

The CRISIL Yearbook On The  
**Indian Debt Market**  
**2015**

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# Executive summary

It has been more than a decade since the High Level Expert Committee chaired by the late Dr R H Patil released the first defining report on developing India's corporate bond market.

Since then, such markets in emerging economies have tripled to \$6.9 trillion (2014) from \$1.9 trillion (2005) in terms of bonds outstanding. Domestic data for the same period is not available, but in the five fiscals to 2015, corporate bonds outstanding have doubled to Rs 17.5 lakh crore, driven by financial sector entities primarily from the public sector.

But in terms of the more important yardstick of market penetration – which is the amount outstanding to GDP – India's corporate bond market has grown just 6.43 percentage points in those five fiscals from 10.31% to 16.74%.

And this is not because evangelists are few and far between; the development of the corporate bond market has been an oft-repeated theme across research papers and conferences.

The example of Malaysia is germane and instructive here. The government there drew out a 10-year roadmap for its capital market in 2001, implemented programmes, and in 2009, opened it up even further by setting up the country's first national financial guarantee institution, the Danajamin Nasional Berhad.

The upshot? Penetration of the corporate bond market in Malaysia is more than two-and-a-half times India's at 43.85% of GDP today.

Clearly, the takeaway is that a concerted effort to develop India's corporate bond market has become an imperative, taking cues from all seminal work available and the experience of countries such as Malaysia. More so because India's banking sector could come up short in terms of wherewithal for the great build-out over the next two decades. Time is nigh, therefore, to identify actionable steps to deepen India's corporate bond market and relentlessly implement them.

At CRISIL, we see three crucial steps, which have facilitated market growth in developed nations, as unmissable: 1) increasing investor demand; 2) transitioning from bank loans to bonds; and, 3) developing facilitative infrastructure.

Working towards the setting up of a dedicated institution to provide guarantees/ credit enhancement, and improving the infrastructure for trading, reporting and settlement will naturally be a part of these.

Needless to mention, any roadmap will need progress milestones that are, well, cast in stone.

Losing another decade simply doesn't make sense. The stakes are just too high.





**The year that was**

Overall, fiscal 2015 was a good year for the Indian debt market. Total debt outstanding increased 14% year on year to Rs 8 lakh crore, with commercial papers (CPs) doubling to Rs 2 lakh crore and corporate bonds logging a healthy 19% growth.

Inflows were strong, driven by the feel good around formation of a stable government at the Centre, its reforms agenda, and a significant easing in inflation. Mutual fund managers pumped nearly Rs 5.87 lakh crore into the debt market, up 8% year on year, while foreign portfolio investors (FPIs) made a net investment of Rs 1.64 lakh crore.

The monetary policy framework witnessed key changes during the year, reflecting implementation of some of the recommendations of the Expert Committee to Revise and Strengthen the Monetary Policy Framework, which submitted its report in January 2014. The most significant change was adoption of CPI (combined) as the key metric of inflation for conducting monetary policy.

Decline in inflation (CPI halved to 5% from 10%), improved market sentiment and higher demand from institutional investors led to a fall of more than 130 basis points in yields of the 10-year benchmark government security (G-sec).

Measures by the Reserve Bank of India (RBI), such as reducing the statutory liquidity ratio (SLR) requirements to 21.5% from 23% and the ceiling in government securities in held to maturity category to 22% from 24%, maintaining liquidity through measures in repo market, and changing the norms to bar FPIs from investing in securities of less than 3 years maturity led to an increase in liquidity of G-secs. Accordingly, government borrowing was also limited to medium-to-long term papers.

State development loans (SDLs) saw activity in tenures other than the traditional 10-year segment, with issuance of a few SDLs of 4- and 5-year tenure, and a few special SDLs of tenure greater than 10 years issued by governments of Uttar Pradesh and Rajasthan (not covered under SLR category).

The year saw several corporate issuers hitting the debt market with commercial papers and bonds. Overall trading increased in both primary and secondary debt markets as yields continued to fall. The year saw an increase in issuances by issuers rated A or below as yields in the debt market were lower compared with loans due to higher base rates of banks and growing acceptance of such securities by mutual funds and alternative investment funds.

| 10-year benchmark yields (%) |              |              |              |              |              |
|------------------------------|--------------|--------------|--------------|--------------|--------------|
|                              | Mar 31, 2014 | Jun 30, 2014 | Sep 30, 2014 | Dec 31, 2014 | Mar 31, 2015 |
| G-sec                        | 9.29         | 9.01         | 8.88         | 8.16         | 7.98         |
| SDL                          | 9.65         | 9.21         | 9.16         | 8.37         | 8.17         |
| AAA corporate bond           | 9.59         | 9.14         | 9.16         | 8.55         | 8.25         |

## Key recent events

### Monetary policy announcements

#### Policy rates

| Effective date | Bank rate | Fix-range LAF rates (%) |              | Cash reserve ratio | Marginal standing facility | Statutory liquidity ratio |
|----------------|-----------|-------------------------|--------------|--------------------|----------------------------|---------------------------|
|                |           | Repo                    | Reverse repo |                    |                            |                           |
| Apr 1, 2014    | 9         | 8                       | 7            | 4                  | 9                          | 23                        |
| Jun 14, 2014   | -         | -                       | -            | -                  | -                          | 22.5                      |
| Aug 9, 2014    | -         | -                       | -            | -                  | -                          | 22                        |
| Jan 15, 2015   | 8.75      | 7.75                    | 6.75         | -                  | 8.75                       | -                         |
| Feb 7, 2015    | -         | -                       | -            | -                  | -                          | 21.5                      |
| Mar 4, 2015    | 8.5       | 7.5                     | 6.5          | -                  | 8.5                        | -                         |

#### Additional measures

- **April 2014:** RBI increased the liquidity provided under 7- and 14-day term repos from 0.5% of net demand and time liabilities (NDTL) of the banking system to 0.75%, and decreased the liquidity provided under overnight repos under the liquidity adjustment facility (LAF) from 0.5% of bank-wise NDTL to 0.25%.
- **June 2014:** RBI reduced the liquidity provided under the export credit refinance (ECR) facility from 50% of eligible export credit outstanding to 32% and introduced a special term repo facility of 0.25% of NDTL to compensate fully for the reduction in access to liquidity under ECR.
- **September 2014:** RBI reduced the liquidity provided under ECR facility from 32% of eligible export credit outstanding to 15%.
- **February 2015:** RBI replaced the ECR facility with the provision of system level liquidity

#### FPI investments

**April 2014:** As a further step towards encouraging longer-term flows, investments by FPIs in G-secs was permitted only in dated securities of residual maturity of one year and above, and existing investment in treasury bills was allowed to taper off on maturity/sale. The overall limit for FPI investment in G-secs, however, was kept unchanged at \$30 billion.

**September 2014:** In order to address operational issues faced by FPIs and long-term foreign investors, it was decided to provide extended reporting timings on trade date and an option for T+2 settlement for secondary market over-the-counter trades in G-secs for such investors.

**February 2015:** As the FPI limit G-secs (capped at \$30 billion) was fully utilised, RBI allowed FPIs to reinvest the coupon of G-secs over and above the exhausted limit. Additionally, FPIs were restricted from investing in corporate bonds of maturity below 3 years in line with regulations for G-secs. They were

also restricted from investing in short-maturity liquid/money market mutual funds. With a view to providing greater flexibility to both FPIs and domestic participants in the exchange traded currency derivatives (ETCD) market, domestic entities and FPIs were allowed to take foreign currency positions in the USD-INR pair up to \$15 million per exchange without having to establish the existence of any underlying exposure. In addition, they were allowed to take foreign currency positions in EUR-INR, GBP-INR and JPY-INR pairs, all put together up to \$5 million equivalent per exchange, without having to establish the existence of any underlying exposure. Domestic entities and FPIs looking to take a position exceeding the above limits in the ETCD market were asked to establish the existence of an underlying exposure.

## **Budget announcements**

### **Steps taken for capital markets**

- A uniform KYC (know your customer) norm proposed, with inter-usability of KYC records across the entire financial sector and a single demat account so that consumers can access and transact all financial assets through this one account.
- International settlement of Indian debt securities proposed and the Indian depository receipt scheme completely revamped.
- American depository receipt/ global depository receipt regime liberalised to allow issuance of depository receipts on all permissible securities.
- It was proposed that financial sector regulators take early steps for a vibrant, deep and liquid corporate bond market and deepen the currency derivatives market by eliminating unnecessary restrictions.
- The finance minister mooted extension of a liberalised facility of 5% withholding tax to all bonds issued by Indian

corporates abroad, extending validity of the scheme to June 30, 2017. (Currently, the tax rate varies across bonds and could be higher as well).

- A modified real estate investment trust-type structure proposed for infrastructure projects to be announced as infrastructure investment trusts, with a similar tax-efficient pass through status, for public-private partnership and other infrastructure projects.
- Addressing the tax concerns of FPIs, the finance minister proposed that income arising to this class of investors from transaction in securities will be treated as capital gain

### **Implications for mutual funds**

- Increase in deduction under Section 80 C to Rs 1.5 lakh brings cheer to equity linked savings schemes.
- Move to increase the holding period for long-term capital gains tax for fixed-income funds from 12 months to 36 months has tax implications for investors in debt mutual fund schemes. The applicable tax rate on long-term capital gains will now be 20% on the nominal long-term capital gains indexed for inflation.
- The finance minister removed an anomaly in dividend distribution tax (DDT) where effective tax rate was lower than the actual tax rate. Investors earning dividend income will receive lower dividend post the DDT amendment effective October 1, 2014.

# Depth wish in three steps

The corporate bond market has a large footprint in developed countries. In India, however, despite a string of measures over the years, it remains a shallow arena.

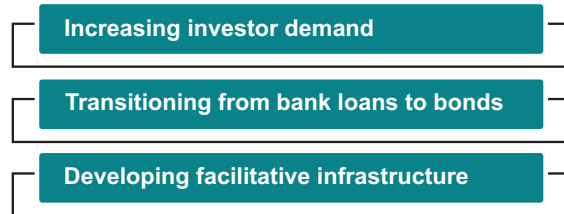
In terms of transacted volume, corporate bonds are way smaller than government securities.

Not surprisingly, between 2010 and 2015, market penetration, measured by amount outstanding to GDP, has increased only marginally from 10.31% to 16.74%.

But here's the sobering perspective: corporate bond markets in emerging economies tripled in size to \$6.9 trillion in 2014 from \$1.9 trillion in 2005 (IOSCO working paper, September 2015). Yet that's puny compared with total global debt (including households, corporate, government and financial), which stood at ~\$199 trillion in 2014, according to a McKinsey estimate.

And that's not because corporate bond market evangelists are few and far between. Its development has been an oft-repeated theme across research papers and conferences for well over a decade.

We believe the time to identify and pursue actionable steps to deepen India's corporate bond market is nigh. We believe three of these are critical because they have facilitated market growth in developed nations:



We look at each measure in detail:

## i. Increasing investor demand

India has a gross domestic savings rate of 33% of GDP, among the highest in the world. Close to 40% of the total savings are financial savings, of which 47% are in fixed deposits. It is interesting to note that the fixed-income nature of bank deposits appeals to Indian investor psyche. But bonds, despite being fixed-income instruments, do not have the same appeal. Therefore, we believe investment products such as mutual funds, insurance and pension funds have the best chance of mobilising financial savings to corporate bonds in India. Even in the US, close to 70% of bond issuances are consumed by MFs, insurers and pension funds. The numbers in India are nothing to write home about, as Table 1 suggests.

**Table 1: Institutional investment in corporate bonds in FY15**

|             | Corporate bonds (Rs cr) | Total investments (Rs cr) | % investments in corporate bonds |
|-------------|-------------------------|---------------------------|----------------------------------|
| EPFO        | 182,128                 | 636,039                   | 28.63%                           |
| Corporates* | 137,708                 | 1,032,299                 | 13.34%                           |
| Banks       | 267,765                 | 2,983,576                 | 8.97%                            |
| FPI         | 181,781                 | 2,320,539                 | 7.83%                            |
| MFs         | 250,054                 | 1,194,774                 | 20.93%                           |
| Insurers    | 420,349                 | 2,344,228                 | 17.93%                           |
| Total       | 1,439,786               | 10,511,455                | 13.70%                           |

\*Data based on FY13, FY14 and FY15  
Source: Websites and reports of corresponding regulators

### Currency conversion ready reckoner

|              |              |
|--------------|--------------|
| 10 lakh      | = 1 million  |
| 1 crore      | = 10 million |
| 1 lakh crore | = 1 trillion |

\*Source – ICI, NAIC, IOSCO Pension statistics

## A six-point agenda to draw investors

There is significant potential to expand the number of investors and their contribution to bond markets. The key steps that can be taken to address this are:

- i. **Investor awareness:** This is one of the most difficult areas to handle. Communicating the benefits and risks associated with investment in debt, through direct or indirect channels, requires sustained efforts from policymakers and market participants. Interestingly, debt products are easier to explain than equity as in most cases the return (coupon) can be stated upfront. This may, however, not apply to products offered through indirect channels such as mutual funds because they are marked to market. Absolute-return products can be an option to mitigate this issue.
- ii. Simple and timely communication to investors on issues such as suitability of the product, impact of risks and return expectations would help them relate to the product better.
- iii. **Development of new products:** It is equally important to develop new products that are likely to meet varied investor needs such as known investment horizon and assured returns. Structured products that incorporate these features can be an attractive option for investors.
  - Fixed-income exchange-traded funds (ETFs) can also be popularised as they have emerged as a preferred vehicle for investment globally. The US has observed close to 20% CAGR in ETF assets over the 10 years to 2014. Fixed-income ETFs account for close to 15% of the overall US ETF market, which is valued at \$2 trillion (ICI Factbook, 2015). ETFs have inherent advantages such as low cost, tax efficiency, higher transparency and liquidity, and low ticket size.

- Taxation is a crucial influencer of investor decision. Compared with equity products, debt products are currently less tax-efficient. And within debt products, mutual funds and insurance plans are relatively more tax-efficient than direct investments. Tax incentives have, in the past, helped channel savings to financial assets such as insurance and retirement products, equity-linked savings schemes and infrastructure bonds. A tax sop also has a positive psychological impact as investors recognise it as a de facto product from the government. Initiatives such as Rajiv Gandhi Equity Savings Scheme can also be replicated for corporate debt products.
  - Globally, tax sops have been a successful medium to incentivise transition of wealth to investment products. For instance, in the US, the introduction of pre-tax, defined-contribution 401(k) retirement plans in 1978 propelled growth in the mutual fund industry and, consequently, its capital markets.
- iv. **Increase share of organised sector employment:** Increase in the share of organised sector employment will help bring in a larger section of working population under the ambit of retirement products such as Employees' Provident Fund and the National Pension System. Additionally, mandatory contribution to pension can be considered. For instance, in the 1980s, Chile had mandated citizens to park their wealth with institutional investors -- a move that has been instrumental in development of the corporate bond market there. So much so, after the diktat, assets of Chilean pension funds increased to almost 54% of GDP in 2000 compared with the negligible level seen in 1980.
  - v. **Increase role of financial intermediation:** Intermediation is key to the success of financial products. Different

segments of intermediaries spanning the organised sector, such as banks, national distributors, and unorganised agents/ advisors need to be appropriately incentivised to reach out to the large investor base.

**vi. Increase participation of foreign investors:** In addition to retail investors, steps to increase the participation of foreign investors need to be encouraged big-time. India needs to develop mechanisms for foreign portfolio investors to manage foreign exchange risk, encourage their access to derivatives markets and enhance use of debt investments as collateral, among other possible measures. Favourable tax laws, inclusion in key emerging market indices, strong laws and policy to settle disputes will also attract more foreign portfolio investments into the corporate bond market.

## ii. Transitioning from bank loans to bonds

Bank financing is by far the most preferred mode of funding in India today. Corporate bonds outstanding to bank loans (corporate) was 26.5% as on December 31, 2015. Various factors such as difference in pricing, accounting/valuation treatment for an asset, time lag permitted for recognition of event of delayed payment/default etc., have contributed to the arbitrage that exists at present between loans and the capital market.

Transition from loans to bonds, we believe, will lead to a deepening of the debt market. The measures that can be taken in this regard are:

i. **Provide impetus to securitisation market** by encouraging insurance companies and provident funds to invest in long-term mortgage-backed securities; persuading banks to securitise their housing and infrastructure portfolios; and, enhancing market for innovations such as commercial mortgage-backed securitisation transactions, toll road

receivables, annuity receivables and education receivables.

- ii. **Remove loan-bond arbitrage by measures** such as allowing banks to classify (and reclassify) bond and loan assets into held-to-maturity or available-for-sale buckets based on their declared intention rather than automatically based on legal documentation. Additionally, reducing the statutory liquidity ratio requirement will free up capital. And the implementation of Basel III norms requiring banks to maintain high-quality liquid assets will push banks to invest in corporate bonds.
- iii. **Limit the amount of bank loan** that can be taken by specific category of borrowers -- say for instance, large borrowers.

## The name is bond...

There is significant scope to expand India's debt market, which, at ~17% of GDP as of December 2015, is rather small compared with 123% for the US and 77% for South Korea. The country compares poorly even some emerging market economies such as Malaysia, Thailand and China.

The government, the Reserve Bank of India (RBI) and the Securities and Exchange Board of India (SEBI) are contemplating measures to promote corporate borrowings from the bond market. These will benefit corporates in terms of both diversification of funding sources and reduction in cost of borrowings. While these efforts are just what are needed, structural measures to deepen – and improve access to -- the bond market face headwinds.

## Challenges for corporates in accessing the bond market

- Illiquidity
- High cost of issuance and higher interest rates
- Lack of well-functioning derivatives market
- Regulatory restrictions, and
- Insignificant retail participation



## Measures taken/proposed to develop bond markets

- **Review of framework for large exposures:** The RBI has floated a discussion paper on enhancing credit supply for large borrowers through a market-based mechanism. The guidelines could reduce concentration of bank exposure to large borrowers and help expand the bond market.
- **Managing primary issuances:** Primary market issuances have suffered because of high cost of issuances and narrow investor base. To address this, SEBI plans to introduce an electronic auction platform for primary debt offers, to develop an enabling ecosystem for the private placement market in corporate bonds.
- **Information repository:** A complete information repository for corporate bonds covering both primary and secondary market segments will be developed jointly by the RBI and SEBI.
- **Innovative instruments such as ‘masala’ bonds:** The RBI had issued guidelines in September 2015 for ‘masala’ bonds denominated in rupees – where the credit risk and currency risk lie with the investor – and has recently reduced the tenure to 3 years from 5 (similar to government securities) to make them more attractive.
- **Promoting derivatives market for hedging:** One factor constraining bond market expansion has been the absence of a well-functioning derivatives market that could absorb risks emanating from interest-rate fluctuations and default possibilities. Taking cognisance of this issue, the RBI has issued guidelines for interest rate futures and credit default swaps.
- **Settlement:** The government has been considering a proposal to join Euroclear, the world’s largest securities settlement system. This would allow investors such as

sovereign wealth funds to settle Indian government/corporate bonds on the system, which has been a long-standing demand.

- **Easing investment norms:** Investment norms for insurance companies, banks and pension funds in India are heavily skewed towards government and public sector bonds (only 15% of funds can be invested in corporate bonds below AA rating). Easing of such norms and increased retail participation will increase liquidity.

While steps are being taken to encourage corporates to access the capital market for debt funding, the recent guidelines to banks on pricing of loans using marginal cost lending rate, which allows banks to have multiple base rates at different tenures, has made bank loans more competitive compared with commercial paper. This could lead to a shift of short-term borrowing from the commercial paper market to bank loans.

### iii. Develop facilitations with North Block oversight

Facilitative policy measures, both from the perspective of investors and issuers, are a sine qua non. Setting up of a team or department of experts within the Ministry of Finance, whose mandate will be to facilitate the development of India’s corporate bond market, and follow up on relevant implementation initiatives, will be a huge help. Some of the measures that can be taken up by such a department are:

- i. **For investors**
  1. Facilitate liberalisation of investment policies of key market participants by permitting them to take higher

exposure to corporate bonds across the rating spectrum. For instance, provident and pension funds, which manage some of the largest corpuses in India, have caps on investments in corporate bonds. The Employees Provident Fund Organisation (EPFO) can invest only 45% of its incremental investments into corporate bonds and that too only in public issuers rated AA and above. Only 10% of incremental investments are permitted in private issuers that meet specific eligibility criteria such as dual AAA ratings, consistent profit track record and dividend history, among others. Introduction of the new investment norms for retirement funds has opened up investment options and has, therefore, been a welcome step. However, the new pattern still limits investments in corporate bonds up to the AA category, unless credit default swap, or CDS, protection is taken. The CDS market, ironically, is almost non-existent in India.

2. In comparison, in developed pension markets, regulators do not impose any investment limit. In emerging pension markets, too, limits are being relaxed. Countries such as Australia, Canada, Korea, Germany and Japan impose no limits for investment in bonds. In the US, limits are only for employees subscribing to employer's bonds. Sweden has a limit of 75% for non-state or equivalent papers. Emerging pension markets such as Chile have restrictions ranging from 40% to 80% in case of lifecycle funds, and investments up to 5% are permitted in non-investment grade securities. Brazil and South Africa allow 80% and 75% allocation, respectively, to corporate bonds.
3. Even if policies mandate exposure only to higher-rated bonds, facilitation of a credit enhancement mechanism by creating innovative instruments such as partial guarantee, securitisation of annuity in highway projects, securitisation of receivables by municipal corporations can be considered. This will also allow issuers/ projects with moderate creditworthiness to access the corporate bond market. It also meets investor need for higher credit

quality. Partial guarantee mechanism permitted for banks has not been effective due to provisioning norms and lower reward to risk. Since September 2015, when banks were permitted to extend partial credit enhancement (PCE) to corporate bonds, there haven't been any transactions based on it. The reason for this is the upper limit of 20% PCE set for a bond issue. Contemporary experience suggests the PCE requirement has exceeded that in majority of successful transactions. Also, issuers seem to be concerned about the PCE commission charged by banks, which could add 30-50 basis points to cost. Added to this, higher yield sought by investors because of the structured nature of the transaction compared with a vanilla instrument of a similar rating has further eroded attractiveness. In this context, an institution such as the proposed Bond Guarantee Fund of India (BGFI) could prove helpful if it extends full guarantee. These structures would be simpler to understand for investors and would be significantly comforting. Credit enhancement mechanism from multilateral institutions and the BRICS Bank can also be evaluated for this. Given the limitations faced by banks in extending third-party guarantees, some emerging markets have introduced agencies that specialise in providing financial guarantees to lower-rated corporations only. For example, in Malaysia, the government has established Danajamin Nasional Berhad, which provides financial guarantee and credit enhancement for corporate bonds, thereby affording access to non-AAA rated issuers.

**ii. Develop standard and independent valuation practices to reduce arbitrage on account of pricing**

Across financial markets in India, different rules are laid down by regulators for valuation of assets, especially corporate bonds. In some cases, multiple approaches are prescribed by the same regulator depending on the period

for which investments are held. For example, banks follow different valuation norms for held-to-maturity, held-for-trading and available-for-sale portfolios. Likewise, different insurers value the same corporate bond differently if held in both unit- and non-unit-linked portfolios. Even in cases where mark-to-market valuations are prescribed, approaches vary across participants. For instance, some financial products do not recognise the intra-rating spread on account of credit perception and illiquidity that exists between securities. This leads to differences between the prices used for reporting and the actual realisable value of the asset. Besides mispricing of investments, such anomalies hinder price discovery, which is critical to ensure that appropriate risk-to-reward relationship exists to incentivise investors. Over time, these measures should translate to more efficient pricing in case of bank loans.

**iii. Incorporate strong and stable legal and regulatory framework and simplify process to settle financial disputes, and enforce laws for insolvency and bankruptcy.**

Current legal structures don't seem to be effective as delays and high costs involved in legal procedures relating to enforcement of debt contracts and corporate insolvency increase the risk to corporate bond investors. Also, in case of a default on a debt instrument, the process of liquidation to repay a bond investor is important. The Recovery of Debts due to Banks and Financial Institutions (RDBF) Act and Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act address the concerns for financial institutions and banks only. A significant step in correcting this has been the recommendations made by committee headed by former law secretary T K Viswanathan. Once accepted, many of the suggestions are expected to help improve the situation.

As for bankruptcy, regulation in the United States has proved effective. In the UK, after 12 months of a case being filed for bankruptcy, there is either discharge with part of the assets being used to pay off debts, or, in situations where companies can be turned around, court-appointed administrators handle cases. And German insolvency law is applicable to both individuals and firms, with independent court-appointed insolvency practitioners helping in realising assets or reorganising the business.



**The structural story is  
turning conducive**

For any corporate bond market to make economic sense, there has to be depth in terms of liquidity and breadth in terms of products. Only then can it play the role of an efficient matchmaker between borrowers and investors/savers.

For ages now, financing from banks has been the default mode for Indian companies, with money market instruments such as commercial papers and certificates of deposits providing short-term funds.

For a corporate bond market to deepen, right macroeconomic environment is as necessary (and seems nigh in India) as strong regulations and legal framework, deep institutional investor base, efficient infrastructure and a vibrant derivatives market.

Studies show that countries with robust, stable and predictable macroeconomic fundamentals have witnessed rapid development of their debt markets, especially for corporate bonds. For example, bond volume in Brazil and Mexico surged after governments there reined in inflation in the past ten years (*Bond Market Development in Emerging Asia, ADB Economics Working Paper Series, No. 448, 2015*).

In contrast, in Philippines, where the macroeconomic environment has been volatile, the corporate bond market has had to lean heavily on government support to survive.

After a smart recovery from the global financial crisis, India's GDP growth had slid into a sub-6% in fiscal year 2013 because of the emergence of factors detrimental to the business climate.

Domestic constraints, such as policy logjam in mining, delays in approving projects, and tardy implementation of cleared projects, were the major reasons. In addition, monetary and fiscal stimulus had to be withdrawn due to rising inflation and fiscal stress. This had pulled down growth and put India in the Fragile Five -- a reference to BRICS nations by IMF.

Indian banks' prolonged struggle with bad loans and the Reserve Bank of India's (RBI) recent moves to clean those Augean stables are indeed cautionary tales. It therefore makes eminent sense to course-correct and derisk India's financing ecosystem and unclog its corporate-finance plumbing by gravitating towards term financing and corporate bonds rather than let the system be a one-trick pony riding on bank loans.

#### India goes from vulnerable to resilient

|                                  | FY13 | FY14 | FY15 | FY16E | FY17F |
|----------------------------------|------|------|------|-------|-------|
| GDP growth (%)                   | 5.6  | 6.6  | 7.3  | 7.6   | 7.9   |
| Inflation (%)                    | 10.2 | 9.5  | 6.0  | 4.9   | 5     |
| CAD / GDP (%)                    | 4.7  | 1.7  | 1.3  | 1.3   | 1.4   |
| Fiscal deficit / GDP (%)         | 4.8  | 4.6  | 4.1  | 3.9   | 3.5   |
| Exchange rate (Rs/\$, March-end) | 54.4 | 60.1 | 62.6 | 66.3  | 65.0  |
| 10-year yield (March-end)        | 7.9  | 8.8  | 7.7  | 7.5   | 7.3   |
| Investment / GDP (%)             | 34.1 | 33   | 32.3 | 31.6  | 31.7  |
| GNPA / advances (%)              | 3.3  | 3.8  | 4.3  | 6.8   | 7.7   |

Over the last 2-3 years, India has transited from being a vulnerable economy to one with robust macroeconomic fundamentals and promising growth prospects.

From a macroeconomic perspective, there are three pre-requisites to a deep and well-functioning corporate bond market:

1. Low and stable inflation

2. Prudential fiscal policy
3. Currency stability

### **Globally, low and stable inflation has boosted bonds**

Empirical studies have shown that lower and stable inflation facilitates a conducive environment for a deeper and mature corporate bond market.

US academicians John D Burger and Francis E Warnock analysed 49 local bond markets (National Bureau of Economic Research working paper 12552, 2006) and found that stable inflation has a significant positive impact on the ratio of local bond market size to GDP, and on the share of a country's outstanding local-currency bonds.

India's inflation has been steadily moderating since 2014, falling to an average 4.9% in fiscal 2016 from 6% in fiscal 2015, and from double-digit rates in the preceding five years. It would be apposite, therefore, to ask the question, what was the cause and how durable is the decline in inflation?

