HUD's Office of Residential Care Facilities, Washington, DC

Cash Flow Model To Estimate and Reestimate the Credit Subsidy for Cohorts of Mortgages Within the Section 232 Program

Office of Audit, Region 5
Chicago, IL

Audit Report Number: 2020-CH-0002
March 17, 2020

To: Roger M. Lukoff, Deputy Assistant Secretary for Healthcare Programs, HPAA

//signed//

From: Kelly Anderson, Regional Inspector General for Audit, 5AGA

Subject: HUD May Be Able To Improve Its Cash Flow Model To Estimate and Reestimate the Credit Subsidy for Cohorts of Mortgages Within the Section 232 Program

Attached is the U.S. Department of Housing and Urban Development (HUD), Office of Inspector General's (OIG) final results of our review of the risk to HUD's General Insurance-Special Risk Insurance Fund.

HUD Handbook 2000.06, REV-4, sets specific timeframes for management decisions on recommended corrective actions. For each recommendation without a management decision, please respond and provide status reports in accordance with the HUD Handbook. Please furnish us copies of any correspondence or directives issued because of the audit.

The Inspector General Act, Title 5 United States Code, appendix 8M, requires that OIG post its reports on the OIG website. Accordingly, this report will be posted at https://www.hudoig.gov.

If you have any questions or comments about this report, please do not hesitate to call me at 312-913-8499.

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HUD May Be Able To Improve Its Cash Flow Model To Estimate and Reestimate the Credit Subsidy for Cohorts of Mortgages Within the Section 232 Program

Highlights

What We Audited and Why

We audited the risk to the U.S. Department of Housing and Urban Development's (HUD) General Insurance-Special Risk Insurance (GI-SRI) Fund based on our ongoing effort regarding HUD-insured Section 232 mortgages. Our objective was to determine whether HUD used financial and credit history variables for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program.

What We Found

HUD did not use financial and credit history variables for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program because of a lack of reliable and sufficient financial data in HUD's systems. However, financial data was available from the U.S. Department of Health and Human Services that HUD could have possibly used to develop financial and credit history variables for its cash flow model. Federal requirements state that agencies must accumulate sufficient relevant and reliable data on which to base cash flow projections and should prepare all estimates and reestimates based on the best available data. As a result, HUD may not have complied with Federal requirements in estimating and reestimating the credit subsidy. Further, we were not able to determine the impact of HUD not using financial and credit history variables for the cash flow model. By using financial and credit history data, HUD could potentially improve its cash flow model to obtain more accurate initial estimates and reestimates of the credit subsidy.

What We Recommend

We recommend that HUD continue testing the financial and credit history variables, including default data, and include the appropriate variables for the cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program.

Table of Contents

Background and Objective

In 1934, Congress established the Federal Housing Administration (FHA) through Title I of the National Housing Act. FHA provides mortgage insurance on loans made by FHA-approved lenders throughout the United States and its territories. It insures mortgages to provide lenders protection against losses as a result of owners' defaulting on their loans.[1] The lenders bear less risk because FHA will pay a claim to the lender in the event of a default.

In 1959, Congress established Section 232 of the National Housing Act, which authorized FHA to insure mortgages for the purchase, construction, or rehabilitation of nursing homes, intermediate care facilities, board and care homes, and assisted living facilities.

In the 1960s, Congress established the U.S. Department of Housing and Urban Development's (HUD) General Insurance-Special Risk Insurance (GI-SRI) Fund to allow FHA to carry out its mortgage insurance obligations, such as collecting premiums and paying insurance claims associated with the Section 232 program and other programs that provide mortgage insurance for various multifamily housing projects, hospitals, the elderly (reverse mortgages from 1990 through 2008), and Title I manufactured housing and property improvement programs. As of February 2019, HUD's GI-SRI Fund had a balance of nearly $8.8 billion.

