"The Global Financial Crisis: Securitization and Fair Value Reporting Practices"

Willoe Freeman

Supervisor
A/Professor Peter Wells

Co-Supervisors
Professor Anne Wyatt

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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Willoe Freeman

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ABBREVIATIONS

AFS	Available-for-Sale
BCBS	Basel Committee on Banking Supervision
CEO	Chief executive officer
CFC	Countrywide Financial Corporation
COP	Congressional Oversight Panel
Countrywide	Countrywide Financial Corporation
CRMPG	Counterparty Risk Management Policy Group
EESA	Emergency Economic Stabilization Act of 2008
EITF	Emerging Issues Task Force
ERP	Economic Report of the President
Fannie Mae	Federal National Mortgage Association
FASB	Financial Accounting Standards Board
FHA	Federal Housing Administration
Freddie Mac	Federal Home Loan Mortgage Corporation
Form 8-K	The *current report* that U.S. listed companies must file with the U.S. Securities and Exchange Commission to announce major events that shareholders should know about
Form 10-K	The *annual report* that U.S. listed companies must file with the U.S. Securities and Exchange Commission which provides a comprehensive overview for the company's business and financial conditions and includes the audited financial statements.
Form 10-Q	The *quarterly report* that U.S. listed companies must file with the U.S. Securities and Exchange Commission which includes unaudited financial statements and provides a continuing view of the company's financial position during the year
FVO	Fair Value Option
GAAP	Generally Accepted Accounting Principles

ABBREVIATIONS CONTINUED

GAO	U.S. Government Accountability Office
GFC	Global Financial Crisis
Ginnie Mae	Government National Mortgage Association
GSEs	Government Sponsored Enterprises which include Ginnie Mae, Freddie Mac, and Fannie Mae
HFS	Held-for-Sale
IMF	International Monetary Fund
Level 1	Assets (liabilities) measured in to accord to FAS 157, that require the use of quoted prices (unadjusted) in active markets for identical assets or liabilities
Level 2	Assets (liabilities) measured in to accord to FAS 157, that require the use of inputs other than quoted prices included within *Level 1* that are observable for the asset or liability, either directly or indirectly
Level 3	Assets (liabilities) measured in to accord to FAS 157 that require the use of inputs that are unobservable for the asset or liability
LIBOR	London Inter Bank Offering Rate
MBSs	Mortgage-backed securities
MSRs	Mortgage Servicing Rights
OFHEO	Office of Federal Housing Enterprise Oversight
OLS	Ordinary Least Squares
OPS	Office of the Press Secretary
Originate-to-distribute	The business of originating mortgage loans and selling those mortgage loans by way of securitization
OTS	Office of Thrift Supervision
PWGFM	President's Working Group on Financial Markets
QSPE	Qualifying special purpose entity

ABBREVIATIONS CONTINUED

Schedule RC-P	Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities in Domestic Offices* is to be completed by all banks with $1 billion or more in total assets and those banks with less than $1 billion in total assets where the residential mortgage banking activities exceeds $10 million for two consecutive quarters
SEC	United States Securities and Exchange Commission
SFAS	Statement of Financial Accounting Standards
SFAS 140	Financial Accounting Statement No. 140, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities-a replacement of FASB Statement No. 125
SFAS 157	Financial Accounting Statement No. 157, Fair Value Measurement
SIFMA	Securities Industry and Financial Markets Association
SOX	The Sarbanes-Oxley Act of 2002
SPE	Special Purpose entity
U.S.	United States
VA	Veterans Administration

ABSTRACT

This thesis examines securitization and fair value reporting practices during the global financial crisis. Specifically, Chapter 2 evaluates the circumstances surrounding the financial distress experienced by Countrywide Financial Corporation (Countrywide). Chapter 3 evaluates whether the information disclosures released by Countrywide in the lead up to its near-bankruptcy provided information about the risks that other firms were exposed to more generally, and whether this information was reflected in the stock prices of the other firms. Finally, Chapter 4 examines whether the concerns relating to the relevance of *Level 3* financial assets measured under Statement of Financial Accounting No. 157 are primarily attributable to those assets arising as a consequence of securitization transactions (i.e., retained interests and mortgage service rights) rather than *Level 3* assets generally. The primary motivation for this thesis is to contribute to the regulatory debate that is occurring in the aftermath of the global financial crisis (GFC). Of particular concern is whether this debate is correctly identifying the causes of the GFC and to provide evidence relating to: claims of the lack of transparency associated with securitization transactions, and whether the criticism directed at financial reporting is correctly focused.

The key findings of this thesis suggest that while Countrywide perhaps is an extreme example, its mortgage banking activities and the sudden financial distress it experienced as a consequence of these activities, typified the problems that beset firms in the financial services sector during the GFC. The risks associated with Countrywide's securitization activities were not well reflected in the financial statements, and the disclosures of these transactions and their cumulative impacts are not clearly disclosed which likely impeded investors' pricing decisions. The results of Chapter 3 provide evidence consistent with the concern that the opacity and complexity of securitization activities reduced the capacity of investors to value the firms' equity. During the six months preceding Countrywide's acceptance of the Bank of America's offer of a $4.1 billion merger deal (January 11, 2008), Countrywide released material disclosures to the Securities and Exchange Commission (on Form 8-K). These disclosures generated significant abnormal returns to the common stock of the (non-) regulated and non-financial firms' common stock which is consistent with the disclosures releasing information that alerted investors to the true risk levels common to other firms. The magnitude of the returns realized can partially be explained by the firms' securitization activities, leverage, liquidity and profitability.

Chapter 4 provides evidence that concerns relating to the reduced relevance of *Level 3* fair value assets are primarily attributable to those assets arising as a consequence of securitization transactions (i.e., retained interests and mortgage service rights) rather than *Level 3* assets generally. Furthermore there is evidence that the disclosures relating to securitization transactions are likely insufficient and potentially relevant information is being omitted from the financial reports. Accordingly, the criticism being leveled against Statement of Financial Accounting Standards No. 157 might more correctly be directed towards Statement of Financial Accounting Standards No. 140 (FASB 2000).

CHAPTER 1

THESIS INTRODUCTION

This thesis evaluates securitization and fair value reporting practices during the global financial crisis. Specifically, Chapter 2 assesses the circumstances surrounding the financial distress experienced by Countrywide Financial Corporation (Countrywide). Countrywide was one of first prominent financial firms to collapse during the global financial crisis (GFC). Prior to its collapse, Countrywide was the largest mortgage lender in the United States (U.S.) with a market capitalization of $27 billion at the end of Jan 2007. However, its stock price plummeted over the second half of 2007, and it was only saved from bankruptcy by Bank of America's merger agreement to acquire it for $4.1 billion on January 11, 2008. Countrywide, while perhaps an extreme example, typified the problems that beset firms in the financial services sector during the GFC. Chapter 3 evaluates whether the information disclosures released by Countrywide in the lead up to its near-bankruptcy provided information about the risks that other firms were exposed to more generally, and whether this information was reflected in the stock prices of the other firms. Finally, Chapter 4 examines whether the concerns relating to the relevance of *Level 3* financial assets measured under Statement of Financial Accounting No. 157 are primarily attributable to those assets arising as a consequence of securitization transactions (i.e., retained interests and mortgage service rights) rather than *Level 3* assets generally.

The primary motivation for this thesis is to address some of the concerns raised in the regulatory debate which is occurring in the aftermath of the GFC. The rapid demise of Countrywide and the firm losses that spread globally from the collapse of the U.S. housing

market sent shock waves through the financial markets prompting calls for more regulatory oversight (PWGFM 2008; GAO 2009). As securitization represents the largest segment of the U.S. debt market and, securitization underpins the financing of U.S. mortgage loans, there were questions surrounding the implications of the opacity and complexity of firms' securitization activities (e.g. Schmudde 2009; Brunnermeier 2009a).[1] The troubling aspect of securitization is that firms structure the securitization transactions to meet *sales* accounting under Statement of Financial Accounting Standards No. 140 (2000) which allows the securitized assets to be transferred off the balance sheet. This treatment significantly reduces the transparency of the risk exposures retained by firms (e.g. Barth and Landsman 2010) and many of the risks that remain with the securitizing firm are not quantifiable from the balance sheet (e.g., Vermilyea et al. 2008; Casu et al. 2010). The lack of transparency in relation to the nature and quantum of the risk exposures retained by firms from the securitization activities continues to create significant concern among accountants, regulators, investors and depositors (e.g. Barth and Landsman 2010; Ryan 2008; Kettering 2008; OPS 2008).

In addition to the concerns raised about the opacity of firms' securitization activities, there were claims of systemic failure in the financial reporting process of the firms' financial assets. Through the Emergency Economic Stabilization Act (2008), the U.S. Congress put strong pressure on the FASB to change the fair value accounting rules criticising the existing regulatory oversight for giving too much flexibility to firms through

[1] The level of outstanding securities resulting from only US firms' securitization activities was USD $11.61 trillion (as at Dec 2007. This figure entails $9.14 billion mortgage-backed securities and $2.47 billion asset-backed securities, collectively representing 36% of the total $32.32 trillion of U.S. bond market debt (SIFMA 2010; GAO 2009).

the fair value measurement requirements of SFAS 157 (2006c).[2] This criticism surrounding the flexibility of SFAS 157 (2006c) measurement requirements is reinforced by academic literature that finds the banks' *Level 3* asset recognitions are less relevant than the banks' *Level 1* and *Level 2* asset recognitions (e.g. Song et al. 2010; Goh et al. 2009). The authors of these studies argue that the reduced relevance is due to the uncertainty regarding the measurement parameters associated with SFAS 157 (2006c) measurement requirements.

The key findings of this thesis are as follows. Chapter 2 reveals that the distress experienced by Countrywide was largely a consequence of its business model which involved the origination and subsequent securitization of mortgage loans. Over the period January 2001 to December 2007, Countrywide originated $2.55 trillion mortgage loans, of which $2.51 trillion were securitized. From these transactions, Countrywide generated $33.83 billion of revenues, and while this appears relatively insignificant in relation to the value of assets securitized (just 1.35%), it represents a substantial proportion (66.38%) of Countrywide's total revenues of $50.97 billion. Critically, the risks of this business model became apparent when the quality of the mortgage loans securitized came into question, and the securitization vehicles experienced liquidity problems (PWGFM 2008; GAO 2009; IMF 2009). An analysis of the external financial reports reveals the risks associated with Countrywide's securitization transactions are not well reflected in the financial statements. Disclosures of these securitization transactions and their cumulative impacts are sparse and incomplete which likely impeded investors' pricing decisions. The question of interest is to what extent the disclosures about Countrywide's declining performance that arose from the

[2] See also Forbes (2009); American Bankers Association (2008); Hughes and Gillian (2008)

risk exposures of its prolific origination and securitization business model, signaled to the capital market the potential risk exposures common to firms more generally.

The results of Chapter 3 find some support for the concern that the opacity and complexity of securitization activities reduced the capacity of investors to value firms' equity. During the six months preceding Countrywide's acceptance of the Bank of America's offer of a $4.1 billion merger deal (January 11, 2008), Countrywide released material disclosures to the Securities and Exchange Commission (on Form 8-K). These disclosures, which revealed the deterioration in the company's financial position that arose from risk associated with its mortgage business, generated significant abnormal returns to the common stock of regulated firms, non-regulated finance and non-finance firms which are consistent with the disclosures releasing information that alerted investors to the true risk levels common to other firms. The average effect of Countrywide's eight disclosures generate significant negative abnormal returns for the unregulated finance and non-finance firms, but not for regulated firms which were subject to tighter regulation on risk exposure (e.g. BCBS 2006). The magnitude of the returns realised can be partially explained by the firms' securitization activities, leverage, liquidity and profitability. The abnormal returns demonstrate the role played by Countrywide in releasing information about the deteriorating state of the mortgage market.

Chapter 4 provides evidence that the banks' recognized *Level 3* assets were less relevant than the banks' recognized *Level 1* and *Level 2* assets during the period of the global financial crisis. However, the lower relevance of *Level 3* assets is restricted to the banks undertaking asset securitizations. Chapter 4 finds that the relatively lower relevance of Level 3 assets can partially be explained by the magnitude of the banks' unconsolidated

mortgage securitizations which are found correlated with unreported liabilities that range from an average 47.42 cents to 77.01 cents per share. For the banks that did not conduct mortgage securitization activities, empirical analysis reveals the investors found *Level 3* asset recognitions to be of equivalent relevance to *Level 1* and *Level 2* asset recognitions. These results provide evidence that disclosures about banks' unconsolidated securitization activities are relevant to *Level 3* asset recognitions. Furthermore, the results provide evidence which suggest the disclosures relating to securitization transactions are likely insufficient and potentially relevant information is being omitted from the financial reports. Accordingly, the criticism being leveled against SFAS 157 (2006c) might more correctly be directed towards SFAS 140 (2000).

This thesis provides evidence to substantiate the concerns that the firms' unconsolidated securitizations may have resulted in price corrections to the firms' equity during the global financial crisis. The separate evaluation of five portfolios constructed of regulated and non-regulated financial firms show significant abnormal returns were realized as the true nature and level of risk exposures associated with mortgage securitization were revealed through a series of adverse events reported by an industry leader, Countrywide Financial Corporation. Further, this thesis extends the existing literature by providing some evidence that in the wake of the global financial crisis, the firms' securitization activities were a cause of the reduced relevance in the firms' *Level 3* fair value asset recognitions. Overall, these findings provide useful insights for public policy orientated towards addressing the contributory role of the opacity and complexity of the firms' unconsolidated securitization transactions to the global financial crisis. In addition, the findings suggest the financial reporting process of fair value asset recognitions did not lead to systematic failure,

but the lack of transparency associated with the firms' unconsolidated securitizations impacted the relevance of the *Level 3* asset recognitions during the global financial crisis. These findings support the FASB's (2009) decision to mandate the consolidation of the firms' securitizations which should avoid substantial off-balance sheet liabilities obscuring the firms' true underlying economic risks.

The remainder of this thesis is organized as follows. Chapter 2 evaluates the circumstances surrounding the financial distress experienced by Countrywide. Chapter 3 examines the economic impact of Countrywide's near-bankruptcy on regulated and unregulated finance firms, and non-finance firms. Chapter 4 evaluates the value relevance of bank securitizations on bank *Level 3* fair value asset recognitions, and Chapter 5 concludes.

CHAPTER 2

SECURITIZATION LEADS TO NEAR-BANKRUPTCY

ABSTRACT: This study evaluates the circumstances surrounding the financial distress experienced by Countrywide Financial Corporation (Countrywide). The study reveals that the distress experienced by Countrywide was largely a consequence of its business model which involved the origination and securitization of mortgage loans. The risks that this business model exposed Countrywide to became apparent when the quality of the mortgage loans securitized came into question, and the unconsolidated securitization vehicles experienced liquidity problems. Though there were indications in the financial reports of the risks that Countrywide was exposed to, this did not extend to the volatility in the value of the *retained interests* on the balance sheet, or to (contingent) liabilities relating to the securitization transactions. While stockholders and management benefited from the high returns that the business model generated over the period 2000 to 2006, the risks were realized in 2007.

Keywords: Countrywide Financial Corporation, Securitization, Mortgage, global financial crisis

Data Availability: All data are publicly available from sources indicated in the text

JEL Classification: M41, M48, G01, G21

Note: To retain continuity, the tables referred to in the text of each chapter can be found at the end of the thesis after the reference list (beginning p. 128). The figures referred to follow the tables (beginning p. 146). The appendices referred to are located after the tables and figures (beginning p.150).

2.1 INTRODUCTION

The objective of this case study is to evaluate the circumstances surrounding the financial distress experienced by Countrywide Financial Corporation (Countrywide). Of specific concern are how the business activities of Countrywide, which involved the origination and securitization of mortgage loans, contributed to its financial distress; how these business activities were reflected in the financial reports and whether they revealed or obscured the risks to which Countrywide was exposed; and finally identifying any factors which might have contributed to Countrywide adopting its particular business model.

Countrywide was one of first prominent financial firms to collapse during the global financial crisis (GFC). Prior to its collapse, Countrywide was the largest mortgage lender in the United States with a market capitalization of $27 billion at the end of Jan 2007. However, its stock price plummeted over the second half of 2007, and it was only saved from bankruptcy by accepting Bank of America's offer of a $4.1 billion merger deal (January 11, 2008). Countrywide, while perhaps an extreme example, typified the problems that beset firms in the financial services sector during the GFC. Accordingly, Countrywide was chosen as the subject for this case study.

The primary motivation for this case study is to contribute to the regulatory debate that is occurring in the aftermath of the GFC. Of particular concern is whether this debate is correctly identifying the causes of the GFC and to provide evidence which may support claims of the lack of transparency associated with securitization (e.g. Gorton 2008b; Kettering 2008; OPS 2008) and whether the criticism directed at financial reporting is correctly focused (e.g. Hazen 2009; US Congress 2008). A secondary motivation for this case study is to inform subsequent studies of how

information disclosed about the problems at Countrywide informed the market about the risk exposures of other firms more generally and how this was reflected in the price reaction (Chapter 3), as well as shed light on the type of accounting disclosures made by financial institutions involved in the origination and securitization of mortgage loans more generally (Chapter 4).

The evaluation of Countrywide reveals that the distress experienced by the firm was largely a consequence of its business model which involved the origination and securitization of mortgage loans (commonly referred to as the originate-to-distribute model BIS 2008). Over the period January 2001 to December 2007, Countrywide originated $2.55 trillion mortgage loans, of which $2.51 trillion were securitized. Furthermore, Countrywide generated $33.83 billion of revenues from these mortgage transactions and while this appears relatively insignificant in relation to the value of assets securitized (just 1.35%), it represents the majority (66.38%) of Countrywide's total revenues of $50.97 billion. Critically, the risks of this originate-to-distribute business model became apparent when the quality of the mortgage loans securitized came into question, and the securitization vehicles experienced liquidity problems (PWGFM 2008; GAO 2009; IMF 2009).

A feature of securitization is that it removes assets (and the liabilities) from the balance sheet, and there are only limited disclosures required by Statement of Financial Accounting No. 140 (2000) relating to the risks associated with the securitization transactions (Barth and Landsman, 2010). These disclosures focus on *retained interests* in the securitizations, which are generally high risk, first loss positions designed to shield investors in the securitized mortgage loans from losses up to a certain level (Chen et al. 2008). In 2007, Countrywide recognized write-downs of $1.28 billion in relation

to its retained interest assets and this represented 38 percent of its mortgage based revenues, an increase of 364 percent (from $0.28 billion) on the previous year prior to the write-downs. The risk, or volatility, in these asset values are not well reflected in the financial statements. However, the *retain interests* are small relative to the value of mortgage loans securitized, and the disclosures of these transactions and their cumulative impacts are not clearly disclosed. Limited recognition also applies to the (contingent) liabilities in relation to the unconsolidated securitization vehicles which hold the underlying mortgage loans securitized.

Reflecting on the factors that likely lead to Countrywide adopting the origination and securitization business model, it is notable that this model contributed to a seven-fold increase in pre-tax profits over the period February 2001 to December 2006, from $0.59 billion to $4.33 billion, and a five-fold increase in market capitalisation from $5.02 billion to $26.36 billion. For the same period CEO, Angelo Mozilo was rewarded with compensation of $391.91 million, of which 22.9 percent ($89.60m) was in the form of cash bonuses, and 72.1% ($284.61m) from the exercise of stock options. Clearly the fortunes of Countrywide, its stockholders and managers were built upon a business model that included significant risks. These risks were realized in 2007.The remainder of this chapter is structured as follows. Section 2.2 provides information on the history of Countrywide and an overview of its business model. Section 2.3 evaluates how Countrywide's activities were captured in the financial reports. Section 2.4 evaluates executive compensation paid and how this related to performance, and Section 2.5 concludes.

2.2 THE HISTORY OF COUNTRYWIDE AND ITS BUSINESS MODEL

THE INITIAL YEARS (1969-2000)

Countrywide was founded by David S. Loeb and Angelo R. Mozilo in March 1969 as OLM Credit Industries Inc. OLM Credit Industries Inc was reincorporated as Countrywide Credit Industries on 6 February 1987 in Delaware, and after the acquisition of Treasury Bank Ltd on 17 May 2001, the company was converted to a bank holding company on 7 November 2002, taking the name of Countrywide Financial Corporation. A summary of the significant dates in Countrywide's history is provided in Table 1.

Since inception, Countrywide has engaged primarily in the mortgage banking business which includes the origination, the purchasing, the servicing and the selling of mortgage loans. Up until the mid 1990s, Countrywide retained the mortgage loans its originated and the sale of loans was only incidental, and when loan sales occurred Countrywide typically continued to service the mortgage loans in return for fees (i.e., a service strip)., These activities were consistent with the market for residential home loans generally, where the overwhelming majority of loans were provided by savings and loans institutions that typically originated, serviced and held the loans in their portfolios.

From the mid 1990s, Countrywide increased the sales of its mortgage loan origination and this was doubtlessly facilitated by the government sponsored mortgage agencies; the Federal National Mortgage Association (Fannie Mae), Government National Mortgage Association (Ginnie Mae), and the Federal Home Loan Mortgage Corporation (Freddie Mac). These agencies provided funding to lending institutions such as Countrywide by purchasing mortgage loans that meet a set of lending standards

(i.e., conforming mortgage loans), securitizing and selling them as mortgage-backed securities to investors (Temkin et al. 2000; Smith et al. 2007; Corporation Act 2005). The extent of this change in the market for residential home loans, from originate and hold-to-maturity to originate and securitize / sell, is highlighted by the government sponsored mortgage agencies securitizing only 1 percent of all outstanding mortgage loans in 1965, and this increasing to 48 percent in 2001 (Barth et al. 2008).

Underpinning this business model was the ability to originate mortgage loans efficiently and, during this period Countrywide developed its 'EDGE' platform to enable the company to reduce mortgage origination costs. In addition, in 1988 Countrywide Servicing Exchange was established to act as a broker for buyers and sellers of mortgage servicing rights. The expansion of mortgage origination activities by Countrywide also coincided with the U.S. savings and loan crisis (European Central Bank 2004). With the decline of the saving and loans, Countrywide's activities expanded, and in the early 1990's Countrywide became the largest independent mortgage lender and servicer in the U.S.

Notwithstanding, Countrywide still faced significant competitive pressures. Consolidation in the banking sector exposed Countrywide to increasing competition from large diversified financial institutions (e.g., Wells Fargo, Washington Mutual). Furthermore, as Countrywide was not licensed to take deposits and instead relied on short-term borrowing to fund its long-term mortgage loans, this necessitated Countrywide selling the mortgage loans it originated off its balance sheet as quickly as possible (Talley 1996). This activity created a heavy reliance on the secondary mortgage loan market, and in particular the government-sponsored mortgage agencies, Freddie Mac, Fannie Mae and Ginnie Mae. While not solely attributable to

Countrywide, it is notable that over the period 1980 to 2000 (Table 2) the value of mortgage loans outstanding in the U.S. held by these agencies increased significantly (1,004%) relative to that of financial institutions (162%). This is also reflected in the comment by Hochstein and Brockman (1999, p. 12) that "Countrywide relies solely on the secondary market created by Fannie and Freddie to place its loans".

It is also likely that to reduce the reliance placed on the government sponsored entities and allow the access to the market for non-conforming mortgage loans, Countrywide established Countrywide Capital Markets for the trading and broking of mortgage-backed securities, mortgage servicing rights, and loans. Completion of the transformation of the business model to origination and securitization was likely signaled by the sale of most of the originated loans sitting on the Countrywide balance sheet to Fannie Mae in 1999 (Hochstein and Brockman 1999).

This evolution of the Countrywide business model was also likely impacted by a number of regulatory factors.[3] First, legislative changes sought to uncouple the mortgage loan functions of origination, servicing, and financing with the aim of enhancing competition in the financial services sector. This saw an expansion in the number of mortgage brokers from 7,000 in 1987 to 53,000, by 2006 (Barth et al. 2008).

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[3] The Equal Credit Opportunity Act (1974) introduced penalties for financial institutions discriminating on the basis of race, color, religion, national origin, sex, marital status, or age; the Community Reinvestment Act (1977) encouraged banks and other institutions to meet the needs of borrowers in all segments of their communities; The Depository Institutions Deregulation and Monetary Control Act (1980) granted thrifts the power to make consumer and commercial loans, issue transaction accounts and exempted some financial institutions from state interest rate limits. Alternative Mortgage Transaction Parity Act (1982) to allow lenders to originate mortgage loans with features such as adjustable-rate mortgage loans, balloon payments, and negative amortization; Tax Reform Act (1986) outlawed tax deductions on consumer loans and allowed interest paid deductions on mortgage loans incentivizing homeowners to spend big on consumer items and use home loan equity to pay the consumer loan (e.g. credit card debt); Riegle-Neal Interstate Banking and Branching Efficiency Act (1994) repealed the interstate provisions of the Bank Holding Company Act of 1956 that regulated the actions of bank holding companies; Gramm-Leach-Bliley Act (1999) repealed the Glass-Steagall Act (1933) and deregulated banking, insurance, securities, and the financial services industry, allowing these financial institutions to grow large. Wachter (1990), Kettering (2008) and Peterson (2007a) provide further details of the regulatory changes.

Problematically, this removed a major incentive for those originating mortgage loans to be concerned with underlying asset quality (e.g. Peterson 2007a; OPS 2008). Second, legislative requirements dictated the accessibility to finance to a wider range of borrowers, especially minority groups, some of whom had poor credit risk (e.g. Mian and Sufi 2008; Demyanyk and Hemert 2008). A manifestation of the increased accessibility to finance was a significant expansion in homeownership rates from 64 percent in 1994, to 69 percent in 2004 the highest point in U.S. history (see Figure 1).

The greater demand for mortgage loans together with increased competition between mortgage originators, led to the establishment of a mortgage loan securitization process independent of the government sponsored entities [See Appendix A for further details on securitization transactions]. The government sponsored enterprises (GSEs) were the traditional 'gatekeepers' of credit quality through their requirement and action of only purchasing *conforming* (also referred to as *agency*) mortgage loans. However, the increased competition couple with the rise of securitization independent of the GSEs signaled the emergence of one aspect of the *non-conforming* (also referred to as *non-agency*) market, the subprime market. While subprime mortgage loans were less than 5 percent of total U.S. mortgage loan originations in 1994, they increased to 13 percent by 2000 and 20 percent by 2006 (Ashcraft and Schuermann 2008; Barth et al. 2008).

THE BOOM YEARS (2000 - 2006)

Using the originate-to-distribute business model, Countrywide expanded its activities rapidly from 2000. Table 3 (Panel A) provides evidence of this with total mortgage loan originations increasing from $66.74b in 2000 to $468.17b in 2006. Furthermore, there was a corresponding increase in the level of mortgage loans serviced

with this increasing from $250.19b in 2000 to $1,298.39b in 2006. Reflecting the reliance Countrywide placed on securitization, mortgage loans held on the balance sheet amounted to only $2.65b in 2000 and $109.36b in 2006.

The nature of mortgage loans being originated during the *boom period* 2000 to 2006 also changed. Whereas mortgage loans categorized as *non-agency* amounted to $17.99 billion and represented only 27 percent of total mortgage loan originations in 2000, by 2006 this had increased to $305.98 billion and represented 65 percent of total mortgage originations. For a mortgage loan to be categorized as an *agency* loan (and for which the government sponsored agencies stood ready to buy and then sell on into the secondary mortgage market) it needs to meet criteria, including a maximum loan to home price ratio, a maximum debt to income ratio and a certain level of mortgage documentation (Temkin et al. 2000). Accordingly, it is inevitable that as the value and proportion of *non-agency* loan originations increased, the risk of the loans were also increasing. Furthermore, not all *non-agency* loans were labeled *subprime*, with this likely reflecting the lack of a precise definition of subprime. Rather a range of descriptors were applied including, but not limited to, *non-conforming*, *subprime* and *prime home equity* mortgage loans (Lehnert et al. 2005, 2006). For Countrywide, the *non-conforming* loans were the largest category, growing twenty-fold from $10.19 billion in 2000 to $211.84 billion in 2006. Subprime mortgage loans showed a ten-fold increase from $4.16 billion in 2000 to $40.60 billion in 2006.

This increasing focus on *non-agency* mortgage loans created by originators such as Countrywide, would not have been possible were it not for a market in the securitized loans. Subsequent to the Dot Com Crash, there was an easing of monetary policy which saw a significant decline in interest rates. The yield on 10-year Treasury securities

declined from 6.03 percent in January 2000 to 3.10 percent by December 2002 (See Figure 1). Furthermore, yields remained low over the period January 2003 to December 2006, with the average yield being only 4.34 percent. This was significantly lower than the average yield over the period January 1970 to December 1999 of 8.25 percent. Doubtless, the reduced interest rates created a strong demand for subprime mortgage loans by pension funds and hedge funds due to their higher yield. Evidence of the increased demand is provided in Figure 1, which shows an increase in subprime originations in the market that occurred both in terms of number and as a percentage of total originations (Dodd and Mills 2008). Furthermore, the percentage of subprime mortgage loans being securitized increased significantly from 50 percent in 2001 to 80.5 percent in 2006 (Ashcraft and Schuermann 2008).

However, there were differences in the strategies adopted by Countrywide and other financial services firms during the 2000 to 2003 period. Between 2000 and 2003 annual U.S. mortgage loan originations increased three-fold from $1.04 trillion in 2000 to $3.95 trillion in 2003. Over this same period, Countrywide was aggressive, and its mortgage loan originations increased six-fold from $66.7 billion to $434.8 billion (Table 5), which resulted in Countrywide's market share of the annual U.S. mortgage loan originations to increase from 6.4 percent to 11.87 percent. Countrywide benefitted from its aggressive origination strategy by becoming the largest U.S. mortgage lender in the last financial quarter of 2003 and continued to penetrate the market as other participants became more conservative. As the Federal Reserve started to raise interest rates over 2003-2006 there was a slowdown in the market, with annual U.S. mortgage loan originations falling by 24 percent ($3,945 billion in 2003 to $2,980 billion in 2006). However, Countrywide continued to expand its business lifting its mortgage loan

originations by a further 7.7 percent ($434.8 billion to $468.1 billion), resulting in the volume of Countrywide's loan originations to be 17.6 percent greater than its nearest competitor, Wells Fargo.[4]

Accordingly, by the end of 2006 Countrywide was clearly the largest originator of mortgage loans in the U.S. It was increasingly writing mortgage loans which were higher yield (and riskier), and was dependent on the securitized mortgage loan market to finance its activities rather than the government sponsored agencies.

THE CRASH (2007)

The risk inherent in Countrywide's securitized mortgage loans through the period 2000 to 2006 were masked by the buoyant property market which increased the demand for Countrywide's mortgage loans, and obscured their exposure to default risk. Over this period, Figure 1 shows the S&P Case-Schiller U.S. Real Home Price Index rose 60.6 percent (from 126.3 in 2000 to 202.82 in 2006).[5] The price rise enabled borrowers experiencing difficulties servicing their loans, to sell the property and repay the loan while realizing a profit. However, the circumstance changed when real property prices fell by 17.3 percent over the period 2007–8, and as a consequence defaults on mortgage loans which typically occur in the year subsequent to origination, increased dramatically (Pennington-Cross and Chomsisengphet 2007; Barth et al. 2008). Nationally, the foreclosure rate on subprime mortgage loans originated during 2006 exceeded 10 percent in the year to September 2007, and in some states such as

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[4] In 2006, Wells Fargo originated $398 billion mortgage. $294 billion of these loans were residential real estate the remainder commercial and loans sales were $271 billion (Wells Fargo & Company 2007)

[5] The S&P/Case-Shiller U.S. National Home Price Index is a composite of single-family home price indices where the national index is normalized to have a value of 100 in the first quarter of 2000 rose 88.7% (from 100 in the first quarter 2000 to 188.66 in the first quarter 2006)

California, one of the top five state Countrywide provided mortgages to (Countrywide 2008), this exceeded 20 percent (Demyanyk and Hemert 2008).

The impact of the collapse of the subprime mortgage market on the market for securities based upon securitized mortgage loans was significant and emerged in 2007. First, the ability to finance securitized mortgage loans was greatly diminished, with this applying to both the unconsolidated special purpose entities holding existing mortgage loans [See Appendix A for details on special purpose entities], and new securitizations. Second, the value of financial assets held by mortgage originators, which were often highly sensitive to the quality of the securitized mortgage loans, became extremely uncertain. Third, it became increasingly necessary for the mortgage originators to support the special entities created as part of the securitization process through the provision of liquidity, and to repurchase mortgage loans where breaches of warrantees given at the time of securitization occurred.[6]

As a consequence Countrywide's mortgage origination fell 12.6 percent in 2007 (from $468.17b to $415.63b). Furthermore, Countrywide switched back to writing the traditional *agency* mortgage loans with the lower default risk profile and which could be securitized through the government sponsored mortgage agencies. Reflecting this, agency mortgage loans rose 47 percent in 2007 (from $162.19b to $239.21b), and exceeded non-agency mortgage loans for the first time since Countrywide obtained industry leadership in 2003. Countrywide's origination of the higher default risk, non-agency mortgage loans fell 42 percent in just the one year, from $305.98b to $176.43b in 2007. An analysis of the non-agency mortgage loans shows that non-conforming loans fell by 44 percent (from $211.84b to $117.63b), subprime mortgage loans fell 58

[6] Evidence of repurchase loans by Countrywide is the reference to *reperforming* loans but very limited disclosure is provided (e.g. Countrywide 2005a, p.48)

percent (from $40.66b down to $16.99b) and, prime home equity mortgage loans also fell 28 percent, (from $47.88b to $34.40b).[7]

Despite the restraint in mortgage loan originations, Countrywide still faced liquidity problems. Figure 2 shows the rapid decline of Countrywide's share price. During August 2007, in an attempt to address liquidity Countrywide drew down on a $11.5 billion line of credit provided by JPMorgan and Barclays, and issued $2.0 billion of 7.25 percent convertible cumulative preferred stock to Bank of America (Hagerty et al. 2007). This was followed by a further $12 billion in financing in September 2007, and cuts to its work force of 20 percent to reduce costs (National Mortgage News 2007b; Hagerty and Kingsbury 2007; Lingling and Kingsbury 2007). The pressure was continuing when in October, Countrywide was named as one of a dozen companies under informal investigation by the SEC as a consequence of the subprime mortgage debacle (Perez et al. 2008). During this time all three rating agencies (Standard and Poor's, Moody's and Fitch Rating) also downgraded Countrywide to the lowest investment grade (Countrywide Financial Corporation 2008d).[8]

Countrywide avoided inevitable bankruptcy by accepting a "rescue deal" takeover offer from the Bank of America on January 11, 2008 (Paletta et al. 2008). The acquisition price for Countrywide was $4.1 billion, only 16 percent of the company's market value on December 29, 2006 (Countrywide Financial Corporation 2008c). Such a rapid demise for a market leader is surprising and it is this which gave rise to the questions about the relevance and transparency of the financial reporting for mortgage origination and sales by securitization transactions.

[7] Commercial real estate loans increased from $5.67b to $7.4b

2.3 REPRESENTATION OF BUSINESS OPERATIONS IN THE FINANCIAL REPORTS

In the interests of brevity, the focus in this section is limited to the period subsequent to 2000 which covers the expansion of business activities and the crash. Summary information is provided in Table 3. Focusing initially on the income statement,[9] there was evidence in the financial reports (Table 3) that over the period 2000 to 2006, Countrywide experienced strong revenue growth. Total revenues grew from $1.89b in 2000 to $11.42b in 2006, a 504 percent rise. The largest contributor to this was mortgage production revenues which by 2006 amounted to $5.65b, or 49.5 percent of revenues. The growth in revenues flowed through to profit with pre-tax profit increasing nearly seven-fold from $0.63b in 2000 to $4.33 b in 2006.

Doubtless contributing to this revenue growth was the acceleration of revenue recognition from the origination of mortgage loans when they are securitized. If a mortgage loan is originated and held to maturity the gain from origination is effectively realized over the term of the loan. With securitization the gains are recognized immediately [Appendix A details accounting for securitization transactions]. In addition, securitization allowed Countrywide to rapidly expand its operations without a 'balance sheet constraint'. Compared to financial services firms which retained a greater proportion of mortgage loans originated, Countrywide expanded its operations more aggressively and recognized revenues earlier.

In addition, there were disclosures relating to the changing nature of mortgage loans being originated. The contribution of subprime and prime home equity loans to mortgage production revenues increased from 20.06 percent in 2000 to 33.33 percent in 2004, before falling to 23.27 percent in 2006 (Table 4). Furthermore, there were

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[8] Standard & Poor's, Moody's Investors Service and Fitch reported respectively short-term A-2, P3, F2; Long-term BBB+, Baa3, BBB+

significant declines in the profit margin on these loans. For subprime mortgage loans the margin fell from 5.53 percent in 2001 (4.6 times the profit margin on conventional loans) to 1.84 percent in 2006 (1.7 times the profit margin on conventional loans). While for prime home equity loans the decline was from 3.99 percent in 2001 (3.3 times the profit margin on conventional loans) to 1.96 percent in 2006 (1.8 times the profit margin on conventional loans).

Accordingly, while there is evidence in the income statement of Countrywide reporting strong performance in the income statement over the period 2000 to 2006 (Table 3), there are signs that this was at least in part attributable to originating higher risk mortgage loans and they were experiencing declining margins in this area (table 4). Furthermore, Countrywide's revenue streams which were derived primarily from mortgage origination and securitization activities were less sustainable than those of more conventional financial services firms. Countrywide relied upon its ability to sell its mortgage loans in order to fund its operations, and the margins Countrywide received on the mortgage loan sales contributed considerably to its reported profits. Conventional financial services firms were able to fund their mortgage loan originations from the deposits they held on the balance sheet, and the revenue streams from the mortgage loans were incremental recorded as borrowers' interest and principle repayments were collected over the term of the loans.

It is unlikely that the risks of Countrywide's business operations would have increased as they did, had Countrywide not focused on mortgage loan securitizations. For the period 2000 to 2006, the period that Countrywide became a prominent mortgage securitizer, its total assets increased from $15.82 billion in 2000 to $199.95 billion in

[9] References to the income statement and balance sheet also include note disclosures.

2006 (Table 3). This increase in total assets was not matched by a commensurate increase in equity but was supported by greater leverage (measured as debt/equity) which increased from 3.7 in 2000, to 13.0 in 2006. An issue which might be argued is whether the evident rising risks in the balance sheet were appropriate for a financial services firm with volatile revenues derived from trading transactions rather than a more conventional strategy of holding investments to maturity.

More problematic is the lack of disclosure relating to the securitization of mortgage loans. Table 4 provides information about Countrywide's securitization activities. Over the period 2001 to 2006 the value of mortgage loans securitized annually increased from $121.93 billion to $470.94 billion. In total $2,102.02 billion of mortgage loans were securitized, but there is little disclosed about these in the balance sheet. There is no indication of the proportion that remained outstanding. In 2006 subordinated securities of $2.07 billion were reported in the balance sheet, as were $0.97 billion of retained interests. Both of these likely relate to mortgage loan securitizations. In addition, $0.39 billion of representations and warrantees were recognized. The most significant assets recognized in relation to mortgage loan securitization were mortgage servicing rights ($16.06b).[10]

In summary, there was evidence of a significant increase in risk in the disclosures relating to the balance sheet of Countrywide. However, the disclosures relating to securitization were poor and it would have been difficult to determine the full extent of the risks to which Countrywide was exposed through representations and warrantees. The difficulties facing Countrywide were only fully revealed in 2007. In its half yearly profit report Countrywide reported a 32.3 percent fall in earnings per share

(from $2.32 to $1.57). While the volume of mortgage underwriting compared favorably ($245b compared to $240b for the six months ended December 31, 2006), loan loss provisions rose dramatically from $125.04 million (six months ended Jun. 30, 2006) to $444.89 million (six months ended Jun. 30, 2007). Guarantees in excess of recorded liabilities were 15 percent higher than the same time last year (from $438.00m to $506.29m). Countrywide's representations and warranties over its mortgage loans rose by 40 percent (from $307.65m to $431.82m).

These problems were exacerbated in the third quarter of 2007. Mortgage origination fell 22 percent in the third quarter of 2007 (from $117.90b to $96.43b). Loan loss provisioning for the third quarter 2007 doubled compared to the six months ended June 30 2007 (rising from $444.89m to $934.27m). Representations and warranties liabilities rose further to $688.90 million.

The full extent of the problems facing Countrywide was realized in the 2007 financial report. Total revenues fell by 46.9 percent (from $11.42 billion to $6.06 billion). Driving the fall in revenues was the decline in the mortgage production revenues which fell 54 percent (from $5.65 billion to 2.76 billion). Countrywide reported a pretax *loss* of $1.31 billion in 2007. This was a major shock to investors considering the company reported a $4.33 billion pre-tax *profit* in 2006. Contributing to this loss were write-downs of $1.28 billion in relation to *retained interests* in securitizations, which are generally high risk, first loss positions designed to shield investors in the securitized mortgage loans from losses up to a certain level [see Appendix A for further details on retained interests]. Further, an increase in borrower defaults on the loans Countrywide issued and sold, can result in the buyers of

[10] The administrative servicing duties are contractually separated from the mortgage loans when they are securitized and the asset originator receives fee based revenues for retaining the servicing rights

Countrywide's loans making more claims against corporate guarantees and mortgage loan representations and warranties (Countrywide 2008a, p. 38). In 2007, Countrywide's liabilities for representations and warranties increased 64 percent, from $390.11 million to $639.64 million.

In conclusion, the income statement did reveal significant information on the business operations of Countrywide, and these should have been sufficient to highlight the increasing risk of the mortgage loans being originated and securitized, together with potential volatility of the earnings arising from this business model. However, the disclosures relating to securitization were not sufficient to fully appreciate the risks to which Countrywide was exposed. These risks were only really revealed when it became apparent that Countrywide was experiencing difficulties securitizing mortgage loans, problematic mortgage loans were flowing back to Countrywide, and expenses and liabilities were being recognized as occurred in 2007.

2.4 EXECUTIVE COMPENSATION AND STOCK PRICE PERFORMANCE

Angelo Mozilo became the chief executive officer (CEO) in February 1998, the Chairman of the Board in March 1999, and the President in March 2000 suggesting that Mozilo was in a position to exert significant influence over the board and defined the corporate policies of the company. Further, this is confirmed by the level of his compensation relative to other executives, with Mozilo earning $398.30 million over the period 2000 to 2006, while the next highest top five executives earned a combined $389.87 million (Table 5). However, an issue is whether this influence impacted the determination of executive compensation.

(referred to as mortgage servicing rights) [Appendix A provides further details].

A breakdown of Mozilo's compensation (Table 5) over the period January 2001 to December 2006 shows that he realized $284.61 million through the exercise of stock options, and $89.60 million as cash bonuses. This compares to $13.77 million of base salary and $3.93 million in other personal benefits (e.g. private jet, cars, recreation; see Countrywide 2005, p. 47). Accordingly, there is evidence that the overwhelming majority of executive compensation was awarded on the basis of performance. Though significant criticism has been directed at high levels of executive compensation which are not performance related (e.g. CRMPG 2008), this does not appear to be the case for Countrywide. With respect to the level of performance delivered, across the same period revenues grew from $2.07 billion (February 2001) to $11.42 billion (December 2006), and this flowed through to profits which increased from $0.59 billion to $4.33 billion, an increase of 634 percent. It is inarguable that Countrywide reported strong financial performance.