While exogenous factors such as the decline in crude oil and other commodity prices contributed significantly to controlling inflation, credit must be given to the RBI and the central government for their well-coordinated and quite proactive moves.

To control food inflation, the government has exercised restraint by offering muted growth in minimum support prices, and deployed its stock effectively to offset the impact of two consecutive droughts. Other steps, such as advising states to allow free movement of fruits and vegetables by delisting them from the Agricultural Produce Marketing Committees (APMC) Act, and developing a national agricultural market, are also long-term positives for food inflation.

Perhaps the most important factor is the new monetary policy framework, agreed to by the RBI and government, which focuses on lowering inflation. The RBI targeted 6% inflation in fiscal 2016 and 4% in 2018, with a band of 2% on either side, in subsequent years. The framework also requires the RBI to semi-annually provide details on sources of inflation and its forecasts for 6-18 months. The framework will result in greater transparency and predictability about the central bank's actions and bring more credibility to the monetary policy. A positive spillover from this would be greater predictability about wage growth, government bond yields, and consumers' purchase decisions. It also offers a conducive environment for deepening the corporate bond market.

### **Why does a commitment to fiscal consolidation matter?**

Fiscal policy influences private sector participation in the corporate bond market in a number of ways. For one, a high fiscal deficit is a negative because it reduces available savings pool for the private sector to draw from. Burger and Warnock showed a wider fiscal deficit expands the government bond market, but not the corporate bond market. Economists Matias Braun and Ignacio Briones, in their 2006 paper titled 'The Development of Bond Markets Around The World', also show that larger government bond issuances crowd out corporate bonds.

Silvia Ardagna of Harvard University, in a 2009 paper on the behaviour of financial markets in Organisation for Economic Cooperation and Development (OECD) economies around episodes of large changes in the fiscal stance between 1960 and 2002, showed that the government's fiscal position has a significant impact on economy-wide interest rates, particularly those of long-term government bonds.

While periods of fiscal consolidation gave room for interest rates to decrease by 124 basis points on an average, fiscal

expansion pushed up rates by as much as 162 basis points. Moreover, during phases of fiscal expansion, interest rates of 10-year government bonds as well as corporate bonds are estimated to increase irrespective of the economy's initial fiscal position. The government's fiscal stance is shown to impact even the short-term government bonds such as the 3-month treasury bills. In effect, lower fiscal deficit softens the benchmark yield curve, which is the key to pricing corporate bonds, Ardagna noted.

It can thus be inferred that fiscal consolidation will reduce interest rates on government bonds/government bond yields, which, in turn, will lower rates in the corporate bond market and make it attractive to issuers.

A recent example of this is when yields on government securities hardly budged despite a 150 bps interest rate reduction by the RBI starting January 2015. However, they came down swiftly after the Union Budget announced adherence to the fiscal consolidation path.

### **Currency stability becalms investors**

Currency volatility is another macroeconomic factor that controls foreign investments in local bond markets. From being the worst-performing currency in 2013 after the 'taper tantrum' stoked by the US Federal Reserve's stated intent of withdrawing the quantitative easing programme, the rupee has become one of the best-performing, low-volatile currencies over the past one year. This has been because of improving macroeconomic fundamentals, good luck from low commodity prices, and proactive government policies. Not surprisingly, there has been an upsurge of foreign investments into India.

### **Conclusion**

It is well known that domestic savings will not be sufficient

to meet the long-term investment requirement for India's infrastructure build-out and socio-economic development. In advanced economies, populations are ageing leading to a significant increase in the corpus – and number – of pension funds seeking long-term investment opportunities with high yields and stable returns.

However, growth prospects for advanced economies seem limited, with economists such as former US Treasury Secretary Larry Summers calling it a phase of 'secular stagnation' where return on capital is low amid low growth and deflation.

Former US Federal Reserve governor Ben Bernanke has suggested that in such a phase, economies should invest in emerging market economies with strong growth prospects.

It is a no-brainer that India is currently one of the strongest emerging markets with strengthening macroeconomic fundamentals.

Economies with investible funds – such as Japan, Germany, Korea and China – export capital either through foreign direct investment or through pension funds and insurance companies, which primarily focus on bond investments. India should use this opportunity to attract capital towards the corporate bond market.

More foreign participation in the corporate bond market will push down yields, further widening the gap between corporate bond yields and bank lending rates. Lower bond yields will attract the private sector and help improve the depth and breadth of the bond market.

It is for the stakeholders led by the government to grab the opportunity with both hands and facilitate conditions to finally do what's been a longstanding demand – of deepening India's corporate bond market and making it a viable alternative to bank financing.

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**A brave new financial order**

Banking in India is undergoing a sea change. After years of restricted licensing, the Reserve Bank of India (RBI) has opened the floodgates by awarding as many as 23 licences in different categories over the past two years.

While two of these are licences for commercial banking, the rest are for niche or differentiated plays, including 11 payments banks and 10 small finance banks. The regulator has announced its intention to issue licences virtually on-tap, including for two more categories -- wholesale banks and custodian banks.

The new banks are expected to usher in innovation, offer customers greater choice and spawn customisation of financial services. The service offerings under each category are as follows:

- **Payments banks** will provide the large unbanked rural and semi-urban population an option of a formal deposit account and transaction capability.
- **Small finance banks** will give small non-banking finance companies (NBFCs) and microfinance institutions (MFIs), who are the primary providers of credit to small scale industries and small borrowers typically under-served by commercial banks, an option to garner less expensive resources in the form of deposits.
- **Wholesale banks** will provide long-term loans to corporates for projects with long gestation periods. Commercial banks face limitations in lending to infrastructure projects, given a mismatch between their shorter-tenure resource profile and the longer-tenure needs of infrastructure projects. This leads to infrastructure projects getting starved for funds or ending up borrowing at high costs.
- **Custodian banks** will hold financial assets such as cash, stocks, bonds, commodities, metals and commercial papers for their clients. While existing banks provide these services, a flourishing capital market, which the RBI is aiming for, will be better served by specialised custodian banks.

Efforts are also on to make the existing models more efficient. Towards this:

- The RBI plans to bring peer-to-peer lending, which has gained traction in the past year or so, under the ambit of regulation.
- Today, while wallets have become a popular mode of payment for e-commerce transactions, other small payments remain dependent on cash. To facilitate movement towards a cashless economy, the RBI has launched the Unified Payment Interface (UPI).

But will these different objectives be met given competition from existing players and a dynamic environment? The opportunities and challenges for each category would be as follows:

- **Payments banks:** Tapping the large domestic remittance market, gathering savings deposits and sourcing loans for the conventional banking channel largely from under-banked and unbanked regions of the country are areas these banks can look at. Another opportunity lies in effective use of technology to capture a share of e-commerce transactions through wallets. However, here, the banks face serious competition from existing banks, with Jan Dhan Yojana bringing a large chunk of the population into the formal banking channel and the launch of UPI possibly rendering wallets redundant.
- **Small finance banks:** Going beyond the current customer segments (non-banking finance companies or NBFCs, and microfinance institutions), the opportunity for these banks lies in gaining access to a new source of funding – deposits – and the added ability to offer transactional products. The conversion into a bank will not be easy though, given competition for resources from commercial banks and payments banks.

- **Wholesale banks:** Conversion into a wholesale bank may be an opportunity for wholesale NBFCs, but garnering long-term resources will be a bigger challenge than getting savings deposits. While they might be exempt from priority lending requirements, meeting liquidity requirements may also pose a challenge.
- **Custodian banks:** Success of custodian banks will depend on deepening of the capital market and their ability to differentiate themselves from large global players and domestic commercial banks. Further, the returns from this model may be low and will be sensitive to business volumes.



# **Dawn of the bankruptcy code**

India's Parliament approved the long-awaited Insolvency and Bankruptcy Code, 2016, which heralds a significant shift to a creditor-friendly ecosystem of identification and resolution of insolvency.

According to a World Bank study, it takes more than four years -- or twice the time taken in China -- to resolve insolvency in India, while recovery of debt, at ~25% is among the worst in emerging economies and way behind global average.

The code supersedes several provisions in extant laws related to insolvency -- the Sick Industrial Companies Act (SICA), the Recovery of Debt due to Banks and Financial Institutions, Companies Act (RDDBI) and the SARFAESI Act -- and intends to make resolution quicker and easier within a defined time period (180-270 days).

Going ahead, the time required to build out the new ecosystem, availability of skilled professionals, and capacity creation in debt recovery tribunals are crucial to the success of code.

#### Key features of the Insolvency and Bankruptcy Code

- **Repeals and replaces set of outdated laws:** The code repeals several outdated laws (such as the Presidency Towns Insolvency Act, 1909, and the Provincial Insolvency Act, 1920). Additionally, it also amends 11 other existing laws which will facilitate quicker insolvency proceedings.
- **Creditor-friendly:** Defaulting firms/individuals got a long rope under extant legislations, while the new code recognises the rights of creditors (both financial and operational) and gives them an effective role in the insolvency resolution process.
- **Focus on revival plans, faster resolution:** The code lays down procedure for revival of distressed firms/assets which involve negotiations between debtors and creditors to draft a revival plan. In case a revival plan cannot be

negotiated upon within the prescribed time frame, the firm will automatically go into liquidation, proceeds of which will be paid to creditors based on a pre-fixed order of priority. The new code is better at preserving the value of assets and distinguishes malfeasance versus business failure, thereby helping recoveries.

- **Clarity on distribution of liquidation proceeds:** As per the code, proceeds from liquidation will be distributed based on an order of priority with employee dues/secured debtors coming first followed by other employees (non-workmen) and then unsecured creditors and finally the government.
- **Addresses cross border insolvencies:** Given that Indian firms operate in different jurisdictions, the code deals with resolution process of cross-border insolvencies as well. The government may enter into agreements with other countries to enforce the provisions of the new code.
- **Penalties for offences:** The code has penal provisions for offences committed under corporate/individual insolvencies. This involves concealing properties, imprisonment of up to five years, or a fine of up to Rs 1 crore (Rs 5 lakh for individuals) or both based on the nature of offence.
- **Wider coverage:** The code will cover companies, limited-liability entities (including limited-liability partnerships), unlimited-liability partnerships and individuals. It treats both type of creditors -- operational (employees, workmen, contractors) and financial (banks, non-banking finance companies) -- fairly, and clearly defines their roles in insolvency resolution.

#### Governing framework

- **Insolvency regulator:** The code proposes to establish an insolvency regulator to exercise oversight over insolvency professionals and their agencies, and informational utilities. The regulator's board will have 10 members, including representatives from the central government and the RBI. It

will register information utilities, insolvency professionals and insolvency professional agencies under it, and regulate their functioning.

- **Insolvency adjudicating authority:** The adjudicating authority will have the jurisdiction to hear and dispose of cases by or against debtors. The Debt Recovery Tribunal shall be the adjudicating authority with jurisdiction over individuals/unlimited liability partnership firms, while the National Company Law Tribunal (NCLT) shall be the adjudicating authority with jurisdiction over companies and limited liability entities.
- **Insolvency professionals:** The insolvency resolution process will be managed by a licensed professional, who will also control the assets of the debtor during the resolution process. The code also proposes to set up insolvency professional agencies, which will admit insolvency professionals as members and develop a code of conduct and evolve performance standards for them. The new law proposes that private practitioners (CAs, lawyers) can be appointed as company administrator/liquidators before lenders or the tribunals.
- **Information utilities:** The code establishes multiple information utilities to collect, collate and disseminate financial information related to a debtor. This will include a record of debt and liabilities of the debtor.

### Insolvency resolution process

If the underlying business is found viable, the code prescribes a timeline of 180 days (which can be extended to 270 days by the adjudicating authority in exceptional cases) for arriving at an insolvency resolution plan. The process is largely similar for individual cases, too.

- Any financial or operational creditor can begin insolvency proceedings on a default. The borrower himself could also initiate an insolvency petition.

- During the insolvency resolution period (180 or 270 days), debtor's assets and management control will be transferred to the insolvency professional.
- The resolution plan prepared by the insolvency professional has to be approved by financial creditors – a committee of creditors – with 75% of voting shares.
- Once approved, the plan has to be sanctioned by the adjudicating authority. But if rejected, the authority will order liquidation.
- If the aggrieved party is not satisfied with the adjudicating authority's order, they can appeal to the appellate tribunal, NCLAT (National Company Law Appellate Tribunal) and DRAT (Debt Recovery Appellate Tribunal). This has to be done within 30 days of such order. Further, appeals against an NCLAT or DRAT order can only be made to the Supreme Court, within 45 days of such order.

### Impact of the code

- **Quicker resolution of financial distress:** Under the existing framework, a significant amount of time is wasted in recognition and resolution of a case of financial stress. The delays cause severe impairment of assets and reduce their economic value. However, under the new code, insolvency professionals chalk out a revival plan within defined timeframe and if creditors don't agree, the firm automatically goes for liquidation. The code thus facilitates faster resolution and therefore preserves the value of assets.
- **Facilitate ARCs in recoveries:** The recovery experience of ARCs isn't significantly better (~36% as per CRISIL) given the limitations within the existing framework. However, in the long run, effective implementation of the code will change the environment and attract investments to the distressed assets space, open up new avenues for ARCs and help them participate in the huge market for NPAs.

- **Deterrent for wilful defaulters / frauds:** Stringent provisions under the code with appropriate safeguards built for the creditors will act as a strong deterrent for wilful defaulters. This, in turn, will help in improving credit discipline in the system over the long term.
- **Boost investor confidence:** Investors shy away from corporate bonds rated below AA category given the higher risk of default and abysmal recoveries. The new code will now lend confidence to investors and therefore can increase liquidity in lower-rated papers over the medium term.
- **Aid higher productivity and economic growth:** With the implementation of the code, India's position in World Bank's rankings of 'ease of doing businesses' will improve, attracting more foreign investors. Given the quick resolution, the assets can be put to use which will enhance productivity levels and hence aid economic growth.
- **Boost entrepreneurship and other stakeholders:** The code will encourage entrepreneurship, and will benefit several other stakeholders including corporates (quicker recognition of stress), start-ups (easier exit if business turns unviable), and employees/workmen (priority on payment of liquidity proceeds).

## Global experience

Several developed countries such as the US, the UK and Japan have robust insolvency resolution frameworks. Consequently, these countries enjoy much ease of doing business rankings. Even emerging markets such as Russia, China and South Africa have better rankings than India. While insolvency frameworks are many across nations, operational characteristics vary in terms of nature of resolution, assets in possession, debtor involvement, and the timeline for finalising a revival plan. For instance, the US has a framework based on the nature of resolution, while Canada's is based on the size of the entity. In several developed economies, insolvent assets are mostly kept with debtors and they are involved in the resolution process.



# **Easing regulatory bottlenecks**

For the corporate bond market to be able to contribute to nation building, it is imperative to ease the regulations that are holding back investments.

To be sure, key institutional investors in the market, such as mutual funds, banks, retirement funds, insurance companies and foreign portfolio investors, are governed by different regulators and policy frameworks. These frameworks typically prescribe limits based on the rating category, group entities,

maturity profile, listing status and financial parameters (networth, dividend, profitability, etc) – all intended to protect the ultimate investor. This, however, has caused a skew towards government securities (G-secs) and higher rated papers.

Hence, there is a need to evaluate whether these limits stand the test of time and relevance, and accordingly reassess and redefine these to match the dynamism of capital markets.

**Table 1: Investment provisos at various institutions**

| Regulations                           | EPFO                                                                                                                      | PFRDA                                                                                                                     | Life insurance                                                                                                                                               | Pension and group business | General insurance                                                                                                           | Mutual funds                                                                                                                                                                 | FPI                                   | Banks                                                                                                                                                                        |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limits on corporate bonds investments | 35-45%                                                                                                                    | Up to 45% for government employees; no restriction under NPS for all                                                      | Not exceeding 50%                                                                                                                                            | Not exceeding 60%          | Not exceeding 70%                                                                                                           | No limit                                                                                                                                                                     | \$51 billion, or Rs 244,323 crore     | NA                                                                                                                                                                           |
| Additional requirements               | Minimum three-year residual maturity; minimum AA rating from two agencies; can invest up to 5% in ABS/ MBS/ REITS/ InvITs | Minimum three-year residual maturity; minimum AA rating from two agencies; can invest up to 5% in ABS/ MBS/ REITS/ InvITs | Minimum investment of 15% in housing and infrastructure; maximum investment of 15% in securities rated below AA and ABS/ MBS, 5% in securities rated below A |                            | Minimum investment of 5% in housing, 10% in infrastructure; investment in securities rated below AA and ABS/MBS maximum 25% | Issuer limit – 10% single issuer for debt. In unrated papers, maximum investment of 10% for issuer and total exposure cap of 25%. Sectoral limit at 25%. Group limit at 20%. | Minimum three years residual maturity | Minimum tenure of one year for bonds; investment in unrated papers not allowed except for infrastructure (capped at 10%) and investment in unlisted securities capped at 10% |

Source: Websites and reports of corresponding regulators

Our study on investments made by major institutional investors suggests the limits available for investment in corporate bonds are not fully utilised. The reasons are not far to seek: limited issuers and available securities satisfying the criteria, negligible spreads between G-secs, state development loans (SDLs) and corporate bonds, and limited liquidity in secondary markets, to name some. Also the limits for corporate bond investments are for fresh investments and keep changing.

As Table 1 shows, there are limits on fresh investments by pension funds and Insurance companies.

In case of mutual funds, there is no limit on exposure to corporate bonds. However, there are certain limits on exposure to sector, group and company. Also, other investors who may not have limits may be compelled to invest in top-rated issuers in such market scenarios as liquidity in secondary markets will also be towards top-rated long tenure papers. This can be discouraging for new and low-rated issuers as there is limited demand, leading to higher cost of funding for them in debt markets.

Banks, on their part, are led by cash reserve ratio (CRR) and statutory liquidity ratio (SLR) requirements to invest primarily in G-secs, which are far more liquid compared with corporate bonds.

Even in case of foreign portfolio investors (FPIs), liquidity plays an important role, pushing them towards G-secs. Low spreads of corporate bonds over G-secs also have a hand here as does the minimum tenure restriction of three years.

Table 2 Provides details of investments made by various market participants in corporate bonds at the end of fiscal 2015.

**Table 2: Institutional investments in corporate bonds in FY15**

|                  | Corporate bonds (Rs cr) | Total investments (Rs cr) | % investments in corporate bonds |
|------------------|-------------------------|---------------------------|----------------------------------|
| EPFO             | 182,128                 | 636,039                   | 28.63%                           |
| Corporates*      | 137,708                 | 1,032,299                 | 13.34%                           |
| Banks            | 267,765                 | 2,983,576                 | 8.97%                            |
| FPI              | 181,781                 | 2,320,539                 | 7.83%                            |
| MFs              | 250,054                 | 1,194,774                 | 20.93%                           |
| Life insurers    | 420,349                 | 2,344,228                 | 17.93%                           |
| General insurers | 78,951                  | 139,887                   | 56.44%                           |
| Total            | 1,518,736               | 10,651,342                | 14.26%                           |

\*Based on FY13/14/15

Hence, there is a need to review investment norms for regulated entities in order to facilitate their active participation in corporate debt markets. The restrictive regulations need to be modified. This may be difficult to implement at one go, but can be carried out in phases over a few years.

CRISIL recommends that the following measures be considered:

#### **RBI**

1. Policies that can encourage lending by banks through bonds instead of loans: Significant portion of bond portfolio is allocated to sovereign securities due to SLR/CRR requirements and many banks sometimes prefer to invest far more than the prescribed floor. Steps that could help channel such surplus to bond markets can be identified.
2. Reducing the SLR requirements and encouraging banks to invest in corporate debt

3. Removing the valuation arbitrage between loans and bonds due to which banks prefer loans over bonds
4. Following the global financial crisis, there was large-scale use of non-sovereign papers as collateral by central banks for providing liquidity. A similar enabling arrangement in India, subject of course to appropriate haircuts and other safeguards, could be examined. This will enhance demand for good quality corporate paper.

### **EPFO, PFRDA, IRDA**

1. Instead of capping investments in corporate bonds, a floor should be introduced for investment in corporate bonds to encourage investors
2. Restrictions such as dual-rated papers and a minimum AA rating can be liberalised to include lower-rated issuers (up to investment grade) with single ratings. Given the significant deployable funds with financially sound insurance companies and other long-term investors, it is necessary to set up a taskforce that can find the ways for such monies to flow into lower-rated papers backed by prudential risk management.
3. Minimum tenure requirement of three years can be removed as this reduces liquidity in shorter tenures, which are the preferred maturity for asset management companies (AMCs), and leads to greater preference for G-secs. Also, it may limit access of new issuers to debt markets as investors may not risk investing in new issuers for long maturity.

### **SEBI**

1. FPI limits can be enhanced and restrictions on minimum maturity removed.

### **Generic measures – SEBI/ Ministry of Finance**

1. Restricting the proportion of borrowings by large corporates from banks and making such corporates use the market mechanism (such as corporate bonds, commercial papers and other instruments)
2. While the Union Budget for fiscal 2017 addresses taxation structure in securitised debt -- from distribution tax at special purpose vehicle level to taxation in the hands of investors -- mutual funds haven't started investing for want of clarity in pending tax issues related to pass-through certificates
3. Inclusion of India in major global emerging market debt indices, which will lead to significant inflows from FPIs
4. Standardised stamp duties on corporate bonds across states
5. Other generic measures such as tax benefits, credit enhancements, guarantee by government or capital protection through CDS, minimum mandatory exposure to infrastructure sector can be taken to incentivise investment in securities of infrastructure sector such as bonds or units of real estate investment trusts (REITs) and infrastructure investment trusts (InvITs).
6. Additional measures such as re-issuance of the same security and transparency of information can boost liquidity of corporate bonds and help shift preference

**A robust and effective bankruptcy regime is already here:** The Parliament has already made the Insolvency and Bankruptcy Code into law. While this is perhaps the biggest financial reform in recent times, its success will be a function of how relentless and effective the implementation would be. That, in turn, will be a function of mindset change among various stakeholders.

# **Overcoming market shallowness**

The corporate bond market has a large footprint in developed countries. However, in India, it remains small despite a string of measures taken over many years now. In terms of size, too, the market for corporate bonds is way shallower than that for government securities.

A look at the total outstanding corporate and sovereign debt in the country shows that sovereign papers comprise 72% of the pie (Table 1).

**Table 1: Sovereign skew continues**

|                    | Amount outstanding as on Dec 31, 2015 (Rs cr) | % of total  |
|--------------------|-----------------------------------------------|-------------|
| <b>Sovereign</b>   | <b>63,96,089</b>                              | <b>72%</b>  |
| i) G-secs          | 45,19,205                                     | 51%         |
| ii) SDL            | 14,51,236                                     | 16%         |
| iii) T-bills       | 4,25,648                                      | 5%          |
| <b>Corporate</b>   | <b>24,26,294</b>                              | <b>28%</b>  |
| i) Corporate bonds | 19,11,226                                     | 22%         |
| ii) CP             | 3,08,509                                      | 4%          |
| iii) CD            | 2,06,559                                      | 2%          |
| <b>Total</b>       | <b>88,22,383</b>                              | <b>100%</b> |

Source: RBI, SEBI

Overall penetration of the debt market in India, as measured by the amount outstanding to GDP, increased from 10.31% to ~17% between 2010 and 2015. However, the growth pales in comparison with top developed and emerging Asian markets (Table 2).

**Table 2: The global penetration picture**

|             | Penetration (outstanding debt/GDP) as on Dec 31, 2015 |            | Ratio (bonds/G-secs) |
|-------------|-------------------------------------------------------|------------|----------------------|
|             | G-secs                                                | Corp bonds |                      |
| US          | 81%                                                   | 123%       | 1.5                  |
| China       | 39%                                                   | 20%        | 0.5                  |
| Japan       | 199%                                                  | 16%        | 0.1                  |
| South Korea | 53%                                                   | 77%        | 1.5                  |
| Hong Kong   | 39%                                                   | 29%        | 0.8                  |
| Singapore   | 46%                                                   | 32%        | 0.7                  |
| Malaysia    | 53%                                                   | 44%        | 0.8                  |
| India       | 40%                                                   | 17%        | 0.4                  |

Source: SIFMA, ADB Online, CRISIL Research

Between 2005 and 2014, the corporate bond markets in emerging economies tripled in size to \$6.9 trillion from \$1.9 trillion (IOSCO working paper, September 2015). But even that was a puny part of the global debt (including households, corporate, government and financial), which stood at ~\$199 trillion in 2014, according to a McKinsey & Co estimate.

### How is the primary market doing?

In an encouraging turn, India saw a healthy growth in fresh issuance of bonds in the last five years, at a 19% CAGR. However, this was concentrated towards the top end, with AAA and AA category papers accounting for almost 80% of the total, mainly given the restrictive investment policies of key investors such as pension funds and insurance companies (Tables 3 & 4).

**Table 3: Swinging mop-ups**

|      | Number of issuers | Amount mobilised (Rs cr) | Growth in amount mobilised |
|------|-------------------|--------------------------|----------------------------|
| FY11 | 182               | 1,92,127                 | 1%                         |
| FY12 | 164               | 2,51,437                 | 31%                        |
| FY13 | 267               | 3,51,848                 | 40%                        |
| FY14 | 245               | 2,70,946                 | -23%                       |
| FY15 | 344               | 4,32,692                 | 60%                        |
| FY16 | 470               | 4,58,073*                | 6%                         |

Source: SEBI

\*Only details of private placement available

**Table 4: Rating-wise decomposition**

| Rating category | Amount (Rs cr) |          |          |          |          |          | FY16*-% of total |
|-----------------|----------------|----------|----------|----------|----------|----------|------------------|
|                 | FY11           | FY12     | FY13     | FY14     | FY15     | FY16*    |                  |
| AAA             | 1,32,075       | 1,89,447 | 2,26,311 | 1,89,396 | 2,80,348 | 1,85,840 | 54%              |
| AA+             | 18,775         | 28,054   | 54,742   | 36,917   | 60,466   | 41,500   | 12%              |
| AA              | 10,851         | 12,587   | 25,351   | 15,360   | 24,345   | 24,271   | 7%               |
| AA-             | 13,856         | 6,237    | 16,946   | 9,404    | 26,707   | 24,286   | 7%               |
| A+              | 8,178          | 2,167    | 3,735    | 5,880    | 12,637   | 9,620    | 3%               |
| A               | 5,844          | 6,175    | 12,015   | 5,207    | 7,826    | 7,832    | 2%               |
| A-              | 890            | 3,414    | 2,536    | 2,243    | 5,357    | 3,455    | 1%               |
| BBB and Below   | 1,658          | 3,356    | 10,637   | 6,539    | 15,007   | 47,095   | 14%              |
| Total           | 1,92,127       | 2,51,437 | 3,52,272 | 2,70,946 | 4,32,692 | 3,43,898 | 100%             |

Source: SEBI, Prime Database, CRISIL Research

\* Data up to December 2015

Among the sectors, banking, financial services and insurance (BFSI) dominated the issuances (Table 5). In fiscal 2016, as of the third quarter, private corporates and non-banking finance companies (NBFCs) saw the sharpest increase, followed by financial institutions and housing finance companies (HFCs). The skew towards top-rated issuers remained, given higher demand from the market. Also, favourable spreads between

bank base rate and yields on these papers prompted these players to raise capital through bonds instead of bank loans. The top 10 issuers accounted for 32% of total issuances in fiscal 2016, led by the financial sector (Table 6). Indeed, the list had only one issuer from manufacturing; financial institutions, HFCs or banks brought up the rest.