The Federal Credit Reform Act of 1990 requires HUD to annually measure, estimate, and budget the cost of providing mortgage insurance. HUD uses cash flow models and the Office of Management and Budget's credit subsidy calculator to estimate the present value of credit subsidy for the life of the mortgages it expects to insure during the fiscal year for each program that is part of the GI-SRI Fund. The estimated credit subsidy can be either negative (estimated cash inflows exceed cash outflows) or positive (estimated cash inflows do not exceed cash outflows). The Office of Management and Budget requires that HUD receive an appropriation from Congress for any estimated positive credit subsidy before it may insure any new mortgages for a program. HUD is also required each fiscal year throughout the life of a cohort of mortgages within a program to reestimate the subsidy cost for each cohort to account for differences between the original assumptions of cash flows and the actual cash flows or the revised assumptions about future cash flows. The Office of Management and Budget requires that HUD must borrow from the U.S. Treasury, through permanent indefinite authority, for any reestimated positive credit subsidy. HUD's initial estimates and reestimates are to be based on sufficient relevant and reliable data.

HUD's Assistant Secretary for Housing-FHA Commissioner is responsible for ensuring the effective execution of FHA programs and policies. HUD's Office of Risk Management and Office of Evaluation within the Office of Risk Management and Regulatory Affairs leads FHA in measuring, monitoring, and managing operational and credit risks of FHA's programs and

[1] A default is the failure of an owner to make any payment due under a HUD-insured mortgage. If a default continues for 30 days, a lender is entitled to get the benefits of the insurance provided for a mortgage.

portfolios. HUD's Office of Residential Care Facilities within the Office of Healthcare Programs has oversight responsibility for the Section 232 program.

Based on data HUD had provided as of March 2019, the Section 232 program included nearly 3,700 mortgages with unpaid principal balances totaling nearly $29.9 billion. This amount accounted for 18.1 percent of the nearly $164.7 billion in unpaid principal balances associated with HUD's GI-SRI Fund. Further, 55 of the Section 232 mortgages were in default with unpaid principal balances totaling more than $446.5 million. The following table shows for the 55 mortgages that were in default, the number of mortgages and the amount of unpaid principal balances for those mortgages that were in default 2 months or fewer, more than 2 months but no more than 6 months, more than 6 months but no more than 1 year, more than 1 year but no more than 2 years, and more than 2 years.

Period of default	Number of mortgages	Unpaid principal balances
≤ 2 months	11	Nearly $62.4 million
> 2 months through 6 months	23	Nearly $159.2 million
> 6 months through 1 year	9	More than $145.5 million
> 1 year through 2 years	5	Nearly $20.9 million
> 2 years	7	More than $58.5 million

Our objective was to determine whether HUD used financial and credit history variables for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program.

Results of Audit

Finding: HUD May Be Able To Improve Its Cash Flow Model To Estimate and Reestimate the Credit Subsidy for the Cohorts of Mortgages Within the Section 232 Program

HUD did not use financial and credit history variables[2] for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts[3] of mortgages within the Section 232 program. This condition occurred because of a lack of reliable and sufficient financial data in HUD's systems.[4] However, financial data was available from the U.S. Department of Health and Human Services' Centers for Medicare & Medicaid Services that HUD could have possibly used to develop financial and credit history variables for its cash flow model. Federal requirements state that agencies must accumulate sufficient relevant and reliable data on which to base cash flow projections and should prepare all estimates and reestimates based on the best available data.[5] As a result, HUD may not have complied with Federal requirements in estimating and reestimating the credit subsidy. Further, we were not able to determine the impact of HUD not using financial and credit history variables for the cash flow model. By using financial and credit history data, HUD could potentially improve its cash flow model to obtain more accurate initial estimates and reestimates of the credit subsidy for the cohorts of mortgages within the Section 232 program.

