

India  
Special Report

## Fixed Income Derivatives – A Survey of the Indian Market

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This report, based on a survey undertaken in conjunction with Indian Banks' Association ("IBA"), is specifically intended for financial analysts, policy makers and other interested parties who may not currently be directly involved in the Indian derivatives market.

### ■ Summary

Phenomenal growth in derivatives in India in recent times has seen daily trading in interest-rate derivatives match that in government securities. Nevertheless, the market is still embryonic, both in terms of depth and sophistication.

This report draws on a survey undertaken in conjunction with IBA on India's interest rate and foreign exchange derivative markets, written specifically for financial analysts, policy makers and other interested parties who may not currently be directly involved in the market. Fitch Ratings and IBA approached various commercial banks; Fitch also held one-on-one discussions with some of the key players in the market, and separately surveyed mutual funds and primary dealers. While many responses to the survey were received, the agency understands that regulations in India prohibit mutual funds and primary dealers from participating in all areas of the market, limiting their input. Insurance companies were excluded from the survey, as at the time of the survey, they were prohibited from entering into derivatives contracts.

The quality of responses varied significantly, perhaps providing an indication of the level of market participation. Response quality and timeliness would also naturally reflect other factors, including risk-reporting systems, which are crucial to derivatives portfolios. Fitch will follow up with those institutions that have reported significant derivatives exposures to better understand the measurement and management of the risk assumed. The agency will continue collecting more information from market participants and report its findings.

Some of the key points arising from the survey are listed below:

- By volume, derivatives now match the government securities market. Any disruption in the market could have far reaching ramifications. It is therefore important for policy makers to ensure that legal, accounting, valuation and risk reporting policies are continuously monitored and improved to ensure market stability.
- Predominantly an inter-bank market, with maximum trading in overnight index swaps ("OIS"), followed by currency swaps, and currency options. Interest rate futures have yet to gain volumes.
- International Swaps and Derivatives Association ("ISDA") agreements have gained acceptance in the Indian marketplace.
- Tenors do not go beyond five years, which is probably due to the absence of counterparty lines for longer tenors. Therefore, the market still lacks the tools to manage interest-rate exposure beyond five years.

- Legal and documentation risks appear the main concerns for market participants. Illiquidity, accounting and tax treatment were also areas that were seen as impediments by survey respondents.
- The small number and varying quality of responses highlighted the lack of market depth. This was further emphasised by the fact that most respondents cited the need for greater investor education as important for the development of the market.

Fitch will continue to hold discussions with those institutions that have not provided comprehensive responses to the survey. Additionally, it may incorporate this in the rating process going forward.

### ■ State of the Market

Fitch and IBA surveyed various commercial banks. Fitch also held one-on-one discussions with some of the key players in the market and separately surveyed mutual funds and primary dealers. The survey focused primarily on interest rate and currency derivatives in the Indian markets. Credit derivatives are yet to make their mark in India and therefore were excluded from the survey.

Of the respondents, 80% provided information that was of good or excellent quality. However, few organisations had not provided comprehensive responses as of the date of this report, which Fitch believes may be a reflection of the embryonic state of the Indian derivatives market.

80% of respondents identified 'hedging' as the primary motive for using derivatives, although for many of the large Public Sector (PSU) banks, 'covered intermediation' was cited. Covered intermediation does imply some risk, albeit limited to credit risk.

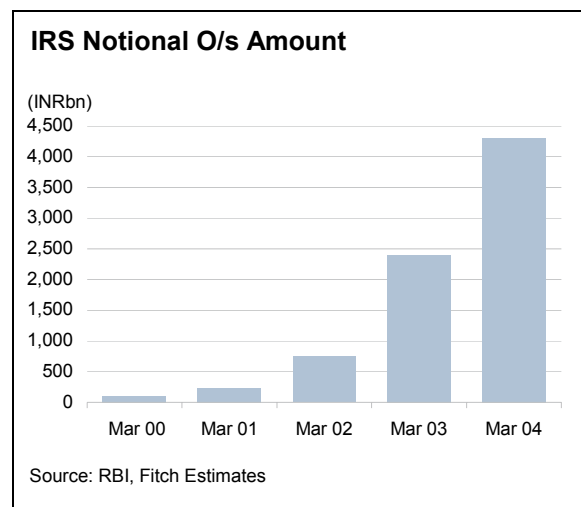
The ability to provide detailed derivatives information reflects positively on the quality and depth of an institution's infrastructure and risk information system capabilities. While any conclusion in this regard could be tentative at best, the respondents that provided comprehensive responses, disclosed capacity to report aggregate positions by instrument and obligor and counterparty concentrations. This is particularly important for larger and more treasury-focused organisations. Poor response quality may also be due to a respondent's limited activity in this market or the need to upgrade risk-reporting systems. Fitch will continue to hold discussions with those institutions that have not provided comprehensive responses to the survey.

