

RESIDENTIAL MORTGAGE-BACKED LOAN SECURITIZATION: BREACH OF CONTRACT EVIDENCE

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ABSTRACT

A financial company's failure to fulfill its obligations related to the securitization of around 6,000 residential mortgage loans sold to a Trust for more than one billion dollars resulted in a breach of contract. The financial company had made several commitments regarding the accuracy of the information given to borrowers, including promises to rectify any non-conformance or repurchase defective Mortgage Loans. It had also guaranteed that it would notify the Trust of any breaches it discovered. An investigation of the Mortgage Loans found that at least 3,000 did not conform to the Mortgage Representations, impacting their value. Additionally, around 2,500 Mortgage Loan Files were unreviewable due to missing documentation. The Trustee informed the financial company about the breaches and demanded that they be remedied, but the company failed to cure any breaches, provide any missing files, or repurchase any defective loan. As a result, the Trust suffered a loss of about half a billion dollars, indicating that the financial company had no intention of complying with its contractual obligations. Therefore, the Trustee must be reimbursed for the losses incurred.

JEL: K10, K12

KEYWORDS: Loan securitization, Residential Mortgage Back Security (RMBS), Breach of Contract

INTRODUCTION

A n action for breach of contract was taken against an Investment Company for failure to comply with its contractual obligations associated with around 6,000 residential mortgage loans that the Financial Company purchased and later on sold to a Trust Company of more than a billion dollars. The mortgage loans were securitized through the issuance of Certificates commonly known as Residential Mortgage-Backed Securities (RMBS). In connection with the sale of the Mortgage Loans, the Financial Company made numerous representations and guaranties concerning the integrity of the information provided, the underwriting standards employed, the accuracy of the information provided to the rating agencies and other aspects of the of the transaction. These representations were critical to the Securitization because investors were not able to conduct loan-by-loan examination before purchasing the Certificates. Investors, in other words, relied on the Mortgage Representations to assess the quality and risk of each Mortgage Loan. If the Financial Company had not provided these representations and guaranties the Securitization would not have been consummated. Also, the Financial Company agreed that if any of the Mortgage Loans failed to conform to the Mortgage Representations the Financial Company would promptly cure the breach or repurchase any defective Mortgage Loans.

Further, the Financial Company promised that if it discovered any breaches, it would provide notice of such breach. In other words, from the very start of the Securitization process the Financial Company had an immediate and ongoing obligation to notify the Trust Company of any breaches of the Mortgage Representations that it discovered. This investigation revealed that the Financial Company breached the Mortgage Representations. Also, the Financial Company failed to fulfill its notice obligations. An analysis of the Mortgage Loans revealed that at least 3,000 of these loans do not conform to the Mortgage Representations and that this affected those Loan's value. The analysis of the Mortgage Loans also revealed numerous material misrepresentations and misstatements in the Loan Files and Loan Schedule. Further, more than 2,000 Mortgage Loan Files could not be reviewed could not be reviewed because these files were missing or they were incomplete. In other words, the Financial Company did not properly document the files. Given these circumstances, the Trustee notified the Financial Company of the numerous breaches and missing documentation and demanded that the Financial Company cure the breaches and provide the missing documentation. The Financial Company has failed to provide a cure, to provide a single missing file, or repurchase a single defective loan. As a consequence, the Trust has suffered over half a billion dollars in losses. This paper reviews the history of RMBS loans to provide background on the loan, analyzes the mortgage loans and provides conclusions on the outcome. To analyze the Mortgage Loans, a random sample was utilized of 6,000 Mortgage Loans separated into two groups, and then by active and liquidated loans. This results in presenting defect rates, defective loans and repurchase damages (\$ millions) by analyzing three different scenarios. This expands upon literature on mortgage loans and contracts by analyzing the data to understand the loss the Trust suffered based on the company's failure to fulfill its obligations, breaching it's contracts and also failing to cure any breaches. Reimbursement must be provided to the Trustee for the losses incurred. Literature review on Residential Mortgage Back Securities, an analysis of 6,000 mortgage loans held by the Trust company to determine the likely repurchase damages, as well as a discussion of the results are presented.