Financial and Credit History Variables Not Used in HUD's Cash Flow Model

We reviewed HUD's fiscal year 2018 cash flow models used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the multifamily programs and Section 232 program. HUD used duration, loan-level, property, and market variables for the cash flow models for the cohorts of mortgages within both the multifamily programs and Section 232 program. Further, it used financial and credit history variables for the cash flow model for the cohorts of mortgages within the multifamily programs. However, it did not use these variables for the cash flow model for the cohorts of mortgages within the Section 232 program because of a lack of reliable and sufficient financial data in HUD's systems.

Although HUD used claim probability rates[6] for its cash flow model for the Section 232 program to predict the probability of the default of active loans and making payments on insurance

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2 Financial variable was measured using various financial ratios. Credit history variable was measured using mortgage history data.
3 Cohort refers to the fiscal year of obligation for the commitment of insured mortgages within a program.
4 This resulted in a scope limitation. See the Scope and Methodology section of this audit report for additional details.
5 See appendix B of this audit report for applicable requirements.
6 HUD determines a claim probability rate for the entire portfolio of mortgages rather than for each mortgage within a cohort of mortgages. HUD then multiplies the unpaid principal balance of each mortgage by the claim probability rate.

claims, it did not use actual default data to estimate and reestimate the credit subsidies. For example, using HUD's credit history variable indicator regarding loans that had been cured two or more times in the past 2 years, 13 of the 55 Section 232 mortgages that were in default as of March 2019 had been cured two or more times since April 2017. The 13 mortgages had unpaid principal balances totaling nearly $144.1 million. Further, there were another 12 mortgages with unpaid principal balances totaling more than $79.4 million that were in default more than 1 year and had not been cured two or more times since April 2017. We audited HUD's monitoring of the financial performance of Section 232 nursing homes (2018-BO-0001). The report stated that the assignment[7] of mortgages was delayed while HUD worked with lenders, owners, operators, and management agents (as appropriate) to turn around the mortgages.

Reliable and sufficient financial data were not always available in HUD's Financial Assessment of FHA Housing[8] system for projects under the Section 232 program. Based on data HUD had provided as of March 2019, the financial data in HUD's system for 2017 were sufficient for only 26.7 percent of the projects. For projects in which the owner leases the project to an operator, the financial data in HUD's system were for the owner rather than the project's operations. HUD's system was not designed to accommodate the electronic submission of financial statements and audit information for projects operating under a lease arrangement. HUD made efforts to require the submission of financial statements associated with the projects' operations in HUD's system. However, due to regulatory agreement requirements, there were conflicts regarding what information could be collected, and efforts were abandoned. Further, a management official with HUD's Office of Risk Management stated that the operator financial data entered into the 232 Healthcare Portal[9] were not sufficient. Therefore, actual default data were not used as a credit variable to calculate the claim probability rates used in the cash flow model for the Section 232 program. Instead, HUD used other variables and statistical and mathematical techniques to produce the model.

A management official with HUD's Office of Risk Management also stated that due to the requirements under the Paperwork Reduction Act of 1995, to lessen the burden of operators' submitting duplicative financial data to HUD already being collected by the Centers for Medicare & Medicaid Services, HUD decided to obtain financial data from the Centers for Medicare & Medicaid Services.[10] In September 2014, HUD's Office of Risk Management

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7 Assignment occurs when a nursing home owner does not pay its HUD-insured mortgage and the lender decides to claim the insurance benefits. If a lender notifies HUD that it is eligible for the insurance benefits but has decided to work with the owner to refinance the mortgage, it is delaying assignment of the HUD-insured mortgage.

8 HUD's Financial Assessment of FHA Housing is an automated system that supports the collection, validation, and assessment of financial data for multifamily housing properties insured or subsidized by HUD to assess multifamily properties for noncompliance and poor performance.

9 HUD developed the 232 Healthcare Portal to collect operator financial data and process business transactions. HUD required operators to submit quarterly financial data to their lenders and the lenders to enter the data into the 232 Healthcare Portal.

