RMA and PwC Survey on Non-Libor Discounting of Derivatives

RMA’s Market Risk Council, working with PriceWaterhouseCoopers (PwC), developed and carried out a survey of financial institutions, seeking to learn the status of their transition to non-Libor discounting. The findings, which included ranges of practices and standards used, are reported in this executive summary.

In the aftermath of the financial crisis, institutions were forced to revisit their pricing and business models for derivatives transactions. Financial institutions worldwide are in the process of transitioning from a pre-crisis, universal approach of discounting derivatives transactions using the London Interbank Offered Rate (Libor) to the current practice of discounting based on 1) collateral currency and type in the Credit Support Annex (CSA) of ISDA agreements, or 2) cost-of-funding rates. This transition has proved to be fraught with methodological, technological, and operational challenges. Moreover, the pace of the transition is vastly different from geography to geography and between institutions at different tiers of market participation.

The results of the survey RMA conducted with PwC provide insights into common industry practices and the degree to which techniques have achieved general acceptance and consistency. The survey results also offer useful benchmarking data.

The survey included sections for respondents to describe what impact, if any, the recent credit crisis, market disruptions, and Libor-related irregularities have had on their approach to valuing derivatives.

The survey consisted of the following parts:

- Overall approach to the transition and its current status.
To determine the leading-practices, we identified a small sample of participants characterized by the size of their trading books, the number of daily trades, and RWA allocation to the trading books.

- Collateralization and derivatives pricing and valuation
- Non-collateralized derivatives transactions pricing and valuation
- Impact of the new pricing and valuation on risk management
- Addendum on related topics

A total of 43 financial institutions based in North America, the United Kingdom, Europe, Asia, and Australia completed the web-based survey, which was written by PwC and RMA and hosted by RMA. The survey, conducted over the winter/spring of 2013, contained over 100 questions, split between multiple choice and written responses. Participants received an e-mail invitation with a unique passcode directing them to a URL address. The passcode was embedded in the URL to ensure only one response per institution.

Overview of the Main Results
Because of the small sample sizes available in the study, no attempt was made to conduct statistical analysis of the results. Instead, phrases such as “a few,” “about half,” “most,” or “the great majority of respondents” describe the main results of the survey.

To determine the leading-practices, we identified a small sample of participants characterized by the size of their trading books, the number of daily trades, and RWA allocation to the trading books. Nine of the 43 institutions were selected using these characteristics to form the pool of leading practitioners. Responses in the pool also revealed that a great majority of leading practitioners have set up a function in their front-office area to manage the OIS/Libor basis centrally. Half of the participants that have not yet done so reported that they plan to have such centralized functions in the future. The survey revealed that this risk is usually managed by the individual trading desks if no central desk has been set up.

All participants agreed that the transition to non-Libor discounting has also put significant pressure on IT costs and internal resources.

Collateralization and Derivatives Pricing and Valuation
The great majority of the institutions that have implemented CSA-based discounting for their collateralized transactions indicated that this method is applied mainly to interest-rate products pricing in the front office, followed by valuation in financial reporting, margining/collateral management, and risk.

The use of CSA discounting decreases rapidly for other products, led by equity products and then credit and commodity products.

Participants indicated that, for front-office pricing, the main factors used for collateralized transactions include CSA collateral terms and conditions, followed by the Credit Valuation Adjustment (CVA) and hedging and funding costs. The following CSA terms are the top three used by almost all the participants for pricing collateralized transactions (in order of decreasing usage):
- CSA direction (one-way in either direction, or two-way).
- Eligible currencies and securities.
- Thresholds.

The survey produced fairly diverse responses to the question of how the participants treated transactions with high thresholds and the ones with non-rehypothecatable collateral. For both cases, the two main responses were: 1) treat as non-collateralized and 2) use Libor for discounting. Other approaches included the use of OIS rates and adjusted cost-of-fund curves.

Less than half the participants indicated they are factoring in the cheapest to deliver (CTD) optionality in CSAs. Among those institutions factoring in CTD, the main approach seems to be use of the currency of the trade with a cross-currency basis with the CTD currency at inception throughout the life of the trade. Only a very small number of participants use a switch option approach incorporating volatilities and correlations.