**Table 5: Sector-wise issuer decomposition**

|                                | Amount (Rs cr) |                |                |                |                |                 | FY16*-% of total |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|------------------|
|                                | FY11           | FY12           | FY13           | FY14           | FY15           | FY16(Q3)        |                  |
| Financial institutions         | 72,112         | 113,520        | 109,425        | 82,434         | 127,892        | 60,404          | 18%              |
| Housing finance companies      | 29,801         | 36,367         | 57,850         | 55,106         | 73,938         | 56,502          | 16%              |
| NBFCs                          | 12,877         | 26,697         | 45,777         | 38,774         | 64,957         | 78,466          | 23%              |
| Banks                          | 19,481         | 14,974         | 24,495         | 14,388         | 47,881         | 25,484          | 7%               |
| <b>Sub-total</b>               |                |                |                |                |                |                 | 64%              |
| Public sector undertakings     | 12,850         | 27,176         | 39,851         | 31,784         | 31,219         | 22,497          | 7%               |
| State-level undertakings       | 1,981          | 4,184          | 8,584          | 3,686          | 5,207          | 502             | 0%               |
| State financial institutions   | 1,425          | 1,575          | 5,394          | 1,482          | 1,733          |                 | 0%               |
| <b>Sub-total</b>               |                |                |                |                |                |                 | 7%               |
| Private – non-financial sector | 41,599         | 26,946         | 60,473         | 43,291         | 79,864         | 1,00,043        | 29%              |
| <b>Total</b>                   | <b>192,127</b> | <b>251,437</b> | <b>351,848</b> | <b>270,946</b> | <b>432,692</b> | <b>3,43,898</b> | <b>100%</b>      |

Source: SEBI, Prime Database, CRISIL Research  
\* Data up to December 2015



**Table 6: Top 10 issuers in FY16**

| Company                    | Sector                         | Amount (Rs cr) |
|----------------------------|--------------------------------|----------------|
| PFC                        | Public FI                      | 21,112         |
| LIC Housing Finance        | HFC                            | 17,343         |
| HDFC                       | HFC                            | 15,376         |
| REC                        | Public FI                      | 12,931         |
| Nabard                     | Public FI                      | 8,705          |
| Reliance Jio Infocomm      | Private – non financial sector | 7,500          |
| PGC                        | Public FI                      | 7,326          |
| IDFC                       | Bank                           | 7,042          |
| Indiabulls Housing Finance | HFC                            | 6,922          |
| Kotak Mahindra Prime       | NBFC                           | 5,668          |

Source: Prime Database, CRISIL Research  
Data up to December 2015

### Is the secondary market any better?

The secondary bond market, too, remains quite illiquid compared with global peers (Table 7). The concerns are heightened in case of corporate bonds compared with G-secs.

**Table 7: Secondary market liquidity comparison**

| Country     | Trading ratio |                 |
|-------------|---------------|-----------------|
|             | G-secs        | Corporate bonds |
| US          | 3.3%          | 0.9%            |
| China       | 0.7%          | 0.3%            |
| Japan       | 2.0%          | 0.1%            |
| South Korea | 0.9%          | 0.2%            |
| Hong Kong   | 1.3%          | 0.2%            |
| Singapore   | 0.4%          | NA              |
| Malaysia    | 0.4%          | 0.1%            |
| India       | 0.8%          | 0.2%            |

Trading ratio is average daily trading to amount outstanding; Data up to December 2015  
Source: SIFMA, ADB Online, CRISIL Research

Similar to the primary market, liquidity in the secondary market for corporate bonds has improved as average daily trading grew 11.5% annually over the past five years. However, the trading remains concentrated towards top-rated securities, with AAA- and AA-rated issuers accounting for almost 96% of the trades, while low-rated issuers are mostly in the held to maturity (HTM) category. Here, too, the BFSI sector dominates play (Table 8, 9 & 10).

**Table 8: Average daily trading (Rs cr)**

|       |       |
|-------|-------|
| FY11  | 2,437 |
| FY12  | 2,476 |
| FY13  | 3,047 |
| FY14  | 4,025 |
| FY15  | 4,584 |
| FY16* | 4,207 |

\* Data up to December 2015;  
Source: FIMMDA, NSE, BSE, CRISIL Research

**Table 9: Rating-wise trading in the secondary market**

| Rating category | % of total trading |       |       |       |       |       |
|-----------------|--------------------|-------|-------|-------|-------|-------|
|                 | FY11               | FY12  | FY13  | FY14  | FY15  | FY16* |
| AAA             | 74.6%              | 84.1% | 78.2% | 80.5% | 80.4% | 78.0% |
| AA+             | 11.7%              | 6.2%  | 10.5% | 8.0%  | 7.3%  | 8.1%  |
| AA              | 4.4%               | 4.3%  | 5.9%  | 4.7%  | 4.5%  | 6.3%  |
| AA-             | 7.0%               | 2.8%  | 2.5%  | 3.9%  | 3.7%  | 3.9%  |
| A+ and Below    | 2.4%               | 2.6%  | 2.9%  | 2.9%  | 4.0%  | 3.8%  |

\* Data up to December 2015;  
Source: FIMMDA, NSE, BSE, CRISIL Research

**Table 10: Sector-wise trading in the secondary market**

| Sector                         | % of total trading |        |        |        |        |        |
|--------------------------------|--------------------|--------|--------|--------|--------|--------|
|                                | FY11               | FY12   | FY13   | FY14   | FY15   | FY16*  |
| FIs                            | 43.20%             | 50.90% | 47.69% | 49.14% | 42.45% | 38.43% |
| HFCs                           | 14.30%             | 19.06% | 16.50% | 17.82% | 18.09% | 20.31% |
| PSUs                           | 9.80%              | 8.67%  | 8.78%  | 11.70% | 15.30% | 10.66% |
| Private – non financial sector | 11.20%             | 10.07% | 15.39% | 9.83%  | 11.55% | 14.91% |
| NBFCs                          | 15.50%             | 7.92%  | 6.28%  | 7.13%  | 8.02%  | 12.04% |
| Banks                          | 5.20%              | 2.69%  | 3.54%  | 2.59%  | 3.60%  | 3.01%  |
| State level undertakings       | 0.40%              | 0.55%  | 1.74%  | 1.77%  | 0.91%  | 0.63%  |
| State financial institutions   | 0.50%              | 0.14%  | 0.07%  | 0.03%  | 0.08%  | 0.01%  |

\* Data up to December 2015;  
Source: FIMMDA, NSE, BSE, CRISIL Research

A review of investment guidelines from major regulators for pension funds and insurance companies, explains the skew towards top-rated issuers. First, regulations prohibit key investors from picking up securities rated below AA, a segment where the BFSI sector dominates. Second, the market prefers top-rated PSU issuers given a perceived lower risk because of government backing. Third, high SLR/CRR requirements limit banks' demand for corporate debt. Fourth, arbitrage provided by bank loans, which are not marked to market, unlike bonds, feeds the preference for loans instead of bonds, too. Fifth, major players follow an HTM style of investing, which is also a reason for illiquidity in the secondary market.

### So what's the solution?

A developed bond market in India remains a distant dream, not because evangelists are few and far between. Indeed, development of the market has been an oft-repeated theme across research papers and conferences for years.

We believe the time to identify and pursue actionable steps to increase the depth of India's corporate bond market depth is nigh. We have identified a few of these, and it will be pertinent to note that all of them have facilitated growth in the corporate bond market of developed nations, which underscores their significance.

- Institutional investment through broad-based retail participation
  - Investor awareness
  - Development of new products
  - Taxation
  - Increased share of organised sector employment
  - Increased contribution of foreign investors

- Transition from bank loans to bonds
  - Impetus to securitisation market
  - Removing loan-bond arbitrage
  - Additional measures such as putting a cap on loans that can be raised by large borrowers
- Bonds by public sector banks – great demand but limited investors
- Revamp of credit enhancement mechanism
  - Boost to innovative structure (partial guarantee, securitisation of annuity – roads, receivables by municipal corporations)
- Revamp of regulatory policies for investments
- Quick and effective implementation of the Insolvency and Bankruptcy Code, 2016, to give comfort -- and showcase its efficacy -- to bond market investors

Identification and modification of regulations which are roadblocks in development of bond markets.



# **Adopting global best practices**

A sizeable debt outstanding notwithstanding, the corporate bond market is in a nascent state compared with not just developed countries, but also key emerging economies such as South Korea and Malaysia. South Korea, which has a GDP very similar to India, has a highly developed corporate bond market, with a penetration level of around 77%. Malaysia, though significantly smaller in terms of GDP, ranks the second-highest among Asian countries in terms of penetration.

|             | Corporate bond market penetration<br>(as % of GDP) |        |
|-------------|----------------------------------------------------|--------|
|             | FY11                                               | FY15   |
| India       | 10.07%                                             | 16.74% |
| South Korea | 58.62%                                             | 76.90% |
| Malaysia    | 37.01%                                             | 43.85% |

India can take a cue from reforms undertaken by these economies and implement the measures found suitable to the local market.

## Malaysia

### The capital market master plan

Malaysian government prepared a plan called 'The Capital Market Master Plan' (CMP) in 2001, to provide a comprehensive roadmap for the country's capital markets over the next 10 years. Representatives of the Securities Commission and local and foreign capital market professionals helped formulate the CMP.

Initiatives under CMP included:

#### Market institutions

- Linking the money settlement system with the capital market trading and clearing systems

#### Bond market

- Encouraging international financial institutions and multinational corporations to issue Ringgit bonds
- Allowing domestic bonds to be rated by international bond rating agencies
- Establishing a centralised platform for clearing and settlement of listed and unlisted bonds

#### Islamic capital market

- Promoting a wider range of Islamic collective investment schemes
- Increasing the pool of Islamic capital market expertise through more training and education
- Enhancing awareness of Malaysia's Islamic capital market at the domestic and international levels

#### Investment management

- Introducing a uniform regulatory framework streamlining the licensing rules for the investment management industry

#### Technology and e-commerce

- Facilitating end-to-end, straight-through processing in Malaysian capital markets, with linkages to international systems

The government also took measures such as:

### Establishment of the national financial guarantee institution

On May 2009, the Malaysian government announced the establishment of the national financial guarantee institution, Danajamin Nasional Berhad (Danajamin). Danajamin will provide financial guarantee insurance for issuances of private debt and Islamic securities. The insurance will be available for securities issued by investment grade companies, which are defined as rated BBB or higher by a Malaysian rating agency. Danajamin will have the capacity to insure up to MYR15 billion of investment grade private debt and Islamic securities.

### Measures to liberalise the capital market

On June 2009, Prime Minister Datuk Seri Najib Razak announced measures that would further liberalise foreign investment and open up Malaysia's domestic capital markets. The measures were part of the country's shift to a new economic model, following liberalisation in services sub-sectors and steps to enhance the financial sector. The important measures included:

- In the wholesale segment of the fund management industry, 100% ownership allowed for qualified and leading fund management companies;
- Foreign shareholding limits for the unit trust management companies/ stock broking companies raised to 70% from 49%;
- Foreign Investment Committee guidelines on acquisition of interests, mergers and takeovers repealed; no equity conditions to be imposed on sectors deemed non-strategic; and,
- The 30% 'bumiputra' requirement for an initial public offering done away with.

A new investment institution, Ekuiti Nasional Berhad (Ekuinas) will also be established. Ekuinas will serve as a private equity fund with an initial capital of Malaysian ringgit 500 million, which will be subsequently enlarged to 10 billion ringgit, focusing on investments in sectors with high growth potential and joint investments with private sector funds.

The above measures led to significant growth, with the outstanding of Malaysian corporate bonds quadrupling in 15 years, as detailed in table below.

| <b>Malaysia</b> | <b>Government (\$ billion)</b> | <b>Corporate (\$ billion)</b> | <b>Total (\$ billion)</b> | <b>GDP (\$ billion)</b> | <b>Government (% of GDP)</b> | <b>Corporate (% of GDP)</b> | <b>Total (% of GDP)</b> |
|-----------------|--------------------------------|-------------------------------|---------------------------|-------------------------|------------------------------|-----------------------------|-------------------------|
| Dec 2000        | 35.68                          | 33.02                         | 68.7                      | 93.79                   | 38.04                        | 35.21                       | 73.25                   |
| Mar 2009        | 88.12                          | 71.87                         | 159.99                    | 206.46                  | 42.68                        | 34.81                       | 77.49                   |
| Mar 2015        | 165.26                         | 124.56                        | 289.82                    | 301.8                   | 54.76                        | 41.27                       | 96.03                   |

Source: ADB Online, CRISIL Research

**Takeaway for India:** A master plan highlighting the roadmap for market development can be drawn up, and milestones set by the government to track progress. Measures such as providing partial guarantee/ insurance have been under evaluation for some time now. Setting up of a dedicated institution to provide guarantees/ credit enhancements can be looked at. Improving the infrastructure for trading, reporting and settlement is an imperative too.

## South Korea

The bond market in the Republic of Korea is one of the largest markets in Asia. Various reforms have led to its rapid development, including gradual market liberalisation. All fixed-income instruments are available to foreign investors. These include:

### Financial supervisory regulation rationalisation plan

The Financial Supervisory Commission (FSC) announced in December 2003 a set of initiatives to streamline and rationalise the regulatory framework of the Financial Supervisory Service (FSS). The plan contained 123 initiatives that emphasised deregulation of businesses, increasing transparency in capital markets, bolstering self-regulation, and deregulation of foreign financial service providers. Specifically, the initiatives aim to:

- raise the ceiling on privately placed bond holdings for investment of trust funds, and repeal the ceiling on privately placed bond holdings for mutual funds;
- expand the range of firms eligible to issue commercial papers and engage in asset securitisation as originators;
- enhance the effectiveness of short-sale regulations by incorporating these into the Securities and Exchange Act; and

- enhance regulatory equity between domestic and foreign market participants, and address the concerns of foreign financial institutions.

### Financial market stabilisation plan

The Korea Securities and Futures Exchange Consolidation Bill was passed in January 2004. The Bill is the legal framework for merger of the Korea Stock Exchange, Korea Futures Exchange, and the KOSDAQ Stock Market to establish an integrated and demutualised exchange. In January 2005, the Korea Exchange (KRX), was incorporated, in a consolidation of the three spot and futures exchanges. KRX was part of the Financial Market Stabilisation Plan under Korea's Economic Policy Direction for 2004. Other policy reforms in the plan include outlining the legal procedures and responsibilities for electronic financial transactions.

### Securities class action suit law

The Securities Class Action Suit Law became effective on January 1, 2005. Under the Law, class action suits can be initiated for unfair trading involving use of inside information and market manipulation. Companies can also be open to class action for deliberate falsification of financial statements and disclosure violations.

### Foreign exchange liberalisation plan

On May 19, 2006, the government announced it was accelerating foreign exchange liberalisation to attract investment capital for new infrastructure, and to promote foreign exchange market development. The foreign exchange liberalisation plan is now



expected to be completed in 2009 instead of 2011. The first phase of the two-phase programme is scheduled for 2006-2007.

The plan will (i) internationalise the won; (ii) liberalise foreign exchange transactions, including Korean overseas investments; and (iii) accelerate development of the foreign exchange market.

### Consolidation of securities and capital market laws

The Financial Investment Services and Capital Markets Act became effective on February 4, 2009. Major changes in the legislation include:

- Financial services deregulation – Removal of restrictions strictly separating securities, futures, asset management, trust services and other financial services businesses (excluding banking) to integrate their financial services business.

- Broadening the scope of financial investment products – the meaning and scope of financial investments and products offered reversed from the earlier system of enumerating what is allowed to one defining what is illegal.
- Deregulation of indirect investment – removal of restrictions that recognise only trust investments (in the form of beneficiary certificates), corporate-type investment companies (mutual funds) and private equity funds as indirect investment vehicles. Thus, other entities recognised under the Commercial Code can be included as indirect investment vehicles.

The above steps led to significant growth of debt markets in Korea, as detailed in table below.

| <b>Korea</b> | <b>Government<br/>(\$ billion)</b> | <b>Corporate<br/>(\$ billion)</b> | <b>Total<br/>(\$ billion)</b> | <b>GDP<br/>(\$ billion)</b> | <b>Government<br/>(% of GDP)</b> | <b>Corporate<br/>(% of GDP)</b> | <b>Total<br/>(% of GDP)</b> |
|--------------|------------------------------------|-----------------------------------|-------------------------------|-----------------------------|----------------------------------|---------------------------------|-----------------------------|
| FY01         | 122.74                             | 232.96                            | 355.7                         | 486.22                      | 25.24                            | 47.91                           | 73.15                       |
| FY09         | 360.35                             | 426.96                            | 787.31                        | 802.33                      | 44.91                            | 53.22                           | 98.13                       |
| FY15         | 711.68                             | 1000.69                           | 1712.37                       | 1352.5                      | 52.62                            | 73.99                           | 126.61                      |

Source: ADB Online, CRISIL Research

**Takeaway for India:** Liberalisation of investment policies by key investors such as pension funds, insurance companies and FPIs can be considered and focus sharpened on removing the hurdles in the path of development of securitisation markets.

## Additional global experiences

### Weaning businesses away from loans

In the US, economies of scale and banking regulation may have played an important role in growth of the corporate bond market. Securities issuance is typically characterised by high set-up costs, but low incremental costs, as the size of the securities issue increases. As such, for the numerous large US corporates, capital markets as a source of financing could be much more compelling than the alternative of using depository institutions. Additionally, banking regulations have kept the securities business separate from commercial banking for most of the past 70 years, and until the 1980s restricted the banking system from being as concentrated as other in countries, including by limiting geographical expansion. Both of these factors have fostered competition, limited the dominance of the banking sector and contributed to corporate bond market growth.

**Takeaway for India:** The following changes can be adopted

1. Removing differential treatment of loans and bonds in terms of valuations – Loans are not marked to market, whereas bonds are. Such difference leads to preference of banks for loans as bad investments can be hidden, unlike in bonds
2. Reducing the CRR/SLR requirements – This will free up capital for banks to invest in corporate bonds
3. Restricting loans to top-rated issuers – This can push top-rated corporate issuers to enter the bond market

## Tax incentives

Favourable tax treatment is one method of incentivising populations to place their wealth with institutional investors. For instance, the US's introduction of pre-tax, defined-contribution 401(k) retirement plans in 1978 propelled growth in the mutual fund industry and, consequently, its capital markets.

Countries can also mandate that populations place their wealth with institutional investors, as Chile did in the 1980s; this has been credited with being instrumental to the country's corporate bond market development.

Hong Kong, Singapore and the United Arab Emirates do not have capital gains or interest income withholding tax. Indonesia is another example of an emerging market that is considering tax breaks for investors in domestic corporate bonds.

In the Indian context, taxation is a crucial influencer of investor decision. Currently, debt products are less tax-efficient than equity products. And within debt products, mutual funds and insurance plans are relatively more tax-efficient than direct investments. Tax incentives have, in the past, helped channel savings to financial assets such as insurance, retirement products, equity-linked savings schemes and infrastructure bonds. A tax sop also has a positive psychological impact as investors recognise it as a de facto product from the government. Initiatives such as Rajiv Gandhi Equity Savings Scheme can be replicated for corporate debt products, too. Increase in share of organised sector employment will help bring in a larger section of working population under the ambit of retirement products such as Employees Provident Fund and the National Pension System. Additionally, mandatory contribution to pension can be an option worth considering.

## Transparency

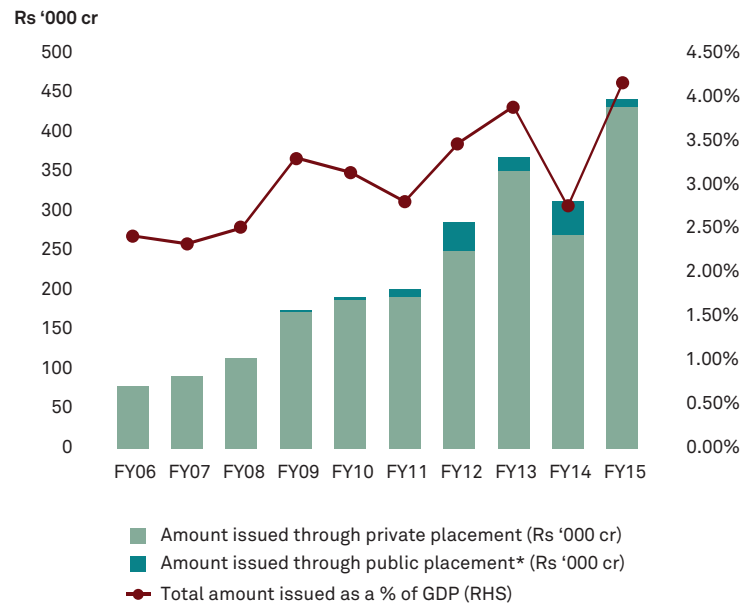
The Asia Bond Monitor provides an example of efforts by ASEAN – backed by the Asian Development Bank – to improve the capture and availability of information on their bond markets. The quarterly publication provides a thorough review of the recent developments in east Asian LCY bond markets along with an examination of the outlook, risks and discussion of policy options. It has greatly improved understanding of the general ASEAN bond markets and supports investors in their own evaluation of the markets. The US also has a trade reporting system, TRACE, where all secondary markets trades are reported within 15 minutes of trade execution.

**Takeaway for India:** The country needs to update its infrastructure to provide better trade settlement and reporting platforms. Availability of primary and secondary market transactions can attract a lot of new investors who can conduct research and take informed decisions on investments. Being a part of initiatives such as ASEAN can also help in standardising the information and procedures and help in flows from member nations.



# Corporate bonds

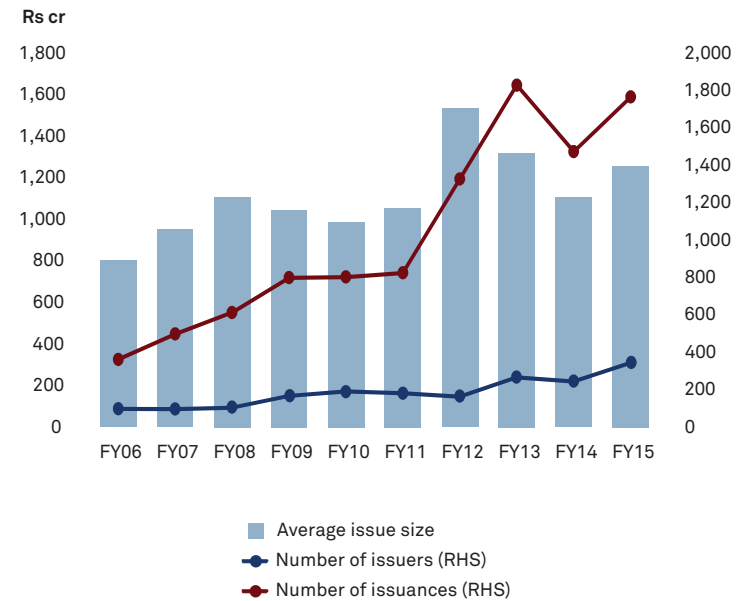
### Issuances grow over five-fold in a decade, placements dominate



\*Data for public placements of corporate bonds available from FY09 onwards  
Source: RBI, SEBI, Prime Database

Private placement remains the most-preferred route to raise monies due to ease of issuance, cost efficiency and institutional demand in private placements. The share of public placements in total issuance declined 11 percentage points – or by Rs 32,670 crore – to 2% in fiscal 2015.

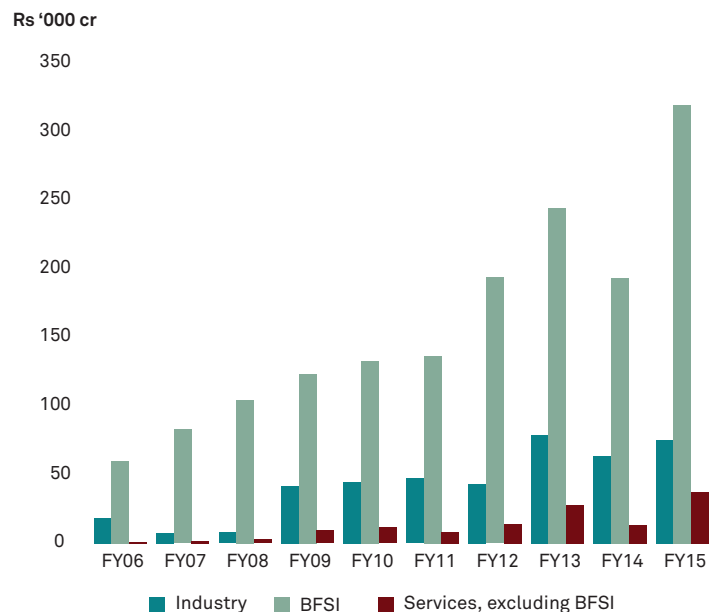
### Market decomposition by issuer, issuance and size



Source: Prime Database

Primary issuance picked up after slowing down in fiscal 2014. Total issuance increased 41% on hopes of economic revival and clarity on the treatment of debenture-redemption reserve for non-banking financial companies (NBFCs). Net investments by foreign portfolio investors (FPIs) increased from a negative Rs 28,000 crore in fiscal 2014 to a positive Rs 166,000 crore.

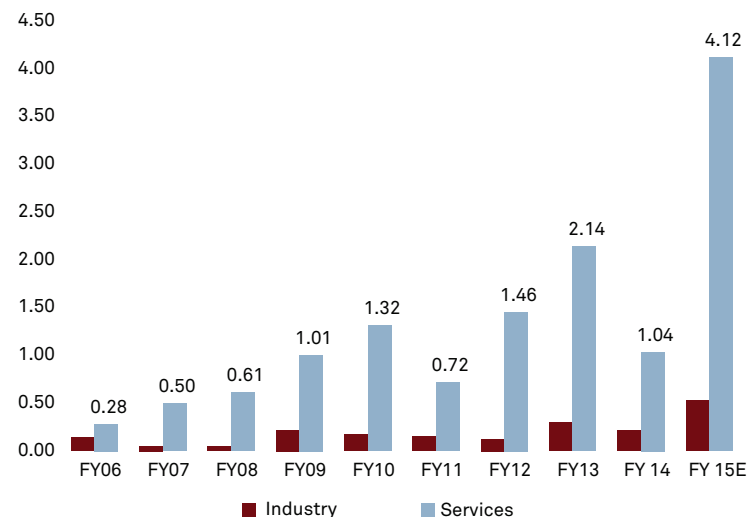
### Bulk of the issuance continues to be from the BFSI sector



Source: Prime Database, CRISIL Research

The services sector extended its domination of issuance, led by the banking, financial services and insurance (BFSI) segment, while other sectors continued to rely less. Issuance by services – excluding BFSI – almost tripled over the previous year. This can be attributed to more floats from the housing, real estate and infrastructure sectors, which have picked up due to the government’s focus on infrastructure build-out. Additionally, information technology and telecom sectors also increased their borrowings.

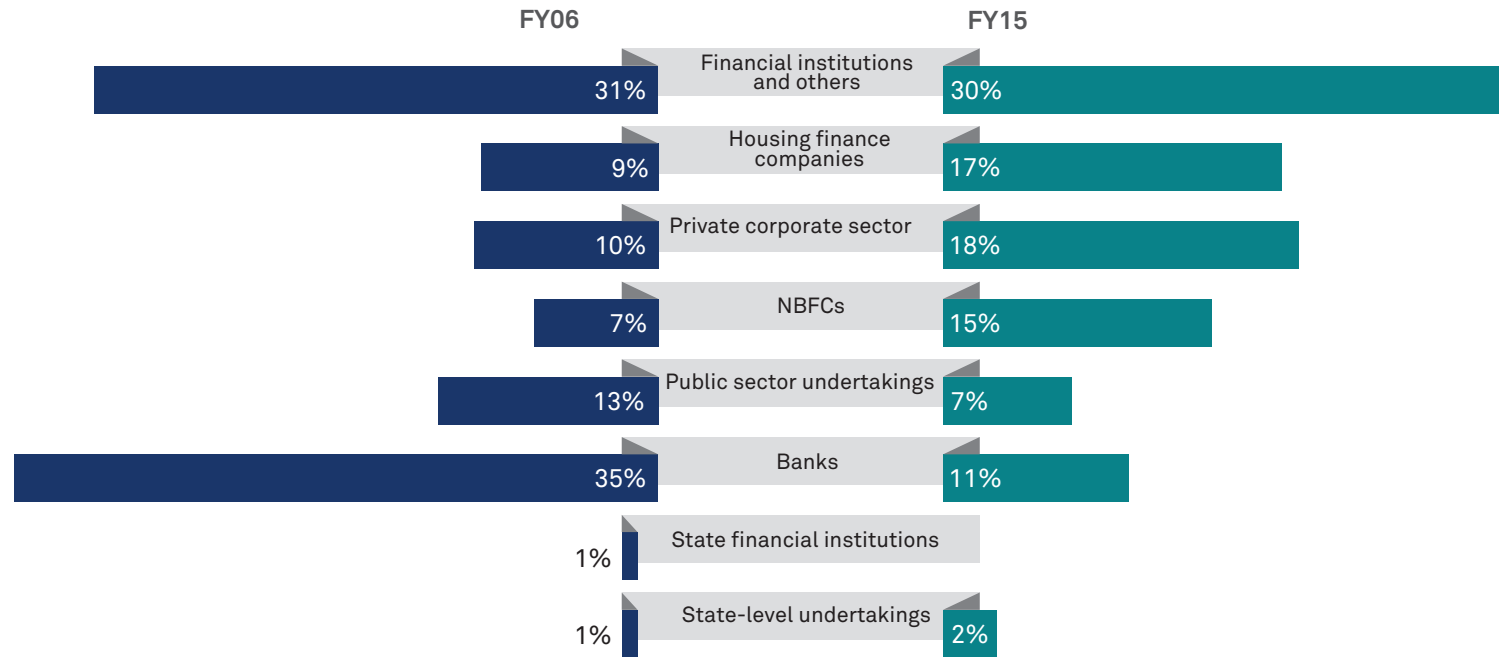
### The growing shift to capital market borrowings



\*Ratio of bond issuances to incremental gross bank credit deployment during the year, excluding bond issuances by banks  
Source: RBI, Prime Database, CRISIL Research

The ratio of bond issuance to bank credit increased for both the industrial and services sectors, due to higher demand from top-rated corporates and lower cost in the bond market. The ratio was 4.12 in Fiscal 2015 for the services sector, implying almost 80% of borrowing was from the bond market.