Furthermore, Countrywide's strong performance was recognized by the market, with the increase in market capitalization captured in Figure 2. Over the period January 3, 2000 to December 28, 2003 market capitalization increased by 424 percent (from $2.78b to $14.58b), while the S&P 500 Index fell by 30 percent (falling from 1,455.22 on January 3, 2000 to 1,111.92 on December 28, 2003). Over this period Countrywide was identified as the best performing stock of any of the financial services companies (Tully and Revell 2003). Countrywide's share price reached a high of $108.3 on December 8, 2003, before undergoing two stock splits in 2004.[11] After the second stock split (on August 30, 2004), investors continued to show confidence in Countrywide's performance. Investors pushed up the share price a further 19.4 percent in the following

[11] April 12, stock split 3-for-2 $85.58 ($57.05); August 30, Stock split 2-for-1 $68.94 ($34.47)

two years (from $35.55 on August 30, 2004) to $42.45 on December 29, 2006). Recognition of Countrywide's performance was provided by *American Banker* who presented Mozilo with the "2006 Lifetime Achievement Award" for positioning the firm as the United States' largest mortgage company (Shenn 2006). In addition, the Corporate Library LLC ranked him the sixth-highest paid executive nationwide in 2006 (Berry 2007).[12]

Countrywide shareholders and executives clearly benefited from the business model they adopted. Securitization of mortgage loans and low credit standards allowed the company to grow at a much faster rate than a traditional model of origination and holding of mortgage loans until discharged. The combined value that Mozilo and the next 5 highly paid executives realized from the rising market value of equity is clearly highlighted by the increase in the value realized from the exercise of options from $4.92m in 2001 to $207.08 million in 2006. If there was a problem with the option grants it was that they were tied more toward short-term performance as opposed to long-term performance goals. While in 2001 and 2004 there were short-term[13] vesting periods, in 2005 all options granted were immediately exercisable (Countrywide Financial Corporation 2006, 2005, 2002b). In hindsight, stockholders may have been better off in terms of controlling risk taking by executives if the stock options had been tied to long-term performance.

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[12] These earnings calculations include gains from the exercise of options and the vesting of stock grants

[13] In 2001, all options were exercisable at the rate of approximately 33.3% on each of the first, second and third anniversaries of the grant date, except in the event of a *Change of Control* as defined in the relevant stock option plan. Upon a *Change of Control*, all options become immediately exercisable. In 2004, Mr. Mozilo's options were exercisable at the rate of approximately 33.3% on each of the first, second and third anniversaries of the grant date, except in the event of a *Change of Control* as defined in the relevant stock option plan. For all other executives, options vest over three years if certain earnings per shares targets are met. Even if such targets are not met, all options will vest after 4.5 years. Upon a *Change of Control*, all options become immediately vested and exercisable (Countrywide 2002b, 2005)

The risk to which Countrywide was exposed became apparent in 2007, and an overview of the stock price movements is provided in Figure 2 (Panel B). The stock was trading at a high of $45.03 on February 2, 2007, and was still trading above $40 on May 23, 2007 after Countrywide reported a 54.1 percent fall in first quarter earnings per share. The Fitch Ratings for June 2007 also reaffirmed the investment grade of Countrywide's long and short-term debt (National Mortgage News 2007a). The financial media appeared unaware of the problems Countrywide faced, and it was even noted that "With tightened credit standards and competition greatly reduced, Countrywide will be in a good place when housing recovers (Cohen 2007, p. 202)". However, the media increased its scrutiny of the company in the weeks prior to the second half-year filing. Consequently, in just 20 trading days the company's stock price fell 36.8 percent. The stock went from $34.84 on Monday July 16 down to $26.38 on Friday, August 10. On October 31, the stock was priced at $15.52. Countrywide was staring down bankruptcy when the September quarterly report was filed with the SEC on November 9. All three rating agencies downgraded Countrywide to the lowest investment grade (Countrywide 2008d) and this was a precursor to acquisition / bail out by Bank of America (Paletta et al. 2008). [14]

An issue is whether management were cognisant of the risks to which they were exposed. In early 2007, increasing volumes of inside sales of stock sparked concerns amongst analysts that Countrywide's executives were trading on price sensitive information not disclosed to investors (Morgenson 2007). Two years on, these fears were demonstrated to be justified. In a case filed in the United District Court June 4, 2009, the SEC prosecuted Mozilo with insider trading, selling shares through the

[14] Standard & Poor's, Moody's Investors Service and Fitch reported respectively short-term A-2, P3, F2; Long-term BBB+, Baa3, BBB+

exercise of over 5.1 million stock options, and reaping proceeds of over $139 million based on non-public information about the company's deteriorating mortgage business (United States District Court 2009). Mozilo and two other former executives (David Sambol and Eric Sieracki) were also charged with securities fraud for deliberately misleading investors about the credit risks taken in efforts to build and maintain the company's market share. They were charged with not informing investors about the increasing risks associated with the underwriting of riskier, non-agency mortgage loans. The risky mortgage loans boosted margins, triggering cash bonuses and option grants. Critically, this suggests that Countrywide's executives were aware of the risks inherent in the business model adopted.[15] Again this suggests stockholders may have been better off in terms of controlling risk taking by executives if the stock options had been tied to long-term performance.

2.5 CONCLUSIONS

The objective of this case study was to evaluate the circumstances surrounding the financial distress experienced by Countrywide Financial Corporation (Countrywide). Of specific concern are how the business activities of Countrywide contributed to its financial distress; how these business activities were reflected in the financial reports and whether they revealed or obscured the risks to which Countrywide was exposed; and finally identifying any factors which might have contributed to Countrywide adopting its particular business model.

[15] In response to a civil action by the Securities and Exchange Commission which was settled October 2010, Mozilo had to pay a $22.5-million fine and to repay $45 million to shareholders. While civil litigation is still outstanding by Countrywide's shareholders against Mozilo, Mozilo was not indicted by the federal prosecutor from the criminal investigation which was closed February, 2011 (Reckard 2011)

The evaluation of Countrywide reveals that the distress experienced by the firm was largely a consequence of its business model which involved the origination and securitization of mortgage loans. Over the period January 2001 to December 2007, Countrywide originated $2.55 trillion mortgage loans, and of these $2.51 trillion were securitized. Furthermore, Countrywide generated $33.83 billion of revenues from these transactions and while this appears relatively insignificant in relation to the value of assets securitized (just 1.35%), it represents the majority (66.38%) of Countrywide's total revenues of $50.97 billion. Critically, the risks of this business model became apparent when the quality of the mortgage loans securitized came into question, and the securitization vehicles experienced liquidity problems.

A feature of securitization is that it removes assets and the liabilities from the balance sheet, and there are only limited disclosures required by SFAS 140 (2000) relating to risks associated with the securitization transactions. These disclosures focus on *retained interests* in the securitizations, which are generally high risk, first loss positions designed to shield investors in the securitized mortgage loans from losses up to a certain level. In 2007, Countrywide recognized write-downs of $1.28 billion in relation to its retained interest assets which represented 38 percent of its mortgage based revenues, and the *retained interest* write-down was near five-fold greater from the previous ($0.28 billion) year's write-down. The risk, or volatility, in these asset values are not well reflected in the financial statements and the interests retained are small relative to the value of mortgage loans securitized and, the disclosures of these transactions and their cumulative impacts are not clearly disclosed.

Reflecting on the factors that likely lead to Countrywide adopting the origination and securitization business model, it is notable that this model contributed to a seven-

fold increase in profits over the period February 2001 to December 2006, from $0.59 billion to $4.33 billion, and a five-fold increase in market capitalisation from $5.02 billion to $26.36 billion. For the same period CEO, Angelo Mozilo was rewarded with compensation of $391.91 million, of which 22.9 percent ($89.60m) was in the form of cash bonuses, and 72.1 percent ($284.61m) from the exercise of stock options. Clearly the fortunes of Countrywide, its stockholders and managers were built upon a business model that included significant risks. These risks were realized in 2007. Whether stock holders were aware of the risks is a separate issue and not addressed in this study. Whether these risks would be considered excessive would depend upon whether stockholders sold during 2006.[16]

[16] If stockholders sold during 2006 then they would have benefitted from Countrywide's aggressive focus on mortgage origination and securitization during the period 2000 to 2006 which lead to the company's leadership positioning in the mortgage market, and considerably increased the company's market capitalization.

CHAPTER 3

MARKET REACTIONS TO THE NEAR-BANKRUPTCY OF THE LARGEST MORTGAGE PROVIDER

ABSTRACT: This chapter evaluates whether the information disclosures released by Countrywide in the lead up to its near-bankruptcy provided information about the risks that other firms were exposed to more generally, and whether this information was reflected in the stock prices of the other firms. During the six months preceding Countrywide's acceptance of the Bank of America's offer of a $4.1 billion merger deal (January 11, 2008), Countrywide made material disclosures to the Securities and Exchange Commission (Form 8-K). While the disclosures of individual events generated both significant positive and negative return responses for the banks whose securitization activities could be identified, the mean return response across the nine disclosures was insignificant. However, the disclosures generated significant negative abnormal returns to the common stock of regulated and non-regulated finance firms whose securitization activities could not be readily identified. These results provide some evidence consistent with Countrywide's disclosures releasing information that alerted investors to the true risk levels common to other firms potentially involved in the business of securitization. The magnitude of the returns realized can partially be explained by the firms' securitization activities, leverage, liquidity and profitability.

Keywords: Countrywide Financial Corporation, price reactions, securitization, global financial crisis.

Data Availability: Data used in this study is available from public sources

JEL Classification: M41, M48, G01, G14, G21

3.1 INTRODUCTION

This chapter evaluates whether the information disclosures released by Countrywide in the lead up to its near-bankruptcy provided information about the risks that other firms were exposed to more generally, and whether this information was reflected in the stock prices of the other firms. Countrywide was one of the first prominent financial institutions to face bankruptcy at the onset of the global financial crisis, escaping bankruptcy only by accepting Bank of America's $4.1 billion merger deal (Jan 11, 2008c).[17] This chapter focuses on the six months preceding Countrywide's acceptance of the merger deal, during which Countrywide released a series of material disclosures to the Securities and Exchange Commission (on Form 8-K). The disclosures revealed the deterioration in the company's financial position which arose from risks associated with Countrywide's business model that were not readily apparent in the financial reports, and the disclosures are likely relevant for signalling information about the potential risk exposures of other firms with similar business models. The disclosures are evaluated for information contagion effects on the stock prices of firms in the same industry and for financial contagion effects on the stock prices of firms in the market more generally.

The rapid demise of Countrywide, and the consecutive firm losses that spread globally from the collapse of the U.S. housing market, sent shock waves through the financial markets, prompting calls for more regulatory oversight (PWGFM 2008).[18] As

[17] According to the Wall Street Journal, the merger was a "rescue deal" for the "tottering mortgage giant Countrywide Financial Corp., in a move that could build a bulwark against the mortgage-default crisis by protecting one of its biggest casualties from collapse".Paletta et al. (2008, p. A. 1)

[18] There were 149 bank failures between January 1, 2008 and November 30, 2009 (COP 2009, p. 43)

securitization represents the largest segment of the U.S. debt market with its USD $11.61 trillion outstanding securities (as at Dec 2007), and securitization underpinned the financing of U.S. mortgage loans, questions were raised about the opacity and complexity of securitization activities (e.g. Schmudde 2009; Brunnermeier 2009a).[19] The concern over securitization is the extent that its opacity and complexity generates information asymmetry that reduces the capacity of investors to value the firms' equity. The challenging aspect of securitization is the securitized assets are not recognized on the firms' balance sheets and this practice has been accompanied by rapid growth in the *shadow banking system* particularly across the period 2001-2006.[20] Coupled with the rapid growth of the shadow banking system is the lack of transparency associated with the securitization transactions which continues to create significant concerns among accountants, regulators, investors and depositors (e.g. Barth and Landsman 2010; Ryan 2008; Kettering 2008; OPS 2008). The lack of transparency in the risk exposures retained by firms from securitization activities, and how extensively this can impact the firms' underlying economic performance became a central issue in the global financial crisis.

The significance of firm losses that degenerated to a point of a global financial crisis provides an ideal setting to study the important role that contagion can play in the financial markets. Important recent papers on contagion, including Allen and Gale (2000; 2004),

[19] See also Rosen (2009), Cheng et al. (2008); Haggard and Howe (2007) and Peterson (2007b, 2007a), Gorton (2008a, 2008b). The level of securitization only considers U.S. activity and the figure entails $9.14 billion mortgage-backed securities and $2.47 billion asset-backed securities, collectively representing 36% of the total $32.32 trillion of U.S. bond market debt (SIFMA 2010; GAO 2009). For comparative purposes the level of outstanding US treasury securities for the same period was $4.516 billion.

Brunnermeier and Pedersen (2005, 2009), Longstaff (2010, 2004, 2008), and many others, have focused on contagion between markets. This literature identifies specific mechanisms whereby the shocks in one market can affect other markets. These mechanisms include the transmission of economic news from more liquid markets to other less liquid markets; the 'flight to quality' where contagion occurs through a liquidity shock across all markets; and severe negative shocks in one market may be associated with increased risk premiums in other markets.[21] Other equally important research including, but not limited to, Lang and Stulz (1992), Docking, Hirschey, Jones (1997); Slovin et al. (1999); Song and Walking (2000); Akhigbe et al.(2005a; 2005b), focus on contagion intra-industry and inter-industry, where major firm events can generate significant negative shocks to other firms within the same industry and across industries. This literature identifies that contagion can arise from the propagation of asymmetric information; the dissemination of economic information about the industry more generally; and the *pure* contagion effect where the event generates adverse economic consequences irrespective of a firm's economic health.

The prime concern of contagion, particularly within the banking industry because of the heavily integrated business functions, is that a bank's distress can make customers and suppliers uncertain about the other banks' financial viability irrespective of their economic health, and thus, exacerbate conditions to make them worse off which bears high social cost (e.g. Shin 2009). The alternate contagion effect is that an adverse firm event can reveal negative information about the components of cash flows that are common to other firms

[20] See Adrian and Shin (2009) and Crotty (2008) for a concise discussion about the role of securitization in the rapid growth of the shadow banking system

consequently decreasing the market's expectations of the profitability of the industry's firms which bears little social cost (e.g. Lang and Stulz 1992). Empirically distinguishing between the two (financial or information) contagion effects is problematic, but the economic cost of the contagion effects is in vast contrast and the identification is important to shaping public policy.

This chapter contributes to the literature by shedding light on the contagion mechanisms occurring from the near-bankruptcy of Countrywide. Further it evaluates whether the rapid financial deterioration of Countrywide triggered the market to modify the equity pricing of firms in the regulated banking industry, the unregulated finance industry and the non-finance industries. The timing of Countrywide's near-bankruptcy and the magnitude of its operations as the largest U.S. mortgage lender responsible for underwriting $2.55 trillion mortgage loans and securitizing $2.51 trillion mortgage loans across the period 2001 to 2007 identifies Countrywide capable of informing the market about the rising risks of other firms' mortgage activities. If the firms' securitization activities are characterized by information opacity as suggested by academics, practitioners and regulators (e.g. Gorton 2008b; Hoffman et al. 2008; BIS 2008) then Countrywide's material disclosures can be expected to instigate rapid price discovery for firms that originate and securitize mortgage loans, but Countrywide's disclosures would not expected to affect firms in other industries.

[21] Longstaff p. 437-438 (2010) provides concise discussions on this particular literature

Five portfolios are constructed to evaluate the contagion effects through the measure of market-adjusted abnormal returns (Gibbons 1982).[22] Three portfolios target firms from the regulated finance industries, and two portfolios assess unregulated finance firms. The two regulated portfolios that provided details about their mortgage securitization activities (proxied by mortgage loans sales reported on Schedule RC-P filed with the Chicago Federal Reserve), do not experience an overall statistically significant response from Countrywide's eight disclosure events. The third regulated portfolio that evaluates banks that did not securitize mortgage loans (or did not conduct mortgage sales in excess of $10 million for any two-consecutive quarters), did experience an average significant abnormal decline in market value of 0.26 percent over the two-day window (-1,0).

For all three regulated portfolios the individual events generally correspond with significant valuation effects for one or more of the portfolios whereby the market perceived two events to provide optimistic information about the profitability of other banks corresponding with significant abnormal returns, and the market perceived five events to provide adverse information about the other banks' profitability corresponding with significant market value declines. The significant contagion effects observed from the (Countrywide – Bank of America) merger agreement on all three regulated portfolios suggests the market perceived this *solution* to be favourable for the banking industry

[22] Portfolios are constructed from firm holding period returns across the period January 14, 2007 to January 14, 2008. The holding period returns are averaged across each trading day to generate a single daily 'mean return' observation. The procedure is conducted for each of the 252 trading days. The 252 holding period mean return observations are then regressed on the market index and Countrywide's major event days to determine if the portfolios realized abnormal returns in the two-day (-1, 0) window of the event.

generally. The magnitude of the abnormal returns realised by the regulated portfolios can partially be explained by the banks securitization activities, the level of securitization, leverage, liquidity and profitability. Overall, the results from the regulated portfolios provide some support for the concern that the opacity and complexity of securitization activities adversely affected the capacity of investors to value firms' equity and led to sudden price corrections when new information came onto the market.

The two unregulated portfolios experienced significant adverse valuation effects from Countrywide eight events. The firms in the same industry as Countrywide (unregulated mortgage bankers) experienced the largest two-day decline in market value of 0.81 percent, while firms in the unregulated finance industry experienced an average two-day decline of 0.30 percent. The merger agreement itself was only significant for the unregulated finance portfolio. Securitization activities can not be accurately measured for the firms in the unregulated portfolios (e.g. Schipper and Yohn 2007) but the magnitude of the abnormal returns for these firms is partially explained by the firms' leverage, liquidity and profitability.

While statistically significant abnormal returns are found in this chapter, it is noted that they are economically relatively small. However, the evaluation is just assessing individual firm-specific event disclosures that generally would not be expected to influence the stock prices of other firms. In addition, Countrywide's prominent position in the mortgage market means that it was mentioned in the media with a high degree of frequency which biases from finding results as the market is being continually informed, and firm-

specific events may have come as less of a surprise then they might have otherwise. Further, the market may have been slow to consider systemic aspects and the nature of the inherent risk exposures associated with firms' mortgage securitization activities, and instead, principally attributed fluctuations in business performance to the management of the business or other factors particular to Countrywide.

If the firms' securitization activities were transparent to the market then the announcements from a prolific securitizer like Countrywide would be unlikely to exhibit a contagious effect to other firms as the information would already be fully recognized and incorporated in stock prices. However, the contagion effects observed from the announcements pending Countrywide's near collapse raise a number of important policy issues with respect to forming regulations for the era of multifaceted globalized financial markets.

The remainder of this chapter is organized as follows. Section 2 provides a background on securitization and Countrywide. Section 3 discusses the determinants for contagion from Countrywide's disclosures. Section 4 outlines the data and research design. Sections 5 and 6 summarize the results and sensitivities, and Section 7 concludes.

3.2 BACKGROUND TO SECURITIZATION AND COUNTRYWIDE FINANCIAL CORP.

Securitization is a financing mechanism that groups the cash flows and the corresponding risks of debt obligations, such as mortgage loans, into a pool. The grouping of the cash flows and the corresponding risks enables the division of the mortgage pool into

portions that can be sold as securities (e.g. mortgage-backed securities) with distinct security grades. Figure 3, illustrates the paradigm of a securitization transaction conducted by Countrywide.

Figure 3 illustrates how Countrywide originates multiple mortgage loans, pools those mortgage loans and transfers them to a special purpose entity (SPE) which is a passive entity that then issues securities on the underlying mortgage pool.[23] The securities issued represent claims against the mortgage cash flows. The SPE funds the mortgage loans by the securities issue, using the proceeds to purchase the mortgage loans from Countrywide. Accordingly, the risk of the mortgage loans in theory is transferred from Countrywide to the SPE and to the holders of the securities, although in a substantial portion of risk may be retained as discussed below. This process of mortgage financing is commonly referred to as the *originate-to-distribute* model (BIS 2008). The class assigned to the securities will depend on the corresponding risk of the cash flows underlying the mortgage loans and the capital structure of the SPE [Appendix A provides further details on securitization transactions].[24]

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[23] The SPEs are typically formed for the purpose of engaging only in activities necessary to the securitization transaction and thus this limited nature of the SPE makes it "bankruptcy remote" in that it is created subject to an array of constraints designed to eliminate the risk that the SPE might in the future become subject to a proceeding under the bankruptcy code. The transfer of the assets to the SPE means that the assets are now the property of the SPE and are not part of the originators bankruptcy estate – thus the assets can be removed from the originator's balance sheet. In Figure 3 Conforming mortgage loans are those that meet the criteria of the Government sponsored enterprises (GSEs), non-conforming mortgage loans are those that do not meet the GSEs criteria

[24] See Ashcraft and Schuermann (2008) and Gorton and Souleles (2007) for a concise discussion of the parties and processes involved in establishing a securitization transaction, and the structuring of SPEs. Ryan (2008), Gorton, (2008b), and Crotty (2008) provide concise discussions and evidence of the trend in the growing off-balance sheet activities of banks' businesses.

In 2001, the level of outstanding securities relating to U.S. firms' securitization activities was $5.41 trillion, representing 28.78 percent of the total U.S. bond market debt and, by 2007 this had grown to $11.62 trillion, 35.89 percent of the total U.S. bond market debt.[25] Mortgage loans are indisputably the preferred asset for securitization ($4.13 trillion mortgage related securities were outstanding in 2001, $9.14 trillion outstanding in 2007) due to the long-term nature and consistency of the mortgage receivable cash flows. However, mortgage underwriting and mortgage securitization is not restricted to regulated banks. By 2007, the level of outstanding mortgage debt issued by regulated financial institutions was $5.07 trillion, while the outstanding level of mortgage debt issued by unregulated financial institutions was $4.27 trillion. Although it cannot be determined from public data sources what percentage of the mortgage debt was financed by the securitization practices of regulated or unregulated financial institutions, it is known that in 2007 overall, 76.9 percent of all U.S. mortgage loans were financed by securitization.[26] These statistics indicate that regulated and unregulated financial institutions both played an important role in the underwriting and securitization of U.S. mortgage loans.

The securitization of non-mortgage assets has also become increasingly significant to enhancing the liquidity of the debt markets and by the end of 2007 there were $2.47

[25] These statistics are gathered from the SIFMA (2010) and they are only taking into consideration mortgage-related and asset-backed securities, they do not include commercial paper activities. For comparative purposes of securitization significance, $3.196 trillion U.S. treasury securities were outstanding in 2001, $5.075 trillion in 2007.

[26] In 2007, $2.43 trillion mortgage loans were originated in the U.S. market, $1.87 trillion of those mortgage originations were funded by securitization. In 2001, 75.45 percent of all mortgage loans were financed by securitization ($1.67 trillion of the $2.22 trillion originations). These statistics are for single-family (1-to 4-family) mortgage loans which includes subprime, second liens and home equity loans, does not include

billion assets-backed securities (ABSs) outstanding.[27] These ABSs resulted from the securitization of, but not limited to, trade and credit card receivables, student and car loans, and automobile and equipment leases.[28] Non-mortgage securitizations generally require more sophisticated financial engineering than the typical mortgage securitization due to the less stable and shorter duration cash flow streams generated by the asset types and, often end up bundled with mortgage securities through innovative financial investment structures (e.g. collateralized debt obligations, credit default swaps).

Mortgage securitizations and other asset securitizations have played an important role in enhancing the liquidity of the financial markets by enabling firms to redistribute and reduce risk. But in 2007, when problems started to occur in the mortgage sector and firms began reporting losses, the focus turned to whether firms' risk exposures to the mortgage market were obfuscated from the financial market due to the lack of transparency in firms' securitization activities. In the lead up to the global financial crisis, securitization formed the basis for the metamorphism of the banking system to a *shadow banking system* as a consequence of the (re) packaging and, distribution of the securities underpinned by the assets, particularly mortgage loans, being held in off-balance sheet special purpose entities (e.g. Adrian and Shin 2009; Crotty 2008). It is the off-balance sheet process of securitization that is implicated in the extent that the firms' risk exposures are obfuscated from the market.

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multi-family, farm or commercial mortgage loans. The data is acquired from the Federal Housing Finance Agency whereby the compilation of the data is discussed in Pafenberg (2005)

[27] In 2001, $1.28 billion asset-backed securities were outstanding.

[28] This is in addition to the $0.84 billion outstanding U.S. Asset-backed commercial paper

Although the securitization process is meant to transfer the risks (and rewards) of the securitized assets onto investors, there is mounting evidence indicating that the securitizing firms are still considerably exposed to the assets.[29] This exposure is difficult to quantify due to the lack of transparency provided by the accounting requirements. Statement of Financial Accounting Standards No. 140 (2000) guided the reporting of firms' securitization activities in the lead up to, and during, the global financial crisis.[30] When firms securitize assets, the accounting under SFAS 140 does not require firms to disclose the fair value of retained interests, SFAS 140 does not require firms to disclose information about the assets and liabilities held in the unconsolidated securitization conduits, and SFAS 140 also does not require disclosures that will enable investors to assess the risks related to firms' retained interests [Appendix A provides further details about the securitization transaction and the accounting for the transaction].[31] The existence of information opacity about firms' retained risk exposures from securitization activities can generate an

[29] It is well understood that securitizing banks provide credit support beyond contractual obligations for the securitized assets, and that these arrangements leave the securitizing banks with ongoing off-balance sheet liabilities which cannot be quantified (e.g., Vermilyea et al.(2008); Chen et al. (2008), Standard and Poor's (2001). In addition, Niu and Richardson (2006) show that banks' off-balance sheet debt related to securitization activities has, on average, the same risk-relevance for explaining the capital asset pricing model beta as the banks' on-balance sheet debt. From an alternate angle Gorton and Souleles (2007) show that investors who buy the securities from the SPEs know that despite legal and accounting restriction, the securitizing firms can provide financial support to the SPE if there is need. Similarly, Landsman et al. (2008) provide evidence that investors perceive the risks inherent in the securitized assets are, to a large extent still held by the originating firm, but off-balance sheet – a treatment contrary to typical asset sales (e.g. retail goods) where the risks (and rewards) are transferred to the parties that purchase the assets.

[30] The introduction of FASB's revised securitization accounting standards SFAS 166 & 167 for financial periods beginning after November 15, 2009, will result in more securitization activities having to be consolidated. See Barth and Landsman (2010) for a more detailed explanation of the accounting.

[31] See Barth and Landsman (2010) and Barth and Taylor (2010) provide further details of the accounting for securitization under SFAS 140

environment where the market will use the information provided by an industry leader such as Countrywide to revise the pricing decisions about other firms.

COUNTRYWIDE DEVELOPS INTO A PROMINENT SECURITIZER

Incorporated in 1969, Countrywide's original business was mortgage broking – the origination and servicing of mortgage loans, and over the following years its growth was steady until the decision to convert to a bank holding company on 7 November 2002. Traditionally, residential mortgage loans were the domain of major financial institutions that originated and retained the mortgage loans on the balance sheet, until discharged or honored by the borrower. The full risk of borrower default was borne by the financial institution. However, the innovation of securitization separates the mortgage functions.[32] The separation of the mortgage origination, from the servicing and the financing function opened up the secondary mortgage market and set the stage for the prowess of Countrywide's business initiatives - a business model of origination and securitization (the originate-to-distribute model).[33]

Securitization enabled Countrywide to recognise revenues immediately instead of the traditional process of incrementally recognising the revenues over the mortgage term. In addition, as Countrywide was not licensed to take deposits, a strong reliance was placed on

[32] Wachter (1990) and Peterson (2007a) provide concise discussions on the evolution of securitization. Some of the benefits of securitization include a) the facilitation of off-balance sheet financing, b) the conversion or illiquid assets into liquid securities, c) the provision of exposure management for credit risk and interest rate risk, and d) the alleviation of the mismatch problem that arises due to differences in tenor and characteristics of the assets and liabilities related to the mortgage loans they originate (see Ryan 2007, p.192 ; Deacon 2007, p. 4 for additional details on advantages)

placing loans on the secondary mortgage market through securitization.[34] Countrywide's ability to access capital to support it mortgage operations substantially depended on investor demand for the types of mortgage-backed securities it issued from its unconsolidated SPEs. As the overall demand for mortgage loans increased (encouraged by the Federal Reserve's monetary policy to spur the U.S. economy out of the dot-com crash), management deemed it necessary that Countrywide diversify its operations to banking services to sustain its market share in the highly competitive mortgage industry, which was dominated by large diversified regulated institutions (e.g., Wells Fargo, Washington Mutual).[35]

In 2000 with an equity base of $3.56 billion (15.5% of total assets), Countrywide originated $68.92 billion mortgage loans, serviced $293.60 billion mortgage loans, and securitized $60.49 billion, and from these activities generated revenues of $1.57 billion.[36] From 2002, Countrywide began transitioning its mortgage business to the banking sector, established itself as the industry leader in 2003, and continued to dominate the mortgage market up to and throughout 2006. By 2006 with an equity base of $14.3 billion (7.16% of

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[33] The originate-to-distribute became increasingly popular for the major financial institutions as well.

[34] Countrywide also received fee income for servicing the mortgage loans. Fee revenue for servicing is typically a percentage of each loan payment (e.g. 25-50 basis points of the interest payment). Countrywide valued these ongoing servicing rights and recorded them as an asset. Expected benefits from the asset would however fall to zero if borrowers prepaid the loan early.

[35] Countrywide became a bank holding company and financial holding company after its acquisition of Treasury bank in 2001 and changed its trading name to Countrywide Financial Corp. from Countrywide Credit Industries 2002 (Countrywide Financial Corporation 2002a, 2003). Countrywide began the transition of its mortgage business to its banking arm from 2001 but the transition was not completed until the fiscal year ended December 31,2007 (Countrywide Financial Corporation 2008b)

[36] In 2001, Countrywide changed fiscal year ends from February 28/29 to December 31. Thus the 2000 figures quoted here are for financial year end February, 2001. As mortgage activities are typically cyclical a conversion is not attempted.

total assets), Countrywide's annual mortgage origination had grown to $468.17 billion, the servicing portfolio increased to $1,298.39 billion, and the annual securitization volume was now $362.27 billion. The magnitude of these mortgage loan activities generated the firm's revenues of $7.2 billion which contributed to earnings of $4.42 per share (Dec 31, 2006) for a share that was trading at $45.03 (Feb 2, 2007). With these bottom line profits, and returns to investors there seemed to be no reason for the market to question the direction of Countrywide's business.

However, Countrywide's reliance on securitization for mortgage financing and bottom line profits was the likely cause of its near collapse, and not its involvement in the subprime mortgage market per se. Critically, the risks of Countrywide's business model became apparent when the quality of the mortgage loans securitized came into question, and the securitization vehicles experienced liquidity problems (PWGFM 2008; GAO 2009; IMF 2009). Although, Countrywide grew its banking business considerably alongside its mortgage securitization business, the rising illiquidity in the secondary mortgage market during 2007 showed that Countrywide's success depended on securitization to generate vital revenues and provide the cash flows necessary to sustain further mortgage loan originations.[37] In 2007, when subprime delinquencies started to rise, investor required yields started to increase, weakening the demand for subprime mortgage products and the

[37] The more traditional competitors have sufficient deposits to support the retention of mortgage loans on the balance sheet. For example for fiscal year end 2007 , the second largest mortgage lender Wells Fargo & Company's balance sheet included $344.46 billion deposits, $221.96 billion mortgage loans (loans for real estate construction and leases not included) and its residential real estate originations for the year were $272 billion (Wells Fargo also originates commercial loans which are not included see Wells Fargo & Company 2008, for further details). This compares to Countrywide's balance sheet that includes only $58.25 billion

subprime mortgage market collapsed.[38] However, the collapse of the subprime market was not particularly debilitating for Countrywide as only 8.7 percent of its mortgage originations were subprime in 2006 and the stability of the company was noted in the media in mid-July: "With tightened credit standards and competition greatly reduced, Countrywide will be in a good place when housing recovers (Cohen 2007, p. 202)." But, as investor demand ground to a halt in the subprime market, the liquidity of other mortgage products started to be impacted, first the prime home equity products and then the non-conforming products.[39]

By the second half of 2007, the weakening demand for non-conforming mortgage loans in the secondary market significantly impaired Countrywide's business. As a consequence of a business model that was funded primarily by the scale of loans securitized, Countrywide was forced to arrange other financing options, tighten underwriting standards, and reduce its prolific mortgage production, in turn, significantly effecting bottom line profits. In addition, the depressed market brought out other *risky* consequences of Countrywide's originate-to-distribute business model - the issuance of

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deposits; $109.68 billion mortgage loans and its residential real estate originations were $408.23 billion (excludes commercial loans).

[38] The collapse of the subprime market beared down February 2007 (see Ryan 2007, for further details)

[39] Home equity products are loans acquired by borrowers that are secured by the equity of the borrower's house. For clarity purposes, the basis for the conclusion that Countrywide's securitization activities led to its rapid decline in performance as oppose the collapse of the subprime market per se, is drawn from Countrywide's significant reliance on securitization as a funding and profit source. Signs of this business strategy being unsustainable in the long-term are evident from the reduction in the profit margins being received on all loan products Countrywide securitized, and Countrywide's strategy to buffer the reduction in profit margin by increasing mortgage securitizations. Had the subprime market not collapsed profit margins on Countrywide's loans likely would have continued to decrease as the supply of the loans on the secondary market increased. In hind sight, Countrywide's business model may have been sustainable had it focused less on mortgage securitization and more on developing other funding sources to sustain its

credit enhancements (recourse arrangements) that had helped in the saleability of its mortgage-backed securities (MBSs) in the period leading up to the GFC.[40] There are only limited disclosures required by SFAS 140 for these credit enhancements and the risks that remain with Countrywide are not quantifiable from the balance sheet (e.g., Vermilyea et al. 2008; Casu et al. 2010). This is likely the reason why investors and the financial media appeared unaware of the impending near-bankruptcy. Countrywide's shares traded at a high of $45.03 on February 2, 2007 and, were still trading above $40 on May 23. In June, Fitch Ratings affirmed the investment grade of Countrywide's long and short-term debt and mid-July the media confirmed the company's stability (Cohen 2007).[41]

3.3 THE EFFECT OF COUNTRYWIDE'S EVENTS

Government authorities (the Board of Governors of the Federal Reserve System) regulate and monitor United States banking activities and the impact of this regulation on the bank industry structure remains controversial particularly during the 2007 to 2010 global financial crisis. A central issue to the controversy is that a negative event that occurs at a specific bank, which implies an increase in the probability of its failure, can generate negative financial consequences for the whole banking system.[42] This occurrence can be

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mortgage loan origination volumes (for example by attracting depositors like the more traditional banking firms).

[40] The issuance of private-label MBS and ABS to investors generally requires some form of credit enhancement, such as over-collateralization, senior-subordinated structures, primary mortgage insurance, specific guarantees and/or private surety guarantees (For details see Ashcraft and Schuermann 2008).

[41] Fitch Ratings affirmed the long-term A rating and short-term F1 rating (National Mortgage News 2007a).

[42] Banks are subject to the risk of market failure in the form of deposit runs that can induce premature asset liquidations, this is the worst case scenario 'a run on the bank' most recently observed through the collapse of Northern Rock detailed in Shin (2009). The Government regulations and monitoring of banks activities

particularly problematic for the integrity of the financial system given the integrated nature of banks' activities. This chapter addresses this issue by analyzing whether the events in the lead up to the near-bankruptcy of the bank holding company that was the largest U.S. mortgage lender in 2007 generated contagion effects to a) regulated mortgage securitizing banks, b) regulated non-mortgage securitizing banks, and c) the unregulated finance and insurance industry...

THE CONTAGION EFFECT

The contagion effect is the change in the value of competitors that cannot be attributed to the wealth redistribution of the firm's major events.[43] The perspective is that, if Countrywide is viewed as a portfolio of investments whose true value is not known to the market then a major event reveals information to the market about Countrywide's value. If the event is deemed a bad event, the market will adversely revise downward the investment value of Countrywide. If Countrywide's events correspond with significant valuation

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conveys the government's willingness to guarantee the continued operation of banks (e.g. the Troubled Asset Relief Program 2008), advocates to regulation question the inferior allocation of scares resources

[43] The definition for the contagion effect is derived from Lang and Stulz (1992) who measure contagion from bank's bankruptcy announcements. While a bank's bankruptcy announcement likely bears significantly greater consequences on an industry than a firm's Form 8-K event, the expected outcome is anticipated to be similar. The outcome in essence is a test of market prices rationality. If stock markets are working properly stock prices should immediately increase with the publicity of good news; immediately decrease with the publicity of bad news and thereafter not change at lease in a predictable way as a result of the previously released news Dolley (1933); Ball and Brown (1968), Fama et al. (1969). The alternate response is that stock prices will not respond to irrelevant firm-specific information (Scholes 1972). Please note that *contagion* can be used interchangeably with *information transfer* and the discussion in this chapter is in alignment to the information transfer literature that includes but is not limited to,Kim, Lacina, and Park (2008), Anilowski et al. (2007), Laux et al. (1998), Lang and Stulz (1992) Freeman and Tse (1992), Schipper (1990), Han and Ramesh (1989) and Foster (1981) whereby this literature refers to an *information transfer* as an event that occurs when news from one firm in an industry provides information to the market about other firms in the industry.

effects in the stock prices of other firms then this suggests contagion. The presence of a contagion effect indicates that, Countrywide's events are perceived by the market to reveal information about the components of cash flows that are common to other firms, or Countrywide's events caused the market to become uncertain about other firms irrespective of their economic health.

Firms that originate and securitize mortgage loans will have investments with similar cash flow characteristics to those of Countrywide. Therefore, Countrywide's major events can convey information to these other firms because the value of their investments is correlated with Countrywide's investments. All else being equal it can be expected that the contagion effect will be greater for the firms that originate and securitize mortgage loans. Regulated banks are primary providers of mortgage loans and predominantly finance mortgage loans through securitization. It is expected that the market may perceive the information from Countrywide's events to be relevant to regulated bank that underwrite and securitize mortgage loans. Countrywide's events can also affect the market value of competitors by affecting their dealings with customers, regulators and suppliers. For instance, customers with limited information about the outstanding risks of individual firms' securitization activities could reassess their perception of the creditworthiness of all firms in the industry. Thus, it is possible that the market may perceive Countrywide's events to be relevant to banks that are seen not to securitize mortgage loans and to the non-regulated finance firms who are not regulated to disclose securitization activities.

SECURITIZATION ACTIVITIES: It is argued that securitization impeded the capacity of investors to value firms' equity in the lead up to the global financial crisis as a consequence of the off-balance sheet treatment and the complex partitioning of the underlying assets (risk) within the unconsolidated special purpose entities. Countrywide's leadership position as the largest mortgage lender and proficient securitizer, creates the potential to offer evidence on whether the unfolding events revealing its deteriorating financial health, embodied and signalled important asymmetric information about the firms' securitization activities. Like Countrywide, banks are significantly involved in the origination and securitization of mortgage loans. Thus, if Countrywide's events are seen relevant to signal important information about the other firms' securitization activities, then a negative (positive) event is expected to reciprocate a decrease (increase) in the equity of those banks' that securitize mortgage loans. All else being equal, the greater the bank's securitization activities (level of mortgage sales to total assets) the greater the decline in the value of the bank's equity to the bad event.

LIQUIDITY AND PROFITABILITY: As the off-balance sheet structure of securitization is the basis for the increased concern over the opacity of banking firms' assets, all else being equal, it is expected that the more liquid (transparent) a banks' assets (total cash and investment securities to total assets) and the more profitable the bank (the higher the return on assets), the less elastic will be the value of the bank's equity to Countrywide's negative events. Loss firms are also controlled for.

LEVERAGE: To better understand how contagion can impact the value of a firm's equity it is necessary to consider the firms' capital structure (total debt to total assets).[44] All else being equal, if Countrywide's major events convey negative information about the industry, the percentage decrease in the equity of other banks increases the higher those firms' leverage. The higher the leverage the greater will be the elasticity of the value of banks' equity to the bad event with respect to the total value of the firm.

FIRM SIZE: It is necessary to consider firm size (log market capitalization), as the literature is consistent in documenting the influential effect of firm size on the level of contagion that can be transferred to other firms from firm-specific events. It is argued that contagion is inversely related to firm size (e.g. Atiase 1985) and that smaller firms are more susceptible to adverse information as they are seen associated with greater information asymmetry (e.g. Slovin et al. 1991). However, financial firms are seen more complex and it is argued that bank loans are informational opaque (e.g. Flannery et al. 2004; Campbell and Kracaw 1980). Thus, to the extent that firm size is a proxy for the degree of complexity and level of informational opacity due to firms' loan activities, a negative coefficient is expect to be associated with Countrywide's bad news events. For firms in the non-finance industry the reverse is likely.

[44] Banks capital ratios were considered as an alternate measure but considering that the regulators attempt to account for banks securitization activities when addressing banks capital adequacy ratios this would effect a focus of this study's assessment of securitization on share price responses (BCBS 2006; Barth and Landsman 2010).

3.4 DATA AND RESEARCH DESIGN

The focus of this chapter is to examine the economic impact of the events pending Countrywide's near-bankruptcy and evaluate whether certain firm characteristics can explain the capital market's response when the null hypothesis (that the average abnormal return equals zero) is rejected. Countrywide's major events are identified from the Securities and Exchange Commission (SEC) EDGAR database. Daily share prices are obtained from the Center for Research in Securities Prices (CRSP) file. The banks' mortgage sales activities are identified from Wharton's Bank Regulatory database, and quarterly accounting information is collected from Standard & Poor's Compustat® database.

IDENTIFICATION OF MAJOR EVENTS

Nine disclosure events are identified as signaling the viability of Countrywide's mortgage business in the six month period leading to its $4.1 billion merger agreement with Bank of America January 11, 2008. Table 6 provides a chronology and description of the nine events leading to the final merger agreement. The SEC Form 8-K is chosen as the best medium to identify the events.[45] U.S. listed companies must file Form 8-K (current report) with the SEC to announce major events that shareholders should know about, that is, events

[45] Media articles was another option, but the leadership position of Countrywide meant that it was mentioned in the media with high frequency (nearly every day and sometimes multiple times a day), and identifying specific events would be difficult and could generate unnecessary bias.

that can influence shareholders views about the firm's expected future cash flows.[46] In the six-month period Countrywide filed 22 Form 8-Ks. Only the disclosure events directly or indirectly related to reporting of the deterioration of Countrywide's originate-to-distribute business model are evaluated. The final nine events chosen relate to the state of the company's operations comprising, one *asset impairment* (Event 1), five *declining operations* (Events 2, 4, 6, 7 and 8), one *capital raising* (Event 3), one *Board change* (Event 5), and the *merger agreement* (Event 9).

Events not considered include, unregistered sales of equity, amendments to articles of incorporation or bylaws, amendments to prior issued form 8-Ks, and consecutive reporting of operating results if they fell only a few days apart. Initially twelve events were singled out. The twelve events were then compared to the Federal Reserve of St. Louis (2008) subprime crisis timeline and the Joint Economic Committee (2008) timeline to ensure no prominent conflicts, which resulted in one *declining operations* event being removed due to coinciding with the bank run of the British bank, Northern Rock (Sept 13). In addition, the $2 billion equity investment by Bank of America (Aug 23) was also removed as it is projected that Bank of America made this investment based on rational projection of Countrywide's remaining a viable going concern, and the event of Mr. Sambol being appointed to the board of Countrywide (Oct 2) was also removed as the interest is in events that provide information about the viability of Countrywide's mortgage

[46] The principle purpose of the Form 8-K is to meet the goals of Section 409 of the Sarbanes-Oxley Act of 2002 "protection of investors"

business.[47] In addition, Countrywide's quarterly reports (Form 10-Q) and annual report (Form 10-K) are not evaluated as all firms are required to issue these reports in a timely manner. Countrywide's December 31 fiscal year-end (and fiscal quarters) is common to many U.S. listed firms resulting in Form 10-Qs and Form-10Ks being issued at similar times which can confound the identification of market reactions that are specific to Countrywide.