LITERATURE REVIEW

There has been pronounced fluctuation in RMBS throughout many decades, which has become the focus of research in this area. According to Griffin (2021), RMBS grew to over one trillion plus between 2003 and 2007. Since the market crisis, the issuance of RMBS has dramatically changed in reference to the volume (Kudenholdt, 2017). In the article by Herndon (2023), loan modifications of privately held RMBS from 2008 to 2014 added billions to the household debt. Following the 2008 economic crisis, disputes related to RMBS litigation arose (Gottlieb et al., 2016), in addition to many defaults and losses in RMBS (Lehman et al., 2011). As described by Petersen et al. (2012), since the mortgage crisis, the risks associated with subprime residential mortgage securitization have been a major focus. Geidosch (2014) investigated RMBS deals that led to the subprime crisis, noting these as toxic deals. The study by Lehman et al. (2011) investigated RMBS losses, describing macroeconomic factors as a performance indicator. In addition, Residential Mortgage-Backed Securities and concerns related to these forms of debt have been ongoing for some time. Kruger and Maturana (2021) investigated misreporting in the residential mortgage backed security market citing RMBS investors being unaware of appraisal misreporting and the need for reliable information for RMBS investors. The current research into RMBS helps to understand areas of litigation, as well as concerns related to deals surrounding RMBS.

Residential Mortgage Back Securities (RMBS) are loans secured by mortgages on residential properties that obligate borrowers to pay principal and interest. Underwriting is the process by which a loan originator decides to make a loan to a borrower. Underwriting is designed to ensure that the barrower is sufficiently creditworthy to repay the loan, the interest rate provides a sufficient return relative to the risk of the loan, and the loan is made against a property with sufficient value to ensure repayment of the loan. Usually, a bank or a mortgage company aggregates the mortgage loans from various originators into a pool that will be placed into a trust. The seller typically reviews the loans to ensure that the loans comply with the seller's standards and the loan's characteristics are as represented by the originators. A common form of securitization involves the creation of a trust to which the sponsor transfers the mortgage loan pool. This transfer is done in two steps. The sponsor transfers the mortgage loans to an intermediary, the depositor, which then transfers the loans to the trust.

After receiving the portfolio of mortgage loans, the trust issue RMBS using the pool of loans as collateral. Investors acquire an indirect ownership interest in the mortgage loan pool and the right to receive the income flowing from the mortgages through the purchase of these securities. RMBS are issued pursuant of registration statements filed with the US Securities and Exchange Commission (SEC). These registration statements include prospectuses, which explain the general structure of the investment, and prospectus supplements, which contain detailed descriptions of the mortgage loan pool securing each RMBS issuance.

To administer the trust's funds and deliver payments due each month on the certificates to the investors, a trustee, a master servicer, and a security administrator are named. The servicer manages the collection of proceeds from the mortgage loans. The servicer is responsible for collecting the borrowers' mortgage loan payments. The servicer's duties include making the collection efforts on delinquent loans and initiating foreclosure proceedings. The credit quality of the certificates directly depends on the credit of the loans in the collateral pool. This is because the cash flow from the loans collateral pool of a securitization is the source of the payments to the holders of these certificates issued by the trust. Special attention is given to the likelihood that borrowers will honor their mortgage payments and the value of the underlying property in case the borrower defaults. Loan files provide critical information regarding the loans' credit quality. These files are compiled by the lender during the loans' origination. Files typically contain the borrower's loan application and documents verifying the borrower's credit reports, an appraisal of the property that will secure the loan and provide the basis for measurement of the loan's credit quality (loan to value ratios). It also provides a statement of the property's occupancy status. Further, the loan file contains the record of the originator's or lender's investigation of the documents and information provided by the borrower, as well as notes from the underwriter setting forth the rationale for the advancing the loan to the borrower. The originator of the loans also makes detailed representations and warranties about the characteristics of each loan. This to ensure that the credit quality of the loans in the collateral pool is as the parties agreed. These representations and warranties are made to the trustee for the benefit of the investors in the certificates issue by the trust. Because investors cannot perform loan-by-loan analysis of certificates, the certifications and warranties are a critical aspect in the securitization process. This way, investors determine the risk associated with and quality of, each mortgage loan in the collateral pool ("Sampling/Opinion Surveys," 2004).