### Issuances by private non-financials, HFCs and NBFCs take off



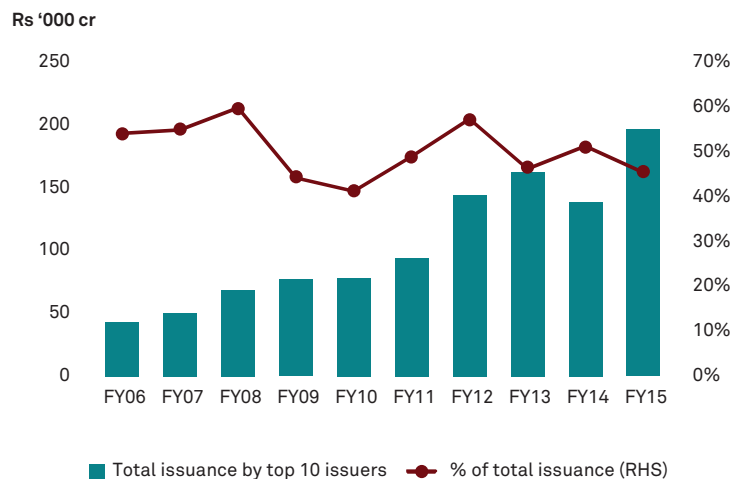
Source: Prime Database, CRISIL Research

In the decade to fiscal 2015, the share of issuance by housing-finance companies (HFCs) and non-banking finance companies (NBFCs) increased from 16% to 32%, as funding preference shifted away from banks. Borrowing from the money market led to a diversification in resource profile, reduced cost of funds (due to higher liquidity, and acceptability by, and demand from, investors). Issuance by banks declined on lower credit growth, surplus funds and healthy foreign currency non-resident (FCNR) deposits. Issuance by state firms was negligible as

debt-burdened power distribution companies stayed away. Issuance by private non-financials, comprising manufacturing, real estate, power, steel and other corporates, increased significantly on higher demand, acceptability of higher-rated manufacturing sector issuers, and the benefit of borrowing from the bond market at a lower cost compared with bank loans, which carried higher base rates. The top five issuers in this category were Reliance Jio, IOT Utkal, JSW Steel, Tata Motors, and Adani Power & Special Economic Zone.



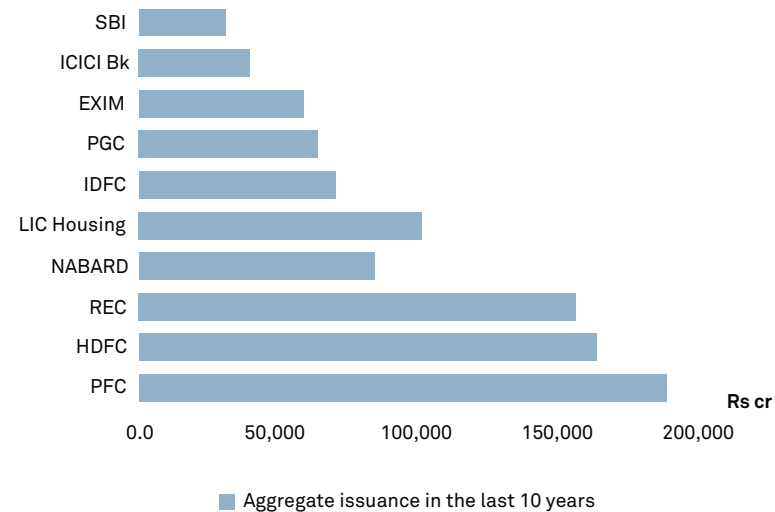
### Top 10 account for chunk of issuances



Source: Prime Database

Total issuance from top 10 issuers continued to grow in volume, but in percentage terms, it has remained steady between 40% and 60% in the past few years. The same can be attributed to high demand for these issuers as there is limited supply from top rated issuers.

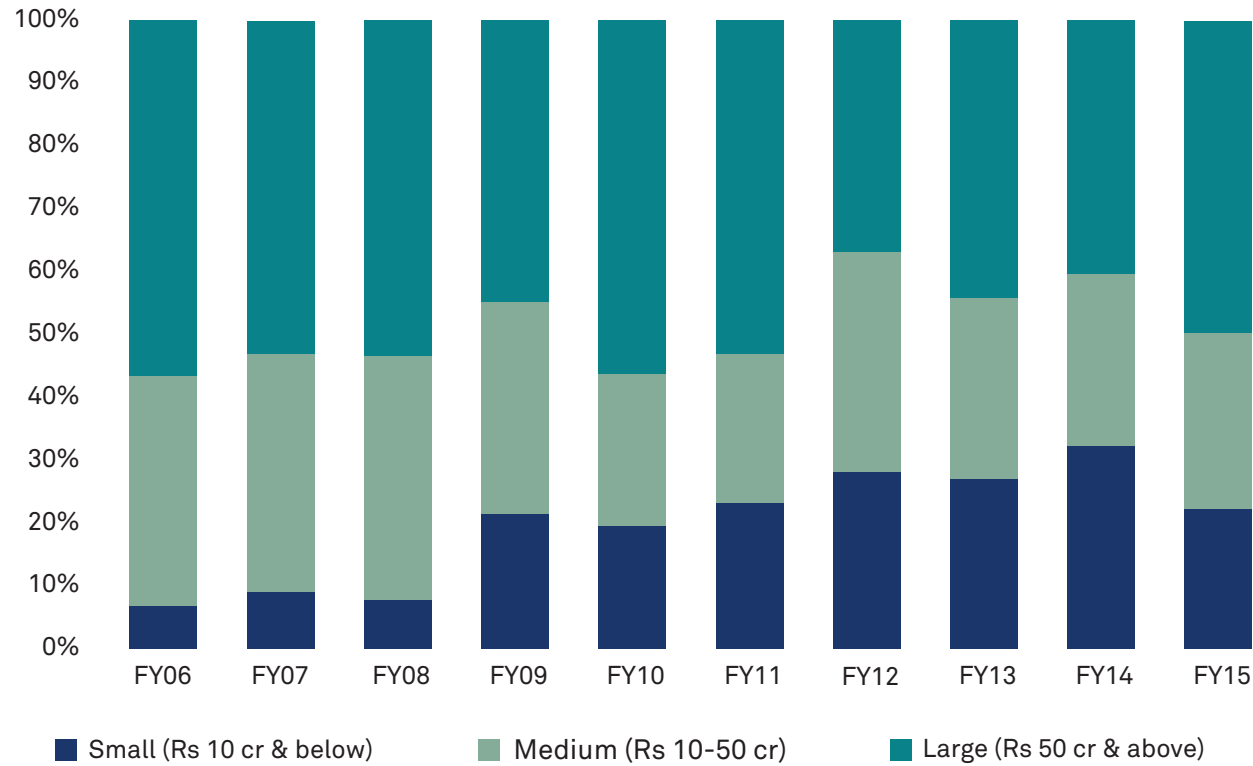
### Financial institutions top the toppers



Source: Prime Database

Financial institutions continue to form a majority of the top-10 issuers' list. ICICI Bank replaced Indian Railway Finance Corporation, which had negligible issuance compared with fiscal 2014.

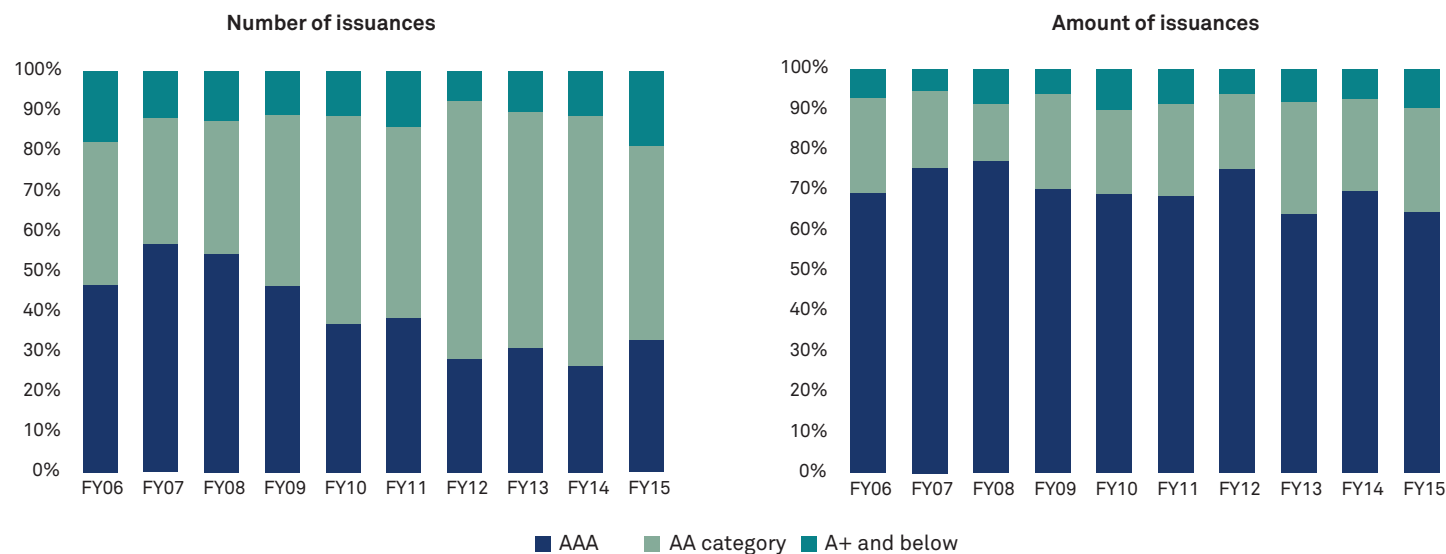
### Half of the issuances are big-ticket



Source: Prime Database, CRISIL Research

The share of large issuances grew to 50% of total, a rise of 10 percentage points, grabbing the share from small issuances due to few large issuances from corporates which took advantage of low yields in bond markets.

**AA rating category continues to dominate by number, and AAA category by volume**

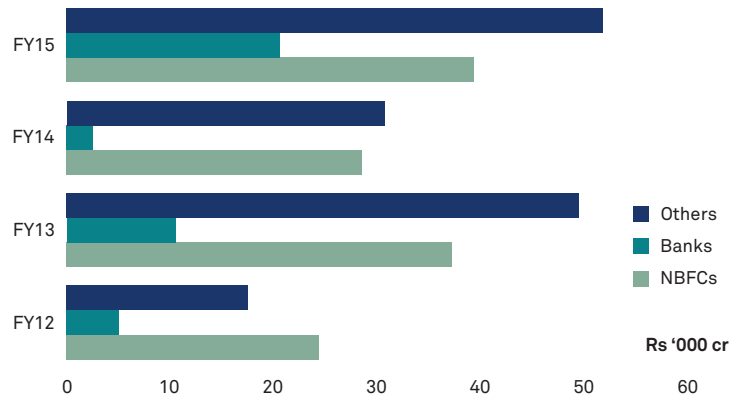


Source: Prime Database, CRISIL Research

AA rated entities remain the largest category in terms of issuance by number, but their share in total fell from 62% to 48%. Issuance grew 8 percentage points in the A+ and below category, and by 6 percentage points in AAA category. The number of A rated issuers increased 35%.

In terms of volume, the trend remains consistent across years, with AAA rated entities accounting for 65-70% of the issuance. Even though there is a sharp rise in the number of issuances by the A+ and below category, growth is only 2 percentage points because of low ticket sizes.

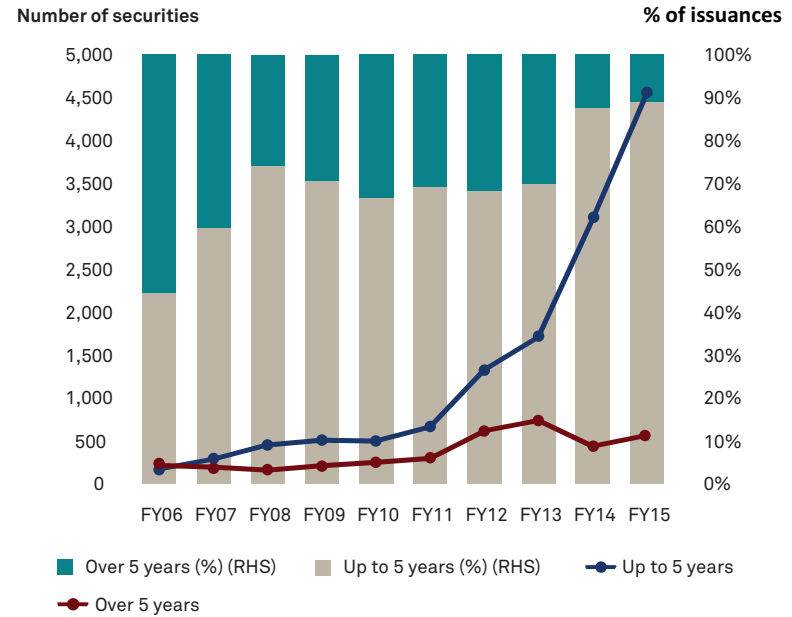
### AA issuances log all-round growth



Source: Prime Database, CRISIL Research

Issuance by banks and others increased considerably, showing rising acceptance of new papers from these segments. Higher number of issuances from HFCs, the services sector, manufacturing companies, and financial institutions drove growth.

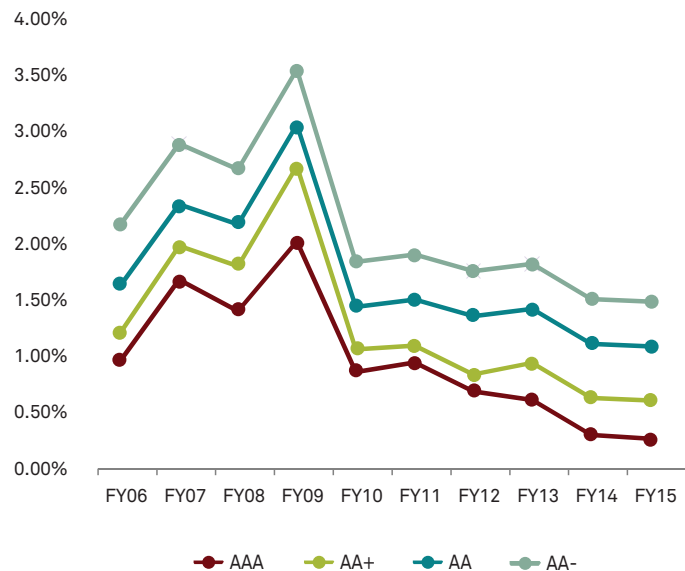
### Shorter papers continue to find favour



Source: Prime Database

Growth in longer issuance was almost flat, but issuance of small- to medium-term maturity papers grew sharply, due to demand for fixed-maturity plan (FMP) rollovers, higher issuance from NBFCs (which is concentrated in this maturity segment) and greater demand from FPIs. Rollovers were led by changes in taxation, which make FMPs below three years unfavourable for investment. FPI demand in maturities beyond three years was due to change in regulation which prohibits investment in papers with maturity of less than three years.

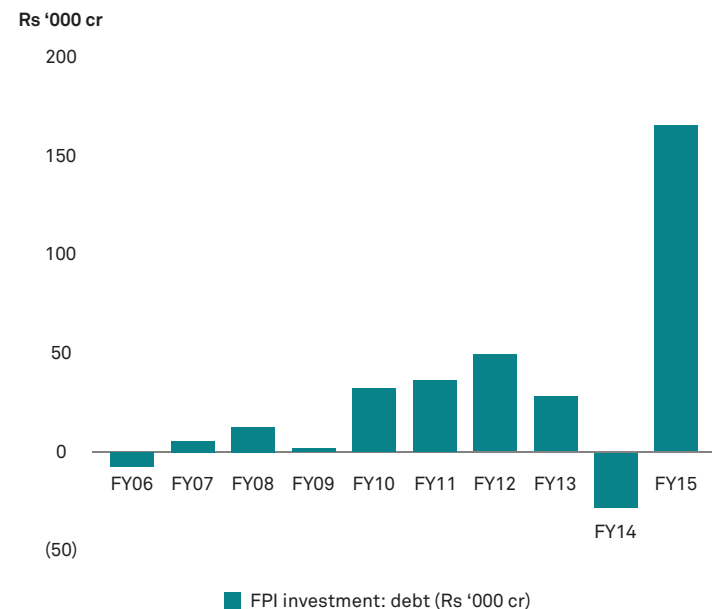
### Bond spreads narrow further



Spread over 10-year benchmark G-sec yield as on March-end  
Source: CRISIL Research

Spreads between yields on 10 year corporate bonds and G-secs continued to narrow, due to higher demand for corporate bonds from institutional investors. Reasons like fall in crude oil prices, stable exchange rates, revision of rating outlook for India to stable, and easy liquidity conditions led to fall in yields and spreads

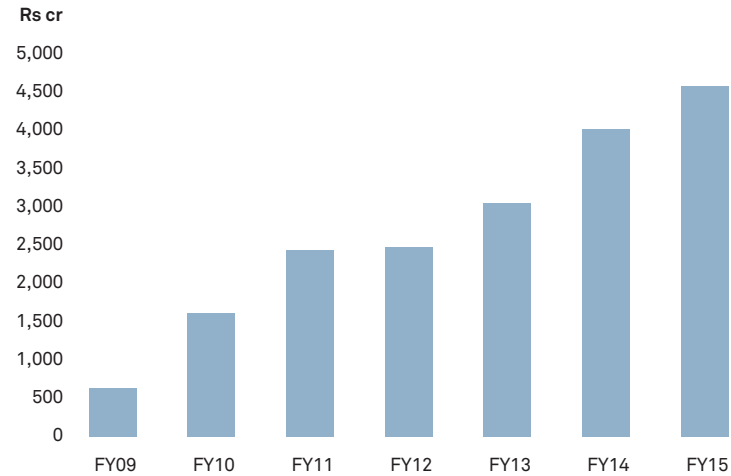
### FPI plonk it in



Source: SEBI

FPI investments increased manifold, suggesting positive sentiment due to a stable government, lower inflation, steady growth rate and higher investment limit.

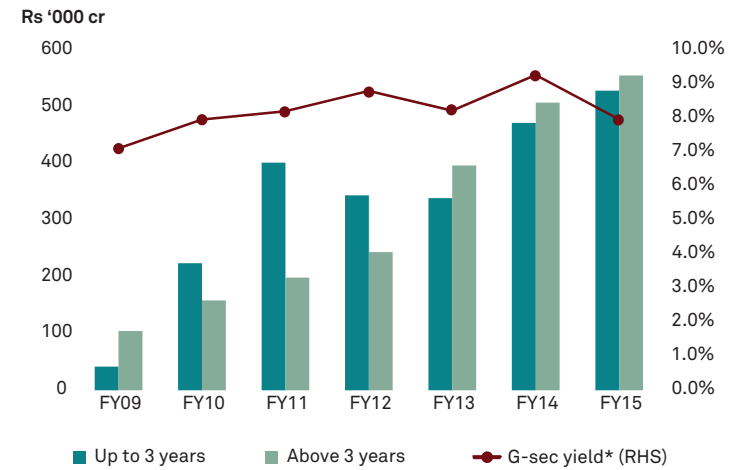
### Trading in secondary market rising



Average daily trading  
Source: FIMMDA, CRISIL Research

Secondary market trading continued to grow, indicating increasing depth and liquidity. Higher FPI activity also contributed marginally to this trend.

### Longer-tenures trade more in bullish markets



Total annual trading  
\*10-year benchmark G-sec yield as on March-end  
Maturity refers to residual maturity of the instruments  
Source: RBI, FIMMDA, CRISIL Research

Longer maturity continues to trade more, due to the large number of trades from banks selling to pension funds and insurers. It was also due to FPI demand for tenures greater than three years.

# **Certificates of deposit and commercial papers**

### A hat-trick of declines in CD issuances

| Certificates of deposit |                |                         |
|-------------------------|----------------|-------------------------|
|                         | Amount (Rs cr) | Interest rate range (%) |
| FY04                    | 4,697          | 3.57-7.40               |
| FY05                    | 12,825         | 1.09-7                  |
| FY06                    | 71,684         | 4.10-8.94               |
| FY07                    | 114,886        | 4.35-11.90              |
| FY08                    | 41,426         | 5.50-11.50              |
| FY09                    | 134,712        | 5.25-21                 |
| FY10                    | 428,438        | 3.09-11.50              |
| FY11                    | 851,834        | 4.15-10.72              |
| FY12                    | 944,996        | 7.30-11.90              |
| FY13                    | 865,156        | 7.85-12                 |
| FY14                    | 796,468        | 7.50-11.95              |
| FY15                    | 772,847        | 7.55-10.25              |

Source: RBI

Issuance of certificates of deposit (CD) marginally extended the decline due to low credit growth of banks. The easing of liquidity conditions, coupled with a reduction in the policy rate and relatively lower issuances of CDs by banks on the back of subdued credit off-take, led to a decrease in interest rate on CDs.

### CP issuances up five-fold in five fiscals

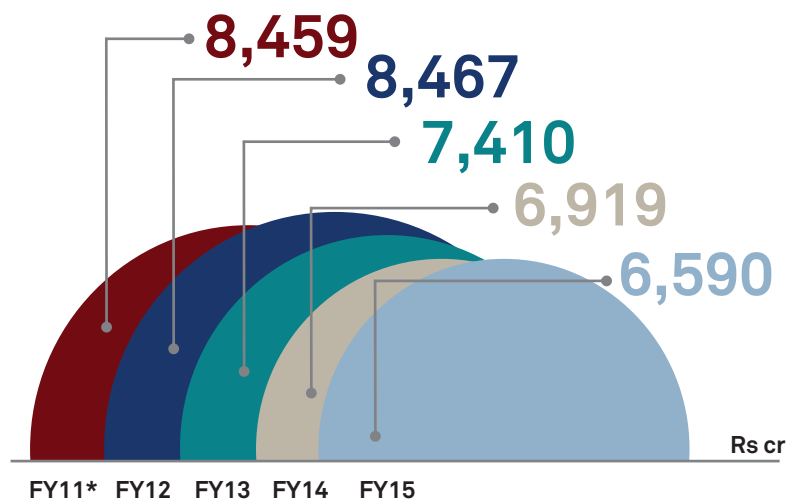
| Commercial paper |                |                         |
|------------------|----------------|-------------------------|
|                  | Amount (Rs cr) | Interest rate range (%) |
| FY06             | 31,686         | 5.25-9.25               |
| FY07             | NA             | 6.25-13.35              |
| FY08             | NA             | 2.25-16                 |
| FY09             | NA             | 5.25-17.75              |
| FY10             | NA             | 2.83-12.50              |
| FY11             | 225,453        | 3.85-18                 |
| FY12             | 492,420        | 6.39-15.25              |
| FY13             | 765,353        | 7.37-15.25              |
| FY14             | 728,146        | 7.36-14.31              |
| FY15             | 1,150,061      | 7.36-14.92              |

NA: Not available  
Source: RBI

Issuance volume of commercial paper (CP) increased by more than 58%, reflecting substitution of short-term bank credit by market based funding on account of the cost effectiveness of CPs for raising funds. For the first time, CP issuances were more than CDs by 49%, due to lower demand from banks and wider spreads. NBFC issuers tapped the market due to wider spreads between bank base rates and debt market yields and a higher share in the lending to small and medium enterprises.



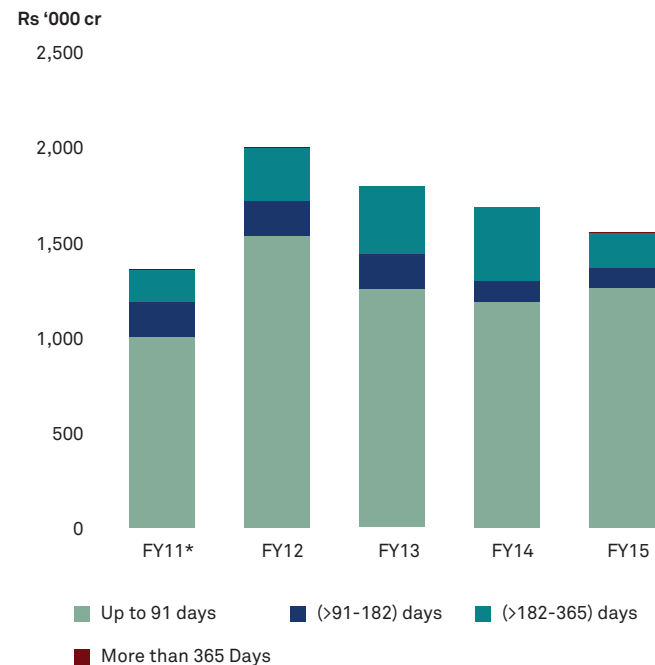
Trading in CDs dropped for a third consecutive year



Average daily trading  
\*From August 2010  
Source: FIMMDA

In line with the issuance volume trend, average daily trading in CDs extended its decline by 5%.

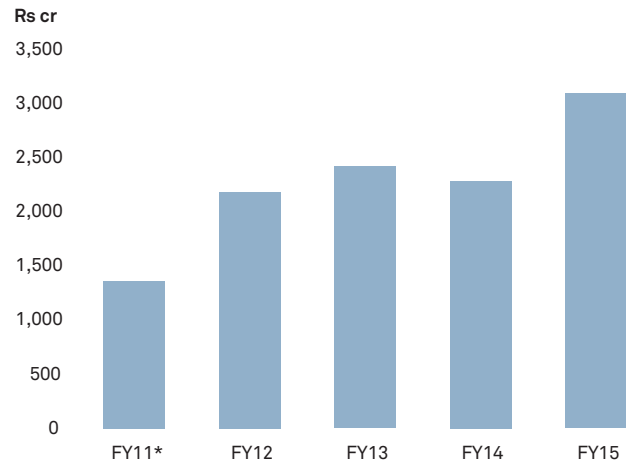
CDs of up to 91-day maturity dominates trading



Total annual trading  
\*From August 2010  
Maturity refers to residual maturity of the instruments  
Source:FIMMDA

Secondary market trading in CDs declined 8%, with the maximum hit taken by 182- to 365-day papers, where volume dropped 52%. CDs with tenures to 91 days continued to be the most liquid.

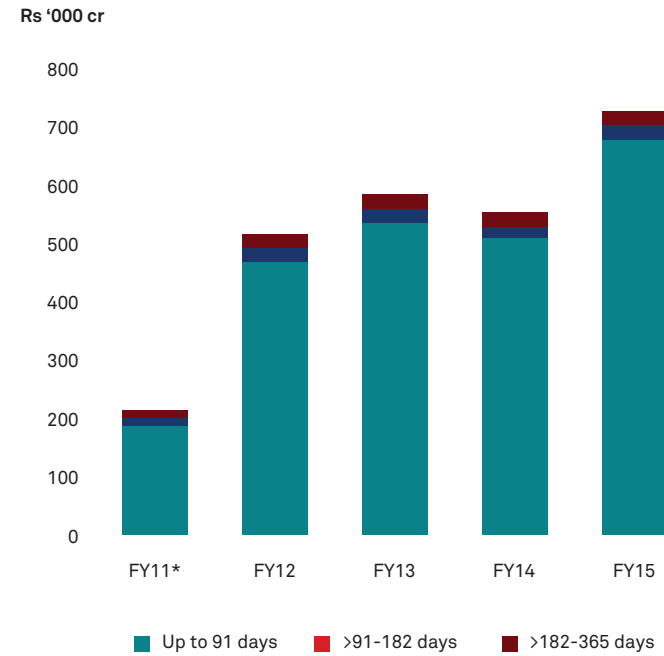
### Trading in CP picks up



Average daily trading  
\*From August 2010  
Source: FIMMDA

Secondary market trading data show overall volume in CP trading increasing 32%. The trend is similar to the issuance trend for commercial paper.

