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# Improving the Efficiency of Mortgage Loan Modification

Devan Pierce  
*Walden University*

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# Walden University

College of Management and Technology

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Devan Pierce

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## Review Committee

Dr. Kevin Davies, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Chad Sines, Committee Member, Doctor of Business Administration Faculty

Dr. Roger Mayer, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2017

Abstract

Improving the Efficiency of Mortgage Loan Modification

by

Devan Pierce

MS, Columbia Southern University, 2010

BS, Howard University, 2007

Doctoral Study Submitted in Partial Fulfilment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

December 2017

## Abstract

A majority of delinquent mortgage loans during the foreclosure crises were unmodified. Lending institutions lost on average 50% of a home's value in future profit from each foreclosure. The purpose of this single case study was to explore what strategies mortgage loan officers might use to improve the selection of delinquent borrowers for mortgage loan modification. The conceptual framework for this study was contract theory. The target population included mortgage loan officers from one community bank who successfully implemented strategies to modify loans for delinquent borrowers during the foreclosure crisis. Semistructured interviews were the data collection method. Emergent themes were identified in the data using a form of pattern matching called explanation building. The following key themes emerged: asymmetric information is essential to a mortgage loan officer's ability to select delinquent borrowers for mortgage loan modification and mortgage loan officers could create value for their organizations through mutually beneficial contracts. The results of this study can be used by leaders in financial institutions to improve the processes and procedures pertaining to mortgage loan modification. Improving mortgage loan modification practices can reduce foreclosure and the impact foreclosures have on the deterioration of communities, property values, and the degraded ability of governments to provide services due to the loss of revenue.

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## Dedication

I would like to dedicate this doctoral study to my grandmother and grandfather, Cynthia and Robert Pierce. From the early age of four, I rememebr them challenging me to achieve academic success. They always provided me with the tools, resources, and love I needed to grow and develop. I owe much of my academic and professional success to the virtues they instilled in me at an early age.

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## Section 1: Foundation of the Study

The foreclosure crisis, beginning in 2006, was one of the worst crises affecting home ownership across the United States (Aguirre & Reese, 2014). Homeowners collectively had reached \$700 billion in negative equity with an estimated 12 million homes underwater (Das & Meadows, 2012). Lending institutions were losing money rapidly. Mortgage loan officers reserved the option to modify loans for delinquent borrowers instead of foreclosing on a home owner's property (Wilkinson-Ryan, 2011). When modifying delinquent loans, strategic default, re-default, and self-cure posed a threat to mortgage loan officers (Wilkinson-Ryan, 2011). The purpose of this qualitative single case study is to explore the strategies mortgage loan officers use to select delinquent borrowers who are not likely to default.

### **Background of the Problem**

Inflated housing prices, high loan-to-value ratios, and the practice of securitized loans are among the factors that lead to one of the greatest foreclosure crises in the history of the United States (Croasdale & Stretcher, 2011). The housing market peaked in 2006 and declined rapidly in 2007 because of the burst of the housing bubble (Croasdale & Stretcher, 2011). The impact of this event resulted in foreclosures exceeding 2.2 million by 2008 (Croasdale & Stretcher, 2011). Additionally, communities around the nation experienced a depreciation of property values (Langdon, 2013). Reese (2014) concluded the foreclosure losses in the state of California alone reached almost \$1 trillion between 2008 and 2012.

Following the start of the foreclosure crisis, Ghent (2011) found that 85% of delinquent loans did not receive any form of modification. Lenders were likely to lose around 55% value from each property foreclosure (Mayer et al., Morrison, Piskorski, & Gupta, 2014). Lenders recover more revenue from renegotiations than they do from foreclosures (Adelino, Gerardi, & Willen, 2013). There is much debate among scholars on the difficulty of renegotiating securitized loans due to contractual stipulations of pooling service agreements (Zhang, 2013). Servicers, who are often independent of the lender, have less incentive to renegotiate loans as they are seldom affected by foreclosures (Zhang, 2013). Substantial evidence supported that renegotiation exposes lenders to two specific types of vulnerability, self-cure, and re-default (Wilkinson-Ryan, 2011). In these cases, lenders exhaust additional resources by either helping borrowers that do not genuinely need modification or delaying the inevitable event of foreclosure. Ghent suggested that lenders should identify delinquent borrowers for loan modification who can fulfill modified contract terms.

### **Problem Statement**

Lending institutions' inability to efficiently modify delinquent mortgage loans contributed to one of the worst mortgage crises in United States' history (Adelino et al., 2013). Lending institutions lost an average of 55% depreciation on the assessed value of foreclosed residential properties in foreclosure crisis starting in 2007 (Mayer et al., 2014). The general business problem is that residential foreclosures devalue stakeholders' investment portfolios. The specific business problem is that some mortgage loan officers

lack effective strategies to improve the selection of delinquent borrowers for loan modification.

### **Purpose Statement**

The purpose of this qualitative single case study was to explore strategies that mortgage loan officers used to improve the selection of delinquent borrowers for loan modification. The population was mortgage loan officers from one community bank who successfully implemented strategies to modify loans for delinquent borrowers during the foreclosure crisis. The geographical location of this study was bound to the Rochester, New York area. The results of this study could help mortgage loan officers prevent loan defaults and future loss of profits for lenders and stakeholders through improved business practices. Reducing the number of foreclosures could also reduce the loss of property value for borrowers, prevent the deterioration in communities and mitigate loss of revenue for state governments.

### **Nature of the Study**

I used the qualitative method to use semistructured interviews. The flexible nature of qualitative studies gives a researcher the ability to use open-ended research questions (Marshall, Cardon, Paddar, & Fontenot, 2013; Sinkovics & Alfoldi, 2012). Researchers using the quantitative method use research tools that tend to be more rigid to collect statistical data (Charlwood et al. 2014). Mixed method research is a combination of both quantitative and qualitative methodologies (Venkatesh, Brown, & Bala, 2013). I did not select the quantitative or mixed method because I was not collecting statistical data. The

objective nature of the quantitative method was not ideal to study the experiences of mortgage loan officers (Garcia & Gluesing, 2013; Venkatesh et al., 2013).

I considered three different designs to conduct my study: (a) case study, (b) phenomenological, (c) miniethnography. I selected the case study design to explore how mortgage loan officers select delinquent borrowers for loan modification. Case studies are the most ideal design to isolate a single case and to improve practices in organizations (Fusch & Ness, 2015; Taylor & Thomas-Gregory, 2015). A researcher using the phenomenological design explores a phenomenon through the experience of individuals involved in the phenomenon to develop findings (Kafle, 2013). I did not select the phenomenological design because it required 30 or more research participants (Kafle, 2013). The miniethnographic design entails the researcher being a participant observer of participants in their natural environment (Weinstein & Ventres, 2000). It was not possible to answer my research question with this design.

### **Research Question**

What strategies do mortgage loan officers use to improve the selection of delinquent borrowers for loan modification?

### **Interview Questions**

1. What collaborative efforts have you taken to find agreeable modification terms between borrowers and lenders?
2. How do you determine a delinquent borrower's eligibility for mortgage loan modification?

3. How do you determine a loan modification candidate's probability of self-cure and re-default?
4. How do you collect asymmetric information about borrowers?
5. How is a loan modification candidate's information used during the mortgage modification process?
6. How do you prevent risky borrowers from defaulting?
7. How effective is mediation during the mortgage loan modification process?
8. How does securitization impact your ability to modify loans?
9. What are the most effective strategies you use to lower risk of default?
10. What other information, not asked, can you share regarding strategies to lower risk of default?

### **Conceptual Framework**

Contract theory is ideal when exploring how the interaction between parties and the presence of asymmetric information affects the outcome of negotiations (Steverson, Rutherford, & Buller, 2013). In the 1960s, Arrow was notable for his contributions towards the concept of moral hazard, defined as the inefficiencies in contracts due to the unpredictability of risk (McCaffrey, 2016). Knight received credit for applying the concept of moral hazard as an ethical principle to the study of economics (McCaffrey, 2016). The works of scholars like Arrow and Knight formed the foundation of contract theory.

In general, contract theory pertains to the field of economics that involves how players and agents create mutually agreeable contracts with one party often having the



advantage of asymmetric information (Hasan & Bhargava, 2013). A contract serves as a binding agreement that commits each involved party to uphold their responsibility in the arrangement (Hasan & Bhargava, 2013). Parties must possess information to create suitable contracts. The party that obtains asymmetric information is at an advantage when developing contracts. (Hasan & Bhargava, 2013; Koszegi, 2014). This notion also applies to mortgage loan officers. As lenders, they can create optimal contracts in their favor when they have an informational advantage (Hoppe & Schmitz, 2015; Roberts, 2015).

Mortgage loans are incomplete contracts. When lenders are unable to predict future contingencies, they create incomplete contracts with borrowers (Christensen, Nikolaev, & Wittenberg, 2016). This situation usually occurs when lenders are creating long-term contracts (Christensen, Nikolaev, & Wittenberg, 2016). Incomplete contracts are designed to allow for renegotiations in the future. Upon renegotiations, parties can correct inefficiencies in a contract or behave in an opportunistic manner (Christensen et al., 2016; Roberts, 2015). A mortgage loan officer must decide if it is beneficial to renegotiate terms or allow a borrower's property to enter foreclosure.

### **Operational Definitions**

*Asymmetric information:* Asymmetric information arises during transactions when one party has more information pertinent than the other which puts one party at a disadvantage (Adelino et al., 2013). During the foreclosure crisis, the status quo was that borrowers held more information than lenders putting lenders at a disadvantage during the loan loss mitigation process (Adelino et al., 2013).

*Loan-to-value ratio:* Loan-to-value ratio is a term used by financial institutions to symbolizes the mortgage loan balance in comparison to the assessed value of the borrowers' home (Archer & Smith, 2013). This value is a consideration that influences borrowers to default on a loan (Archer & Smith, 2013).

*Loss mitigation:* Loss mitigation is a procedure in which a lending institution uses various methods to renegotiate the terms of a mortgage loan to make it possible for the borrower to sustain timely payments on a loan (Collins, Schmeiser, & Urban, 2013).

*Mortgage-backed security:* A mortgage- backed security an investment instrument backed by mortgages bundled into a pool (Park, 2013). This asset is then rated based on risk and sold to investors. The stability of this investment relies on mortgage borrowers' loan repayments (Park, 2013).

*Portfolio loan:* A portfolio loan is a type of mortgage loan that has not been sold on the secondary market and is not bundled with other mortgages (Immergluck, 2013). These loans are usually held by the originating institution (Immergluck, 2013).

*Re-default:* Re-default occurs when a borrower becomes delinquent on a loan after receiving a form of loan modification or assistance to bring their loan current after a previous default (Holden et al., 2012).

*Securitization:* Securitization is the process in which financial products are bundled into a pool of mortgage-backed securities (Oppenheim & Trask-Rahn, 2012). The securities are broken off and sold to investors (Oppenheim & Trask-Rahn, 2012).

*Self-cure risk:* Self-cure risk is the risk lenders face when they renegotiate the terms of a loan with a delinquent borrower who can resolve their delinquency without the assistance of loan modification from the lender (Cordell & Lambie-Hanson, 2015).

*Subprime loan:* A subprime loan is a loan originated with a higher than average interest rate for a borrower with a high-risk credit profile (Pajarskas & Jočienė, 2015). Borrowers that assume subprime loans have a marginal ability to sustain payments on the loan (Pajarskas & Jočienė, 2015).

### **Assumptions, Limitations, and Delimitations**

#### **Assumptions**

An assumption is a bias that a researcher knowingly or subconsciously brings to a study that may not always be factual (Peredaryenko & Krauss, 2013). I assumed that participants in my study will be honest and transparent during interviews. I assumed that mortgage loan officers possess the knowledge, tools, and processes to determine what borrowers have a low risk to redefault on a loan. My last assumption was that the strategies mortgage loan officers used to successfully select and modify delinquent borrowers during the previous foreclosure crisis could be used effectively in a future crisis.

#### **Limitations**

A limitation is a factor out of the researcher's control that is a potential weakness in the study (Greene et al., 2013). A limitation of my study was that the results of my single case study may not be representative of a general population. Over 10 years has elapsed since the events of the foreclosure crisis. I relied on participants' ability to recall

events that occurred almost a decade ago by using semistructured interviews as my data collection technique.

### **Delimitations**

Delimitations are controls implemented by the researcher to narrow the scope of the research study (Zenker, 2016). The first delimitation of this study was the population that I selected for this study. I only selected my participants from a single organization in a population of community bank mortgage loan officers. The second delimitation of this study was the region I selected to conduct my study. I conducted my study in the Rochester, New York area which contains one medium city and surrounding suburbs.

### **Significance of the Study**

#### **Contribution to Business Practice**

The subprime market contained most delinquent loans in the foreclosure crisis (Adelino et al., 2013). The creation of quality loan products and improved credit screening processes could reduce mortgage loan default rates. Community banks have effectively implemented credit screening using borrowers' private information, known as asymmetric information, with success (Seiler, 2014). This information includes a borrower's intentions with their mortgage loans. The most evident benefit of this study to businesses would be developing strategies that might reduce the loss of revenue due to foreclosure.

An evaluation of techniques in other sectors may provide insight into the development of better business practices for lending institutions. Some community banks had a higher level of success than large banks during the foreclosure crisis (Seiler, 2014).

Mortgage loan officers in community banks did not engage in the same predatory lending practices that mortgage loan officers in major banks used (Croisdale & Stretcher, 2011). Community banks had positive relationships with their clients in contrast to large financial institutions (Croisdale & Stretcher, 2011). Mortgage loan officers' practices also included personalized screening processes that evaluated a consumer's individual situation (Fogel, Kali, & Yeager, 2011). Fogel et al. observed that relationships community banks shared with borrowers and communities had an overall positive effect on businesses that proved the significance of asymmetric information. The practice of investing in relationships with the community resulted in a reduction of foreclosures (Croisdale & Stretcher, 2011). Time spent investing in personal relationships with local consumers increased operational costs (Seiler, 2014). Lenders could utilize lessons learned to develop their business models to prevent foreclosures. Add summary to fully conclude the section.

### **Implications for Social Change**

The significance of this study was to provide strategies to mortgage loan officers to select delinquent borrowers for loan modification. The benefit to society is that the reduction of foreclosures can mitigate the devaluation of properties in communities and local economies. Oppenheim and Trask-Rahn (2012) observed that the practice of subprime and predatory lending led to the most severe financial crash in United States history involving the real estate market. Researchers have identified a relationship between foreclosures and the economic health of the United States (Donald, Glasmeier,

Gray, & Lobao, 2014). The inability of banks to resolve issues with foreclosures further exacerbated the crisis.

The effects of this crisis extended beyond the economy. Banks, cities, neighborhoods, and servicers are among the stakeholders affected by the crisis (Reese, 2014). Abandoned homes detract from the well-being of a community by encouraging vandalism, squatters, and crime (Reese, 2014). Reese concluded that these factors caused a significant depreciation in property values. Reese observed that many foreclosures in a concentrated area had depreciated property values. From 2008 to 2012, California experienced some of the highest concentrated foreclosure rates in the nation (Reese, 2014). Municipalities lost revenue due to the reduced tax appraisal value of residential properties (Hollar, 2011). Reese calculated that between 2008 and 2012 the state of California lost over \$3.8 billion in tax revenue from residential properties. Zacks and Zacks (2015) found that faulty and negligent banking practices opened financial institutions up to lawsuits. Lending institutions can mitigate social and economic issues by reducing foreclosures.

### **A Review of the Professional and Academic Literature**

The purpose of this comprehensive literature review is to explore and synthesize literature to understand the context of the foreclosure crisis that began in 2007 and how market factors impacted the strategies used by mortgage loan officers. I used the contract theory to describe the context in which borrowers and mortgage loan officers strategically interact to advance their interest. The first section of this literature review contains key legislation passed by the federal government that influenced financial markets and the

real estate industry. The second section covers the impact that the foreclosure crisis had on different stakeholders in the real estate market. The following sections cover securitization, loan modification, strategic default, and government intervention in the real estate market. This literature concludes with an analysis of the game theory in the context of the real estate market and future considerations for scholars and strategists seeking resolutions to mitigating foreclosures.

The literature for this study was sourced using Google Scholar; ABI/INFORM Complete database; Proquest; EbscoHost; and the internet. I used 74 peer-reviewed articles and two professional articles to develop this literature review. Sixty-nine of the articles were published within the last 5 years. Many of the peer-reviewed articles I used in this study derived from banking and finance journals, economic journals, and real estate journals. I located sources using a combination of the following key terms: *securitization, subprime mortgage crisis, loss mitigation, loan modification, renegotiation of mortgage loans, asymmetric information, troubled mortgages, renegotiation failure theory, foreclosure prevention, mass foreclosures, Community Reinvestment Act, mortgage loan servicers, game theory, risk management theory, risk assessment theory, mortgage-backed securities, self-cure, re-default, property values, distressed loans, and strategic default.*

Table 1

*Literature Review Sources*

	Total Articles	Articles from 2013-2017	Percentage peer reviewed sources from 2013-2017
Peer Reviewed	75	66	85.70%
Nonpeer Reviewed	2	0	0
Dissertations	0	0	0
Total	77	66	85.70%

**Prelude to the Housing Market Crash**

The federal government and private institutions' actions contributed to the start of the foreclosure crisis of 2007 (Oppenheim & Trask-Rahn, 2012). The federal government passed legislation that encouraged the private sector to engage in risky behavior (Oppenheim & Trask-Rahn, 2012). Collectively, the following sequential events created the conditions that led to the foreclosure crisis in 2007.