10 A Medicare-certified institutional provider is required to submit an annual cost report to a Medicare administrative contractor. The cost report contains information such as facility characteristics, utilization data, cost and charges by cost center (in total and for Medicare), Medicare settlement data, and financial statement

started obtaining financial data for skilled nursing facilities from the Centers for Medicare & Medicaid Services and had been working on including financial and credit history variables for the cash flow model for the cohorts of mortgages within the Section 232 program. As of December 2018, the Office had obtained, validated, and downloaded the available data into a database and planned to use the data to determine claim probability rates for fiscal year 2019 as appropriate. Based on data HUD had provided as of March 2019, the financial data for 2017 were sufficient for 73.9 percent of the projects. The management official stated that as of March 2019, the Office had been researching and testing many different financial and credit history variables, including default data, to determine which variables, if any, would be appropriate for the cash flow model for the cohorts of mortgages within the Section 232 program. Further, the management official stated that HUD had been continuously working to improve its cash flow models.

As a result of the condition described above, we were not able to determine the impact of HUD not using financial and credit history variables for the cash flow model. By using financial and credit history data, HUD could potentially improve its cash flow model to obtain more accurate initial estimates and reestimates of the credit subsidy for the cohorts of mortgages within the Section 232 program.

Conclusion

HUD did not use financial and credit history variables for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program. The weakness described above occurred because of a lack of reliable and sufficient financial data in HUD's systems. As a result, HUD may not have complied with Federal requirements in estimating and reestimating the credit subsidy. Further, we were not able to determine the impact of HUD not using financial and credit history variables for the cash flow model. By using financial and credit history data, HUD could potentially improve its cash flow model to obtain more accurate initial estimates and reestimates of the credit subsidy for the cohorts of mortgages within the Section 232 program.

Recommendation

We recommend that the HUD's Deputy Assistant Secretary for Healthcare Programs work with HUD's Office of Risk Management, for the Office to be able to

1A. Continue testing the financial and credit history variables, including default data, and include the appropriate reliable and sufficient variables for the cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program.

In response to our draft audit report, HUD's Associate Deputy Assistant Secretary for Healthcare Programs provided documentation to support that HUD implemented the recommendation. We reviewed the documentation and found it sufficient to support that HUD has now included

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data. The Centers for Medicare & Medicaid Services maintains the cost report data in its Healthcare Provider Cost Reporting Information System.

financial and credit history variables, including default data, for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program. Therefore, we will record final action for and close the recommendation in HUD's audit resolution and corrective action tracking system upon issuance of the report.

Scope and Methodology

We performed our audit work from June 2018 through May 2019 at HUD's Chicago regional office located at 77 West Jackson Boulevard, Chicago, IL. The audit covered the period January 2016 through May 2018 but was expanded through March 2019 to include the Section 232 program mortgages that were in default and the status of HUD's Office of Risk Management's testing of different financial and credit history variables, including default data, to determine which variables, if any, would be appropriate for the cash flow model for the cohorts of mortgages within the Section 232 program as of March 2019.

To accomplish our objective, we reviewed

- Applicable laws; HUD's regulations at 24 CFR (Code of Federal Regulations) Parts 200, 207, and 232; the Office of Management and Budget's regulations at 5 CFR Part 1320; Office of Management and Budget Circulars A-11 and A-129; HUD Handbooks 2400.1, REV-1, CHG-11, and 4232.1, REV-1; the Federal Accounting Standards Advisory Board Handbook on Federal Accounting Standards and Other Pronouncements as amended; Office of Inspector General audit report 2018-BO-0001, issued September 17, 2018; HUD FHA's annual management and congressional justification reports for fiscal years 2016 through 2018; HUD's cash flow models and guidelines; and HUD's Office of Housing's organizational chart.

- Data in HUD's Multifamily Delinquency and Default Reporting and Online Property Integrated Information Suite systems.

In addition, we interviewed HUD staff.

We relied on the data from HUD's systems to determine the number of HUD-insured Section 232 mortgages that were in default. Although we did not perform a detailed assessment of the reliability of the data, we performed minimal levels of testing and found the data to be adequately reliable for our purposes.