### Shortest-tenure paper traded the most

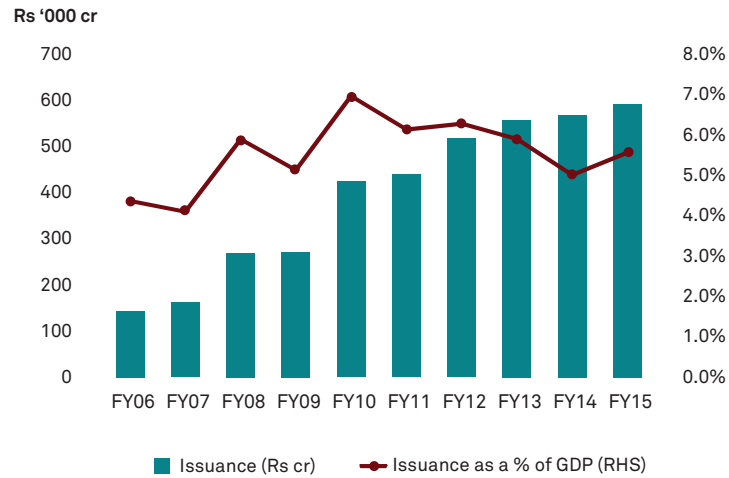


Total annual trading  
\*From August 2010  
Maturity refers to residual maturity of the instruments  
Source: FIMMDA

CPs with maturity up to 91 days remained the most liquid, with almost 93% of the trades happening in them.

# **Government securities**

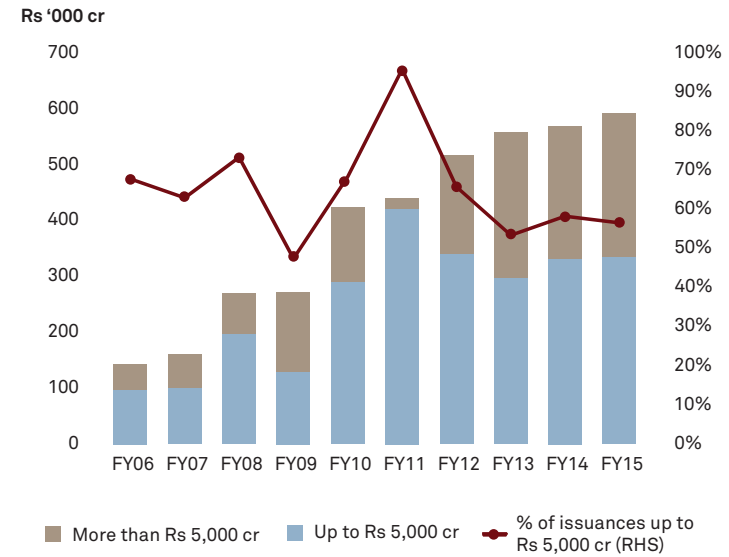
### Issuances grow along with share in GDP



Source: RBI, CRISIL Research

Issuance amount (absolute and as a percentage of GDP) increased marginally over the previous year. The central government borrowed Rs 5.92 lakh crore in fiscal 2015, lower than the budgeted Rs 6 lakh crore. That compares with Rs 5.68 lakh crore borrowed in fiscal 2014.

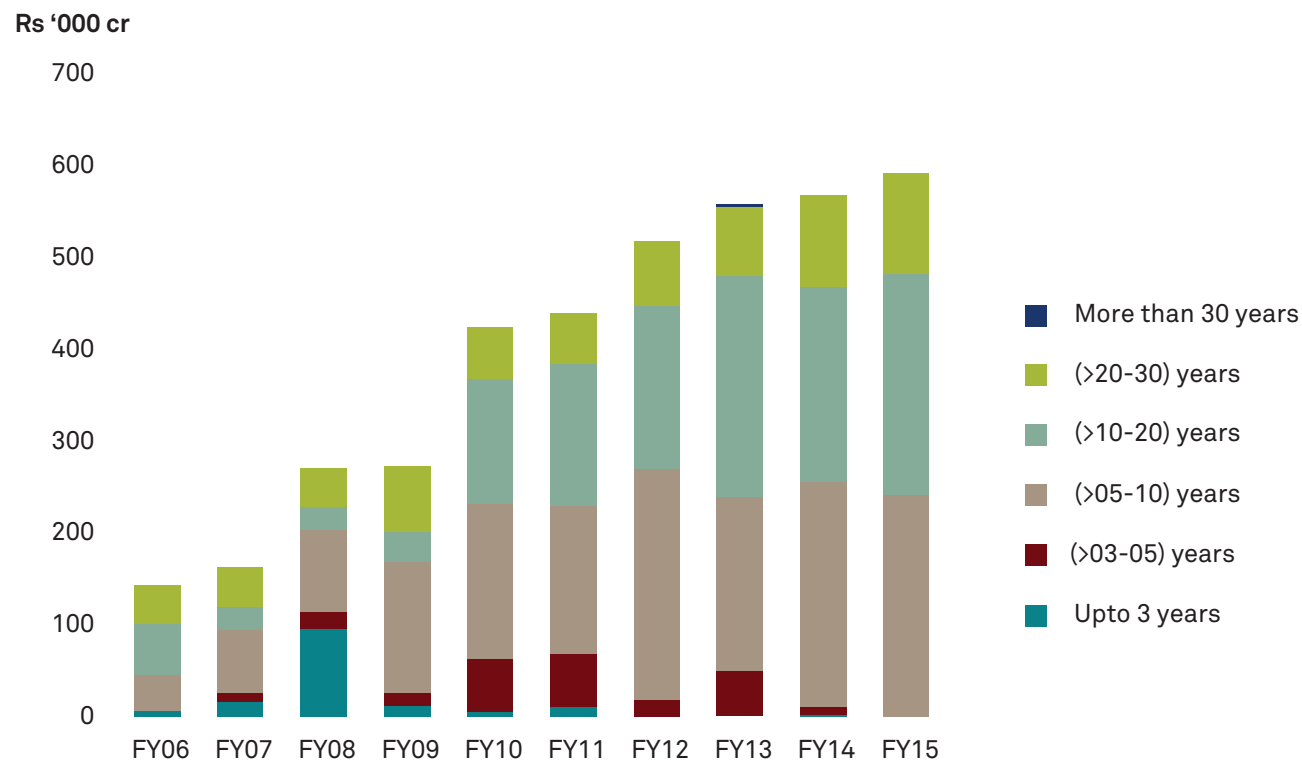
### Small and big issuances apace



Source: RBI, CRISIL Research

Larger issuances (greater than Rs 5,000 crore) increased marginally compared with the previous year.

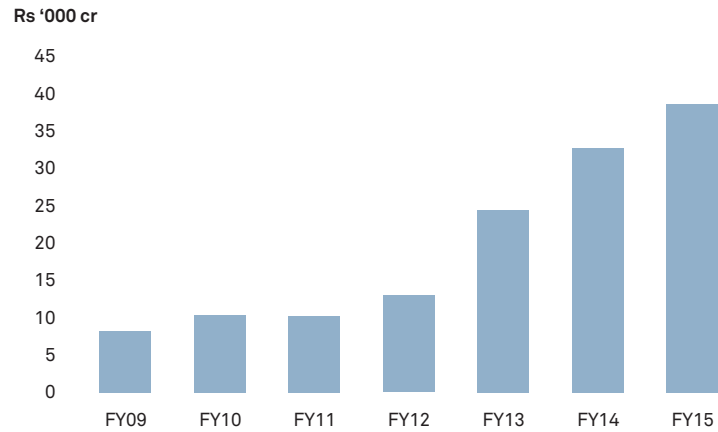
**No issuance in the short tenures**



Source: RBI, CRISIL Research

There was no issuance in the shorter maturity (0-5 years) as RBI elongated the maturity profile of government debt, through long tenure issuances, thereby mitigating rollover risks. Borrowing increased in the 10-20-year segment while overall borrowing increased slightly.

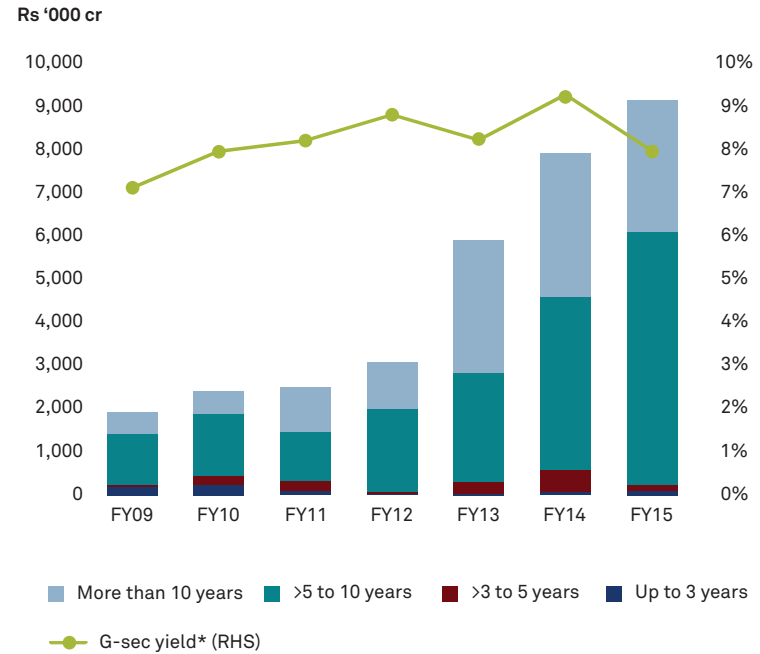
### Secondary market trading continues to be healthy



Average daily trading  
Source: CCIL

Average daily trading continued to increase in fiscal 2015, rising 18%. In the previous four years, it increased nearly 3 times, due to higher FPI limit and lower statutory liquidity ratio for banks, which are the majority G-sec traders.

### Longer-tenures trade more amid falling yields

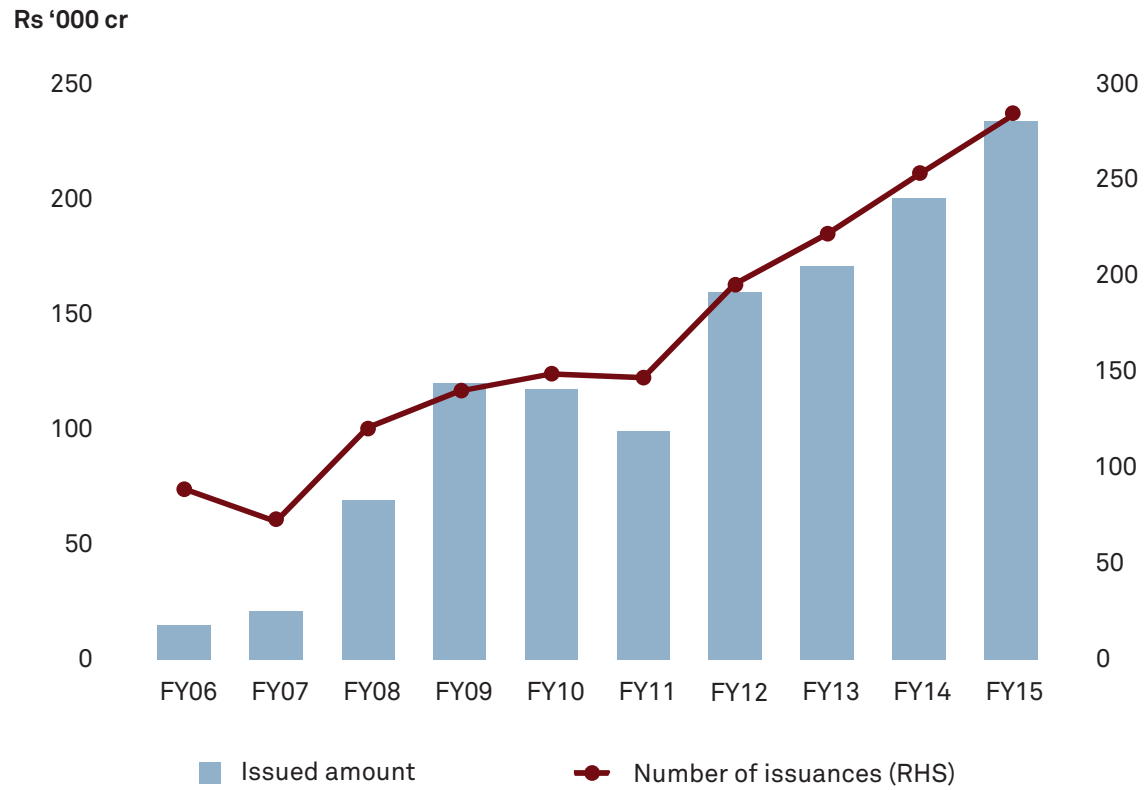


Total annual trading  
\*10-year benchmark G-sec yield as on March-end  
Maturity refers to residual maturity of the instruments  
Source: RBI, CCIL

Trading in medium-term papers (3-5 years) decreased considerably because of the lack of fresh issuance and lower FPI interest. Investors preferred longer durations due to the expectation of an economic revival and falling interest rates. Majority of trades (about 65%) were by banks (domestic and foreign) and primary dealers (about 20%), which are mainly sellers of new securities, followed by mutual funds and insurers. Trading was higher in the longer tenures, as the majority of issuance was in that segment.

# **State development loans**

### Of late, a sharp rise in state development loan issuances



Source: RBI (FY10-15), CRISIL Research (FY06-09)

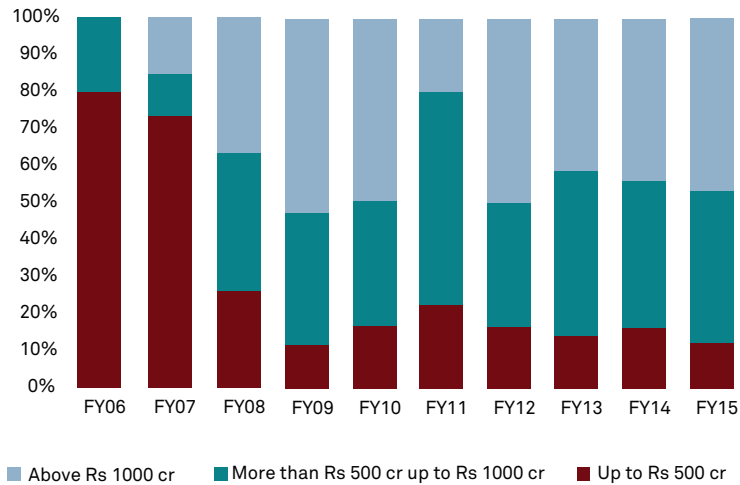
Issuance of state development loans continued to increase, as states hit the bond market multiple times to fund development.



**West Bengal, Maharashtra, Andhra most prolific borrowers**

| Classification of states based on amount and frequency of issuances |                                           |                                                                   |            |                   |                  |
|---------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------|------------|-------------------|------------------|
|                                                                     |                                           | Number of years in which issuances were made in the last 10 years |            |                   |                  |
|                                                                     |                                           | <5                                                                | 5 to 8     | 9                 | 10               |
| Aggregate amount issued in last 10 years                            | Up to Rs 5,000 cr                         | Odisha                                                            | Puducherry | Tripura           | Manipur          |
|                                                                     |                                           |                                                                   |            | Sikkim            | Meghalaya        |
|                                                                     |                                           |                                                                   |            | Arunachal Pradesh | Mizoram          |
|                                                                     | Above Rs 5,000 cr and up to Rs 25,000 cr  | Chhattisgarh                                                      | Assam      |                   | Goa              |
|                                                                     |                                           |                                                                   |            |                   | Himachal Pradesh |
|                                                                     |                                           | Jammu & Kashmir                                                   |            |                   |                  |
|                                                                     |                                           | Jharkhand                                                         |            |                   |                  |
|                                                                     | Above Rs 25,000 cr and up to Rs 50,000 cr | Telangana                                                         |            |                   | Nagaland         |
|                                                                     |                                           |                                                                   |            |                   | Uttarakhand      |
|                                                                     | Above Rs 50,000 cr and up to Rs 80,000 cr |                                                                   | Haryana    | Karnataka         | Madhya Pradesh   |
| Kerala                                                              |                                           |                                                                   |            |                   |                  |
| Punjab                                                              |                                           |                                                                   |            |                   |                  |
| Above Rs 80,000 cr                                                  |                                           |                                                                   | Gujarat    | Rajasthan         |                  |
|                                                                     |                                           |                                                                   |            | Andhra Pradesh    |                  |
|                                                                     |                                           |                                                                   |            | Maharashtra       |                  |
|                                                                     |                                           |                                                                   |            | Tamil Nadu        |                  |
|                                                                     |                                           |                                                                   |            | Uttar Pradesh     |                  |
|                                                                     |                                           |                                                                   |            | West Bengal       |                  |

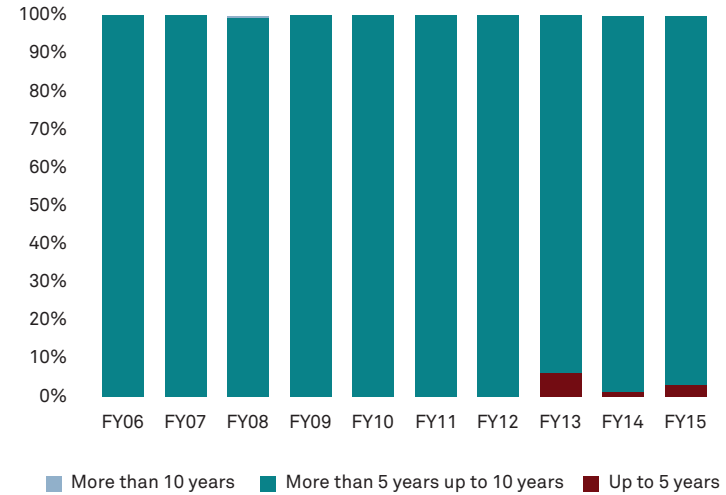
### Slight increase in larger issuances



Source: RBI (FY10-14), CRISIL Research (FY05-09)

Large issuances (Rs 500 crore and more), which remain the most preferred size, increased by 22%, while smaller ones reduced by 12%.

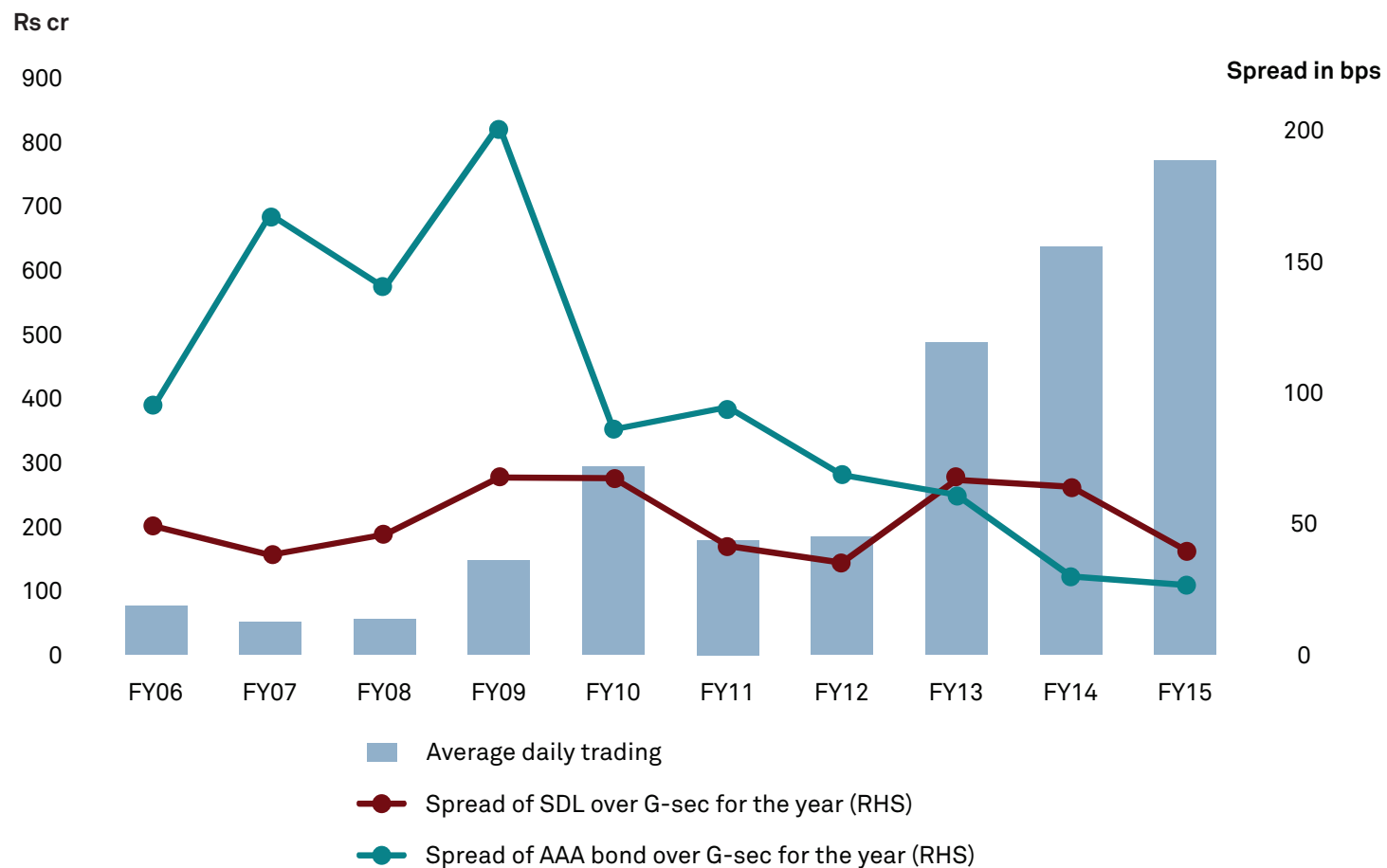
### 10-year maturity remains the preferred tenure



Source: RBI (FY10-15), CRISIL Research (FY06-09)

In SDLs, 5-10 years remained the preferred maturity, with a majority of issuance in the 10-year bracket. However, in fiscal 2015, there were quite a few instances of SDLs being issued with tenures up to five years and a few special bonds with tenures greater than 10 years. These bonds were special because they were not eligible for statutory liquidity ratio calculation and predate the UDAY bonds for the power sector

**Fiscals 2012-15 saw a sharp rise in traded volume**

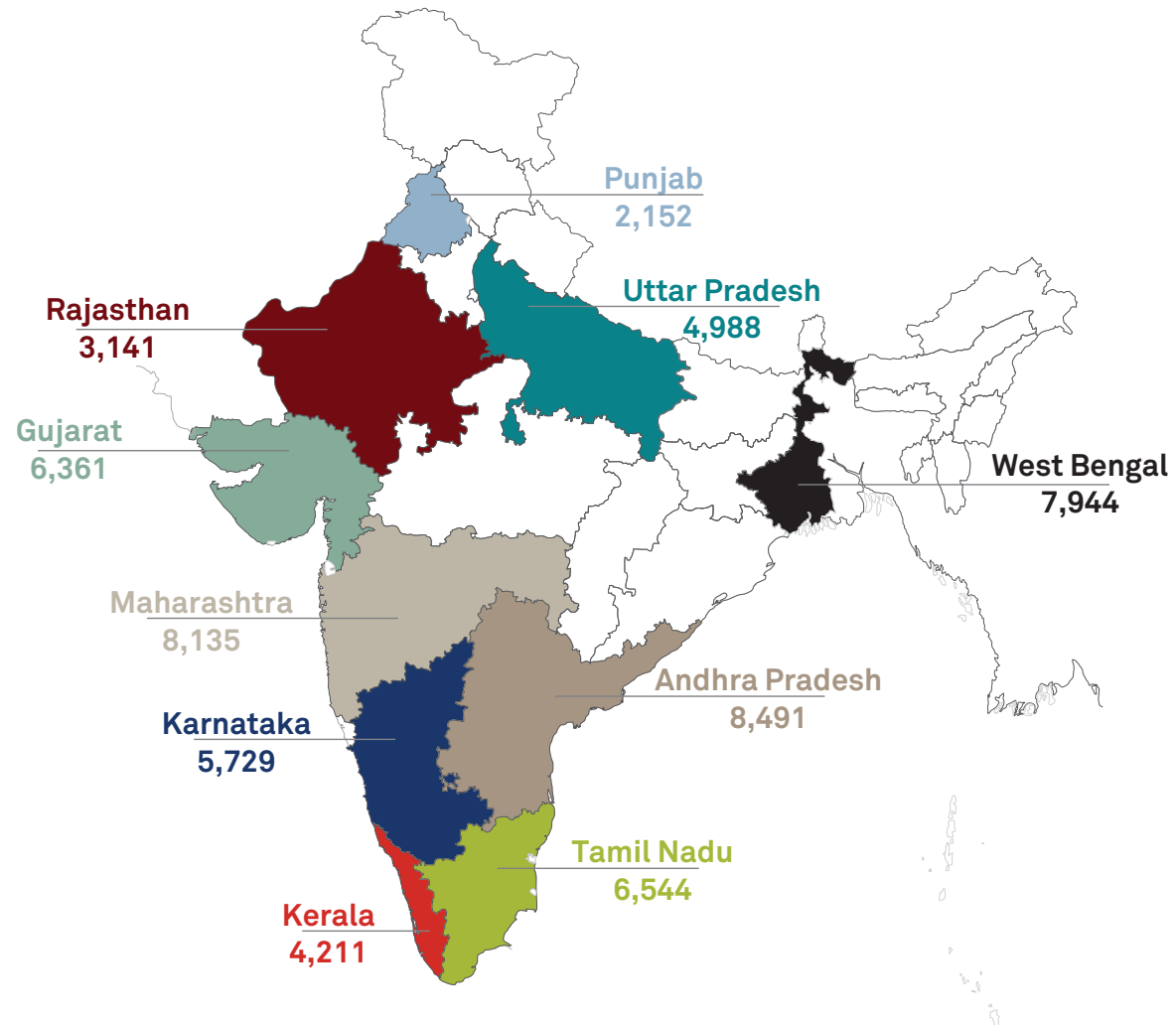


Source: CCIL (FY09-15), CRISIL Research (FY06-08)

Over the past three years, as traded volume and liquidity increased in SDLs, their spreads over G-secs continued to narrow. Despite this, there was higher demand because the