METHODOLOGY

The Trust company hold approximately 6,000 Mortgage Loan. Loan were separated in to two groups: Group 1 and Group 2. Table 1 below shows mortgage loans held by the trust company.

	Group 1	Group 2	Total
Original outstanding Principal Balance	700,000,000	500,000,000	1,200,000,000
Principal Payments	300,000,000	250,000,000	550,000,000
Principal losses	250,000,000	250,000,000	500,000,000
Outstanding Principal Balance	120,000,000	100,000,000	300,000,000

Table 1: Mortgage Loans Held by Trust Company (\$)

This table shows the mortgage loans held by the trust company separated in two groups and total. This includes four categories, the original outstanding principal balance of each group, the principal payments of each group, principal losses of each group and the outstanding principal balance of each group. The table also shows the totals for each category.

The procedure consisted in drawing random samples (1948,1960,1977,1998,2004,2008) of approximately 6,000 Mortgage Loans, from groups 1 and 2, active and liquidated. As the literature indicates, sampling is relevant and appropriate technique in cases, used for many years (Stock & Hochstim, 1948; Deming, 1960; Cochran, 1977). The data collected for this study derived from confidential files. The years selected were from those years that were available for use for this research. These samples were then used to calculate

unbiased estimates of associated population characteristics (Levy, P.S. & Lemeshow, S., 2008) such as defect rates. They were also used to calculate damages to the Trust. And they were used to extrapolate the sample defect rates to the population. To determine damages a Monte Carlo simulation (Metropolis & Ulam, 1949; Metropolis, 1987; Sobol, 1994; Liu, 2001; Robert & Monte, 2004; McLeish, 2005; Rubinstein & Kroese, 2007; Shonkwiler & Mendivil, 2009) was used. The Monte Calo method is a tool used often in risk management, which utilizes simulation for modeling (Glasserman, 2003).

RESULTS AND DISCUSSION

Defect rates in the samples and associated populations were analyzed and shown in in Table 2, defective loans in the samples and associated populations are shown in Table 3. Finally, three scenarios were considered to calculate repurchase damages, shown in Table 4. Table 2 presents the liquidated loans with two groups, with defect rate of 93% with total loans in population of 1,800 and 97% with total loans in population of 1,000. In addition, the active loans are presented with two groups, with defect rates of 88% with total loans in population of 750 and 92% with total loans in population of 365.

Table 2: Defect Rates in the Samples and Associated Populations

Population	Loan Group	Defect Rate (%)	Totals Loans in Population
Liquidated Loans	1	93	1,800
	2	97	1,000
Active Loans	1	88	750
	2	92	365

Table 2 shows the defect rates in the samples and associated populations. Within this table are the populations presented by liquidates loans and active loans. There are two loan groups in each population and the defect rate is also presented. The total loans in population are presented for both populations, liquidated and active.

As presented in Table 3, the defective loans are presented are presented with two populations and two groups for each population. Liquidated loans presented 1,700 extrapolated defective loans in population from a total loan in population of 1,800 and 1,000 extrapolated defective loans in population from total loans in population of 1,000.