HUD did not use financial and credit history variables for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program because of a lack of reliable and sufficient financial data in HUD's systems. The lack of reliable and sufficient financial data in HUD's systems created a scope limitation, which impacted our ability to determine the impact of HUD's not using financial and credit history variables for the cash flow model.

We conducted the audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective(s). We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Internal Controls

Internal control is a process adopted by those charged with governance and management, designed to provide reasonable assurance about the achievement of the organization's mission, goals, and objectives with regard to

- effectiveness and efficiency of operations,
- relevance and reliability of information, and
- compliance with applicable laws and regulations.

Internal controls comprise the plans, policies, methods, and procedures used to meet the organization's mission, goals, and objectives. Internal controls include the processes and procedures for planning, organizing, directing, and controlling program operations as well as the systems for measuring, reporting, and monitoring program performance.

Relevant Internal Controls

We determined that the following internal controls were relevant to our audit objective:

- Effectiveness and efficiency of operations – Policies and procedures that management has implemented to reasonably ensure that a program meets its objectives.
- Relevance and reliability of information – Policies and procedures that management has implemented to reasonably ensure that operational and financial information used for decision making and reporting externally is relevant, reliable, and fairly disclosed in reports.
- Compliance with applicable laws and regulations – Policies and procedures that management has implemented to reasonably ensure that resource use is consistent with laws and regulations.

We assessed the relevant controls identified above.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, the reasonable opportunity to prevent, detect, or correct (1) impairments to effectiveness or efficiency of operations, (2) misstatements in financial or performance information, or (3) violations of laws and regulations on a timely basis.

Significant Deficiency

Based on our review, we believe that the following item is a significant deficiency:

- HUD did not use financial and credit history variables for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program because of a lack of reliable and sufficient financial data in HUD's systems (finding).

Appendixes

Appendix A

Auditee Comments and OIG's Evaluation

We provided the results of our audit to HUD's Deputy Assistant Secretary for Healthcare Programs during the audit. We also invited the Deputy Assistant Secretary to provide written comments on our draft audit report. In response, HUD's Associate Deputy Assistant Secretary for Healthcare Programs provided documentation to support that HUD has now included financial and credit history variables, including default data, for its cash flow model used to estimate and reestimate the credit subsidy for the cohorts of mortgages within the Section 232 program.

We acknowledge and appreciate HUD's commitment to improving its cash flow model and taking timely action to resolve the audit recommendation.

Appendix B

Applicable Requirements

Title V, section 501, of the Federal Credit Reform Act of 1990 states that the purposes of the Act are to (1) measure more accurately the costs of Federal credit programs, (2) place the cost of credit programs on a budgetary basis equivalent to other Federal spending, (3) encourage the delivery of benefits in the form most appropriate to the needs of beneficiaries, and (4) improve the allocation of resources among credit programs and between credit and other spending programs.

Title V, section 502(3), of the Federal Credit Reform Act of 1990 defines loan guarantee as any guarantee, insurance, or other pledge with respect to the payment of all or a part of the principal or interest on any debt obligation of a non-Federal borrower to a non-Federal lender, but does not include the insurance of deposits, shares, or other withdrawable accounts in financial institutions. Section 502(4) defines loan guarantee commitment as a binding agreement by a Federal agency to make a loan guarantee when specified conditions are fulfilled by the borrower, the lender, or any other party to the guarantee agreement. Section 502(5)(A) defines cost as the estimated long-term cost to the Government of a direct loan or loan guarantee, calculated on a net present value basis, excluding administrative costs and any incidental effects on governmental receipts or outlays. Section 502(5)(C) states that the cost of a loan guarantee will be the net present value when a guaranteed loan is disbursed of the cash flow from: (1) estimated payments by the Government to cover defaults and delinquencies, interest subsidies, or other payments, and (2) the estimated payments to the Government including origination and other fees, penalties, and recoveries. Section 502(5)(D) states that any Government action that alters the estimated net present value of an outstanding direct loan or loan guarantee (except modifications within the terms of existing contracts or through other existing authorities) will be counted as a change in the cost of that direct loan or loan guarantee. The calculation of such changes must be based on the estimated present value of the direct loan or loan guarantee at the time of modification recoveries. Section 502(5)(E) states that in estimating net present values, the discount rate will be the average interest rate on marketable Treasury securities of similar maturity to the direct loan or loan guarantee for which the estimate is being made.

