## II. Baseline Supervisory Model Worksheet

To illustrate how a bank's IRR exposure would be calculated under the baseline supervisory model, the following worksheets are provided for a hypothetical bank (Bank A) that is not exempted from reporting (see policy statement) and has filed the proposed Schedule 1. Since Bank A's fixed-rate residential mortgage loan and security holdings are less than 20% of its total assets and its adjustable-rate holdings are less than 10% of total assets, it is not subject to any the supplemental reporting schedules. Schedule 1A shows the completed Schedule 1 for Bank A. Tables 1A and 2A are the baseline model worksheets for the rising and falling rate scenarios, respectively for Bank A.

Column A in Tables 1A and 2A combine and transcribe the balance information that Bank A reported. For example, Bank A reported \$4.126 million of fixed-rate mortgage securities and \$5.432 million of fixed-rate mortgage loans that had maturities of 10- to 20-years. These balances have been combined and reported in Item 1(f) in Tables 1A and 2A.

Column B in Tables 1A and 2A shows the supervisory model risk weights for each instrument type and maturity

category. The risk weights represent the estimated percentage change in the value of the reported balances for a 200 basis point rise (Table 1A) and decline (Table 2A) in interest rates. For example, the value of a 3- to 5-year nonamortizing loan or security, as shown in Item 6(d) is estimated to decline by 6.60% if interest rates increase by 200 basis points and increase in value by 7.10% if rates decline by 200 basis points. The risk weights shown in Column B are established by the agencies and published in Appendix 3 to this policy statement. Because liabilities represent future obligations of the bank, the risk-weights used for liabilities are shown as positive numbers for the rising rate scenario (representing a benefit to the bank) and negative numbers for the declining rate scenario.

Column C in Tables 1A and 2A represents the estimated dollar change in the present value of each reported balance. These values are obtained by multiplying the reported balance in Column A by the corresponding risk weight in Column B. For example, Bank A has \$3.458 million in ARMs that are near their lifetime caps (line 2(d) in Tables 1A and 2A). The agencies have estimated that the value of such ARMs will decline by approximately 7.00% if rates increase by 200 basis points. Thus, the estimated decline in value for Bank A's reported ARM balances near lifetime caps is approximately \$242 thousand (\$3.458 million times -7.00%). Note that for self-reported items, no multiplication is needed. Rather, the estimated dollar change in value reported by the bank in Schedule 1A is incorporated directly into the exposure estimate.

Bank A's net IRR exposure is calculated by summing the individual risk-weighted positions and selfreported change amounts shown in Column C. The sum of the risk-weighted asset positions plus self-reported items for Bank A indicates a decline in value for these portfolios of approximately \$17.560 million under the rising rate scenario. This decline is partially offset by \$11.093 million and \$0.266 million increases in value for liabilities and other off-balance sheet items, respectively. Bank A's net risk-weighted position is the sum of these items and indicates that the economic value of Bank A is expected to decline by \$6.201 million under the rising rate scenario. Conversely, under the declining rate scenario, the economic value of Bank A is expected to increase by \$10.103 million.

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