Table 3: Defective Loans in the Samples and Associated Populations

Population	Loan Group	Extrapolated Defective Loans in Population	Totals Loans in Population
Liquidated Loans	1	1,700	1,800
	2	1,000	1,000
Active Loans	1	633	750
	2	336	365

Table 3 shows the defective loans in the samples and associated populations. Within this table are the populations presented by liquidated loans and active loans. There are two loan groups for each population and the extrapolated defective loans in population are presented. The total loans in population are also included, both for liquidated loans and active loans.

To calculate damages, 3 scenarios were considered. Scenario 1 included purchase date for all defective loans is assumed 90 days after the closing date. Scenario 2 included purchase date for all defective loans is assumed 90 days after the date of the First Breach Notice. Scenario 3, Scenario 3: Purchase date is assumed 90 days after the date of the First Breach Notice for all Defective Loans listed in the First Breach Notice and 90 days after the date of the Second Breach Notice for all other Defective Loans. As shown in Table 4, the repurchase damages are presented between three scenarios and two loan groups for each scenario. Scenario 1 totaled most likely repurchase damages of \$470,000,000 and \$430,000,000 for a total of \$900,000,000. Scenario 3 presented most likely repurchase damages of \$450,000,000 and \$400,000,000 and \$4

Scenario	Loan M Group	lost Likely Liquidated Loan Repurchase Damages \$M	Most Likely Active Loan Repurchase Damages \$M	Most Likely Repurchase Damages \$M
1	1	370	100	470
	2	330	100	430
	Total	700	200	900
2	1	300	100	450
	2	300	100	400
	Total	600	200	850
3	1	350	100	450
	2	300	100	400
	Totals	650	200	850

Table 4: Repurchase Damages (\$ millions)

Table 4 shows the repurchase damages (\$ millions) for the three different scenarios that were considered. For each scenario, there are two loan groups, as well as a total group. Also presented for each loan group is the most likely liquidated loan repurchase damages, the most likely active loan repurchase damages and the most likely repurchase damages. Totals are presented for each scenario.

Samples are sufficiently large to draw conclusions about the corresponding population and specifically to make scientifically reliable estimate of the Defect Rates. The Liquidated and Active Defect Rates were also used as inputs to determine Repurchase Damages. Sample sizes produce a 95% confidence interval with a maximal margin of error for the Defect Rates of plus or minus 5%. These are accepted sample size and level of precision in RMBS cases.

CONCLUSION

The current study was conducted using random sampling of confidential RMBS loan information for the source of data. This was randomized and followed the Monte Carlo method of simulation to determination the information and if the data collected indicated any issues. This included analyzing the data by running the sample with the Monte Carlo method with the three parameters and analyzed to determine that yes, there is an indication of breach of contract. Thus, this presents legal implications for the parties injured by the breach of contract. This paper is not without limitations. Randomized sampling, in general, creates a limitation in the research as additional data can be analyzed to determine further concerns with the breach of contract. This also creates an area of opportunity for future research, to analyze additional data and consider additional parameters. By re-considering the data and analyze the procedure to see if it captured all the nuances of the data, including certain microeconomic variables that may need to be considered or missing. Future research could also consider additional scenarios. In conclusion, the samples identified, the procedure used, and the analysis of the results are sufficient to draw reliable conclusions about the Defect Rates and to calculate Repurchase Damages. The margins of error associated with the Defect Rates is sufficient and appropriate for this analysis. They relate to the precision of the analyses. The margin of error relates to the width of the 95% confidence interval around the Defect Rates and Repurchase Damages. The analysis shows that a trade-off exists between precision and sample size. The sample sizes used are sufficient and reliably determine the Defect Rates and the associated Repurchase Damages.

REFERENCES

Asset-Backed Securities Act Release No. 33-8518, Exchange Act Release No. 34-50905, 84 S.E.C., Docket 1624 (2004). Retrieved June 22 from the U.S. Securities and Exchange Commission Web site: http://www.sec.gov/rules/final/33-8518.htm

Cochran, W.G. (1977) "Sampling Techniques," New York: Wiley and Sons, Inc, p. 9-10

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Geidosch, M. (2014). Asset correlation in residential mortgage-backed security reference portfolios. *The Journal of Credit Risk*, 10(2), 71–95.