Event 1 (Jul 24) is chosen as the starting point for analysis as there was no public signs yet of the trouble brewing at Countrywide. Figure 4 shows the trading movements in the stock price of Countrywide across the period January 16, 2007 to January 14, 2008. The points on the graph indicate the major events described in Table 6. Figure 4 shows obvious declines in Countrywide's share price that do not coincide with the points identifying Countrywide's events. The more prominent declines seen in August and November are the likely consequence of prominent market activities that took occurrence at that time.

In particular, in the first week of August (trading days 137-140), Countrywide's share price declined a cumulative 24.28%. This decline coincides with Bear Stearns declaring two of its hedge funds bankrupt (Aug 1) consequential to excessive subprime exposure, and a price supplement filing (Form 424B2) that Countrywide made (Aug 3) updating details about its unsecured and unsubordinated indebtedness of its mortgage

[47] Bank of America realized a market adjusted 0.46 percent share price increase on the day of its $2 billion capital investment .Shin (2009) details the bank run of Northern Rock. Event 5 (Oct 24) was also considered for removal as Merrill Lynch reported a write down of investments due to subprime lending. However, as the analysis is market-adjusted with the Standard & Poor's Composite index it seemed reasonable to leave it in. The composite index focuses on the large-cap sector of the U.S. equity markets

business.[48] Interestingly, Countrywide's share price rebounds by 19.95% in the following week (Aug 6-9) when American Home Mortgage files for bankruptcy (Aug 6) and American International Group another prominent U.S. mortgage lender warns mortgage defaults are spreading beyond the subprime sector.[49] The rebound is likely the result of Countrywide's Form 10-Q filing (Aug 9) reporting June quarter earnings per-share of 0.81 cents. Mid-November was another particularly turbulent time for Countrywide's share price which does not coincide with firm-specific material disclosures filed with the SEC. However, Barclays Group PLC which provided $2.2 billion in capital to Countrywide (Aug 16) reported a $2.7 billion losses on securities linked to U.S. subprime mortgage market (Nov 15) and Credit Suisse reported that Fannie Mae would be likely to report losses of up to $5 billion consequential to its subprime mortgage portfolio (Nov 21).[50]

REGULATED PORTFOLIOS

The three regulated portfolios include a total of 529 regulated depository financial institutions (banks) identified through Wharton's Bank Regulatory Database, the Federal Reserve Bank of Chicago, and the CRSP database.[51] Table 7 summarises the portfolios.

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and companies selected for inclusion are the leading companies in leading industries - Merrill Lynch likely being one of these.

[48] Countrywide stipulates that as of March 31, 2007, Countrywide Home Loans, Inc., on an unconsolidated basis, had $10.46 billion aggregate carrying value of the $21.13 billion unsecured and unsubordinated indebtedness outstanding (excluding guarantees) of Countrywide Financial Corporation.

[49] Across the 4-day period some of the most reputable hedge funds also reported record losses (See Khandani and Lo 2011)

[50] Fannie Mae is one of the Government Sponsored Enterprises that plays a prominent role in sustaining liquidity in the secondary mortgage market.

[51] The Federal Reserve Bank of Chicago provides the permco identification codes for those banks listed on a U.S. exchange which are necessary for acquiring share price data from CRSP.

The banks have the required quarterly data filed with the Chicago Federal Reserve for Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities in Domestic Offices,* in addition to daily share prices. Schedule RC-P is used to identify the banks that securitize mortgage loans and those that do not.[52] Mortgage sales are evaluated as the proxy for the banks' mortgage securitizations because banks' securitization data is opaque and inconsistent.[53] The *Securitization* portfolio includes 168 banks that sell mortgage loans during the test period, and the *No-Securitization* portfolio includes 80 banks that do not sell mortgage loans during the test period.[54] To increase the strength of the sub-division it is required that the banks in the No-Securitization portfolio did not sell mortgage loans in any quarter from March 2006.[55] The *Other Depository* portfolio includes 281 banks that did not file a RC-P report.[56]

UNREGULATED PORTFOLIOS

The two unregulated portfolios include a total of 1,783 unregulated firms. The securitization activities for these firms cannot be evaluated as they are not required to file mortgage activities with the Chicago Federal Reserve and it is very difficult to ascertain the

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[52] Schedule RC-P is to be completed by all banks with $1 billion or more in total assets and those banks with less than $1 billion in total assets where the residential mortgage banking activities exceeds $10 million for two consecutive quarters (RC-P, 2008).

[53] Schipper and Yohn (2007, p. 79) identify that the contractual provisions provided with the securitization transaction may only be found in "very difficult-to-access sources". Barth et al. (1996) discuss the limitations to interpreting banks off-balance sheet disclosures.

[54] Bank of America is not included in the securitization portfolio because it acquired Countrywide.

[55] March 2006 is the first quarter that banks were required to file Schedule RC-P with the SEC.

[56] Schedule RC-P only needs to be completed by banks with $1 billion or more in total assets and those banks with less than $1 billion in total assets where residential mortgage banking activities exceeds $10 million for two consecutive quarters.

level of activities from the financial reports.[57] The *Finance* portfolio includes 1,768 firms from the finance, insurance and real estate industry with a two-digit SIC of 60-67. Any firm with a two-digit SIC of 60 and a three-digit SIC of 616 is removed. The removal of firms with a two-digit SIC of 60 removes all depository institution and the removal of firms with a three-digit SIC of 616 removes all firms in the same industry as Countrywide (mortgage bankers, loan correspondents and loan brokers).[58] The *Mortgage Bankers* portfolio includes the 15 firms with the same three-digit sic code (616) as Countrywide.

ABNORMAL RETURN CALCULATIONS

Portfolios are constructed for each of the industries before abnormal returns are calculated (Gibbons 1982).[59] Using the R*egulated* portfolio as the example, for the period January 14, 2007 to January 14, 2008, 252 individual portfolios of holding period returns are constructed where each portfolio represents the daily holding period returns generated for all banks on the day. The banks holding period returns are then averaged across the trading day to generate a single 'mean return' observation. The procedure is conducted for each of the 252 trading days. The 252 holding period mean return observations are then regressed on the market index and Countrywide's major event days to determine if the

[57] Many firms net their mortgage activities which make it difficult to ascertain the type of mortgage sold and the level of mortgage loans sold.

[58] The removal of these firms is to minimize the similarity of operations / cash flows to that of Countrywide. Countrywide's firm specific announcements should not affect firms with dissimilar operations / cash flows (Lang and Stulz 1992)

[59] If individual stock returns were individual evaluated this would likely result in the residuals of the individual securities to be contemporaneously correlated across banks because of the clustering on event-date. The aggregations of firms into a portfolio explicitly accounts for the cross-sectional dependence of firm returns,

portfolio of banks realized abnormal returns in the two-day (-1, 0) window of the event.[60] The market index used is the Standard and Poor's Composite index.[61] Countrywide's major events are identified dichotomously; Event = 1 on day 0 and Event =1 on day -1 for event K using a two-day window, 0 otherwise.[62] The model takes the following form:

$$Portfolio\ Return_j = \alpha_j + \beta_j Market\ Return + \delta_K Events_{jK} + \varepsilon_j \quad (1)$$

The null hypothesis of the statistical test is that the average abnormal return for Countrywide's major event days equals zero. Stated in alternate form the interest is to determine whether Countrywide's events, that are signalling deteriorating performance, instigate a negative return to the tested portfolios. An observed significant negative return response suggests two alternate responses a) the market is uncertain about the underlying economic value of other firms irrespective of their current economic health, and/or b) the market views the information provided by the events to be relevant to the industry as a whole such that the event is revealing adverse information about the components of cash

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allowing for conventional tests of significance to be applied to individual portfolio return characteristics (Dann and James 1982; Bernard 1987; Schipper and Thompson 1983)

[60] This analysis relies on the correct identification of information events, and there being no confounding news during the event window. Campbell et al. (1997) Chapter 4 provides a detailed discussion of the assumptions and limitations of an event-study research design.

[61] The market return is included to mitigate potential confounding effects of global news occurring concurrently with Countrywide's events. As sensitivity the value weighted and equally weighted market index were evaluated to replace the Standard and Poor's index. Appendix B, Tables 16-22 report the results. In addition the 4-week U.S. Government Treasury bill secondary market rate (weekly frequency) is included in the evaluation of the regulated portfolios to accommodate for the sensitivity of depository institutions to interest rates. The results are similar to those reported in the text. Appendix B, Tables 19-23 report the results.

[62] All computations in the body of the text are based on two-day trading periods. Using the two-day time period (-1, 0) is motivated by the inability to identify exactly when the announcement became available to the market. Countrywide's announcements could have be released prior to trading or during the trading day. In the chance that the announcements are released subsequent the trading day, the alternate two-day window is also tested where Event = 1 on day 0 and day +1. The one-day window and the three-day window are also evaluated where Event =1 on day 0 (one-day window), and Event =1 on day -1, day 0 and

flows that are common to all firms. Both responses signal that Countrywide's events have contagion effects. The former suggests a financial contagion whereby the market is irrationally penalizing firms irrespective of their health which reciprocates to a high social cost (e.g. Diamond and Dybvig 1983; Chari and Jagannathan 1988). The latter is an information contagion with low to no social cost. If a significant positive return is observed for an adverse event then this suggests a competitive effect whereby, all else being equal, the information revealed by Countrywide's adverse event such as a decline in production could be the consequence of other firms increasing production and taking market share (Lang and Stulz 1992).

CROSS-SECTIONAL ANALYSIS FOR DEGREE OF CONTAGION ACROSS FIRMS

To enhance the cross-sectional analysis of contagion, bank-specific characteristics are evaluated. The regulated *Securitization* and *No-Securitization* portfolios are evaluated together with an indicator variable (Securitization) distinguishing the firms that securitize mortgage loans. The indicator variable aims to target whether Countrywide's dominant position in the mortgage market places Countrywide in a position such that the market views the information reported by Countrywide is relevant to providing information about the opaque risk factors inherent to other banks' securitization activities. Banks' liquidity, leverage, profitability and size as discussed in Section 3.1 are also evaluated for their potential explanatory power in relation to the magnitude of contagion effects.

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day +1 (three-day window) respectively. The different windows provide similar results to those reported in the text. Appendix B Tables 16-22 report the results.

As the securitization activities cannot be estimated with accuracy for the remaining firms, a separate cross-sectional analysis is run to include all regulated and non-regulated firms. An indicator variable is incorporated to identify the regulated banks that reported mortgage sales activities on Schedule RC-P with the Chicago Federal Reserve, and the firms' liquidity, leverage, profitability, and size are evaluated as potential explanatory factors for the magnitude of contagion effects.

The OLS regressions are run separately for each event day. The cross-sectional regressions are estimated where the dependent variable is the cumulative market-adjusted returns (*Cumulative Abnormal Return*) obtained by adding the returns from the two-day event window (-1, 0), and the independent variables control for certain firm characteristics (discussed previously in Section 3.3). The sample number of firms is slightly reduced in the cross-sectional analysis due to the requirement of consistent and non-missing accounting data across all nine events. The model takes the following form:

$$Cumulative\ Abnormal\ Return_j = \alpha_j + \beta_j Leverage + \beta_j Liquidity + \beta_j Loss + \beta_j Return\ on\ Assets + \beta_j Size + \beta_j Securitization + Controls + \varepsilon_j \quad (2)$$

3.5 RESULTS

The results of this chapter suggest that Countrywide's events are contagious to the performance of regulated and unregulated financial firms, and unregulated non-financial firms. The contagion effects observed on the regulated portfolios suggest information transfer while the contagion effects observed on the unregulated portfolios could be the

result of information contagion or financial contagion. The magnitude of the abnormal returns that signal contagion can partial be determined by firms' asset liquidity, profitability, leverage, firm size, and securitization activities.

CONTAGION ARISING FROM COUNTRYWIDE'S EVENTS

The statistically significant stock market reactions to the events of Countrywide distinguish the events which are firm-specific and the events that have been interpreted by the market to be indirectly relevant to the intra-industry and inter-industry portfolios. While Countrywide's disclosures as individual events generated both significant positive and significant negative return responses for the banks whose securitization activities could be identified, the mean return response across the eight disclosures (excluding the merger agreement) was statistically insignificant. However, Countrywide's disclosures generated significant negative abnormal returns to the common stock of regulated and non-regulated finance firms whose securitization activities could not be readily identified.

COUNTRYWIDE FINANCIAL CORPORATION (Table 8, Models 1-2): Model 1 shows the four individual events preceding the merger agreement that result in significant negative abnormal valuation effects for the firm, and Model 2 identifies the average abnormal decline in Countrywide's two-day market adjusted return from the eight events preceding the merger agreement is 6.38 percent (p-value 0.000).[63] Event 3 (capital raising), the borrowing of $11.5 billion, corresponds with a significant negative abnormal valuation of

[63] All percentage responses discussed hereon are average market adjusted two-day holding period returns.

10.26% (p-value 0.002). Event 5 (board change), the departure of Mr. Cisneros who had been on the director board since 2001 and was heavily involved in developing the campaign to fund $1 trillion in home loans to minorities and low-to moderate-income borrowers, counters a significant abnormal adverse change in valuation of 6.54 (p-value 0.033). Mr. Cisneros did not give a specific reason for his departure.[64]

Event 7 (declining operations), which reports that monthly mortgage underwriting is down 32.70 percent from the same time last year (from $67.0b to $45.07b), was also significant and coincides with a 6.26 percent abnormal loss (p-value 0.033). Event 8 (declining operations), provides a clear report of yearly comparisons. Event 8 shows the servicing portfolio has grown by 13.7 percent (from $1.30t to $1.48t), the level of delinquencies as a percentage of unpaid principle balance on the portfolio have increased by 36.1 percent (from 4.60% to 7.20%), the level of foreclosures pending as a percentage of unpaid principle balance on the portfolio have increase by 51.39 percent (from 0.70% to 1.44%), and overall mortgage originations are only down by 11.22 percent (from $468.17b to $415.63b). The disclosure of these statistics spawned the largest abnormal loss of 16.45 percent (p-value 0.000). This rapid price reaction suggests that Countrywide's investors initially under-reacted to the preceding events that signalled Countrywide's deteriorating performance. However, this event does provide greater clarity of Countrywide's

[64] Event 1, the report of strong mortgage underwriting with revenues depleted by a securitization impairment charge of $417 million, generates an insignificant loss of 3.30 percent (p-value 0.167). Event 2, the report that mortgage underwriting volume is down 14 percent from the previous month, coincides with an insignificant 3.27% loss (p-value 0.169).

performance by providing a yearly comparison which likely helped investors to better realize Countrywide's financial performance and position.

The only event that generates a positive share-price response for Countrywide is Event 9 (merger agreement), which corresponds with a 17.59 percent abnormal return (p-value 0.000). This positive response suggests that the merger agreement did protect against bankruptcy transferring wealth from creditors to shareholders. Further, looking across the results for the other portfolios it is noticed that Event 1 (asset impairment), Event 2 (declining operations) and Event 6 (declining operations) which were not significant for Countrywide are significant for one or more of the other portfolios. This result is consistent with Countrywide signalling to the market the potential risk exposures common to firms more generally.

REGULATED SECURITIZATION PORTFOLIO (Table 8, Models 3-4): The banks in the securitization portfolio are identified as being close competitors of Countrywide due to their prominent role of originating and securitizing U.S. mortgage loans. The 12-month return (Jan 14, 2007 – Jan 14, 2008) on the *Regulated Securitization* portfolio was 6.60 percent, but a mean total loss was realized across Countrywide's nine disclosure events (including the merger agreement) of -0.04 percent. However, the average abnormal loss for the portfolio in response to Countrywide's eight events preceding the merger agreement was statistically insignificant. However, six of Countrywide's eight events are statistically significant to the mortgage securitizing banks, but the cumulative effect of all eight events is insignificant which can be seen to be the consequence of the cancelling effect between

negative and positive responses. Significant abnormal declines in the market value of the securitization portfolio are observed for Event 1 (asset impairment), Event 5 (board change), Event 7 (declining operations) and Event 8 (declining operations) of 0.40 percent (p-value 0.093), 0.66 percent (p-value 0.016), 0.70 percent (p-value 0.012), and 0.72 percent (p-value 0.009) respectively, while, Event 2 (declining operations) and Event 4 (declining operations) generate insignificant decreases. Event 3 (capital raising) and Event 6 (declining operations) generate significant abnormal returns of 1.61 percent (p-value 0.000) and 0.63 percent (p-value 0.019) respectively and, the merger announcement also corresponds with a significant increase in market value of 0.45% (p-value 0.068).

The optimistic response to Countrywide borrowing $11.5 billion can suggest that although demand is slowing in the securitization market which has been a dominant funding source of U.S. mortgage loans, the more traditional funding sources are still available for supporting banks' mortgage businesses. The significant positive abnormal return on Event 6 (declining operations) (40% decline in mortgage underwriting) suggests a competitive effect whereby the decline in Countrywide's underwriting suggests other banks have increased their percentage market share of underwriting, However, the positive abnormal return could also be the result of Countrywide's initiatives to help struggling borrowers. The significant abnormal declines in market value on the common stock of the firms that conduct mortgage securitizations observed from Event1 (asset impairment), Event 6 (declining operations), Event 7 (declining operations) and Event 8 (declining

operations) suggests the market interpreted these events to signal negative information about the economic state of securitizing banks generally.

REGULATED NO-SECURITIZATION PORTFOLIO (Table 8, Models 5-6): The No-Securitization portfolio includes the U.S. listed banks that did not sell mortgage loans during, and one year prior to, the test period. Thus the investments for the firms in this portfolio are less likely to be correlated with Countrywide's investments and as such Countrywide's events would be expected to be less likely to convey information to these banks. This does not appear to be the case.[65] The 12-month return (Jan 14, 2007 – Jan 14, 2008) on the *Regulated No- Securitization* portfolio was -42.09 percent and the mean total return across Countrywide's nine disclosure events (including the merger agreement) was 0.78 percent. However, the average abnormal return for the portfolio in response to Countrywide's eight events preceding the merger agreement was 0.01 percent but this marginal increase was statistically insignificant. Similar to the securitization portfolio, Event 3 (capital raising) and Event 6 (declining operations) coincide with significant portfolio market value increases of 1.26 percent (p-value 0.000) and 00.67 percent (p-value 0.020) respectively, and Event 5 (board change) and Event 7 (declining operations) coincide with significant portfolio market value declines of 0.47 percent (p-value 0.073) and 0.71 percent (p-value 0.015), respectively. The merger agreement is associated with an abnormal market value increase of 0.67 percent (p-value 0.185)

[65] With the merger agreement included with the nine events, the market value of the portfolio decreased by 0.62% (p-value 0.025)

REGULATED OTHER-DEPOSITORY PORTFOLIO (Table 8, Models 7-8): The 12-month return (Jan 14, 2007 – Jan 14, 2008) on the *Regulated Other-Depository* portfolio was -48.19 percent, the mean total return on the portfolio across Countrywide's nine disclosure events (including the merger agreement) was -1.51 percent, and the average abnormal loss across the two-day event window in response to Countrywide's eight events preceding the merger agreement was -0.26 percent. Though the average two-day loss may seem marginal, it was statistically significant (p-value 0.002). All Events except Event 2 (declining operations), generate a significant abnormal valuation response for the portfolio of banks that did not conduct mortgage sales activities above $10 million for any two-consecutive quarters. The merger announcement is associated with a significant increase in market value of the portfolio of 0.51% (p-value 0.023).

UNREGULATED FINANCE PORTFOLIO (Table 8, Models 9-10): The 12-month return (Jan 14, 2007 – Jan 14, 2008) on the Un-*Regulated Finance* portfolio was 37.73 percent, the mean total return on the portfolio across Countrywide's nine disclosure events (including the merger agreement) was -2.01 percent, and the average abnormal loss across the two-day event window in response to Countrywide's eight events preceding the merger agreement was -0.30 percent. Though the average two-day loss may seem marginal, it was statistically significant (p-value 0.000).[66] Event 1 (asset impairment), Event 2 (declining operations), Event 3 (capital raising) and Event 7 (declining operations) generated significant decreases to the market value of the portfolio of 0.38 percent (p-value 0.024),

[66] With the merger agreement included with the nine events, the market value of the portfolio decreased by 0.18% (p-value 0.003)

0.39 percent (p-value 0.021), 0.61 percent (p-value 0.001) and 0.53 percent (p-value 0.003) respectively. Events 6 and 7 while Events 4 is against prediction but these events were not statistically significant. The merger announcement generated a statistically significant increase in market value of 0.38% (p-value 0.022).

The unregulated finance portfolio evaluates firms that are not depository institutions and, that do not operate within the same industry (mortgage banking) as Countrywide. Thus, it would not be expected that the market value of this portfolio of firms would be adversely affected by Countrywide's events. However, the adverse effect on the portfolio could be the consequence of these firms also conducting securitizations. Unregulated finance firms are not required to lodge their securitization activities like regulated banks and the disclosures provided in their financial reports are particularly difficult to determine what level of securitization was undertaken, if any. Further, it is institutional investors that generally purchase the securities issued from the unconsolidated securitization conduits and the spectrum of institutions investors is broad extending beyond banks and mortgage bankers.

UNREGULATED MORTGAGE BANKERS PORTFOLIO (Table 8, Models 11-12): The 12-month return (Jan 14, 2007 – Jan 14, 2008) on the Un-*Regulated Mortgage Bankers* portfolio was -49.88 percent, the mean total return on the portfolio across Countrywide's nine disclosure events (including the merger agreement) was -6.10 percent, and the average abnormal loss across the two-day event window in response to Countrywide's eight events preceding the merger agreement was -0.81 percent. Though the average two-day loss may

seem marginal, it was statistically significant (p-value 0.013).[67] The merger announcement was associated with an increase in market value of 0.40% but this was not statistically significant (p-value 0.318). Event 1 (asset impairment), Event 3 (capital raising) and Event 7 (declining operations) coincide with significant market value declines to the immediate competitor portfolio of 1.44 percent (p-value 0.070), 1.58 percent (p-value 0.053) and 1.40 percent (p-value 0.076), respectively. The lack of abnormal responses observed on Countrywide's individual events is the likely consequence that Countrywide's immediate competitors are not prominent competitors in the originate-to-distribute mortgage business.[68]

In summary, if the evaluation of Countrywide's events is just limited to the stock market reactions this would not distinguish whether the event information was firm-specific or indirectly relevant to the industry more generally. Neither would the stock-price reaction indicate whether other firms, inter- and intra-industry are affected. Evaluating the effect of the events on various portfolios of firms addresses this issue. Further, the events evaluated

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[67] With the merger agreement included with the nine events, the market value of the portfolio decreased by 0.62% (p-value 0.025)

[68] For example Valley National Bancorp (VLY - largest immediate industry competitor to Countrywide by market value as at Oct 26, 2007) does not provide clear disclosures about its mortgage origination or securitization activities even in its annual report. However, it can still be determined that its originate-to distribute activities are just a fraction of Countrywide's. For the annual period ended December 31, 2007 VLY's cash flow statement reveals 'proceeds from the sale of loans' (proxy for securitization) of $0.29 billion and 'operating cash outflows from the origination of loans held for sale' of $0.034 billion – both components recognized in 'cash flows from operating activities'. Its 'cash flows from investing activities' suggests further mortgage originations recognizes by 'net increases in loans made to customers' of $0.44 billion (Valley National Bancorp 2008). For the same fiscal period Countrywide originated $415.63 billion mortgage loans. Countrywide does not provide disclosure about its six month level of securitization. Its annual level of securitization for 2007 was $375.94 billion (Countrywide Financial Corporation 2008b). Doral Financial Corporation's (the sixth smallest by market value as at Oct 26, 2007) disclosures are considerably better than both Valley National and Countrywide, its level of mortgage securitization for the

are those that lead to the merger agreement that saved Countrywide from bankruptcy, and the analysis therefore provides insights on the efficiency of the market in impounding potential signals about the declining health of the mortgage market / securitization activities as a whole.

The view that firm-specific events can have consequences for other firms in the same industry irrespective of their economic health, and that the consequences can occur because of the similarity in the components of cash flows, is reinforced by the abnormal return responses generated from Countrywide's events. For the regulated portfolios all of Countrywide's events except Event 2 (declining operations) show contagion effects for the regulated portfolios. For the unregulated portfolios, all of Countrywide's Events except Event 4 (declining operations) and Event 5 (board change) show contagion effects for the unregulated portfolios. This result suggests that the unfolding events in the lead up to the collapse of Countrywide's originate-to-distribute business model did impound and signal important asymmetric information about other firms' business activities, and the following cross-sectional evaluation provides some insight about the sources for the contagion [see Appendix B for additional sensitivity testing discussed next in Section 3.6].

Though the significant abnormal return movements observed are relatively small, it is important to note that the evaluation is just assessing individual firm-specific event disclosures that would not be expected to influence the stock prices of other firms. In addition, Countrywide's prominent position in the mortgage market means that it was

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fiscal period ended December 31, 2007 was $0.30 billion and its mortgage originations for the same period were $1.33 billion (Doral Financial Corporation 2008).

mentioned in the media with a high degree of frequency which biases from finding results as the market is being continually informed, and material events may have come as less of a surprise then they might have otherwise.[69] Further, the market may have been slow to consider systemic aspects and the nature of the inherent risk exposures associated with firms' mortgage securitization activities, and instead, principally attributed fluctuations in business performance to the management of the business or other factors particular to Countrywide.

CROSS-SECTIONAL ANALYSIS FOR DEGREE OF CONTAGION ACROSS FIRMS

The significant abnormal returns signalling contagion from Countrywide's events can partially be determined by firm characteristics. The explanatory characteristics include securitization, asset liquidity, leverage, firm size, return on assets, Standard and Poor's ranking and loss. The results for the cross-sectional analysis are reported in Table 9. The results from the cross-sectional analysis substantiate that the market is considering how other firms are indirectly subject to the nine events revealing the deteriorating performance of Countrywide. The nine events are not evaluated collectively as the events are not independent of each other, the information revealed in a current event builds upon the information revealed in a prior event (Fama and MacBeth 1973).

Table 9 Panel A, shows the cross-sectional results for the regulated banks that reported mortgage sales activities on Schedule RC-P filed with the Chicago Federal

[69] The negative annual returns realized by three of the portfolios provide some evidence to support the difficulty of mapping specific 8-K disclosures to the repricing of securities of other firms in the same

Reserve.[70] The analysis of banks' *Leverage* (total debt to total asset), suggests that the market may have some difficulty distinguishing the actual financial risk of banks. Four of the nine events have significant coefficient estimates. However, when evaluating the direction of the coefficients with the market's perceived adverse (favourable) information effect from Countrywide's events, the sensitivity of the banks' *Leverage* varied. It was expected that banks with a greater level of debt would be more susceptible to contagion effects. From the sign of each of the significant coefficients it appears that banks with a greater level of debt were less susceptible to contagion effects as all coefficients are directional against prediction. Potentially this result could suggest that the market perceives banks that are more highly levered are monitored more closely by the bank regulators.

Alternatively, the result could suggest that the market is concerned that the banks with less on-balance sheet debt may be exposed to certain levels of risks from their off-balance securitization conduits (e.g. Landsman et al. 2008). The analysis of banks' *Liquidity* (total cash and short-term investments to total asset) is statistically significant for 6 of the 9 events and five of the coefficients (Events 2, 3, 4, 7 and 8) provide evidence consistent with the assertion that banks that had a higher level of liquid (transparent) assets are less susceptible to contagion effects for adverse (favourable) firm events. In addition, banks' with higher return on assets were also showed some evidence to be less susceptible to contagion effects while banks that made a loss in the immediate quarter were highly

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industry.

[70] The nine events are not evaluated collectively as the events are not independent of each other, the information revealed in the current events builds upon the information revealed in the previous event (Fama and MacBeth 1973)

susceptible to contagion effects. The estimated coefficients for the *Size* (log Market value) variable is statistically significant for 6 of the 9 events and all six coefficients (for Events 1, 2, 4, 6, 7 and 9) provide evidence consistent with the assertion that the larger the bank the more negative (positive) will be the impact on its stock return to a large bank making a material disclosure that the market perceives as adverse (favourable) information. This result is likely due to the similarity in the type of operations the banks engage, invoking the concern of the market.

The variable *Securitization* provides support for the assertion that, ceteris paribus, banks that sold mortgage loans were more sensitive to information-based contagion affects. The estimated coefficients for the *Securitization* variable are significant for five of the eight events preceding the merger agreement. The directional sign of the coefficients provide evidence predominantly consistent with the hypothesis that Banks who engage in mortgage sales activities are particularly exposed to information-based contagion when new information relating to the state of Countrywide's mortgage business became available. Only one of the five significant coefficients is against predictions and that is Event 7 (declining operations). The significance of the banks' mortgage sales activities, *Securitization Ratio* (mortgage sales to total assets) and the interaction variable *Securitization Ratio* * *Loss* (takes the value of 1 if the firm made a loss in the immediate quarter, 0 otherwise), provide some support for the hypothesis that the banks who engaged in a higher level of mortgage sales activities are more exposed to contagion effects from Countrywide's events.

Table 9 Panel B show that the cross-sectional results all firms are consistent with those discussed above. The *Mortgage Securitization* variable is significant for 7 of the 9 events and all seven coefficients provide evidence consistent with the assertion that for the banks perceived by the market to be involved in the securitization of mortgage loans, the more negative (positive) will be the impact on its stock return to a large bank making a material adverse (favourable) disclosure about its mortgage activities.

3.6 *SENSITIVITY*

Various sensitivities are conducted to test the robustness of the results reported in the body of the text. The results of the sensitivities hold consistency with the findings: the events reporting the declining performance of Countrywide indirectly informed the market about other firms' potential risk exposures to the deteriorating state of the mortgage market and this resulted in significant abnormal returns to those firms. Initially, the prime focus of this study was on banks due to their more transparent securitization activities that can be proxied by level of mortgage sales. However, given the expanse of the turmoil in the capital markets from the global financial crisis and, the increasing significance of non-mortgage securitization activities which enabled firms in a variety of industries, to redistribute and reduce risk, it seemed necessary to evaluate the whole market, and include this in the focus of the study. Accordingly, the sensitivities conducted are predominantly centred to addressing possible bias of the model across the whole market.[71] The sensitivities include

[71] The sensitivities include an additional event in the analysis, the $2 billion capital injection by Bank of America.

evaluating different event windows, different market indices, different firm characteristics and degree of contagion across firms controlling for different industries [See Appendix B for all tables referred to in this discussion].[72]

EVENT WINDOW (TABLES 16-22): The correct identification of information events, and there being no confounding news during the event window is a critical factor for event studies (Campbell et al. 1997, Chapter 4). For this reason the event window is kept to a two-day window as Countrywide's announcements could have be released prior to trading or during the trading day. In the chance that the announcements are released subsequent the trading day, the alternate two-day window is also tested where Event = 1 on day 0 and day +1. The one-day window and the three-day window are also evaluated where Event =1 on day 0 (one-day window), and Event =1 on day -1, day 0 and day +1 (three-day window) respectively. The different windows provide similar results to those reported in the text.

MARKET INDICES (TABLES 17-24): The *Standard & Poor's index* is included in the main results to mitigate potential confounding effects of global news occurring concurrently with Countrywide's events. Alternate market indices, including the equally-weighted market index and the value-weighted market index, are evaluated as alternate controls. These CRSP indices calculate for equal-weighted and value-weighted portfolios of all available stocks each trading period, based on individual stock returns (Harvard Business School 2010). The index choice does generate minor fluctuations in the magnitude

[72] Additional *Industry specific (Sensitivities 10-13, Tables 22-25)* is also conducted but not reported.

of the abnormal return for some of the individual events and individual portfolios but the results are generally consistent.

TREASURY RATE (TABLES 21-23): For the regulated portfolios, the weekly U.S. Government Treasury bills (secondary market) rate is included in the evaluation of Countrywide's events to accommodate for the sensitivity of depository institutions to interest rates (Federal Reserve Bank of New York 2010). This rate is seen as the most stringent rate to control for potential return implications from the volatile spreads that were occurring in the secondary mortgage market (and markets more generally) from the falling demand in various mortgage products. The variable is not significant for the regulated *(No-) Securitization* portfolios but does show to be significant for the regulated *Other Depository* portfolio but the magnitude of the reported abnormal returns do not vary considerably.

INTERACTION WITH CORE CAPITAL AND BOOK-TO-MARKET (TABLE 24): Banks capital ratios is the more tradition measure for measuring risk factors for banks and is tested as an alternate measure for leverage. Leverage is used in the primary tests as regulators attempt to account for banks securitization activities when addressing banks capital adequacy ratios which would likely effect the a focus of this study's assessment of securitization on share price responses (BCBS 2006; Barth and Landsman 2010). Banks' are required by law to hold a minimum 4% core capital (Tier 1) to risk weighted assets.[73] If Countrywide's major events convey negative information about the industry, all else being equal, the percentage decrease in the equity of other banks decreases the higher the capital threshold. The higher

the bank's capital threshold the less elastic will be the value of the bank's equity to the bad event with respect to the total value of the firm. This appears to be the case for the two events (Event 3 and Event 7) that a banks' tier 1 ratio was important to explaining the magnitude of abnormal returns.

Firms' book-to-price ratios are also considered as another potential measure of risk that may help explain the magnitude of abnormal returns. Book-to-price ratios exist as the accounting measures book values, rather than risk.[74] As suggested by Fama and French (1992, 1993, 1997) in efficient markets high book-to-market stocks are positively correlated with subsequent stock returns to compensate for risk. The competing explanation is systematic mispricing, where market participants underestimate future earnings for high book-to-market stocks and overestimate future earnings for low book-to-market stock.[75] Whether in efficient or inefficient markets a positive correlation between stocks' returns and book-to-price appears possible. However, given that book-to-price may also capture the degree of complexity and level of informational opacity due to firms' loan activities a negative coefficient is expect to be associated with Countrywide's bad news events. This is the case for four events (Events 6, 7, 9 and 10).

DEGREE OF CONTAGION CONTROLLING FOR INDUSTRIES (TABLES 24 TO 27): Tables 24 to 27 tests if the degree of contagion across firms varies when industry controls are

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[73] To be well-capitalized under federal banking regulatory agency definitions a bank must have a Tier 1 Capital of at least 6% and a combined Tier 1 and Tier 2 capital ratio of at least 10%. At minimum, banks are required to have a Tier 1 ratio of at least 4% and a combined Tier 1 and Tier 2 ratio of at least 8%

[74] If all assets and liabilities were accounted for using unbiased fair value accounting then book-to-price ratios would be equal to unity for all levels of risk (Penman et al. 2007).

introduced. Irrespective of the industry controls, the significant abnormal returns signalling contagion from Countrywide's events can partially be determined by firm characteristics. The firm characteristics evaluated for this sensitivity are consistent with the main tests and include securitization (for regulated banks), asset liquidity, leverage, firm size, and profitability. Irrespective of the industry control, the results (Tables 24 to 27) from the cross-sectional analysis that evaluates all (non-) regulated finance firms and non-finance firms substantiate that the market was considering how other firms may have been indirectly subject to the events revealing the deteriorating performance of Countrywide.

Table 25 introduces the variable *Mortgage Securitization* to control for (by an indicator variable) the regulated banks indicating their level of activity in the mortgage market, by filing Schedule RC-P with the Chicago Fed which indicates the level of mortgage sales. The *Mortgage Securitization* variable is significant for all events accept Event 8 (performance decline) Table 25, Panel B, then evaluates if the contagion is more pronounced for the bank characteristics (by interacting the *Mortgage Securitization* variable with the firm characteristics evaluated) that indicated their activity in the mortgage market. There is some evidence to suggest that the characteristics of the *Mortgage Securitization* banks did increase the degree of contagion. Tables 26 evaluates the degree of contagion across just the regulated and unregulated finance firms by the indicator variable *Regulated*, and provides some evidence to suggest that regulated firm characteristics helped to determine the magnitude of the abnormal returns. Table 27 evaluates the degree of

[75] La Porta et al (1997), Skinner and Sloan (2002), and Ali et al. (2003) propose mispricing to be greater for stocks with higher expected volatility.

contagion across all firms and uses an indicator variable for each industry, and the results suggest that a firm's industry may have had some effect on the degree of contagion across firms.[76]

3.7 *CONCLUSIONS*

This chapter examines the contagion effects to regulated banks, unregulated finance firms and, unregulated non-finance firms arising from Countrywide Financial Corporation's rapid financial decline to near-bankruptcy. Countrywide's core business was the underwriting of mortgage loans and the sale of those mortgage loans onto the secondary mortgage market through securitization. These activities are common to many regulated banks. The prime concern of this study is that because of the complexity of banks' securitization activities, a large amount of opaque information about banks' securitization activities built up in the background. A consequence of the build up of this opaque information is sudden price adjustments when the information is finally released. As a regulated bank holding company that was the largest U.S. mortgage lender in 2007, the timing of Countrywide's financial decline distinguishes it capable of signalling to the market potential risk exposures underlying the mortgage activities of other banks in the industry.

The results of this chapter provide evidence that Countrywide's firm specific events did generate significant abnormal return responses to the regulated and unregulated finance

[76] A further robustness test is evaluated in Table 28. Table 28 determines if the results change considerably when the standard errors are adjusted for auto-correlation using the Newey-West Test. The results are

firms and unregulated non-finance firms. This evidence is consistent with the existence of a systematic level of undisclosed information and resulting information asymmetry, and some resolution of this private information build up occurring through information-based contagion. In addition, the results suggest banks that sold mortgage loans were more sensitive to information-based contagion affects and that the larger the bank the more negative (positive) the stock price effects of the information contagion process involving adverse (favourable) news. The strength of the *mortgage loan sales* and *size* results are likely due to the similarity in the banks' operations.

A potential concern that may be raised is the significant abnormal return movements discussed in this chapter are economically relatively small. However, the evaluation is just assessing individual firm-specific event disclosures that would not be expected to influence the stock prices of other firms. In addition, Countrywide's prominent position in the mortgage market means that it was mentioned in the media with a high degree of frequency which biases from finding results as the market is being continually informed, and material events may have come as less of a surprise then they might have otherwise. Further, the market may have been slow to consider systemic aspects and the nature of the inherent risk exposures associated with firms' mortgage securitization activities, and instead, principally attributed fluctuations in business performance to the management of the business or other factors particular to Countrywide.

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substantially consistent.

In summary, the results of this chapter suggest that the events revealing the deteriorating performance of Countrywide had systematic consequences for the banks that also conducted mortgage securitizations during 2007. This result suggest significant information asymmetry existed between banks and investors about the operating and financial risk exposures underlying the business model which involved mortgage sales by way of securitization. A primary problem is that this business model is predominantly transacted off-balance sheet, leading to risk exposures that are off balance sheet and therefore not revealed to investors in a timely manner. The information asymmetry experienced by investors was also exacerbated by wider macroeconomic conditions including the state of interest rates and real estate market for family homes. However, the implications of these latter conditions for banks might have been discernable had the banks been required to consolidate their off-balance sheet securitization conduits. These findings can provide useful insights for public policy orientated towards shaping the securitization reporting regulations.

CHAPTER 4

MORTGAGE SECURITIZATION AND THE RELEVANCE OF FAIR VALUE ASSETS

ABSTRACT: The application of fair value accounting to financial assets has attracted much criticism in the period subsequent to the global financial crisis. This chapter provides evidence that concerns relating to the reduced relevance of *Level 3* financial are primarily attributable to those assets arising as a consequence of securitization transactions (i.e., retained interests and mortgage service rights) rather than *Level 3* assets generally. Furthermore, there is evidence that the disclosures relating to securitization transactions are likely insufficient and potentially relevant information is being omitted from the financial reports. Accordingly, the criticism being leveled against Statement of Financial Accounting Standards No. 157 might more correctly be directed towards Statement of Financial Accounting Standards No. 140.

Keywords: Securitization; banks; retained interests; implicit recourse; SFAS 157; SFAS 140

Data Availability: Data used in this study is available from public sources

JEL Classification: G10, G21, M41, M48,

4.1 INTRODUCTION

This chapter evaluates the impact of bank asset securitization activities on the relevance of recognised *Level 3* fair value assets by banks under Statement of Financial Accounting Standards No. 157 (FASB 2006c, hereafter SFAS 157). The prior literature suggests recognised bank *Level 3* assets are less relevant than recognised bank *Level 1* and *Level 2* assets, and attributes this to concerns relating to the reliability of the measurement of *Level 3* assets (e.g. Song et al. 2010; Goh et al. 2009). These same concerns are reflected in the debate surrounding the application of fair value accounting generally (Laux and Leuz 2009). However, for many banks a significant proportion of the *Level 3* assets arise from securitisation transactions, accounted for as sale transactions in accordance with Statement of Financial Accounting Standards No. 140 (FASB 2000, hereafter SFAS 140). Accordingly, a number of issues require address in determining whether attention has been properly directed at SFAS 157, or rather whether it should be focussed on SFAS 140. First, is the reduced relevance of recognised *Level 3* assets attributable to all such assets, or primarily those arising from securitisation transactions. Second, are there unrecognised liabilities arising from securitisation transactions, which are likely correlated with recognised *Level 3* assets.

During the global financial crisis, the level of losses reported by firms led to claims of systemic failure in the financial reporting process which in turn, prompted increasing calls for additional regulatory oversight of external reporting (PWGFM 2008; GAO 2009).[77] Through the Emergency Economic Stabilization Act (2008), the U.S. Congress put

[77] See also Hazen (2009); U.S. Treasury (2009); Davidoff (2009)

strong pressure on the FASB to change the fair value accounting rules.[78] The rational for criticising the existing regulatory oversight was the provision of too much flexibility given to firms through the fair value measurement requirements of SFAS 157 (2006c). Depending on the fungibility of the firms' assets (and liabilities), SFAS 157 (2006c) requires the value of the firms' assets (liabilities) to be measured using either direct market inputs (*Level 1*), a combination of direct and indirect market inputs (*Level 2*), or unobservable inputs (*Level 3*). The criticism about the flexibility of the SFAS 157 (2006c) measurement requirements is reinforced by academic literature which finds the banks' *Level 3* asset recognitions provide less relevant information to the market than the banks' *Level 1* and *Level 2* asset recognitions (e.g. Song et al. 2010; Goh et al. 2009). These studies argue that the relatively lower relevance is due to the uncertainty with the parameters of the *Level 3* measurement requirements that can enable managers to estimate fair values using subjective valuation techniques in opportunistic ways.

However, these criticisms overlook the extent to which securitisation transactions accounted for under SFAS 140 have contributed to an accumulation of *Level 3* assets on the balance sheets of some banks and opacity in the financial reports of banks. Asset securitization is a significant part of many banks operations and the removal of the securitized assets, through the *sales* accounting treatment afforded under SFAS 140, continues to give rise to debate as to how this reflects the economic reality of the transactions. In particular, there are concerns with respect to the on-going risk exposures arising from the securitized assets (e.g. Schipper and Yohn 2007; Barth and Landsman 2010). This paperpaper considers whether the lower relevance of *Level 3* assets is primarily

[78] See also Forbes (2009); American Bankers Association (2008); Hughes and Gillian (2008)

attributable assets arising from asset securitisations (e.g., residual interests), rather than *Level 3* assets generally. Furthermore, consideration is given to whether there are unrecognised liabilities arising from asset securitisations which are likely correlated with *Level 3* assets arising from securitisation transactions.

