

§ 652.100

12 CFR Ch. VI (1–1–12 Edition)

§ 652.100 Audit of the risk-based capital stress test.

You must have a qualified, independent external auditor review your implementation of the risk-based capital stress test every 3 years and submit a copy of the auditor's opinion to us.

APPENDIX A TO SUBPART B OF PART 652— RISK-BASED CAPITAL STRESS TEST

- 2.0 Credit Risk.
- 2.1 Loss-Frequency and Loss-Severity Models for All Types of Loans, Except Rural Utility Loans.
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- 2.5 Calculation of Loss Rates for Use in the Stress Test for All Types of Loans, Except Rural Utility Loans.
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1.0 INTRODUCTION

a. Appendix A provides details about the risk-based capital stress test (stress test) for Farmer Mac. The stress test calculates the risk-based capital level required by statute under stipulated conditions of credit risk and interest rate risk. The stress test uses loan-level data from Farmer Mac's agricultural mortgage portfolio or proxy data as described in section 4.1 d.(3) below, as well as quarterly Call Report and related information to generate pro forma financial statements and calculate a risk-based capital requirement. The stress test also uses historic agricultural real estate mortgage performance data, rural utility guarantee fees, relevant economic variables, and other inputs in its calculations of Farmer Mac's capital needs over a 10-year period.

b. Appendix A establishes the requirements for all components of the stress test. The key components of the stress test are: Specifications of credit risk, interest rate risk, the cashflow generator, and the capital calculation. Linkages among the components ensure that the measures of credit and interest rate risk pass into the cashflow generator. The linkages also transfer cashflows through the financial statements to represent values of assets, liabilities, and equity capital. The 10-year projection is designed to reflect a steady state in the scope and composition of Farmer Mac's assets.

2.0 CREDIT RISK

Loan loss rates are determined by applying the loss-frequency equation and the loss-severity factor to Farmer Mac loan-level data. Using this equation and severity factor, you must calculate loan losses under stressful economic conditions assuming Farmer Mac's portfolio remains at a "steady state." Steady state assumes the underlying characteristics and risks of Farmer Mac's portfolio remain constant over the 10 years of the stress test. Loss rates discussed in this section apply to all loans, unless otherwise indicated. Loss rates are computed from estimated dollar losses for use in the stress test. The loan volume subject to loss throughout the stress test is then multiplied by the loss rate. Lastly, the stress test allocates losses to each of the 10 years assuming a time pattern for loss occurrence as discussed in section 4.3, "Risk Measures."

2.1 Loss-Frequency and Loss-Severity Models for All Types of Loans, Except Rural Utility Loans

a. Credit risks are modeled in the stress test using historical time series loan-level data to measure the frequency and severity of losses on agricultural mortgage loans. The model relates loss frequency and severity to loan-level characteristics and economic conditions through appropriately specified regression equations to account explicitly for the effects of these characteristics on loan losses. Loan losses for Farmer Mac are estimated from the resulting loss-frequency equation combined with the loss-severity factor by substituting the respective values of Farmer Mac's loan-level data or proxy data as described in section 4.1 d.(3) below, and applying stressful economic inputs.

b. The loss-frequency equation and loss-severity factor were estimated from historical agricultural real estate mortgage loan data from the Farm Credit Bank of Texas (FCBT). Due to Farmer Mac's relatively short history, its own loan-level data are insufficiently developed for use in estimating the default frequency equation and loss-severity factor. In the future, however, expansions in both the scope and historic length of Farmer