Title II, Section 232(a), of the National Housing Act, as amended, states that the purpose of section 232 of the Act is to assist the provision of urgently needed nursing homes for the care and treatment of convalescents and other persons who are not acutely ill and do not need hospital care but who require skilled nursing care and related medical services. Section 232(c) states that the Federal Housing Commissioner is authorized to insure any mortgage (including advances on such mortgage during construction) in accordance with the provisions of Section 232 of the Act upon such terms and conditions as he may prescribe and to make commitments for insurance of such mortgage prior to the date of its execution or disbursement thereon. Section 232(d) states that in order to carry out the purpose of Section 232 of the Act, the Federal Housing Commissioner is authorized to insure any mortgage which covers a new or rehabilitated nursing home.

The Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that the Handbook contains the body of accounting concepts and standards for the U.S. Government. The mission of the Federal Accounting Standards Advisory Board is to serve the public interest by improving Federal financial reporting through issuing Federal financial accounting standards and providing guidance after considering the needs of external and internal users of Federal financial information.

Paragraph 4 of Statement of Federal Financial Accounting Standard Number 2 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that the Federal Government, in discharging its responsibility to promote the nation's general welfare, makes direct loans and guarantees loans to segments of the population not adequately served by non-Federal financial institutions. Examples of Federal credit programs include farmers' home loans, small business loans, veterans' mortgage loans, and student loans. For those to whom non-Federal financial institutions would be reluctant to grant credit because of the high risk involved, Federal credit programs guarantee the payment of these non-Federal loans, absorbing the cost of defaults. Paragraph 5 states that because Federal credit programs provide interest subsidies and sustain losses caused by defaults, the costs of these programs are significant. It is crucial, therefore, that the actual and expected costs of Federal credit programs be fully recognized in both budget and financial reporting. Paragraph 6 states that the primary intent of the Federal Credit Reform Act of 1990 is to ensure that the subsidy costs of direct loans and loan guarantees are taken into account in making budgetary decisions.

Paragraph 7 of Statement of Federal Financial Accounting Standard Number 2 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that the major provisions of the Federal Credit Reform Act of 1990, which is effective for fiscal year 1992 and thereafter, are to:

- Require that, for each fiscal year in which the direct loans or the loan guarantees are to be obligated, committed, or disbursed, the President's budget reflect the long-term cost to the government of the subsidies associated with the direct loans and loan guarantees. The subsidy cost estimate for the President's budget is to be based on the present value of specified cash flows discounted at the average rate of marketable Treasury securities of similar maturity.

- Require that, before direct loans are obligated or loan guarantees are committed, annual appropriations generally be enacted to cover these costs. However, mandatory programs have permanent indefinite appropriations.

Paragraph 21 of Statement of Federal Financial Accounting Standard Number 2 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that these standards concern the recognition and measurement of direct loans, the liability associated with loan guarantees, and the cost of direct loans and loan guarantees. The standards apply to direct loans and loan guarantees on a group basis, such as a cohort or a risk category of loans and loan guarantees. Paragraph 27 states that projected net recoveries include the amounts that would be collected from borrowers at a later date or the proceeds from the sales of acquired assets minus the costs of foreclosing, managing, and selling the assets. Paragraph 27A states that the default cost of loan guarantees results from paying lenders' claims upon default of the guaranteed loans. The default cost of loan guarantees is measured at the present value of projected payments to lenders required by the guarantee plus uncollected fees minus interest supplements not paid as the result of the default and projected net recoveries as defined in paragraph 27.

