**RiskGPS: Deposit Assumptions**

RiskGPS leverages extensive historical data from your bank’s Call Report to automatically generate a set of deposit assumptions. However, it is critical that senior management reviews and, if needed, adjusts these assumptions to accurately reflect the bank’s profile, future outlook, and internal policies.

The Deposit Assumptions screen in RiskGPS is divided into three key sections:

* **Betas**
* **Decay Rates**
* **Market/Discount Rates**

**1. Betas**

Betas represent the sensitivity of your bank’s deposit pricing to changes in broader market interest rates. In RiskGPS, a beta reflects the basis point change in your bank’s deposit rates in response to a 100 basis point movement in market rates.

**Understanding Betas**

To interpret betas, consider how your bank might adjust a deposit rate (e.g., a NOW account) in response to a 100 bp rise in market rates:

* **Beta = 0**: The bank does not adjust the deposit rate
* **Beta = 100**: The bank fully matches the market rate movement

Most community banks fall somewhere between these extremes. Examiners expect banks to anticipate and document their expected responses to interest rate changes. Betas often differ in rising versus falling rate environments; for instance, banks may raise rates more slowly during rising markets and lower them more aggressively during declines.

**Impact on RiskGPS Analysis**

Deposit betas affect key outputs in RiskGPS, such as:

* Shocked Net Interest Margin
* Economic Value of Equity (EVE)
* GAP Reports

For non-maturing deposits, RiskGPS uses betas to allocate balances into two time buckets: “Immediate-Floating” and “1-3 Years.”

**Beta Calculation Methodology**

RiskGPS calculates default betas using historical data from two distinct periods, as detailed on the Rate Sensitivity of Non-Maturing Balances section (pg. 13) of the RiskGPS report:

* One period where rates rose significantly for a sustained period
* One period where rates fell substantially for a sustained period

The visual analysis includes:

* **Blue solid line**: Average yield on 6-month Treasury bills for each quarter
* **Green dashed line**: Your bank’s yield on Interest Bearing Checking Accounts for each quarter
* **Red dashed line**: Your bank’s yield on Money Market and Savings Accounts for each quarter

RiskGPS calculates the amount of change in your bank’s rates divided by the amount of change in the treasury rate over each of the selected periods to arrive at the Rising Rate and Falling Rate default betas.

**Special Considerations**

* **MMDA and Savings**: The default betas are the same for these two categories, as the call report combines some information needed to calculate historic yields on these categories.
* **Certificates of Deposit (CDs)**: These betas are not bank-specific. Rather, they are based on proprietary estimates using our knowledge of the industry. We strongly recommend users make changes to these defaults to appropriately reflect their own bank and market conditions.
* **Gap Beta**: Simple average of the Rising and Falling Rate betas.

Note: Default betas are based on historical behavior and may not reflect current or future market dynamics. Management is expected to review and, if appropriate, override these assumptions.

**2. Decay Rates**

Changes to betas influence the system-calculated decay rates. Decay rates are used exclusively in **Economic Value analysis** (not GAP, margin, or income analysis) to estimate the expected life of non-maturity deposits.

**How Decay Rates Are Calculated**

Decay rates are used to estimate the expected life of deposits that have no contractual maturity. RiskGPS calculates decay terms for:

* Non-Interest Bearing Checking
* Interest Bearing Checking
* Money Market
* Savings

The decay rate is directly related to the deposit beta. A higher beta implies more rate sensitivity, meaning customers are likely to move funds more quickly, so this lowers the decay term. Duration is a measure of economic life, so a shorter decay term (or life) results in a shorter duration.RiskGPS calculates the decay term by using the beta as an annual amortization factor. For example, a 100% beta would result in a system calculated decay rate of 100% over one year, or a decay term of 12 months. For a 50% beta, the decay rate would be 50% per year, or a 24-month decay term. The maximum RiskGPS default decay rate is 100 months. But you can enter a longer decay rate than that in the “User Defined” area. Remember to document your reasoning for the assumptions you enter.

**Additional Guidance**

* **Non-Interest Checking**: Although these accounts bear no rate, their economic value is expected to vary in response to market rates. RiskGPS applies the same beta as Interest-Bearing Checking to estimate the decay rate for non-interest bearing checking.
* You can override this and use different decay terms if other estimation methods are employed.

**Alternative Estimation Methods**

Banks may define decay rates using judgment of expected depositor behavior during times of rising and falling rates. For example:

* Management estimates a 10% annual attrition rate on non-interest checking balances per year if rates increase sharply. Divide 1 by the loss rate (10% or 0.10) to get the number of years it would take to deplete the entire category (e.g.,10 years). Multiply that result by 12 to arrive at a decay term of 120 months.

Always consider additional factors such as “hot money,” “surge balances,” or concentration risks that may accelerate decay.

Note: Carefully assess the impact of any decay rate changes on market value in shocked scenarios. These assumptions are heavily scrutinized by regulators.

**3. Market/Discount Rates**

RiskGPS calculates the economic value of deposits by discounting the principal and interest cash flows over the life (or decay) of the balances on the last day of the quarter. “Discounting” requires a market rate to measure the impact of the yields already existing in the portfolio, compared to the current market rate for the specific asset or liability.

The RiskGPS default Discount Rate for each deposit category is based on the Treasury Yield Curve point with a similar duration. For example, suppose the decay term for non-interest checking at our bank is 33 months. Duration is estimated at half that, or about 16 months. If the rate on treasuries is 37 basis points at 16 months, that’s the default discount rate.

We recommend that you document a senior management discussion and Board review to determine the appropriate discount rates for your bank. Once you have those rates, if they are different than the default, simply type your rates in the boxes and click “OK” to register the change.

Note: When a new decay rate is saved, RiskGPS automatically updates the discount rate for that category to the corresponding Treasury yield for half of the decay term.

**Ongoing Review of Assumptions**

**Governance Requirements**

Model assumptions, especially for betas and decay rates, should be:

* Reviewed at least annually by ALCO and the Board.
* Documented in meeting minutes, including rationale and methodologies for specific assumptions used.
* Stress-tested at least annually to assess sensitivity of results to assumption changes.

RiskGPS offers built-in tools and tutorials to facilitate stress testing. Detailed instructions are available in the **E-Learning Series** within the Tutorial Library.

**Support and Advisory Services**

Plansmith and other independent consultants can support assumption reviews and documentation. For assistance:

* **Phone**: 1-800-323-3281
* **Email**: support@bankersgps.com

If your institution requires deeper support—such as policy development, regulatory response, or training—our Advisory Services are available.