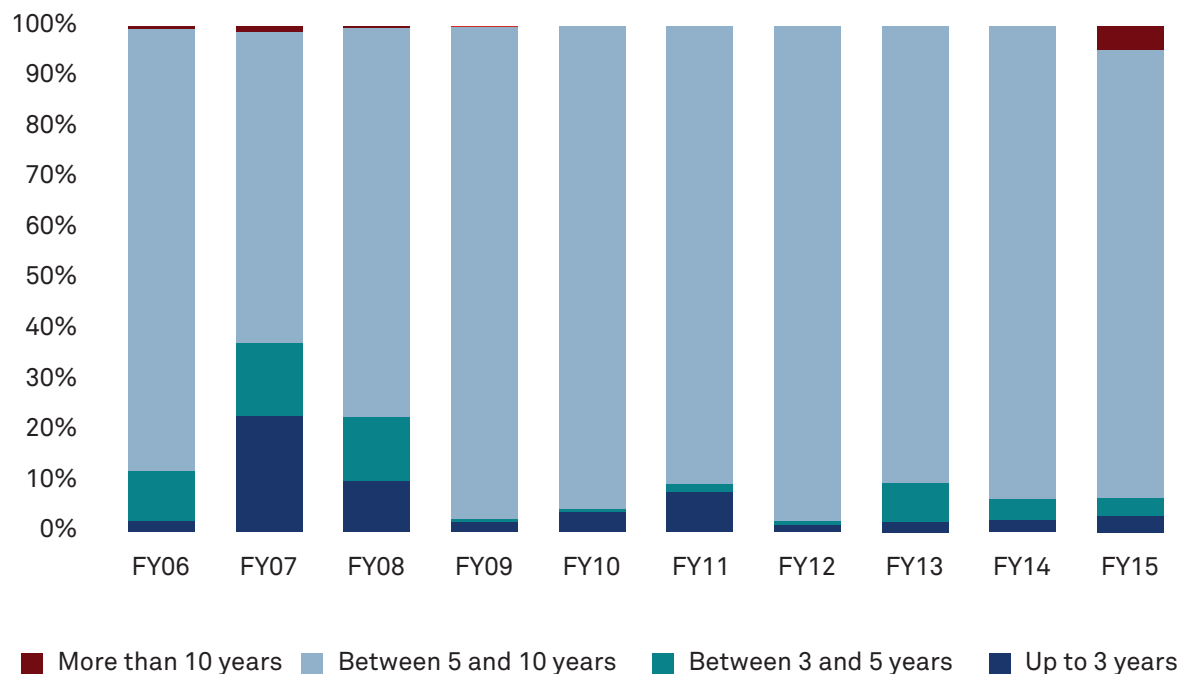
yields offered were higher than in G-secs and even AAA rated corporate bonds

### Trading mirrors issuance trends



Source: CCIL, CRISIL Research  
Numbers indicate average annual traded volume (Rs cr) for the last 10 years for each state

**Majority of trading is in the 10-year and above tenures**



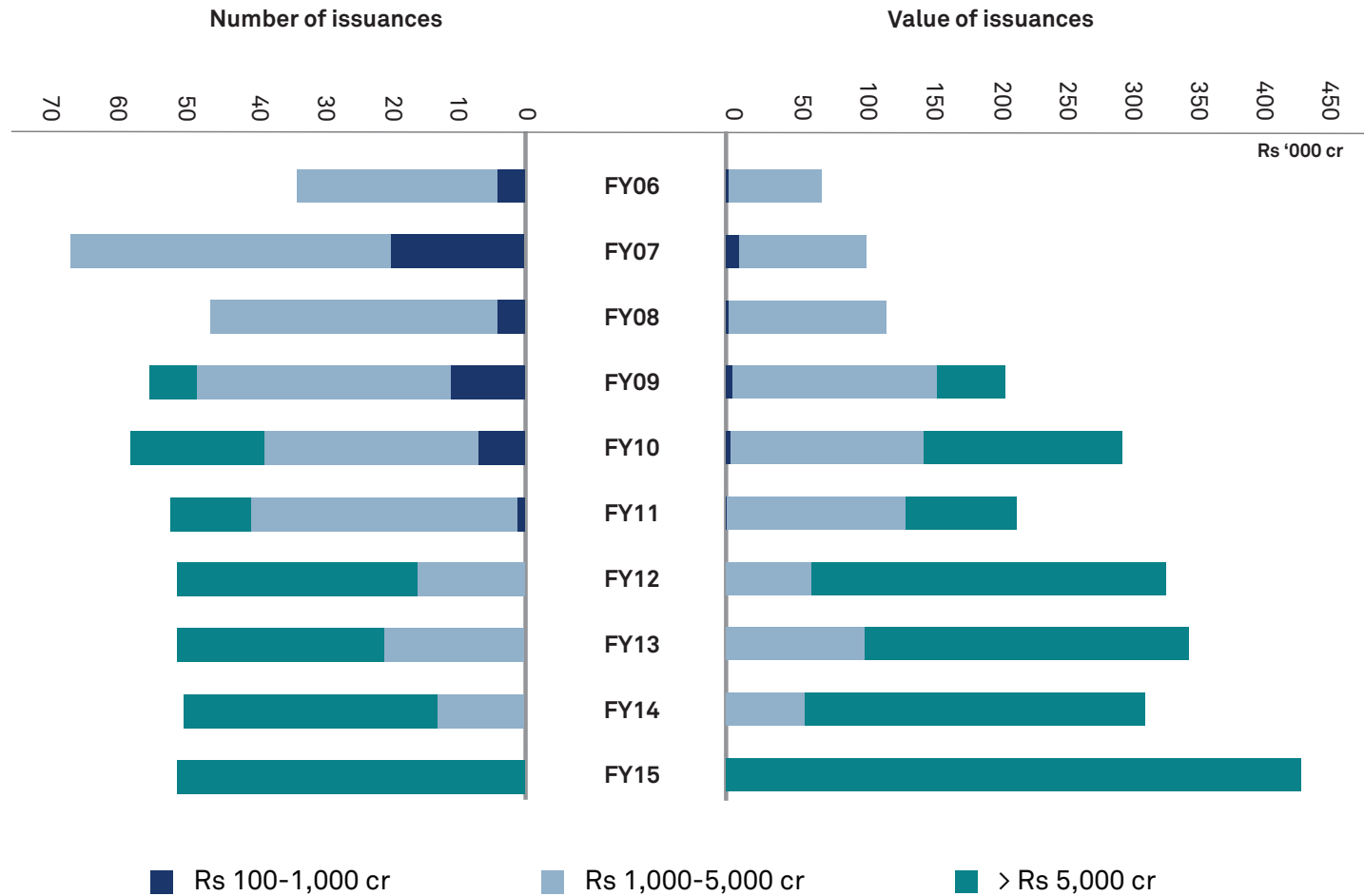
Maturity refers to residual maturity of the instruments  
Source: CCIL (FY09-15), CRISIL Research (FY06-08)

Also, in line with the issuance trend, the 5-10-year segment remained the most active maturity for SDLs, accounting for 89% of traded volume. Special papers issued by Rajasthan and Uttar Pradesh with longer maturities (predating the UDAY bonds, with no eligibility for statutory liquidity ratio calculation) were in demand in the secondary market. Almost 5% of trading volume was seen in tenures over 10 years.



# Treasury bills

### Issuance of 91-day bills tops Rs 5,000 crore

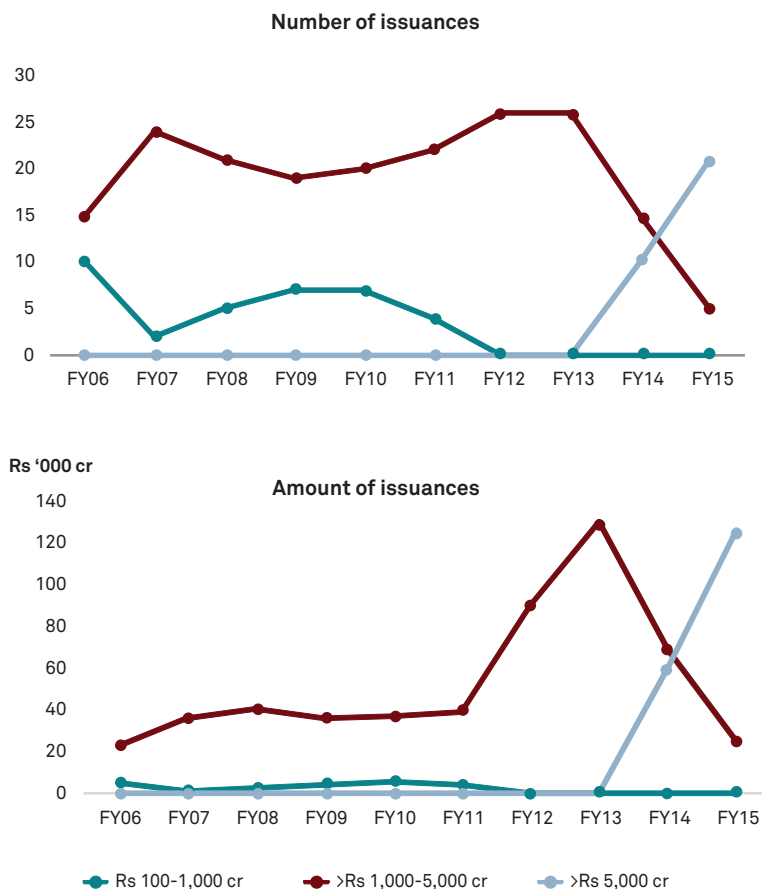


Source: RBI

Issuance volume was greater than Rs 5,000 crore all through the year, increasing aggregate borrowing in 91-day bills more than 37%.



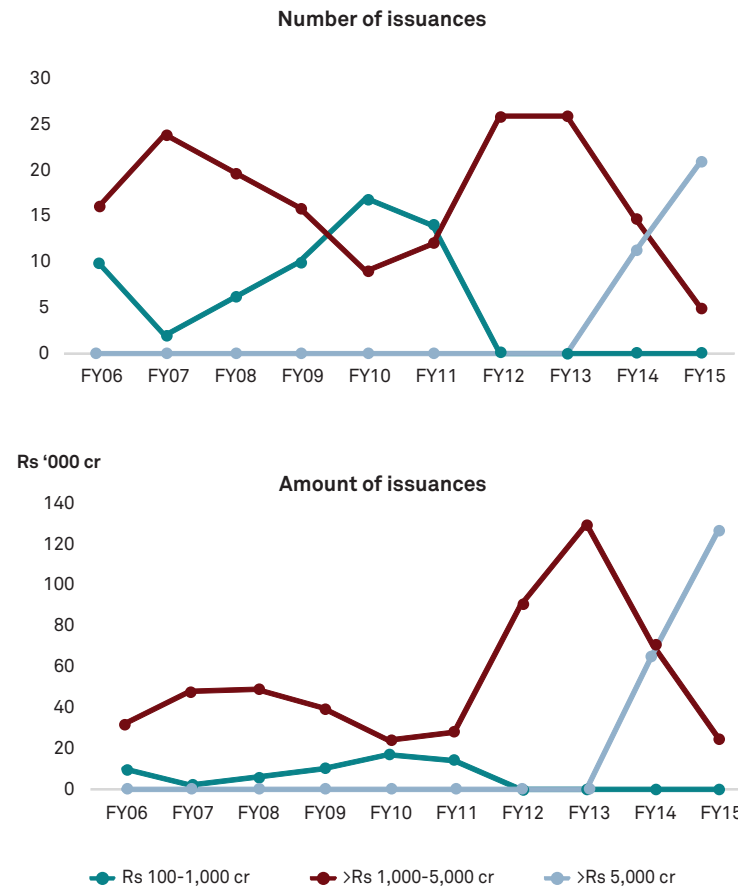
**In 182-day bills, issuances of smaller amounts decrease**



Source: RBI

Majority of auctions of 182-day bills were greater than Rs 5,000 crore. Total issuance grew 17%.

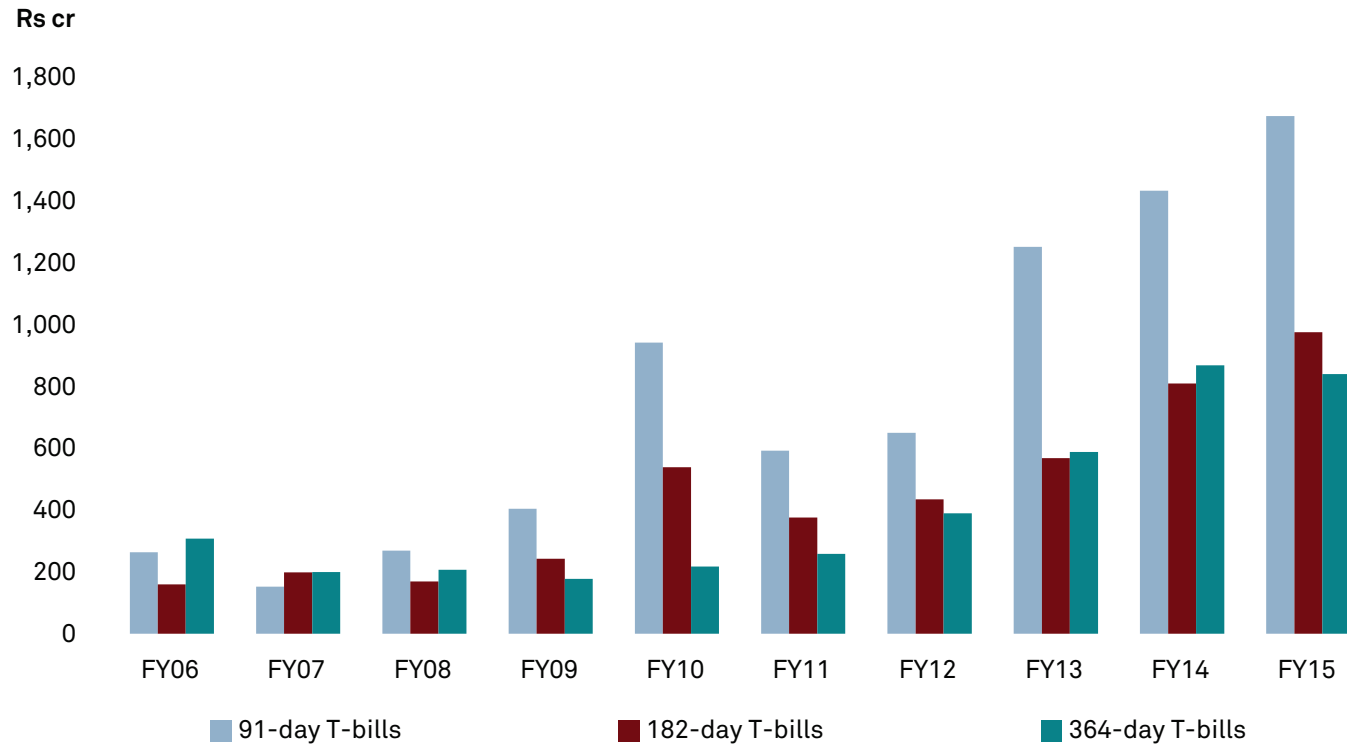
**In 364-day bills, issuances of Rs 5,000 crore and above see a slight increase**



Source: RBI

364-day bills showed a similar trend as 91-day and 182-day bills, with majority of auctions of over Rs 5,000 crore increasing aggregate borrowing by 11%.

### Average daily trading



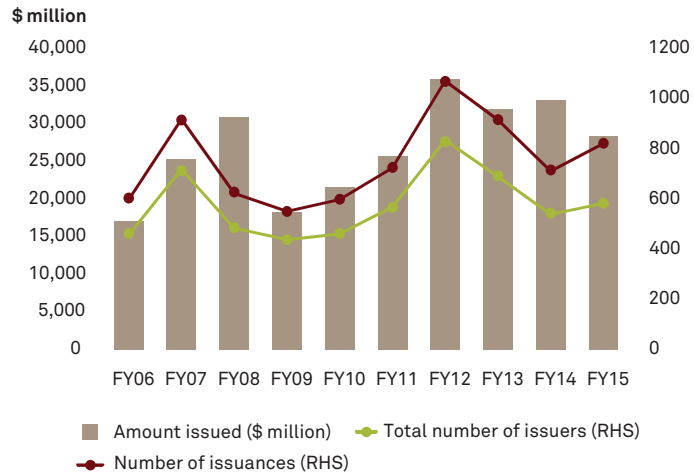
Average daily trading  
 Trades are based on original maturity of the instrument  
 Source: CCIL (FY09-15), CRISIL Research (FY06-08)

91-day bills remain the most actively traded and 364-day bills the least traded. Overall, average traded volume increased by

just 12%, but 91-day and 182-day bills showed growth of 17% and 21%, respectively, while 364-day bills showed a decline of 3%.

**External commercial borrowings/  
foreign currency convertible bonds**

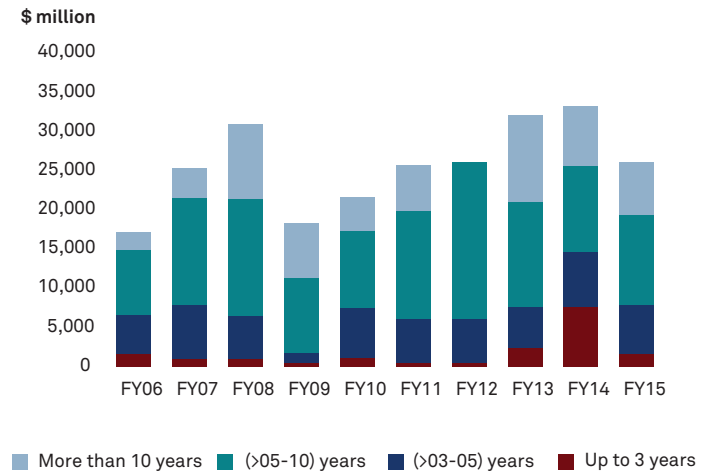
### Borrowers and issuances rise



Source: RBI

Volume of external commercial borrowings (ECB) decreased 15%, even as the number of issuances and issuers increased 15% and 8%, respectively. This was due to higher acceptance of new smaller issuers amid lower interest rates versus bank loans, which were costlier due to high base rates. Companies were slightly cautious to tap ECBs, as the market expected the US Federal Reserve to hike the Fed Funds rate in the first half of fiscal year. Spreads widened and hedging costs increased due to a volatile USD-INR, leading to a decline in total borrowings last fiscal.

### Short-tenure issuances decline



Source: RBI

Issuance amount decreased by 15%. The maximum decline was in the 0-3 years segment, where volume decreased more than 79%.

**Issuances of \$10 million or less dominate**

| Number of issuances     |            |            |            |            |            |            |              |            |            |            |
|-------------------------|------------|------------|------------|------------|------------|------------|--------------|------------|------------|------------|
| Issue size (\$ million) | FY06       | FY07       | FY08       | FY09       | FY10       | FY11       | FY12         | FY13       | FY14       | FY15       |
| Up to 10                | 394        | 607        | 334        | 320        | 380        | 441        | 610          | 569        | 457        | 598        |
| 10 to 50                | 108        | 211        | 186        | 169        | 143        | 186        | 328          | 230        | 145        | 142        |
| > \$50                  | 98         | 103        | 105        | 64         | 77         | 99         | 136          | 119        | 112        | 84         |
| <b>Total</b>            | <b>600</b> | <b>921</b> | <b>625</b> | <b>553</b> | <b>600</b> | <b>726</b> | <b>1,074</b> | <b>918</b> | <b>714</b> | <b>824</b> |

Source: RBI

**But most of the money gathered was through bigger-sized issues**

| Value of issuances      |               |               |               |               |               |               |               |               |               |               |
|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Issue size (\$ million) | FY06          | FY07          | FY08          | FY09          | FY10          | FY11          | FY12          | FY13          | FY14          | FY15          |
| Up to 10                | 1,005         | 1,586         | 1,218         | 1,078         | 1,186         | 1,603         | 2,344         | 1,934         | 1,325         | 1,644         |
| 10 to 50                | 2,724         | 5,119         | 4,785         | 4,162         | 3,176         | 4,294         | 7,806         | 5,250         | 3,466         | 3,114         |
| >50                     | 13,444        | 18,647        | 24,956        | 13,124        | 17,307        | 19,878        | 25,817        | 24,873        | 28,446        | 23,625        |
| <b>Total</b>            | <b>17,172</b> | <b>25,353</b> | <b>30,957</b> | <b>18,363</b> | <b>21,671</b> | <b>25,776</b> | <b>35,966</b> | <b>32,058</b> | <b>33,238</b> | <b>28,384</b> |

Source: RBI



# **Chronology of Key debt market milestones**

# Chronology of key debt market milestones

Government

SEBI

RBI

Years

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

Amendment in provisions related to issuances of corporate bonds - single rating instead of dual for public/rights issue, removal of least rating criteria, removal of structural restrictions (maturity, put/call options)

Introduction of mandatory dissemination, by Issuer, of key information relating to default, creation of charge and rating etc

NSE, BSE and FIMMDA operationalise corporate bond trade reporting platforms

Conventions prevalent in the G-sec market regarding shut period, lot size and day-count introduced for corporate bonds

Amendments to listing agreements to ensure electronic transfer of interest and redemption

Corporate Bonds and Securitisation Advisory Committee set up to make recommendations on developing the corporate bond and securitisation markets

SEBI (Public Offer and Listing of Securitised Debt Instruments) Regulations, 2008, and SEBI (Issue and Listing of Debt Securities) Regulations, 2008 notified

Simplified listing agreement for debt securities

Reporting made mandatory for inter-scheme transfers of corporate bonds by mutual funds

Mandatory usage of interest rate convention of actual/actual by issuers

Record date to be not more than 15 days prior to book closure for all prospective privately placed issues of corporate bonds

Guidelines for Issue and Listing of Structured Products/Market Linked Debentures

Mutual funds permitted to set up an IDF

Regulated entities asked to settle OTC trades in debt instruments including CPs & CDs through clearing corporation

Fills included in list of strategic investors in infrastructure debt funds

Stock exchanges allowed to create a debt segment for trading

SEBI unveils risk management framework for the debt segment of stock exchanges

Registered FPIs allowed to invest in credit-enhanced bonds up to a limit of \$5 billion

Centralised database for corporate bonds announced to help market participants

Draft framework on issuance of rupee-linked bonds abroad introduced

Framework for Real Estate and Infrastructure Investment Trusts

NBFCs get to undertake forward contracts in corporate debt

Bonds issued by multilaterals such as World Bank Group (IBRD, IFC), ADB and AfDB in India made eligible underlying for repo

NBFCs to undertake ready forward contracts in corporate debt securities

Recommendations of High Level Expert Committee for the development of the corporate bond and securitisation markets accepted

Clarification on issues of regulatory jurisdiction of the RBI and SEBI provided

SDLs made eligible securities under the liquidity adjustment facility repos

Announcements made on launch of exchange-based interest rate futures, separation of equity option from convertible bonds to boost trading, market-based system for classifying instruments based on complexity, TDX exemption for listed and demand instruments

Non-competitive bidding for SDLs introduced

Interest rate futures (IRFs) reintroduced with modifications

Reporting platform for all secondary market transactions in CPs and CDs operationalised by FIMMDA

Interest rate futures on 91-day T-bills permitted

Introduction of guidelines permitting repo in corporate bonds

STRIPS introduced in G-secs

Infrastructure debt funds under the NBFC and AMC routes announced

Credit default swaps on corporate bonds introduced

NBFCs permitted to set up infrastructure debt funds

Introduction of web-based system for access to NDS auction and NDS-OM to facilitate direct participation by retail and mid-segment investors

Short-term debt securities permitted for corporate repo

Credit default swaps for unlisted rated corporate bonds permitted

Inflation indexed bonds introduced

Credit enhancement reset allowed in securitisation transactions for both banks and NBFCs

Cash-settled interest rate futures on 10-year G-sec introduced

EPFO allowed to invest up to 55% in debt securities issued by bodies corporate

Announcement on Real Estate and Infrastructure Investment Trusts

New pattern of investments in equity, and new instruments such as REITs and InvITs notified

Incremental FPI investments allowed only in corporate bonds with a minimum residual maturity of three years, and restrictions announced on liquid and money-market mutual fund schemes

Issuers permitted to consolidate and re-issue corporate debt



# Annexures

## Corporate bonds

### Outstanding amount of various fixed-income securities

|                 | As on March 31, 2015 (Rs cr) |
|-----------------|------------------------------|
| Corporate bonds | 1,750,320                    |
| G-secs          | 4,162,571                    |
| SDLs            | 1,264,502                    |
| T-bills         | 363,704                      |
| CDs             | 329,096                      |
| CPs             | 193,270                      |
| <b>Total</b>    | <b>8,063,463</b>             |

Source: RBI, SEBI, CCIL

### Primary issuances

|      | Private placements |                 |                       |                           |                            |                              | Mobilised amount through public placements<br>Rs cr | Ratio of publicly mobilised to privately mobilised monies | Total amount mobilised as % of GDP |
|------|--------------------|-----------------|-----------------------|---------------------------|----------------------------|------------------------------|-----------------------------------------------------|-----------------------------------------------------------|------------------------------------|
|      | Number of issuers  | Number of deals | Number of instruments | Mobilised amount<br>Rs cr | Growth in amount mobilised | Amount mobilised as % of GDP |                                                     |                                                           |                                    |
| FY06 | 99                 | 362             | 432                   | 79,446                    | 44%                        | 2.4%                         | NA                                                  | NA                                                        | NA                                 |
| FY07 | 97                 | 498             | 568                   | 92,355                    | 16%                        | 2.3%                         | NA                                                  | NA                                                        | NA                                 |
| FY08 | 104                | 613             | 681                   | 115,266                   | 25%                        | 2.5%                         | NA                                                  | NA                                                        | NA                                 |
| FY09 | 167                | 799             | 874                   | 174,327                   | 51%                        | 3.3%                         | 1,500                                               | 1%                                                        | 3.3%                               |
| FY10 | 192                | 803             | 879                   | 189,478                   | 9%                         | 3.1%                         | 2,500                                               | 1%                                                        | 3.2%                               |
| FY11 | 182                | 825             | 956                   | 192,127                   | 1%                         | 2.7%                         | 9,451                                               | 5%                                                        | 2.8%                               |
| FY12 | 164                | 1,327           | 1,939                 | 251,437                   | 31%                        | 3.1%                         | 35,611                                              | 14%                                                       | 3.5%                               |
| FY13 | 267                | 1,828           | 2,443                 | 351,848                   | 40%                        | 3.7%                         | 16,982                                              | 5%                                                        | 3.9%                               |
| FY14 | 245                | 1,473           | 3,524                 | 270,946                   | -23%                       | 2.4%                         | 42,383                                              | 16%                                                       | 2.8%                               |
| FY15 | 344                | 1,765           | 5,109                 | 432,692                   | 60%                        | 4.1%                         | 9,713                                               | 2%                                                        | 4.2%                               |

Source: SEBI, RBI, Prime Database

**Sector-wise break-up of number and amount of issuances**

|              |                                          | Number of issuances |            |            |            |            |            |              |              |              |              |
|--------------|------------------------------------------|---------------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|
|              |                                          | FY06                | FY07       | FY08       | FY09       | FY10       | FY11       | FY12         | FY13         | FY14         | FY15         |
|              | Agriculture & allied activities          |                     |            |            |            |            |            | 1            | 1            |              | 1            |
|              | Industry                                 | 41                  | 23         | 29         | 95         | 109        | 119        | 72           | 157          | 141          | 150          |
| Top 5        | Banking/term lending                     | 181                 | 175        | 169        | 146        | 199        | 175        | 199          | 247          | 122          | 158          |
|              | Diversified                              |                     |            | 4          | 17         | 5          | 18         | 11           | 17           | 16           | 16           |
|              | Financial services                       | 123                 | 286        | 395        | 522        | 446        | 491        | 1019         | 1,328        | 1,133        | 1,311        |
|              | Housing/ civil construction/ real estate |                     | 4          | 11         | 14         | 21         | 22         | 13           | 60           | 51           | 107          |
|              | Power generation & supply                | 14                  | 14         | 7          | 21         | 25         | 24         | 23           | 28           | 41           | 38           |
|              | Services                                 | 321                 | 475        | 584        | 704        | 694        | 706        | 1,254        | 1,670        | 1,332        | 1,614        |
| Of which     | Financial services                       | 123                 | 286        | 395        | 522        | 446        | 491        | 1,019        | 1,328        | 1,133        | 1,311        |
|              | Banking/term lending                     | 181                 | 175        | 169        | 146        | 199        | 175        | 199          | 247          | 122          | 158          |
| <b>Total</b> |                                          | <b>362</b>          | <b>498</b> | <b>613</b> | <b>799</b> | <b>803</b> | <b>825</b> | <b>1,327</b> | <b>1,828</b> | <b>1,473</b> | <b>1,765</b> |

