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A/L BENCHMARKS *COMMUNICATOR*

Your monthly asset/liability management newsletter

Discount Rate Construction

For a given balance sheet category, the model used for *A/L Benchmarks* will employ one of two techniques to construct the discount rate. They are the Build-up Approach or the Risk Premium Approach.

The **Build-up Approach** views the discount rate as consisting of four components: the risk–free rate, credit risk, operating expense and prepayment option price.

The **Risk-Free Rate** forms the foundation of the discount rate and is derived from the Treasury yield curve. The point on the Treasury yield curve which corresponds to the time into the future for the cash flow is selected as the risk-free rate. A geometric interpolation is used between the discrete points of the yield curve to approximate the curvilinear shape of the yield curve. The value of this component may vary across time to reflect the term structure of interest, while the remaining components are constant across all time periods.

The **Credit Risk** component is the annualized yield needed to cover the loss of value expected over the entire life of the portfolio. For loans, the derivation of this component is based on an analysis of under performing loans and the gross charge-off experience for the past four quarters. For funding sources, the derivation of this component is based on financial ratios that reveal the ”credit-worthiness” of the financial institution for which present values are being computed. In both cases, the higher the credit quality component, the higher the credit risk.

The **Operating Expense** component represents an annualized cost rate derived from operating expense allocations. This component is used to adjust the risk-free rate in order to compensate for operating expenses. When dealing with core deposits, the operating expense component is reduced by service charge component. The service charge component represents an annualized income yield derived from operating income allocations and is used to reduce the operating expense component.

The **Prepayment Option Price** is the final component, and represents a basis point adjustment to the risk-free rate to reflect the value of imbedded prepayment options.

The **Risk Premium** approach views the discount rate as the sum of two components: the risk-free rate and a risk premium. The risk-free rate is the same as defined above. The **Risk Premium** is the annualized yield needed to cover the risk reflected in the portfolio. This risk premium incorporates all forms of risk in a single spread to the Treasury yield curve. Consistent with an entry rate concept of selecting a discount rate, the marginal pricing rate for each account serves as the basis for determining an appropriate risk premium to the Treasury yield curve. This risk premium is calculated by subtracting the value on the Treasury yield curve which corresponds to the average maturity of the account from the account’s marginal pricing rate.

Discount rate techniques for the general balance sheet categories are defined as follows:

CATEGORY	TECHNIQUE	SHOULD APPROXIMATE…
Securities & Trading assets	Risk Premium	Current market rates
Short Term Investments	Risk Premium	Current market rates
Loans	Build-up	Current offering rates
Deposits	Build-up	Cost of alternative funding for the given maturity, adjusted for expenses and credit quality
Short Term Borrowings	Build-up	Cost of alternative funding for the given maturity, adjusted for expenses and credit quality

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Benchmarks Brief

Forecasting non-interest income and expenses

In order to honor the cyclical nature of non-interest income and expenses, *A/L Benchmarks* uses a bank's history, same quarter prior year, to form the basis of the forecast. Any values identified as unusual or non-reoccurring in history are then removed from the base forecast. Growth rates supplied the by Bank are then calculated, and finally, values identified as unusual or non-reoccurring in the forecast are added. As seen in the prior article describing the calculation of discount rates, operating expenses have significant impact on discount rates used in calculating present values and the importance of supplying Supplement Date to the Call Report cannot be over emphasized.

Welcome aboard

The staff of Olson Research Associates, Inc. extends a warm welcome to the following Banks:

Union State Bank Rockwell City, IA
Commercial Bank Ithaca, MI
First Washington State Bank Windsor, NJ
Red River Bank Alexandria, LA
First Community Bank SW Florida Fort Meyers, FL
Heritage Bank of Central Illinois Trivoli, IL
Farmers State B & TC Church Point, LA
Millennium Bank Gainesville, FL
Union B & TC Strawberry Point, IA

Upcoming Events

November 18, 1999
"Getting the Maximum Benefit From *A/L Benchmarks*"
Columbia, MD

November 19, 1999
"Revising Your ALCO Policies"
Columbia, Maryland

We hope to see you there!

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