The Community Reinvestment Act (CRA) of 1977 was designed to encourage commercial banks to meet the credit needs of borrowers in their communities that had varying income levels (Crawford & Forsyth, 2015). Low-income groups included risky borrowers in low-income communities. Influenced by the CRA, banks sold loans to underserved communities using lower than normal qualification criteria (Avery & Brevoort, 2015). Before the crisis, financial institutions viewed the originate-to-distribute model as the way of the future (Azkunaga, San-Jose, & Urionabarrenetxea, 2013). In hindsight, scholars attributed the abundance and poor quality of subprime mortgage loans



as a contributing factor to the subsequent ballooning of the housing market (Crawford & Forsyth, 2015).

The Supreme Court Case *Marquette vs. First of Omaha Service Corp* findings changed the way nationally chartered banks operated across the United States (Liou, 2013a). The Supreme Court relaxed anti-usury regulations and allowed banks to issue consumer credit products outside of their chartered state (Schumann, 2013). Financial institutions capitalized on the financial incentive for relocating to states with the most business-friendly regulations.

The Depository Institutions Deregulation and Monetary Control Act of 1980 repealed specific banking regulations with the intent to manage risk in the financial sector and prevent concentration within the industry (Liou, 2013b). The act permitted institutions to charge interest rates that were illegal in the past (Liou, 2013b). Banks could capitalize on charging interest based on credit worthiness. The Depository Institutions Deregulation and Monetary Control Act had statutes that encouraged subprime lending (Liou, 2013b). Oppenheim and Trask-Rahn (2012) argued that the Alternative Mortgage Transaction Parity Act of 1982 obscured the actual cost of mortgage loans. This act permitted lending institutions to create adjustable rate mortgage (ARMs) loan products and charge balloon payments (Smith, 2014). Freeman, Wells, and Wyatt (2014) blamed regulations like the Alternative Mortgage Transaction Parity Act for contributing to unsustainable high-cost loan products sold to high-risk borrowers. Financial institutions viewed the flexibility of balloon payments and ARMs as innovative strategies to attract new consumers (Schildkraut & Mustaine, 2014). The aforementioned

policies led to many financial institutions engaging in substandard loan origination practices with the intent to attract more consumers.

Government regulation influenced financial institutions to capitalize on the relaxed market conditions. Reese (2014) stated that risky and questionable lending practices became common practice in the 1980's. After 9/11, the Federal Reserve successfully stimulated the economy and the housing market by reducing the interest rate on federal loan products (Schildkraut & Mustaine, 2014). The practice of packaging mortgages as financial instruments and selling them to investors rapidly increased (Reese, 2014). Banks sold loans in the secondary market and had no vested interest in the outcome of these loans (Reese, 2014). Loans sold on the secondary market were a rapid source of liquidity for banks (Jiang, Nelson, & Vytlačil 2013). Financial institutions were benefiting from the relaxed standards, however many of the institutions were engaging in the practices that contributing to the creation of the housing bubble.

The consistent appreciation of home values across America presented an attractive and stable investment for financial institutions and private investors. The market conditions in the early 2000's was ideal for financial institutions to capitalize on the profit made from subprime lending and selling mortgage-backed securities (Croasdale & Stretcher, 2011). The conditions were also ideal for new borrowers seeking home ownership.

Borrowers assumed higher than normal loans to pay for the increased home values. In 2005, home values declined and left many borrowers with negative loan-to-value ratios (Mykhaylova, Mago, & O'Carroll, 2013). The subprime mortgage market

began to fail in early 2007 (Oppenheim & Trask-Rahn, 2012). In response to the market failure, the national composite index of housing prices declined by 30% (Mykhaylova et al., 2013). The economic crisis in 2008 was an additional variable that caused lenders to tightened credit lending standards and reduce the availability of credit for consumers (Das & Meadows, 2013). The foreclosure rate continued to rise as the economic condition declined across the United States (Oppenheim & Trask-Rahn, 2012). High-risk subprime borrowers were the most sensitive to changes in the economy (Oppenheim & Trask-Rahn, 2012). As the market continued to deteriorate, high-risk borrowers faced difficulties making their mortgage payments and were subjected to foreclosure (Oppenheim & Trask-Rahn, 2012). Adjustable rate mortgage loans contributed to many borrowers entering delinquency in the years leading up to the foreclosure crisis.

### **The Consequences of Foreclosure**

Stakeholders invested in a residential property are impacted differently by the foreclosure process. The primary parties negatively impacted by an abundance of foreclosures are borrowers and their communities, lenders, governments, and investors (Brandt, 2013). Campbell (2013) recognized that there was an interdependent relationship between the housing market and the nation's economy. On the macro level, a concentrated number of foreclosures affected the housing market and local governments (Campbell, 2013). Furthermore, scholars recognized that to revive the economy there needed to be a reduction in national mortgage debt (Eberly & Krishnamurthy, 2015).

**Foreclosure Crisis and Housing Markets.** Since the foreclosure crisis began, the volume of foreclosures has destabilized housing markets and declined the amount of tax

revenue collected by local governments (Reese, 2014). Mian, Sufi, and Trebbi (2015) argued that the process of judicial review reduces the influx of foreclosed properties into the housing market, slowing down the detrimental impact on the economy and real estate market. Gerardi, Lambie-Hanson, and Willen (2013) countered that argument emphasizing the rationale of separating incurable delinquent borrowers from their properties as soon as possible reduced the transactional cost to accumulated at the end of foreclosure proceedings. Property taxes are a source of income for many local governments. Foreclosures compromised the government's ability to generate tax revenue.

Schildkraut and Mustaine (2014) suggested that there is a cyclical relationship between the lack of social organization in communities and the rate of foreclosure foreclosures in communities. The decay caused by foreclosures decreased community cohesion. Decreased community cohesion encouraged socially unacceptable behaviors such as crime, lack of property upkeep, and strategic default (Chan, Sharygin, Been, & Haughwout, 2014; Schildkraut & Mustaine, 2014). Disorganization and lack of cohesion inhibited communities from rebuilding (Chan et al., 2014).

Shcildkraut and Mustaine (2014) used the broken windows theory to illustrate how neighborhood decay contributed to the decline of local real estate markets. Properties that sat stagnant during the foreclosure process attracted negative elements to communities that depreciated home values. Borrowers tended to cease investing effort and money into the upkeep of their property once they accepted the loss of their homes to foreclosure (Gerardi et al., 2013). Declining neighborhoods deterred future home buyers

and reduced consumer demand (Mian et al., 2015). Vacant properties attracted squatters and other criminal elements such as vandalism and larceny (Chan et al., 2014). Criminal elements and property decay not only decreased the value of properties during the foreclosure process, but it also devalued the surrounding properties in the community. Campbell (2013) calculated that surrounding property values would decline up to 9%. Instability in the housing market led to other homeowners in the surrounding area to foreclose on their properties as their home's value declines (Chan et al., 2013).

**Foreclosure crisis and unemployment.** The need for workers in the real estate industry declined as the real estate market delcined. The high volume of foreclosures caused layoffs in industries related to real estate (Reese, 2014). Bradley, Cutts, and Liu (2015) and Simkovic (2013) attributed the foreclosure crisis to a 5.5% increase in the nation's unemployment rate from December 2007 to October 2009. Workers that were laid off also had mortgages to maintain. Prior debt obligations and addition residual effects of the housing market was a contributing factor to borrowers' financial instability (Agarwal et al., 2013). Borrower indebtedness increased the number of delinquent borrowers across the nation (Agarwal et al., 2013). Unemployment, the decline in home values, and the economic recession caused lenders to adopt more stringent underwriting standards (Ding, 2013). Tighter underwriting standards prevented distressed borrowers from refinancing their loans to alleviate high payments (Ding, 2013). The foreclosure crisis led to many workers losing their jobs. Unemployment contributed to the crisis by compromising borrowers' ability to sustain mortgage payments.

**Foreclosure crisis and governments.** The government has a vested interest in the performance of the real estate market as it has impacted the macroeconomy of the nation and individual states (Eberly & Krishnamurthy, 2015). Governments collected taxes on a yearly basis from residential property owners. Revenue generated from taxes provided governments money to fund city services. From 2008 to 2012, the California state government's tax revenue losses exceeded \$3.8 billion (Reese, 2014). Hollar (2011) found that the nationwide average of tax revenue losses per property was around \$6,000. Declining home values decrease the taxable value of properties. When delinquent borrowers entered the foreclosure process and ceased to make payments, the borrower also stopped making tax payments to the government (Reese, 2014).

**Foreclosure crisis and lenders.** Lenders that held portfolio loans stood to lose a significant portion of a foreclosed property's original value (Immergluck, 2013). Mayer et al. (2014) calculated that lenders lost an average of 55% depreciation on a residential properties assessed value upon foreclosure. This loss was contingent upon the unpaid balance left on the loan as well as the depreciated value at the closing of a foreclosure. In California from 2008 to 2012, the total loss of value from foreclosed properties across the entire state was estimated at around \$1 trillion (Reese, 2014). After a foreclosure, lenders were responsible for the transactional cost of property (Hollar, 2011). Some of these transactional costs included maintenance, appraisal, legal, and marketing fees (Hollar, 2011). Any delay in the foreclosure proceedings increased the transactional cost burden to lenders (Gerardi et al., 2013). Lenders also competed with other properties for sale near their foreclosed property. The competition with other sellers could increase the

amount of time a property was on the market (Anglin & Wiebe, 2013). Demand for homes in an area influenced what buyers considered to be a reasonable market price for a property (Anglin & Wiebe, 2013). In some cases, buyers had leverage to demand lower prices on homes for sale.

### **Subprime Lending**

Subprime lending became a trend in the housing market in the early 2000s (Smith & Hevener, 2014). Lending institutions created subprime loans as a solution to provide high risk borrowers with mortgages (Smith & Hevener, 2014). Lending institutions changed their strategies to meet the needs of the increased demand for mortgage products. Over a 10-year span ending in 2004, the Office of Thrift Supervision and the Office of the Comptroller of the Currency had reduced the scope and power of state antipredatory lending laws (Ding, Quercia, Reid, & White, 2012). Limiting state power in this manner gave lenders the flexibility to market products to high credit risk groups using deceptive like strategies.

Within the subprime market lending, institutions' loan screening standards declined significantly (Dell'Ariccia, Igan, & Laeven, 2012;). Lenders wanted to capitalize on the market conditions to maximize profits and working capital. Lenders placed less of an emphasis on loan-to-income ratio, and some instances this criterion may have been waived completely (Dell'Ariccia et al., 2012). Before the decline of the real estate market in 2007, lenders were more inclined to assume a higher than average level of risk (Dell'Ariccia et al., 2012).

Credit denial rates were low in markets with rapidly rising home values and high demand for credit (Dell’Ariccia et al., 2012). The ease in lending standards allowed borrowers of all financial standings to enter the market. Financially-constrained borrowers with high debt to income ratios or with unstable income could purchase homes (Campbell, 2013). Risky borrowers were more sensitive to fluctuations in the market. For lenders, unpredictable borrowers led to uncertainty in receiving monthly mortgage payments (Campbell, 2013). Low credit qualification standards allowed many high-risk borrowers to enter the real estate market creating the conditions for an unstable market.

Scholars have debated that borrowers in the subprime market were susceptible to predatory lending practices (Campbell, 2013). There were a wide variety of mortgage products available on the market; even experts admitted to not understanding every single product (Campbell, 2013). One of the most common products sold in the subprime market was adjustable rate mortgages (ARMs). ARMs had low initial teaser rates that were attractive to borrowers (Oppenheim & Trask-Rahn, 2012). The interest rate on ARMs would increase significantly after the introductory period making monthly mortgage payments unaffordable for some subprime borrowers (Oppenheim & Trask-Rahn, 2012).

Practices in the prime market remained relatively the same in the early 2000s. Denial rates were higher in the prime market, and lenders assumed less risk in highly competitive markets (Dell’Ariccia et al., 2012). Uncredit worthy borrowers were not able to enter the market in these areas (Dell’Ariccia et al., 2012). In contrast to subprime loans, loans originated in the prime market were often sold to government-sponsored



enterprises which were subject to congressionally mandated restrictions during the underwriting process (Agarwal et al., 2013; Dell’Ariccia et al., 2012). Historically prime loans have outperformed subprime loans (Elul, 2015). Low quality loan products were a common trend in the subprime market where barriers to entry were low for loan applicants.

### **Securitization**

In the process of securitizing mortgages, many mortgage loans were grouped together into a mortgage-backed security and sold to a subsidiary (Wray, 2013). Lemmon, Liu, Mao, and Nini (2014) observed that securitization was the least successful in the mortgage and consumer credit industry. Commercial and investment banks engaged in buying and selling securitized loans (Krainer & Laderman, 2014; Wray, 2013). The mortgage-backed securities were sold from an institution to another party as a trust that private parties purchased as investments (Krainer & Laderman, 2014; Wray, 2013). Borrowers sustained the profitability of the securities by making their mortgage payments (Croasdale & Stretcher, 2011; Oppenheim & Trask-Rahn, 2012). Loan servicers were responsible for collecting payments and managing the mortgages in a fund as directed by a pooling service agreement attached to mortgage-backed security fund (Adelino et al., 2013).

The securitization of mortgage loans into mortgage-backed securities was a major factor in the foreclosure crisis of 2007 (Agarwal et al., 2013; Simkovic, 2013). Croasdale and Stretcher (2011) noted that lending institutions had been influenced by government policy to market loans to un-credit worthy borrowers in the years leading up to the

foreclosure crisis. Mortgage loan officers used lenient underwriting standards for loans that they intended to sell leading to the creating of low quality loans (Ghent, 2011; Simkovic, 2013). Loan originators had no oversight of the products they originated after the products were securitized (Croasdale & Stretcher, 2011; Fogel et al., 2011).

Oppenheim and Trask-Rahn (2012) observed that the improper securitization of mortgage loans and the predatory tactics used in the subprime market led to the creation of volatile liquid assets.

Without securitization, many financial institutions could not have achieved rapid expansion (Jiang et al., 2013). During their expansion, lending institutions flooded the mortgage-backed security market with subprime mortgages degrading the quality of many investment portfolios (Croasdale & Stretcher, 2011). Securitization was advantageous to banks because it created a liquid asset that offset the impact of local funding shocks (Jiang et al., 2013).

In a study using Office of the Comptroller of the Currency and the Office of the Thrift Supervision mortgage data from 2008, Zhang (2013) concluded that securitized loans were less stable than portfolio loans. The volatility of mortgage-backed securities was exposed in late 2006 after the burst of the housing bubble (Zhang, 2013). Most delinquencies after the foreclosure crises resulted from securitized mortgages (Adelino, et al., 2013). Agarwal et al. (2013) found in a study using a data set containing mortgage loan originations from 2004 to 2007 that there was no consistent pattern in loan quality of securitized and portfolio loans. The lack of a pattern indicated that some lending

institutions sold higher quality prime loans in the secondary market as well as subprime loans.

Traditionally, mortgage origination involved two parties, the lender and the borrower (Ghent, 2011). Ghent (2011) observed that borrowers and lending institutions had a close relationship. Lenders that originated bank held loans had more interest in the outcome of the mortgage loan (Oppenheim & Trask-Rahn, 2012). Lending institutions would originate higher quality loans due to their relationship with borrowers and the stability of their own portfolios. Securitized mortgage loans were sold at least once which absolved the originating entity of liability (Croasdale & Stretcher, 2011; Fogel et al., 2011). Oppenheim and Trask-Rahn (2012) concluded that originating institutions that sold their loans had less incentive to produce quality loan products.

Services, investors, and lenders were in different bargaining positions when dealing with securitized loans. Lenders did not consider collecting asymmetric information as a priority for loans intended for securitization (Jiang et al., 2013). Some lending institutions invested more time and effort into collect personal information about borrowers for loans that were originated with the intent to stay within the bank's portfolio (Agarwal, Amromin, Ben-David, Chomsisengphet, & Evanoff, 2011). Collecting personal information required an investment of time and manpower, so lenders directed these efforts specifically towards underwriting quality portfolio loans (Agarwal et al., 2011). Agarwal et al. (2011) attributed the increased level of personal information collected on portfolio loan clients to the lower foreclosure rate of these loans during the foreclosure crisis. Servicers received securitized loans originated by lenders with a

quality grade based on the perceived level of risk associated with the pool of mortgages (Oppenheim & Trask-Rahn, 2012). Certain characteristics about loan performance are only possible to obtain after origination (Jiang et al., 2013). Investors had the most ideal position to make decisions in the securitized mortgage market as they were able to view loan performance history back to the time of origination before choosing to invest in a fund (Jiang et al., 2013).

Complex financial instruments were difficult for both borrowers and lenders to navigate during the foreclosure crisis creating an obstacle to foreclosure mitigation (Blinder, 2015). A common theme in the literature is that securitization impeded lenders and servicers from renegotiating the terms of residential mortgages. Pooling service agreements attached to mortgage-backed securities imposed restrictions that made it difficult for servicers and lenders to appease all stakeholders (Ding, 2013). Ghent (2011) suggested that researchers have not agreed on the correlation between securitization and the lack of mortgage modification. Ghent (2011) also observed that two researchers, using the same dataset, found opposite conclusions about the correlation between securitization and the lack of mortgage modification. Lenders' and servicers' perception that securitized mortgage loans inhibited remediation led to unnecessary foreclosures (Adelino et al., 2013). Wilkinson-Ryan (2011) concluded that the lack of the ability to modify delinquent loans contributed to the foreclosure crisis and encouraged strategic default.