Collateral management is a function that has undergone considerable enhancements given the transition to CSA-based pricing of collateralized transactions. The great majority of the participants described the state of data availability on almost all the CSA terms in their CSA repository as accurate and reliable. Moreover, a majority of participants have established collateralized central management functions in their front-office areas, while half of the participants that did not establish these functions indicated they plan to do so in the future. A very small number of these centralized collateral management functions are operating as profit centers.

A significant minority of participants also indicated they have set up a function in their front-office area to manage the OIS/Libor basis centrally. Half of the participants that have not yet done so reported that they plan to have such centralized functions in the future. The survey revealed that this risk is usually managed by the individual trading desks if no central desk has been set up.
A significant majority of the leading-practitioner pool indicated they use Libor discounting for pricing non-collateralized transactions, while the remaining minority is using cost-of-funding curves for pricing.

The majority of the leading-practitioner pool has either partially implemented a centralized unit for trading/risk management of FVA, or is in a planning stage. The majority of this pool expects that funding costs will be allocated to legal entities.

Non-collateralized Derivatives Transactions: Pricing and Valuation
A significant majority of the participants are applying Libor-based discounting to pricing and valuation of non-collateralized transactions.

Half of the participants who are not using Libor-based discounting indicated they are using a cost-of-funding curve to price non-collateralized transactions. The other half of these respondents said they are using OIS discounting.

The following factors (in order of decreasing usage) were used by the great majority of participants for front-office pricing of non-collateralized transactions:

- CVA
- Funding valuation adjustment (FVA)
- Debt valuation adjustment (DVA)
- Hedging costs, followed by fees and commissions

Other factors mentioned were liquidity value adjustment and capital.

The survey also revealed that the majority of the participants are planning to allocate FVAs to legal entities. More than half of the participants either are in the process of implementing or are planning a centralized unit for trading/risk-managing FVA.

Impact of the New Pricing and Valuation on Risk Management
The survey revealed that incorporating non-Libor discounting into the risk management functions at financial institutions is a work in progress.

A minority of the participants indicated they have the capabilities to manage risks related to non-Libor discounting in relation to stress testing, Value-at-Risk (VaR)/Potential Future Exposure (PFE), and economic capital calculations. The majority of institutions do not use non-Libor discounting for counterparty and other types of risk limit calculations. The capabilities with incorporating non-Libor discounting (or dual curve pricing) for risk management purposes lie mainly in the areas of specific products only (interest rate products).

A majority of respondents indicated they have not yet moved to set risk limits and hedging capabilities related to “new” risks arising from the transition to non-Libor discounting (for example, foreign exchange and basis risk limits for CVA and equity desks that did not have limits before).

All respondents in the leading-practitioners pool indicated they have implemented dual curve capabilities in their risk management systems for interest rate products, for calculating risk sensitivities and VaR. A significant majority of them have limits management and hedging capabilities for the “new” risks established and are reporting on their internal and external reporting.

Survey Addendum on Related Topics
An addendum to the survey also presented open-ended questions about the use of Libor. There was a shared view among the participants that Libor would remain a primary bank lending rate after all the enhancements to its setting process have been implemented.

Participants indicated that the alternative to Libor could be either a more trading-based index or the OIS rates themselves. However, some of the participants believe there is seemingly no other rate with enough liquidity across all the terms.

Future Surveys
RMA and PwC will build on this survey and engage in future topical surveys with the following goals in mind:
- Enhancing the quality of survey questions (such as refining questions that might have been ambiguous, or eliminating or refining questions that proved of marginal value)
- Improving the quality of the electronic survey tool (for example, refining the process and making it more flexible)
- Solidifying the existing level of participation and recruiting additional key institutions.
- Providing an ongoing benchmark in the areas of valuation, pricing, and risk management of derivatives transactions, as well as other functions, to reveal leading practices.

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Notes
1. Note that, for some of the respondents, the treatment of non-collateralized transactions can mean either Libor-based discounting or cost-of-funds rate-based discounting.
2. Martin Wheatley, managing director of the U.K. Financial Services Authority, in 2012 proposed a 10-point plan (the “Wheatley Report”) for reforming Libor and restoring its credibility following the manipulated setting of the Libor benchmark. Other regulatory and industry working groups are also reviewing the Libor-setting process.

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