Paragraph 32 of Statement of Federal Financial Accounting Standard Number 2 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that credit programs should reestimate the subsidy cost allowance for outstanding direct loans and the liability for outstanding loan guarantees as required in this standard. The two kinds of reestimates are interest rate reestimates and technical/default reestimates. Entities should measure and disclose each programs reestimates in these two components separately. Paragraph 32(B) states that a technical/default reestimate is a reestimate due to changes in projected cash flows of outstanding direct loans and loan guarantees after reevaluating the underlying assumptions and other factors that affect cash flow projections as of the financial statement date, except for any effect of the interest rate reestimates. In making technical/default reestimates, reporting entities should take into consideration all factors that may have affected various components of the projected cash flows, including defaults, delinquencies, recoveries, and prepayments. The technical/default reestimate should be made each year as of the date of the financial statements.

Paragraph 33 of Statement of Federal Financial Accounting Standard Number 2 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that the criteria for default cost estimates provided in this and the following paragraphs apply to both initial estimates and subsequent reestimates. Default costs are estimated and reestimated for each program on the basis of separate cohorts and risk categories. The reestimates take into account the differences in past cash flows between the projected and realized amounts and changes in other factors that can be used to predict the future cash flows of each risk category. Paragraph 34 states that in estimating default costs, the following risk factors are considered: (1) loan performance experience; (2) current and forecasted international, national, or regional economic conditions that may affect the performance of loans; (3) financial and other relevant characteristics of borrowers; (4) the value of collateral to loan balance; (5) changes in recoverable value of collateral; and (6) newly developed events that would affect the loans' performance. Improvements in methods to reestimate defaults are also considered. Paragraph 35 states that each credit program should use a systematic methodology, such as an econometric model, to project default costs of each risk category. If individual accounts with significant amounts carry a high weight in risk exposure, an analysis of the individual accounts is warranted in making the default cost estimate. Paragraph 36 states that actual historic experience of the performance of a risk category is a primary factor upon which an estimation of default cost is based. To document actual experience, a database should be maintained to provide historical information on actual payments, prepayments, late payments, defaults, recoveries, and amounts written off.

Paragraph 88 of Statement of Federal Financial Accounting Standard Number 2 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that in calculating the present value of the subsidy costs for the budget, agencies must first develop data on cash flow components. The Office of Management and Budget requires agencies to use the Office of Management and Budget credit subsidy model, which takes these cash flows as inputs and automatically calculates the components of the subsidy cost.

Paragraph 17 of Federal Financial Accounting and Auditing Technical Release 6 of the Federal Accounting Standards Advisory Board Handbook of Federal Accounting Standards and Other Pronouncements, as amended, states that agencies must accumulate sufficient relevant and reliable data on which to base cash flow projections. It is important to note that agencies should prepare all estimates and reestimates based on the best available data at the time the estimates are made.

Paragraph 1.1 of section I of HUD Handbook 4232.1, REV-1, states that the Section 232 program is a FHA mortgage insurance program that insures HUD-approved lenders against financial loss from mortgage defaults. Further, Section 232 mortgage insurance is available on mortgages that finance residential healthcare facilities such as nursing homes, assisted living facilities, and board and care facilities. Eligible mortgages can be for the purchase, refinance, new construction, or substantial rehabilitation – or for a combination of these. Paragraph 1.3.A states that the Section 232 program is authorized by Section 232 of the National Housing Act.

Section V of HUD's credit reform board charter states that HUD's Credit Risk Reform Board will ensure that sufficient relevant and reliable data on which to base estimates are accumulated and made available as input to the estimation process.

HUD's model risk management guidelines state that data and assumptions must be evaluated as part of model development to document that the data and assumptions are supportable as model inputs. Further, models must be based on sufficient relevant and reliable data.