### **Loan Modification**

A common perception amongst scholars found in the literature is that securitization was a deterrent that prevented many lenders and servicers from modifying delinquent loans (Zhang, 2013). Researchers have cited that pooling service agreements were the source of contract frictions that inhibit servicers from negotiating new terms for delinquent loans within their portfolios (Adelino, et al., 2013; Zhang, 2013). On the contrary, other researchers have found that contract frictions linked to pooling service agreements were not a legitimate factor in the prevention of mortgage loan modification (Zhang, 2013). Some mortgage loan officers had the perception that mishandling the modification of loans with pooling servicing agreements had legal ramifications. However, of the 800 lawsuits pursued against lenders and servicers since 2008, none have involved servicer violation of pooling service agreements (Adelino et al., 2013).

There are cases where pooling service agreements and regulations made it difficult for servicers to act in the best interest of all parties. Adelino et al. (2013) cited cases where pooling service agreements restricted servicers from contacting borrowers that were less than 60 days delinquent. The Security Exchange Commission also stipulated that contacting a borrower that is less than 60 days delinquent is defined as an ongoing relationship (Adelino et al., 2013). Not adhering to this rule jeopardized the off-balance sheet status of a mortgage loan unless loan default was reasonably foreseeable (Adelino et al., 2013).

Servicer quality has been a contributing factor to the lack of loan modification. Collins and Urban (2014) concluded that mediation was an effective means to obtain private information needed for efficient loan modification. Ding (2013) observed that

some servicers lacked the proper staff and training needed for loan modification. By focusing training solely on collection activities, servicers were more likely to push for foreclosure rather than loan modification (Ding, 2013). With no standardized process to follow and no guidance from pooling service agreements, foreclosure was the most convenient choice for servicers (Ding, 2013; Zhang, 2013).

Loan modification was one of the immediate solutions instead of foreclosure to keep delinquent borrowers in their homes. The public perceived foreclosures to be more preventable than it was (Adelino et al., 2013). Lenders and servicers have had issues with distinguishing between borrowers that were likely to sustain their loans after modification (Ghent, 2011). Servicers were also at risk to borrowers that strategically default and re-default. Uncertainty about borrowers' willingness to pay and financial standing made it risky for lenders and servicers to modify loans.

Servicers had a key role in initiating loan modification efforts for securitized loans. Ding (2013) observed in prior crises that servicer self-interest and overall cost were barriers to servicers pursuing loan modification for delinquent borrowers. Foreclosures did not negatively impact servicers the way investors and borrowers are (Adelino et al., 2013; Zhang, 2013). Upon foreclosure, servicers were the first to receive reimbursement for the cost of the foreclosure proceedings (Adelino et al., 2013). Investors received the remaining funds. Considering that servicers recouped a fee upon foreclosure, servicers viewed modification as more labor intensive and expensive than the option of foreclosure (Ding, 2013). Servicers had significantly less incentive to invest the time and effort needed to negotiate modification for delinquent borrowers (Zhang, 2013).

Before securitization, banks originated, funded, and held mortgage loans until maturity or default (Jiang et al., 2013). Bank held loans are known as portfolio loans. Unlike third-party servicers, portfolio loans that were in foreclosure held in the originating institution's portfolio had a greater financial impact on the organization. Loans originated with the purpose of being held within the originating institutions had stricter underwriting standards (Ding, 2013). Originators that practiced less restrictive underwriting standards during the foreclosure crisis had a higher in default rate (Ding, 2013).

Portfolio loan servicers have had varying levels of success modifying delinquent loans. Ding (2013) observed that portfolio loan servicers had invested more time and resources towards loan modification efforts. Loan servicers that practiced loss mitigation found concessionary modifications to be successful (Adelino et al., 2013; Collins, Schmeiser, & Urban, 2013). The most common forms of concessionary modifications for delinquent borrowers were interest rate reduction, term extension, and reduction of loan balance (Ghent, 2013).

### **Strategic Default**

A strategic default occurred when a capable borrower decided to cease making payment on their mortgage loan and let their loan enter delinquency. Strategic default contributed to the increase in foreclosures during the crisis (Guiso, Sapienza, & Zingales, 2013). Borrowers had several reasons to strategically default on their loans. The most common reason borrowers defaulted during the foreclosure crisis was a reduction in household income or a significant loss of home equity (Guiso et al., 2013). Bradley et al.

(2015) found through a simulation analysis that when the value of a home fell below half of the amount owed on the property a borrower was likely to consider strategically default.

Homeowners no longer found value in their properties as their homes and communities decline (Schildkraut & Mustaine, 2014). Guiso et al. (2013) surveyed 1,000 American households evaluating morality and willingness to strategic default. The researchers found that 23% of participants were willing to walk away from their mortgages if their negative equity exceeded \$100 thousand even if they could still afford the monthly payments. In a study tracking the debt repayment behavior of 1.5 million randomly selected mortgage holders over 7 years, Andersson, Chomsisengphet, Glennon, and Li (2013) found that borrowers committed to their mortgage first were just as likely to strategic default after the mortgage crisis as borrowers that didn't hold their mortgage as a priority. When homeowners reached a point of excessive negative equity, it seemed more cost effective to foreclose than continue to pay their mortgage (Wilkinson-Ryan, 2011). Owners that deemed equity position important were more likely to strategic default (Bradley et al., 2015). The threat of a decreased credit score was not a deterrent to a borrower considering strategic default (Wilkinson-Ryan, 2011). Instead of maintaining a mortgage, delinquent borrowers opted to seek rental properties. It was common that delinquent borrowers sought out rental properties of similar style and monthly cost to their previous homes instead of continuing paying a mortgage (Wilkinson-Ryan, 2011).

Many researchers have considered the psychology behind why borrowers chose to strategically default and have found many reasons for this phenomenon. Wilkinson-Ryan



(2011) compared strategic defaulters to players in the ultimatum game. Borrowers were pushed to choose between their wellbeing and their contractual obligations (Wilkinson-Ryan, 2011). As borrowers watched banks receiving bailed out for their mistakes, they felt less inclined to honor their mortgage obligation (Wilkinson-Ryan, 2011). Bradley et al. (2015) observed that strategic defaulters motivated other potential strategic defaulters in their area. Borrowers that were underwater on their loans were most likely to be influenced by other strategic defaulters in their areas (Bradley et al., 2015).

**The right to cure.** The right to cure was a legal protection provided to borrowers by the government. The right to cure policy afforded a borrower time to make their mortgage loan current before legal action could be taken to remove them from their homes (Gerardi et al., 2013). The right to cure period varied from state to state depending on judicial review or non-judicial review status of the state.

In certain states, borrowers that chose to strategic default held legal rights that gave them a significant advantage over lenders and servicers seeking foreclosure (Gerardi et al., 2013). When borrowers were aware of the penalty of foreclosure as indicated in their contracts, they were more likely to consider the ramifications before strategic default (Wilkinson-Ryan, 2011). Borrowers factored a lender's ability to pursue legal retribution as a penalty to foreclosure as they considered strategic default as an option (Campbell, 2013). Historically lenders rarely sought legal recourse against borrowers that default (Bradley et al., 2015). In states with the judicial review process for foreclosure, delinquent borrowers could reside in their homes during the extended right to cure process (Gerardi et al., 2013). Mian et al. (2015) observed higher foreclosure rates in

non-judicial review states. In non-judicial review states, lenders could pursue foreclosure in a shorter amount of time. Strategic default in non-judicial review states was less likely given the shortened right to cure period (Mian et al., 2015). In both judicial review and non-judicial review states Gerardi et al. (2013) observed that the right to cure process allows borrowers a period to live rent free in their properties. A longer right to cure period encouraged strategic default and gave borrowers a strategic advantage over lenders.

### **Government Oversight in the Housing Market**

The United States Federal Government recognized the severity of the foreclosure crisis and initiated programs to assist borrowers and the struggling housing market. Borrower protections laws existed to protect borrower rights and facilitate negotiations between lenders and borrowers (Gerardi et al., 2013). Reforms were designed to remove barriers to renegotiation, create standards in the industry, and provide incentives for renegotiation (Ding, 2013). Since the start of the foreclosure crisis Congress and the Obama Administration spent over \$75 billion in efforts to improve the state of the housing market (Reese, 2014). The reforms and laws implemented by the government had varying levels of success.

**The home affordable modification program.** Governments tended to intervene in industries to prevent the failure of businesses and to protect the economy (Herd-Clark & Murty, 2013). The lack of understanding of legal boundaries and contractual obligations associated with modifying securitized mortgage loans prompted the Federal Government to act (Agarwal et al., 2013). The Federal Government introduced the Home

Affordable Modification Program (HAMP) as a part of the Making Homes Affordable Program in early 2009 with allotted funds from Troubled Asset Relief Program (Holden, Kelly, McManus, Scharlemann, Singer, & Worth, 2012). HAMP was among the most notable program introduced during the foreclosure crisis (Immergluck, 2013). This program was designed to protect homeowners, lenders, and the government from the negative effects of the foreclosure crisis (Hollar, 2011). HAMP assisted distressed eligible borrowers with getting timely help by incentivizing the modification process for lenders and servicers (Ding, 2013; Holden et al., 2012). HAMP offered rate reductions to assist borrowers in meeting the demands of their monthly payments (Ding, 2013; Holden et al., 2012). Servicers received \$1 thousand for each successful loan modification and a \$1 thousand annual payment for up to 3 years for loans that remained current (Agarwal et al., 2013; Reese, 2014).

Overall, HAMP was a marginally successful program (Ding, 2013). By 2011, the program had only helped 630 thousand out of the 4 million projected (Reese, 2014). There were some theories for the poor performance of the program. The program was optional, and there was no penalty to servicers and lenders for non-compliance (Ding, 2013). The stringent criteria limited many delinquent borrowers from participating (Agarwal et al., 2013). Researchers criticized HAMP for having convoluted rules and poor government oversight (Reese, 2014). Agarwal et al. (2013) also observed that many organizations were not structured and staffed appropriately to handle the increased workload required by HAMP. Despite assistance from modification departments, some delinquent borrowers could not be cured due to their personal circumstances.

Government reform affected investors and lenders. When borrowers delayed the foreclosure process properties often continued to deteriorate (Hollar, 2011). The transaction cost of stagnant properties was inevitably passed on to stakeholders to include homeowners in the surrounding community (Hollar, 2011). HAMP lowered mortgage payments for borrowers but decreased income for lenders and servicers. Servicers were not able to recuperate the cost of loan modification or bill investors for the cost of modification services (Collins, Reid, & Urban, 2015). Collins et al. (2015) found that HAMP alone was not enough incentive to push servicers to increase their loan modification efforts.

### **Contract Theory and the Foreclosure Crisis**

Contract and game theory are both applicable to understanding how mortgage loan officers can select borrowers who are at lower risk of default after mortgage loan modification (Steverson, Rutherford, & Buller, 2013). Scholars exploring the interaction between parties while they are negotiating contracts more commonly use contract theory (Steverson, Rutherford, & Buller, 2013). Contract theory is also ideal when exploring information asymmetry, moral hazard, and adverse selection (Steverson, Rutherford, & Buller, 2013).

**Contract theory.** There are several variations of contract theory that can be applied to understand the dynamics between mortgage loan officers and delinquent borrowers. In general, contract theory pertains to the field of economics that involves how players and agents create mutually agreeable contracts with one party often having the advantage of asymmetric information (Hasan & Bhargava, 2013). Contracts are

agreements that outline the expected interactions between parties (Schouten, 2013).

Mortgage loan terms served as the contract between lenders and borrowers during the foreclosure crisis. Mortgage loan officers that obtained personal information about their borrowers were at an advantage when creating loan terms.

*Contracts and relationships.* In this case study, I used contract theory to understand the continuous relationships shared between parties and transactions that occurred during the crisis (McLaughlin, McLaughlin, & Elaydi, 2014; Mouzas, S., & Blois, 2013). McLaughlin et al. (2014) observed that the interaction between parties in a contract is often a reflection of the norms of society. Relationships between parties were also influential in how they negotiated effective contracts.

An essential element of contract theory is the complex relationships that exist between parties (McLaughlin et al., 2014). In relationships where the level of commitment is strong between parties, actors will make concessions to preserve the status of the contract (McLaughlin et al., 2014). These relationships could explain why community banks had a lower default rate in their mortgage loans during the foreclosure crisis (Croasdale & Stretcher, 2011; Seiler, 2014). There are also relationships that promote competition between actors. The shortage of information makes it difficult for parties to develop suitable contracts, and the possession of asymmetric information gives one party an advantage when developing contracts (Hasan & Bhargava, 2013; Koszegi, 2014). Parties can use methods of dishonesty or moral hazard to improve their position within an arrangement (Hasan & Bhargava, 2013; Roberts, 2015; Steverson et al., 2013). Some lenders engaged in predatory practices that gave them a complete advantage over

unsuspecting borrowers (Tippit, 2014). On the other hand, some borrowers took advantage of their position and strategically defaulted.

*Contracts and behavioral tendencies.* Koszegi (2014) asserted that the principle party could develop an understanding of the other party's behavioral tendencies with thorough screening. An ideal situation for the principle party is when they obtain complete information (Hasan & Bhargava, 2013). Community banks could achieve lower default rates by screening individuals and building asymmetric information before engaging in mortgage loans (Fogel et al., 2011; Seiler, 2014).

A contract promotes integrity between parties to uphold their portion of the agreement (Hasan & Bhargava, 2013). The threat of moral hazard exists even after the agreement of a contract. The issue of strategic default was often observed when borrowers found it more logical or cost effective to default rather than continue to pay into an undesirable mortgage (Wilkinson-Ryan, 2011). Borrowers made decisions based on what produced the most beneficial results (Koszegi, 2014). A party that favors loss aversion will consider any loss to be far worse than any potential gain (Koszegi, 2014). Parties that favor inequity aversion dislike situations that yield unequal outcomes (Koszegi, 2014). They will consider moral hazard when they are likely to end up in a position where they are behind the other party (Bradley et al., 2015; Koszegi, 2014). Inequity can occur when the principle party arranges an exploitative contract with another party that capitalizes on their mistakes or ignorance (Koszegi, 2014). The mortgage loan contracts made before the foreclosure crisis contained much ambiguity, some real estate experts struggled to understand the complexities of the contracts (Campbell, 2013).

***Incomplete contracts.*** Lenders made incomplete contracts with borrowers when they were unable to account for contingencies in contracts. Long term contracts make it difficult to draft complete contracts (Christensen et al., 2016). Mortgage loans are a form of an incomplete contract that permits negotiation later in the contract.

Negotiations are triggered when a borrower can no longer fulfill their financial obligation to the lender (Roberts, 2015). Negotiations are an opportunity for the lender and the borrower to amend inefficiencies in the original contract (Christensen et al., 2016). Negotiations are also an opportunity for a party to take advantage of the chance to create new contract terms. Lenders learn more information about a borrower during renegotiations than they obtained originally (Roberts, 2015).

Lenders can obtain more favorable contract terms when they possess asymmetric information (Hoppe & Schmitz, 2015; Roberts, 2015). Lenders must balance the terms of their renegotiations carefully. Borrowers will not accept a lender's offer if the terms are unfavorable (Hoppe & Schmitz, 2015). Brandts, Charness, and Ellman (2015) observed that open communication and mutual understanding between parties yields better contracts. Lenders can also reduce future cost by creating efficient contracts (Roberts, 2015).

**Parties involved in contracts.** There were multiple parties in the foreclosure crisis. I focused on the interdependent interaction between borrowers and lenders in this study. Parties in this context made decisions that offered the highest reward (Collins, Harrison, & Seiler, 2015). Through contract theory, I could explore the issue of moral hazard and adverse selection. Exploring borrower behavior and the factors that influenced

their decisions could help understand how mortgage loan officers selected delinquent borrowers for loan modification that were at lower risk for re-default.

**Lenders.** Lenders were the financial institutions that originated and maintained their portfolio of mortgage loans. Lenders made money as borrowers repaid their mortgage. Delinquent borrowers were a threat to a lender's income source (Agarwal et al., 2011). However, there was a narrow margin where it was in the financial best interest of lenders to modify loans for delinquent borrowers (Collins et al., 2015).

Lenders typically had three options when dealing with delinquent borrowers. Lenders could modify the loan, in some states seek retribution by legally pursuing a borrower's personal assets, or foreclosed on a property after the right to cure time had passed. Loan modification was a very costly procedure for a lender. The most common loan modification procedures included the lender writing off a portion of a borrowers' principle in a concessionary modification, which resulted in an immediate realization of financial loss on a lender's balance sheets (Das & Meadows, 2013). Concessionary modifications were still risky considering there was no form of loan modification that could guarantee that the borrower would not re-default in the future (Das & Meadows, 2013). During the foreclosure crisis, homeowners collectively reached \$700 billion in negative equity with an estimated total of 12 million homes underwater (Das & Meadows, 2013). Lenders considered the culture of moral hazard and strategic default while making loan modification decisions for borrowers (Collins et al., 2015). Strategic default and re-default was a challenge for lenders that pursued mortgage loan modifications.



To further complicate the loan modification process, lenders faced difficulty distinguishing between borrowers that had a low ability to pay and borrowers that had a low willingness to pay (Das & Meadows, 2013). Lenders made their loan modification decisions based on the available information they possessed (Tippit, 2014). Steinbuks and Elliehausen (2014) argued that a borrower's ability to pay is the borrower's private information. They had a difficult task of making efficient mortgage loans due to the unpredictability of borrower behavior (Hoppe & Schmitz, 2015). Lenders made more efficient loans in situations when they could obtain borrower information, however private information came at the expense of time and money (Roberts, 2015).