Sample firms for this study are U.S. listed regulated banks as this includes firms who have significant financial assets valued under SFAS 157, as well as firms with a diversity of asset securitization activities (Dechow et al. 2010). Evidence is provided that when sample firms are restricted to those without asset securitisations there is little difference in the relevance of recognised *Level 1*, *Level 2* and *Level 3* assets. When the sample is expanded to include firms with asset securitizations but without controls for asset securitization, consistent with the prior literature, there is evidence that *Level 3* assets are less relevant. However, this result does not persist when controls are introduced for the *Level 3* assets arising from securitization transactions and unrecognized liabilities. This suggests that the reduced relevance of *Level 3* assets is primarily attributable to assets arising from asset securitization transactions rather than *Level 3* assets generally, and unrecognized liabilities which are correlated with these same *Level 3* assets.

This study contributes to the regulatory debate surrounding the application of fair value accounting in SFAS 157. It also contributes to the academic literature focussed on SFAS 157 by considering an alternate explanation for the lower relevance of recognised *Level 3* assets. Critically, it takes into account concerns raised about the opacity and complexity of the banks' unconsolidated (off-balance sheet) securitization activities (Gorton 2008b; Hellwig 2009). Evidence is provided that the lower relevance of *Level 3* assets is restricted to firms undertaking asset securitizations, and this likely reflects

concerns with the valuation of *Level 3* assets arising from securitization and unrecognised liabilities. Accordingly, the criticism being levelled against SFAS 157 might more correctly be directed towards SFAS 140.

The chapter is organized as follows. Section 4.2 discusses the background to securitization. Section 4.3 reviews prior research and develops the hypothesis. Section 4.4 describes the data. Sections 4.5 and 4.6 present the empirical results and sensitivity analysis and Section 4.7 concludes.

4.2 BACKGROUND TO SECURITIZATION AND THE BANKS' *LEVEL 3* ASSETS

Historically, banks used deposits as the primary funding source for mortgage loans which involved banks retaining the mortgage loans on the balance sheet until they were discharged.[79] However, when securitization became feasible in the mid-1980s, it was rapidly adopted by banks as an alternate financing function for mortgage loans, and as a means to diversify the risk of mortgage default.[80] Banks no longer retain all the mortgage loans they originate on the balance sheet, but sell an increasing proportion of the mortgage loans on to investors through securitization.[81] The securitization transaction involves the bank selling a pool of mortgage loans to a special purpose entity (SPE – a passive

[79] A profit is earned from the difference between the interest rates on the loan and deposits

[80] In addition, benefits of securitization include a) the facilitation of off-balance sheet financing, b) the conversion of illiquid assets into liquid securities, c) the provision of exposure management for credit risk and interest rate risk, and d) the alleviation of the mismatch problem that arises due to differences in tenor and characteristics of the assets and liabilities related to the mortgage loans they originate (see Ryan 2007, p.192; Deacon 2007, p. 4; Dechow and Shakespeare 2009, p. 100). Wachter (1990) and Peterson (2007a) provide concise discussions on the evolution of securitization.

[81] Securitization allows banks to remove and repackage mortgage loans that have built up on a bank's balance sheet and sell these on, in the secondary mortgage market. Credit risk is removed from the banks' balance sheet and cash reserves increase as loans are sold on. In turn, the reduction in both credit risk and increased cash on balance sheet provides banks with the regulatory ability to provide additional loans for new or

'bankrupt remote' conduit) that transforms the mortgage pool into securities which are issued to investors (this is commonly referred as the 'originate-to-distribute' business model).[82] The sale of the mortgage pool to the SPE (SPE and securitization conduit will be used interchangeably) results in the mortgage loans being removed from the bank's balance sheet on the provisory of the transaction meeting the *sale* accounting requirements under the Statement of Financial Accounting Standards No. 140 (2000) [Appendix C details the development of the accounting standards for securitization].[83]

When banks sell mortgage loans to securitization conduits, and they have established that control is relinquished over the mortgage loans, the loans (and associated liabilities) are removed from the banks' balance sheets (2000, paragraph 9).[84] The vast majority of securitization transactions result in the banks' reporting a securitization gain (Barth and Taylor 2010; Dechow et al. 2010). The reported gain is the difference between the securitization cash proceeds, less the value of retained interest, the incurred liabilities and the acquisition cost of the underlying mortgage loans.[85] Any interests retained (and liabilities) represent the banks' expected future cash flows from (exposure to) the assets transferred to the SPE. The value of the retained interests (and liabilities) are based on their

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existing customers. See Altunbas et al. (2007), Ashcraft and Schuermann (2008), and Fabozzi and Kothari (2007) for further details on the securitization process

[82] An SPE acts as a depository for a specific group of assets in a securitization, and in turn, issues securities to the marketplace for purchase by investors

[83] See also Barth and Taylor (2010), Dechow and Shakespeare (2009) and Ryan (2008).

[84] SFAS 156 (2006b) became mandatory for the first fiscal year that begins after September 15, 2006; to amend SFAS 140 (2000) and the paragraph references for the most part are equivalent. The main amendment is that SFAS 156 allows for the fair valuing of servicing rights.

[85] Incurred liabilities include any representations and warranties made by the mortgage securitizer about the quality of the mortgage loans securitized. The retained interests are recognized as assets. Subordinate securities are common interests retained by the securitizing bank. These securities have subordinated access to the underlying cash flows which are higher risk, and therefore will be the first to suffer losses in value in the event that the underlying financial assets default. If the underlying assets default the securitizing bank will

relative fair values at the date of transfer (2006b, paragraph 10). The fair value of the interests not transferred, typically cannot be ascertained from direct (*Level 1*) or indirect (level 2) market prices for equivalent assets (liabilities), and must be estimated using the *Level 3* measurement criterion of SFAS 157 (2006c) (Barth and Landsman 2010; Ryan 2008).[86]

For banks that securitize mortgage loans, their *Level 3* asset recognitions primarily comprise of interests relating to the securitization activities which expose the firm to risk of loss, either through non-receipt of expected cash inflows, or through implicit and explicit promises to make good the losses suffered by the SPE if borrowers fail to repay their loan. Mortgage servicing rights (MSRs) and subordinate securities are the typical interests retained by the banks.[87] Countrywide Financial Corporation (Countrywide) the largest U.S. mortgage lender in 2007 identifies in its annual report that "the precise market value of MSRs and retained interests cannot be readily determined because these assets are not

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have to write-off the asset. In 2007, Countrywide Financial Corp. wrote-off $1.28 billion in relation to its subordinate securities and this represented 38 percent of its mortgage based revenues (Countrywide 2008).

[86] SFAS 157 (2006c) does not introduce new fair value measurement requirements; rather SFAS 157 provides a vigorous and consistent framework for fair value measurement which is required by many of the accounting standards (See Appendix D for details of the development of fair value accounting).

[87] When the originator sells / securitizer the mortgage loans to the special purpose entity (SPE), the SPE typically does not have the capacity to provide the necessary administrative support to service the mortgage loans. Instead the administrative servicing duties are contractually separated from the mortgages loans when they are securitized and the asset originator receives fee based revenues for retaining the servicing rights (referred to as mortgage servicing rights). The servicing fees can provide substantial cash flows for the originator (Countrywide realized $3 billion fiscal year end 2007), and these are valued at the time of securitization and recognized as a mortgage service right on the balance sheet. The value of the mortgage servicing rights (MSRs) recognized on the balance sheet is based on the fair value estimation of the servicing income earned on each and every loan in the portfolio. In the event borrowers do not honour their obligations to the underlying mortgage loans, MSRs will be impacted. Subordinate securities are retained by the originator to address moral hazard problems associated with the origination and securitization process. These securities are high risk as they have subordinated access to the underlying cash flows and will be the first to suffer losses in value in the event that the underlying mortgage loans default. Banks also retain other interests from their securitization activities which include, but are not limited to, interest-only securities, principal-only securities and residual securities which have similar properties to subordinate securities but are not as high risk.

actively traded in stand-alone markets (CFC 2008b, p. 54)". Wells Fargo and Company (WFC) is even more direct with its disclosures identifying that approximately 18% of its fair value assets required *Level 3* measurements and "Virtually all of our financial assets valued using *Level 3* measurements represented MSRs (WFC 2008, p. 41)." While, East West Bancorp, Inc. (EWBC) provides a broader elaboration of its *Level 3* asset types which "typically includes mortgage servicing assets, impaired loans, private label mortgage-backed securities, retained residual interests in securitizations, and purchased residual securities (EWBC 2008, p. 11)".

For the banks that don't securitize mortgage loans, their *Level 3* asset recognitions are primarily comprised of available-for-sale investment securities and impaired loans.[88] Available-for-sale investment securities are an important part of all the banks' asset structures as these securities serve as the primary source of liquidity that can be interchanged quickly through repurchase agreements, to manage the daily liquidity requirements of deposit withdrawals and loan demands. In the period preceding the global financial crisis mortgage-backed securities that comprised the product of the other banks' mortgage securitization activities was increasingly utilized as collateral for overnight repurchase agreements.[89]

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[88] While some banks' do not securitize mortgage loans they still invest in mortgage-backed securities – the product of other banks securitization activities, as these securities were increasingly utilized as collateral for overnight repurchase agreements in the period preceding the global financial crisis. Royal Bancshares of Pennsylvania, Inc. (2008), Cathay General Bancorp (2008) and Pacific Mercantile Bancorp (2008) are examples of three banks that did not securitize mortgage loans during 2008 and whose *Level 3* assets were predominantly comprised of impaired loans and available-for-sale investment securities

[89] Repurchase agreements are regulated institutional transactions that enable the immediate acquisition of funds by selling securities and simultaneously agreeing to repurchase the same or similar securities after a specified time at a given price. Repurchase agreements are close substitutes for federal funds borrowings and are typically short term transactions (a week or less) conducted between banks in amounts greater than a $1 million (Lumpkin 1993).

However, as the global financial crisis unfolded, demand for mortgage-backed securities diminished, impacting their liquidity and value as collateral (The Economist 2010; McCormick 2008). Thus, while banks such as Royal Bancshares of Pennsylvania, Inc. (2008), Cathay General Bancorp (2008) and Pacific Mercantile Bancorp (2008) did not securitize mortgage loans during 2008 they needed to use *Level 3* measurement requirements for certain securities they held in relation to other banks' securitization activities and also for their impaired loans. The *Level 3* assets of the banks' that do not securitize mortgage loans are not exposed to the same risks as securitizing banks. Securitizing banks' are exposed directly to the first loss retained interests positions and the cash inflow reductions on servicing assets, from the potential default of mortgage loans they securitized in unconsolidated securitization conduits.

4.3 PRIOR RESEARCH AND THE SECURITIZATION IMPACT ON *LEVEL 3* ASSETS

The value relevance literature assumes that if accounting information is found embedded in the market's pricing of the firms' equity, that information is considered to be associated with the information set that investors used to value the company (Barth et al. 2004).[90] Recent studies suggest the accounting information for the banks' *Level 1* and *Level 2* asset recognitions are more relevant to the market than the banks' *Level 3* asset recognitions. Specifically, Goh et al. (2009) who find a lower relevance for banks' recognised *Level 3* assets compared to the banks' recognised *Level 1* and *Level 2* assets. Similarly, Song et al. (2010) find that *Level 3* assets are less relevant than *Level 1* and *Level*

[90] Barth et al. (2001) provides a concise review of the earlier studies evaluating firms' fair value items and Song et al. (2010) provides a concise summary of the more recent value relevance studies

2 assets and there is evidence that this result is sensitive to the operation of particular governance mechanisms. However, these governance mechanisms are themselves likely associated with firm characteristics, and it is possible that there may be differences in the relevance of fair value disclosures across different types of assets or firms. Of particular concern are whether there are differences in the extent to which these firms undertake asset securitisation, the accounting for which has also been subject to much criticism.

LEVEL 3 ASSETS AND BANK MORTGAGE SECURITIZATIONS

The removal of securitized assets from the banks' balance sheets continues to give rise to debate, particularly with respect to distinguishing the transfers of financial assets that are sales from the transfers that are secured borrowings (Schipper and Yohn 2007; Reilly 2008). The debate has intensified as a consequence of the level of outstanding mortgage-backed securities resulting from firms' securitization activities which by the end of 2007 amounted to USD $9.14 trillion (United States Government 2010; SIFMA 2010).[91]

Ultimately, securitization is a funding, and risk transfer transaction. Securitizing loans provides instant return of some of the mortgage loan cash flows and appears to transfer some risk of loss, through loan default, on to the SPE and its investors. As the U.S. 2007 level of risk transfer by securitization represents the largest segment of the debt market in the world, there is considerable speculation that securitization played a key role

[91] This number reflects 69 percent of the total $14.53 trillion mortgage-related debt outstanding and 28 percent of the total $32.32 trillion of U.S. bond market debt Seven years earlier at the end of 2000, the outstanding mortgage-related debt from securitization was $3.57 trillion. The $9.14 trillion at the close of 2007 is 2.56 times the level at the end of 2000, the peak of the dotcom bubble.

in the global financial crisis (Gieve 2008; Kettering 2008).[92] The reason for the speculation is twofold. First, the accounting framework that allows the SPEs to be unconsolidated has led to the banking system metamorphosing into an off-balance sheet system (the *shadow banking system*). Second, the off-balance sheet treatment impedes the investors' ability to assess the quality of the underlying assets securitized and the level of ongoing risk exposures to those assets.[93]

The removal of securitized assets from the banks' balance sheets continues to give rise to debate, particularly with respect to distinguishing the transfers of financial assets that are sales from the transfers that are secured borrowings (Schipper and Yohn 2007; Reilly 2008). Although securitizations accounted for as *sales* under SFAS 140 are intended to transfer the risks (and rewards) of the securitized assets onto investors, there is mounting evidence indicating that the securitizing firms are still exposed to the assets. This exposure is difficult to quantify due to the lack of transparency provided by the accounting requirements (Barth and Landsman 2010), and the complex partitioning of the underlying asset risks within the unconsolidated special purpose entities compounds the inability for investors, even institutional investors, to trace the firms' exposure to the underlying securitized mortgage assets.[94]

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[92] Hellwig (2009), Blinder (2007), Stiglitz (2007), Mayer et al. (2009); and Mayer and Pence (2008) provide a concise summary of the crisis and research that has sought to explain the crisis

[93] Ryan (2008), Gorton, (2008b), and Crotty (2008) provide concise discussions and evidence of the trend in the growing off-balance sheet activities of banks' businesses.

[94] Shin (2009) and Ryan (2007) show that the retention of banks' risk exposures is a consequence of the links banks retain with the off-balance sheet SPEs where the amount of risk transference achieved through securitization is dependent on the structure of the transaction. Ryan (2008) and Gorton (2008b) show that the complex partitioning of the underlying asset risks within the SPEs through (re) securitizations, credit derivatives, and other financial transactions increases the opacity of the on-going risk exposures. This is further backup by Cheng et al. (2008) who find banks selling assets through securitization demonstrate higher levels of information opacity compared to banks not using securitization and Haggard and Howe (2007) who find information opacity increases with the magnitude of securitized assets.

The securitizations of mortgage loans are no longer established through simple pass-through special purpose entity (SPE or trust) as they were in the 1970s but through multiple SPEs referred to as master SPEs (Mason and Rosner 2007).[95] Each SPE within the master SPE is routinely structured so that multiple classes of mortgage-backed securities (MBSs) can be issued on the underlying mortgage loans. The grade of the security determines the priority to accessing the underlying cash flows.[96] Securities which have deferred or subordinated access to the underlying cash flows are higher risk and will be the first to suffer losses in value, in event the underlying mortgage loans default. Such high risk securities are considered first loss positions, and they are often retained by the asset originator to address moral hazard problems associated with the origination and securitization process. These subordinate securities (referred to as credit enhancing securities or retained interests) do not trade in liquid markets and thus, require the use of unobservable market inputs to recognize the fair value of these securities (Dechow et al. 2010).[97]

Furthermore, it is increasingly understood that securitizing banks provide credit support beyond contractual obligations for the securitized assets, and that these

[95] A simple pass through structure would be considerably more difficult to prove 'bankruptcy remoteness' for sales accounting. The multi-trust (SPE) structuring ensures (or is meant to ensure) 'bankruptcy remoteness' and increases the efficiency of the securitization process by preventing the costs of creating of new legal SPEs each time a new pool of mortgage loans is ready for sale.

[96] See Deacon (2007), Ryan (2007) and Ashcraft and Schuermann (2008) for the other complex structural features of special purpose entities that can be designed with a prima fascia to protect investors from losses on the underlying mortgage assets which include, but not limited too, excess spread, shifting interest, and performance triggers.

[97] Moody's (1987, 2003) provides a good illustrative discussion of the implications of the retention of these credit enhancing 'first loss' position securities whereby if any losses in the cash flows streams from the underlying asset pool occurs this will first be absorbed as credit losses to the credit enhancing securities.

arrangements leave the securitizing banks with ongoing off-balance sheet liabilities which cannot be quantified (e.g. Vermilyea et al. 2008; Standard & Poor's 2001).

Even though implicit recourse retained by the firm cannot be quantified, it is apparent that the market is aware it exists. Focusing on banks investors, Niu and Richardson (2006) show that the banks' off-balance sheet liabilities associated with securitization activities have the same relevance as the banks' on-balance sheet debt in explaining firm risk. Similarly, Landsman et al. (2008) provide evidence that investors perceive the risks inherent in the securitized assets are, to a large extent still held by the originating firm, even though these risks are carried off-balance sheet. Further, Cheng et al (2008) finds that banks undertaking securitisations have higher information asymmetry. There is also evidence that investors who buy the securities from the SPEs know that despite legal and accounting restriction, the securitizing firms can provide financial support to the SPEs if there is the need (Gorton and Souleles 2007). Collectively these results suggest that banks undertaking asset securitisations likely have significant unrecognised liabilities. At best this represents a source of error in a value relevance study, or if associated with a recognised balance sheet item could present an omitted correlated variable problem.

Accordingly, as a consequence of the magnitude of the banks' securitization activities, and the lack of recognition of all the on-going risk exposures, this chapter argues the banks' securitizations will influence the relevance of the banks' reported asset recognitions. Furthermore, Barth, Beaver and Landsman (1996) identify that it is critical to include variables pertinent to banks when determining the value relevance research

design.[98] The authors demonstrate that the exclusion of certain variables can generate bias in the inferences made about the relevance of the banks' fair value estimates. Neither Song et al. (2010) or Goh et al. (2009) consider the potential off-balance sheet risk exposures correlated with the *Level 3* bank assets that can arise from bank securitizations when evaluating the relevance of fair value asset recognitions. This leads to the following related hypotheses (stated in alternate form):

> **HYPOTHESIS 1**: *The Level 3 asset recognitions for banks not undertaking securitizations have the same relevance as the banks' Level 1 and Level 2 asset recognitions*

> **HYPOTHESIS 2**: *The Level 3 asset recognitions of banks that conduct mortgage securitizations are less relevant than the banks' Level 1 and Level 2 asset recognitions*

4.4 SAMPLE SELECTION AND DESCRIPTIVE STATISTICS

The final data sample comprises 1,667 firm-quarter observations for the period January 1, 2008 to September 30, 2009. The banks used in this study are regulated depository financial institutions identified through Wharton's Bank Regulatory Database and the Federal Reserve Bank of Chicago.[99] To be included in the sample, the banks are

[98] Barth et al. (2001) also provides a concise discuss on the importance of variable selection for value relevance studies.

[99] The source of the data comes from the Federal Reserve Bank of Chicago (Chicago Fed). The Chicago Fed is one of the twelve regional reserve banks that make up the U.S. central bank, and all regulated banks are

required to have a complete set of data across the following three sources: i) Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities in Domestic Offices* which is used to acquire the banks' mortgage activities, ii) The Standard & Poor's Compustat® database which is used to collect the banks' fair value information and other accounting data and iii) The Center for Research in Security Prices (CRSP) database which is used to collect the information on the banks' listed equity.

Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities* (Schedule RC-P) is utilized for the evaluation of the banks' mortgage securitization activities. The banks' securitization disclosures are not directly evaluated as the data for these transactions are incomplete, opaque and inconsistent (Schipper and Yohn 2007).[100] However, banks are required to report their mortgage sales activities in a filing to the Federal Reserve Bank of Chicago, on a quarterly basis (N=259 March 31, 2008).[101] Unregulated financial institutions are not evaluated because it is not possible to accurately ascertain unregulated financial institutions mortgage sales activities as they do not have to file reports with the Federal Reserve Bank of Chicago.[102]

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required to file their regulated financial information on a periodic basis with the Chicago Fed. The Chicago Fed provides the permco identification codes for banks listed on a U.S. exchange which are necessary for acquiring share price data from CRSP.

[100] The literature evaluating the efficiency of securitization is sparse, and is focused more toward practitioners in the conduct of the transactions rather than critically evaluating the transactions (see Kettering 2009). The limited availability and lack of consistency in disclosures provided for securitization transactions are prime reasons for the paucity of literature. Schipper and Yohn 2007 (p.79) identify that the contractual provisions provided with the securitization transaction may only be found in "very difficult-to-access sources". Barth et al. (1996) discuss the limitations to interpreting banks off-balance sheet fair value disclosures (p.523).

[101] Schedule RC-P is to be completed by all banks with $1 billion or more in total assets and, the Schedule is also required to be filed by banks with less than $1 billion in total assets where the residential mortgage banking activities exceeds $10 million for two consecutive quarters (RC-P, 2008).

[102] Many firms net their mortgage activities which make it difficult to ascertain the type of mortgage sold and the level of mortgage loans sold. Using only regulated banks varies the sample slightly from Song et al. (2010), and Goh et al. (2009) who identified there sample from the Compustat database which includes financial

Consistent with the sample selection of Goh et al (2009) and Song et al. (2010) which will allow comparison of results with the prior studies, the banks are included in the sample if they provide the first quarter SFAS 157 (2006c) fair value hierarchy recognitions for March 31, 2008. As all the banks have a coinciding first quarter on March 31, 2008 there is no confounding effect of prices from different macroeconomic events. All banks are required to have price information in the CRSP database (N=216), and the most current price information in the CRSP database when this sample is gathered is December 2009. As price is forward looking when evaluating firms' accounting information (Ball and Brown 1968), the price information evaluated is measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline limiting the sample to nine financial quarters (N=1723). The sample size is considerably larger than Song et al. (2010) and Goh et al. (2009) due to data being available for an additional four financial quarters. All variables are then restricted to five standard deviations from the sample mean to control for bias from outliers (N=1667). Table 10 reports the descriptive statistics for the sample of banks.

Table 10 shows that on a per share basis the mean (median) *Level 1*, *Level 2*, and *Level 3* asset recognitions held by the banks are $1.88 ($0.10), $28.31 ($21.28), and $1.23 ($0.05) respectively.[103] The mean (median) value of the banks' other asset recognitions (that require accounting measures other than fair value) are $147.16 ($132.86) and bank

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institutions that are not governed by the same regulatory requirements as the banks that must report data with the Federal Reserve Bank of Chicago.

[103] Please note that the low magnitude of *Level 3* assets is not particularly precise as not all banks hold *Level 3* assets. To keep consistency with Song et al (2010) and Goh et al (2009) who do not control for banks with no *Level 3* assets the main results are reported accordingly. The main results are not affected by the inclusion of some banks' with no *Level 3* assets just the reported magnitudes vary and this is discussed in the sensitivity section.

total liabilities are $162.13 ($146.28) per share. The mean (median) level of income before extraordinary items is -$0.19 ($0.15) per share and the mean (median) share price is $15.52 ($12.00).

The mean (median) value of mortgage loans sold in the current quarter *Securitization Level* is $1.93 ($0.46) per share. To proxy for the magnitude of outstanding off-balance sheet liabilities associated with prior mortgage securitizations, bank mortgage sales are evaluated incrementally for the prior three financial quarters.[104] The mean (median) value of loans sold by banks in the previous financial quarter *Securitization Level (Q1)* is $2.29 ($0.58) per share. Two financial quarters prior to the current quarter the mean (median) value of mortgage loans sold *Securitization Level (Q2)* is $2.04 ($0.50) per share and three financial quarters prior *Securitization Level (Q3),* the mean (median) value is $1.92 ($0.46) per share.[105]

Table 11 shows the correlation matrix for the variables used in the cross sectional analysis. Importantly, the control variable (*Securitization*) is significantly correlated at the 1 percent level with the variable *Level 3 Assets.* This result suggests the banks' unconsolidated securitization activities are an important characteristic to consider when evaluating the relevance of the banks' fair value asset recognitions, and suggests that banks are recognizing a level of retained interests on the balance sheet that are associated with

[104] Please note, a limitation of the analysis is that the actual dollar amount of securitization cannot be directly measured, and can only be estimated and inferred by the dollar value of the mortgage loans that are sold.

[105] The mean value is taken for all bank quarterly observations (1667) and thus is diluted, as 455 quarterly observations did not conduct mortgage sales. The mean (median) value of mortgage loans sold per share for just the bank observation that sold mortgage loans across the current quarter, 2 quarters, 3 quarters and 4 quarters is $3.45 ($1.33), $3.15 ($1.24), $2.81 ($1.16), and $2.65 ($1.12), respectively

their mortgage securitizations (e.g. mortgage servicing rights).[106] The significant correlation between the *Securitization* variables and the *Level 3 assets* variable suggests that the banks' do recognize interests from their securitization activities and that these interests are not accompanied by liquid markets and must be estimated using the *Level 3* measurement criterion of SFAS 157 (2006c).[107]

4.5 RESEARCH DESIGN AND RESULTS

THE RELEVANCE OF THE BANKS FAIR VALUE ASSETS

Similar to Song et al. (2010) and Goh et al. (2009), stock price is used to measure the relevance of the banks' accounting recognitions and securitization disclosure proxies. All the accounting recognitions and securitization activities are deflated by the level of shares outstanding (Barth and Clinch 2009). This study starts by replicating the model specifications of Song et al. 2010 and Goh et al. 2009, and then makes several modifications to the model. Song et al. (2010) split the banks' fair value liabilities into two categories, the first category combines banks *Level 1* and *Level 2* fair value liabilities and *Level 3* liabilities into the second category, while Goh et al. (2009) separate all the fair value measures. As the primary interest of this study is the banks' fair value assets, all the liabilities are grouped together [Appendix E shows that the treatment of liabilities makes little difference to the main results]. This study separates the banks' assets into four categories, one category for each of SFAS 157 (2006c) fair value hierarchy and one

[106] There is also a significant correlation at the 1 percent level for *Level 1 Assets* this correlation would be the like result of the holding of mortgage-backed securities for over-night repurchase agreements (McCormick 2008).

[107] The Mann-Whitney test also identifies that the *Level 3* assets of banks that securitize are significantly different to the banks that do not securitize (z = -9.918, p-value 0.000).

category for the assets that do not require fair value measurement. Equation 1 is estimated to the replicate prior studies' findings.

$$Price_{jt} = \beta_0 + \beta_1 Other\ Assets_{jt} + \beta_2 Level\ 1\ Assets_{jt} + \beta_3 Level\ 2\ Assets_{jt} + \beta_4 Level\ 3\ Assets_{jt} + \beta_5 Other\ Liabilities_{jt} + \beta_6 Level\ 123\ Liabilities_{jt} + \beta_7 Income_{jt} + Controls + \varepsilon_{jt} \quad (1)$$

Consistent with the findings of Song et al. (2010) and Goh et al. (2009), the estimates from Equation 1, using the same specification as these authors, are consistent with the concerns that the accounting recognitions provided by bank *Level 3* asset recognitions are less relevant than bank *Level 1* and *Level 2* asset recognitions. Table 12 Model 1, shows that the banks' fair value asset recognitions are relevant to investors and that the coefficients on all three fair value asset levels are significantly different to zero.[108] It is the non-zero coefficient on the asset measures that identifies bank fair value measures are relevant to the market.[109] Theoretically, for every dollar of assets held by the banks', investors are perceiving bank *Level 1* assets at a mean value of 98.37 cents, bank *Level 2* assets at a mean value of 84.28 cents, and bank *Level 3* assets at a mean value of 44.67 cents.

The Wald tests confirm *Level 3* asset recognitions are relatively less relevant than *Level 1* and *Level 2* asset recognitions. The coefficients on *Level 1* assets (Wald test=0.01) and *Level 2* assets (Wald test=0.95) are not significantly different to the theoretical

[108] Table 12 Models 2 and 3 shows the effect of the control variables on Song et al. (2010) and Goh et al. (2009) base model. The effect of the control variables is relatively minimal but do result in *Level 3 Assets* becoming insignificant. Control variables are included to caution against bias on the variables of interest as the economic period between 2008 and 2009 was rather volatile due to the global financial crisis.

predicted value of $1. However, the Wald test identifies that the coefficient on the banks' *Level 3* assets are significantly different to the theoretical value of $1 at the ten percent significance level (Wald test=4.97, p-value 0.027). The relatively lower relevance of *Level 3* asset recognitions over *Level 1* and *Level 2* asset recognitions is confirmed by the Wald tests that show that the coefficients on *Level 1* and *Level 2* assets are significantly different to the coefficient on *Level 3* assets at the five percent significance level (Wald test=6.19, p-value 0.014; and Wald test=3.91, p-value 0.049 respectively). Table 12, Model 2 and Model 3 evaluate the effect of the reporting fiscal quarter (Model 2) and the effect of loss firms (Model 3) on the relevance of bank fair value assets.[110] The findings are consistent with those reported for Model 1, whereby the banks' *Level 3* asset recognitions are less relevant than the banks' *Level 1* and *Level 2* asset recognitions, and this reduced relevance is verified by the Wald tests. The results of the three Models are consistent with Song et al. (2010) and Goh et al. (2009).

However, when the banks that do not securitize are evaluated separately, the banks' *Level 3* asset recognitions have comparable relevance to the banks' *Level 1* and *Level 2* asset recognitions. Table 13 Model 1, suggest the banks' three fair value asset levels are significantly different to zero and thus, relevant to the market. The coefficients on the asset levels suggest the theoretically mean value of bank *Level 1* assets is $1.00 per share, bank

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[109] This inference is based on the assumption that the capital markets are perfect and that the firm-value can be expressed as a linear function of firms' accounting components (See Barth et al. 2001 p. 91 for a concise discussion of the assumptions implied with Equation 1 and Equation 2 following)

[110] Table 13 Models 2 and 3 include control variables to caution against bias on the variables of interest as the economic period between 2008 and 2009 was rather volatile due to the global financial crisis. Song et al. (2010) and Goh et al. (2009) do not use control variables however, both control variables have significant coefficients suggesting their importance to the estimation model. The effect of both control variables is relatively minimal but do result in the *Level 3 Assets* coefficient increasing in magnitude which may suggest

Level 2 assets is 95.83 cents, and bank *Level 3* assets is 80.26 cents. The Wald tests confirm the coefficients on *Level 1* assets (Wald test=0.00), *Level 2* assets (Wald test=0.03), and *Level 3* assets (Wald test=0.38) are not significantly different to the theoretical predicted value of $1. In addition, the comparable relevance of bank *Level 3* asset recognitions to bank *Level 1* and level 2 asset recognitions is confirmed by the Wald tests that show the coefficients on *Level 1* assets and *Level 2* assets are not significantly different to the coefficient on *Level 3* assets (Wald test=0.35; and Wald test=0.27). These results provide support for Hypothesis 1 and are contrary to Song et al. (2010) and Goh et al. (2009).

The contrasting preliminary results between Table 12 and Table 13 suggest bank securitizations are problematic and that there may be potential liabilities which are an omitted correlated variable in Song et al 2010 and Goh et al (2009). If this omitted variable is associated with *Level 3* assets from bank securitizations then this would influence the results of Song et al. (2010) and Goh et al (2009). The following section evaluates the impact of banks securitizations on the relevance of *Level 3* asset recognitions.

THE IMPACT OF MORTGAGE SECURITIZATION ON THE RELEVANCE OF LEVEL 3 ASSETS

Barth et al. (1996) provides evidence that introducing certain variables that capture the characteristics pertinent to banks can remove bias in the inferences made about the relevance of the banks' fair value estimates. This chapter argues that mortgage securitization is a key characteristic of banks and that controlling for the banks' securitization activities can remove bias on the inferences made about the relevance of the

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marginal increase in relevance. The significance of the marginal movement is not tested as this is not the prime interest.

Level 3 asset recognitions. 69 percent of the sample sold mortgage loans during the test period and these transactions require the use of the *Level 3* measurement criterion of SFAS 157 (Barth and Taylor 2010; Dechow et al. 2010).

To determine if the banks' mortgage securitizations impact the relevance of bank *Level 3* asset recognitions, a binary variable is included in the estimation model to control for the banks that sold mortgage loans. The binary variable *Securitization* takes the value of 1 if the banks' sold mortgage loans during the sample period, and 0 otherwise. To enhance the segregation of the sample it is required that the bank observations observed as not selling mortgage loans also did not sell mortgage loans 6 financial quarters prior to the beginning of the sample period.[111] The *Securitization* variable is then interacted with the banks' *Level 3 Asset* variable to give the interaction variable *Securitization * Level 3 Assets*. To be consistent with the literature that identifies that there are usually off-balance sheet liabilities associated with the banks' securitization activities (e.g. Vermilyea et al. 2008; Standard & Poor's 2001) a significant negative coefficient is predicted for the estimate on *Securitization*Level 3 Assets*. In addition, as mortgage securitizations generate gains (or losses) for the banks which are reported through income, an interaction term *Securitization*Income* is included in the model estimation to reduce bias on the variables of interest; the coefficient for the estimate of *Securitization*Income* is expected to be positive. Accordingly, Equation 2 is estimated as follows:

$$Price_{jt} = \beta_0 + \beta_1 Other\ Assets_{jt} + \beta_2 Level\ 1\ Assets_{jt} + \beta_3 Level\ 2\ Assets_{jt} + \beta_4 Level\ 3\ Assets_{jt}$$

[111] March 2006 is the first quarter that banks were required to report their mortgage loans sales data filed with the Chicago Fed on Schedule RC-P.

$$+ \beta_5 Other\ Liabilities_{jt} + \beta_6 Level\ 123\ Liabilities_{jt} + \beta_7 Income_{jt} + \beta_8 Securitization_{jt}$$
$$+ \beta_9 Securitization * Level\ 3\ Assets_{jt} + \beta_{10} Securitization * Income_{jt} + Controls_{jt} + \varepsilon \quad (2)$$

Table 14 provide the results that address hypothesis 2, that bank mortgage securitizations impact the relevance of bank *Level 3* asset recognitions. Table 14 Model 1 is included for comparability and the results are the same as that discussed for Table 12 Model 3. The results of Table 14 Model 2 show the information about bank mortgage securitizations are relevant to bank *Level 3* asset recognitions. Model 2 shows the *Securitization* variable has a predicted positive coefficient of 2.028 (p-value 0.015) which suggests the banks' that securitize mortgage loans are more profitable, and the additional profitability is consistent with the gains they receive from selling the mortgage loans to the unconsolidated securitization conduits. The interaction term *Securitization*Level 3 Assets* suggests the *Level 3* asset recognitions of the banks that securitize mortgage loans are incrementally less relevant to bank *Level 3* asset recognitions that don't securitize by a theoretical value of 46.70 cents (p-value 0.035). This result also indicates the theoretical value of the *Level 3* assets for banks that don't securitize are 80.17 cents (given by the coefficient on *Level 3* assets with p-value 0.000), and the theoretical value of the *Level 3* assets for banks that securitize are 33.47 cents (80.17 – 46.70). The significant negative coefficient on the interaction term *Securitization*Level 3 Assets* suggests liabilities are associated with the banks' mortgage securitizations and this is impacting the relevance of *Level 3* asset recognitions.

The Wald tests confirm the coefficients on bank *Level 1* assets (Wald test=0.30), *Level 2* assets (Wald test=2.05), and *Level 3* assets (Wald test=0.58) are not significantly

different in relevance when the banks' mortgage securitizations are controlled for. In addition, the comparable relevance of bank *Level 3* asset recognitions to bank *Level 1* and *Level 2* asset recognitions is confirmed by Wald tests that show the coefficients on bank *Level 1* assets and *Level 2* assets are not significantly different to the coefficient on bank *Level 3* assets (Wald test=0.18; and Wald test=0.01).

Table 14, Model 3 introduces controls for the level of income generated from mortgage securitization activities and the significant positive coefficient of 1.57 (p-value 0.001) on the interaction term *Securitization* * *Income* confirms the revenues generated from securitization activities are relevant to the income recognitions of mortgage securitizers. This result is confirmed by the insignificant coefficient on the *Income* variable which is suggesting that the income for banks that did not securitize was irrelevant to price for the tested period. Controlling for bank securitizations income has a marginal effect on the incremental change in relevance on the *Level 3* asset recognitions for banks that securitize (increasing by 2.91 cents to 36.38cents). This result has no effect on the relevance of bank *Level 1*, 2 and 3 asset recognitions which is unchanged and still comparably relevant as indicated by the Wald tests.

Table 14, Model 4 takes a more direct approach at testing the impact of mortgage securitizations on banks *Level 3* asset recognitions by including the continuous variable *Securitization Level*. *Securitization Level* measures the magnitude of the banks' securitization activities (mortgage sales) for the financial quarter. The coefficient on *Level 3* assets in Model 4 suggests the theoretical value of the *Level 3* assets for banks that don't securitize is 80.11 cents (p-value 0.003). The theoretical value of the *Level 3* assets for banks that securitize are 40.72 cents (80.09 – 39.39). The significant negative coefficient on

the interaction term *Securitization*Level 3 Assets* suggests liabilities are associated with the banks' mortgage securitizations and this is impacting the relevance of *Level 3* asset recognitions. The *Securitization Level* variable which estimates the off-balance sheet liabilities of bank securitizations has a significant negative coefficient of 0.223 (p-value 0.001). Assessing the mean value of bank mortgage sales ($3.45 per share), with the negative coefficient on the *Securitization Level* variable suggests the off-balance sheet liabilities associated with bank securitizations have a theoretical value of 77.01 cents per share (3.45 * 0.2233). Securitizations conducted in prior quarters are also accompanied by significant off-balance sheet liabilities. For the prior quarter, second prior quarter, and third prior quarter off-balance sheet liabilities associated with securitizations are estimated at a theoretical mean value of 65.12 cents, 58.13 cents, and 47.12 cents per share, respectively.

Overall, these results suggest that the banks' unconsolidated securitization activities are an important characteristic of the banks' business activities and the disclosures about the activities have statistically significant influence on the inferences drawn about the relevance of the banks' *Level 3* asset recognitions. The results suggest the inferences reached by Song et al. (2010) and Goh et al. (2009) are subject to an omitted variable bias and that the reduction in the relevance of the banks' *Level 3* asset recognitions are not a function of the investors' uncertainty in the measurement requirements used by banks under the SFAS 157, but rather a function of the off-balance sheet liabilities associated with the banks' unconsolidated securitization activities. Accordingly, the criticism being leveled against Statement of Financial Accounting Standards No. 157 might more correctly be directed towards Statement of Financial Accounting Standards No. 140.

4.6 SENSITIVITY

To test for the robustness of the results discussed in the text, seven sensitivities are conducted. The first two sensitivities evaluate the robustness of the results to the liability classifications of Song et al. (2010) and Goh et al. (2009). The robustness of the main results is then tested for survivor bias and the effect of focusing just on *Level 3* asset holders. The tables of results mentioned in this discussion can be found in Appendix E.

SONG ET AL. (2010) LIABILITY CLASSIFICATION (TABLE 31): Song et al (2010) evaluate the relevance of bank fair value assets by segregating bank assets into four classes and bank liabilities into three classes. The asset segregation matches the segregation applied by this study, one category for each of SFAS 157 fair value hierarchy and one category for the assets that do not require fair value measurement. Liabilities are separated into three categories with two categories for bank fair value liabilities. The first category combines banks *Level 1* and *Level 2* fair value liabilities and *Level 3* liabilities forms the second category. The third category is for the liabilities that do not require fair value measurement.

Table 31 Model 1 suggests, without controls for financial quarter, loss firms and bank mortgage securitizations, bank *Level 1*, *Level 2* and *Level 3* liabilities are relevant to investors. However, the inclusion of the control for loss firms (Model 3) suggest bank *Level 3* liabilities recognitions are not relevant to investors, and the lack of relevance holds when bank mortgage securitizations are controlled for in Model 4 through to Model 9. In Model 5 to Model 9 consistent with the main results when bank mortgage securitization income is controlled for, the income for the banks that do not conduct mortgage securitizations losses relevance.

Consistent with the main results Models 4 to 9 suggest the relevance of *Level 3* asset recognitions for banks that do not securitize mortgage loans is greater than the relevance of the *Level 3* assts of banks that do securitize mortgage loans, and the relevance of *Level 3* asset recognitions are equivalent to the relevance of *Level 1* and *Level 2* asset recognitions (Indicated by the Wald tests). The coefficients on *Level 3 Assets* across Models 4 to 9 suggest the mean theoretical value of the *Level 3* assets for banks that don't securitize range from, a low of 80.63 cents (Model 6) when bank current securitizations are controlled for, to a high of 82.14 cents (Model 9) when bank securitizations three quarters prior are controlled for. The coefficients on *Securitization*Level 3 Assets* across Models 4 to 9 suggest the mean theoretical value of the *Level 3* assets for banks that securitize, range from a low of 40.48 cents (Model 6) when bank current securitizations are controlled for, to a high of 41.48 cents (Model 9) when bank securitizations three quarters prior are controlled for. These results suggest the *Level 3* asset recognitions for banks that securitize are less relevant to the banks' *Level 1* and *Level 2* asset recognitions, and this is likely the result of the lack of transparency in the off-balance sheet liabilities associated with bank securitizations. The results in Models 6 to 9 suggest the off-balance sheet liabilities associated with bank mortgage securitizations range between a theoretical mean value of 74.10 cents per share for the magnitude of mortgage securitizations conducted in the immediate quarter (securitization level per share \$3.52 * 0.211), and 44.96 cents per share for securitizations conducted three financial quarter prior to the current quarter (securitization level per share \$2.69 * 0.167).

GOH ET AL. (2009) LIABILITY CLASSIFICATION (TABLE 32): Goh et al. (2009) evaluate the relevance of bank fair value assets by segregating bank assets into four classes and bank

liabilities into four classes. A separate category for each asset and liability class measured under SFAS 157 (2006c) fair value hierarchy, and a separate category for the assets and liabilities that do not require fair value measurement. Table 32 Model 1 suggests, without controls for financial quarter, loss firms and bank mortgage securitizations, bank *Level 2* and *Level 3* liabilities are relevant to investors but *Level 1* liabilities are not relevant. The inclusion of the control for the impact of bank securitizations on *Level 3* assets *Securitization * Level 3 Assets* (Model 4) suggests bank *Level 3* liability recognitions are not relevant to investors, and the insignificant coefficient on the *Securitization * Level 3 Assets* variable suggests *Level 3* asset recognitions for banks that securitize are also not relevant.