Additionally, it may incorporate this in the rating process going forward

### Market Development

Given the number of respondents that indicated daily trading volumes in the region of INR1billion-INR5billion, and making allowances for those that did not respond, Fitch estimates that daily trading volumes in interest-rate derivatives in India are around INR30bn, significantly ahead of the foreign exchange derivatives market. It appears that volumes have spurred to these levels from INR10bn in January 2004. This rapid growth is probably due to increased uncertainty surrounding interest rates as it is the only market, which permits participants to take a two-way view on the market.

While the market for interest-rate derivatives is now comparable with that for government securities in India, Fitch believes there are still only about 20 active players in the former compared to over 100 in the latter. The key participants will be concluding between five and 10 trades a day. Fitch believes that high frequency of trades is key for an efficient price-setting mechanism; a lack of depth will constrain market evolution, limiting hedging opportunities for fixed-income portfolios in India.



Foreign exchange derivatives have been traded in India for far longer than interest-rate derivatives, although the latter have been more readily accepted. 40% of respondents disclosed that, within their bond trading volumes, in excess of 10% took the form of interest rate derivatives, while only 20% of respondents had allocated in excess of 10% of foreign exchange trading volumes to currency derivatives. 70% of respondents revealed that daily currency and interest rate derivative trades aggregated to less than INR1bn. Interestingly, of the foreign and Indian private banks that responded to

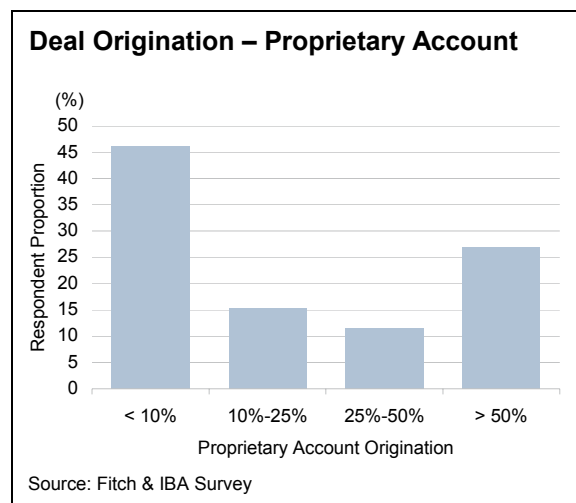
the survey, 50% reported average daily volumes of INR5bn.

### Term Structure and Counterparties

The bond markets in India have a term structure of 30 years, with the 10 to 15 year bracket being the most active, versus the five-year bracket in the OIS market, which the survey findings supported. Discussion with some of the large players indicates that this probably stems from the absence of “counterparty lines” for longer maturity with other major participants. However, in currency derivatives, 70% of the respondents cited an average portfolio maturity of less than one year.

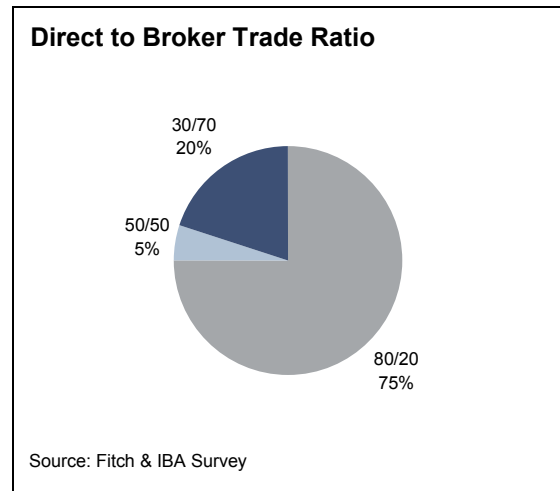
Foreign and public sector banks consistently ranked as the major counterparties in the Indian derivatives market, although two Indian banks ranked corporates. Participant diversity is essential to the development of India’s derivatives market. Fitch believes that greater awareness of derivatives products and interest rate volatility will be key to raising interest across corporate treasuries, but which can be spurred by an increase in the number of active commercial banks.

The majority of foreign and new generation private banks that responded to the survey revealed that more than 25% of derivatives transactions were traded for proprietary accounts, indicating a greater appetite for risk. Large PSU banks have cited ‘covered intermediation’ as their primary motive for using derivatives. That said, growth in proprietary derivatives trading will aid the development of the market.



80% of respondents revealed that the majority of derivatives counterparties were rated ‘AAA(ind)’. Additionally, most limited trades with brokers to less than 20%. Fitch believes that higher proportion of

direct trades and robust counterparty credit profiles mitigate settlement risk.



ISDA, the global trade association, represents the leading participants in the over-the-counter (“OTC”) derivatives market comprising interest rate, currency, commodity and equity swaps, as well as related products such as caps, collars, floors and ‘swaptions’. Fitch believes that the trend of using ISDA documentation prior to negotiating trades with counterparties reflects mature risk-awareness. While ISDA has become the standard for documentation, it still remains an important hurdle for some players. 17% of the respondents said that they had signed ISDA’s with less than 40% of the counterparties.