Scholars observed that mutual communication between borrowers yielded better relationships between parties and greater stability in sold loan products (Brandts et al., 2015; Turvey, Xu, Kong, & Cao, 2013). Narrowing the informational disconnect between lenders and borrowers could have been beneficial to facilitating better modification outcomes between lenders and borrowers (Turvey et al., 2013). Brandts et al. (2015) observed that lenders and borrowers were more likely to reach mutually agreeable contracts. Lenders could make more informed decisions in line with their organization's objectives and detect moral hazard when using asymmetric information obtained from borrowers (Das & Meadows, 2013).

***Borrowers.*** Borrowers were the recipients of mortgage loan products. They had a contractual obligation to fulfill the terms of their agreement with lending institutions. Their primary stake in fulfilling the terms of the contract was their property, credit, and equity. After the foreclosure crisis had started, borrowers had more at stake than just their

properties. Along with the decline of their home values, some borrowers have observed the decline of their neighborhoods (Shcildkraut & Mustaine, 2014). The degradation in the value and safety in neighborhoods occurred because of mass foreclosures (Cagney, Browning, Ivenivk, & English, 2014). During the crisis, some borrowers experienced above water returns. Borrowers' homes maintained their values, but other external variables such as unemployment left them with the inability to sustain their mortgage payments (Collins et al., 2015). Borrowers with equity in their homes were at risk of losing value.

Some borrowers considered the emotional, economic, and legal impact foreclosure had on their lives before defaulting (Seiler, 2014). In a study conducted by Cagney et al. (2014) to evaluate the emotional effects of foreclosure on borrowers, the researchers observed emotional distress particularly in elderly participants after loan default and foreclosure. Lindblad and Riley (2015) found in a study comparing mortgage performance data to household health surveys from 2008 to 2013, that an increase in self-reported stress and declined health had a stronger connection to unemployment rather than foreclosure. The researchers also observed in their sample population a reduction of stress after loan modification (Lindblad & Riley, 2015). Cagney et al. (2014) and Linblad and Riley (2015) concluded that there might have been a relationship between foreclosure and emotional stress in borrowers. As the stigma associated with default declined during the foreclosure crisis, strategic default was a socially acceptable means for some borrowers to escape the burdens of a distressed property (Collins et al., 2015).

Default had a significant impact on borrowers' credit scores (Wilkinson-Ryan, 2011). Decreased credit scores impacted borrowers' chances of obtaining credit in the future. Depending on each borrowers' situation delinquent credit reporting was a small penalty to pay. Borrowers were concerned about the legal ramifications of mortgage default. Lenders had the right to pursue delinquent borrowers depending on state laws (Bradley et al., 2015). However, there has been little evidence of lenders legally pursuing borrowers for judgment after default (Collins et al., 2015).

Borrowers' decisions with their contracts were influenced by life events, emotions, and additional market-related factors such as unemployment (Collins et al., 2015; Seiler, 2014). Ultimately, borrowers had an informational advantage over lenders as they were most familiar with their intentions and ability to repay their mortgage (Collins & Urban, 2014). Borrowers are only able to self-cure from default if they have the financial means to do so. Self-cure required a borrower to bring the loan current by paying the past due balance (Collins et al., 2015). Although borrowers had leverage in negotiations due to the financial crisis, some borrowers chose to strategic default if they no longer perceived value in their mortgages (Collins et al., 2015; Roberts, 2015).

***Stakeholders to contracts.*** Investors, servicers, and governments all had an influence and stake in the foreclosure crisis. Investors purchased mortgage-backed securities based on their desired level of acceptable risk and return on investment. Investors had no relationship or interaction with borrowers and had no knowledge of the origins of the mortgages in their portfolios (Atkinson, Paschall, Bonnefant, & Steinmann, 2014). Investors reserved the contractual right to hold servicers to the standard outlined in

their pooling service agreements (Ding, 2013; Zhang, 2013). Mian et al. (2015) observed that many individual investors failed to perform due diligence when purchasing mortgage-backed securities and were not fully aware of their rights or the quality of their investments.

Servicers were the organizations responsible for collecting mortgage payments on behalf of investors and financial institutions that held mortgage-backed securities. Servicers' source of income derived from commission and fees paid by borrowers (Ding, 2013). Servicers were linked to investors through pooling servicing agreements attached to mortgage-backed securities (Adelino et al., 2013).

Servicers had a low rate of loan modifications during the foreclosure crisis (Ghent, 2011). Servicers were not significantly impacted by the act of a property foreclosure and had little incentive to modify loans (Adelino et al., 2013). Servicers were the first to be reimbursed upon the final sale of a foreclosure property. Ding (2013) cited poor servicer quality and focused on generating income as a rationale for the lack of loan modification.

The government had a vested interest in the outcome of the foreclosure crisis. A large portion of tax revenue for governments derived from property taxes (Hollar, 2011). There was also an interdependent relationship between the economy and the housing market. The foreclosure crisis was a significant factor that led to the financial crisis of 2008 (Das & Meadows, 2013).

Federal and State governments had a significant role in shaping the laws that players follow. The Federal government was responsible for the laws that set the

conditions for the foreclosure crisis (Atkinson et al., 2014). The government had set the stage for recovery by enforcing the right to cure laws and passing government mandated programs (Agarwal et al., 2013; Gerardi et al., 2013). State governments exercised their power to preserve the stability of their regions. Cagney et al. (2014) observed a case in Richmond, California where the municipal government exercised eminent domain and bought back distressed properties to preserve communities in their region. The case in Richmond, California represented one of the many ways the government can shape the context of the game.

**External influences on contracts.** External influences impacted how contract negotiations were carried out between lenders and borrowers. In the foreclosure crisis regulation, laws, and legally binding contracts were potential constraints. The government and contracts between parties created external influences.

***The right to cure.*** State laws permitted what was called a right to cure for delinquent borrowers. All states fell somewhere within the spectrum of judicial review or non-judicial review laws (Gerardi et al., 2013). These laws afforded borrowers the right to correct their delinquency within a specified amount of time before a lender could proceed with the foreclosure process. However, each state varied in their level of regulation in the foreclosure process (Gerardi et al., 2013).

Some states practice what is called a power of sale or non-judicial review. The power of sale state laws legally permitted lending institutions to pursue foreclosure on a delinquent borrower without court supervision (Gerardi et al., 2013). In comparison to states that practiced the judicial review process, foreclosures occurred at a faster and

much cheaper rate to lenders (Gerardi et al., 2013). In some states, the foreclosure process occurred within 35 days after a lender defaulted on their mortgage loan (Atkinson et al., 2014). This type of foreclosure was possible using a deed of trust where a designated third party or trustee held the title to a property (Atkinson et al., 2014). Mian et al. (2015) conducted a study on the foreclosure rate of a single zip code split by a Stateline with a non-judicial review policy on one side and a judicial review side on the other. From 2007 to 2011 Mian et al. found that lenders in non-judicial review states were twice as likely to foreclose on a delinquent borrower than lenders in judicial review states. Gerardi et al. argued that government intervention in the foreclosure process may have created a persistent state of delinquency by allowing defaulters to remain in their properties for an extended period. Lenders in power of sale states could reduce the cumulative cost of foreclosure by reducing the time that properties were in delinquency (Mian et al., 2015). External influences were more favorable for lenders seeking foreclosure against delinquent borrowers in non-judicial review states.

Both non-judicial and judicial review laws extend the time it took until a lender could foreclose on a delinquent borrower. Gerardi et al. (2013) found that in non-judicial review states the right to cure period was too short to be conducive to allow for delinquent loan negotiations. Courts supervised foreclosures in judicial review states (Mian et al., 2015). Lenders had to file a suit against the borrowers in the judicial system. Borrowers were then mailed a noticed and given 30 days to cure the delinquency. If no payment was made, a judicial decree authorized the foreclosure (Mian et al., 2015). Gerardi et al. found that during the foreclosure crisis in judicial review states, after a year

of delinquency only 14% of lenders could sell delinquent units in an auction. By 2008, 35% of delinquent properties in power of sale states had foreclosed (Gerardi et al., 2013). Borrowers can remain in their homes until the completion of the foreclosure process. The legal process of foreclosure lasted up to a year or more after the borrower's last mortgage payment (Lindblad, Quercia, Jacoby, Wang & Zhao, 2015). Borrowers that were aware of state laws were capable of intentionally taking advantage of the right to cure period (Mian et al., 2015).

***Pooling Service Agreements.*** Pooling service agreements were the contract stipulations tied to mortgage-backed securities. The contract outlined the relationship and obligations of each party involved in trusts managed by mortgage loan servicers (Zhang, 2013). Scholars argued that pooling service agreements created contract frictions that discouraged servicers from modifying delinquent loans for fear of legal ramifications from stakeholders (Adelino, Gerardi, & Willen, 2014; Adelino et al., 2013; Zhang, 2013). In contrast, some scholars have argued that PSAs were not the source of contract frictions (Zhang, 2013). Additionally, there is no evidence of a servicer being sued for modifying a delinquent loan during the foreclosure crisis (Adelino et al., 2013). Ding (2013) suggested that servicers were not staffed and trained to handle mass amounts of foreclosure nor was it in their financial best interest to do so. Most scholars have agreed that the presence of PSAs was a contributing factor to the decisions servicers made about loan modification (Adelino et al., 2013).

**Lenders versus borrowers.** Before the foreclosure crisis, banks and borrowers once shared a closer relationship (Wilkinson-Ryan, 2011). Community banks that had

intimate knowledge about their clients could obtain asymmetric information through their close relationships (Croasdale & Stretcher, 2011). Lenders interacted directly with their clients on a personal level. Therefore, community banks and borrowers had a higher level of success reaching amicable solutions for delinquent loans (Fogel et al., 2011). In the foreclosure crisis of 2007 borrowers and lenders competed to achieve their own strategic objectives (Seiler, 2014). Contract renegotiations created conditions for either party to behave opportunistically to improve their position in the contract or either party could suffer a complete loss from failed negotiations (Christensen et al., 2016). Seiler observed that this ultimatum game was a common occurrence in the foreclosure crisis. If either party's initial move was rejected by the other, the contract negotiations usually ended in foreclosure.

Lenders wanted to maximize profits for their organizations through the massive amounts of mortgage loans sold in the housing boom before the foreclosure crisis. Tippit (2014) suggested that some lenders started taking advantage of information asymmetries long before the foreclosure crisis began through predatory practices and deception during loan origination that negated the informational advantage many borrowers held. During the boom, some lenders negated their informational advantage on borrowers' ability to repay loans by failing to collect asymmetric information (Turvey et al., 2013). The initial relationship established between lenders and borrowers set the tone for later events. Some borrowers resented lenders for their predatory practices (Seiler, 2014). Bandts et al. (2012) also observed that rigid contracts aroused resentment in borrowers.



Borrowers have a critical choice to make when considering to discontinue paying their mortgage. Borrowers chose to default or reach out to their lender for modification. There were some factors that determined which decision a borrower made. Some borrowers that reached out to their lenders could receive modification. Some borrowers received concessionary modifications to reduce their monthly payment making their mortgages more affordable (Das & Meadows, 2013). Other borrowers were not able to receive any form of loan modification.

Seiler (2014) observed that borrowers' sentiment towards their lender might have determined their level of moral hazard. Some borrowers were willing to strategically default to penalize their lender even at the expense of losing their house and receiving derogatory marks on their credit (Seiler, 2014). Many strategic defaulters knowingly took advantage of mortgage and rent-free living while under the protection of the right to cure laws (Gerardi et al., 2013). Gerardi et al. observed that in power of sale states defaulters were more likely to self-cure due to the leverage lenders had over borrowers to foreclose on a property.

Some borrowers that received loan modification were still at risk of redefault or had no potential to self-cure. Strategic defaulters and redefaulters consumed more time and money from lenders (Roberts, 2015). It was difficult for lenders to distinguish between salvageable borrowers and borrowers that did not require assistance (Gerardi et al., 2013). In a study conducted by Adelino et al. (2013), the researchers found that more 30% of their sample size that received loan modifications were capable of self-cure without modification. Many borrowers would stay in their homes if they legally could

after modification, even if they could not afford the new loan amount (Adelino et al., 2013).

Borrowers who ultimately accepted foreclosure as their final option, even after modification posed additional concerns to lenders. Lenders lost more profit from the deterioration of a property from the lack of upkeep by borrowers that had ceased to maintain their properties (Adelino et al., 2013). Defaulters postponed the inevitable costing lenders significantly more from the extended delinquency and potential property neglect (Adelino et al., 2013).

The most common modifications were concessionary modifications and reduction of principle (Das & Meadows, 2013; Schmeiser & Gross, 2014). These two forms of modification had the highest success rate in preventing redefault and foreclosure (Ding, 2013; Ghent 2011). Challenge lenders faced was determining at what point were borrowers going to walk away or redefault on their loan (Wilkinson-Ryan, 2011). Every delinquent borrower varied in their level of willingness and ability to pay (Das & Meadows, 2013). Lenders understood the unfortunate fact that traditional means of credit evaluation could not detect strategic defaulters (Seiler, 2014). Lenders were at a significant risk to lose more when they chose to modify a delinquent loan. Mian et al. (2015) observed that lenders put more resources towards foreclosing on borrowers that were unlikely to self-cure. Lenders were only able to end the game after the right to cure time had elapsed (Collins et al., 2015).

### **Alternate Theories**

The foreclosure crisis can be explored using other theories. Game theory can be used to explore the relational dynamics between parties and the creation and execution of contracts. Stakeholder theory is used to evaluate how managers make choices in the best interest of their stakeholders (McLaughlin et al., 2014). Rational choice theory is a variant of contract theory that can be used to explore how parties evaluate their choices based on the pros and cons of their decisions (McLaughlin et al., 2014). Stakeholder and rational choice theory do not contain a framework for exploring the strategic decision-making process that occurs between each party involved in a mortgage loan contract. The tenants of game theory encompass all the elements of the foreclosure crisis required to understand what strategies mortgage loan officers use to improve the selection of delinquent borrowers for loan modification. Game theory is best employed as a formula in a statistical analysis (Brandenburger & Nalebuff, 1995).

**Game theory.** The traditional form of game theory founded by Von Neumann and Morgenstern consisted of formulas used to predict outcomes based on the interdependent decisions players made within the context of a game (Brandenburger & Nalebuff, 1995). The game theory formula is used to simulate players' actions to find possible outcomes or payoffs from each action (Adriansyah Samsura & Krabben, 2012). Managers have found utility in using the game theory framework to explain players' actions (Brandenburger & Nalebuff, 1995). Modern day, game theory has also evolved into a model managers use to develop business strategy.

Game theory is practical when exploring situations where decision makers in a context have conflicting preferences for an outcome (Hui & Bao, 2013). Players in a

game made independent simultaneous moves based on the information they possessed about other players in the game (Beltadze, 2013). In the foreclosure crisis, lending institutions used credit reports and asymmetric information to make decisions on the fate of their borrowers' loans. Each action executed in the game is interdependent of other players' actions (Adriansyah Samsura & Krabben, 2012). Borrowers actions or inactions directly affected the decisions lenders made for loan modification. Information sharing within a game assisted players with making informed decisions and calculated moves. In cooperative games players shared information with opponents, however, in uncooperative games, information sharing was minimal (Lozano, Moreno, Adenso-Díaz, & Algaba, 2013). Lenders often made decisions based on their financial best interest (Collins et al., 2015). Some lenders made decisions without consulting borrowers to ensure achieving the most benefit for themselves (Beltadze & Giorgobiani, 2015).

There were limitations to consider when using the game theory model. Real world situations were more complex than what the game theory formula could replicate (Adriansyah Samasura & Krabben, 2012; Manshaei, Zhu, Alpcan, Bacşar, & Hubaux, 2013). Also, game theory is designed to be simulated as a statistical analysis (Brandenburger & Nalebuff, 1995). However, the game theory model could simulate calculated decisions made by humans. In the foreclosure crisis, many borrowers made decisions out of emotion rather than rational thinking (Seiler, 2014). It is important to note that not all elements of the human factor could be predicted using this model.

**Components of the game theory in the foreclosure crisis.** To understand the foreclosure crisis through the lens of the game theory, it was essential to understand the

components of the game in the foreclosure crisis. In the foreclosure crisis, the key components were the players, the rules, and the strategies and tactics used by each player. Each of these components was interdependent of one another.

Players were the involved parties within a game (Brandenburger & Nalebuff, 1995). They were the parties that had the ability to make decisions that influence the game (Adriansyah Samasura & Krabben, 2012). The players in a game were not fixed and were subject to change at any time. Each player in a game shared an interdependent relationship. As a delimitation of this study, I focused on lenders and borrowers. Servicers, investors, and the government were other players within the foreclosure crisis that had a stake in the outcome of foreclosures.

Rules were the structure of the game (Brandenburger & Nalebuff, 1995). The rules define limitations, constraints, and boundaries. Government regulation, laws, and contracts between players established rules in the foreclosure crisis.

Each player in a game had a desired end state. Tactics and strategies were the means in which players achieved their goals (Brandenburger & Nalebuff, 1995). In non-cooperative games, players competed for the most beneficial outcome (Adriansyah Samasura & Krabben, 2012). The conflict in each players' desired end state yielded a win for one player and a loss for the others. This type of game between lenders and borrowers was common in the foreclosure crisis.

In cooperative games, players worked together to reach a solution where the payoff was higher for both parties (Adriansyah Samasura & Krabben, 2012; Lozano et al., 2013). During the foreclosure crisis, cooperative games were unique to the

relationship between community banks and their borrowers. Researchers observed a high level of information sharing in the relationship between community banks and borrowers (Croasdale & Stretcher, 2011). These relationships have led to a higher level of success in modifying loans and averting a complete loss from foreclosure during the crisis (Fogel et al., 2011).