Consistent with the main results, when bank mortgage securitizations are controlled for the relevance of bank *Level 3* asset recognitions is equivalent to bank *Level 1* and *Level 2* asset recognitions for the banks that don't mortgage securitize (suggest by the Wald tests in Models 4 to 9). The evaluation in Models 6 to 9 suggest bank mortgage securitizations are associated with significant off-balance sheet liabilities and these off-balance sheet liabilities, as an omitted correlated variable, is the likely reason for the reduced relevance in bank level 3 asset recognitions reported by Goh et al (2009).

SURVIVOR BIAS (TABLE 33): Reverting back to the asset and liability classification of the main study discussed in the text, a *survivor bias* is evaluated. The period 2008 to 2009 was a volatile time as a consequence of the global financial crisis and many banks did fail. The banks that did fail likely had significant exposure to the collapse of the U.S. mortgage and though the main sample is truncated for outliers, heavily exposed banks' may place

bias on the results, and thus this *survivor bias* sensitivity only evaluates the banks that had a complete set of data for all nine financial quarters (N=1316).

The main results discussed in the text hold for the *survivor bias* evaluation. Table 33 Models 6 to 9 suggest bank mortgage securitizations are associated with off-balance sheet liabilities, and these liabilities are relevant to investors. Models 4 to 9 suggest *Level 3* asset recognitions for the banks that securitized are significantly less relevant than the level 3 asset recognitions for the banks that don't securitize and the impact of controlling for bank securitizations results in *Level 3* asset recognitions for the banks that don't securitize, being of equivalent relevance to bank *Level 1* and *Level 2* asset recognitions. Interestingly, the *survivor bias* suggests that the income from bank securitizations is not relevant to investors. This result is contrary to the main results and this may have to do with type of mortgage loans securitized by the *survivor* banks. The profit margins attained from the securitization of less risky mortgage loans (e.g. mortgage loans that meet criteria of government agencies) are considerably smaller than the profit margins that can be generated from the securitization of subprime mortgage loans (e.g. Countrywide Table 4). *Survivor* banks may have securitized less risky mortgage loans resulting in smaller profits, the magnitude of which may not have been specific to *survivor* banks' overall revenues.

This reasoning may partially be substantiated by the results across Models 6 to 9 which suggest that the level of off-balance sheet liabilities is less than the main results suggesting less risky mortgage securitizations activities. The off-balance sheet liabilities associated with the *survivor* banks' securitizations for the current quarter (Model 6) are estimated at a mean value of 74.72 cents (compared to 81.09 cents for main sample) per share, and the reduced level of off-balance sheet liabilities remains for each of the previous

financial quarter mortgage securitizations (Models 7 to 9). The significance of the lower level is not tested. In addition, caution is taken on the significance of the lower level as the *survivor* banks' level of mortgage securitizations were less, mean of $3.50 per share, compared to $3.77 per share for the main sample, and the *survivor* banks' level of securitizations were consistently smaller for the prior three financial quarters evaluated.[112] Off-balance sheet liabilities are likely to increase with the level of mortgage securitizations as well as with the type of mortgage loans securitized.

FOCUS ON LEVEL 3 ASSETS AND SURVIVOR BIAS (TABLES 34 TO 35): Song et al. (2010) and Goh et al. (2009) did not control for the banks' that did not have *Level 3* asset recognitions when reporting their findings that level 3 asset recognitions are less relevant than bank *Level 1* and *Level 2* assets recognitions. This treatment may place bias on the results reached, and thus is tested. Based on the main sample of banks evaluated by this study, 54.83 percent (N=914) of the sample recognized *Level 3* assets on the balance sheet which does suggest the potential for bias in the main results. However, this is not the case. The results in Table 34 Models 1 to 9 suggest the results are consistent with the main results and provide support for the stated hypotheses: the *Level 3* asset recognitions for banks not undertaking securitizations have the same relevance as the banks' *Level 1* and *Level 2* asset recognitions, and the *Level 3* asset recognitions of banks that conduct mortgage securitizations are less relevant than the banks' *Level 1* and *Level 2* asset recognitions.

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[112] For *survivor* banks' on a per share measure, mean Securitization Level (Q1) was $3.17, Securitization Level (Q2) was $2.81, and Securitization Level (Q3) was $2.66; compared to *Main* sample of banks on a per share basis, mean Securitization Level (Q1) was $3.31, Securitization Level (Q2) was $2.93, and Securitization Level (Q3) was $2.77.

To ease discussion of results this sensitivity will be referred to as *Level 3 Focus* and the main sample as *Main.* The mean (median) quantity of *Level 3* Assets for the *Level 3 Focus* sample increases to $2.25 ($0.63) compared to the *Main* sample of $1.23 ($0.05) per share, and the quantity of *Level 1* and *Level 2* assets also increase to $1.75 ($0.18) and $32.31 ($24.33) respectively.[113] The mean (median) value of mortgage loans sold on a per share basis, by the *Level 3 Focus* sample in the current quarter, prior quarter, second prior quarter, and third prior quarter are $3.97 ($1.54), $3.61 ($1.39), $3.21 ($1.26), and $3.01 ($1.17), respectively, and these levels are greater than the *Main* sample.[114]

Compared to the *Main* sample, Table 34 Model 6 to 9 suggest that the greater magnitude of mortgage securitizations by the *Level 3 Focus* sample are accompanied by higher levels of significant off-balance sheet liabilities, in the current quarter, prior quarter, second prior quarter, and third prior quarter estimated at a theoretical mean value of 98.66 cents, 81.73cents, 73.86 cents and 62.20 cents per share, respectively.[115] Further, accounting for the bank current quarter securitizations (Model 6) suggests bank *Level 3* asset recognitions for the banks that securitize, are significantly less relevant than bank *Level 1* and *Level 2* asset recognitions with an estimated mean theoretical value of 31.93 cents (compared to 40.72 cents for the *Main* Sample). The results for the *Level 3* assets or the banks that do not securitize, when controlling for bank current quarter securitizations

[113] The mean (median) quantity of the *Main* sample *Level 1* and *Level 2* assets was $1.88 ($0.10) and $28.31 ($21.28), respectively.

[114] For the *Main* sample, the mean (median) value of mortgage loans sold per share for just the bank observation that sold mortgage loans across the current quarter, 2 quarters, 3 quarters and 4 quarters is $3.45 ($1.33), $3.15 ($1.24), $2.81 ($1.16), and $2.65 ($1.12), respectively. In addition, 78.12 percent of the *Level 3 Focus* sample sold mortgage loans compared to 72.71 percent for the *Main* sample.

[115] For the *Main* sample off-balance sheet liabilities associated with securitizations in the current quarter, prior quarter, second prior quarter, and third prior quarter estimated at a theoretical mean value of 77.01cents, 65.12cents, 58.38 cents and 47.42 cents per share, respectively

(Model 6), are theoretically estimated at a mean of 91.23 cents per share and the relative relevance of these level 3 asset recognitions are comparable to the relevance of bank *Level 1* and *Level 2* asset recognitions (Wald tests = 0.06 and Wald test = 0.40, respectively). Testing *survivor* bias on the *Level 3 Focus* sample (Table 35) generates similar results.

4.7 CONCLUSIONS

This chapter evaluates the impact of bank mortgage securitization activities on the relevance of bank *Level 3* fair value asset disclosures under the Statement of Financial Accounting Standards No. 157 (FASB 2006c). Prior literature suggests bank *Level 3* asset recognitions are less relevant than bank *Level 1* and *Level 2* asset recognitions due to the measurement requirements under SFAS 157 (e.g. Song et al. 2010; Goh et al. 2009). However, mortgage securitization is a significant part of the banks' operations and the removal of the securitized assets, through the *sales* accounting treatment under the Statement of Financial Accounting Standards No. 140 (2000) from the banks' balance sheets, continues to give rise to debate, particularly with respect to the on-going risk exposures arising from the securitized assets (e.g. Schipper and Yohn 2007; Barth and Landsman 2010). This chapter argues that the banks' unconsolidated securitization activities impact the relevance of bank *Level 3* asset recognitions, and that not taking into account the unconsolidated securitization activities provides an explanation for the relatively lower relevance of the banks' *Level 3* asset recognitions.

Although, *sales* accounting for securitizations is meant to transfer the risks (and rewards) of the securitized assets onto investors, there is mounting evidence that the securitizing firms are still considerably exposed to the assets (e.g. Landsman et al. 2008). This exposure is difficult to quantify due to the lack of transparency provided by the

accounting requirements (Barth and Landsman 2010). An additional problem is the complex partitioning of the underlying asset risks within the unconsolidated special purpose entities (SPEs), which compounds the investors' inability, even institutional investors, to trace the securitizing banks' exposure to the underlying securitized mortgage assets (Gorton 2008b).

This study provides evidence that there is little difference between the relevance of the banks' *Level 1*, *Level 2* and *Level 3* asset recognitions when the banks' unconsolidated securitization activities are controlled for. This study focuses on U.S. listed regulated banks as they are the largest group of securitizers (Dechow et al. 2010), and data on their mortgage activities are available from the Federal Reserve Bank of Chicago. Not controlling for the banks' unconsolidated mortgage loan securitizations on the evaluation of the banks' *Level 3* asset recognitions, results in *Level 3* asset recognitions being less relevant than the banks' *Level 1* and *Level 2* asset recognitions. The division of the sample of banks into mortgage securitizers and non-mortgage securitizers suggests the banks that securitized mortgage loans have less relevant *Level 3* asset recognitions.

The relatively lower relevance of the banks' *Level 3* asset recognitions can partially be explained by, the risk exposures correlated with the *Level 3* assets arising from the banks' unconsolidated mortgage loan securitizations, and the magnitude of the banks' securitizations which are correlated with unreported liabilities that range from 47.42 cents to 77.01 cents per share. For the banks that did not conduct mortgage loan securitizations, the market found their *Level 3* asset recognitions to be of equivalent relevance to *Level 1* and *Level 2* asset recognitions. These results provide evidence the banks' unconsolidated securitization activities are relevant to the banks' *Level 3* asset recognitions. The

statistically insignificant difference between the relevance of bank asset recognitions when the unconsolidated securitizations are controlled for suggests that investors, on average, understand the nature of the risk exposures associated with the banks' securitizations, and that they try to estimate the undisclosed level of off-balance sheet risks in the course of assessing the *Level 3* asset recognitions. The implementation of the new securitization requirements which require firms to consolidate an increasing amount of their securitization activities under Statement of Financial Accounting Standards No. 166 (2009a) and Statement of Financial Accounting Standards No. 167 (2009b) will enable investors to more accurately evaluate the level of liabilities associated with the securitization activities.

The findings of this study can provide useful insights for public policy orientated towards businesses operating within securitization markets and the firms' disclosure practices. This study of the impact of bank securitizations on the relevance of *Level 3* asset recognitions is limited to regulated financial institutions where there is sufficient financial reporting to facilitate the study. The implementation of the new securitization requirements under SFAS 166 (2009a) and SFAS 167 (2009b) will enable investors and researchers alike to also evaluate the securitization activities of non-regulated firms.[116]

[116] Securitizations conducted by non-regulated firms are considerably more opaque due to the reduced regulatory oversights that govern their operations.

CHAPTER 5

THESIS CONCLUSIONS

This thesis expands the current knowledge about securitization and fair value reporting practices during the global financial crisis. Specifically, Chapter 2 evaluates the circumstances surrounding the financial distress experienced by Countrywide Financial Corporation (Countrywide). Countrywide was one of first prominent financial firms to collapse during the global financial crisis (GFC). Countrywide, while perhaps an extreme example, typified the problems that beset firms in the financial services sector during the GFC. Chapter 3 determines what the economic impact of Countrywide's near-bankruptcy was on regulated and unregulated finance firms, and non-finance firms. Countrywide's leadership position is capable of signaling to the market important asymmetric information about the firms' mortgage securitization activities which may generate contagion effects on the stock prices of firms. Finally, Chapter 4 addresses whether the banks' off-balance sheet mortgage securitizations are relevant to fair value asset recognitions measured under Statement of Financial Accounting Standards No. 157 (FASB 2006c).

The key findings of this thesis are as follows. Chapter 2 reveals that the distress experienced by Countrywide was largely a consequence of its business model which involved the origination and subsequent securitization of mortgage loans. Over the period January 2001 to December 2007, Countrywide originated $2.55 trillion mortgage loans, of which $2.51 trillion were securitized. From these transactions, Countrywide generated $33.83 billion of revenues, and while this appears relatively insignificant in relation to the value of assets securitized (just 1.35%), it represents a substantial proportion (66.38%) of Countrywide's total

revenues of $50.97 billion. Critically, the risks of this business model became apparent when the quality of the mortgage loans securitized came into question, and the securitization vehicles experienced liquidity problems (PWGFM 2008; GAO 2009; IMF 2009). An analysis of the external financial reports reveals the risks associated with Countrywide's securitization transactions are not well reflected in the financial statements. Disclosures of these securitization transactions and their cumulative impacts are sparse and incomplete which likely impeded investors' pricing decisions. The question arising is to what extent the disclosures about Countrywide's declining performance that arose from the risk exposures of its prolific origination and securitization business model, signaled to the capital market the potential risk exposures common to firms more generally

The results of Chapter 3 find some support for the concern that the opacity and complexity of securitization activities reduced the capacity of investors to value firms' equity. During the six months preceding Countrywide's acceptance of the Bank of America's offer of a $4.1 billion merger deal (January 11, 2008), Countrywide released material disclosures to the Securities and Exchange Commission (on Form 8-K). These disclosures, which revealed the deterioration in the company's financial position that arose from risk associated with its mortgage business, generated significant abnormal returns to the common stock of regulated firms, non-regulated finance and non-finance firms which are consistent with the disclosures releasing information that alerted investors to the true risk levels common to other firms. The average effect of Countrywide's eight disclosures generate significant negative abnormal returns for the unregulated finance and non-finance firms, but not for regulated firms which were subject to tighter regulation on risk exposure (e.g. BCBS 2006). The magnitude of the returns realized can be partially explained by the firms' securitization activities, leverage,

liquidity and profitability. The abnormal returns demonstrate the role played by Countrywide in releasing information about the deteriorating state of the mortgage market.

Chapter 4 provides some evidence that the banks' securitization activities were a contributing factor to the reduced relevance of bank fair value asset recognitions during the global financial crisis. Chapter 4 finds the banks that securitized mortgage loans had less relevant *Level 3* asset recognitions. The relatively lower relevance of the banks' *Level 3* asset recognitions can partially be explained by, the risk exposures correlated with the *Level 3* assets arising from the banks' unconsolidated mortgage loan securitizations, and the magnitude of the banks' securitizations which are correlated with unreported liabilities ranging from 47.42 cents to 77.01 cents per share. For the banks that did not conduct mortgage securitization activities, empirical analysis reveals the investors found *Level 3* asset recognitions to be of equivalent relevance to *Level 1* and *Level 2* asset recognitions. The statistically insignificant difference between the relevance of bank asset recognitions when the unconsolidated securitizations are controlled for suggests that investors, on average, understand the nature of the risk exposures associated with the banks' securitizations, and that they try to estimate the undisclosed level of off-balance sheet risks in the course of assessing the *Level 3* asset recognitions. Accordingly, these results suggest that the criticism being leveled against Statement of Financial Accounting Standards No. 157 might more correctly be directed towards Statement of Financial Accounting Standards No. 140.

This thesis provides some evidence to substantiate the concerns that the off-balance sheet nature of securitization transactions did obfuscate the banks' true level of risk exposures, which in turn, resulted in price corrections to the banks' equity during the global financial crisis as the nature and level of risk exposures were revealed through a series of adverse

advents reported by a central player, Countrywide Financial Corporation. Further, this thesis extends the existing literature by providing some evidence that suggests in the wake of the global financial crisis, the firms' securitization activities were consistent with the reduced relevance of the Level 3 fair value asset recognitions. These findings provide useful insights for public policy orientated towards addressing the contributory role of the opacity and complexity of the firms' securitization activities to the global financial crisis. In addition, the findings suggest the financial reporting process of fair value asset recognitions did not lead to systematic failure, and the results are consistent with, the lack of transparency associated with firm securitizations lead to the reduction in the relevance of the asset recognitions during the global financial crisis. Accordingly, the criticism being leveled against Statement of Financial Accounting Standards No. 157 might more correctly be directed towards Statement of Financial Accounting Standards No. 140. These findings support the FASB's (2009) decision to mandate the consolidation of off-balance sheet securitization activities to avoid substantial off-balance sheet liabilities obscuring the firms' true underlying economic risks.

The studies conducted in Chapter 3 and Chapter 4 is limited to evaluating bank mortgage securitization activities where there is sufficient financial reporting to facilitate the studies. In addition, the findings relating to firms' securitization activities must be taken with some caution as the measure 'mortgage sales' is a proxy which creates bias away from finding results. Furthermore, while statistically significant abnormal returns are found in Chapter 3, it is noted that they are economically relatively small. However, the evaluation is just assessing individual firm-specific event disclosures that generally would not be expected to influence the stock prices of other firms. In addition, Countrywide's prominent position in the mortgage market means that it was mentioned in the media with a high degree of frequency which

biases from finding results as the market is being continually informed, and firm-specific events may have come as less of a surprise then they might have otherwise. Further, the market may have been slow to consider systemic aspects and the nature of the inherent risk exposures associated with firms' mortgage securitization activities, and instead, principally attributed fluctuations in business performance to the management of the business or other factors particular to Countrywide.

Overall, the results provide evidence consistent to support the FASB's decision to reform the accounting regulations where firms' securitization activities are required to be consolidated, with help investors to evaluate the risks associated with the securitizations. The literature evaluating the efficiency of securitization is sparse and much of the literature on securitization serves practitioners in the conduct of the transactions rather than critically evaluating the transactions (Kettering 2008). Limited availability of accounting information is one reason for the paucity of literature (Schipper and Yohn 2007). It is particularly difficult for researchers to obtain data on the firms' securitization transactions. However, the implementation of the new securitization requirements, which require firms to consolidate an increasing amount of their securitization activities under SFAS 166 (2009a) and SFAS 167 (2009b), will enable investors and researchers alike to better evaluate the true risk exposures of the firms' securitization activities. Particularly for non-regulated firms whose securitization activities are considerably under evaluated as they are significantly more opaque due to the reduced regulatory oversights that govern their operations.

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MAIN TABLES AND FIGURES

TABLE 1
KEY EVENTS IN THE HISTORY OF COUNTRYWIDE, 1969-2008

	Events
1969	: Co-founders Angelo Mozilo and David Loeb register OLM Credit Industries, Inc.
1984	: Launch of the correspondent lending division to buy mortgages from other lenders
1987	: OLM Credit Industries, Inc. reincorporated as Countrywide Credit Industries in Delaware, and Countrywide Servicing Exchange is established
1990	: Introduction of its own state-of-the-art loan origination service, EDGE, which was designed to reduce the risks of deficient loans and guarantee pricing. The system was able to significantly reduce origination and processing costs, while accelerating funding time to less than 30 days on conventional loans
1992	: Angelo Mozilo became chairman of the Mortgage Bankers Association
1994	: Countrywide became the first mortgage lender to sign a fair-lending agreement with the Department of Housing and Urban Development.
1996	: Entered the subprime market – Full spectrum lending subsidiary
1999	: Formed a joint venture with Woolwich (a mortgage lender in the UK) to provide fee-based mortgage services in the Europe. Acquired Balboa Life and Casualty Insurance group (an underwriter of credit-related insurance, specializing in creditor-placed auto and homeowners insurance) from Associates First Capital. Countrywide also launched International Consulting Services (CICS).
2000	: Launched Countrywide Investment Services, to provide a range of financial services including mutual funds, annuities, individual securities, IRAs and investment advisory services. Launched another subsidiary, CCM International to serve as the European affiliate of Countrywide Securities Corporation, the group's securities broker-dealer.
2001	: Acquired Treasury Bank, Ltd and expanded its services portfolio to include banking, concurrently became a bank holding company
2002	: Name changed to Countrywide Financial Corporation
2003	: Countrywide Bank opened a financial centre in Torrance, California and in Dallas, Texas. In August Angelo Mozilo comments on the proposal to eliminate down payment requirements for minority and low-income borrowers. In the fourth quarter, CFC became the largest home loan originator ahead of Wells Fargo and Washington mutual.
2004	: Countrywide Home Loans (a subsidiary) and Stanford Carr Development announced the formation of Inter Island Home Loans to provide home buyers in Hawaii with a range of home financing programs. Countrywide Home Loans and Prudential Rand formed Hudson Home Loans to enable home buyers and sellers to access a range of home financing programs. April 12, stock split 3-for-2. August 30, Stock split 2-for-1
2005	: Countrywide and Community Commerce Bank (a subsidiary of Telacu) formed a joint venture, Telacu Community Mortgage. Acquired all the assets of KB Home Mortgage Company (KB Home's subsidiary) and simultaneously formed a 50/50 joint venture to give residential loans to KB Home customers. Countrywide Insurance Group and Atlantic Mutual formed a strategic alliance. Countrywide opened new financial centers, three in the Chicago and two in the Beverly Hills and Irvine, California
2006	: Countrywide entered into a definitive agreement to acquire the assets and assume certain liabilities of Chicago-based CCM Futures. Countrywide Bank opened its first financial centre in New York. Termination of the joint venture with Barclays Bank.
2007	: Countrywide acquired Home Mortgage Acceptance Corporation. Countrywide launched its online mortgage tool, www.HomeByCountrywide.com Home Ownership Mortgage Education (H.O.M.E.) program. This tool offers an interactive learning centre which includes five topics: basic finance, how credit affects one, preparing for home ownership, steps for buying a home, and life as a homeowner. Countrywide and Home Bank entered into an agreement whereby Countrywide will acquire certain of the assets related to Home Bank's retail mortgage operations, including five retail branches. Countrywide formed Hope Now Alliance with credit and homeowners' counselors'', mortgage servicers and secondary market investors, a collaborative effort formed with the encouragement of the Department of the Treasury and the Department of Housing and Urban Development
2008	: January 11, Bank of America announced the acquisition of Countrywide for $4.1 billion

Table amalgamated from Wall Street Journal articles (sourced through EBSCOhost database search term 'Countrywide Financial'; filings released with the U.S. Securities Exchange and Commission (sourced through Edgar); and Flamholtz and Kurland (2006).

TABLE 2
UNITED STATES MORTGAGE DEBT OUTSTANDING BY HOLDER, 1980-2008
(Billions of dollars)

	Major Financial Institutions	Federal & Related Agencies[a]	Inidividuals and Others[b]	Total
1980	996.8	256.8	214.0	1,467.6
1981	1,040.5	289.4	261.6	1,591.5
1982	1,021.3	355.4	299.4	1,676.1
1983	1,108.1	433.3	330.2	1,871.7
1984	1,247.8	490.6	382.3	2,120.6
1985	1,363.5	580.9	425.8	2,370.3
1986	1,476.5	733.7	447.7	2,657.9
1987	1,667.6	857.9	470.7	2,996.2
1988	1,834.3	937.8	541.1	3,313.1
1989	1,935.2	1,067.3	582.9	3,585.4
1990	1,918.8	1,258.9	610.5	3,788.2
1991	1,846.2	1,422.5	661.2	3,929.8
1992	1,770.4	1,558.1	714.9	4,043.4
1993	1,770.1	1,682.8	721.8	4,174.8
1994	1,824.7	1,788.0	726.6	4,339.2
1995	1,900.1	1,878.7	746.2	4,524.9
1996	1,981.9	2,006.1	804.6	4,792.5
1997	2,084.0	2,111.4	909.1	5,104.5
1998	2,194.6	2,310.9	1,084.2	5,589.6
1999	2,394.3	2,613.3	1,187.9	6,195.4
2000	2,619.0	2,834.4	1,300.8	6,754.2
2001	2,790.9	3,205.0	1,465.9	7,461.8
2002	3,089.3	3,592.2	1,680.4	8,361.9
2003	3,387.3	4,026.8	1,951.4	9,365.5
2004	3,926.3	4,079.1	2,622.0	10,627.4
2005	4,396.2	4,208.5	3,460.4	12,065.1
2006	4,780.8	4,525.9	4,151.6	13,458.4
2007	5,065.8	5,190.2	4,273.0	14,529.0
2008	5,044.0	5,759.3	3,812.7	14,616.0

(a) Includes Government National Mortgage Association (GNMA or Ginnie Mae), Federal Housing Administration, Veterans Administration, Farmers Home Administration (FmHA), Federal Deposit Insurance Corporation, Resolution Trust Corporation (through 1995), and in earlier years, Reconstruction Finance Corporation, Homeowners Loan Corporation, Federal Farm Mortgage Corporation, and Public Housing Administration. Also includes U.S.-sponsored agencies such as Federal National Mortgage Association (FNMA or Fannie Mae), Federal Land Banks, Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac), Federal Agricultural Mortgage Corporation (Farmer Mac, beginning 1994), Federal Home Loan Banks (beginning 1997), and mortgage pass-through securities issued or guaranteed by GNMA, FHLMC, FNMA, FmHA, or Farmer Mac. Other U.S. agencies (amounts small or current separate data not readily available) included with "individuals and others." (b) Includes private mortgage pools. Data availability: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations (United States Government 2010)

TABLE 3
COUNTRYWIDE'S MORTGAGE ACTIVITIES AND FINANCIAL PERFORMANCE, 2000 – 2007

PANEL A: MORTGAGE PRODUCTION AND SERVICING DISCLOSURES (BILLIONS OF DOLLARS)

	Feb-00	Feb-01	Dec-01*	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Mortgage Production									
Conventional Non-conforming	10.2	11.4	22.2	61.6	136.7	140.6	225.2	211.8	117.6
Subprime	4.2	5.4	5.6	9.4	19.8	39.4	44.6	40.6	17.0
Prime Home Equity	3.6	4.7	5.7	11.7	18.1	30.9	42.7	47.9	34.4
Commercial Real Estate	-	-	-	-	-	0.4	3.9	5.7	7.4
Total non-agency	18.0	21.4	33.4	82.7	174.6	211.3	316.5	306.0	176.4
Agency mortgages	48.8	47.5	90.5	169.2	260.3	152.1	178.4	162.2	239.2
Total Production	66.7	68.9	124.0	251.9	434.9	363.0	494.9	468.2	415.6
Mortgage Servicing[(a)]	250.2	293.6	336.6	452.4	644.9	838.3	1,111.1	1,298.4	1,476.0

(a) The mortgage servicing portfolio is predominantly comprised of the mortgage loans CFC underwrite, but also includes (minimal) bulk purchases of mortgage servicing responsibilities from other third parties. * *Dec-01* Countrywide changed fiscal year end to December 31, from February 29(28), thus *Dec-01* is for ten months.

TABLE 3 CONTINUED
COUNTRYWIDE'S MORTGAGE ACTIVITIES AND FINANCIAL PERFORMANCE, 2000 – 2007

PANEL B: INCOME STATEMENT RECOGNITIONS (BILLIONS OF DOLLARS)

	Feb-00	Feb-01	Dec-01*	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Mortgage production revenue[(b)]	1.05	1.10	2.04	4.23	6.49	5.68	5.17	5.65	2.76
Mortgage servicing revenues[(b)]	0.54	0.47	- 0.09	- 1.11	- 0.72	0.17	1.42	1.55	0.59
Other revenues[(c)]	0.30	0.51	0.69	1.40	2.21	2.71	3.80	4.22	2.71
Total Revenues	1.89	2.07	2.64	4.29	7.98	8.57	10.02	11.42	6.06
Total Expenses	1.26	1.49	1.85	2.95	4.13	4.97	5.87	7.08	7.37
Pre-Tax Profit	0.63	0.59	0.79	1.34	3.85	3.60	4.15	4.33	- 1.31

PANEL C: BALANCE SHEET RECOGNITIONS (BILLIONS OF DOLLARS)

	Feb-00	Feb-01	Dec-01*	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Mortgage inventory held-for-sale	2.65	1.96	10.60	15.03	24.10	37.35	36.81	31.27	11.68
Mortgage inventory held-for-investment	-	-	3.45	6.07	26.37	39.66	69.87	78.09	98.00
Mortgage servicing assets[(b)]	5.40	5.77	7.10	6.68	8.22	10.64	15.29	19.10	21.41
Other Assets[(c)]	7.77	15.22	16.06	30.26	39.29	40.85	53.13	71.49	80.64
Total Assets	15.82	22.96	37.22	58.03	97.98	128.50	175.09	199.95	211.73
Total Liabilities	12.43	18.90	32.63	52.37	89.89	118.19	162.27	185.63	197.07
Equity	3.39	4.06	4.59	5.66	8.08	10.31	12.82	14.32	14.66

(b) As per segment disclosures. (c) Includes the activities generated from Countrywide's other business activities: Capital markets, Insurance, Global, and Banking. Banking began in 2001. * *Dec-01* Countrywide changed fiscal year end to December 31, from February 29(28), thus *Dec-01* is for ten months.

TABLE 4
COUNTRYWIDE'S SECURITIZATION ACTIVITIES, 2001 – 2007

PANEL A: SECURITIZATION RECOGNITIONS (BILLIONS OF DOLLARS)

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Mortgage servicing rights	5.40	5.77	6.12	5.38	6.86	8.73	12.61	16.06	18.96
Suboridnate securities (a)	NP	0.64	0.41	0.74	0.93	1.54	2.03	2.07	1.01
Other retained interests (a)	NP	0.56	0.57	0.55	0.43	0.37	0.64	0.97	1.44
Representations and warranties (b)	NP	NP	NP	NP	0.09	0.14	0.19	0.39	0.64
Corporate guarantees	NP	NP	0.06	0.10	0.12	0.19	0.03	0.05	0.69

PANEL B: SECURITIZATION DISCLOSURES (BILLIONS OF DOLLARS)

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Gain on Sale (c)	0.56	0.61	1.77	3.69	5.94	4.79	4.65	5.33	2.37
Credit losses absorbed by retained interests (d)	NP	0.02	0.03	0.11	0.13	0.14	0.16	0.28	1.28
Expense for representations and warantees (e)	NP	NP	NP	NP	0.09	0.07	0.29	0.09	0.08
Cash proceeds received from securitisations	NP	60.49	103.83	222.41	346.18	259.10	364.67	362.27	350.51
Value of mortgages securitised	NP	NP	121.93	245.06	420.78	371.65	471.66	470.94	405.49
Contingent corporate guaratee (f)	NP	NP	0.08	0.04	0.11	0.15	0.35	0.49	0.50

(a) Only the total retained interest is recognized on-balance sheet, the breakdown is acquired from the disclosures and is of importance because subordinate securities absorb all or a disproportionately high percentage of the losses realized on the related mortgage loans securitized. (b) Included in other liabilities 2004, 2005. (c) Recognized as component of gain on sale of loans and securities reported on the income statement. (d) Determined from financial statement disclosures. (e) Recourse liability and corporate guarantees are provision for losses arising from the guarantees recorded as a component of gain on sale. (f) Corporate guarantees in excess of recorded liabilities (this is the contractual limit of CFC's corporate guarantee that exceeds the amount reported on the financial statement). NP: Not Provided.

TABLE 4 CONTINUED
COUNTRYWIDE'S SECURITIZATION ACTIVITIES, 2001 – 2007

PANEL C: COMPOSITION OF MORTGAGE PRODUCTION REVENUES (PERCENTAGE)

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Conventional - includes agency mortgages (g)	NP	NP	67.09	72.10	78.20	43.86	53.87	63.44	101.24
Subprime Mortgage Loans	NP	NP	15.22	9.51	6.98	19.63	17.05	12.46	(9.76)
Prime Home Equity Loans	NP	NP	4.84	5.69	0.24	13.70	12.21	10.81	(11.05)
Reperforming loans (h)	NP	NP	-	-	2.52	2.24	0.63	0.05	-
Captial markets	NP	NP	-	-	3.66	4.81	6.21	7.62	5.33
Other production reveneus (i)	NP	NP	12.85	12.70	8.40	15.76	10.04	5.63	14.25
Mortgage production revenue			100.00	100.00	100.00	100.00	100.00	100.00	100.00

PANEL D: PROFIT MARGINS RECEIVED ON MORTGAGE PRODUCT SALES (PERCENTAGE)

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Conventional - includes agency mortgages (g)	NP	NP	1.20	1.33	1.40	0.93	0.82	1.07	0.80
Subprime Mortgage Loans	NP	NP	5.53	4.64	4.43	3.64	2.01	1.84	(1.91)
Prime Home Equity Loans	NP	NP	3.99	3.35	1.90	3.01	2.29	1.96	(2.30)
Reperforming loans (h)	NP	NP	-	-	6.82	4.59	2.75	1.06	-
Captial markets	NP	NP	-	-	0.54	0.62	0.55	0.64	0.50
Margin on Total Securitizations	NP	NP	1.46	1.51	1.41	1.29	0.99	1.13	0.58

(g) Countrywide does not separately disclose its conventional mortgage sales in to 'agency (sold to GSEs)' and 'non-agency (sold to private investors)'. (h) Reperforming loans are reinstated loans that had previously defaulted and were repurchased from mortgage securitization trusts CFC sponsor. (i) This the total production revenue reported in the income statement less the 'gain on sale' disclosed in the notes. Accordingly this revenue is likely the origination fees because prior to the change in fiscal yearend CFC did separately recognize on the balance sheet origination fees and securitization revenues. NP: Not Provided.

TABLE 5
COUNTRYWIDE'S EXECUTIVE COMPENSATION AND COMPANY PERFORMANCE, 2001 – 2007

PANEL A: CEO COMPENSATION (MILLIONS)

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07
Base salary	1.40	1.65	1.46	2.04	2.27	2.47	2.67	2.87	1.9
Bonus	4.21	3.76	4.65	7.76	19.89	17.27	19.56	20.46	-
Other[(a)]	0.51	0.57	0.57	0.73	0.64	0.62	0.73	0.64	-
Total	6.12	5.98	6.68	10.54	22.79	20.36	22.95	23.97	1.9
Value realised under option exercise[(b)]	-	0.42	-	10.42	34.36	48.59	119.02	72.21	10.0
Options granted (#)[(c)]	0.50	0.50	1.00	1.40	2.00	1.40	1.40	1.40	NP

PANEL B: COMPENSATION OF THE FIVE MOST HIGHLY PAID EXECUTIVES (MILLIONS)

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07*
Base salary	2.63	2.20	2.26	2.95	2.77	3.44	3.80	4.73	3.8
Bonus	3.61	3.35	5.98	8.31	15.92	16.63	20.59	14.25	2.6
Other[(a)]	0.83	0.22	0.29	0.48	0.46	0.96	0.49	27.38	-
Total	7.06	5.77	8.53	11.74	19.16	21.02	24.88	46.36	6.4
Value realised under option exercise[(b)]	4.67	4.51	0.49	13.39	26.19	41.31	31.66	134.86	17.9
Options granted (#)[(c)]	0.47	0.42	0.51	1.90	5.79	5.52	1.85	2.23	?

The CEO office was held by Angelo Mozilo. (a) The amounts reported reflect the aggregate incremental cost of perquisites and other personal benefits provided to the named executive officers, including the personal use of Company aircraft, use of country club memberships, use of automobiles, paid tax and investment advice, executive physicals, and recreational activities covered by U.S. while the named executive officer traveled for business Includes other annual compensation plus all other compensations; also tax reimbursements, payment accruals on termination plans (Kurland 2006, $25,662.22th); registrant contributions to defined contribution plans, life insurance premiums; and contributions made by Countrywide to the Director Charitable Awards Program and the Executive Matching Gift Program; and changes in pension value and nonqualified deferred compensation earnings. (b) As disclosed in Securities and Exchange Commission DEF-14A company filings. (c) Year 2003, 2004 and 2006 also include the 'restricted option grants' that were issued to executives. Also, in 2006 Mr. Kurland's employment with the Company was terminated on September 7, 2006, which under his employment agreement caused all of his unvested options and SARs to become vested and immediately exercisable until January 7, 2007. Mr. Kurland exercised his stock options and SARs within that period. * For fiscal year 2007 executive compensation only includes the top *Four* executives as opposed to *five* provided in the previous years due to Mr. Kurland's departure.

TABLE 5 CONTINUED
COUNTRYWIDE'S EXECUTIVE COMPENSATION AND COMPANY PERFORMANCE, 2001 – 2007

PANEL C: CEO AND EXECUTIVE CASH BONUSES, OPTION EXERCISES AND SHARE PRICE PERFORMANCE

	Feb-00	Feb-01	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06	Dec-07*
Total cash bonuses	7.82	7.11	10.63	16.08	35.81	33.90	40.15	34.71	2.63
Total value realized under option exercise[(b)]	4.67	4.92	0.49	23.81	60.55	89.90	150.69	207.08	27.9
Earnings per share									
Basic	3.63	3.26	4.04	6.75	4.44	3.90	4.28	4.42	-2.03
Diluted	3.52	3.14	3.89	6.49	4.18	3.63	4.11	4.30	-2.03
Share price[(d)(e)]	24.93	44.23	40.97	51.65	75.85	37.01	34.19	42.45	8.94
Book value	29.89	35.78	37.53	44.79	43.87	17.76	21.43	23.05	25.33
Price to Book ratio	0.83	1.24	1.09	1.15	1.73	2.08	1.47	1.84	0.35
Shares outstanding (mil)	113.33	113.46	122.23	126.38	184.28	580.42	597.94	621.08	578.70
Market capitalisation[(d)]	2826.14	5018.47	5007.68	6527.53	13977.49	21481.27	18890.57	26364.63	5173.58

[(b)] In 2006 Mr. Kurland's employment with the Company was terminated on September 7, 2006, which under his employment agreement caused all of his unvested options and SARs to become vested and immediately exercisable until January 7, 2007. Mr. Kurland exercised his stock options and SARs within that period. (d) Based on closing price as reported on the New York Stock Exchange the day of fiscal year end. If stock exchange was closed then price is taken for the day prior. (e) April 2004 and August 2004, Countrywide completed a 3-for-2 and a 2-for-1 stock split respectively, effected as stock dividends. * For fiscal year 2007 executive compensation only includes the top *Four* executives as opposed to *five* provided in the previous years due to Mr. Kurland's departure.

Table 6
Chronology of Countrywide's Material Disclosures
(Filed with the Securities and Exchange Commission on Form 8-K)

Event	Description	Date	Predict
Event 1 (Asset impairment)	Countrywide reports strong loan production offset by higher credit costs "second quarter included impairment charges of $417 million taken during the quarter on the Company's investment in credit-sensitive retained interests"	Jul 24, 07	-
Event 2 (Declining operations)	Countrywide reports mortgage underwriting declined 14 percent on a sequential month basis	Aug 14, 07	-
Event 3 (Capital raising)	Countrywide reports the borrowing of $11.5 billion predominantly from JPMorgan and Barclays. $7.16 on 364-Day Credit Agreement and the remaining on Five-Year Credit Agreement	Aug 16, 07	?
Event 4 (Declining operations)	Mortgage underwriting for the month of September 2007 totaled $21 billion, a 44 percent decline from September 2006; Average daily mortgage loan application activity for September 2007 was $1.7 billion, a 39 percent decrease from September 2006. The mortgage loan servicing portfolio continued to grow, reaching $1.46 trillion at September 30, 2007. This is an increase of $215 billion, or 17 percent, from September 30, 2006.	Oct 11, 07	-
Event 5 (Board change)	Departure of Mr. Cisneros. As a director of the Board since 2001 Mr. Cisneros tenure coincides with the company's launch of the We House America $1 Trillion Dollar Challenge, a campaign to fund $1 trillion in home loans to minorities and low- to moderate-income borrowers, and to borrowers in lower-income communities, by 2010. As of August 31, 2007, the company has funded approximately $789 billion toward that goal.	Oct 24, 07	-
Event 6 (Declining operations)	Mortgage underwriting and mortgage loan application is still on a downward trend and Subprime mortgage underwriting for the month of October 2007 was just 0.2 percent of total mortgage underwriting. Further, Countrywide stipulates it is working diligently toward mitigating the consequences facing its borrowers. Countrywide reports that it has recently launched a $16 billion home ownership preservation initiative and has partnered up with the Neighborhood Assistance Corporation of America, the Homeownership Preservation Foundation and NeighborWorks America, forming initiatives that will help the community at large.	Nov 13, 07	?
Event 7 (Declining operations)	Mortgage underwriting for the month of November 2007 totaled $23 billion, a 40 percent decline from November 2006; average daily mortgage loan application activity down 32 percent from November 2006. In addition, government mortgage underwriting represented 10 percent of total mortgage underwriting in November 2007 versus 3 percent in November 2006	Dec 13, 07	-
Event 8 (Declining operations)	Total mortgage underwriting up slightly from the previous month and the mortgage servicing portfolio continues to grow with a balance of $1.48 trillion as at December 31, 2007. While this sounds optimistic the summary accounts shows the performance of the servicing portfolio is weakening, with delinquencies as a percentage of the unpaid principle balance now 7.2% and foreclosures pending as a percentage of the unpaid principle balance, 1.44%. The portfolio performance is comparative to the previous month of 6.52% delinquency and 1.28% pending foreclosure, and the previous year of 4.60% delinquency and 0.70% pending foreclosure. In addition, overall mortgage originations are only down by 11.22 percent (from $468.17b to $415.63b).	Jan 9, 08	-
Event 9 (Merger agreement)	Bank of America Corporation announces a definitive agreement to purchase Countrywide Financial Corp. in an all-stock transaction worth approximately $4.1 billion	Jan 11, 08	?