Source: Prime Database, CRISIL Research

|              |                                    | Amount of issuances (Rs cr) |               |                |                |                |                |                |                |                |                |
|--------------|------------------------------------|-----------------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|              |                                    | FY06                        | FY07          | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
|              | Agriculture & allied activities    | -                           | -             | -              | -              | -              | -              | 250            | 400            | -              | 275            |
|              | Industry                           | 18,356                      | 7,724         | 7,946          | 41,614         | 44,789         | 47,421         | 43,425         | 78,993         | 63,971         | 75,322         |
| Top 5        | Banking/term lending               | 54,118                      | 61,519        | 68,204         | 91,916         | 93,778         | 92,029         | 129,161        | 139,084        | 98,489         | 175,706        |
|              | Diversified                        | -                           | -             | 2,250          | 11,100         | 1,000          | 4,915          | 2,885          | 5,445          | 5,056          | 6,949          |
|              | Financial services                 | 5,859                       | 21,463        | 36,269         | 31,335         | 39,271         | 44,384         | 64,682         | 105,662        | 95,300         | 144,062        |
|              | Oil exploration/drilling/ refining | 2,225                       | -             | -              | 4,100          | 6,340          | 4,750          | 1,415          | 13,760         | 3,200          | 3,500          |
|              | Power generation & supply          | 7,660                       | 6,748         | 3,468          | 12,671         | 16,474         | 19,025         | 23,615         | 21,408         | 20,942         | 35,312         |
|              | Services                           | 61,090                      | 84,632        | 107,320        | 132,713        | 144,688        | 144,706        | 207,762        | 272,455        | 206,975        | 357,094        |
| Of which     | Financial services                 | 5,859                       | 21,463        | 36,269         | 31,335         | 39,271         | 44,384         | 64,682         | 105,662        | 95,300         | 144,062        |
|              | Banking/term lending               | 54,118                      | 61,519        | 68,204         | 91,916         | 93,778         | 92,029         | 129,161        | 139,084        | 98,489         | 175,706        |
| <b>Total</b> |                                    | <b>79,446</b>               | <b>92,355</b> | <b>115,266</b> | <b>174,327</b> | <b>189,478</b> | <b>192,127</b> | <b>251,437</b> | <b>351,848</b> | <b>270,946</b> | <b>432,692</b> |

Source: Prime Database, CRISIL Research

| Sector-wise break-up of primary issuances (Rs cr) |               |               |                |                |                |                |                |                |                |                |
|---------------------------------------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                   | FY06          | FY07          | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| State financial institutions                      | 719           | 1,192         | 1,309          | 254            | 1,337          | 1,425          | 1,575          | 5,394          | 1,482          | 883            |
| Public sector undertakings                        | 10,719        | 6,178         | 3,526          | 11,814         | 22,355         | 12,850         | 27,176         | 39,851         | 31,784         | 31,219         |
| State-level undertakings                          | 889           | 752           | 1,348          | 4,738          | 2,085          | 1,981          | 4,184          | 8,584          | 3,686          | 6,057          |
| Banks                                             | 27,554        | 36,046        | 25,902         | 38,596         | 38,679         | 19,481         | 14,974         | 24,495         | 14,388         | 47,881         |
| NBFCs                                             | 5,486         | 12,050        | 15,072         | 17,951         | 17,643         | 12,877         | 26,697         | 45,777         | 38,774         | 65,541         |
| Housing finance companies                         | 6,925         | 9,370         | 21,105         | 12,719         | 16,805         | 29,801         | 36,367         | 57,850         | 55,106         | 73,888         |
| Financial institutions and others                 | 25,060        | 25,755        | 41,051         | 53,720         | 53,942         | 72,112         | 113,520        | 109,425        | 82,434         | 128,290        |
| Private – non-financial sector                    | 2,093         | 1,013         | 5,953          | 34,533         | 36,767         | 41,599         | 26,946         | 60,473         | 43,291         | 78,932         |
| <b>Total</b>                                      | <b>79,446</b> | <b>92,355</b> | <b>115,266</b> | <b>174,327</b> | <b>189,613</b> | <b>192,127</b> | <b>251,437</b> | <b>351,848</b> | <b>270,946</b> | <b>432,692</b> |

Source: Prime Database, CRISIL Research

### Issuances by size, amount raised and rating category

| Number of issues  |            |            |            |            |            |            |              |              |              |              |
|-------------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|
| Issue size        | FY06       | FY07       | FY08       | FY09       | FY10       | FY11       | FY12         | FY13         | FY14         | FY15         |
| Rs 10 cr & below  | 25         | 45         | 48         | 172        | 158        | 192        | 375          | 496          | 477          | 394          |
| Rs 10-25 cr       | 69         | 97         | 131        | 140        | 95         | 102        | 297          | 290          | 218          | 256          |
| Rs 25-50 cr       | 63         | 92         | 107        | 129        | 98         | 93         | 166          | 235          | 184          | 238          |
| Rs 50-100 cr      | 22         | 32         | 57         | 38         | 54         | 45         | 58           | 134          | 108          | 139          |
| Rs 100 cr & above | 183        | 232        | 270        | 320        | 398        | 393        | 431          | 673          | 486          | 738          |
| <b>Total</b>      | <b>362</b> | <b>498</b> | <b>613</b> | <b>799</b> | <b>803</b> | <b>825</b> | <b>1,327</b> | <b>1,828</b> | <b>1,473</b> | <b>1,765</b> |

Source: Prime Database, CRISIL Research

| Amount raised (Rs cr) |               |               |                |                |                |                |                |                |                |                |
|-----------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Issue size            | FY06          | FY07          | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| Rs 10 cr & below      | 202           | 374           | 429            | 1,162          | 904            | 1,197          | 2,408          | 2,109          | 2,160          | 1,936          |
| Rs 10-25 cr           | 1,449         | 2,079         | 2,845          | 2,722          | 1,904          | 2,171          | 5,415          | 5,613          | 4,251          | 4,689          |
| Rs 25-50 cr           | 2,692         | 3,978         | 4,618          | 5,629          | 4,366          | 4,268          | 6,572          | 9,729          | 7,609          | 9,806          |
| Rs 50-100 cr          | 1,622         | 2,229         | 4,074          | 2,650          | 3,918          | 3,330          | 4,183          | 9,292          | 7,594          | 9,892          |
| Rs 100 cr & above     | 73,481        | 83,696        | 103,301        | 162,164        | 178,386        | 181,161        | 232,859        | 325,105        | 249,333        | 406,369        |
| <b>Total</b>          | <b>79,446</b> | <b>92,355</b> | <b>115,266</b> | <b>174,327</b> | <b>189,478</b> | <b>192,127</b> | <b>251,437</b> | <b>351,848</b> | <b>270,946</b> | <b>432,692</b> |

Source: Prime Database, CRISIL Research

### Private sector vs non-private sector issuers

| Amount (Rs cr)          |               |               |                |                |                |                |                |                |                |                |
|-------------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                         | FY06          | FY07          | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| Non-private sector      | 71,616        | 77,815        | 93,577         | 119,693        | 134,300        | 132,088        | 193,303        | 238,111        | 181,343        | 272,372        |
| Private sector          | 7,829         | 14,541        | 21,689         | 54,634         | 55,178         | 60,039         | 58,134         | 113,737        | 89,603         | 160,319        |
| <b>Total</b>            | <b>79,445</b> | <b>92,356</b> | <b>115,266</b> | <b>174,327</b> | <b>189,478</b> | <b>192,127</b> | <b>251,437</b> | <b>351,848</b> | <b>270,946</b> | <b>432,692</b> |
| Share of private sector | 10%           | 16%           | 19%            | 31%            | 29%            | 31%            | 23%            | 32%            | 33%            | 37%            |

Source: Prime Database

### Rating-wise break-up of number and amount of issuances

| Number of issues |            |            |            |            |            |            |              |               |              |              |
|------------------|------------|------------|------------|------------|------------|------------|--------------|---------------|--------------|--------------|
| Rating           | FY06       | FY07       | FY08       | FY09       | FY10       | FY11       | FY12         | FY13          | FY14         | FY15         |
| AAA              | 169        | 284        | 335        | 371        | 297        | 318        | 375          | 566           | 391          | 585          |
| AA+              | 84         | 97         | 100        | 176        | 279        | 226        | 574          | 536           | 520          | 451          |
| AA               | 38         | 52         | 88         | 136        | 84         | 87         | 151          | 222           | 207          | 330          |
| AA-              | 7          | 7          | 14         | 29         | 54         | 80         | 131          | 320           | 190          | 72           |
| A+               | 3          | 3          | 13         | 16         | 38         | 53         | 23           | 31            | 29           | 57           |
| A                | 7          | 10         | 14         | 10         | 19         | 16         | 21           | 67            | 38           | 46           |
| A-               | 4          | 1          |            | 3          | 6          | 5          | 12           | 20            | 7            | 65           |
| BBB+             | 1          | 2          | 3          | 9          | 5          | 2          | 4            | 5             | 17           | 41           |
| BBB              |            |            |            | 3          |            | 5          | 1            | 8             | 12           | 30           |
| BBB-             |            |            |            |            | 1          | 3          | 3            | 6             | 21           | 26           |
| BB+              |            |            |            |            |            | 1          |              | 3             | 12           | 19           |
| BB               | 1          |            |            |            | 2          |            | 2            | 2             | 3            | 17           |
| BB-              |            |            |            |            |            | 1          |              | 7             | 10           | 12           |
| B+               |            |            |            |            |            |            |              | 2             | 8            | 3            |
| B                |            |            |            |            |            |            |              | 2             | 1            | 6            |
| B-               |            |            |            |            |            |            |              |               | 1            | 1            |
| C                |            |            |            |            |            |            | 1            | 4             | 4            | 1            |
| A1+              | 17         | 11         | 12         | 38         |            |            |              |               |              |              |
| A1               | 4          | 1          |            | 1          |            |            |              |               |              |              |
| Not rated        | 27         | 30         | 34         | 7          | 18         | 28         | 29           | 28            | 2            | 3            |
| <b>Total</b>     | <b>362</b> | <b>498</b> | <b>613</b> | <b>799</b> | <b>803</b> | <b>825</b> | <b>1,327</b> | <b>1,829*</b> | <b>1,473</b> | <b>1,765</b> |

\*Note: The rating-wise issuances are 1,829, whereas total issuances are 1,828 during the year  
Source: Prime Database

| Amount raised (Rs cr) |               |               |                |                |                |                |                |                |                |                |
|-----------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Rating category       | FY06          | FY07          | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| AAA                   | 55,241        | 69,753        | 89,273         | 122,856        | 131,208        | 132,075        | 189,447        | 226,311        | 189,396        | 280,348        |
| AA+                   | 13,682        | 10,438        | 9,152          | 21,349         | 19,758         | 18,775         | 28,054         | 54,742         | 36,917         | 60,466         |
| AA                    | 3,990         | 6,440         | 5,372          | 16,393         | 14,285         | 10,851         | 12,587         | 25,351         | 15,360         | 24,345         |
| AA-                   | 841           | 680           | 1,606          | 3,235          | 5,023          | 13,856         | 6,237          | 16,946         | 9,404          | 26,707         |
| A+                    | 435           | 132           | 1,112          | 3,171          | 8,911          | 8,178          | 2,167          | 3,735          | 5,880          | 12,637         |
| A                     | 425           | 2,279         | 2,858          | 1,131          | 4,498          | 5,844          | 6,175          | 12,015         | 5,207          | 7,826          |
| A-                    | 448           | 48            |                | 200            | 2,168          | 890            | 3,414          | 2,536          | 2,243          | 5,357          |
| BBB+                  | 2             | 74            | 770            | 1,485          | 705            | 150            | 918            | 208            | 453            | 2,859          |
| BBB                   |               |               |                | 987            |                | 507            | 32             | 884            | 1,104          | 1,481          |
| BBB-                  |               |               |                |                | 83             | 445            | 323            | 518            | 2,501          | 2,566          |
| BB+                   |               |               |                |                |                | 250            |                | 192            | 450            | 2,367          |
| BB                    | 200           |               |                |                | 275            |                | 495            | 95             | 98             | 2,963          |
| BB-                   |               |               |                |                |                | 84             |                | 2,935          | 791            | 988            |
| B+                    |               |               |                |                |                |                |                | 198            | 444            | 98             |
| B                     |               |               |                |                |                |                |                | 155            | 6              | 805            |
| B-                    |               |               |                |                |                |                |                |                | 17             | 25             |
| C                     |               |               |                |                |                |                | 53             | 477            | 571            | 142            |
| A1+                   | 1,115         | 821           | 389            | 1,368          |                |                |                |                |                |                |
| A1                    | 90            | 390           |                | 25             |                |                |                |                |                |                |
| Not rated             | 2,983         | 1,301         | 4,734          | 2,127          | 2,564          | 222            | 1,535          | 4,977          | 103            | 714            |
| <b>Total</b>          | <b>79452*</b> | <b>92,355</b> | <b>115,266</b> | <b>174,327</b> | <b>189,478</b> | <b>192,127</b> | <b>251,437</b> | <b>352,272</b> | <b>270,946</b> | <b>432,692</b> |

\*Rating-wise issuances tot up to Rs 79,452 cr, whereas total issuances are Rs 79,446 cr during the year  
 \*Rating-wise issuances tot up to Rs 352,272 cr, whereas total issuances are Rs 351,848 cr during the year  
 Source: Prime Database

### Issuances by maturity

| Number of issues |            |            |            |            |            |            |              |              |              |              |
|------------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|
| Maturity (years) | FY06       | FY07       | FY08       | FY09       | FY10       | FY11       | FY12         | FY13         | FY14         | FY15         |
| Up to 3          | 110        | 229        | 344        | 317        | 335        | 466        | 1,096        | 1,203        | 2,609        | 3,805        |
| 3 to 5           | 60         | 55         | 106        | 190        | 160        | 195        | 228          | 505          | 472          | 744          |
| 5 to 10          | 182        | 132        | 107        | 151        | 172        | 178        | 386          | 577          | 354          | 454          |
| > 10             | 31         | 61         | 50         | 59         | 76         | 117        | 229          | 158          | 81           | 106          |
| NA               | 49         | 91         | 74         | 157        | 136        |            |              |              |              |              |
| <b>Total</b>     | <b>432</b> | <b>568</b> | <b>681</b> | <b>874</b> | <b>879</b> | <b>956</b> | <b>1,939</b> | <b>2,443</b> | <b>3,516</b> | <b>5,109</b> |

NA: Not available  
 Source: Prime Database

### Interest rates and sovereign yields

|      | Interest rate* | Sovereign yield^ | Difference |
|------|----------------|------------------|------------|
| FY06 | 6.50%          | 7.54%            | 1.04%      |
| FY07 | 7.75%          | 8.17%            | 0.42%      |
| FY08 | 7.75%          | 8.02%            | 0.27%      |
| FY09 | 5.00%          | 7.13%            | 2.13%      |
| FY10 | 5.00%          | 7.98%            | 2.98%      |
| FY11 | 6.75%          | 8.23%            | 1.48%      |
| FY12 | 8.50%          | 8.82%            | 0.32%      |
| FY13 | 7.50%          | 8.24%            | 0.74%      |
| FY14 | 8.00%          | 9.29%            | 1.29%      |
| FY15 | 7.50%          | 7.98%            | 0.48%      |

\*Repo rate as on March-end.  
^ 10-year benchmark G-sec yield as on March-end.  
Source: RBI, CRISIL Research

### Rating-wise spreads

| Over 10-year benchmark G-sec as on March-end |       |       |       |       |
|----------------------------------------------|-------|-------|-------|-------|
|                                              | AAA   | AA+   | AA    | AA-   |
| FY06                                         | 0.96% | 1.21% | 1.63% | 2.17% |
| FY07                                         | 1.68% | 1.98% | 2.35% | 2.89% |
| FY08                                         | 1.40% | 1.80% | 2.17% | 2.66% |
| FY09                                         | 2.02% | 2.69% | 3.06% | 3.55% |
| FY10                                         | 0.86% | 1.06% | 1.44% | 1.84% |
| FY11                                         | 0.94% | 1.09% | 1.50% | 1.90% |
| FY12                                         | 0.69% | 0.84% | 1.36% | 1.76% |
| FY13                                         | 0.61% | 0.94% | 1.42% | 1.82% |
| FY14                                         | 0.30% | 0.63% | 1.11% | 1.51% |
| FY15                                         | 0.27% | 0.61% | 1.09% | 1.49% |

Source: CRISIL Research

### Top 10 issuers in the last 10 years\*

| Issuer                                            | FY06  | FY07  | FY08   | FY09   | FY10   | FY11   | FY12   | FY13   | FY14   | FY15   |
|---------------------------------------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Power Finance Corp Ltd                            | 5,671 | 4,652 | 7,359  | 12,809 | 12,289 | 13,756 | 28,605 | 30,277 | 24,698 | 46,920 |
| Housing Development Finance Corp Ltd              | 5,515 | 6,750 | 16,566 | 5,250  | 6,800  | 13,865 | 20,895 | 33,180 | 24,269 | 29,170 |
| Rural Electrification Corp Ltd                    | 4,894 | 1,473 | 6,474  | 11,367 | 14,254 | 13,227 | 22,862 | 21,782 | 24,253 | 34,538 |
| National Bank for Agriculture & Rural Development | 3,150 | 9,859 | 12,503 | 4,879  | 0      | 8,020  | 17,914 | 17,414 | 0      | 9,850  |
| LIC Housing Finance Ltd                           | 1,100 | 1,695 | 2,650  | 4,485  | 7,365  | 11,373 | 10,420 | 15,656 | 20,850 | 24,791 |
| IDFC                                              | 1,850 | 2,232 | 5,302  | 3,136  | 8,172  | 11,457 | 10,458 | 4,713  | 7,398  | 15,114 |
| Power Grid Corporation of India Ltd               | 2,000 | 4,725 | 2,770  | 3,698  | 5,478  | 6,368  | 9,698  | 8,830  | 9,091  | 10,887 |
| Export-Import Bank of India                       | 2,860 | 2,602 | 3,445  | 2,592  | 2,050  | 5,557  | 7,425  | 10,617 | 10,462 | 10,863 |
| ICICI Bank                                        | 3,973 | 4,222 | 1,235  | 4,521  | 8,700  | 3,479  | 1,600  | 4,900  | 0      | 6,850  |
| State Bank of India                               | 3,283 | 9,428 | 6,024  | 8,000  | 2,000  | 0      | 0      | 0      | 2,000  | 0      |

\*Based on aggregate issuances  
Source: Prime Database

## Average daily trading

|      | Average daily trading (Rs cr) |
|------|-------------------------------|
| FY09 | 630                           |
| FY10 | 1,613                         |
| FY11 | 2,437                         |
| FY12 | 2,476                         |
| FY13 | 3,047                         |
| FY14 | 4,025                         |
| FY15 | 4,584                         |

Source: FIMMDA, NSE, BSE

| Residual maturity (years) | FY09           |                | FY10           |                | FY11           |                | FY12           |                | FY13           |                | FY14           |                | FY15             |                |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|
|                           | Rs crore       | % of total     | Rs crore       | % of total     | Rs crore       | % of total     | Rs crore       | % of total     | Rs crore       | % of total     | Rs crore       | % of total     | Rs crore         | % of total     |
| Up to 3                   | 41,892         | 28.55%         | 224,614        | 58.52%         | 402,614        | 66.90%         | 344,841        | 58.52%         | 339,693        | 46.07%         | 473,347        | 48.20%         | 529,827          | 48.77%         |
| 3 to 5                    | 29,467         | 20.08%         | 53,962         | 14.06%         | 55,504         | 9.22%          | 74,523         | 12.65%         | 147,973        | 20.07%         | 226,315        | 23.04%         | 203,296          | 18.71%         |
| 5 to 10                   | 59,726         | 40.70%         | 77,778         | 20.27%         | 85,629         | 14.23%         | 117,147        | 19.88%         | 182,262        | 24.72%         | 189,858        | 19.33%         | 283,405          | 26.08%         |
| >10                       | 15,634         | 10.65%         | 27,246         | 7.10%          | 58,097         | 9.65%          | 52,711         | 8.95%          | 67,450         | 9.15%          | 92,567         | 9.43%          | 69,946           | 6.44%          |
| NA                        | 25             | 0.02%          | 200            | 0.05%          | -              | 0.00%          | -              | 0.00%          | -              | 0.00%          | -              | 0.00%          | -                | 0.00%          |
| <b>Total</b>              | <b>146,744</b> | <b>100.00%</b> | <b>383,801</b> | <b>100.00%</b> | <b>601,844</b> | <b>100.00%</b> | <b>589,222</b> | <b>100.00%</b> | <b>737,378</b> | <b>100.00%</b> | <b>982,088</b> | <b>100.00%</b> | <b>1,086,474</b> | <b>100.00%</b> |

NA: Not available  
Source: FIMMDA, NSE, BSE

## Certificate of deposit

### Average daily trading

|       | Certificate of deposit (Rs cr) |
|-------|--------------------------------|
| FY11* | 8,459                          |
| FY12  | 8,467                          |
| FY13  | 7,410                          |
| FY14  | 6,919                          |
| FY15  | 6,590                          |

\*From August 2010  
Source: FIMMDA

### Maturity-wise annual trading

| Residual maturity (days) | Amount (Rs cr)   |                  |                  |                  |                  |
|--------------------------|------------------|------------------|------------------|------------------|------------------|
|                          | FY11*            | FY12             | FY13             | FY14             | FY15             |
| Up to 91                 | 1,000,007        | 1,530,341        | 1,254,390        | 1,183,495        | 1,256,828        |
| 91 to 182                | 186,812          | 182,189          | 185,702          | 109,702          | 108,142          |
| 182 to 365               | 166,320          | 283,821          | 353,011          | 388,186          | 183,585          |
| > 365                    | 360              | 1,816            | 0                | 0                | 50               |
| <b>Total</b>             | <b>1,353,498</b> | <b>1,998,165</b> | <b>1,793,102</b> | <b>1,681,383</b> | <b>1,548,605</b> |

\*From August 2010  
Source: FIMMDA



## Commercial paper

### Average daily trading

|       | Commercial paper (Rs cr) |
|-------|--------------------------|
| FY11* | 1,360                    |
| FY12  | 2,181                    |
| FY13  | 2,417                    |
| FY14  | 2,285                    |
| FY15  | 3,094                    |

\*From Aug 2010  
Source: FIMMDA

### Maturity-wise annual trading

|                          | Amount (Rs cr) |                |                |                |                |
|--------------------------|----------------|----------------|----------------|----------------|----------------|
| Residual maturity (days) | FY11*          | FY12           | FY13           | FY14           | FY15           |
| Up to 91                 | 186,200        | 469,050        | 535,065        | 509,450        | 677,419        |
| 91 to 182                | 15,061         | 22,625         | 24,789         | 19,025         | 26,837         |
| 182 to 365               | 13,502         | 23,015         | 24,918         | 24,495         | 22,614         |
| <b>Total</b>             | <b>214,763</b> | <b>514,690</b> | <b>584,772</b> | <b>552,970</b> | <b>726,870</b> |

\*From Aug 2010  
Source: FIMMDA

## G-secs

### Primary issuances

|      | Amount (Rs cr) | Amount issued as a % of GSDP |
|------|----------------|------------------------------|
| FY06 | 143,000        | 4.4%                         |
| FY07 | 162,000        | 4.1%                         |
| FY08 | 270,000        | 5.9%                         |
| FY09 | 272,000        | 5.1%                         |
| FY10 | 424,000        | 7.0%                         |
| FY11 | 439,000        | 6.1%                         |
| FY12 | 517,000        | 6.3%                         |
| FY13 | 558,000        | 5.9%                         |
| FY14 | 568,500        | 5.0%                         |
| FY15 | 592,000        | 5.6%                         |

Source: RBI, CRISIL Research

### Size-wise amount issued

|                                  | Amount (Rs cr) |                |                |                |                |                |                |                |                |                |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                  | FY06           | FY07           | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| Up to Rs 5,000 cr                | 97,000         | 102,000        | 198,000        | 129,000        | 290,000        | 421,000        | 340,000        | 298,000        | 331,500        | 335,000        |
| More than Rs 5,000 cr            | 46,000         | 60,000         | 72,000         | 143,000        | 134,000        | 18,000         | 177,000        | 260,000        | 237,000        | 257,000        |
| <b>Total</b>                     | <b>143,000</b> | <b>162,000</b> | <b>270,000</b> | <b>272,000</b> | <b>424,000</b> | <b>439,000</b> | <b>517,000</b> | <b>558,000</b> | <b>568,500</b> | <b>592,000</b> |
| % of issuances up to Rs 5,000 cr | 68%            | 63%            | 73%            | 47%            | 68%            | 96%            | 66%            | 53%            | 58%            | 57%            |

Source: RBI, CRISIL Research

### Maturity-wise amount issued

| Amount (Rs cr)   |                |                |                |                |                |                |                |                |                |                |
|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Maturity (years) | FY06           | FY07           | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| Up to 3          | 6,000          | 16,000         | 96,000         | 11,000         | 5,000          | 11,000         | 0              | 0              | 2,000          | 0              |
| 3 to 5           | 0              | 10,000         | 18,000         | 15,000         | 58,000         | 57,000         | 18,000         | 50,000         | 9,000          | 0              |
| 5 to 10          | 40,000         | 69,000         | 89,000         | 143,000        | 169,000        | 162,000        | 252,000        | 189,000        | 244,500        | 242,000        |
| 10 to 20         | 55,000         | 24,000         | 25,000         | 32,000         | 136,000        | 154,000        | 177,000        | 241,000        | 213,000        | 240,000        |
| 20 to 30         | 42,000         | 43,000         | 42,000         | 71,000         | 56,000         | 55,000         | 70,000         | 75,000         | 100,000        | 110,000        |
| > 30             | 0              | 0              | 0              | 0              | 0              | 0              | 0              | 3,000          | 0              | 0              |
| <b>Total</b>     | <b>143,000</b> | <b>162,000</b> | <b>270,000</b> | <b>272,000</b> | <b>424,000</b> | <b>439,000</b> | <b>517,000</b> | <b>558,000</b> | <b>568,500</b> | <b>592,000</b> |

Source: RBI, CRISIL Research

| Maturity-wise issuance as a % of total |        |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Maturity (years)                       | FY06   | FY07   | FY08   | FY09   | FY10   | FY11   | FY12   | FY13   | FY14   | FY15   |
| Up to 3                                | 4.20%  | 9.88%  | 35.56% | 4.04%  | 1.18%  | 2.51%  | 0.00%  | 0.00%  | 0.35%  | 0.00%  |
| 3 to 5                                 | 0.00%  | 6.17%  | 6.67%  | 5.51%  | 13.68% | 12.98% | 3.48%  | 8.96%  | 1.58%  | 0.00%  |
| 5 to 10                                | 27.97% | 42.59% | 32.96% | 52.57% | 39.86% | 36.90% | 48.74% | 33.87% | 43.01% | 40.88% |
| 10 to 20                               | 38.46% | 14.81% | 9.26%  | 11.76% | 32.08% | 35.08% | 34.24% | 43.19% | 37.47% | 40.54% |
| 20 to 30                               | 29.37% | 26.54% | 15.56% | 26.10% | 13.21% | 12.53% | 13.54% | 13.44% | 17.59% | 18.58% |
| > 30                                   | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.54%  | 0.00%  | 0.00%  |

Source: RBI, CRISIL Research

### Average daily trading

|      | Amount (Rs cr) |
|------|----------------|
| FY09 | 8,254          |
| FY10 | 10,353         |
| FY11 | 10,238         |
| FY12 | 12,973         |
| FY13 | 24,462         |
| FY14 | 32,710         |
| FY15 | 38,645         |

Source: CCIL

### Maturity-wise annual trading

| Amount (Rs cr)            |                  |                  |                  |                  |                  |                  |                  |
|---------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Residual maturity (years) | FY09             | FY10             | FY11             | FY12             | FY13             | FY14             | FY15             |
| Up to 3                   | 189,193          | 241,551          | 113,212          | 36,798           | 31,955           | 87,110           | 98,347           |
| 3-5                       | 51,424           | 218,251          | 210,690          | 39,235           | 284,693          | 506,321          | 159,076          |
| 5-10                      | 1,179,318        | 1,423,186        | 1,158,779        | 1,937,553        | 2,522,769        | 4,012,652        | 5,849,135        |
| > 10                      | 503,175          | 529,168          | 1,035,778        | 1,087,067        | 3,080,326        | 3,342,498        | 3,052,312        |
| <b>Total</b>              | <b>1,923,110</b> | <b>2,412,156</b> | <b>2,518,459</b> | <b>3,100,652</b> | <b>5,919,743</b> | <b>7,948,581</b> | <b>9,158,870</b> |

Source: CCIL

## State development loans (SDLs)

### Primary issuances

|      | Amount<br>(Rs cr) | Amount issued as a<br>percentage of GDP |
|------|-------------------|-----------------------------------------|
| FY06 | 14,995            | 0.5%                                    |
| FY07 | 21,064            | 0.5%                                    |
| FY08 | 69,238            | 1.5%                                    |
| FY09 | 120,070           | 2.3%                                    |
| FY10 | 117,333           | 1.9%                                    |
| FY11 | 99,129            | 1.4%                                    |
| FY12 | 159,610           | 1.9%                                    |
| FY13 | 171,147           | 1.8%                                    |
| FY14 | 200,507           | 1.8%                                    |
| FY15 | 233,772           | 2.2%                                    |