Upon foreclosure loan servicers' financial losses were significantly less than any other player's losses (Zhang, 2013). Additionally, servicers received the first portion of the proceeds from a foreclosure sale (Adelino et al., 2013). The ultimatum game was the most ideal for servicers. This type of encounter often led one or both players rejecting seemingly unfair request from the other (Halali, Bereby-Meyer, & Ockenfels, 2013). Servicers were in a position where accepting default from borrowers was a completely acceptable option. On an organizational level, servicers were in a position where generating revenue was more important than borrowers' respect and views on fairness (Seiler, 2014). Unfortunately, for most borrowers, negotiating with servicers was a zero-sum game for the servicer. Seiler observed that borrowers that chose to play the ultimatum game defaulted out of spite. A borrower's strong feeling of disgust after a poor encounter with their lender or servicer could lead to strategic default (Guiso et al., 2013; Seiler, 2014).

**Rational choice theory.** Rational choice theory and relational contract theory bear similarities. Like contract theory, the study of rational choice theory is centered around the interaction and exchange between parties (McLaughlin et al., 2014). Rational choice theory differs from contract theory in that the decisions made by parties in rational

theory is calculated based on risk, cost, and benefit (Loughran, Paternoster, Chalfin, & Wilson, 2016; McLaughlin et al., 2014). The tenants of rational choice theory require that a researcher rejects the existence of choices in an interaction that are not rational (McLaughlin et al., 2014). Every action is evaluated for implications towards achieving an overall objective. (McLaughlin et al., 2014).

Through the lens of the rational choice theory, lenders and borrowers make decisions based on the cost and benefit of each action (McLaughlin et al., 2014). Rational choice theory could be used to explain why mortgage loan officers may choose to modify some delinquent borrowers on a basis of risk versus reward. To answer my research question, I need to explore how the exchange between lenders and borrowers impacted mortgage loan officers' decisions on how they chose to manage delinquent borrowers. I did not select this theory because it does not contain a framework that accounts for the interaction between lenders and borrowers.

**Stakeholder theory.** Stakeholder theory can be used to understand behavioral trends in a market and interactions that occur between parties (McLaughlin et al., 2014). Through the lens of stakeholder theory, a manager's goal is to act in the best interest of their organization's stakeholders (Harrison & Wicks, 2013). Advocating for stakeholders' interest entails activities that maximize value for the organization and its stakeholders. Managers must understand their stakeholders as well as assign a priority in the distribution of value to each stakeholder group (Harrison & Wicks, 2013; McLaughlin et al., 2014). Mortgage loan officer's stakeholders included their firm, investors, and borrowers (McLaughlin et al., 2014). I could use stakeholder theory to explore the

complexities in the relationship between parties based on the practical uses of the theory described by Harrison and Wicks, particularly between lenders and borrowers.

Stakeholder theory can be used to address the best decision a mortgage loan officer can make towards a delinquent borrower on behalf of stakeholders. A borrower's willingness to strategically default, or moral hazard, is private information held by the borrower (Musumeci, 2016). Moral hazard can lead to foreclosure on a property, even after a mortgage loan officer acts within the best interest of their stakeholders (Musumeci, 2016). Moral hazard must be analyzed to answer my research question. I did not select stakeholder theory because it cannot be used to explore the issue of moral hazard that mortgage loan officers face when making loan modification decisions.

**The way ahead.** Shiller (2014) asserted that innovation in the mortgage industry was stagnant in a primitive phase. In hindsight, scholars offered observations that may be beneficial towards future loss mitigation practices. Loss mitigation practices can come at the immediate expense of the lender (Shiller, 2014). Efficient loan modification in a foreclosure crisis could provide relief to struggling homeowners and stabilize housing markets (Ding, 2013). Understanding and creating effective solutions to foreclosures could improve lenders' profits and relationships with their stakeholders. Some of these suggestions have significant social and economic benefits but still provide no upfront financial incentive for lenders to explore these options (Shiller, 2014).

Scholars also suggested that government intervention should not be the long-term solution to mitigating foreclosures (Brandt, 2013). Private organizations may be more apt to find a sustainable solution to the crisis (Brandt, 2013). On the other hand, Eberly and



Krishnamurthy (2015) argued that the government possess the resources necessary to facilitate mortgage loan modification.

Borrowers' misperception of who was responsible for the foreclosure crisis led to ill sentiment towards their borrowers. Misperception led to a portion of strategic defaults (Seiler, 2014). Lenders can improve consumers' perceptions of their organization if they are open to communication, educating, and loan modification (Wilkinson-Ryan, 2011). Seiler found in a survey conducted using two separate samples of homeowners; both groups believed that principal reduction loan modifications would reduce strategic default even if the modification did not lower the monthly payment of the loan. Using a Core Logic data set from 2010 of 20 thousand subprime securitized loans, Schmeiser and Gross (2014) found concessionary modifications of principle reductions to be the most effective in reducing re-default in borrowers.

Scholars have suggested the use of other innovative loan modification products. Das and Meadows (2013) suggested that by using a shared appreciation mortgage a lender could assume a share of the borrower's debt and a stake in property in exchange for the write down of their principal balance until the entirety of the loan is paid off. Lenders in non-judicial states could be more open to negotiation considering their leverage to foreclose if the modification does not work (Mian et al., 2015).

Other scholars have argued that swift action against delinquent borrowers could shape borrower behavior. Bradley et al. (2015) approached the issue from a behavioral economic perspective suggesting that aggressively pursuing delinquency judgments can shape borrower behavior mitigating strategic default. Wilkinson-Ryan (2011) also agreed

that recourse against borrowers was likely to reduce strategic default. Pursuing judgment against borrowers may work to influence behavior, but the average lending institution lacked the resources to act (Wilkinson-Ryan, 2011).

Self-cure, strategic default and re-default are all significant threats to lenders. Seiler (2014) observed that strategic default was lower in community banks due to the mutual relationship shared and asymmetric information. In contrast to the ultimatum game, a shared relationship between lenders and borrowers could facilitate transparency during the game. Each party could maximize their strategies when negotiating in a bid-offer counter-offer game (Adriansyah Samsura & Krabben, 2012). Mortgage loan officers could make informed decisions when they understand the interdependent relationship they shared with borrowers (Adriansyah Samsura & Krabben, 2012). A bid-offer counter-offer game could yield better results than what lending institutions have achieved during the foreclosure crisis.

### **Transition**

During the foreclosure crisis, a large portion of delinquent homeowners did not receive any form of relief for their distressed loans (Ding, 2013). The lack of relief caused many foreclosures across the United States. Some lenders lost over half of a home's value due to the depreciation associated with distressed properties (Mayer et al., 2014). Governments and communities also experienced the negative effects of foreclosures in areas where there was a high concentration of foreclosures (Reese, 2014). Researchers have found that it is costly and impractical to attempt to cure every single delinquent borrower (Ding, 2013). Mortgage loan officers lack effective strategies to

select delinquent borrowers for loan modification who are at a lower risk of default. I used contract theory as the conceptual framework to explore the interactions between mortgage loan officers and delinquent borrowers during the foreclosure crisis.

Section 2 outlines the procedures of how I conducted this qualitative case study. This section contains a description of my role in this study and what instruments I used. I also described in this section how I maintained the reliability and validity of this study. In section 3, I presented the finding of this study and discuss the way ahead for practical application of my findings and future studies.

## Section 2: The Project

Section 2 consists of a discussion of the measures taken to ensure the validity and quality control of this study. A researcher must take the appropriate procedures to ensure the reliability and credibility of their study (Houghton, Casey, Shaw, & Murphy, 2013). Validity and quality control measures include the role of the researcher, participants and procedures for sampling, the justification for the research method, ethical research, and data collection procedures.

### **Purpose Statement**

The purpose of this qualitative single case study was to explore strategies that mortgage loan officers might use to improve the selection of delinquent borrowers for loan modification. The population was mortgage loan officers from one community bank that have successfully implemented strategies to modify loans for delinquent borrowers during the foreclosure crisis. The geographical location of this study was bound to the Rochester, New York area. The results of this study could help mortgage loan officers prevent loan defaults and future loss of profits for lenders and stakeholders through improved business practices. Reducing the number of foreclosures could also reduce the loss of property value for borrowers, prevent the deterioration in communities and mitigate loss of revenue for state governments.

### **Role of the Researcher**

Researchers must understand their role when conducting research. A researcher must be directly involved in a qualitative study, but remain impartial throughout the process (Yilmaz, 2013). Peredaryenko and Krauss (2013) proposed that researchers must

open about their perceptions to ensure transparency. My responsibilities included ensuring the objective collection of information through interviews with mortgage loan officers and data mining organizational policies and procedures.

I acknowledged my experiences with the research topic before conducting this study to reveal any biases I may have had (Peredaryenko & Krauss, 2013). I had several years of experience investing in the real estate market. I was familiar with mortgage loan products, but I had no working experience in the mortgage industry. I have never experienced or known anyone that has gone through a foreclosure. I had no relationship with the participants in the study. My experiences had a minimal impact on my perception on the relationship between lending institutions and borrowers. To further address any biases I may have had, I documented any preconceived notions I had regarding this study. Before this study, I had no interaction or affiliation with the proposed participants of this study.

I took several measures to ensure the protection of my participants. I did not contact any participants until Walden University's Institutional Review Board (IRB) approved my protocol for ensuring the safety of all research participants (Belnap et al., 2015; Oquendo, Stanley, Ellis, & Mann, 2004). I provided prospective participants with the problem and purpose statements of the study and any potential risk associated with participation in the study. Upon agreement to participate in the study, participants were required to complete informed consent forms. I treated all participants fairly and informed them of their right to quit the study at any time. The intent of the Belmont Report is to protect the autonomy and safety of research participants during research

studies (Adams & Miles, 2013). I ensured that participants understood the risks associated with participation in my study by following the guidelines of the Belmont Report as recommended by Adams and Miles. I maintained a log of daily activities and interactions with participants. Participants will receive a copy of the study along with a small monetary gift as a token of appreciation when this study is published. All information and data collected during this study is stored digitally on a USB drive and will be kept in a safe for 5 years. I will destroy all digital records after 5 years.

The interview was my primary means of collecting information for this study. I used an interview protocol to ensure that my interviews were standardized and provide insight into my research procedures (See Appendix A). It was important that I remained impartial and allowed the free flow of information to collect data representative of my sample as the interview facilitator. I kept track of my biases by recording biases into a log to ensure impartiality. I did not ask suggestive or leading interview questions. Open-ended questions during interviews allowed for candid responses from participants. During the interview, I asked follow-up questions to ensure participants were specific and detailed in their responses.

### **Participants**

I used five tenured mortgage loan officers within a community bank that services bank-held loans. I used purposive sampling to select participants. The criteria for purposive sampling is that participants should possess the characteristics required to answer the research question (Carman, Clark, Wolf, & Moon, 2015). It was a requirement that the participants have mortgage lending experience or experience with loss mitigation

after the start of the financial crisis. Participants successfully modified loans during this period. I isolated and explored a specific set of characteristics by using predetermined criteria to select my participants (El Zein, Solis, Vaughn, & Mcculley, 2014; Santha, Sudheer, Saxena, & Tiwari, 2016). Palinkas et al. (2015) also affirmed that using preselection criteria to select participants will ensure that participants are able to provide data required to fulfill a research study.

I recorded general work experience from each participant. I did not record participants' names. The characteristics about each participant are essential to understanding the lens in which each participant views the case (Radley & Chamberlain, 2012). I took participants' backgrounds into account when I interpreted the findings of this study.

For this study to be successful, I had to gain access to the participants within a lending institution. I selected an institution that had mortgage loan officers that have successfully selected low risk borrowers and modified their loans during the foreclosure crisis in the Rochester, New York area. Selecting an institution that meets this criterion ensured that I achieved the desired number of participants for my study (Elo et al., 2014; Morse et al., 2014). I contacted executive leadership to gain permission to use the organization's data and contact participants. I sent an invitation letter to formally request access to the organization (See Appendix B).

Lewis (2015) observed that building rapport with participants can facilitate access to an organization's resources. I used the organization's leadership as gatekeepers to encourage participation and cooperation during my research as recommended by Renert,

Russell-Mayhew, and Arthur (2013). I sent the invitation letter to participants that agreed to participate and followed-up with a phone call to establish a working relationship (See Appendix C). I introduced the impact the results of this study could have on society and the social implications. Lohle and Terrell (2014) stated that trust between researchers and participants can be established through open communication and assurance of confidentiality.

## **Research Method and Design**

### **Research Method**

The research method selected for a study should be appropriate to the research question of the study (Garcia & Gluesing, 2013). I conducted this study using a qualitative methodology. I used the qualitative method to explore how mortgage loan officers interacted with the environment during a specific period. Through the qualitative method, I gained an in-depth contextual understanding of the phenomenon in the mortgage industry as suggested by Morse, Lowery, and Steury (2014). My findings could be used to draw similarities between similar cases rather than generalize to another population (Radley & Chamberlain, 2012).

Sinkovics and Alfoldi (2012) argued that, in recent years, the use of qualitative research in the business community has been progressive. Marshall et al. (2013) argued that qualitative inquiries are ambiguous and flexible in nature. The key strengths of the qualitative method are the flexibility allowed during research and the unpredictability of the findings (Sinkovics & Alfoldi, 2012). The qualitative method is ideal for researchers seeking an explanation for a phenomenon from the perspective of the individuals



involved in the phenomenon (Garcia & Gluesing, 2013). Researchers seeking to understand and categorize the unique experiences of groups in a real-life context use qualitative methods (Garcia & Gluesing, 2013; Lewis, 2015).

The quantitative method has a variety of strengths and weaknesses. Researchers have a variety of data collection techniques at their disposal. Researchers use tools to draw inferences about the sample population and similar groups (Radley & Chamberlain, 2012). Inferences can be achieved by conducting a statistical analysis to correlate variables (Charlwood et al., 2014). I could not use a statistical analysis to yield the rich detail I needed to answer my research question. Researchers can generalize their findings due to the objectivity and sample size of quantitative designs (Radley & Chamberlain, 2012). Generalized findings are obtained from a sample taken from a generalized population. I specifically needed to use purposive sampling to ensure that I could obtain mortgage loan officers that can answer my research question.

Researchers using quantitative methods must follow the rigid prescription of their chosen design (Garcia & Gluesing, 2013; Venkatesh et al., 2013). Unlike the quantitative method, the qualitative method allows for discovery during the interview process allowing the researcher to obtain information from unexpected opportunities that may have otherwise been overlooked (Garcia & Gluesing, 2013; Marshall et al., 2013). I capitalized on opportunities to obtain data during interviews. The qualitative method is the most rigorous method to study organizations in their context (Garcia & Gluesing, 2013).

## **Research Design**

I used the case study design to conduct this study. Case studies can be used to develop theoretical propositions specific to a historical context (Radley & Chamberlain, 2012). Through case study research, researchers develop a rich description of historical events through the unique perspective of participants. Case study researchers have a wide breadth of tools available to collect rich data on participants in their environments in close proximity (Abro, Khurshid, & Aamir, 2015; Baillie, 2013). Garcia and Gluesing (2013) argued that qualitative designs are ideal for investigating a phenomenon within an organization. In an organizational setting, case studies can contribute to the development of theories that link problems to outcomes (Radley & Chamberlain, 2012). The case study design can be used to isolate how mortgage loan officers interacted with delinquent borrowers during the foreclosure crisis through the lens of the game theory. The phenomenological design is the other research design that is practical to use to explore strategies used by mortgage loan officers. When using the phenomenological design, a researcher focuses on the lived experience of others to develop findings of a phenomenon (Kafle, 2013). Similar to case studies, researchers use interviews, database analysis, and observations as the research tool in phenomenological studies (Kafle, 2013). A major drawback to using the phenomenological study is the number of interviews required to conduct the study. Some scholars have recommended up to 10 interviews for the phenomenological design and three to five interviews for the case study design (Marshall et al., 2013). Based on allotted time and skill, conducting 10 to 50 interviews was not practical. Other designs, such as miniethnography, require that researchers become

participant-observers in their studies by conducting unstructured interviews (Keikelame & Swartz, 2013; Weinstein & Ventres, 2000). The nature of the miniethnographic design does not give researchers full control over the direction of their interviews (Weinstein & Ventres, 2000). Unlike the semistructured format of case study interviews, researchers initiate their interviews by asking an open-ended question and follow with prompts for elaboration on specific comments made by participants (Keikelame & Swartz, 2013; Weinstein & Ventres, 2000).

Achieving data saturation is a challenge to a qualitative researcher. The standard for data saturation is dependent upon each qualitative research design (Fusch & Ness, 2015). To ensure valid and significant results, researchers must conduct qualitative studies using a sufficient sample size (Marshall et al., 2013). The validity of a study is more susceptible to questioning when the study lacks data saturation (Fusch & Ness, 2015; Morse et al., 2014). Data saturation is achieved when the researcher has reached a point where no new information is discovered from additional sources (Morse et al., 2014). Some scholars have agreed that data saturation can be achieved in six interviews (Fusch & Ness, 2015). Marshall et al. and Morse et al. proposed that there are some factors that influence data saturation to include the skill of the researcher, the scope of the study, and the composition of the participants. Researchers recognize that data saturation is achieved when researchers obtain data that is rich in quality that contains a wide variety of perspectives (Fusch & Ness, 2015; Hancock, Amankwaa, Revell, & Mueller, 2016). Using the guidelines above as my standard for data saturation, I conducted five interviews with mortgage loan officers selected using purposive sampling. I conducted

follow-up interviews with the participants when new data emerged to ensure depth in my data collection. I reached data saturation when no new information emerged during interviews.