Table 7
Portfolio Details

Portfolio	Details
Portfolio 1 (Regulated Securitization)	The regulated securitization portfolio includes 168 regulated depository financial institutions that reported on Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities in Domestic Offices* filed with the Federal Reserve Bank of Chicago a level of mortgage loan sales greater than zero.
Portfolio 2 (Regulated No-Securitization)	The regulated no-securitization portfolio includes 80 regulated depository financial institutions that reported on Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities in Domestic Offices* filed with the Federal Reserve Bank of Chicago a level of mortgage loan sales that was equal to zero.
Portfolio 3 (Regulated Other Depository)	The regulated other depository portfolio includes 281regulated depository financial institutions that did not file Schedule RC-P, *1-4 Family Residential Mortgage Banking Activities in Domestic Offices* filed with the Federal Reserve Bank of Chicago. Schedule RC-P only needs to be completed by banks with $1 billion or more in total assets and those banks with less than $1 billion in total assets where residential mortgage banking activities exceeds $10 million for two consecutive quarters.
Portfolio 4 (Unregulated Finance)	The Finance portfolio includes 1,768 firms from the finance, insurance and real estate industry with a two-digit SIC of 60-67. Any firm with a two-digit SIC of 60 and a three-digit SIC of 616 is removed. The removal of firms with a two-digit SIC of 60 removes all depository institution and the removal of firms with a three-digit SIC of 616 removes all firms in the same industry as Countrywide (mortgage bankers, loan correspondents and loan brokers)
Portfolio 5 (Unregulated Mortgage Bankers)	The Mortgage Bankers portfolio includes 15 firms with the same three-digit sic code (616) as Countrywide

Table 8
Contagion Arising from Countrywide's Major Events
(Portfolio Return$_j$ = α_j + β_jMarket Return + δ_KEvents$_{jK}$ + ε_j)

		Countrywide Financial (Countrywide)		Regulated Securitization (Portfolio 1)		Regulated No-Securitization (Portfolio 2)		Regulated Other Depository (Portfolio 3)		Unregulated Finance (Portfolio 4)		Unregulated Mortgage bankers (Portfolio 5)	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*
Intercept	?	-0.0034	-0.0034	-0.0012 ***	-0.0012 **	-0.0013 ***	-0.0013 ***	-0.0011 ***	-0.0011 ***	-0.0001	-0.0001	-0.0021 **	-0.0021 **
Market	?	2.5734 ***	2.5769 ***	0.7417 ***	0.7400 ***	0.5912 ***	0.5892 ***	0.5445 ***	0.5462 ***	0.6930 ***	0.6966 ***	0.8168 ***	0.8312 ***
Event 1	-	-0.0330		-0.0041 *		-0.0026		-0.0042 **		-0.0038 **		-0.0144 *	
Event 2	-	-0.0327		-0.0029		-0.0013		-0.0022		-0.0039 **		-0.0158 *	
Event 3	?	-0.1026 ***		0.0162 ***		0.0127 ***		0.0053 **		-0.0061 ***		-0.0037	
Event 4	?	-0.0135		-0.0019		0.0012		-0.0030 *		0.0002		-0.0022	
Event 5	-	-0.0654 **		-0.0066 **		-0.0047 *		-0.0052 **		-0.0015		-0.0078	
Event 6	-	-0.0242		0.0063 **		0.0067 **		0.0037 **		-0.0013		0.0041	
Event 7	-	-0.0626 **		-0.0070 **		-0.0071 **		-0.0071 ***		-0.0053 ***		-0.0140 *	
Event 8	-	-0.1645 ***		-0.0072 ***		-0.0039		-0.0075 ***		-0.0023		-0.0112	
Event 9	-	0.1759 ***		0.0045 *		0.0067 **		0.0051 **		0.0038 **		0.0040	
All Events[a]	?		-0.0638 ***		-0.0004		0.0001		-0.0026 ***		-0.0030 ***		-0.0081 **
N		252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.354	0.2209	0.7726	0.7311	0.6517	0.6181	0.7695	0.7383	0.8831	0.8754	0.2809	0.2916

Accumulated Portfolio Returns

	Countrywide	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Portfolio 5
Annual portfolio returns[b]	-0.8492	0.0660	-0.4209	-0.4819	0.3773	-0.4988
Total event returns (-1,0)[c]	-0.6362	0.1194	0.0165	-0.0234	-0.0092	-0.1375
Mean event return (-1,0)[d]	-0.3226	-0.0026	0.0078	-0.0151	-0.0201	-0.0610
Mean reduced events return (-1,0)[e]	-0.3305	-0.0167	-0.0069	-0.0203	-0.0163	-0.0535

The portfolio return is the mean holding period return for Event$_K$ over the two-day window (-1,0) is the dependent variable (discussed in Section 4.4). Market is Standard and Poor's composite Index. Event 1 to 9 (Detailed in Table 7) take the value of 1 for the two-day window (-1,0) of the Event; 0 otherwise. The Securitization portfolio includes the banks that sell mortgage loans. The No-Securitization portfolio includes the banks that do not sell mortgage loans. The Other Depository portfolio includes the banks that did not file an RC-P report. The Finance portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. Section 3.5 details the portfolio construction. [a]*All Events* does not include Event 9, the merger agreement. [b] The return is based on a $1 portfolio investment placed January 14, 2007 and withdrawn January 14, 2008. [c] Total event return is an accumulated return over the two day event window (-1, 0) for all nine events. [d] Mean event return is the accumulated mean event returns for all nine events where the mean is taken across the two day event window (-1, 0). [e] Mean reduced events return excludes events 3, 5, and 9 as these events may be seen unique to Countrywide and not necessarily events that are less likely to lead to contagion * p<0.1; **p<0.05; *** p<0.00

Table 9

Cross-Sectional Analysis for degree of Contagion across Firms

Cumulative Abnormal Return$_j$ = α_j + β_jLeverage + β_jLiquidity + β_jLoss + β_jReturn on Assets + β_jSize + β_jSecuritization variables + ε_j

Panel A: Regulated Securitization and No-Securitization Firms

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9
Intercept	?	0.0091	-0.0647	0.2525	-0.1279 ***	0.0323	0.0184	-0.1506 **	-0.1811 **	-0.0130
Leverage	-	-0.0066	0.0800	-0.2238 *	0.1432 ***	-0.0569	-0.0365	0.1778 ***	0.1912 **	-0.0048
Liquidity	+	-0.0733 *	0.1352 **	-0.1439 *	0.1539 ***	0.0514	-0.0774	0.0880 **	0.0929 *	0.0140
Loss	-	-0.1137 ***	-0.0966 ***	0.0895 **	0.0007	-0.0114	0.0200	0.0053	-0.0176 *	-0.0023
Return on Assets	+	0.3989	0.8441	-3.0535	1.4346 **	0.1510	0.0119	2.5201 **	0.7015	-1.0776
Size	-	-0.0019 *	-0.0029 *	0.0013	-0.0021 **	0.0009	0.0064 ***	-0.0058 ***	-0.0014	0.0048 **
Speculative S&P's Rank	-	0.0031	0.0081	-0.0284 ***	0.0054 *	-0.0076 *	-0.0024	-0.0089 **	-0.0161 **	0.0079
Securitization	-	-0.0025	-0.0136 **	0.0384 ***	-0.0061 **	-0.0078 *	-0.0006	0.0112 ***	-0.0012	-0.0149 **
Securitization Ratio	-	0.0000	0.0000	-0.0001	0.0000	-0.0001	0.0001	-0.0002 ***	-0.0001 **	0.0001
Securitization Ratio * Loss	-	0.0002	0.0001	-0.0006 **	0.0001	0.0002 **	-0.0002 *	0.0000	0.0005 ***	0.0000
N		210	210	210	210	210	210	210	210	210
Adjusted R_Squared		0.166	0.064	0.135	0.163	0.032	0.047	0.193	0.077	0.012
P-value of F-Statistic		0.000	0.008	0.000	0.000	0.075	0.027	0.000	0.003	0.245

The cumulative market adjusted return for EventK over the two-day window (-1,0) is the dependent variable. Leverage is Firmj's total liabilities to total assets at the immediate quarter end. Liquidity is Firmj's level of cash and short term investments to total assets at the immediate quarter end. Loss takes the value of 1 if Firmj's made a loss, 0 otherwise. Return on Assets is Firmj's income before extraordinary items to total assets at the immediate quarter end. Size is the log of Firmj's market value at the immediate quarter end. Speculative S&P Rank takes the value of 1 if Firmj's Standard and Poor's ranking is B- or below, 0 otherwise. Securitization takes the value of 1 if Firmj filed Schedule RC-P indicating that it sold mortgage loans, 0 otherwise (see Section 4.2 for detail). Securitization Ratio is Firmj's level of mortgage sales to total asset for the immediate quarter. Regulated Securitization takes the value of 1 if the regulated bank filed Schedule RC-P with the Chicago Federal Reserve indicating whether or not they sold residential mortgage loans; 0 otherwise. * p<0.1; **p<0.05; *** p<0.01

Table 9 Continued
Cross-Sectional Analysis for degree of Contagion across Firms
Cumulative Abnormal Return$_j$ = α_j + β_jLeverage + β_jLiquidity + β_jLoss + β_jReturn on Assets + β_jSize + β_jSecuritization variables + ε_j

Panel B: Cross Sectional Analysis on All Firms

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9
Intercept	?	0.0011	0.0194 ***	0.0000	0.0018	0.0016	-0.0294 ***	-0.0100 *	-0.0179 ***	-0.0162 ***
Leverage	-	0.0014	0.0069 *	0.0112 **	0.0039	-0.0050	0.0137 ***	-0.0133 ***	0.0073 *	0.0285 ***
Liquidity	+	0.0021	0.0174 ***	0.0021	-0.0063 **	-0.0044	-0.0083 *	0.0138 ***	0.0311 ***	0.0123 **
Loss	-	-0.0048 **	-0.0108 ***	-0.0048 *	0.0011	-0.0017	-0.0024	-0.0049 **	-0.0056 **	0.0093 ***
Return on Assets	+	-0.0283 *	0.0511 **	0.0379 *	-0.0131	0.0167	0.0785 ***	0.0088	0.0439 **	-0.0276 *
Size	-	-0.0011 ***	-0.0036 ***	0.0003	-0.0009 **	-0.0004	0.0024 ***	0.0014 **	0.0004	-0.0004
Speculative S&P's Rank	-	-0.0014	-0.0018	-0.0115 ***	-0.0030 **	0.0008	0.0022	-0.0054 **	-0.0145 ***	0.0022
Mortgage Securitization	-	-0.0079 ***	-0.0147 ***	0.0534 ***	-0.0040 *	-0.0138 ***	0.0244 ***	-0.0004	-0.0079 **	-0.0047
N		2565	2565	2565	2565	2565	2565	2565	2565	2565
Adjusted R_Squared		0.004	0.023	0.108	0.003	0.007	0.056	0.015	0.034	0.026
P-value of F-Statistic		0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

The cumulative market adjusted return for EventK over the two-day window (-1,0) is the dependent variable. Securitization takes the value of 1 if Firmj filed Schedule RC-P indicating that it sold mortgage loans (regardless of whether they reported a sales level of zero), 0 otherwise.
* p<0.1; **p<0.05; *** p<0.01

Table 10
Bank Descriptive Statistics

	N	Mean	Std. Dev.	25%	Median	75%	99%
Price	1667	15.553	13.104	6.250	12.000	21.070	61.700
Other Assets	1667	147.155	74.367	97.821	132.856	168.750	415.858
Level 1 Assets	1667	1.882	5.943	0.000	0.104	0.768	33.462
Level 2 Assets	1667	28.306	25.919	11.352	21.279	34.374	123.555
Level 3 Assets	1667	1.233	3.086	0.000	0.046	0.742	15.380
Total Liabilities	1667	162.129	83.563	106.993	146.284	186.360	458.271
Income	1667	-0.186	1.409	-0.189	0.153	0.362	1.399
Securitization Level	1667	1.929	4.304	0.000	0.456	1.870	23.464
Securitization Level (Q1)	1667	2.293	4.798	0.000	0.581	2.185	25.826
Securitization Level (Q2)	1667	2.045	4.374	0.000	0.495	2.008	22.298
Securitization Level (Q3)	1667	1.929	4.304	0.000	0.456	1.870	23.464

All variables are measured on a per share basis unless specified otherwise. *Price:* closing share price measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline. *Other Assets:* assets that do not require fair value measurement. *Level 1 Assets*: assets that require fair value measurement using quoted prices in active markets for identical assets. *Level 2 Assets*: assets that require fair value measurement using inputs other than quoted prices observable for the asset either directly or indirectly. *Level 3 Assets*: assets that require fair value measurement using unobservable inputs. *Other Liabilities*: liabilities that do not require fair value measurement. *Level 123 Liabilities*: liabilities that require fair value measurement. *Income*: income before extraordinary items. *Financial quarter*: takes the value of 1 for March quarter, 2 for June quarter, 3 for September quarter, 4 for December quarter. *Exchange*: takes the value 1 if the bank is listed on the New York Stock Exchange and 0 otherwise. *Securitization Level:* level of closed-end 1-4 family mortgage loans sold in the current quarter. *Securitization Level (Q1):* level of closed-end 1-4 family mortgage loans sold in the previous financial quarter. *Securitization Level (Q2):* level of closed-end 1-4 family mortgage loans sold two financial quarters prior. *Securitization Level (Q3):* level of closed-end 1-4 family mortgage loans sold three financial quarters prior.

Table 11
Correlation Matrix of Bank Characteristics

	A	B	C	D	E	F	G	H	I	J	K	L	M
A : Price	1												
B : Other Assets	**0.428**	1											
C : Level 1 Assets	**0.171**	**0.066**	1										
D : Level 2 Assets	**0.471**	**0.480**	0.001	1									
E : Level 3 Assets	**0.189**	**0.368**	**0.066**	**0.374**	1								
F : Other Liabilities	**0.482**	**0.962**	**0.121**	**0.690**	**0.435**	1							
G : Income	**0.382**	-0.004	0.025	**0.090**	**-0.101**	0.009	1						
H : Securitization	**0.123**	**0.128**	**0.064**	0.034	**0.106**	**0.117**	-0.006	1					
I : Quarter	**-0.144**	-0.004	-0.026	-0.009	0.017	-0.005	**-0.147**	-0.036	1				
J : Loss	**-0.452**	-0.035	-0.051	**-0.179**	0.050	**-0.072**	**-0.555**	0.010	**0.160**	1			
K : Securitization Level	**0.090**	**0.251**	0.057	**0.129**	**0.170**	**0.246**	0.036	**0.296**	**-0.096**	**-0.065**	1		
L : Securitization Level (Q1)	**0.075**	**0.237**	0.058	**0.117**	**0.165**	**0.231**	0.016	**0.293**	0.041	-0.040	**0.873**	1	
M : Securitization Level (Q2)	**0.075**	**0.248**	0.058	**0.099**	**0.185**	**0.235**	0.006	**0.287**	0.046	-0.027	**0.788**	**0.901**	1
N : Securitization Level (Q3)	**0.085**	**0.262**	0.062	**0.080**	**0.212**	**0.240**	0.000	**0.275**	-0.044	-0.001	**0.750**	**0.756**	**0.871**

Bolded values indicate significance at the 1 percent level for two-tailed tests. Variables as previously specified.

Table 12
The Relevance of Bank *Level 3* Asset Recognitions

$$Price_{jt} = \beta_0 + \beta_1 Other\ Assets_{jt} + \beta_2 Level\ 1\ Assets_{jt} + \beta_3 Level\ 2\ Assets_{jt} + \beta_4 Level\ 3\ Assets_{jt} + \beta_5 Other\ Liabilities_{jt} + \beta_6 Level\ 123\ Liabilities_{jt} + \beta_7 Income_{jt} + Controls + \varepsilon_{jt}$$

		Model 1[(a)]	Model 2[(a)]	Model 3[(a)]
Intercept	?	3.4580 ***	5.9184 ***	7.7478 ***
Other Assets	+	0.7029 ***	0.6998 ***	0.6583 ***
Level 1 Assets	+	0.9837 ***	0.9765 ***	0.9114 ***
Level 2 Assets	+	0.8428 ***	0.8399 ***	0.7751 ***
Level 3 Assets	+	**0.4467** **	**0.4462** **	**0.4682** **
Total Liabilities	-	-0.7222 ***	-0.7189 ***	-0.6719 ***
Income	+	2.7143 ***	2.6038 ***	1.4483 ***
Quarter	?		-1.0587 ***	-0.8115 ***
Loss	-			-6.8883 ***
Wald test: Level 1 Assets =1[(b)]		0.01	0.02	0.24
Wald test: Level 2 Assets =1[(b)]		0.95	0.99	2.10
Wald test: Level 3 Assets =1[(b)]		4.97 **	4.99 **	5.16 **
Wald test: Level 1 Assets = Level 3 Assets [(b)]		6.19 **	6.00 **	4.62 **
Wald test: Level 2 Assets = Level 3 Assets[(b)]		3.91 **	3.84 *	2.56
N		1667	1667	1667
Adjusted R Squared		0.4784	0.4849	0.5245

[(a)]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [(b)]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1, **p<.05, *** p<.01

Table 13
The Relevance of *Level 3* Assets for Banks that Do Not Securitize

		Model 1[(a)]	Model 2[(a)]	Model 3[(a)]
Intercept	?	2.6096 ***	3.7899 ***	5.0731 ***
Other Assets	+	0.7812 ***	0.7768 ***	0.7345 ***
Level 1 Assets	+	1.0021 ***	0.9936 ***	0.9350 ***
Level 2 Assets	+	0.9583 ***	0.9526 ***	0.9009 ***
Level 3 Assets	+	**0.8026** ***	**0.8068** ***	**0.7866** ***
Total Liabilities	-	-0.8196 ***	-0.8148 ***	-0.7684 ***
Income	+	1.2741 ***	1.2427 ***	0.4819 *
Quarter	?		-0.4821 ***	-0.3515 *
Loss	-			-4.6992 ***
Wald test: Level 1 Assets =1[(b)]		0.00	0.00	0.07
Wald test: Level 2 Assets =1[(b)]		0.03	0.04	0.19
Wald test: Level 3 Assets =1[(b)]		**0.38**	**0.36**	**0.47**
Wald test: Level 1 Assets = Level 3 Assets [(b)]		0.35	0.31	0.20
Wald test: Level 2 Assets = Level 3 Assets[(b)]		0.31	0.27	0.17
N		455	455	455
Adjusted R Squared		0.548	0.549	0.578

[(a)]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [(b)]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1, **p<.05, *** p<.01

Table 14

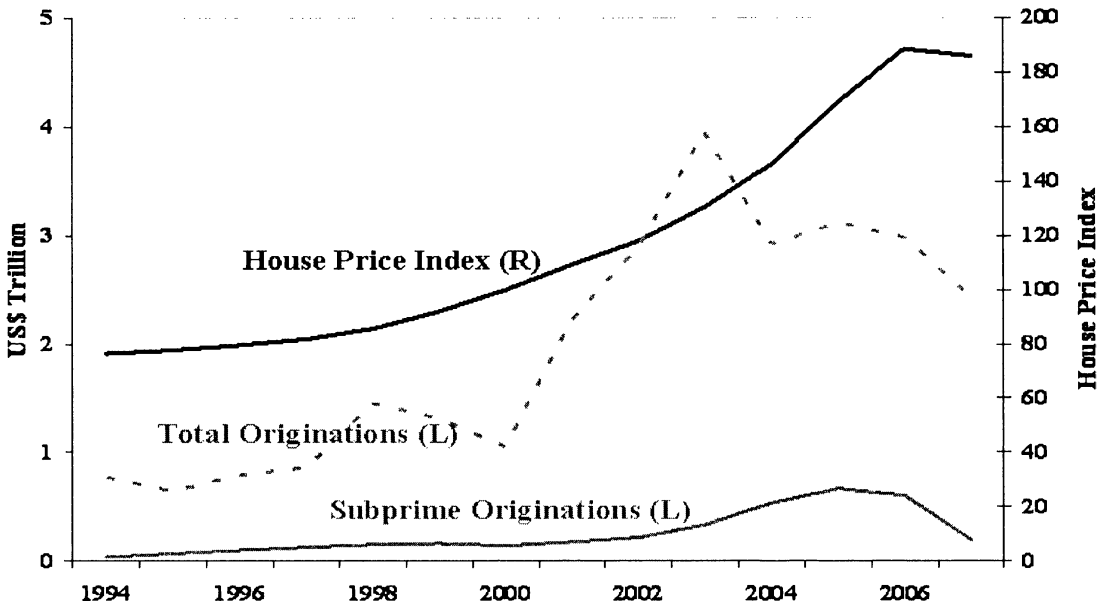
Mortgage Securitization and the Relevance of *Level 3* Asset recognitions

		Model 1[(a)]	Model 2[(a)]	Model 3[(a)]	Model 4[(a)]	Model 5[(a)]	Model 6[(a)]	Model 7[(a)]
Intercept	?	7.7478 ***	6.2483 ***	6.0104 ***	5.8880 ***	5.6104 ***	5.6348 ***	5.8395 ***
Other Assets	+	0.6583 ***	0.6649 ***	0.6739 ***	0.6774 ***	0.6789 ***	0.6809 ***	0.6836 ***
Level 1 Assets	+	0.9114 ***	0.9012 ***	0.9127 ***	0.9179 ***	0.9202 ***	0.9215 ***	0.9241 ***
Level 2 Assets	+	0.7751 ***	0.7788 ***	0.7903 ***	0.7910 ***	0.7930 ***	0.7937 ***	0.7959 ***
Level 3 Assets	+	**0.4682** **	**0.8017** ***	**0.8049** ***	**0.8011** ***	**0.8036** ***	**0.8106** ***	**0.8176** ***
Total Liabilities	-	-0.6719 ***	-0.6781 ***	-0.6886 ***	-0.6895 ***	-0.6916 ***	-0.6938 ***	-0.6969 ***
Income	+	1.4483 ***	1.4179 ***	0.2251	0.1930	0.2087	0.2134	0.2201
Quarter	?	-0.8115 ***	-0.7886 ***	-0.7731 ***	-0.8594 ***	-0.7151 ***	-0.7183 ***	-0.7986 ***
Loss	-	-6.8883 ***	-6.9223 ***	-6.8854 ***	-7.0050 ***	-6.9770 ***	-6.9579 ***	-6.8784 ***
Securitization	+		2.0278 **	2.2712 ***	2.9178 ***	2.8285 ***	2.7552 ***	2.6382 ***
Securitization * Level 3 Assets	-		**-0.4670** **	**-0.4411** *	**-0.3939** *	**-0.4028** *	**-0.4028** *	**-0.4045** *
Securitization * Income	+			1.5730 ***	1.6268 ***	1.6048 ***	1.5945 ***	1.5878 ***
Securitization Level	-				**-0.2233** ***			
Securitization Level (Q1)	-					**-0.2065** ***		
Securitization Level (Q2)	-						**-0.2076** **	
Securitization Level (Q3)	-							**-0.1787** **
Securitization * Level 2 Assets	-							
Wald test: Level 1 Assets =1[(b)]		0.24	0.30	0.24	0.21	0.20	0.19	0.18
Wald test: Level 2 Assets =1[(b)]		2.10	2.05	1.84	1.79	1.77	1.78	1.76
Wald test: Level 3 Assets =1[(b)]		5.16 **	0.58	0.44	0.47	0.45	0.42	0.39
Wald test: Level 1 Assets = Level 3 Assets [(b)]		4.62 **	0.18	0.15	0.19	0.19	0.17	0.15
Wald test: Level 2 Assets = Level 3 Assets[(b)]		2.56	0.01	0.00	0.00	0.00	0.00	0.01
N		1667	1667	1667	1667	1667	1667	1667
Adjusted R Squared		0.525	0.529	0.534	0.540	0.539	0.538	0.537

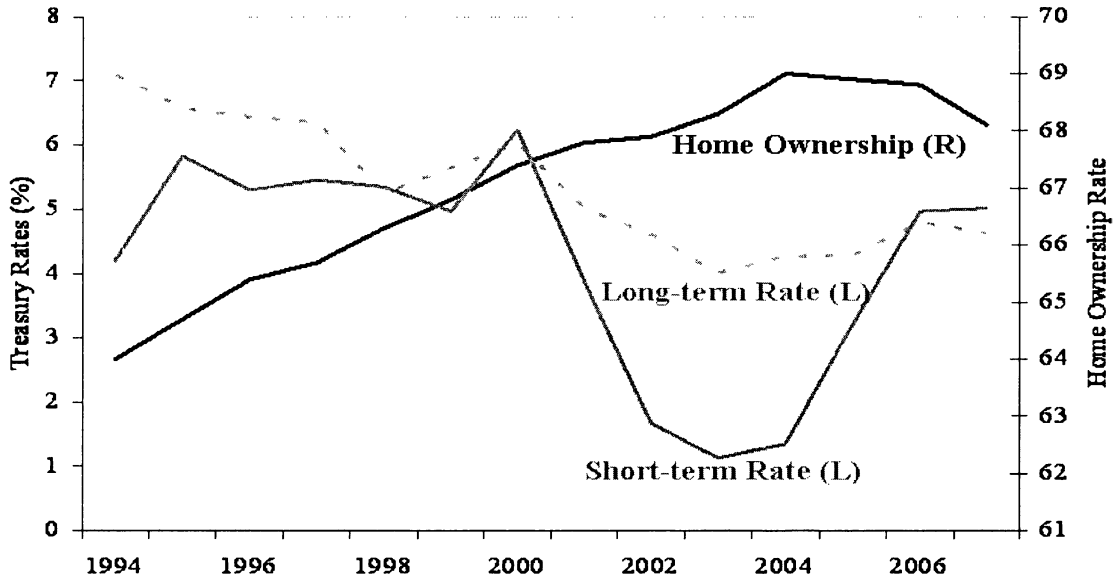
The dependent variable is price. *Securitization:* Dichotomous variable that takes the value of 1 if the bank sells mortgage loans and 0 otherwise. *Securitization * Level 3 Assets*: interaction of *Securitization* and *Level 3 Assets*. *Securitization*Income*: interaction of *Securitization* and *Income*. Other variables are as previously specified. [(a)]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [(b)]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1, **p<.05, *** p<.01

FIGURE 1
MORTGAGE MARKET INDICATORS

PANEL A: HOUSE PRICES AND MORTGAGE ORIGINATION ACTIVITY



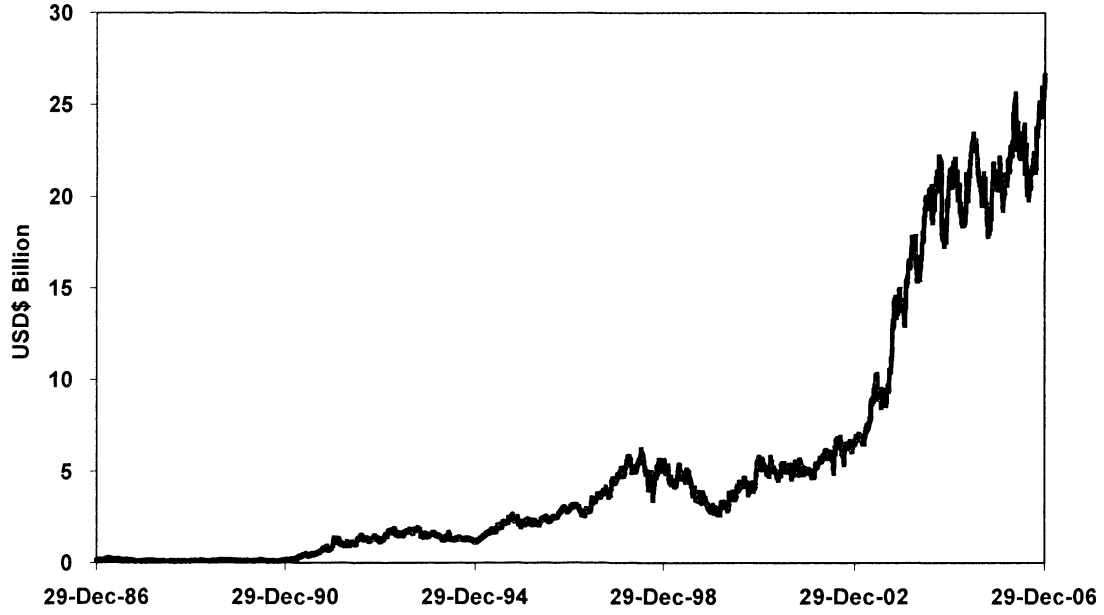
PANEL B: HOME OWNERSHIP RATES AND TREASURY YIELDS



Real home price index is Case-Shillers Indices data from Figure 2.1 in Robert J. Shiller (2005). Home ownership rates are acquired from U.S. Census bureau; Long-term Rate is the 10-year treasury rate and the Short-term Rate is the Federal Funds Rate data acquired from The Economic Report to the president (United States Government 2010)

FIGURE 2
PERFORMANCE OF COUNTRYWIDE'S EQUITY, 1987-2008

PANEL A: COUNTRYWIDE MARKET CAPITALIZATION FOR DECEMBER 1986 - 2006



PANEL B: SHARE PRICE PERFORMANCE, JANUARY 2007 TO JANUARY 2008

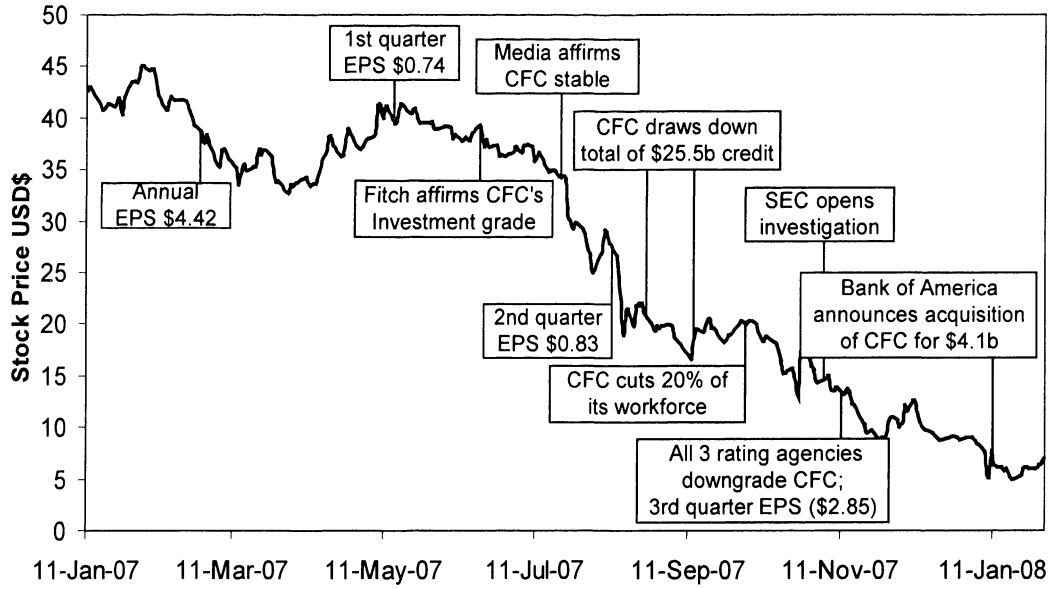
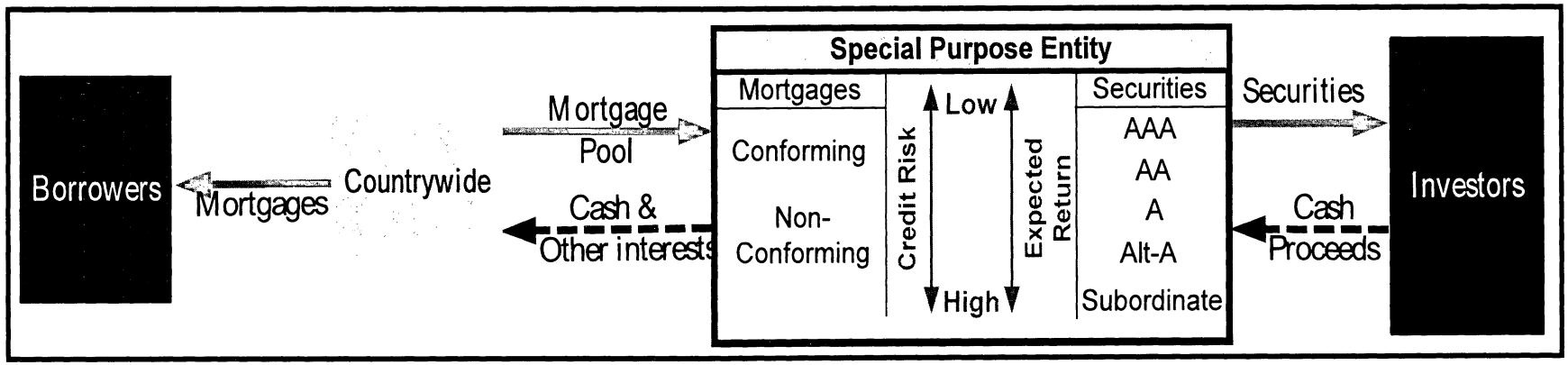
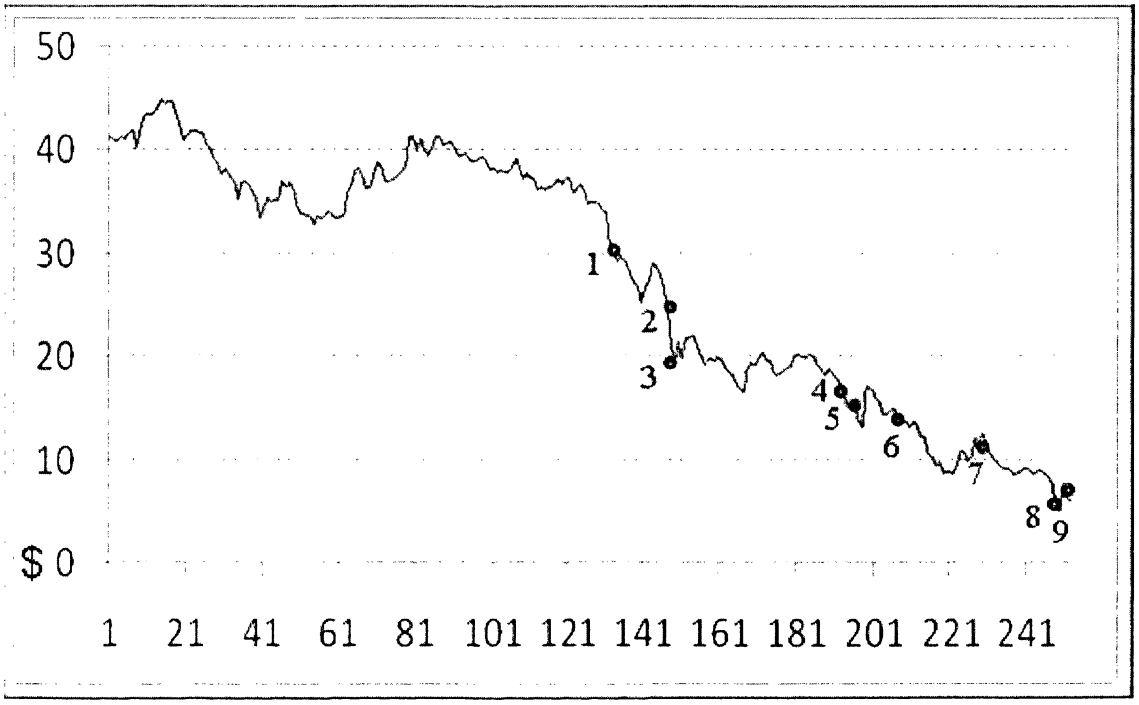


FIGURE 3
PARADIGM SECURITIZATION STRUCTURE WITH SUBORDINATION



Conforming mortgages also referred to as agency mortgage loans meet the criteria of the government sponsored enterprises (GSEs). Non-conforming mortgage loans also referred to as non-agency mortgages do not meet the criteria of the GSEs.

FIGURE 4
TRADING DAY STOCK PRICE OF COUNTRYWIDE
JANUARY 14, 2007 TO JANUARY 14, 2008
(Points on graph correspond with the material disclosures detailed in Table 6)



APPENDIX A

MORTGAGE SECURITIZATION

Historically, banks used deposits as the primary funding source for mortgage loans which involved banks retaining the mortgage loans on the balance sheet until they were discharged. As a consequence, balance sheet capability and leverage ratios imposed significant limitations on the level of the banks' lending activities. The attraction of securitization is twofold. First, securitization allows banks to remove the mortgage loans that have built up on the balance sheet and sell these on, in the secondary mortgage market. Credit risk associated with the mortgage loans is removed from the banks' balance sheet and cash reserves increase as the loans are sold on. The reduction in credit risk and increased cash on the balance sheet provides banks with the regulatory ability to provide additional loans for new or existing customers. Second, securitization accelerates the recognition of revenues arising from the origination of mortgage loans. Securitization enables illiquid mortgage loans to be converted into liquid securities and this process results in the vast majority of banks' reporting gains on the income statement (Barth and Taylor 2010; Dechow et al. 2010), instead of having to incrementally report profits over the life of the mortgage loan. Whereby the profit earned over the life of the mortgage loan is the difference between the interest rate charged for the mortgage loan, and the interest rate paid on the deposits used to fund the loan.

In its simplest form securitization involves the aggregation of financial assets into a portfolio, which is then sold to a special purpose entity. The acquisition of the financial

assets is financed by the issue of securities, with the servicing of these securities being provided by the cash flows arising from the financial assets being acquired. Hence, where the financial assets being securitized are mortgage loans, the securities issued are often labelled mortgage-backed securities (or collateralised debt obligations). These securities have a number of attractions for investors. First, they allow the acquisition of an interest in a portfolio of financial assets. Second, the credit rating of the securities is determined by the quality of the financial assets being securitised, rather than the firm originating the mortgage. Third, the yield on these securities is higher due to the securities not being credit enhanced by the vendor of the financial assets, the mortgage loan originator.

More complex securitizations involve special purpose entities issuing securities with different priorities to accessing the underlying cash flows. Securities which have deferred or subordinated access to the underlying cash flows are higher risk, and will be the first to suffer losses in value in event the underlying financial assets default. Such high risk securities are considered first loss positions, and they are often retained by the asset originator to address moral hazard problems associated with the origination and securitization process. In the case of Countrywide these were labeled 'retained interests' and were extremely high risk investments.

THE TRANSACTION

The securitization transaction involves the bank selling a pool of mortgage loans to a special purpose entity (SPE – a passive 'bankrupt remote' conduit) that transforms the

mortgage loan pool into securities which are issued to investors.[117] The sale of the mortgage loan pool to the SPE results in the mortgage loans being removed from the bank's balance sheet on the provisory of the transaction meeting the *sale* accounting requirements under Statement of Financial Accounting Standards No. 140 (2000) [discussed next section].

The SPE securitizes the mortgage loans by selling securities to the public and the SPE pays the cash proceeds received from the public to the securitizing bank. The securitizing bank then accounts for the transfer as a sale and derecognizes the pool of mortgage loans it had previously recognized as financial assets. The transfer of the assets to the SPE means that the assets are now the property of the SPE and are not part of the securitizing bank's bankruptcy estate. It is the *bankruptcy isolation* of the SPE that enables the mortgage loan assets to be removed from the securitizing bank's balance sheet. The achievement of 'bankruptcy isolation' of the securitized assets is seen the purpose of the securitization transaction as the credit risk associated with the securitized mortgage loans now becomes independent of the creditworthiness of the securitizing bank (see Kettering 2008, for detailed discussion).

The securitizations of mortgage loans are no longer established through simple pass-through SPEs as they were in the 1970s but through multiple SPEs referred to as master SPEs (Mason and Rosner 2007).[118] Each SPE within the master SPE is routinely structured so that multiple classes of mortgage-backed securities can be issued on the

[117] An SPE acts as a depository for a specific group of assets in a securitization, and in turn, issues securities to the marketplace for purchase by investors

[118] A simple pass through structure would be considerably more difficult to prove 'bankruptcy remoteness' for sales accounting. The multi-trust (SPE) structuring ensures (or is meant to ensure) 'bankruptcy remoteness'

underlying mortgage loans and, within each security class additional credit enhancing type securities are issued (e.g. interest-only securities).[119] The credit enhancing securities, particularly the most subordinate class of securities (referred to as retain interests for accounting purposes) are typically retained by the securitizing bank. The retention of the subordinate securities acts as a credit enhancement to the remaining higher grade securities, thus, acting to verify the quality of the mortgage loans transferred to the SPE. Subordinate securities encompass the concentrated risk exposures of the assets securitized.

In addition, when the securitizing bank sells the mortgage loans to the special purpose entity (SPE), the SPE typically does not have the capacity to provide the necessary administrative support to service the mortgage loans. Instead the administrative servicing duties are contractually separated from the mortgage loans when they are securitized and the asset originator receives fee based revenues for retaining the servicing rights (referred to as mortgage servicing rights). The servicing fees can provide substantial cash flows for the originator and these are valued at the time of securitization and recognized as a mortgage service right on the balance sheet.[120] The value of the mortgage servicing rights recognized on the balance sheet is based on the fair value estimation of the servicing income earned on each and every loan in the portfolio.

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and increases the efficiency of the securitization process by preventing the costs of creating of new legal SPEs each time a new pool of mortgage loans is ready for sale.

[119] Deacon (2007), Ryan (2007) and Ashcraft and Schuermann (2008) provide further details on other complex structural features of special purpose entities that can be designed with a prima fascia to protect investors from losses on the underlying mortgage assets which include, but not limited too, excess spread, shifting interest, and performance triggers.

ACCOUNTING FOR THE TRANSACTION

The following example demonstrates how Countrywide Financial Corporation (Countrywide) accounts for a transfer of mortgage loans to a special purpose entity (SPE) under SFAS 140 (2000). For Countrywide to record the transaction as a sale which enables Countrywide to remove the mortgage loans from the balance sheet, it is necessary for Countrywide to establish that it has surrendered *control* over the pool of mortgage loans (2000, paragraph 9). A condition of *sale* accounting is that the SPE must have the control over the mortgage loans, not Countrywide. Thus, standing at law the SPE must be a distinct entity from Countrywide. If the SPE is a distinct entity it becomes *bankruptcy remote* from Countrywide's stakeholders, and the SPE is classified a *qualifying* SPE for accounting purposes (2000, paragraph 175-191). Table 14 demonstrates the accounting for Countrywide's securitization transactions.

Illustrated in Table 14 Panel A, Countrywide sells a pool of mortgage loans to the *qualifying special purpose entity* (QSPE) that it has established, for $1,008,000. The carrying value of the loans is $1,000,000. This carrying value includes the outstanding principal balance of the loans, net of deferred origination costs and fees, any premiums or discounts, and any adjustment resulting from hedge accounting. Countrywide will continue to service the loans, and the contract stipulates that Countrywide will be compensated for performing these services (the *mortgage servicing rights*) through fee revenue amounting to 25 basis points on the outstanding principle across the term of the mortgage loans. Subsequently, the fair value of the *mortgage servicing rights* has been determined to be

[120] For fiscal year end 2007 Countrywide realized $3.01 billion from its mortgage servicing rights p. 68 CFC 2007 annual.

$10,000 (this is one type of retain interest). Furthermore, Countrywide has retained an interest in the pool of loans it sold. The fair value of the *retained interests*, which include subordinate securities and interest only securities, results in the retention of a 0.4% interest that equates to $4,000. Countrywide also incurs a limited recourse obligation (incurred liability) to repurchase delinquent loans of $1,000.

Table 15
Accounting for Securitization Transaction

Panel A: Accounting template for Countrywide's Securitization Transaction

Carrying value of mortgage loans underlying a security	$ 1,000,000
Sale Proceeds (Fair values):	
Cash	$ 999,000
MSRs	10,000
Liabilities incurred	(1,000)
	1,008,000
Fair value used to allocate basis:	
Loans Sold (sale proceeds)	$ 1,008,000
Retained interests	4,000
	1,012,000
Computation of gain on sale of security	
Sale proceeds	$ 1,008,000
Less: costs allocated to loans sold [$1,000,000 * ($1,008,000 / $1,012.000)]	996,047
Gain on sale	11,953
Initial recorded value of retained interests ($1,000,000 - $996,047)	3,953 [(a)]

Panel B: Journal Entry for Countrywide's Securitization Transaction

	Debit ($)	Credit ($)
Cash	999,000	
Mortgage servicing rights	10,000	
Loans		996,047
Recourse obligation		1,000
Gain on Sale		11,953

[(a)] At the time of the transfer, Countrywide reports the 0.4% retained interest in the mortgage loans at its allocated carrying amount of $3,953.

Table 14 Panel B, shows the journal entry required to record the transaction. Notably, when Countrywide securitizes the pool of mortgage loans, the receivables are moved 'off-balance sheet' and replaced by cash or cash equivalents (less expenses of the securitisation). This improves Countrywide's balance sheet and the resultant gain on the

sale of receivables is a beneficial consequence. In addition, Countrywide no longer has to wait until it receives payment of the mortgage receivables to obtain funds to continue its business and generate new mortgage loans.

The vast majority of securitization transactions result in the banks' reporting a securitization gain (Barth and Taylor 2010; Dechow et al. 2010). Whereby, the reported gain is the difference between the securitization cash proceeds, less the value of retained interests and incurred liabilities, and the acquisition cost of the underlying mortgage loans. In many cases, and particularly for Countrywide, this liquidity function is essential and a role otherwise filled by more traditional and more costly methods of financing. This is especially significant when the receivables are long term, as they are with real property mortgage loans.