Glasserman, P. (2003) "Monte Carlo Methods in Financial Engineering," *New York: Springer* Gottlieb, R. E., Levin, F. S., Lawrence, A. R., & Heeringa, A. P. (2016). Recent developments in residential mortgage-backed securities litigation. *The Business Lawyer*, *71*(2), 689–699.

Griffin, J.M. (2021). Ten years of evidence: was fraud a force in the financial crisis? *Journal of Economic Literature*, *59*(4), 1293–1321. https://doi.org/10.1257/jel.20201602

Herndon, T. (2023). Punishment or forgiveness? loan modifications in private label residential mortgagebacked securities from 2008 to 2014. *Review of Political Economy*, 35(1), 287-315. doi:https://doi.org/10.1080/09538259.2021.1923282

Kudenholdt, S. S. (2017). RMBS post-crisis: 2.0 to 3.0. *Journal of Structured Finance, 23*(2), 85-87. doi:https://doi.org/10.3905/jsf.2017.23.2.085

Kruger S. & Maturana, G. (2021) Collateral Misreporting in the Residential Mortgage-Backed Security Market. *Management Science*, 67(5):2729-2750. <u>https://doi.org/10.1287/mnsc.2019.3569</u>

Lehman, D.,II, Simpson, T., & Nedelciuc, F. (2011). Cause and effect: The role of loan-level mortgage characteristics in RMBS losses. *Journal of Structured Finance*, *17*(2), 114-125,6.

Liu, J.S. (2001) "Monte Carlo Strategies in Scientific Computing," *New York: Springer* Metropolis, N. (1987) "The Beginning of the Monte Carlo Method," *Los Alamos Science*, no.15, p. 125-30, available at https://permalink.lanl.gov/object/tr?what=info:lanl-repo/lareport/LA-UR-88-9067

Metropolis, N. and S. Ulam., (1949) "The Monte Carlo Method," *Journal of the American Statistical Association* 44, p. 335-41

McLeish, D.L (2005) "Monte Carlo Simulation and Finance," Hoboken, NJ: John Wiley & Sons, Inc.

Petersen, M. A., Mulaudzi, M. P., Mukuddem-Petersen, J., Schoeman, I. M., & Waal, B. (2012). Stochastic control of credit default insurance for subprime residential mortgage-backed securities. *Optimal Control Applications and Methods*, 33(4), 375–400. <u>https://doi.org/10.1002/oca.1001</u>

P.S. Levy and S. Lemeshow (2008) "Sampling of Populations: Methods and Applications," 4th ed. *Hoboken. NJ: John Wiley & Sons, 2008*, p. 22 [hereinafter "Levy and Lemeshow"].

Robert, C.P. and G.C. Monte (2004) "Carlo Statistical Methods," New York: Springer

Rubinstein R.Y. and D.P. Kroese (2007) "Simulation and the Monte Carlo Method," 2nd ed. *Hoboken, NJ: John Wiley & Sons, Inc.*

"Sampling/Opinion Surveys," (2004) Manual for Complex Litigation,4th ed. *Washington, DC: Federal Judicial Center [hereinafter Manual for Complex Litigation]*

Shonkwiler, R.W. and F. Mendivil, (2009) "Explorations in Monte Carlo Methods," New York: Springer

Sobol, I.M. (1994) "A Primer for the Monte Carlo Method," Boca Raton, FL: CRC Press

Stock, J.S. and J.R. Hochstim (1948) "Commercial Uses of Sampling," *Journal of the American Statistical Association* 43, no. 244 (1948), 509-22

W.E. Deming (1960) "Sample Design in Business Research," *New York: John Wiley & Sons, Inc.,* [hereinafter "Deming"].

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