### **Population and Sampling**

The population of this study consisted of professionals working in the mortgage loan industry in the Rochester, New York area that have successfully modified loans for delinquent borrowers during the foreclosure crisis. The objective of my interviews was to obtain data from individuals within the population that could provide credible input based on their firsthand experience. I selected my sample using purposive sampling and snowball sampling by requesting the names of mortgage loan officers with qualifying experience for this study.

When conducting a research study, it is not practical for a researcher to interview every member in a targeted population (Acharya, Prakash, Saxena, & Nigam, 2013). A researcher must narrow the participants down using sampling strategies while preserving the validity of their study (Marshall et al., 2013). Researchers interested in sampling individuals in a population that has the most experience with a phenomenon tend to use purposive sampling (Elo et al., 2014; Morse et al., 2014). I selected mortgage loan officers within my population that had experience dealing with loan modifications during the period of the foreclosure crisis. I anticipated that these individuals had the most experience with handling delinquent loans. I obtained rich data from these participants by allowing them to candidly share their experiences in an interview format (Morse et al., 2014). I used snowball sampling to ensure I could achieve data saturation. Participants

assist a researcher in snowball sampling by providing other respondents that also meet the criteria of the study's sample population (Acharya et al., 2013; Morse et al., 2014; Yoshida, Gotoh, Tomizawa, & Ikeda, 2013). I used snowball sampling as leverage against my lack of familiarity with professionals in the mortgage loan industry in the Rochester, New York area.

Marshall et al. (2013) observed a relationship between the sample size of a study and data saturation. An adequate sample size is needed to achieve saturation. However, qualitative research scholars in the past loosely defined the sample size requirements (Fusch & Ness, 2015; Marshall et al., 2013). The lack of data saturation can have a detrimental effect on the validity of a study (Elo et al., 2014; Fusch & Ness, 2015; Morse et al., 2014). Marshall et al. recommend several methods to justify the standards for data saturation in a qualitative study. Using the guidelines established by Marshall et al., I set the minimum number of interviews based on the recommendation of other scholars. Fusch and Ness and Marshall et al. cited that the number of interviews appropriate for a qualitative case range from three to six participants. Morse et al. concluded all aspects of a phenomenon must be described to achieve data saturation. Morse et al. recommended the use of a data saturation curve. A researcher must calculate the number of interviews against the number of new responses to each interview question. Data saturation is achieved when the number of new responses reaches an asymptote, meaning no new information or themes emerge in subsequent interviews (Morse et al., 2015). After conducting the minimum number of interviews, I stopped conducting interviews when I met the requirements for data saturation.

### **Ethical Research**

Walden University's IRB requires that the protocols in this study meet the appropriate standards of ethical and professional conduct. After submission of my proposal and IRB application form, I was assigned IRB approval number 06-13-17-0419180 with an expiration date of June 12, 2018. After I received permission from the IRB, I began to contact participants within the population of this study.

The safety and welfare of the participants in this study will not be at risk during the interviews in this study. Adherence to the ethical principles of the Belmont report will ensure participants' safety in this study (Morrow, 2015). I informed participants of their right to refuse participation or withdraw from the study at any time. Participants also reserved the right to refuse to answer any question during this study. Participants wishing to withdraw from the study could do so via email or telephonic notification.

I emailed prospective participants informed consent forms and the invitation letter upon first contact. All participants were required to return the consent form to me via email before participating in this study. Informed consent is used to guarantee participants' anonymity when participating in a study (Morrow, 2015). The contents of this form will include a confidentiality agreement and my ethical obligations as the researcher. I also provided the research question and objectives of the study upon initial contact with participants.

I did not record the identity and organizational affiliations of the participants during this study. The data collected was stored on a password-protected secure digital card and stored in a safety deposit box for 5 years. I will erase all data after 5 years and

physically destroy the secured data card. As a token of appreciation, all participants were sent a copy of the study and a \$25 gift card.

### **Data Collection Instruments**

Data collection instruments are typically selected based on the requirements needed to answer the research question of a study (Carter et al., 2014). I needed an instrument that provided the free flow of ideas in a confidential setting to understand the phenomenon that mortgage loan officers experienced during the foreclosure crisis. I served as the primary data collection instrument and used in-depth semistructured interviews to collect data from participants in this study. Interviews allowed direct exposure to participants that may have had the most knowledge about a phenomenon as described by Elo et al. (2014). Interviews are ideal for building an in-depth understanding of a phenomenon as participants are more likely in interviews to express sensitive and personal experiences (Carter et al., 2014; Doody & Noonan, 2013). A researcher has a greater range of flexibility and spontaneity when interacting with participants by using in-depth interviews (Carter et al., 2014). This flexibility gave me the ability to improvise during interview sessions.

The interviews in this study were semistructured. Before conducting an interview Doody and Noonan (2013) recommended reviewing the interview questions with a potential participant or co-researcher to ensure the succinctness of the research questions. Elo et al. (2014) stated that evaluating the interview questions ensures that the proper questions are asked and phrased in the correct manner. I used a subject matter expert in the mortgage industry to assist in refining the interview questions. I asked participants

nine primary research questions. The sequence of the questions asked during the interview depended the direction of the interview. The intent of each research question in my semistructured interviews was to explore themes in the phenomenon, allowing the participants to explore their interpretation of the topic as recommended by Doody and Noonan. The flexible and semistructured nature of the interview allowed for exploring additional topics that may arise during the interview. I held all interviews at a time and location convenient for the participants. Participants had an opportunity to make additions to their statements any time after the interview. Hermanowicz (2013) referred to emergence as new data and concepts that are evolving over time as the researcher interprets data. Appendix A contains the interview protocol for this study which describes the procedures and questions used in each interview.

Data triangulation is used by researchers in qualitative studies to test the validity of their data by using multiple sources (Been, Benaglia, Lucia, Gervasoni, Esseiva, & Delémont, 2015; Carter et al., 2014). Fusch and Ness (2015) associated data triangulation to exploring the same phenomenon from different levels and perspectives. In addition to using interviews, I analyzed loan modification policies and procedures from the organization's records to ensure the validity of this study. Interviews alone may not have ensured the depth of a study as described by Fusch and Ness and Owen (2014). Owen emphasized the importance of using documents closest to the period of the phenomenon to ensure the validity of the findings. To ensure the accuracy of my interpretation of participants' responses, I used member checking. Member checking is an essential step in establishing credibility in a research study (Harvey, 2015; Lewis, 2015; Perkins,



Columna, Lieberman, & Bailey, 2013). I ensured the authenticity of the transcribed interviews during member checking (Perkins et al., 2013).

### **Data Collection Technique**

I collected data using interviews and searching records related to the policies and procedures during the crisis from the participants' financial institution. Interviews are instruments used by researchers to gather data directly from participants that have experience with a phenomenon (Doody & Noonan, 2013). Database and document analysis add to the richness of the data collected in a study. Collecting data from multiple sources and multiple perspectives allow a researcher to interpret the most accurate description of the phenomenon in its entirety (Houghton et al., 2013). Documents can give a researcher foresight before conducting interviews as well as corroborate or challenge data collected in interviews (Owens, 2014).

I conducted five semistructured interviews. The first participants were selected using purposive sampling based on their experience with the phenomenon in this study (Elo et al., 2014). I conducted follow-up interviews with participants to address new data that I discovered during interviews. I used participants to identify colleagues who also met the participation criteria through snowball sampling (Carman et al., 2015; Morse et al., 2014). I coordinated a time and a place to conduct the interview after prospective participants returned their consent forms via email. I provided the purpose of the interview, the interview questions before the interview, and the promise to keep personally identifiable information confidential to establish trust with participants. Each session began with a restatement of the purpose of the interview and informed consent

agreement. I requested permission to record each 30 to 60-minute interview session to later transcribing the interview. I focused on themes surrounding the interview questions during the semistructured interviews. The participants had the opportunity to guide the interview around these themes. I requested permission to access any pertinent documents. Researchers should obtain documents that could reveal the historical information about the participants in the phenomenon (Owen, 2014). After each interview, I scheduled a follow-on meeting to conduct member checking to ensure the accuracy of the interview transcriptions (Houghton et al., 2013).

There were several strengths and weaknesses associated with interviews as a data collection method. I conducted interviews to allow for flexibility during data collection. Interviews are ideal when a researcher is not an expert on the topic being researched (Doody & Noonan, 2013). The flexibility of an interview allows participants to provide insightful input that may have been overlooked (Garcia & Gluesing, 2013; Marshall et al., 2013). Interviews can be perceived as intrusive, which can affect the amount of data a participant is willing to share. (Doody & Noonan, 2013). The data is also limited to the stratification of the research participants (Carman et al., 2015). A researcher can probe specific responses to solicit more data. For this study, the time interval between the phenomenon and the interview was a potential issue. Owen (2014) suggested using documents from the period of the phenomenon to cross check interviews when there is a potential for faulty memory in participants.

The credibility of a qualitative researcher's findings is based on their ability to collect accurately and interpret data. Gioia, Corley, and Hamilton (2012) argued that

qualitative researchers can be innovative in their work while still maintaining the plausibility and defensibility in their work. I achieved plausibility and defensibility by establishing rigor in my study. Houghton et al. (2013) stated that the elements of rigor in qualitative research is the credibility of a study, dependability, confirmability, and transferability. I conducted a field test with a subject matter expert within the mortgage loan industry to establish the credibility of my research instrument after receiving IRB approval. The subject matter expert was pre-identified and was not included in the sample. I used the field test as an opportunity to further refine my interview questions to yield the most accurate data during the actual interviews as recommended by Elo et al. (2014). I ensured the accuracy of my interview transcription through member checking as recommended by Harvey (2015). Peer debriefing is a method to establish credibility in a researcher's interpretation of their data (Houghton et al., 2013). In the peer debriefing process, a researcher requests a peer or a subject matter expert to evaluate the logical steps a researcher used to conclude their findings (Houghton et al., 2013). I used field tests, member checking, and peer debriefing to establish the credibility of my data collection and interpretation.

### **Data Organization Technique**

Organizing data in case study research serves several purposes. As data is collected, it needs to be stored and organized for later analysis. Studies lack trust when data is not properly organized (Elo, 2014). Researchers should document and organize their research to establish dependability and confirmability in their work (Houghton et al., 2013; Yin, 2013).

I used field logs and an audit trail to track my day to day activities and data analysis process. The field log consisted of a notebook with all events, interviews, and correspondence with participants logged by time and day. Audit trails are used to improve the quality of a study by improving dependability and conformability (Baillie, 2015; Houghton et al., 2013;). NVivo can help facilitate building trustworthiness in a study when it is used to build an audit trail (Sinkovics & Alfoldi, 2012). I maintained an audit trail using NVivo to keep track of my reasoning during the data analysis process.

I used computer assisted qualitative data analysis software (CAQDAS) called NVivo as my primary means of data organization in this study. NVivo is ideal for storing data such as interview transcripts and collected documents (Owen, 2014; Sinkovics & Alfoldi, 2012). The trustworthiness of a study is improved when a researcher accurately categorizes data (Elo et al., 2014). NVivo assists researchers with identifying emergent themes in data. Coreley (2012) recommended the use of models to organize ideas and themes for later analysis. I created themed categories for my data analysis process with NVivo as recommended by Garcia and Gluesing (2013). I abided by my agreement from the informed consent form to not use any names of participants or organizations in my study to protect the anonymity and privacy of all my participants as suggested by researchers (Castillo-Montoya, 2016; Doody & Noonan, 2013; Morrow, 2015). All documents and interviewees were assigned numbers. I also presented my research findings to the participating organization's leadership team to prevent publication of practices and characteristics that can be used to identify the organization. I redacted

information that can be linked specifically to the organization and disclose that information was omitted in my findings.

I turned all hard copies of documents into pdf files at the conclusion of my research. I consolidated all electronic files on a password protected storage drive and hard copies of documents from my study in a safe. After 5 years the electronic files and hard copies will be destroyed.

### **Data Analysis**

The process of data analysis in case study research requires a researcher to systematically interpret data to extract common themes and ideas (Morse et al., 2014). Researchers use triangulation to ensure that the data analysis process leads to a contextualized interpretation of a phenomenon (Almutairi, Gardner, & McCarthy, 2014). Researchers use methodological triangulation by validating their findings by collecting data from different sources (Ngulube & Ngulube, 2015). Triangulation lends a researcher to collecting data that represents a phenomenon in its entirety (Tonkin-Crine et al., 2016).

Elo et al. (2014) outlined a three-stage process in data analysis: the preparation phase, the organization phase, and the reporting phase. I began the analysis of data during the preparation phase. This phase begins shortly after the start of data collection (Elo et al., 2014). I used a form of pattern-matching called explanation building to analyze the data. Explanation-building is an iterative process where the researcher conducts data analysis during data collection (Carolan, Forbat, & Smith, 2015; Cronin, 2014). Researchers can capitalize on emergent themes by conducting data analysis during the process of data collection (Cronin, 2014; Hermanowicz, 2013). Using the explanation-

building method, I adjusted data collection strategies to take advantage of the emergence of opportunities or new ideas. Cronin emphasized that explanation-building despite its flexibility was still a systematic process. Researchers must maintain transparency by keeping a log of their activities to preserve rigor in a study.

I used NVivo software as a supplemental tool to assist with data organization and coding. NVivo is a centralized data hub that provides rapid access to collected data through search tools and filtering (Owen, 2014). I used NVivo to store interview transcripts and other data collected from participants. Technological platforms aid researchers by assisting with the identification of patterns in data and the development of concepts (Garcia & Gluesing, 2013). The organization phase consisted of several rounds of coding data as described by Pemsel and Wiewiora (2013). Ensuring data saturation during the collection process was essential to ensure that I had enough data to extract themes according to Elo et al. (2014) and Waibel et al. (2015). During this process, I collated data by organizing data into specific themes and ideas based on the responses to the interview questions and other data collected (Cronin, 2014). I organized themes and ideas per the frequency in which it occurs in the data.

During the process of reporting, researchers develop findings based on the key themes and ideas that emerged from the data (Elo et al., 2014). I developed my findings based on the frequency of specific patterns and themes recurring in my research using explanation-building. I used triangulation to improve the quality and validity of my data analysis process as recommended by researchers (Almutairi et al., 2014; Carter et al., 2014; Tonkin-Crine et al., 2016). I compared my findings against old and current

literature as suggested by Pemsel and Wiewiora (2013). Houghton (2013) argued that research findings should be transferable, conformable, and credible. I maintained an audit trail for several purposes. An audit trail is a record of the analysis process used and the rationale a researcher used to develop their findings (Houghton, 2013). I used peer debriefing to ensure my analysis of the data followed a logical sequence that peers and experts in the mortgage industry could understand as recommended by researchers (Doody & Noonan, 2013; Houghton, 2013; Perkins et al., 2013). The process of evaluating my results through multiple methods is vital for establishing rigor and trustworthiness in a study (Elo et al., 2014).

### **Reliability and Validity**

#### **Reliability**

Reliability in qualitative research refers to the ability for other researchers to replicate the study (Trotter, 2012). I used several methods to ensure the reliability of this study. Reliability in a qualitative study can be achieved through collecting data from multiple reliable sources (Gale, Heath, Cameron, Rashid, & Redwood, 2013; Trotter, 2012). I used interviews and analyzed the organization's policies to achieve data triangulation. Data saturation and replicated responses from participants is a source of reliability in a qualitative study (Trotter, 2012). I reached data saturation when no new themes or ideas emerged from subsequent interviews as described by Carman et al. (2015). Audit trails are composed of comprehensive notes taken by a researcher that provide a background of the processes and steps used by the researcher (Baellie, 2014, Houghton et al., 2013). I maintained an audit trail to record the decisions that I made

while conducting my research. I used an interview protocol as standard guide for each interview to strengthen the quality of data I collected as suggested by Castillo-Montoya (2016). I also used NVivo to organize data by themes and concepts. Organizing data and maintaining a trail of logic can provide other researchers with insight into the methods I used to develop my findings.

### **Validity**

Some scholars have deemed case study research as a linear process and often considered inferior to quantitative research designs (Sinkovics & Alfoldi, 2012). Readers challenge the validity of case study results as case findings are specific to the participants of a study (Radley & Chamberlain, 2012). Morse et al. (2014) and Radley and Chamberlain argued that case studies provide contextual meaning to a phenomenon when compared to similar case studies. Researcher's use transferability, credibility, dependability, and confirmability to establish validity in their case studies (Houghton et al., 2013).

**Transferability.** Palinkas et al. (2015) described purposive sampling as a technique to build transferability in a study. I selected participants using purposive sampling to recruit participants that could provide a rich description of the phenomenon as well as a wide variety of perspectives as recommended by researchers (Elo et al., 2014; Palinkas et al., 2015; Radley & Chamberlain, 2012). To build transferability, the sample group specifically consisted of mortgage loan officers with underwriting and loan modification experience during the foreclosure crisis. Purposive sampling is, however, a threat to the trustworthiness of a study (Elo et al., 2014). Expert sampling improved the



validity of my study (Austin, Henderson, Power, Jirwe & Alander, 2013). Transferability is also contingent upon credibility, dependability, and confirmability (Houghton et al., 2013).