### ISDA

ISDA Counterparties	Respondent % (cumulative)
< 5%	10
< 15%	13
<40%	16

Source: Fitch & IBA Survey

### Product Risk

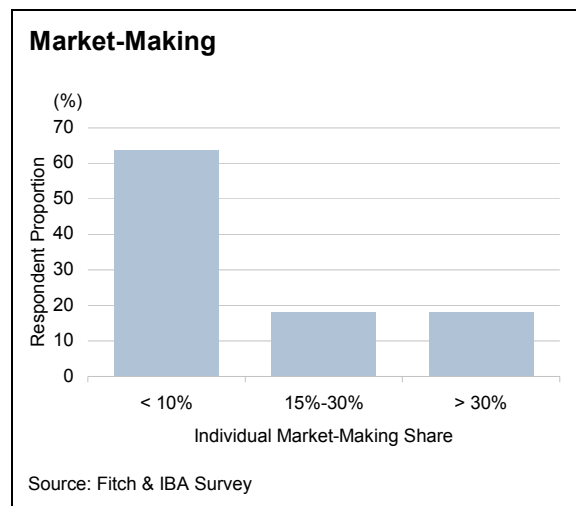
Interest rate swaps that include the OIS market dominate the derivatives books for 80% of the respondents. Interestingly, half of respondents perceived exotic products to present the greatest risk in their portfolios. Derivatives essentially hedge risk. However, there exists perceptible asymmetry in risk grading of derivatives.

### How Risky is Investing in Derivatives?

Risk Grade	Respondent Proportion (%)
Gol Securities	33
Between Gol Secs & Equities	45
Forex Products	15
Equities	7

Source: Fitch & IBA Survey

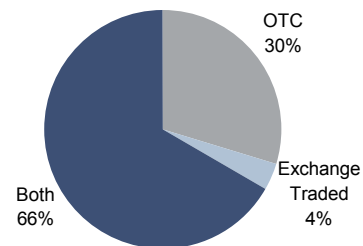
Aside from valuation risks, the type of position taken by the institution in a derivatives deal is important. Market making means that a trader or an organisation puts both buy and sell orders into the market, and wait for people to trade on either side. Market making in derivatives acts as an effective mitigant for reference risk as the product purchased in the market is usually sold on the other side. Indian private-sector banks and foreign banks exhibited higher propensity for market-making activities. In their respective subsets, 50% of both private sector and foreign banks reported more than 15% of deals arising from market-making activities. PSU banks were unanimous in reporting that less than 10% of deals were originated from market making activities. We believe that a lower proportion of market making activities is a reflection of the embryonic nature of the Indian derivatives market.



Identifying and managing risks is essential in the financial system. 70% of respondents revealed they had developed risk management systems internally; the balance had outsourced this to consultants. The survey revealed a combination of risk management tools are employed, including, principal component analysis, value-at-risk, modified duration limits and counterparty limits.

Risk management is also dependent on the type of markets in which a product is traded. Exchange-traded-products are an effective mitigant to settlement risk. They also aid in the development of an efficient price-setting mechanism. However, interest rate and currency derivatives traded, as OTC products are essential risk management tools. Most respondents identified the need for both OTC products and exchange-traded products for effective risk management.

## Trading Platform



Source: Fitch & IBA Survey

Interest rate futures were introduced in India on the National Stock Exchange in June 2003. However, trading to date has not been significant. A critical drawback of these contracts, written on notional bonds, is that they are priced on a zero coupon yield curve, which market participants believe do not match yields in the OTC market. Fitch believes that harmonisation of fixed income valuation methodologies in the Indian markets will be a critical driver for growth and efficient risk management.

## Disclosures

Fitch believes greater financial disclosure improves market transparency. There is a clear need for financial institutions to improve disclosure of interest rate and currency derivatives substantially. Financial statements, on the whole, currently provide little meaningful insight into an institution's use of this increasingly important risk management tool.

The present methodology of disclosing the notional value of interest rate swaps, as contingent liabilities tend to inflate the position of these contracts. Interest rate swaps are generally traded without involving exchange of principal, resulting in disparity between their actual and reported values. This could be addressed with the inclusion of additional information on the 'net position' of these contracts.

In India, trading positions are required to be marked-to-market ("MTM"). However, MTM gains/losses are subject to different accounting treatment reflecting the lack of clarification on whether these should be reported on a gross deal or net portfolio basis. This has resulted in the adoption of varying accounting practices in the market, which needs to be addressed.

## ■ Conclusion

Respondents to the survey were virtually unanimous in their desire to see growth in interest rate derivatives escalate, which bodes well for the market. However, in the respondents' opinion, achieving this will depend on investor education coupled with harmonisation of accounting treatment and development of a robust legal framework.

Fitch will continue collecting information from various market participants. The agency believes that investors and the market as a whole will benefit from greater transparency and disclosure. It anticipates providing additional market commentary as incremental information is processed and in response to other market developments.

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