Source: RBI (FY10-15), CRISIL Research (FY06-09)

### State-wise break-up of amount issued

|                   | Amount (Rs cr) |       |       |        |        |        |        |        |        |        |
|-------------------|----------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
|                   | FY06           | FY07  | FY08  | FY09   | FY10   | FY11   | FY12   | FY13   | FY14   | FY15   |
| Andhra Pradesh    | 1,202          | 2,726 | 6,650 | 10,934 | 12,383 | 12,000 | 15,875 | 20,000 | 25,400 | 17,000 |
| Arunachal Pradesh | 386            | 108   | 185   | 26     | 79     | -      | 33     | 170    | 230    | 306    |
| Assam             | 684            | 857   | 1,005 | 3,101  | 1,747  | 800    | -      | 300    | -      | 2,950  |
| Bihar             | 262            | -     | 1,196 | 3,700  | 3,207  | 2,600  | 4,281  | 7,100  | 6,500  | 8,100  |
| Chhattisgarh      | -              | -     | -     | -      | 700    | -      | -      | 1,500  | 3,000  | 4,200  |
| Goa               | 78             | 100   | 400   | 500    | 600    | 300    | 670    | 850    | 990    | 800    |
| Gujarat           | 116            | -     | 6,775 | 7,659  | 9,000  | 11,293 | 16,500 | 14,800 | 16,840 | 13,900 |
| Haryana           | 458            | -     | -     | 2,795  | 4,000  | 4,450  | 6,528  | 9,330  | 12,893 | 13,200 |
| Himachal Pradesh  | 348            | 512   | 1,673 | 1,812  | 1,420  | 645    | 1,440  | 2,360  | 2,682  | 2,345  |
| Jammu & Kashmir   | 367            | 691   | 2,226 | 1,757  | 1,327  | 500    | 1,500  | 3,600  | 4,100  | 1,400  |
| Jharkhand         | 225            | 401   | 1,192 | 1,294  | 1,070  | 2,408  | 3,175  | 2,150  | 1,180  | 4,950  |
| Karnataka         | 28             | -     | 750   | 7,417  | 5,750  | 2,000  | 7,500  | 9,300  | 14,895 | 18,500 |
| Kerala            | 1,413          | 2,168 | 4,297 | 5,516  | 5,456  | 5,500  | 8,880  | 11,583 | 12,800 | 13,200 |
| Madhya Pradesh    | 872            | 1,420 | 1,600 | 7,145  | 5,048  | 3,700  | 4,000  | 4,500  | 5,000  | 10,100 |
| Maharashtra       | 1,012          | 1,738 | 8,520 | 17,762 | 14,650 | 10,127 | 20,500 | 16,313 | 24,431 | 25,083 |

| Amount (Rs cr)                |               |               |               |                |                |               |                |                |                |                |
|-------------------------------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|----------------|----------------|----------------|
|                               | FY06          | FY07          | FY08          | FY09           | FY10           | FY11          | FY12           | FY13           | FY14           | FY15           |
| Manipur                       | 265           | 99            | 247           | 303            | 503            | 258           | 150            | 275            | 350            | 463            |
| Meghalaya                     | 342           | 202           | 196           | 259            | 274            | 190           | 310            | 385            | 340            | 545            |
| Mizoram                       | 429           | 129           | 147           | 156            | 155            | 267           | 300            | 186            | 260            | 230            |
| Nagaland                      | 424           | 293           | 369           | 1,367          | 317            | 355           | 580            | 655            | 535            | 600            |
| Odisha                        | 28            | -             | -             | -              | -              | -             | -              | -              | -              | 3,000          |
| Punjab                        | 1,199         | 981           | 4,121         | 5,061          | 3,885          | 4,928         | 8,267          | 9,700          | 9,000          | 8,950          |
| Rajasthan                     | 528           | 1,724         | 4,775         | 6,406          | 7,500          | 6,180         | 4,617          | 8,500          | 8,800          | 12,300         |
| Sikkim                        | 445           | 115           | 250           | 293            | 328            | -             | 40             | 94             | 215            | 330            |
| Tamil Nadu                    | 1,568         | 1,814         | 4,450         | 8,298          | 10,599         | 8,050         | 13,490         | 15,300         | 17,200         | 22,100         |
| Tripura                       | 181           | 35            | -             | 156            | 350            | 285           | 500            | 645            | 550            | 150            |
| Union Territory of Puducherry | -             | -             | 337           | 350            | 500            | 600           | 533            | 302            | 500            | 470            |
| Uttar Pradesh                 | 891           | 3,248         | 5,300         | 12,594         | 13,503         | 11,200        | 16,118         | 9,500          | 7,750          | 16,100         |
| Uttarakhand                   | 504           | 369           | 971           | 1,011          | 300            | 992           | 1,400          | 1,750          | 2,500          | 2,400          |
| West Bengal                   | 741           | 1,336         | 11,607        | 12,397         | 12,681         | 9,502         | 22,423         | 20,000         | 21,566         | 21,900         |
| Telangana                     | -             | -             | -             | -              | -              | -             | -              | -              | -              | 8,200          |
| <b>Total</b>                  | <b>14,995</b> | <b>21,064</b> | <b>69,238</b> | <b>120,070</b> | <b>117,333</b> | <b>99,129</b> | <b>159,610</b> | <b>171,147</b> | <b>200,507</b> | <b>233,772</b> |

Source: RBI (FY10-15), CRISIL Research (FY06-09)

### Issuances by size and amount

| Number of issues     |           |           |            |            |            |            |            |            |            |            |
|----------------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|
| Size                 | FY06      | FY07      | FY08       | FY09       | FY10       | FY11       | FY12       | FY13       | FY14       | FY15       |
| Up to Rs 500 cr      | 84        | 67        | 73         | 60         | 65         | 70         | 88         | 84         | 109        | 108        |
| > Rs 500 to 1,000 cr | 05        | 03        | 32         | 50         | 47         | 64         | 59         | 92         | 89         | 104        |
| > Rs 1,000 cr        | -         | 02        | 16         | 30         | 37         | 13         | 49         | 46         | 55         | 71         |
| <b>Total</b>         | <b>89</b> | <b>72</b> | <b>121</b> | <b>140</b> | <b>149</b> | <b>147</b> | <b>196</b> | <b>222</b> | <b>253</b> | <b>283</b> |

Source: RBI (FY10-15), CRISIL Research (FY06-09)

| Amount (Rs cr)                |               |               |               |                |                |               |                |                |                |                |
|-------------------------------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|----------------|----------------|----------------|
| Issue size                    | FY06          | FY07          | FY08          | FY09           | FY10           | FY11          | FY12           | FY13           | FY14           | FY15           |
| Up to Rs 500 cr               | 11,956        | 15,467        | 18,074        | 14,179         | 19,845         | 22,428        | 26,599         | 24,371         | 33,072         | 29,189         |
| > Rs 500 cr up to Rs 1,000 cr | 3,039         | 2,349         | 25,782        | 42,952         | 39,743         | 57,173        | 53,739         | 76,518         | 79,719         | 95,800         |
| > Rs 1,000 cr                 | -             | 3,248         | 25,381        | 62,939         | 57,744         | 19,529        | 79,272         | 70,258         | 87,716         | 108,783        |
| <b>Total</b>                  | <b>14,995</b> | <b>21,064</b> | <b>69,238</b> | <b>120,070</b> | <b>117,333</b> | <b>99,129</b> | <b>159,610</b> | <b>171,147</b> | <b>200,507</b> | <b>233,772</b> |

Source: RBI (FY10-15), CRISIL Research (FY06-09)

### Top 10 issuer states based on aggregate amount issued in the last 10 years

| Amount (Rs cr) |                |       |       |        |        |        |        |        |        |        |        |         |
|----------------|----------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Rank           |                | FY06  | FY07  | FY08   | FY09   | FY10   | FY11   | FY12   | FY13   | FY14   | FY15   | Total   |
| 1              | Maharashtra    | 1,012 | 1,738 | 8,520  | 17,762 | 14,650 | 10,127 | 20,500 | 16,313 | 24,431 | 25,083 | 140,134 |
| 2              | West Bengal    | 741   | 1,336 | 11,607 | 12,397 | 12,681 | 9,502  | 22,423 | 20,000 | 21,566 | 21,900 | 134,154 |
| 3              | Andhra Pradesh | 1,202 | 2,726 | 6,650  | 10,934 | 12,383 | 12,000 | 15,875 | 20,000 | 25,400 | 17,000 | 124,170 |
| 4              | Tamil Nadu     | 1,568 | 1,814 | 4,450  | 8,298  | 10,599 | 8,050  | 13,490 | 15,300 | 17,200 | 22,100 | 102,869 |
| 5              | Gujarat        | 116   | 0     | 6,775  | 7,659  | 9,000  | 11,293 | 16,500 | 14,800 | 16,840 | 13,900 | 96,882  |
| 6              | Uttar Pradesh  | 891   | 3,248 | 5,300  | 12,594 | 13,503 | 11,200 | 16,118 | 9,500  | 7,750  | 16,100 | 96,204  |
| 7              | Kerala         | 1,413 | 2,168 | 4,297  | 5,516  | 5,456  | 5,500  | 8,880  | 11,583 | 12,800 | 13,200 | 70,813  |
| 8              | Karnataka      | 28    | 0     | 750    | 7,417  | 5,750  | 2,000  | 7,500  | 9,300  | 14,895 | 18,500 | 66,140  |
| 9              | Rajasthan      | 528   | 1,724 | 4,775  | 6,406  | 7,500  | 6,180  | 4,617  | 8,500  | 8,800  | 12,300 | 61,329  |
| 10             | Punjab         | 1,199 | 981   | 4,121  | 5,061  | 3,885  | 4,928  | 8,267  | 9,700  | 9,000  | 8,950  | 56,093  |

Source: RBI, CRISIL Research

### Aggregate amount issued by top 10 issuers\* as a percentage of GSDP

| Amount (Rs cr)                                 |           |           |           |           |           |           |           |           |           |           |
|------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                | FY05      | FY06      | FY07      | FY08      | FY09      | FY10      | FY11      | FY12      | FY13      | FY14      |
| Total amount issued by top 10 issuers* (Rs cr) | 14,822    | 8,698     | 15,735    | 57,244    | 94,044    | 95,407    | 80,779    | 134,170   | 134,996   | 158,682   |
| Total GSDP of top 10 issuer states (Rs cr)     | 2,042,662 | 2,352,312 | 2,756,939 | 3,205,080 | 3,654,692 | 4,210,797 | 5,056,910 | 5,837,308 | 6,510,168 | 7,351,091 |
| Issued amount as % of GSDP                     | 0.7%      | 0.4%      | 0.6%      | 1.8%      | 2.6%      | 2.3%      | 1.6%      | 2.3%      | 2.1%      | 2.2%      |

\*Based on aggregate amount issued in the last 10 years

Source: MOSPI, RBI, CRISIL Research

### Issuances by top 10 states\* as a percentage of GSDP

| State          | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | FY14 | FY15 |
|----------------|------|------|------|------|------|------|------|------|------|------|
| Maharashtra    | 0.2% | 0.3% | 1.2% | 2.4% | 1.7% | 0.9% | 1.6% | 1.2% | 1.7% | 1.5% |
| West Bengal    | 0.3% | 0.5% | 3.9% | 3.6% | 3.2% | 2.0% | 4.1% | 3.2% | 3.1% | 2.7% |
| Andhra Pradesh | 0.5% | 0.9% | 1.8% | 2.6% | 2.6% | 2.1% | 2.4% | 2.7% | 3.0% | 3.3% |
| Tamil Nadu     | 0.6% | 0.6% | 1.3% | 2.1% | 2.2% | 1.4% | 2.1% | 2.1% | 2.0% | 2.3% |
| Gujarat        | 0.0% | 0.0% | 2.1% | 2.1% | 2.1% | 2.1% | 2.7% | 2.2% | 2.2% | NA   |
| Uttar Pradesh  | 0.3% | 1.0% | 1.4% | 2.8% | 2.6% | 1.9% | 2.4% | 1.2% | 0.9% | 1.6% |
| Kerala         | 1.0% | 1.4% | 2.5% | 2.7% | 2.4% | 2.0% | 2.8% | 3.3% | 3.2% | NA   |
| Karnataka      | 0.0% | 0.0% | 0.3% | 2.4% | 1.7% | 0.5% | 1.6% | 1.8% | 2.6% | 2.6% |
| Rajasthan      | 0.4% | 1.0% | 2.5% | 2.8% | 2.8% | 1.8% | 1.1% | 1.9% | 1.7% | 2.1% |
| Punjab         | 1.1% | 0.8% | 2.7% | 2.9% | 2.0% | 2.2% | 3.2% | 3.3% | 2.8% | 2.6% |

\*Based on aggregate amount issued in the last 10 years  
Source: MOSPI, RBI, CRISIL Research

### Maturity-wise amount issued

| Maturity (years) | Amount (Rs cr) |               |               |                |                |               |                 |                |                |                |
|------------------|----------------|---------------|---------------|----------------|----------------|---------------|-----------------|----------------|----------------|----------------|
|                  | FY06           | FY07          | FY08          | FY09           | FY10           | FY11          | FY12            | FY13           | FY14           | FY15           |
| Up to 5          | -              | -             | -             | -              | -              | -             | -               | 10,600         | 2,987          | 7,500          |
| > 5 to 10        | 14,995         | 21,064        | 68,888        | 120,070        | 117,333        | 99,129        | 1,59,610        | 160,547        | 197,520        | 226,272        |
| > 10             | -              | -             | 350           | -              | -              | -             | -               | -              | -              | NA             |
| <b>Total</b>     | <b>14,995</b>  | <b>21,064</b> | <b>69,238</b> | <b>120,070</b> | <b>117,333</b> | <b>99,129</b> | <b>1,59,610</b> | <b>171,147</b> | <b>200,507</b> | <b>233,772</b> |

Source: RBI (FY10-15), CRISIL Research (FY06-09)

## Average daily trading

|      | Average traded volume (Rs cr) |
|------|-------------------------------|
| FY06 | 76                            |
| FY07 | 52                            |
| FY08 | 55                            |
| FY09 | 147                           |
| FY10 | 294                           |
| FY11 | 179                           |
| FY12 | 185                           |
| FY13 | 487                           |
| FY14 | 637                           |
| FY15 | 772                           |

Source: CCIL (FY09-15), CRISIL Research (FY06-08)

## Top 10 most actively traded SDLs\*

|                | Amount (Rs cr) |
|----------------|----------------|
| Andhra Pradesh | 8,491          |
| Maharashtra    | 8,135          |
| West Bengal    | 7,944          |
| Tamil Nadu     | 6,544          |
| Gujarat        | 6,361          |
| Karnataka      | 5,729          |
| Uttar Pradesh  | 4,988          |
| Kerala         | 4,211          |
| Rajasthan      | 3,141          |
| Punjab         | 2,152          |

Source: CCIL (FY09-15), CRISIL Research (FY06-08)

\*Based on average annual traded volume for the last 10 years

## Maturity-wise annual trading

|                           | Rs cr         |               |               |               |               |               |               |                |                |                |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| Residual maturity (years) | FY06          | FY07          | FY08          | FY09          | FY10          | FY11          | FY12          | FY13           | FY14           | FY15           |
| Up to 3                   | 450           | 2,879         | 1,392         | 658           | 2,850         | 3,253         | 656           | 2,345          | 3,697          | 5,826          |
| > 3 to 5                  | 2,028         | 1,805         | 1,712         | 198           | 302           | 579           | 321           | 9,192          | 6,309          | 6,569          |
| > 5 to 10                 | 17,930        | 7,692         | 10,493        | 33,246        | 65,398        | 36,629        | 43,237        | 106,429        | 144,737        | 162,133        |
| > 10                      | 89            | 135           | 28            | 01            | -             | -             | -             | -              | -              | 8,504          |
| <b>Total</b>              | <b>20,498</b> | <b>12,511</b> | <b>13,626</b> | <b>34,103</b> | <b>68,549</b> | <b>40,462</b> | <b>44,214</b> | <b>117,966</b> | <b>154,743</b> | <b>183,032</b> |

Source: CCIL (FY09-15), CRISIL Research (FY06-08)

## Treasury bills

### 91-day issuances by number and amount

| Number of issues  |           |           |           |           |           |           |           |           |           |           |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Issuance size     | FY06      | FY07      | FY08      | FY09      | FY10      | FY11      | FY12      | FY13      | FY14      | FY15      |
| Rs 100-1,000 cr   | 20        | 4         | 11        | 7         | 1         | -         | -         | -         | -         | -         |
| Rs 1,000-5,000 cr | 30        | 48        | 43        | 38        | 32        | 40        | 16        | 21        | 13        | -         |
| > Rs 5,000 cr     | -         | -         | -         | 7         | 20        | 12        | 36        | 31        | 38        | 52        |
| <b>Total</b>      | <b>50</b> | <b>52</b> | <b>54</b> | <b>52</b> | <b>53</b> | <b>52</b> | <b>52</b> | <b>52</b> | <b>51</b> | <b>52</b> |

Source: RBI

| Amount (Rs cr)    |               |               |                |                |                |                |                |                |                |                |
|-------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Issuance size     | FY06          | FY07          | FY08           | FY09           | FY10           | FY11           | FY12           | FY13           | FY14           | FY15           |
| Rs 100-1,000 cr   | 10,000        | 2,000         | 5,500          | 3,500          | 500            | -              | -              | -              | -              | -              |
| Rs 1,000-5,000 cr | 70,000        | 96,000        | 119,000        | 154,000        | 146,000        | 135,000        | 65,000         | 105,000        | 60,000         | -              |
| > Rs 5,000 cr     | -             | -             | -              | 51,500         | 150,000        | 84,000         | 268,000        | 245,000        | 257,000        | 435,000        |
| <b>Total</b>      | <b>80,000</b> | <b>98,000</b> | <b>124,500</b> | <b>209,000</b> | <b>296,500</b> | <b>219,000</b> | <b>333,000</b> | <b>350,000</b> | <b>317,000</b> | <b>435,000</b> |

Source: RBI

### 182-day issuances by number and amount

| Number of issues  |           |           |           |           |           |           |           |           |           |           |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Issuance size     | FY06      | FY07      | FY08      | FY09      | FY10      | FY11      | FY12      | FY13      | FY14      | FY15      |
| Rs 100-1,000 cr   | 10        | 2         | 5         | 7         | 7         | 4         | -         | -         | -         | -         |
| Rs 1,000-5,000 cr | 15        | 24        | 21        | 19        | 20        | 22        | 26        | 26        | 15        | 5         |
| > Rs 5,000 cr     | -         | -         | -         | -         | -         | -         | -         | -         | 10        | 21        |
| <b>Total</b>      | <b>25</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>27</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>25</b> | <b>26</b> |

Source: RBI

| Amount (Rs crore) |               |               |               |               |               |               |               |                |                |                |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| Issuance size     | FY06          | FY07          | FY08          | FY09          | FY10          | FY11          | FY12          | FY13           | FY14           | FY15           |
| Rs 100-1,000 cr   | 5,000         | 1,000         | 2,500         | 4,000         | 5,500         | 4,000         | -             | -              | -              | -              |
| Rs 1,000-5,000 cr | 22,500        | 36,000        | 40,500        | 36,000        | 37,000        | 39,000        | 90,000        | 130,000        | 69,000         | 25,000         |
| > Rs 5,000 cr     | -             | -             | -             | -             | -             | -             | -             | -              | 60,000         | 126,000        |
| <b>Total</b>      | <b>27,500</b> | <b>37,000</b> | <b>43,000</b> | <b>40,000</b> | <b>42,500</b> | <b>43,000</b> | <b>90,000</b> | <b>130,000</b> | <b>129,000</b> | <b>151,000</b> |

Source: RBI



**Size-wise break-up of number and amount of issuances (364-day T-bills)**

| Number of issuances |           |           |           |           |           |           |           |           |           |           |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Issuance size       | FY06      | FY07      | FY08      | FY09      | FY10      | FY11      | FY12      | FY13      | FY14      | FY15      |
| Rs 100-1,000 cr     | 10        | 2         | 6         | 10        | 17        | 14        | -         | -         | -         | -         |
| Rs 1,000-5,000 c    | 16        | 24        | 20        | 16        | 9         | 12        | 26        | 26        | 15        | 5         |
| > Rs 5,000 cr       | -         | -         | -         | -         | -         | -         | -         | -         | 11        | 21        |
| <b>Total</b>        | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> | <b>26</b> |

Source: RBI

| Amount raised (Rs cr) |               |               |               |               |               |               |               |                |                |                |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| Issuance size         | FY06          | FY07          | FY08          | FY09          | FY10          | FY11          | FY12          | FY13           | FY14           | FY15           |
| Rs 100-1,000 cr       | 10,000        | 2,000         | 6,000         | 10,000        | 17,000        | 14,000        | -             | -              | -              | -              |
| Rs 1,000-5,000 cr     | 32,000        | 48,000        | 49,000        | 40,000        | 24,000        | 28,000        | 90,000        | 130,000        | 71,000         | 25,000         |
| > Rs 5,000 cr         | -             | -             | -             | -             | -             | -             | -             | -              | 66,000         | 127,000        |
| <b>Total</b>          | <b>42,000</b> | <b>50,000</b> | <b>55,000</b> | <b>50,000</b> | <b>41,000</b> | <b>42,000</b> | <b>90,000</b> | <b>130,000</b> | <b>137,000</b> | <b>152,000</b> |

Source: RBI

**Average daily trading**

| Amount (Rs cr)  |            |            |            |            |              |              |              |              |              |              |
|-----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                 | FY06       | FY07       | FY08       | FY09       | FY10         | FY11         | FY12         | FY13         | FY14         | FY15         |
| 91-day T-bills  | 263        | 152        | 269        | 404        | 941          | 592          | 650          | 1,250        | 1,432        | 1,673        |
| 182-day T-bills | 159        | 199        | 169        | 242        | 538          | 376          | 435          | 567          | 808          | 975          |
| 364-day T-bills | 308        | 199        | 207        | 178        | 218          | 259          | 389          | 587          | 868          | 839          |
| <b>Total</b>    | <b>731</b> | <b>551</b> | <b>646</b> | <b>825</b> | <b>1,697</b> | <b>1,227</b> | <b>1,473</b> | <b>2,405</b> | <b>3,108</b> | <b>3,487</b> |

Source: CCIL (FY09-15), CRISIL Research (FY06-08)

## External commercial borrowings/ foreign currency convertible bonds

|      | Issuers | Issuances | Amount (\$ million) |
|------|---------|-----------|---------------------|
| FY06 | 459     | 600       | 17,172              |
| FY07 | 722     | 921       | 25,353              |
| FY08 | 486     | 625       | 30,958              |
| FY09 | 440     | 553       | 18,363              |
| FY10 | 463     | 600       | 21,669              |
| FY11 | 571     | 726       | 25,776              |
| FY12 | 837     | 1,074     | 35,967              |
| FY13 | 692     | 918       | 32,058              |
| FY14 | 541     | 714       | 33,238              |
| FY15 | 585     | 824       | 28,384              |

Source: RBI

## Maturity-wise issuance

| Maturity (years) | Amount (\$ million) |               |               |               |               |               |               |               |               |               |
|------------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                  | FY06                | FY07          | FY08          | FY09          | FY10          | FY11          | FY12          | FY13          | FY14          | FY15          |
| Up to 3          | 1,683               | 1,017         | 1,061         | 495           | 1,129         | 563           | 521           | 2,457         | 7,739         | 1,634         |
| 3 to 5           | 4,913               | 6,886         | 5,490         | 1,273         | 6,470         | 5,500         | 5,614         | 5,253         | 6,900         | 6,308         |
| 5 to 10          | 8,382               | 13,744        | 14,928        | 9,603         | 9,767         | 13,875        | 20,044        | 13,333        | 10,957        | 11,501        |
| > 10             | 2,194               | 3,706         | 9,479         | 6,991         | 4,303         | 5,837         | 9,787         | 11,015        | 7,641         | 6,730         |
| NA               | -                   | -             | -             | -             | -             | -             | -             | -             | -             | 2,211         |
| <b>Total</b>     | <b>17,172</b>       | <b>25,353</b> | <b>30,958</b> | <b>18,363</b> | <b>21,669</b> | <b>25,776</b> | <b>35,967</b> | <b>32,058</b> | <b>33,238</b> | <b>28,384</b> |

Source: RBI

# Abbreviations

| <b>Abbreviation</b> | <b>Full form</b>                                               |
|---------------------|----------------------------------------------------------------|
| ABS                 | Asset-backed security                                          |
| ADB                 | Asian Development Bank                                         |
| AMC                 | Asset management company                                       |
| APMC                | Agricultural produce marketing committee                       |
| ARC                 | Asset reconstruction company                                   |
| BFSI                | Banking, financial services and insurance                      |
| BGFI                | Bond Guarantee Fund of India                                   |
| BIFR                | Board for Industrial and Financial Reconstruction              |
| CAD                 | Current account deficit                                        |
| CCIL                | Clearing Corporation of India Ltd                              |
| CD                  | Certificate of deposit                                         |
| CDS                 | Credit default swap                                            |
| CP                  | Commercial paper                                               |
| CPI                 | Consumer Price Index                                           |
| CRR                 | Cash reserve ratio                                             |
| DDT                 | Dividend distribution tax                                      |
| ECB                 | External commercial borrowing                                  |
| ECR                 | Export credit refinance                                        |
| EPFO                | Employees' Provident Fund Organisation                         |
| ETCD                | Exchange traded currency derivatives                           |
| ETF                 | Exchange traded fund                                           |
| EXIM Bank           | Export Import Bank of India                                    |
| FCCB                | Foreign currency convertible bond                              |
| FCNR                | Foreign currency non-resident                                  |
| FI                  | Financial institution                                          |
| FII                 | Foreign institutional investor                                 |
| FIMMDA              | Fixed Income Money Market and Derivatives Association of India |
| FMP                 | Fixed maturity plan                                            |

| Abbreviation | Full form                                           |
|--------------|-----------------------------------------------------|
| FPI          | Foreign portfolio investors                         |
| GDP          | Gross domestic product                              |
| GNPA         | Gross non-performing advances                       |
| GSDP         | Gross state domestic product                        |
| G-secs       | Government securities                               |
| HFC          | Housing finance company                             |
| HDFC         | Housing Development Finance Corporation             |
| HTM          | Held to maturity                                    |
| IDFC         | Infrastructure Development Finance Company          |
| IMF          | International Monetary Fund                         |
| InvITs       | Infrastructure investment trust                     |
| IRDA         | Insurance Regulatory and Development Authority      |
| LAF          | Liquidity Adjustment Facility                       |
| MBS          | Mortgage-backed security                            |
| MFI          | Micro-finance institution                           |
| MOSPI        | Ministry of Statistics and Programme Implementation |
| NABARD       | National Bank for Agriculture and Rural Development |
| NBFC         | Non-banking finance company                         |
| NDS          | Negotiated dealing system                           |
| NDTL         | Net demand and time liabilities                     |
| NPA          | Non-performing asset                                |
| NSDL         | National Securities Depository Limited              |
| PCE          | Partial credit enhancement                          |
| PFC          | Power Finance Corporation                           |
| PFRDA        | Pension Fund Regulatory and Development Authority   |
| PGC          | Power Grid Corporation                              |
| PSU          | Public sector unit                                  |
| PTC          | Pass through certificate                            |

| <b>Abbreviation</b> | <b>Full form</b>                       |
|---------------------|----------------------------------------|
| RBI                 | Reserve Bank of India                  |
| REC                 | Rural Electrification Corporation      |
| REITs               | Real Estate Investment Trust           |
| SBI                 | State Bank of India                    |
| SDL                 | State development loan                 |
| SEBI                | Securities and Exchange Board of India |
| SICA                | Sick Industrial Companies Act          |
| SLR                 | Statutory liquidity ratio              |
| SME                 | Small and medium-sized enterprises     |
| SPV                 | Special purpose vehicle                |
| T-bill              | Treasury bill                          |
| UPI                 | Unified Payments Interface             |

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