**Credibility.** Researchers can ensure credibility in their studies through member checking, peer debriefing, and a review of the interview questions with a subject matter expert (Doody & Noonan, 2013; Perkins et al., 2013). I used a subject matter expert in the mortgage industry to ensure that I had developed the appropriate interview questions for my study as recommended by Elo et al. (2014). Member checking is an essential step in establishing credibility in a research study (Harvey, 2015; Lewis, 2015; Perkins et al., 2013). I used member checking to accurately transcribe and interpret the interview sessions. I established credibility in my findings through peer debriefing. I had a subject matter expert in the mortgage industry to evaluate the logic steps used to develop the findings during peer debriefing as suggested by Houghton et al. (2013).

**Dependability and confirmability.** Dependable and confirmable studies are organized and well documented (Houghton et al., 2013; Yin, 2013). I used NVivo as a platform to build an audit trail and keep track of the data analysis process to establish confirmability and dependability as recommended by Sinkovics & Alfoldi (2012). The field log consisted of a notebook with all events, interviews, and correspondence with participants logged by time and day.

**Data saturation.** Fusch and Ness (2015) and Hancock et al. (2016) asserted that obtaining a wide breadth of experience from participants yields rich quality data. I conducted exhaustive interviews to reach data saturation and as a step in data

triangulation as recommend by researchers (Carter et al., 2014; Fusch & Ness, 2015; Morse et al., 2014). Data saturation can be achieved within as few as six interviews and when no new information is obtained from additional interviewees (Fusch & Ness, 2015; Hancock et al., 2016; Morse et al., 2014).

### **Transition and Summary**

I conducted a qualitative case study to explore what strategies might mortgage loan officers use to improve the selection of delinquent borrowers for loan modification. As the researcher, I served as the primary data collection instrument, upheld ethical standards during this study, and protected the safety of all participants. The participants were purposively and snowball sampled from a population of mortgage loan officers in the Rochester, New York area that had lending experience with delinquent borrowers during the foreclosure crisis starting in 2007. I ensured the validity and reliability of this study through the data collection and analysis process.

In section 3, I reported the findings of my research. I discussed emergent themes and ideas about current scholarly literature. I also discussed how my findings apply to current business practices and implications for social change. I concluded section three with recommendations for action and recommendations for further research.

This is the end of the proposal.

### Section 3: Application to Professional Practice and Implications for Change

#### **Introduction**

The purpose of this qualitative single case study was to explore effective strategies mortgage loan officers use to improve the selection of delinquent borrowers for loan modification. I interviewed five mortgage loan officers from one community bank in the Rochester, New York area that had successfully implemented strategies to modify loans for delinquent borrowers. The findings showed effective strategies mortgage loan officers used to reduce the probability of a borrower defaulting after loan modification.

#### **Presentation of the Findings**

The research question in the study was: What strategies do mortgage loan officers use to improve the selection of delinquent borrowers for loan modification? I interviewed five participants with varying levels of experience that had served as mortgage loan officers from 2007-2013 (See Table 2) using semistructured interviews with 10 primary interview questions. I also reviewed company policy related to loan modification, values, and mission statements from of 2007-2016 to support methodological triangulation. Five main themes emerged during data analysis.

Table 2

*Case Study Participants Demographics*

Participant	Level of Management	Total Years Experience
Participant 1 (P1)	Lower	10
Participant 2 (P2)	Lower	9
Participant 3 (P3)	Lower	16
Participant 4 (P4)	Middle	21
Participant 5 (P5)	Upper	28

**Theme 1: Asymmetric Information was Critical to the Loan Modification Process**

Asymmetric information was essential to the mortgage loan officers' ability to modify a loan for a delinquent borrower. Asymmetric information occurred when lenders had the advantage of having more private information about borrowers (Adelino et al., 2013). In contract theory, the party that possessed asymmetric information had the advantage when developing contracts (Hasan & Bhargava, 2013; Koszegi, 2014). All participants indicated that mortgage loan officers used asymmetric information as a predictor to determine if a borrower had the capability and desire to repay a modified loan. Lending institutions found loan applicant screening to be an effective method to reveal behavioral tendencies in borrowers (Koszegi, 2014). The prescreening process revealed private details about a borrower that mortgage loan officers needed to approve loan modification. Mortgage loan officers made complete contracts after modification approval when they obtained asymmetric information. The mortgage loan officers used a variety of methods to collect as much information as they could on each applicant.

All participants stated that they conducted a thorough screening process when evaluating a borrower for loan modification. The loan officers used credit reports, bank statements, references, and audit reports to authenticate a borrower's financial standing and assess an applicant's ability to repay a modified loan. P1 stated "We have to make sure borrowers are who they say they are and ensure that they do not have any hidden debt". P2 and P3 expressed that their processes are highly effective in developing a total understanding of a borrower's financial well-being and spending habits.

Musumeci (2016) found that managers used borrowers' risk profiles to develop suitable loan products and predict a borrower's ability to pay a loan. The mortgage loan officers used the asymmetric information to build a risk profile to qualify or disqualify loan modification applicants. The mortgage loan officer's success utilizing asymmetric information to modify loans supports the ideas presented by Seiler (2014) in the literature review. Mamonov and Benbaunan-Fich (2017) found that inconsistent positive credit history or excess borrowing were key factors in predicting future delinquency. According to P3, "Bank statements can reveal a lot about a borrower. If I see someone that is delinquent because of poor spending habits, I am likely to decline their application". All participants indicated that mortgage loan officers were likely to deny applicants loan modification if they exhibited a recent pattern of mismanagement of money.

Collecting asymmetric information can consume time and resources. Roberts (2015) presumed that obtaining borrower information came at the expense of time or money. All the participants' experiences contradicted the literature I found that supported that collecting asymmetric information was a high cost activity. All the participants expressed that the time and resources required to obtain asymmetric information at the community bank was negligible. All participants indicated that there were only three primary decision makers in the loan modification approval process. P4 and P5 were the final approvers in the loan modification process. P1, P2, and P3 was responsible for initiating the discovery process for borrowers' asymmetric information.

El Khouly and Fadl (2016) found that a collaborative decision-making culture increased productivity. The average time spent on each applicant was around six hours.

“It normally takes me a few hours to gather all of the information I need to make a decision on an application. I send up my findings and my boss usually spends a couple hours on it” (P1). The small physical size of the institution allowed easy access to experienced upper level management who were often able to contribute to making difficult modification decisions. All participants indicated that the modification process was efficient and not taxing on resources.

Relationships are an essential element to building contracts under contract theory (McLaughlin et al., 2014). Effective communication between negotiating parties tends to yield better results during contract negotiations (Brandts et al., 2015; Turvey et al., 2013). All participants indicated that effective communication with borrowers was essential to collecting as much asymmetric information as possible. Some asymmetric information was collected during a customer’s tenure at a community bank (Ame & Prager, 2016). “We see a lot of our customers that use our standard services frequently. Many of them have been members here for decades” (P5). Customers long tenure and close relationship with the bank contributed to the ease of collection of asymmetric information.

By serving the surrounding community, the participants capitalized on gathering asymmetric information through face-to-face interviews with their customers. “Most of the time we have face-to-face interviews with our customers. We can interview over the phone if they are embarrassed or uncomfortable coming in” (P2). “It makes it (the interview process) easier to collect information when we can meet face-to-face with applicants” (P3). The presence in the community is an advantage that community banks have over larger financial institutions. The statements by P2, P3, & P5 support the

literature by Fogel et al. (2011), who argued that community banks could achieve a higher level of success modifying loans because they interacted directly with their consumer base.

### **Theme 2: Mutually Beneficial Contracts added Value to the Organization**

The participants indicated several reasons a mortgage loan officer in their organization would approve a mortgage loan modification (See Table 3). Mortgage loan officers favored mutually beneficial contracts over one sided contracts. P1, P2, and P3 had experiences modifying loans for delinquent borrowers that faced catastrophic life events which caused their delinquency during the foreclosure crisis. Loan officers had the flexibility to make creative loan products for borrowers. Loan officers were willing to assume some risk under certain circumstances. Contractual concessions were acceptable for borrowers facing difficulties with life events that caused delinquency if mortgage loan modification could assist them with sustaining their payments. All the participants' made statements that supported the literature by McLaughlin et al. (2014) who found that strong relationships between parties encouraged concessions by either party.

Table 3

#### *Loan Modification Concessions*

Reasons for Delinquency	Willing to Consider Approval for Modification
Mismanagement of money	None
Health Crisis/ Disability	P1, P2, P3, P4, P5
Loss of Job	P1, P2, P3, P4, P5
Strategic Default	None

P1, P2, P4, and P5 expressed that ideal mortgage loan modification contracts yielded profits for their organization. P1, P4, and P5 stated that positive return on each mortgage loan was not the only consideration when deciding to modify loans. “We are concerned with managing public perception and preserving a positive long-term relationship with their customers” (P5). McLaughlin et al. (2014) found that parties with a high mutual high level of commitment were more prone to making contractual concessions in contract theory.

P5 expressed that the mortgage loan officers can assume some risk and approve applications that an automated underwriting system would typically decline. P1, P2, and P3 also reported they had the trust of their leadership to make creative modification contracts that were logical for both the organization and the borrower. Taking ownership of a borrower’s delinquent assets devalued the lenders portfolio and required upkeep cost that the mortgage loan officers did not want to assume. “There is significant liability when we put an asset up for foreclosure. There are fees and maintenance cost until we sell the home. During colder months, we even have to pay to winterize the home” (P1). P1’s statement supported the literature from Adelino et al. (2013) who observed that there were upkeep costs associated with foreclosed properties. Due to the smaller size of the bank’s portfolio in comparison to larger banks, it was not ideal to take over a delinquent borrower’s property.

P1, P2, and P3 encountered borrowers that defaulted for a variety of reasons. P1 cited an experience where they denied a couple a second loan modification. The asymmetric information on the borrower revealed that they were suffering from



overextension of credit and not a catastrophic event or negative equity. “When I looked at their bank statements the problem was clear. The wife had a shopping problem. They didn’t need modification, they needed credit counseling” (P1). Das and Meadows (2013) found that asymmetric information was effective in identifying moral hazard in borrowers. Moral hazard is the conscious act of borrowers pursuing their own best interest which often resulted in strategic default (Musumeci, 2016). In contract theory, borrowers will often make the decision that is most beneficial for themselves (Koszegi, 2014). P1 evaluated the borrowers profile using asymmetric information and found that modification for delinquent borrowers that have financial management issues would not have been mutually beneficial for both parties. P1 stated that credit counseling in situations where borrowers have money mismanagement issues are more effective long term than modification. The borrowers self-cured by becoming current on their loan payments within several months after the denial and present day are current on their mortgage loan.

The mortgage loan officers expressed that borrowers were more likely to default due to catastrophic events like loss of employment, medical expenses, or anything that compromised a borrower’s primary source of income. P1, P3, P4, and P5 claimed that they rarely experienced defaults because of negative equity. In a study conducted by both Musumeci (2016) and Mamonov and Benbunan-Fich (2017), researchers found that loss of income was a primary factor leading to default. “If we were to lose a major employer in this area we would experience a lot more defaults” (P5). Other researchers observed life events, emotions, and additional market-related factors such as unemployment as

primary reasons for loan default (Collins et al., 2015; Seiler, 2014). Mamonov and Benbunan-Fich (2017) argued that negative equity did not necessarily trigger default until it reached over 40% of the home's value, which is consistent with what the participants revealed during my study.

Lenders can create favorable contract terms when they possess asymmetric information (Hoppe & Schmitz, 2015; Roberts, 2015). P1, P4, and P5 explained that their favorable contract terms are often to the benefit of both parties. P3 cited a specific example of modifying a delinquent borrower into a mutually beneficial loan product. The loan modification applicant was repaying three separate loan products to the bank that were backed by the borrower's property as collateral. P3 used asymmetric information to assess the borrower's situation and predicted that the borrower could sustain a reasonable monthly payment. "When we looked at his information we found that he was making enough to pay a normal mortgage with his disability alone. I combined all of his loans into one which made a lot more sense" (P3). P3's experience supported the literature; mutual communication between parties tends to yield suitable contracts (Brandts et al., 2015; Turvey et al., 2013). "He (the borrower) was transparent and provided me with all of the information I needed to make the best decision" (P3). The flexibility afforded to the officer by their organization allowed them to create a mutually beneficial product. P3 combined the three loan products into one and reduced the borrower's payment by two thirds. The participant reported that the borrower continued to make consistent payments on their new loan product.

### **Theme 3: Bank's Culture, Values, and Mission Support Loan Officer Behavior**

A unique characteristic about the participants in this study is that the members of the bank were vested members in the community they served. "We all live and work in this community" (P1). The bank's culture, values, mission, and some policies supported serving the surrounding community. El Khouly and Fadel (2016) found that an employees' actions reflect an organization's culture. The participants in this study all behaved in a manner supportive of the organization's culture and policies. P5 stated that the organization must be reflexive and receptive to members' requests. The participants' bond with the community supports the literature by Fogel et al. (2011) who observed the strategic significance of the bond between community banks and their communities. Relationships between parties influences the level of commitment between parties in contract theory (McLaughlin et al., 2014). The organization's mantra led many of the mortgage loan officers to make products in the best interest of the bank, but also their consumers.

The participating bank's philosophy was to act in the best interest of their customers when reviewing the bank's policy on best practices. "We want to do whatever we can to help our customers" (P5). P1, P2, P3, and P4 expressed a strong desire to help their customers, even in situations where they could not modify their loans. In contract theory, parties are often willing to make concessions when they have a positive relationship (McLaughlin et al., 2014). The claims by P1, P2, P3, and P4 supports literature about the success scholars observed in community bank mortgage loan officers

and their ability to use their bond with customers to mitigate some foreclosure (Croasdale & Stretcher, 2011; Seiler, 2014).

Adding to the literature, concessionary modifications were not the only way the participating organization were able to aid customers and reduce foreclosure. P2 cited a specific example where they denied a delinquent borrower modification due to debt management and overspending. “The applicant was way overextended on credit; a modification would only supplement his spending habits” (P2). Instead, P2 invested in the borrower’s financial management education by enrolling the borrower into financial management classes with a partner organization. P2 stated that the borrower eventually self-cured after a series of classes. “He eventually recovered after a few months of late payments. It was a tough decision (to decline the modification) but I’m glad I made it” (P2). P3 expressed that additional resources also help encourage borrowers not to give up on their mortgages. “Often times it’s about mental resiliency and how we get the borrowers not to give up on paying their loans” (P3). The organization emphasizes that mortgage loan officers should provide risky borrowers with additional resources to improve their financial management habits. Borrowers continue to remain in mortgages if they presume the contract to be in their best interest (Koszegi, 2014). “We want to provide our members with all of the tools necessary to succeed” (P5). Gerecke (2016) and Vera (2016) in separate studies found that credit counseling was effective in reducing delinquency by at least a third.

P4 and P5 challenged and empowered the other mortgage loan officers to be flexible and receptive to member request. This mantra reflected the organizations mission

statement. Lending institutions can create a competitive advantage in the marketplace through the creation of innovative financial products (Thaker, Khalig, & Thaker, 2016). The quality in bank management can drive employee performance (Amel & Prager, 2016). P1, P2, and P3 stated that they felt empowered and entrusted by upper management to create flexible and creative loan products. P5 stated that some of the loan products created often go against popular trends in the mortgage market. “A lot of the products we create are against the norm but it’s what makes the most sense” (P4). Wilkinson-Ryan (2011) stated that lenders can positively shape consumer perception through education and willingness to modify loans. All participants believed that what made the most sense for the bank and the borrower influenced final decisions on loan applications. Personal values are important in contract theory as renegotiations exposes parties to dishonesty and moral hazard (Hasan & Bhargava, 2013; Roberts, 2015; Steverson et al., 2013). El Khouly and Fadl (2016) found that employees’ actions reflected their organization’s values. I observed a common set of shared beliefs and practices in all the participants’ responses.

Fogel et al. (2011) observed that the proximity of community banks to their customers improved the efficiency of negotiating loan contracts. The participants in this study is unique in that they all are members of the community they serve. P3 stated that it is the community that keeps the bank profitable. “Our customers are the reason why we are profitable. It is in our best interest to serve our community” (P3). All participants felt compelled to serve their community by acting in their bank members best interest. P1 found that the stronger ties with their members made it easier to collect asymmetric

information from their borrowers. Although delinquent borrowers were denied modification, P1 and P3 expressed that it was emotionally difficult to make that decision. “It’s tough to deny a modification to someone, but sometimes it’s in their long-term best interest” (P3). Christensen et al. (2016) found that contract negotiations exposed parties to opportunistic behavior from the other party. The participants’ experiences contrasted to the literature in that they did not engage in opportunistic or predatory behavior that some lending institutions practiced. “Our close ties to the community has earned us a significant level of trust with our customers” (P4). The close relationship between mortgage loan officers and their borrowers and their obligation to the community mitigated opportunistic behavior from lenders when negotiating contracts.

#### **Theme 4: Reputation the Bank has with the Community Reflects in Market Share**

Community banks operate within smaller markets than traditional lending institutions. Vera (2016) recognized that repeat customers were essential to the profitability of community banks. Member loyalty and bank performance reflects the quality of service that customers receive (Thaker, Khalig, & Thaker, 2016). All the participants shared their perspective on how customer commitment relates to the bank’s reputation.

P5 and P4 stated that the organization does not make a large yield in profit from loan modifications. However, the reputation the organization has in the community brings repeat customers. P3 stated that word of mouth in the community carried a lot of weight with customers. Inversely, a reputation of predatory practices has a negative effect on a lending institution’s reputation and profit margin (Vera, 2016). “Even if we are not

at fault, customers will hate you for a foreclosure” (P1). Seiler (2014) observed that in contract theory, borrowers are more likely to engage in strategic default when they have negative sentiment towards their lender. Customers tend to associate their bad experience with foreclosure to the brand name of the lending institution.