SECURED BORROWING

If Countrywide can not demonstrate that it has relinquished *control* of the pool of mortgage loans it transfers to the special purpose entity (SPE) then the transaction is to be treated as a secured borrowing [140,9]. In a secured borrowing, Countrywide would use the mortgage receivables as collateral for the cash proceeds received for the mortgage pool securitised with the SPE.[121] If Countrywide defaults on paying back the cash proceeds to the SPE, the proceeds from the collection of the pledged or assigned receivables will be applied directly to the payment of the debt.[122] Countrywide typically cannot borrow up to the full amount of the receivables pledged. The lender retains this difference in order to

[121] A financing function

provide for accounts on which collection is not made. The lender also levies a financing charge on the borrower in addition to the interest on the mortgage itself. Collection of the receivables may be done by Countrywide or the lender. In the case of pledging, the responsibility for collection of the receivables rests entirely with Countrywide.

In the case of a secured borrowing, Countrywide maintains the receivables on its books, records a liability, and recognizes interest expense over the term of the mortgage. If the transferee is not permitted to sell or pledge the collateralized receivables unless Countrywide defaults, then Countrywide continues to carry the assets with its trade accounts receivable. If the transferee is permitted to sell or pledge the assets, then Countrywide must reclassify the receivables and report them separately from other receivables and follows the securitization accounting (discussed above).

[122] The term "assigning" signifies the pledging of specific receivables as collateral, whereas the term pledging refers to pledging of say all trade receivables as collateral.

APPENDIX B

SENSITIVITY TESTING FOR CHAPTER 3

Chronology of Countrywide's Major Events
(Filed with the Securities and Exchange Commission on Form 8-K)

Event	Description	Date	Predict
1	: Countrywide reports strong loan production offset by higher credit costs "second quarter included impairment charges of $417 million taken during the quarter on the Company's investment in credit-sensitive retained interests"	Jul 24, 07	-
2	: Countrywide reports mortgage underwriting declined 14 percent on a sequential month basis	Aug 14, 07	-
3	: Countrywide reports the borrowing of $11.5 billion predominantly from JPMorgan and Barclays. $7.16 on 364-Day Credit Agreement and the remaining on Five-Year Credit Agreement	Aug 16, 07	?
4	: Bank of America makes a $2 billion equity investment	Aug 23, 07	?
5	: Mortgage underwriting for the month of September 2007 totaled $21 billion, a 44 percent decline from September 2006; Average daily mortgage loan application activity for September 2007 was $1.7 billion, a 39 percent decrease from September 2006. The mortgage loan servicing portfolio continued to grow, reaching $1.46 trillion at September 30, 2007. This is an increase of $215 billion, or 17 percent, from September 30, 2006.	Oct 11, 07	-
6	: Departure of Mr. Cisneros. As a director of the Board since 2001 Mr. Cisneros tenure coincides with the company's launch of the We House America $1 Trillion Dollar Challenge, a campaign to fund $1 trillion in home loans to minorities and low- to moderate-income borrowers, and to borrowers in lower-income communities, by 2010. As of August 31, 2007, the company has funded approximately $789 billion toward that goal.	Oct 24, 07	-
7	: Mortgage underwriting and mortgage loan application is still on a downward trend and Subprime mortgage underwriting for the month of October 2007 was just 0.2 percent of total mortgage underwriting. Further, Countrywide stipulates it is working diligently toward mitigating the consequences facing its borrowers. Countrywide reports that it has recently launched a $16 billion home ownership perservation initiative and has partered up with the Neigbborhood Assistance Corporation of America, the Homeownership Preservation Foundation and NeighborWorks America, forming initiatives that will help the community at large.	Nov 13, 07	?
8	: Mortgage underwriting for the month of November 2007 totaled $23 billion, a 40 percent decline from November 2006; average daily mortgage loan application activity down 32 percent from November 2006. In addition, government mortgage underwriting represented 10 percent of total mortgage underwriting in November 2007 versus 3 percent in November 2006	Dec 13, 07	-
9	: Total mortgage underwriting for the month was up slightly from the previous month and the the mortgage servicing portfolio continues to grow with a balance of $1.48 trillion as at December 31, 2007. While this sounds optimistic the summary accounts shows the performance of the servicing portfolio is weakening, with delinquencies as a percentage of the unpaid prinicple balance now 7.2% and foreclosures pending as a percentage of the unpaid prinipciple balance, 1.44%. The portfolio performance is comparative to the previous month of 6.52% delinquency and 1.28% pending foreclosure, and the previous year of 4.60% delinquency and 0.70% pending foreclosure.	Jan 9, 08	-
10	: Bank of America Corporation announces a definitive agreement to purchase Countrywide Financial Corp. in an all-stock transaction worth approximately $4.1 billion	Jan 11, 08	?

TABLE 16
SINGLE-DAY CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.004	-0.004	-0.002	-0.003 ***	-0.003 *	-0.002	-0.002	-0.001 ***	-0.003 **	-0.001 ***	0.001	0.000	-0.003	0.000	-0.002	-0.003 ***
Market	?	2.584 ***	2.614 ***	1.097 ***	0.868 ***	1.131 ***	1.142 ***	0.498 ***	0.601 ***	0.476 ***	0.559 ***	0.743 ***	0.718 ***	0.694 ***	0.868 ***	1.097 ***	0.868 ***
Event 1	-	-0.048		0.004		0.017		-0.025		-0.012		0.010		0.015		0.004	
Event 2	-	-0.027		-0.009		-0.027		0.014		0.014		0.008		0.010		-0.009	
Event 3	?	-0.110 **		0.006		0.002		0.036 *		-0.037 **		-0.002		0.097 ***		0.006	
Event 4	?	0.017		-0.034		-0.005		0.010		-0.026 *		-0.019		-0.011		-0.034	
Event 5	-	-0.010		0.007		-0.038 **		-0.003		0.002		0.005		-0.003		0.007	
Event 6	-	-0.068 *		-0.006		0.010		0.010		0.016		0.000		0.043 *		-0.006	
Event 7	-	-0.028		-0.029		0.007		-0.009		-0.006		0.048 ***		-0.042 *		-0.029	
Event 8	-	-0.036		0.014		-0.025		-0.024		-0.019		-0.005		0.002		0.014	
Event 9	-	-0.086 *		0.079 **		-0.014		-0.007		0.075 ***		-0.042 ***		0.036 *		0.079 **	
Event 10	?	-0.143 ***		-0.034		-0.008		-0.009		0.032 *		0.010		-0.016		-0.034	
All Events	-		-0.054 ***		-0.002		0.003		0.001		-0.001		-0.002 ***		-0.004 ***		-0.002
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.232	0.230	0.075	0.300	0.227	0.666	0.048	0.629	0.099	0.753	0.236	0.912	0.097	0.903	0.075	0.300

The mean holding period return for $Event_K$ over the single-day window (0) is the dependent variable (discussed in Section 3.4.4). *Market* is the value-weighted index distributions included (vwretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the single-day window (0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 16 CONTINUED
SINGLE-DAY CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL B: MARKET IS EQUALLY-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.004	-0.004	-0.002 ***	-0.002 ***	-0.001 **	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 ***	-0.002 ***
Market	?	3.138 ***	3.211 ***	1.111 ***	1.118 ***	1.339 ***	1.345 ***	0.745 ***	0.739 ***	0.684 ***	0.688 ***	0.862 ***	0.868 ***	1.078 ***	1.075 ***	1.111 ***	1.118 ***
Event 1	-	-0.041		-0.011		0.001		0.002		-0.004 *		0.000		0.001		-0.011	
Event 2	-	-0.023		-0.012		0.010 *		0.004		0.003		-0.004 ***		0.002 **		-0.012	
Event 3	?	-0.094 **		0.027 **		0.065 ***		0.023 ***		0.014 ***		0.001		-0.003 ***		0.027 **	
Event 4	?	0.021		0.005		-0.011 *		0.000		0.003		0.001		0.000		0.005	
Event 5	-	-0.002		0.002		0.002		0.006 *		-0.001		0.002 *		-0.002 ***		0.002	
Event 6	-	-0.062		-0.001		-0.006		-0.002		-0.005 **		-0.001		0.000		-0.001	
Event 7	-	-0.014		0.001		0.005		0.000		0.003		0.003 *		-0.001		0.001	
Event 8	-	-0.022		0.000		0.003		0.001		-0.001		-0.002 *		0.001		0.000	
Event 9	-	-0.059		-0.022 **		0.011 *		-0.004		-0.002		0.004 ***		-0.002 **		-0.022 **	
Event 10	?	-0.144 ***		0.022 **		-0.005		0.008 ***		0.007 ***		0.004 ***		-0.003 ***		0.022 **	
All Events	-		-0.044 ***		0.001		0.007 ***		0.004 ***		0.002 **		0.001 *		-0.001 ***		0.001
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.246	0.247	0.364	0.357	0.731	0.660	0.706	0.681	0.838	0.817	0.957	0.954	0.990	0.989	0.364	0.357

The mean holding period return for $Event_K$ over the single-day window (0) is the dependent variable (discussed in Section 3.4.4). *Market* is the value-weighted index distributions included (vwretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the single-day window (0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 16 CONTINUED
SINGLE-DAY CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL C: MARKET IS STANDARD & POOR'S INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.004	-0.004	-0.002 ***	-0.002 ***	-0.001 ***	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 ***	-0.002 ***
Market	?	2.558 ***	2.574 ***	0.841 ***	0.834 ***	1.135 ***	1.136 ***	0.602 ***	0.589 ***	0.550 ***	0.546 ***	0.699 ***	0.696 ***	0.845 ***	0.834 ***	0.841 ***	0.834 ***
Event 1	-	-0.050		-0.016		-0.002		-0.001		-0.006 **		-0.003		-0.003		-0.016	
Event 2	-	-0.031		-0.016		0.008		0.002		0.002		-0.007 ***		-0.002		-0.016	
Event 3	?	-0.114 **		0.020 *		0.056 ***		0.018 ***		0.010 ***		-0.004 *		-0.010 ***		0.020 *	
Event 4	?	0.016		0.003		-0.013 **		-0.002		0.002		0.000		-0.002		0.003	
Event 5	-	-0.011		-0.002		-0.001		0.004		-0.003		0.000		-0.006 *		-0.002	
Event 6	-	-0.071 *		-0.004		-0.010 *		-0.004		-0.007 **		-0.003		-0.003		-0.004	
Event 7	-	-0.030		-0.003		-0.003		-0.004		0.000		-0.002		-0.006 *		-0.003	
Event 8	-	-0.042		-0.007		-0.006		-0.004		-0.006 **		-0.008 ***		-0.006 **		-0.007	
Event 9	-	-0.095 **		-0.034 ***		-0.006		-0.013 ***		-0.010 ***		-0.006 ***		-0.014 ***		-0.034 ***	
Event 10	?	-0.145 ***		0.021 *		-0.005		0.007 *		0.006 **		0.004 *		-0.004		0.021 *	
All Events	-		-0.057 ***		-0.004		0.002		0.000		-0.001		-0.003 ***		-0.005 ***		-0.004
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.232	0.229	0.294	0.283	0.733	0.673	0.646	0.618	0.759	0.736	0.880	0.877	0.853	0.853	0.294	0.283

The mean holding period return for $Event_K$ over the single-day window (0) is the dependent variable (discussed in Section 3.4.4). *Market* is Standard & Poor's index. *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the single-day window (0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 17
TWO-DAY (LEAD) CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.005 *	-0.006	-0.003 ***	-0.003 ***	-0.002 ***	-0.002 ***	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.003 ***	-0.003 ***
Market	?	2.425 ***	2.660 ***	0.808 ***	0.871 ***	1.125 ***	1.139 ***	0.601 ***	0.600 ***	0.552 ***	0.559 ***	0.704 ***	0.720 ***	0.877 ***	0.872 ***	0.808 ***	0.871 ***
Event 1	-	-0.033		-0.012 *		-0.001		0.000		-0.003		-0.003 **		-0.004 **		-0.012 *	
Event 2	-	-0.058 *		-0.021 **		0.013 ***		0.005 **		0.002		-0.006 ***		-0.002		-0.021 **	
Event 3	?	-0.016		0.030 ***		0.031 ***		0.010 ***		0.008 ***		0.004 ***		-0.006 ***		0.030 ***	
Event 4	?	-0.026		0.006		-0.008 *		0.000		0.001		-0.001		-0.001		0.006	
Event 5	-	0.004		0.001		-0.003		0.007 **		-0.002		-0.001		-0.002		0.001	
Event 6	-	-0.057 *		-0.006		-0.002		-0.001		-0.002		-0.002		-0.002		-0.006	
Event 7	-	-0.014		0.008		-0.003		-0.004		0.000		0.000		-0.003 *		0.008	
Event 8	-	-0.013		-0.006		-0.006		-0.002		-0.004 *		-0.004 ***		-0.003 *		-0.006	
Event 9	-	0.208 ***		-0.021 **		0.004		-0.002		-0.002		0.000		-0.004 **		-0.021 **	
Event 10	?	-0.101 ***		0.008		-0.003		0.003		0.002		0.001		-0.002		0.008	
All Events	-		-0.011		-0.001		0.002		0.002 *		0.000		-0.001 **		-0.003 ***		-0.001
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.319	0.206	0.339	0.299	0.704	0.665	0.644	0.632	0.763	0.753	0.918	0.911	0.900	0.902	0.339	0.299

The mean holding period return for $Event_K$ over the two-day window (0, +1) is the dependent variable (discussed in Section 3.4.4). *Market* is the value-weighted index distributions included (vwretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry. Section 3.5.1 of the text details the portfolio construction. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 17 CONTINUED
TWO-DAY (LEAD) CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL B: MARKET IS EQUALLY-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.005	-0.005	-0.002 ***	-0.002 ***	-0.001 **	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 ***	-0.002 ***
Market	?	3.082 ***	3.300 ***	1.045 ***	1.116 ***	1.321 ***	1.334 ***	0.737 ***	0.735 ***	0.679 ***	0.686 ***	0.850 ***	0.867 ***	1.085 ***	1.076 ***	1.045 ***	1.116 ***
Event 1	-	-0.021		-0.008		0.003		0.002		0.000		0.000		0.000		-0.008	
Event 2	-	-0.048 *		-0.017 **		0.016 ***		0.008 ***		0.004 **		-0.004 ***		0.001 **		-0.017 **	
Event 3	?	-0.011		0.031 ***		0.034 ***		0.012 ***		0.009 ***		0.006 ***		-0.004 ***		0.031 ***	
Event 4	?	-0.024		0.006		-0.007		0.000		0.001		0.000		0.000		0.006	
Event 5	-	0.007		0.002		-0.002		0.007 ***		-0.002		0.000		-0.001		0.002	
Event 6	-	-0.052 *		-0.004		0.000		0.000		-0.001		0.000		-0.001		-0.004	
Event 7	-	-0.009		0.010		0.000		-0.002		0.001		0.002 *		-0.001 *		0.010	
Event 8	-	-0.002		-0.002		-0.002		0.001		-0.001		-0.001 *		0.001		-0.002	
Event 9	-	0.216 ***		-0.019 **		0.008 *		0.000		0.000		0.003 **		-0.001 **		-0.019 **	
Event 10	?	-0.100 ***		0.008		-0.003		0.003		0.002		0.002 *		-0.002 ***		0.008	
All Events	-		-0.004		0.001		0.005 ***		0.003 ***		0.001 **		0.001 **		-0.001 ***		0.001
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.347	0.230	0.391	0.357	0.701	0.658	0.697	0.685	0.829	0.818	0.961	0.954	0.991	0.989	0.391	0.357

The mean holding period return for $Event_K$ over the two-day window (0, +1) is the dependent variable (discussed in Section 3.4.4). *Market* is the equally-weighted index distributions included (ewretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 17 CONTINUED
TWO-DAY (LEAD) CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL C: MARKET IS STANDARD & POOR'S INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.005	-0.005	-0.002 ***	-0.002 ***	-0.001 ***	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 ***	-0.002 ***
Market	?	2.355 ***	2.606 ***	0.776 ***	0.837 ***	1.116 ***	1.134 ***	0.587 ***	0.588 ***	0.538 ***	0.547 ***	0.681 ***	0.699 ***	0.840 ***	0.838 ***	0.776 ***	0.837 ***
Event 1	-	-0.036		-0.014 *		-0.002		-0.001		-0.004 *		-0.004 **		-0.005 **		-0.014 *	
Event 2	-	-0.062 **		-0.022 ***		0.011 **		0.004 *		0.001		-0.007 ***		-0.004 *		-0.022 ***	
Event 3	?	-0.017		0.029 ***		0.030 ***		0.010 ***		0.007 ***		0.004 **		-0.006 ***		0.029 ***	
Event 4	?	-0.026		0.006		-0.008 *		0.000		0.001		-0.001		0.000		0.006	
Event 5	-	0.004		0.001		-0.003		0.007 **		-0.002		0.000		-0.001		0.001	
Event 6	-	-0.059 **		-0.006		-0.003		-0.001		-0.002		-0.002		-0.003		-0.006	
Event 7	-	-0.014		0.008		-0.003		-0.004		0.000		0.000		-0.003		0.008	
Event 8	-	-0.015		-0.007		-0.007		-0.002		-0.004 **		-0.005 ***		-0.004 *		-0.007	
Event 9	-	0.204 ***		-0.022 ***		0.002		-0.003		-0.003		-0.001		-0.005 **		-0.022 ***	
Event 10	?	-0.102 ***		0.007		-0.004		0.002		0.001		0.001		-0.003		0.007	
All Events	-		-0.013		-0.002		0.001		0.001		0.000		-0.002 ***		-0.003 ***		-0.002
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.313	0.202	0.325	0.282	0.710	0.673	0.631	0.619	0.745	0.735	0.882	0.874	0.847	0.850	0.325	0.282

The mean holding period return for $Event_K$ over the two-day window (0, +1) is the dependent variable (discussed in Section 3.4.4). *Market* is Standard & Poor's index. *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * $p<0.1$; **$p<0.05$; *** $p<0.01$

TABLE 18
TWO-DAY (LAG) CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.004	-0.004	-0.002 **	-0.002 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 **	-0.002 **
Market	?	2.592 ***	2.620 ***	0.849 ***	0.863 ***	1.153 ***	1.141 ***	0.605 ***	0.601 ***	0.557 ***	0.558 ***	0.714 ***	0.719 ***	0.868 ***	0.869 ***	0.849 ***	0.863 ***
Event 1	-	-0.030		-0.013 *		-0.003		-0.002		-0.003 *		-0.003 **		-0.002		-0.013 *	
Event 2	-	-0.031		-0.015 *		-0.004		-0.001		-0.002		-0.003 **		0.000		-0.015 *	
Event 3	?	-0.098 ***		-0.002		0.038 ***		0.014 ***		0.006 ***		-0.005 ***		-0.006 ***		-0.002	
Event 4	?	-0.006		-0.002		-0.009 **		-0.001		0.001		0.002		0.001		-0.002	
Event 5	-	-0.015		-0.003		-0.002		0.001		-0.003 *		0.000		-0.002		-0.003	
Event 6	-	-0.066 **		-0.008		-0.010 **		-0.005 *		-0.005 ***		-0.002		-0.001		-0.008	
Event 7	-	-0.017		0.006		0.013 ***		0.008 ***		0.005 ***		0.001		-0.003		0.006	
Event 8	-	-0.059 **		-0.013 *		-0.005		-0.006 **		-0.006 ***		-0.004 ***		-0.003 *		-0.013 *	
Event 9	-	-0.161 ***		-0.010		-0.006		-0.003		-0.007 ***		-0.001		-0.006 ***		-0.010	
Event 10	?	0.176 ***		0.004		0.003		0.007 **		0.005 ***		0.004 ***		0.000		0.004	
All Events	-		-0.030 ***		-0.006 **		0.001		0.001		-0.001		-0.001 **		-0.002 ***		-0.006 **
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.353	0.223	0.297	0.307	0.728	0.664	0.668	0.630	0.789	0.755	0.918	0.911	0.900	0.899	0.297	0.307

The mean holding period return for $Event_K$ over the two-day window (-1, 0) is the dependent variable (discussed in Section 3.4.4). *Market* is the value-weighted index distributions included (vwretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 18 CONTINUED
TWO-DAY (LAG) CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL B: MARKET IS EQUALLY-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.003	-0.003	-0.002 **	-0.002 **	-0.001 **	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 **	-0.002 **
Market	?	3.074 ***	3.229 ***	1.090 ***	1.104 ***	1.368 ***	1.336 ***	0.746 ***	0.737 ***	0.685 ***	0.684 ***	0.863 ***	0.867 ***	1.077 ***	1.076 ***	1.090 ***	1.104 ***
Event 1	-	-0.022		-0.010		0.000		0.000		-0.002		-0.001		0.001 *		-0.010	
Event 2	-	-0.028		-0.013 *		-0.002		0.000		-0.001		-0.002 **		0.002 ***		-0.013 *	
Event 3	?	-0.085 ***		0.003		0.044 ***		0.017 ***		0.009 ***		-0.001		-0.001		0.003	
Event 4	?	-0.008		-0.003		-0.010 **		-0.002		0.000		0.001		0.000		-0.003	
Event 5	-	-0.013		-0.002		-0.001		0.001		-0.003 *		0.000		-0.002 **		-0.002	
Event 6	-	-0.061 **		-0.007		-0.008 *		-0.004 *		-0.004 ***		0.000		0.000		-0.007	
Event 7	-	-0.011		0.008		0.016 ***		0.010 ***		0.006 ***		0.002 **		-0.001		0.008	
Event 8	-	-0.048 *		-0.009		0.000		-0.004		-0.004 **		-0.001		0.001		-0.009	
Event 9	-	-0.148 ***		-0.005		-0.001		0.000		-0.004 **		0.002 **		-0.001 **		-0.005	
Event 10	?	0.171 ***		0.002		0.000		0.006 **		0.004 **		0.002 **		-0.002 ***		0.002	
All Events	-		-0.025 **		-0.003		0.004 **		0.002 ***		0.000		0.000		0.000		-0.003
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.353	0.242	0.349	0.360	0.731	0.655	0.723	0.681	0.848	0.815	0.955	0.954	0.990	0.989	0.349	0.360

The mean holding period return for $Event_K$ over the two-day window (-1, 0) is the dependent variable (discussed in Section 3.4.4). *Market* is the equally-weighted index distributions included (ewretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * $p<0.1$; **$p<0.05$; *** $p<0.01$

TABLE 18 CONTINUED
TWO-DAY (LAG) CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL C: MARKET IS STANDARD & POOR'S INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		All Firms	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.003	-0.003	-0.002 **	-0.002 **	-0.001 ***	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	0.000	0.000
Market	?	2.573 ***	2.577 ***	0.817 ***	0.831 ***	0.742 ***	0.740 ***	0.591 ***	0.589 ***	0.544 ***	0.546 ***	0.693 ***	0.697 ***	0.834 ***	0.835 ***	0.787 ***	0.788 ***
Event 1	-	-0.033		-0.014 *		-0.004 *		-0.003		-0.004 **		-0.004 **		-0.003		-0.004 *	
Event 2	-	-0.033		-0.016 *		-0.003		-0.001		-0.002		-0.004 **		-0.001		-0.002	
Event 3	?	-0.103 ***		-0.004		0.016 ***		0.013 ***		0.005 **		-0.006 ***		-0.008 ***		-0.005 **	
Event 4	?	-0.014		-0.002		-0.002		0.001		-0.003 *		0.000		-0.002		-0.001	
Event 5	-	-0.065 **		-0.008		-0.007 **		-0.005 *		-0.005 **		-0.002		-0.001		-0.002	
Event 6	-	-0.024		0.004		0.006 **		0.007 **		0.004 **		-0.001		-0.005 *		-0.003	
Event 7	-	-0.063 **		-0.014 *		-0.007 **		-0.007 **		-0.007 ***		-0.005 ***		-0.004 **		-0.005 **	
Event 8	-	-0.165 ***		-0.011		-0.007 ***		-0.004		-0.008 ***		-0.002		-0.007 ***		-0.006 ***	
Event 9	-	0.176 ***		0.004		0.005 *		0.007 **		0.005 **		0.004 **		0.000		0.001	
All Events	?		-0.064 ***		-0.008 **		0.000		0.000		-0.003 ***		-0.003 ***		-0.004 ***		-0.003 ***
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.354	0.221	0.281	0.292	0.773	0.731	0.652	0.618	0.77	0.738	0.883	0.875	0.849	0.847	0.878	0.876

The mean holding period return for $Event_K$ over the two-day window (-1, 0) is the dependent variable (discussed in Section 3.4.4). *Market* is Standard & Poor's index. *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 19
THREE-DAY CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.005	-0.005	-0.002 **	-0.002 **	-0.001 ***	-0.002 ***	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 **	-0.002 **
Market	?	2.617 ***	2.657 ***	0.816 ***	0.870 ***	1.121 ***	1.139 ***	0.591 ***	0.600 ***	0.549 ***	0.559 ***	0.709 ***	0.720 ***	0.873 ***	0.872 ***	0.816 ***	0.870 ***
Event 1	-	-0.024		-0.012 *		-0.002		-0.001		-0.002		-0.003 **		-0.003 **		-0.012 *	
Event 2	-	-0.038		-0.025 ***		-0.007 *		-0.001		-0.003 *		-0.005 ***		0.001		-0.025 ***	
Event 3	?	-0.028		0.019 *		0.029 ***		0.010 ***		0.007 ***		0.002 **		-0.005 ***		0.019 *	
Event 4	?	-0.028		0.001		-0.007 **		0.000		0.000		0.001		0.001		0.001	
Event 5	-	-0.004		-0.001		-0.003		0.004 *		-0.003 *		0.000		-0.001		-0.001	
Event 6	-	-0.059 **		-0.008		-0.005		-0.003		-0.003 *		-0.001		-0.002		-0.008	
Event 7	-	-0.013		0.010		0.007 *		0.004 *		0.003 **		0.001		-0.002		0.010	
Event 8	-	-0.035		-0.011 *		-0.006 *		-0.005 **		-0.005 ***		-0.004 ***		-0.003 *		-0.011 *	
Event 9	-	0.030		-0.013 *		-0.002		-0.001		-0.004 ***		0.000		-0.003 **		-0.013 *	
Event 10	?	0.088 ***		0.005		0.001		0.004 *		0.004 **		0.002 **		0.001		0.005	
All Events	-		-0.008		-0.003 *		0.001		0.001 *		0.000		-0.001 **		-0.002 ***		-0.003 *
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.242	0.206	0.330	0.304	0.708	0.665	0.650	0.632	0.778	0.754	0.917	0.911	0.899	0.899	0.330	0.304

The mean holding period return for $Event_K$ over the two-day window (-1, 0, +1) is the dependent variable (discussed in Section 3.4.4). *Market* is the value-weighted index distributions included (vwretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 19 CONTINUED
THREE-DAY CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL B: MARKET IS EQUALLY-WEIGHTED INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.004	-0.005	-0.002 **	-0.002 **	-0.001 **	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002 **	-0.002 **
Market	?	3.226 ***	3.299 ***	1.051 ***	1.110 ***	1.321 ***	1.331 ***	0.727 ***	0.734 ***	0.675 ***	0.685 ***	0.857 ***	0.867 ***	1.083 ***	1.076 ***	1.051 ***	1.110 ***
Event 1	-	-0.014		-0.008		0.002		0.001		0.000		0.000		0.000		-0.008	
Event 2	-	-0.033		-0.023 ***		-0.005		0.000		-0.002		-0.004 ***		0.003 ***		-0.023 ***	
Event 3	?	-0.021		0.021 ***		0.032 ***		0.012 ***		0.008 ***		0.004 ***		-0.003 ***		0.021 ***	
Event 4	?	-0.029		0.000		-0.008 **		-0.001		0.000		0.000		0.000		0.000	
Event 5	-	-0.003		-0.001		-0.003		0.004 *		-0.003 **		0.000		-0.001		-0.001	
Event 6	-	-0.055 **		-0.007		-0.003		-0.002 **		-0.002		0.000		0.000		-0.007	
Event 7	-	-0.009		0.011 *		0.009 **		0.005		0.004 ***		0.002 **		-0.001		0.011 *	
Event 8	-	-0.025		-0.008		-0.002		-0.002		-0.003 **		-0.001		0.000		-0.008	
Event 9	-	0.038		-0.010		0.001		0.000		-0.003 **		0.002 **		-0.001		-0.010	
Event 10	?	0.083 ***		0.003		-0.001		0.003		0.003 *		0.001		-0.001 ***		0.003	
All Events	-		-0.004		-0.002		0.003 **		0.002 ***		0.000		0.000		0.000 **		-0.002
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.260	0.230	0.380	0.359	0.704	0.654	0.700	0.683	0.839	0.815	0.958	0.954	0.990	0.989	0.380	0.359

The mean holding period return for $Event_K$ over the two-day window (-1, 0, +1) is the dependent variable (discussed in Section 3.4.4). *Market* is the equally-weighted index distributions included (ewretd). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * p<0.1; **p<0.05; *** p<0.01

TABLE 19 CONTINUED
THREE-DAY CONTAGION EFFECTS AND DIFFERENT MARKET CONTROLS

PANEL C: MARKET IS STANDARD & POOR'S INDEX

		Countrywide Financial		Unregulated Mortgage bankers		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository		Unregulated Finance		Unregulated No-Finance		Unregulated Mortgage bankers	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*	*Model 9*	*Model 10*	*Model 11*	*Model 12*	*Model 13*	*Model 14*	*Model 15*	*Model 16*
Intercept	?	-0.005	-0.005	-0.002	-0.002 **	-0.001 **	-0.001 **	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	0.000	0.000	-0.002	-0.002 **
Market	?	2.565 ***	2.603 ***	0.783	0.837 ***	1.112 ***	1.135 ***	0.578 ***	0.588 ***	0.536 ***	0.547 ***	0.686 ***	0.698 ***	0.837 ***	0.837 ***	0.783	0.837 ***
Event 1	-	-0.028		-0.013		-0.004		-0.002		-0.003 *		-0.004 ***		-0.005 **		-0.013	
Event 2	-	-0.041		-0.026		-0.008 *		-0.002		-0.003 **		-0.006 ***		0.000		-0.026	
Event 3	?	-0.030		0.019		0.028 ***		0.010 ***		0.006 ***		0.002		-0.006 ***		0.019	
Event 4	?	-0.026		0.002		-0.007 *		0.000		0.000		0.001		0.001		0.002	
Event 5	-	-0.002		0.000		-0.003		0.004 *		-0.002 *		0.000		0.000		0.000	
Event 6	-	-0.059 **		-0.008		-0.005		-0.003		-0.003 *		-0.001		-0.002		-0.008	
Event 7	-	-0.016		0.009		0.006		0.003		0.003 *		0.000		-0.003 *		0.009	
Event 8	-	-0.037		-0.012		-0.007 *		-0.005 ***		-0.006 ***		-0.004 ***		-0.004 **		-0.012	
Event 9	-	0.028		-0.013		-0.003		-0.002		-0.005		-0.001		-0.004 **		-0.013	
Event 10	?	0.088 ***		0.005		0.001		0.004 *		0.004		0.002 *		0.001		0.005	
All Events	-		-0.009		-0.004 *		0.000		0.001		-0.001		-0.001 **		-0.002 ***		-0.004 *
N		252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252
Adj. R Squared		0.239	0.202	0.315	0.288	0.713	0.673	0.637	0.619	0.760	0.736	0.881	0.874	0.847	0.846	0.315	0.288

The mean holding period return for $Event_K$ over the two-day window (-1, 0, +1) is the dependent variable (discussed in Section 3.4.4). *Market* is Standard & Poor's index. *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. The *Mortgage Bankers* portfolio include the firms with the same three-digit sic code as Countrywide. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. The *Finance* portfolio includes firms from the finance, insurance and real estate industry with a two-digit SIC of 61-67 that are not in the Mortgage Bankers portfolio. The *No-Finance* portfolio include all other non-financial U.S. listed firms except those firms from the Agriculture, Forestry and Fishing, and Mining industries. *All Firms* portfolio includes all firms except Countrywide, Bank of America, and firms from Mining and Agriculture, Forestry and fishing industry.. Section 3.5.1 of the text details the portfolio construction. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 20
SINGLE-DAY CONTAGION EFFECTS ON FINANCIAL FIRMS (MARKET AND TREASURY BILL CONTROLS)

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0031	-0.0050	-0.0029 *	-0.0036 **	-0.0033 ***	-0.0036 ***
Market	?	1.3380 ***	1.3445 ***	0.7445 ***	0.7388 ***	0.6832 ***	0.6878 ***
Event 1	-	0.0008		0.0014		-0.0045 *	
Event 2	-	0.0103 *		0.0037		0.0032	
Event 3	?	0.0645 ***		0.0229 ***		0.0139 ***	
Event 4	?	-0.0108 *		-0.0003		0.0031	
Event 5	-	0.0026		0.0063 *		-0.0006	
Event 6	-	-0.0062		-0.0018		-0.0047 **	
Event 7	-	0.0054		0.0000		0.0035 *	
Event 8	-	0.0036		0.0016		-0.0007	
Event 9	-	0.0111 *		-0.0036		-0.0011	
Event 10	?	-0.0047		0.0079 **		0.0070 ***	
Treasury Bill	?	0.0439	0.0880	0.0380	0.0539	0.0506 **	0.0576 **
All Events	-		0.0079 ***		0.0039 ***		0.0020 **
N		252	252	252	252	252	252
Adj. R Squared		0.7302	0.6611	0.7064	0.6826	0.8408	0.8207

PANEL B: MARKET IS STANDARD & POOR'S INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0025	-0.0047	-0.0026	-0.0034 *	-0.0031 **	-0.0035 ***
Market	?	1.1339 ***	1.1350 ***	0.6015 ***	0.5884 ***	0.5485 ***	0.5460 ***
Event 1	-	-0.0021		-0.0008		-0.0066 **	
Event 2	-	0.0077		0.0018		0.0013	
Event 3	?	0.0557 ***		0.0181 ***		0.0094 ***	
Event 4	?	-0.0132 **		-0.0016		0.0018	
Event 5	-	-0.0012		0.0041		-0.0027	
Event 6	-	-0.0100 *		-0.0040		-0.0067 **	
Event 7	-	-0.0030		-0.0038		0.0001	
Event 8	-	-0.0054		-0.0034		-0.0052 *	
Event 9	-	-0.0053		-0.0123 ***		-0.0090 ***	
Event 10	?	-0.0044		0.0077 *		0.0068 **	
Treasury Bill	?	0.0263	0.0777	0.0296	0.0490	0.0431 *	0.0530 *
All Events	-		0.0022		0.0007		-0.0010
N		252	252	252	252	252	252
Adj. R Squared		0.7318	0.6735	0.6449	0.6182	0.7606	0.7387

The mean holding period return for $Event_K$ over the single-day window (0) is the dependent variable (discussed in Section 3.4.4). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the single-day window (0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. *Treasury Bill* is the U.S. Government treasury securities rate (secondary market 4-week) acquired from Federal Reserve Statistical Release on Schedule H.15. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. * p<0.1; **p<0.05; *** p<0.01

TABLE 21
TWO-DAY (LEAD) CONTAGION EFFECTS ON FINANCIAL FIRMS (MARKET AND TREASURY BILL CONTROLS)

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0036	-0.0058 *	-0.0035 **	-0.0043 **	-0.0036 ***	-0.0040 ***
Market	?	1.3197 ***	1.3326 ***	0.7359 ***	0.7343 ***	0.6776 ***	0.6855 ***
Event 1	-	0.0032		0.0023		-0.0006	
Event 2	-	0.0156 ***		0.0073 ***		0.0038 **	
Event 3	?	0.0345 ***		0.0120 ***		0.0091 ***	
Event 4	?	-0.0067		0.0008		0.0014	
Event 5	-	-0.0018		0.0075 ***		-0.0013	
Event 6	-	0.0002		0.0006		-0.0005	
Event 7	-	0.0002		-0.0018		0.0018	
Event 8	-	-0.0011		0.0014		-0.0005	
Event 9	-	0.0088 *		0.0005		0.0008	
Event 10	?	-0.0026		0.0032		0.0023	
Treasury Bill	?	0.0523	0.1043	0.0501	0.0687 **	0.0549 **	0.0648 ***
All Events	-		0.0054 ***		0.0035 ***		0.0017 ***
N		252	252	252	252	252	252
Adj. R Squared		0.7	0.6595	0.6977	0.6874	0.8314	0.8221

PANEL B: MARKET IS STANDARD & POOR'S INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0029	-0.0050	-0.0032 *	-0.0039 **	-0.0033 **	-0.0036 ***
Market	?	1.1150 ***	1.1329 ***	0.5860 ***	0.5871 ***	0.5369 ***	0.5465 ***
Event 1	-	-0.0024		-0.0012		-0.0038 *	
Event 2	-	0.0111 **		0.0042		0.0010	
Event 3	?	0.0303 ***		0.0101 ***		0.0075 ***	
Event 4	?	-0.0080 *		0.0003 **		0.0010	
Event 5	-	-0.0030		0.0069		-0.0019	
Event 6	-	-0.0026		-0.0011		-0.0020	
Event 7	-	-0.0032		-0.0033		0.0005	
Event 8	-	-0.0066		-0.0018		-0.0035 *	
Event 9	-	0.0026		-0.0025		-0.0019	
Event 10	?	-0.0035		0.0026		0.0019	
Treasury Bill	?	0.0356	0.0844	0.0432	0.0590	0.0488	0.0558 *
All Events	-		0.0018		0.0015 *		-0.0001
N		252	252	252	252	252	252
Adj. R Squared		0.7087	0.6737	0.6307	0.6207	0.7465	0.7378

The mean holding period return for $Event_K$ over the single-day window (0, +1) is the dependent variable (discussed in Section 3.4.4). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. *Treasury Bill* is the U.S. Government treasury securities rate (secondary market 4-week) acquired from Federal Reserve Statistical Release on Schedule H.15. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. * p<0.1; **p<0.05; *** p<0.01

TABLE 22
TWO-DAY (LAG) CONTAGION EFFECTS ON FINANCIAL FIRMS (MARKET AND TREASURY BILL CONTROLS)

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0027	-0.0051	-0.0031 *	-0.0039 **	-0.0029 ***	-0.0035 ***
Market	?	1.3676 ***	1.3358 ***	0.7451 ***	0.7369 ***	0.6841 ***	0.6843 ***
Event 1	-	0.0002		0.0001		-0.0018	
Event 2	-	-0.0026		0.0001		-0.0010	
Event 3	?	0.0434 ***		0.0170 ***		0.0093 ***	
Event 4	?	-0.0101 **		-0.0017		0.0003	
Event 5	-	-0.0012		0.0018		-0.0025 *	
Event 6	-	-0.0077 *		-0.0035		-0.0041 **	
Event 7	-	0.0165 ***		0.0099 ***		0.0067 ***	
Event 8	-	0.0003		-0.0032		-0.0035 **	
Event 9	-	-0.0003		0.0008		-0.0032 **	
Event 10	?	0.0005		0.0061 **		0.0046 ***	
Treasury Bill	?	0.0342	0.0900	0.0428	0.0605	0.0422 *	0.0548 **
All Events	-		0.0041 **		0.0028 ***		0.0006
N		252	252	252	252	252	252
Adj. R Squared		0.7299	0.6554	0.7231	0.6825	0.849	0.8179

PANEL B: MARKET IS STANDARD & POOR'S INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0024	-0.0046	-0.0030 *	-0.0036 **	-0.0028 **	-0.0032 **
Market	?	1.1416 ***	1.1345 ***	0.5902 ***	0.5887 ***	0.5435 ***	0.5457 ***
Event 1	-	-0.0046		-0.0028		-0.0044 **	
Event 2	-	-0.0048		-0.0014		-0.0024	
Event 3	?	0.0354 ***		0.0125 ***		0.0051 **	
Event 4	?	-0.0088 *		-0.0009		0.0011	
Event 5	-	-0.0014		0.0016		-0.0027	
Event 6	-	-0.0097 **		-0.0045 *		-0.0049 **	
Event 7	-	0.0106 **		0.0070 **		0.0040 **	
Event 8	-	-0.0063		-0.0066 **		-0.0067 ***	
Event 9	-	-0.0078 *		-0.0034		-0.0070 ***	
Event 10	?	0.0027		0.0072 **		0.0056 ***	
Treasury Bill	?	0.0253	0.0759	0.0396	0.0534	0.0392	0.0482
All Events	-		0.0008		0.0010		-0.0012 *
N		252	252	252	252	252	252
Adj. R Squared		0.7288	0.6729	0.6515	0.619	0.7704	0.74

The mean holding period return for $Event_K$ over the two-day window (-1, 0) is the dependent variable (discussed in Section 3.4.4). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the two-day window (-1, 0) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. *Treasury Bill* is the U.S. Government treasury securities rate (secondary market 4-week) acquired from Federal Reserve Statistical Release on Schedule H.15. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. * p<0.1; **p<0.05; *** p<0.01

TABLE 23
TWO-DAY (LAG) CONTAGION EFFECTS ON FINANCIAL FIRMS (MARKET AND TREASURY BILL CONTROLS)

PANEL A: MARKET IS VALUE-WEIGHTED INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0033	-0.0056 *	-0.0037 **	-0.0044 ***	-0.0031 ***	-0.0037 ***
Market	?	1.3195 ***	1.3302 **	0.7252 ***	0.7338 ***	0.6740 ***	0.6841 ***
Event 1	-	0.0017		0.0010		-0.0001	
Event 2	-	-0.0056		-0.0004		-0.0019	
Event 3	?	0.0318 ***		0.0117 ***		0.0082 ***	
Event 4	?	-0.0075 *		-0.0004		0.0001	
Event 5	-	-0.0030		0.0041 **		-0.0024 *	
Event 6	-	-0.0029		-0.0013		-0.0015	
Event 7	-	0.0093 **		0.0055 **		0.0044 ***	
Event 8	-	-0.0018		-0.0017		-0.0025 *	
Event 9	-	0.0019		0.0010		-0.0024 *	
Event 10	?	-0.0004		0.0033		0.0030 **	
Treasury Bill	?	0.0487	0.0989	0.0546	0.0711 *	0.0452 *	0.0597 **
All Events	-		0.0032 **		0.0026 ***		0.0008 *
N		252	252	252	252	252	252
Adj. R Squared		0.703	0.6554	0.7016	0.6861	0.8402	0.8189

PANEL B: MARKET IS STANDARD & POOR'S INDEX

		Regulated Securitization		Regulated No-Securitization		Regulated Other Depository	
		Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Intercept	?	-0.0030	-0.0048	-0.0036 *	-0.0041 **	-0.0030 **	-0.0034 **
Market	?	1.1112 ***	1.1336 ***	0.5768 ***	0.5875 ***	0.5347 ***	0.5466 ***
Event 1	-	-0.0041		-0.0023		-0.0032 **	
Event 2	-	-0.0078 *		-0.0021		-0.0035 **	
Event 3	-	0.0276 ***		0.0098 ***		0.0064 ***	
Event 4	?	-0.0067 *		0.0003		0.0008	
Event 5	-	-0.0026		0.0043 *		-0.0022	
Event 6	-	-0.0048		-0.0023		-0.0024	
Event 7	-	0.0059 *		0.0037 *		0.0029 *	
Event 8	-	-0.0067 *		-0.0044 *		-0.0051 ***	
Event 9	-	-0.0024		-0.0013		-0.0045 **	
Event 10	?	0.0018		0.0046 *		0.0042 **	
Treasury Bill	?	0.0404	0.0803	0.0522	0.0620	0.0431	0.0513 *
All Events	-		0.0009		0.0013 *		-0.0005
N		252	252	252	252	252	252
Adj. R Squared		0.7124	0.6731	0.6381	0.6212	0.7611	0.7383