P1 and P2 stated that member loyalty contributed to the success of the bank. “We have an unheard-of market share in this region” (P1). The participants helped their organization achieve significant market share against their competitors in their market through building a strong brand image with their customer base. P3 gave an example of how a customer referred their relatives to the bank after they received mortgage loan modification. “I helped a gentleman through his delinquency and a few weeks later he brought his uncle in to get help” (P3). P4 and P5 claimed that they believe customer referrals were a major factor in the organization achieving a high level of market share.

#### **Theme 5: Underwriting Quality of Original Loan is a Factor in Borrower Success**

P5 expressed that impact that high quality loan origination had on borrower success. The mortgage loan officers followed strict regulations and used asymmetric information when originating loans during and after the foreclosure crisis. The mortgage loan officers implemented several strategies to influence borrower behavior to prevent default and reduce the bank’s exposure to loss.

P5 stated that quality origination on the front end reduces the organizations exposure to loss. “It’s critical that we abide by all of the rules to keep from getting slammed with a lawsuit” (P1). P1, P2, and P3 stated that their due diligence when originating loans could reduce the probability of default. “Tighter contracts on the front

end really prevents delinquencies later down the road” (P3). Their efforts included making complete contracts using asymmetric information. P3’s statement supports the literature in that bank held loans were originated using strict standards (Ding, 2013). Lender could not develop suitable contracts with a shortage of information, however when lenders obtained asymmetric information they could make optimal contracts (Hasan & Bhargava, 2013; Koszegi, 2014).

P1, P2, and P3 found that many of their loan modification denials were due to poor spending habits and overextension of credit in their delinquent borrowers. P1, P2, and P3 providing credit counseling to borrowers during the underwriting process. “We want to curb as many bad habits in borrowers as we can before they get themselves into hot water” (P2). Gerecke (2016) found that borrower behavior could be shaped to prevent the miscalculation of finances and overextending their credit after assuming responsibility of a mortgage loan.

Collecting collateral was a method P1, P2, and P3 used to try to mitigate their exposure to loss during loan origination. Agarwal, Chomsisengphet, and Lui (2015) found that collateral requirements could prevent moral hazard in borrowers. “Down payments are a way for borrowers to put some skin in the game. If they foreclose they end up losing out too” (P2). In contrast, P4 and P5 stated that collateral was moderately successful in encouraging borrowers not to default. “Down payments reduce our financial liability on a property” (P5). They found that collateral was more effective in reducing the amount of financial exposure in the event of a foreclosure.



P3, P4, and P5 stated that their underwriting process has followed strict guidelines since 2010. Vera (2016) presumed that additional regulations to the underwriting process could potentially burden community banks. P3 and P5 in contrast to the literature, claimed that laws protected consumers but it also had a positive effect on the stability of mortgage loans. “The underwriting standards only have helped us create better loans. Our organization has an efficient underwriting standard even without the regulations” (P3). In 2014, policy makers implemented additions to the Dodd Frank Act to combat low-documentation practices. The Ability to Repay and Qualified Mortgages rule required lenders to ensure that borrowers had the ability to repay their mortgage loans. “We never engaged in low documentation underwriting. Our documentation requirements have always been strict, it’s the norm for us” (P5). P1, P3, and P5 stated that additional regulations were not a burden to their loan origination process.

### **Applications to Professional Practice**

Four of the five major themes I observed in this study are relevant to leaders of lending institutions to improve business practices. The participants exhibited a high level of success selecting delinquent borrowers for loan modification through various methods of collecting asymmetric information. The participants created value for their organization and stronger bonds with their borrowers through mutually beneficial contracts. I found that the participant’s organizational culture encouraged and empowered mortgage loan officers to create mutually beneficial contracts. The participants revealed that high quality loan origination reduced the probability of foreclosure.

The use of asymmetric information can be essential in the assessment of a delinquent borrower's suitability for loan modification. Asymmetric information is a requirement to create a complete contract (Hoppe & Schmitz, 2015; Roberts, 2015). Private information about a borrower reveals their history and their habits. Leaders should use asymmetric information to predict a borrower's financial ability and their willingness to repay a loan. The participants of this study expressed that the collection of asymmetric information does not have to be a time consuming and costly process. Lending institutions should consider developing a borrower evaluation process as a starting framework for information collection. The participants of this study effectively collaborated with upper level management as a means of checks and balances in their decision-making process. Lending institutions should leverage the relationships with long term customers to build rapport and collect more asymmetric information.

Mortgage loan officers should strive to create mutually beneficial contracts with delinquent borrowers. A lending institutions willingness to cooperate with consumers improves their perception and perceived credibility in the organization (Wilkinson-Ryan, 2011). Contracts that benefit both parties encourage borrowers to fulfill their contractual obligations (Hoppe & Schmitz, 2015). The participants in this study could achieve mutually beneficial contracts through the creation of innovative loan modifications. Leadership in financial institutions should encourage their mortgage loan officers to seek out opportunities to create mutually beneficial contracts. Mortgage loan officers should be empowered to approve modification at their discretion that an automated process may decline.

The leadership in organizations should create a culture that reinforces the creation of innovative and mutually beneficial loan modifications. Mortgage loan officers that embrace a culture of innovation can be source of competitive advantage in the mortgage loan industry (Thaker, Khalig, & Thaker, 2016). Culture can also positively influence customers' perception of an organization. Mortgage loan officers that embrace the innovative culture are more likely to create value through their practices. The participating organization created this culture through their mission statement and organizational values. The participants in this study did not yield to their customers' every demand. Instead, organizational leadership should encourage their mortgage loan officers to act in the best interest of their customers and the organization. Upper level management must exude this behavior to encourage subordinates to adopt the culture (El Khouly & Fadl, 2016).

High quality loan origination can reduce the occurrence of delinquency due to the lack of borrower ability to pay. High quality loan origination can also prevent an organization's exposure to lawsuits and fines (Oppenheim & Trask-Rahn, 2012). High quality origination improves the stability of an institution's portfolio. Mortgage loan officers must exercise due diligence and adhere to all regulations when originating loans to avoid exposing their organization to undue risk (Oppenheim & Trask-Rahn, 2012). Collecting asymmetric information and communication during loan origination is effective in assessing the appropriate loan products for an applicant (Turvey et al., 2013). Mortgage loan officers should accept risk based on the portfolio grade.

### **Implications for Social Change**

The significance of this study was to provide strategies to mortgage loan officers to select delinquent borrowers for loan modification. Donald, Glasmeier, Gray, and Lobao (2014) found a relationship between the foreclosure crisis and the welfare of the United States. The results of this study can be used to positively influence social change in communities, governments, and the relationship between borrowers and lending institutions.

Lending institutions can implement the findings of this study to improve the selection of delinquent borrowers for loan modification and reduce the rate of foreclosure in communities. Reese (2014) found that concentrated foreclosures in an area had a negative effect on communities. Reducing foreclosures in an area could mitigate the crime that results from squatters in abandoned properties. Improving modification practices can reduce the loss of property value from concentrated foreclosures.

The findings of this study could help lending institutions develop strategies to reduce the impact of foreclosures on the government's ability to generate revenue from property taxes to fund essential services. Foreclosures reduce the amount of revenue governments collect from homeowners (Reese, 2014). States like California, that were among the states with the highest number of foreclosures, lost over \$3.8 billion from 2008 to 2012 (Reese, 2014). Lending institutions can modify loans for qualified borrowers to keep them in their homes.

Leaders in financial institutions should encourage high underwriting standards for loan origination and modification. Lending institutions have used predatory practices in

the past against unsuspecting borrowers (Tippit, 2014). Seiler (2014) found that predatory practices caused a deterioration in the trust between borrowers and lenders. Negligent underwriting also exposes borrowers and society to undue harm (Oppenheim & Trask-Rahn, 2012). Mortgage loan officers can use the evidence from this study to understand the impact that high underwriting standards have on society and their organizations.

### **Recommendations for Action**

I conducted this study with the intent to help leaders in large financial institutions improve their mortgage loan modification practices. Leaders in financial institutions that have influence over their loan origination and loan modification processes should observe the themes that emerged in this study. I will distribute the findings of my study by sharing an executive summary with a wider audience.

Asymmetric information is an essential requirement for mortgage loan officers to create suitable contracts (Hasan & Bhargava, 2013; Koszegi, 2014). I found that mortgage loan officers from my participating organization were successful in selecting delinquent borrowers for modification through creating an effective process for collecting asymmetric information. Mortgage loan officers and their leaders should develop an effective delinquent borrower evaluation process specific to their organizations.

Members of an organization are likely to emulate the behavior observed by their leadership (El Khouly & Fadl, 2016). I found that the participants in this study were encouraged by their leadership and organizational policies to create mutually beneficial and innovative contracts. The participant's strong relationship with their community and customers improved their ability to collect asymmetric information and create efficient

contracts. Leaders in financial institutions should create a culture through action and policies that encourages mortgage loan officers to seek out opportunities to modify loans that are in the best interest of their organization and customers.

Crawford and Forsyth (2015) attributed the poor quality in underwriting of mortgage loans as one of the main factors that caused to foreclosure crisis. P5 claimed that high underwriting standards on bank held portfolio loans can mitigate some delinquency, lawsuits, and fine. Leaders of financial institutions should enforce high underwriting standards on loan origination and modification.

I intend to share an executive summary of my findings with the leaders of the participating organization. I will also use Philadelphia City Chamber of Commerce to assist with the distribution of my executive summary to interested parties in my area. I could also seek to publish a condensed version of my study in professional real estate journals.

### **Recommendations for Further Research**

I encourage other scholars to replicate and build on this study to provide further insight into the mortgage crisis phenomenon and mortgage loan officers' ability to select delinquent borrowers for loan modification. I conducted a single case study using one community bank that operated in the Rochester, New York area. I have developed several recommendations for further research based on the limitations of this study and serendipitous information revealed by the participants.

The findings of this study may be applicable to organizations that share similar characteristics rather than generalizable to a larger population (Radley & Chamberlain,

2012). Participants revealed that their area was not as heavily impacted by the foreclosure crisis as some major cities or areas that lost major employers. There is a possibility that the volume of foreclosures and the causation for delinquency that the participants experienced may vary from a financial institution in a heavily impacted area. The volume of foreclosure and the reasons for foreclosure in a specific area may impact a lending institutions ability to modify loans effectively. Researchers should replicate this study in a geographic location that experienced a higher level of foreclosure during the foreclosure crisis.

Researchers found that mortgage loan modification was viewed as a costly procedure to financial institutions (Das & Meadows, 2013; Ding, 2013). The participants in this study indicated that their mortgage loan modification process was not an expensive or overly time-consuming endeavor. Further research should focus on if other financial institutions have replicated successful mortgage loan modification practices.

### **Reflections**

My journey to completing this Doctoral Study has been an essential step in my development as a scholar. This 5-year journey has been grueling and challenging, but also enlightening. I have learned a lot about myself and how to conduct scholarly research.

Prior to this study, I underestimated the impact that information technology had on my productivity. Over the last 5 years I have gained experience using the tools and resources provided by Walden University and that are accessible to the public. The Walden library, Google Scholar, and Ulrich's Periodical Directory were critical in my

ability to find and vet peer reviewed journal articles. In hindsight, I would have taken advantage of an automated system to organize my journal articles. A journal organization tool could have saved hours of valuable time. I could take advantage of an NVivo trial, transcription software, and recording devices that made analyzing data significantly easier.

I initially did not make good use of my classmates in the Doctoral Study mentorship classes. My classmates played a significant role in the development of myself and the refinement of my study. Earlier use of Walden's library and workshops could have improved my progress with my study.

I found it difficult to find a community bank to participate in my study on the East Coast. Many of the community banks I encountered were reluctant to participate in my study. My search for a participating organization delayed my progress for about two to three weeks. In the future, I would gain informal commitment from an organization well in advance of the data collection process. Once I found an organization to participate in my study, I was surprised how open and forthcoming the participants were with their experiences. Their openness and willingness to participate made the data collection process enjoyable for me. My pleasurable interactions when interviewing participants confirmed my preference to conduct a qualitative study versus a quantitative study.

### **Summary and Study Conclusions**

The foreclosure crisis that began in 2006 was one of the worst foreclosure crises in United States history (Aguirre & Reese, 2014). Scholars have found that up to 85% of delinquent loans during the foreclosure crises went without modification (Ghent, 2011).



The effects of the large number of foreclosures impacted all parts of American society. Some lenders struggled with modifying loans for delinquent borrowers. The loan modification process exposed lenders to increased losses due to strategic default, re-default, and self-cure (Wilkinson-Ryan, 2011). Ghent (2011) proposed that lenders should focus their efforts on delinquent borrowers that can fulfill modified contract terms. However, some mortgage loan officers lacked effective strategies to improve the selection of delinquent borrowers for loan modification.

I conducted a single case study to explore what strategies mortgage loan officers use to improve the selection of delinquent borrowers for loan modification. Most of the themes that emerged about practices in community banks were consistent with my literature review. Further studies should be conducted to determine how larger financial institutions can best adopt some of the successful practices that community banks implemented to modify delinquent loans during the foreclosure crisis.

I found that asymmetric information was the key to evaluating a delinquent borrower's qualification for loan modification. Lending institutions should develop timely and cost-effective methods that allow mortgage loan officers to collect information and evaluate borrowers loan modification application. Asymmetric information was necessary to create complete and mutually beneficial contract terms (Hoppe & Schmitz, 2015; Roberts, 2015). Mutually beneficial contracts benefit both parties and encourages borrowers to remain current on their mortgage loans. Leadership in financial institutions should drive a culture of innovation through leadership, values, and a mission statement. Culture can instill values that empower mortgage loan officers

to seek opportunities to create mutually beneficial contracts. The level of commitment borrowers had to the lending institution reflected the organization's reputation. Financial institutions should invest in improving their reputation to build stronger customer commitment. Financial institutions can improve long term borrower success and reduce the number of foreclosures by adopting strict underwriting standards. Community banks were successful with modifying loans for delinquent borrowers during the foreclosure crisis (Seiler, 2014). The findings of this study could be used to improve mortgage loan modification practices at larger financial institutions.

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## Appendix A: Interview Protocol

- A. I will begin the interview by introducing myself to the research participant and a brief review of the purpose and research question of the study.
- B. I will thank the participant for taking the time to respond to the invitation to participate.
- C. I will review the consent form with the participant and ask if there are any questions pertaining to the participation of the study. I will also inform the participant that the interview session will be recorded. The participant will receive a copy of the consent form.
- D. I will turn on the audio recorder, note the date, time, location, and the code name for the participant.
- E. The interview will span approximately 45-60 minutes for responses to the 9 interview questions, including any additional follow-up questions. (See interview questions below).
- F. I will inform the participant regarding the review of the interview reports that I will make available after my transcription.
- G. At the end of the interview, I will thank the research participant for taking the time to participate in the study and arrange a follow-up meeting to conduct member checking.

Interviewee Code Name/Number: \_\_\_\_\_ Audio Recording Number: \_\_\_\_\_  
Position: \_\_\_\_\_ Time/Date: \_\_\_\_\_  
Location: \_\_\_\_\_

### Research Question

What strategies do mortgage loan officers use to improve the selection of delinquent borrowers for loan modification?

### Interview Questions

1. What collaborative efforts have you taken to find agreeable modification terms between borrowers and lenders?
2. How do you determine a delinquent borrower's eligibility for mortgage loan modification?
3. How do you determine a loan modification candidate's probability of self-cure and re-default?
4. How do you collect asymmetric information about borrowers?
5. How is a loan modification candidate's information used during the mortgage modification process?
6. How do you prevent risky borrowers from defaulting?
7. How effective is mediation during the mortgage loan modification process?
8. How does securitization impact your ability to modify loans?
9. What are the most effective strategies you use to lower risk of default?
10. What other information, not asked, can you share regarding strategies to lower risk of default?

Additional Questions Asked-

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## Appendix B: Organization Invitation Letter

Dear (Manager),

I am Devan Pierce, a graduate student at Walden University. I am conducting research to explore what strategies might mortgage loan officers use to improve the selection of delinquent borrowers for loan modification. This study is in fulfillment of my degree requirements. The members of your organization that have experience successfully modifying loans during the foreclosure crisis are in an ideal position to give me valuable first-hand information through confidential semistructured interviews. I would like to interview a minimum of 5 participants to complete my single case study. I would also like to view historical policies and procedures to support my research findings. The name of your organization and participants will not be disclosed in this study. The results of this study have the potential to help your organization improve processes and procedures related to modifying mortgage loans. Could you assist me by identifying members in your organization that meet the criteria for this study?

Respectfully,

Devan Pierce

Participating Organization

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix C: Participant Invitation Letter

Dear (Participant name),

I am Devan Pierce, a graduate student at Walden University. I am conducting research to explore what strategies might mortgage loan officers use to improve the selection of delinquent borrowers for loan modification. This study is in fulfillment of my degree requirements. You have been identified as having experience successfully modifying loans during the foreclosure crisis are in an ideal position to give me valuable first-hand information. I would like to have an interview session and a follow-up with you with 45-60 minutes each. Your name or your organization will not be disclosed in this study. The results of this study have the potential to help your organization improve processes and procedures related to modifying mortgage loans. You will receive a 25\$ dollar gift card and a summary of my findings. Upon request, a complete copy of the study can be provided to you. If you would like to participate, please review and return the attached informed consent form via email. If you have any questions, please contact me at the number below.

Respectfully,

Devan Pierce