The mean holding period return for $Event_K$ over the three-day window (-1, 0, 1) is the dependent variable (discussed in Section 3.4.4). *Events 1 to 10* (Detailed in Table 1, Appendix 6), take the value of 1 for the three-day window (-1, 0, +1) of the Event; 0 otherwise. *All Events* includes Event 10, the merger agreement. *Treasury Bill* is the U.S. Government treasury securities rate (secondary market 4-week) acquired from Federal Reserve Statistical Release on Schedule H.15. The *Securitization* portfolio includes the banks that sell mortgage loans. The *No-Securitization* portfolio includes the banks that do not sell mortgage loans. The *Other Depository* portfolio includes the banks that did not file an RC-P report. * p<0.1; **p<0.05; *** p<0.01

TABLE 24
DEGREE OF CONTAGION ACROSS REGULATED (NON-) SECURITIZING BANKS

PANEL A: DEGREE OF CONTAGION CONTROLLING FOR TIER 1 CAPITAL

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9
Intercept	?	0.0087	0.0143	-0.0342	0.0118	-0.0337	-0.0148	-0.0275	-0.0262	-0.0070
Tier 1 Capital	+	0.0001	-0.0003	0.0046 **	0.0002	0.0009	0.0003	0.0026 ***	0.0016	-0.0002
Liquidity	+	0.0613	0.2080 **	-0.3367 ***	0.0962 **	0.1340 **	-0.0932	0.0938 *	0.0795	-0.0089
Loss	-	-0.0854 ***	-0.0774 *	-0.0287	-0.0026	0.0024	0.0074	0.0036	-0.0076	-0.0164
Return on Assets	+	-3.2473 *	0.5697	-0.2005	0.3124	0.8127	-0.1899	1.8169 *	0.0018	-2.8737 **
Size	-	-0.0022 *	-0.0040 *	0.0059 **	-0.0030 ***	0.0004	0.0065 ***	-0.0047 ***	-0.0010	0.0045 **
Speculative S&P's Rank	-	0.0028	0.0070	-0.0164 *	-0.0005	-0.0054	-0.0026	-0.0084 **	-0.0184 ***	0.0050
Securitization	-	-0.0027	-0.0124 *	0.0415 ***	-0.0067 **	-0.0069	0.0010	0.0154 ***	-0.0009	-0.0160 **
Securitization Ratio	-	-0.0393	0.0141	-0.1087	0.0436 *	0.0357	-0.0439	-0.2015 ***	-0.0372	0.0865
N		188	188	188	188	188	188	188	188	188
Adjusted R_Squared		0.0601	0.0412	0.1548	0.0739	0.0105	0.0205	0.2082	0.0315	0.0290
P-value of F-Statistic		0.0137	0.0484	0.0000	0.0049	0.2736	0.1633	0.0000	0.0762	0.0889

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Tie 1 Capital* is $Firm_j$'s level of tier 1 capital at the immediate quarter end. *Leverage* is $Firm_j$'s total liabilities to total assets at the immediate quarter end. *Liquidity* is $Firm_j$'s level of cash and short term investments to total assets at the immediate quarter end. *Return on Assets* is $Firm_j$'s income before extraordinary items to total assets at the immediate quarter end. *Size* is the log of $Firm_j$'s market value at the immediate quarter end. *Speculative S&P Rank* takes the value of 1 if $Firm_j$'s Standard & Poor's ranking is B- or below, 0 otherwise. *Securitization* takes the value of 1 if $Firm_j$'s filed Schedule RC-P indicating that it sold mortgage loans, 0 otherwise (see Section 3.4.2 for detail). *Securitization Ratio* is $Firm_j$'s level of mortgage sales to total assets for the immediate quarter. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 24 CONTINUED
DEGREE OF CONTAGION ACROSS REGULATED (NON-) SECURITIZING BANKS

PANEL B: DEGREE OF CONTAGION CONTROLLING FOR BOOK-TO-PRICE

	Predict	Event 1	Event 2	Event 3	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10
Intercept	?	-0.0157	-0.0673	0.2642	-0.0818	-0.0327	-0.0572	-0.1371	-0.1589 *	0.0010
Book-to-Price (BP)	-	0.0014	-0.0096	0.0036	-0.0020	0.0138 *	0.0211 **	-0.0017	-0.0150 **	0.0108 *
Leverage	-	0.0317	0.0969	-0.2699 *	0.0972 **	0.0020	-0.0037	0.1635 ***	0.1899 **	-0.0187
Liquidity	+	0.0306	0.1593 **	-0.2136 **	0.0983 ***	0.0981 **	-0.0999 *	0.0752 *	0.0833	-0.0065
Loss	-	-0.0155	-0.0261	-0.0136	0.0025	-0.0020	0.0012	0.0047	-0.0094	-0.0022
Return on Assets	+	0.3551	0.8324	-3.2097	1.2383 *	0.8802	0.5880	2.3861 **	0.5205	-0.7809
Size	-	-0.0037 ***	-0.0040 **	0.0056 ***	-0.0020 **	0.0004	0.0097 ***	-0.0057 ***	-0.0023	0.0044 ***
Speculative S&P's Rank	-	0.0032	0.0078	-0.0226 ***	0.0034	-0.0101 **	-0.0009	-0.0081 **	-0.0128 **	0.0017
Securitization	-	-0.0046	-0.0123 **	0.0342 ***	-0.0076 ***	-0.0073 *	0.0082	0.0107 ***	-0.0053	-0.0224 ***
Securitization Ratio	-	-0.0045	0.0162	-0.141 **	0.0356	0.0509	-0.0191	-0.1993 ***	-0.0473	0.1241 *
N		240	240	240	240	240	240	240	240	240
Adjusted R_Squared		0.042	0.056	0.143	0.082	0.029	0.132	0.168	0.075	0.036
P-value of F-Statistic		0.0238	0.0074	0.0000	0.0009	0.0756	0.0000	0.0000	0.0010	0.0365

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Book-to-market* is $Firm_j$'s book value to market value at the immediate quarter end. *Leverage* is $Firm_j$'s total liabilities to total assets at the immediate quarter end. *Liquidity* is $Firm_j$'s level of cash and short term investments to total assets at the immediate quarter end. *Return on Assets* is $Firm_j$'s income before extraordinary items to total assets at the immediate quarter end. *Size* is the log of $Firm_j$'s market value at the immediate quarter end. *Speculative S&P Rank* takes the value of 1 if $Firm_j$'s Standard & Poor's ranking is B- or below, 0 otherwise. *Securitization* takes the value of 1 if $Firm_j$'s filed Schedule RC-P indicating that it sold mortgage loans, 0 otherwise (see Section 3.4.2 for detail). *Securitization Ratio* is $Firm_j$'s level of mortgage sales to total asset for the immediate quarter. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 24 CONTINUED
DEGREE OF CONTAGION ACROSS REGULATED (NON-) SECURITIZING BANKS

PANEL C: DEGREE OF CONTAGION CONTROLLING FOR LOSS FIRMS

	Predict	Event 1	Event 2	Event 3	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10
Intercept	?	-0.0157	-0.0673	0.2642	-0.0818	-0.0327	-0.0572	-0.1371	-0.1589 *	0.0010
Book-to-Price (BP)	-	0.0014	-0.0096	0.0036	-0.0020	0.0138 *	0.0211 **	-0.0017	-0.0150 **	0.0108 *
Leverage	-	0.0317	0.0969	-0.2699 *	0.0972 **	0.0020	-0.0037	0.1635 ***	0.1899 **	-0.0187
Liquidity	+	0.0306	0.1593 **	-0.2136 **	0.0983 ***	0.0981 **	-0.0999 *	0.0752 *	0.0833	-0.0065
Loss	-	-0.0155	-0.0261	-0.0136	0.0025	-0.0020	0.0012	0.0047	-0.0094	-0.0022
Return on Assets	+	0.3551	0.8324	-3.2097	1.2383 *	0.8802	0.5880	2.3861 **	0.5205	-0.7809
Size	+	-0.0037 ***	-0.0040 **	0.0056 ***	-0.0020 **	0.0004	0.0097 ***	-0.0057 ***	-0.0023	0.0044 ***
Speculative S&P's Rank	-	0.0032	0.0078	-0.0226 ***	0.0034	-0.0101 **	-0.0009	-0.0081 **	-0.0128 **	0.0017
Securitization	-	-0.0046	-0.0123 **	0.0342 ***	-0.0076 ***	-0.0073 *	0.0082	0.0107 ***	-0.0053	-0.0224 ***
Securitization Ratio	-	-0.0045	0.0162	-0.141 **	0.0356	0.0509	-0.0191	-0.1993 ***	-0.0473	0.1241 *
N		240	240	240	240	240	240	240	240	240
Adjusted R_Squared		0.042	0.056	0.143	0.082	0.029	0.132	0.168	0.075	0.036
P-value of F-Statistic		0.0238	0.0074	0.0000	0.0009	0.0756	0.0000	0.0000	0.0010	0.0365

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Book-to-market* is $Firm_j$'s book value to market value at the immediate quarter end. *Leverage* is $Firm_j$'s total liabilities to total assets at the immediate quarter end. *Liquidity* is $Firm_j$'s level of cash and short term investments to total assets at the immediate quarter end. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Return on Assets* is $Firm_j$'s income before extraordinary items to total assets at the immediate quarter end. *Size* is the log of $Firm_j$'s market value at the immediate quarter end. *Speculative S&P Rank* takes the value of 1 if $Firm_j$'s Standard & Poor's ranking is B- or below, 0 otherwise. *Securitization* takes the value of 1 if $Firm_j$'s filed Schedule RC-P indicating that it sold mortgage loans, 0 otherwise (see Section 3.4.2 for detail). *Securitization Ratio* is $Firm_j$'s level of mortgage sales to total asset for the immediate quarter. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 24 CONTINUED
DEGREE OF CONTAGION ACROSS REGULATED (NON-) SECURITIZING BANKS
(This excludes Bank of America's Capital injection of $2 billion – Event 9 is the Merger Agreement)

PANEL D: DEGREE OF CONTAGION CONTROLLING FOR LOSSES ON SECURITIZATION ACTIVITIES

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9
Intercept	?	-0.059	-0.113	0.301 *	-0.092 **	-0.009	0.032	-0.143 **	-0.181 **	-0.015
Leverage	-	0.059	0.126	-0.268 *	0.102 *	-0.014	-0.055	0.167 ***	0.192 **	-0.004
Liquidity	+	0.030	0.190 **	-0.184 **	0.083 ***	0.104 **	-0.120 **	0.074 *	0.089 *	0.011
Loss	-	-0.005	-0.031	0.038	0.001	-0.011	0.020	0.005	-0.017 *	-0.002
Return on Assets	+	0.533	1.031	-3.342	1.337 **	0.384	-0.009	2.452 **	0.730	-1.057
Size	-	-0.002 *	-0.003	0.001	-0.001	0.001	0.007 ***	-0.006 ***	-0.001	0.005 **
Speculative S&P's Rank	-	0.007 *	0.011 *	-0.032 ***	0.004	-0.005	-0.002	-0.009 **	-0.018 **	0.007
Securitization	-	-0.001	-0.013 **	0.037 ***	-0.007 **	-0.005	0.001	0.012 ***	-0.002	-0.015 **
Securitization Ratio	-	-0.046	0.010	-0.123	0.005	-0.083	0.058	-0.224 ***	-0.139 *	0.090
Securitization Ratio * Loss	-	-0.291 *	-0.225	-0.405	0.057	0.219 **	-0.199 *	0.019	0.515 ***	-0.029
N		204	204	204	204	204	204	204	204	204
Adjusted R_Squared		0.025	0.048	0.132	0.078	0.034	0.064	0.178	0.080	0.014
P-value of F-Statistic		0.125	0.027	0.000	0.003	0.072	0.009	0.000	0.003	0.231

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Leverage* is $Firm_j$'s total liabilities to total assets at the immediate quarter end. *Liquidity* is $Firm_j$'s level of cash and short term investments to total assets at the immediate quarter end. *Return on Assets* is $Firm_j$'s income before extraordinary items to total assets at the immediate quarter end. *Size* is the log of $Firm_j$'s market value at the immediate quarter end. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Speculative S&P Rank* takes the value of 1 if $Firm_j$'s Standard & Poor's ranking is B- or below, 0 otherwise. *Securitization* takes the value of 1 if $Firm_j$'s filed Schedule RC-P indicating that it sold mortgage loans, 0 otherwise (see Section 3.4.2 for detail). *Securitization Ratio* is $Firm_j$'s level of mortgage sales to total asset for the immediate quarter. *Securitization Ratio* * *Loss* is the interaction of *Securitization ratio* and *Loss*. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 25
DEGREE OF CONTAGION ACROSS ALL FIRMS

PANEL A: DEGREE OF CONTAGION ACROSS REGULATED (NON-) SECURITIZING BANKS

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10
Intercept	?	0.008 **	0.020 ***	-0.007	-0.011 ***	0.003	0.000	-0.032 ***	-0.004	-0.015 ***	-0.014 ***
Leverage	-	0.003	0.003	0.022 ***	0.009 ***	0.001	-0.012 ***	0.020 ***	-0.012 ***	0.000	0.024 ***
Liquidity	+	0.002	0.016 ***	0.010 *	0.005	-0.012 ***	-0.007 *	-0.001	0.009 **	0.027 ***	0.011 **
Loss	-	-0.003 *	-0.012 ***	-0.009 ***	-0.004 **	0.003 *	-0.002	-0.005 **	-0.008 ***	-0.005 **	0.011 ***
Return on Assets	+	-0.007	0.059 ***	-0.013	0.015	-0.004	0.030 **	0.063 ***	0.013	0.042 ***	-0.007
Size	+	-0.002 ***	-0.003 ***	0.000	0.000	-0.001	0.000	0.002 ***	0.001 *	0.001 *	0.000
Speculative S&P's Rank	-	-0.003 **	-0.004 **	-0.012 ***	0.006 ***	-0.002 *	0.003	0.001	-0.006 ***	-0.013 ***	0.002
Mortgage Securitization	-	-0.012 ***	-0.017 ***	0.062 ***	-0.022 ***	-0.007 **	-0.013 ***	0.027 ***	-0.004	-0.009 **	-0.006 *
N		2974	2974	2974	2974	2974	2974	2974	2974	2974	2974
Adjusted R_Squared		0.009	0.027	0.098	0.020	0.004	0.011	0.047	0.013	0.031	0.020
P-value of F-Statistic		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Leverage* is $Firm_j$'s total liabilities to total assets at the immediate quarter end. *Liquidity* is $Firm_j$'s level of cash and short term investments to total assets at the immediate quarter end. *Return on Assets* is $Firm_j$'s income before extraordinary items to total assets at the immediate quarter end. *Size* is the log of $Firm_j$'s market value at the immediate quarter end. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Speculative S&P Rank* takes the value of 1 if $Firm_j$'s Standard & Poor's ranking is B- or below, 0 otherwise. *Mortgage Securitization* takes the value of 1 if $Firm_j$'s filed Schedule RC-P with the Chicago Federal Reserve indicating that it did or did not sell mortgage loans, 0 otherwise. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 25 CONTINUED
DEGREE OF CONTAGION ACROSS ALL FIRMS

PANEL B: DEGREE OF CONTAGION ACROSS REGULATED (NON-) SECURITIZING BANK CHARACTERISTICS

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10
Intercept	?	0.008 *	0.020 ***	-0.007	-0.011 ***	0.003	0.000	-0.031 ***	-0.006	-0.015 ***	-0.013 **
Leverage	-	0.003	0.003	0.022 ***	0.009 ***	0.001	-0.011 ***	0.020 ***	-0.012 ***	0.000	0.024 ***
Liquidity	+	0.002	0.016 ***	0.010 *	0.004	-0.012 ***	-0.008 *	-0.001	0.009 **	0.027 ***	0.010 **
Loss	-	-0.003 *	-0.012 ***	-0.009 ***	-0.004 **	0.003 **	-0.002	-0.005 **	-0.007 ***	-0.005 **	0.011 ***
Return on Assets (ROA)	+	-0.006	0.060 ***	-0.014	0.014	-0.004	0.030 **	0.064 ***	0.013	0.042 ***	-0.005
Size	-	-0.002 ***	-0.003 ***	0.000	0.000	0.000	0.000	0.002 ***	0.001 **	0.001 *	-0.001
Speculative S&P's Rank	-	-0.003 **	-0.004 *	-0.012 ***	0.006 ***	-0.002 *	0.003	0.001	-0.006 ***	-0.013 ***	0.002
Mortgage Securitization	-	-0.053	-0.077	0.126	-0.049	-0.099	-0.010	0.030	-0.149	-0.202 **	-0.205 **
Mortgage Securitization * Leverage	-	0.037	0.048	-0.057	0.037	0.104	-0.019	-0.040	0.204 *	0.222 **	0.162 *
Mortgage Securitization * Liquidity	+	-0.252 ***	-0.073	0.012	0.132 **	0.185 ***	0.038	-0.057	0.056	0.032	0.014
Mortgage Securitization * ROA	+	2.899 *	1.816	-1.521	-0.035	0.527	0.660	0.073	2.822 *	1.291	1.699 *
Mortgage Securitization * Size	-	0.002	0.002	-0.001	-0.002	-0.002	0.002	0.005 **	-0.007 ***	-0.002	0.007 ***
N		2974	2974	2974	2974	2974	2974	2974	2974	2974	2974
Adjusted R_Squared		0.012	0.026	0.097	0.019	0.006	0.011	0.047	0.015	0.031	0.022
P-value of F-Statistic		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Leverage* is $Firm_j$'s total liabilities to total assets at the immediate quarter end. *Liquidity* is $Firm_j$'s level of cash and short term investments to total assets at the immediate quarter end. *Return on Assets* is $Firm_j$'s income before extraordinary items to total assets at the immediate quarter end. *Size* is the log of $Firm_j$'s market value at the immediate quarter end. *Loss* takes the value of 1 if $Firm_j$'s made a loss, 0 otherwise. *Speculative S&P Rank* takes the value of 1 if $Firm_j$'s Standard & Poor's ranking is B- or below, 0 otherwise. *Mortgage Securitization* takes the value of 1 if $Firm_j$'s filed Schedule RC-P with the Chicago Federal Reserve indicating that it did or did not sell mortgage loans, 0 otherwise. The remaining variables are interactions of the variables specified. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 26
DEGREE OF CONTAGION ACROSS (UN-) REGULATED FIRMS

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10
Intercept	?	0.008 *	0.019 ***	-0.007	-0.010 ***	0.003	0.000	-0.029 ***	-0.008	-0.017 ***	-0.011 **
Leverage	-	0.006 *	0.005	0.011 **	0.016 ***	0.003	-0.008 **	0.015 ***	-0.012 **	0.000	0.024 ***
Liquidity	+	0.003	0.017 ***	0.008 *	0.005 *	-0.013 ***	-0.008 **	-0.001	0.009 **	0.027 ***	0.011 **
Loss	-	-0.004 *	-0.012 ***	-0.007 **	-0.005 **	0.003 *	-0.002	-0.005 **	-0.007 **	-0.004 *	0.009 ***
Return on Assets (ROA)	+	-0.008	0.058 ***	-0.009	0.013	-0.004	0.030 **	0.065 ***	0.013	0.042 ***	-0.007
Speculative S&P's Rank	-	-0.004 **	-0.004 **	-0.011 ***	0.006 ***	-0.002 *	0.002	0.001	-0.006 **	-0.012 ***	0.002
Size	-	-0.002 ***	-0.003 ***	0.001	0.000	-0.001 *	0.000	0.002 ***	0.001 **	0.001 **	-0.001 *
Regulated	-	0.048	0.050	-0.021	-0.050	-0.075 **	-0.010	0.025	-0.063	-0.031	-0.035
Regulated * Leverage	-	-0.048	-0.049	0.018	0.047	0.078 **	0.001	-0.056	0.101 *	0.058	0.004
Regulated * Liquidity	+	-0.066	-0.024	-0.111 *	0.085 **	0.163 ***	0.101 **	-0.122 **	0.062	0.044	-0.003
Regulated * ROA	+	-0.028	0.003	0.733	0.766	1.150 *	1.657 **	-0.573	2.046 **	0.937 *	-1.066 **
Regulated * Size	-	-0.002 *	-0.003 *	0.009 ***	-0.003 **	-0.002 *	-0.002	0.009 ***	-0.006 ***	-0.005 ***	0.005 ***
N		2877	2877	2877	2877	2877	2877	2877	2877	2877	2877
Adjusted R_Squared		0.011	0.025	0.103	0.028	0.010	0.014	0.054	0.017	0.032	0.022
P-value of F-Statistic		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

The *cumulative market-adjusted return* for the two-day window (-1, 0) is the dependent variable. *Regulated* takes the value of 1 if $Firm_j$ is a depository institution with a two-digit SIC code is 60; 0 otherwise. The remaining variables are interactions of the variables specified. * $p<0.1$; **$p<0.05$; *** $p<0.01$

TABLE 27

DEGREE OF CONTAGION ACROSS FIRMS CONTROLING FOR INDUSTRY

INCLUDING MINING, AGRICULTURE, FORESTRY AND FISHING INDUSTRIES

	Predict	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10
Intercept	?	-0.016 *	-0.007	-0.035 ***	-0.009	0.013 *	0.007	-0.056 ***	-0.007	-0.044 ***	0.013
Leverage	-	0.009 ***	0.012 **	-0.006	0.019 ***	0.005 *	-0.002	0.005	-0.006	0.004	0.016 ***
Liquidity	+	0.000	0.014 ***	0.001	0.006 *	-0.009 ***	-0.006	-0.008 *	0.010 **	0.031 ***	0.013 ***
Loss	-	-0.004 **	-0.013 ***	-0.004	-0.006 ***	0.002	-0.003	-0.003	-0.008 ***	-0.005 **	0.011 ***
Return on Assets	+	-0.010	0.057 ***	-0.010	0.014	-0.004	0.030 **	0.063 ***	0.014	0.046 ***	-0.004
Speculative S&P's Rank	+	-0.004 **	-0.005 **	-0.007 ***	0.005 ***	-0.004 **	0.001	0.005 **	-0.007 ***	-0.014 ***	0.003 *
Size	-	-0.002 ***	-0.003 ***	0.002 ***	-0.001 *	-0.001 ***	0.000	0.003 ***	0.000	0.000	0.000
Brokers	-	-0.016	0.029 *	0.008	-0.018	-0.028 **	-0.030 **	0.020	-0.027 *	0.006	-0.024
Forestry	-	0.020	-0.013	0.066 **	0.010	-0.025 *	0.017	0.040 *	0.011	0.035 *	-0.010
Manufacturing	-	0.025 ***	0.029 ***	0.023 ***	0.002	-0.010 *	-0.006	0.023 ***	0.005	0.029 ***	-0.028 ***
Mining	-	0.008	0.018 **	-0.013	0.009	0.014 **	0.005	-0.019 **	0.016 *	0.050 ***	-0.021 **
Other Regulated	-	0.012 *	0.011	0.066 ***	-0.017 **	-0.018 ***	-0.020 **	0.040 ***	-0.003	0.027 ***	-0.019 **
Regulated Securitization	-	-0.006	-0.008 *	0.039 ***	-0.011 ***	0.000	-0.006	0.017 ***	0.000	-0.007	-0.009 *
Regulated No-Securitization	-	-0.001	0.008	0.000	-0.003	0.008 *	-0.001	0.011	-0.001	-0.002	0.001
Retail	-	0.027 ***	0.025 ***	0.036 ***	-0.008	-0.017 **	-0.012	0.039 ***	-0.008	0.039 ***	-0.033 ***
Service	-	0.024 ***	0.028 ***	0.029 ***	0.001	-0.006	-0.007	0.024 ***	0.003	0.029 ***	-0.030 ***
TransComm	-	0.026 ***	0.026 ***	0.026 ***	0.001	-0.008	-0.012 *	0.018 **	0.006	0.037 ***	-0.026 ***
Unregulated Finance	-	0.011 *	0.011	0.055 ***	-0.005	-0.009 *	-0.016 **	0.041 ***	-0.003	0.027 ***	-0.012 *
Wholesale	-	0.025 ***	0.031 ***	0.016 *	0.000	-0.012 **	-0.002	0.020 **	0.000	0.025 ***	-0.019 **
N		2974	2974	2974	2974	2974	2974	2974	2974	2974	2974
Adjusted R_Squared		0.030	0.039	0.155	0.030	0.027	0.019	0.092	0.017	0.042	0.030
P-value of F-Statistic		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

The cumulative market adjusted return for the two-day window (-1, 0) is the dependent variable. *Brokers* takes the value of 1 if $Firm_j$ is a mortgage bankers, loan correspondent or loan brokers; 0 otherwise. *Forestry* takes the value of 1 if $Firm_j$'s two-digit SIC code is 01-09; 0 otherwise. *Manufacturing* takes the value of 1 if $Firm_j$'s two-digit SIC code is 20-39; 0 otherwise. *Mining* takes the value of 1 if $Firm_j$'s two-digit SIC code is 10-14; 0 otherwise. *Other Regulated* takes the value of 1 if $Firm_j$ is a depository institution that did not file Schedule RC-P; 0 otherwise. *Regulated Securitization* takes the value of 1 if $Firm_j$ filed schedule RC-P indicating residential mortgage sales above zero; 0 otherwise. *Regulated No-Securitization* takes the value of 1 if $Firm_j$ filed Schedule RC-P indicating residential mortgage loans sales was zero; 0 otherwise. *Retail* takes the value of 1 if $Firm_j$'s two-digit SIC code is 52-59; 0 otherwise. *Service* takes the value of 1 if $Firm_j$'s two-digit SIC code is two-digit SIC code 70-89; 0 otherwise. *TransComm* takes the value of 1 if $Firm_j$'s two-digit SIC code is 40-49; 0 otherwise. *Unregulated Finance* takes the value of 1 if $Firm_j$'s two-digit SIC code is 61-67 but is not within Brokers; 0 otherwise. *Wholesale* takes the value of 1 if $Firm_j$'s two-digit SIC code is 50-51; 0 otherwise. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

TABLE 28
AUTOCORRELATION OF ERROR TERMS

Panel A: Regulated Securitization Portfolio

Dependent Variable = *Portfolio Mean Holding Period Return for Event* $_K$

		Model 1				Model 1A[(a)]			
Independent Variables		**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept		-0.001	0.000	-4.400	0.000 ***	-0.001	0.000	-4.430	0.000 ***
Market	?	0.741	0.026	28.140	0.000 ***	0.741	0.036	20.670	0.000 ***
Event 1	-	-0.004	0.003	-1.330	0.093 *	-0.004	0.000	-9.260	0.000 ***
Event 2	-	-0.003	0.003	-0.940	0.174	-0.003	0.005	-0.620	0.268
Event 3		0.016	0.003	5.330	0.000 ***	0.016	0.007	2.340	0.020 **
Event 4	-	-0.002	0.003	-0.620	0.268	-0.002	0.000	-4.260	0.000 ***
Event 5	-	-0.007	0.003	-2.170	0.016 **	-0.007	0.001	-8.350	0.000 ***
Event 6		0.006	0.003	2.080	0.038 **	0.006	0.006	1.090	0.277
Event 7	-	-0.007	0.003	-2.290	0.012 **	-0.007	0.001	-6.050	0.000 ***
Event 8	-	-0.007	0.003	-2.350	0.010 ***	-0.007	0.001	-5.400	0.000 ***
Event 9		0.005	0.003	1.500	0.136	0.005	0.001	3.700	0.000 ***
n		252							
Adjusted R Squared		0.773							
Intercept		-0.001	0.000	-4.040	0.000 ***	-0.001	0.000	-4.510	0.000 ***
Market		0.740	0.028	26.110	0.000 ***	0.740	0.035	21.260	0.000 ***
All Events[(a)]		0.000	0.001	-0.230	0.815	0.000	0.002	-0.130	0.900
n		252							
Adjusted R Squared		0.731							

The portfolio mean holding period return for Event$_K$ over the two-day window (-1,0) is the dependent variable (discussed in Section 4.4). *Market* is Standard and Poor's composite Index. *Events 1 to 9* (Detailed in Table 7) take the value of 1 for the two-day window (-1,0) of the Event; 0 otherwise. The regulated securitization portfolio includes 168 regulated depository financial institutions that reported on Schedule RC-P, 1-4 Family Residential Mortgage Banking Activities in Domestic Offices filed with the Federal Reserve Bank of Chicago a level of mortgage loan sales greater than zero. [(a)]The Model is adjusted for autocorrelation in the error terms using the Newey-West Test. * p<0.1; **p<0.05; *** p<0.01

TABLE 28 CONTINUED
AUTOCORRELATION OF ERROR TERMS

Panel B: Regulated No-Securitization Portfolio

Dependent Variable = *Portfolio Mean Holding Period Return for Event* $_K$

		Model 2				Model 2A[(a)]			
Independent Variables		**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept		-0.001	0.000	-4.440	0.000 ***	-0.001	0.000	-4.490	0.000 **
Market	?	0.591	0.028	21.010	0.000 ***	0.591	0.035	17.020	0.000 ***
Event 1	-	-0.003	0.003	-0.800	0.211	-0.003	0.001	-1.960	0.026 **
Event 2	-	-0.001	0.003	-0.380	0.352	-0.001	0.002	-0.560	0.288
Event 3		0.013	0.003	3.900	0.000 ***	0.013	0.004	3.100	0.002 ***
Event 4	-	0.001	0.003	0.380	0.351	0.001	0.002	0.650	0.260
Event 5	-	-0.005	0.003	-1.460	0.073 *	-0.005	0.001	-9.170	0.000 ***
Event 6		0.007	0.003	2.080	0.039 **	0.007	0.008	0.900	0.370
Event 7	-	-0.007	0.003	-2.180	0.015 **	-0.007	0.003	-2.820	0.003 ***
Event 8	-	-0.004	0.003	-1.200	0.117	-0.004	0.006	-0.620	0.267
Event 9		0.007	0.003	2.070	0.039 **	0.007	0.001	13.140	0.000 ***
n		252							
Adjusted R Squared		0.653							
Intercept		-0.001	0.000	-4.230	0.000 ***	-0.001	0.000	-4.570	0.000 ***
Market		0.590	0.029	20.220	0.000 ***	0.590	0.033	17.740	0.000 ***
All Events[(a)]		0.001	0.001	0.740	0.458	0.001	0.002	0.450	0.654
n		252							
Adjusted R Squared		0.618							

The portfolio mean holding period return for Event$_K$ over the two-day window (-1,0) is the dependent variable (discussed in Section 4.4). *Market* is Standard and Poor's composite Index. *Events 1 to 9* (Detailed in Table 7) take the value of 1 for the two-day window (-1,0) of the Event; 0 otherwise. The regulated no-securitization portfolio includes 80 regulated depository financial institutions that reported on Schedule RC-P, 1-4 Family Residential Mortgage Banking Activities in Domestic Offices filed with the Federal Reserve Bank of Chicago a level of mortgage loan sales that was equal to zero. [(a)]The Model is adjusted for autocorrelation in the error terms using the Newey-West Test. * p<0.1; **p<0.05; *** p<0.01

TABLE 28 CONTINUED
AUTOCORRELATION OF ERROR TERMS

Panel C: Regulated Other Depository Portfolio

Dependent Variable = *Portfolio Mean Holding Period Return for Event* $_K$

		Model 3				Model 3A[(a)]			
Independent Variables		**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept		-0.001	0.000	-5.450	0.000 ***	-0.001	0.000	-5.390	0.000 ***
Market	?	0.545	0.020	27.930	0.000 ***	0.545	0.027	20.510	0.000 ***
Event 1	-	-0.004	0.002	-1.870	0.031 **	-0.004	0.002	-2.440	0.008 ***
Event 2	-	-0.002	0.002	-0.980	0.165	-0.002	0.003	-0.850	0.198
Event 3		0.005	0.002	2.340	0.020 **	0.005	0.003	1.700	0.090 *
Event 4	-	-0.003	0.002	-1.330	0.092 *	-0.003	0.000	-12.300	0.000 ***
Event 5	-	-0.005	0.002	-2.310	0.011 **	-0.005	0.001	-3.860	0.000 ***
Event 6		0.004	0.002	1.650	0.099 *	0.004	0.003	1.330	0.185
Event 7	-	-0.007	0.002	-3.180	0.001 ***	-0.007	0.001	-7.120	0.000 ***
Event 8	-	-0.008	0.002	-3.360	0.001 ***	-0.008	0.001	-5.050	0.000 ***
Event 9		0.005	0.002	2.280	0.024 **	0.005	0.001	6.290	0.000 ***
n		252							
Adjusted R Squared		0.770							
Intercept		-0.001	0.000	-5.110	0.000 ***	-0.001	0.000	-5.480	0.000 ***
Market		0.545	0.021	26.520	0.000 ***	0.545	0.027	20.540	0.000 ***
All Events[(a)]		-0.002	0.001	-2.040	0.042 **	-0.002	0.001	-1.280	0.202
n		252							
Adjusted R Squared		0.739							

The portfolio mean holding period return for Event$_K$ over the two-day window (-1,0) is the dependent variable (discussed in Section 4.4). *Market* is Standard and Poor's composite Index. *Events 1 to 9* (Detailed in Table 7) take the value of 1 for the two-day window (-1,0) of the Event; 0 otherwise. The regulated other depository portfolio includes 281regulated depository financial institutions that did not file Schedule RC-P, 1-4 Family Residential Mortgage Banking Activities in Domestic Offices filed with the Federal Reserve Bank of Chicago. Schedule RC-P only needs to be completed by banks with $1 billion or more in total assets and those banks with less than $1 billion in total assets where residential mortgage banking activities exceeds $10 million for two consecutive quarters. [(a)]The Model is adjusted for autocorrelation in the error terms using the Newey-West Test. * p<0.1; **p<0.05; *** p<0.01

TABLE 28 CONTINUED
AUTOCORRELATION OF ERROR TERMS

Panel D: Unregulated Finance Portfolio

Dependent Variable = *Portfolio Mean Holding Period Return for Event* $_K$

		Model 4				Model 4A[(a)]			
Independent Variables		**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept		0.000	0.000	-0.350	0.726	0.000	0.000	-0.350	0.729
Market	?	0.694	0.016	42.520	0.000 ***	0.694	0.022	31.390	0.000 ***
Event 1	-	-0.004	0.002	-1.990	0.024 **	-0.004	0.001	-5.690	0.000 ***
Event 2	-	-0.004	0.002	-2.050	0.021 **	-0.004	0.002	-1.890	0.030 **
Event 3	?	-0.006	0.002	-3.250	0.001 ***	-0.006	0.001	-4.650	0.000 ***
Event 4	-	0.000	0.002	0.090	0.463	0.000	0.000	0.650	0.259
Event 5	-	-0.002	0.002	-0.820	0.206	-0.002	0.001	-1.380	0.084 *
Event 6	?	-0.001	0.002	-0.680	0.496	-0.001	0.000	-2.940	0.004 ***
Event 7	-	-0.005	0.002	-2.850	0.003 ***	-0.005	0.002	-2.880	0.002 ***
Event 8	-	-0.002	0.002	-1.220	0.113	-0.002	0.003	-0.820	0.206
Event 9	?	0.004	0.002	2.030	0.044 **	0.004	0.000	17.760	0.000 ***
n		252							
Adjusted R Squared		0.883							
Intercept		0.000	0.000	-0.340	0.732	0.000	0.000	-0.350	0.723
Market	?	0.695	0.017	42.000	0.000 ***	0.695	0.022	31.810	0.000 ***
All Events[(a)]	?	-0.002	0.001	-3.380	0.001 ***	-0.002	0.001	-2.670	0.008 ***
n		252							
Adjusted R Squared		0.878							

The portfolio mean holding period return for Event$_K$ over the two-day window (-1,0) is the dependent variable (discussed in Section 4.4). *Market* is Standard and Poor's composite Index. *Events 1 to 9* (Detailed in Table 7) take the value of 1 for the two-day window (-1,0) of the Event; 0 otherwise. The Finance portfolio includes 1,768 firms from the finance, insurance and real estate industry with a two-digit SIC of 60-67. Any firm with a two-digit SIC of 60 and a three-digit SIC of 616 is removed. The removal of firms with a two-digit SIC of 60 removes all depository institution and the removal of firms with a three-digit SIC of 616 removes all firms in the same industry as Countrywide (mortgage bankers, loan correspondents and loan brokers). [(a)]The Model is adjusted for autocorrelation in the error terms using the Newey-West Test. * p<0.1; **p<0.05; *** p<0.01

TABLE 28 CONTINUED
AUTOCORRELATION OF ERROR TERMS

Panel E: Unregulated Mortgage Bankers Portfolio

Dependent Variable = *Portfolio Mean Holding Period Return for Event* $_K$

		Model 5				Model 5[(a)]			
Independent Variables		**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept		-0.002	0.001	-2.340	0.020 **	-0.002	0.001	-2.340	0.020
Market	?	0.816	0.084	9.670	0.000 ***	0.816	0.099	8.260	0.000 ***
Event 1	-	-0.014	0.010	-1.480	0.071 *	-0.014	0.002	-7.340	0.000 ***
Event 2	-	-0.016	0.010	-1.620	0.053 *	-0.016	0.001	-10.660	0.000 ***
Event 3	?	-0.004	0.010	-0.380	0.707	-0.004	0.017	-0.210	0.831
Event 4	-	-0.002	0.010	-0.220	0.412	-0.002	0.001	-2.280	0.012 **
Event 5	-	-0.008	0.010	-0.800	0.212	-0.008	0.003	-2.840	0.003 ***
Event 6	?	0.004	0.010	0.430	0.671	0.004	0.005	0.850	0.394
Event 7	-	-0.014	0.010	-1.440	0.076 *	-0.014	0.005	-2.860	0.003 ***
Event 8	-	-0.011	0.010	-1.150	0.125	-0.011	0.016	-0.690	0.245
Event 9	?	0.004	0.010	0.420	0.678	0.004	0.012	0.340	0.734
n									
Adjusted R Squared									
Intercept		-0.002	0.001	-2.360	0.019 **	-0.002	0.001	-2.380	0.018 **
Market	?	0.828	0.083	9.980	0.000 ***	0.828	0.096	8.630	0.000 ***
All Events[(a)]	?	-0.007	0.003	-2.020	0.044 **	-0.007	0.004	-1.890	0.060 *
n		252							
Adjusted R Squared		0.292							

The portfolio mean holding period return for Event$_K$ over the two-day window (-1,0) is the dependent variable (discussed in Section 4.4). *Market* is Standard and Poor's composite Index. *Events 1 to 9* (Detailed in Table 7) take the value of 1 for the two-day window (-1,0) of the Event; 0 otherwise. The Mortgage Bankers portfolio includes 15 firms with the same three-digit sic code (616) as Countrywide. [(a)]The Model is adjusted for autocorrelation in the error terms using the Newey-West Test. * $p<0.1$; **$p<0.05$; *** $p<0.01$

APPENDIX C

THE DEVELOPMENT OF THE ACCOUNTING FOR SECURITIZATIONS

Prior to fiscal yearend December 1996, securitisation transactions were handled by a number of different accounting standards which were difficult to apply and produced inconsistent and arbitrary results. To address these issues FASB consolidated the treatment of securitisation transactions into one statement, Statement No. 125, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities* (SFAS 125), issued June 1996. Since 1996, SFAS 125 has been amended 3 times, through SFAS 140, SFAS 156 and to the current statement SFAS 166. Table 26 shows how the accounting framework for securitizations has developed since 1982 to 2009.

Table 28
The Development of the Accounting Framework for Securitization

Number	Title	Issued	Status
65	Accounting for Certain Mortgage Banking Activities	Sep. 1982	*Superseded*
76	Extinguishment of Debt-an amendment of APB Opinion	Nov. 1983	*Superseded*
77	Reporting by Transferors for Transfers of Receivables with Recourse	Dec. 1983	*Superseded*
91	Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases—an amendment of FASB Statements No. 13, 60, and 65 and a rescission of FASB Statement No. 17	Dec. 1986	*Superseded*
115	Accounting for Certain Investments in Debt and Equity Securities	May. 1993	*Superseded*
122	Accounting for Mortgage Servicing Rights—an amendment of FASB Statement No. 65	May. 1995	*Superseded*
125	Accounting for the Transfers and Servicing of Financial Assets and Extinguishments of Liabilities	Jun. 1996	*Superseded*
134	Accounting for Mortgage-Backed Securities Retained after the Securitization of Mortgage Loans Held for Sale by a Mortgage Banking Enterprise—an amendment of FASB Statement No. 65	Oct. 1998	*Superseded*
140	Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities-a replacement of FASB Statement No. 125	Sep. 2000	*Superseded*
156	Accounting for Servicing of Financial Assets—an amendment of FASB Statement No. 140	Mar. 2006	*Superseded*
166	Accounting for Transfers of Financial Assets—an amendment of FASB Statement No. 140	Jun. 2009	
167	Amendments to FASB Interpretation No. 46(R)	Jun. 2009	

The issuance of SFAS 125 in 1996 was one of the largest changes to securitization reporting. SFAS 125 superseded and amended a number of accounting standards including SFAS 76, *Extinguishment of Debt,* and SFAS 77, *Reporting by Transferors for Transfers of Receivables with Recourse*. SFAS 125 also amended SFAS 115, *Accounting for Certain Investments in Debt and Equity Securities,* to clarify that a debt security may not be classified as held-to-maturity if it can be prepaid or otherwise settled in such a way that the holder of the security would not recover substantially all of its recorded investment. SFAS 125 extended to all the accounting standards on servicing assets and liabilities contained in Statement No. 65, *Accounting for Certain Mortgage Banking Activities,* and superseded SFAS 122, *Accounting for Mortgage Servicing Rights*. SFAS 125 also superseded SFAS Technical Bulletins No. 84-4, *In-Substance Defeasance of Debt,* and No. 85-2, *Accounting for Collateralized Mortgage Obligations (CMOs),* and amends SFAS Technical Bulletin No. 87-3, *Accounting for Mortgage Servicing Fees and Rights.*

In contrast to the earlier statements for securitization, SFAS 125 adopts a financial-components approach. This approach focuses on control and recognizes that financial assets and liabilities can be divided into a variety of components. Prior to SFAS 125, it was generally required that a company account for financial assets transferred as inseparable units that had been either entirely sold or entirely retained. Accounting for transferred assets as inseparable units was difficult and produced inconsistent and arbitrary results. For example, depending on the accounting application chosen by the reporting entity, an asset transfer 'purported to be a sale' could be reported as a sale of receivables under one accounting standard, or as a secured borrowing under another (Kane 1997). The financial accounting standards board concluded the previous treatments that viewed each financial asset as an indivisible unit did not provide an appropriate basis for developing consistent and operational standards for dealing with transfers and servicing of financial assets and

extinguishments of liabilities. The financial accounting standards board deemed it necessary that in order to be responsive to the developments in the financial markets, the financial components approach would provide the most consistent approach for accounting for transfers and servicing of financial assets and extinguishments of liabilities (SFAS 140 paragraph 141). The financial-components approach is retained throughout the following amendments made in SFAS 140 and SFAS 156, but is refined in SFAS 166.

AMENDMENT 1: Statement No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities - a replacement of FASB Statement No. 125*

SFAS 140 under the same name replaces SFAS 125. SFAS 140 revises the standards for accounting for securitisations and other transfers of financial assets and collateral and requires certain disclosures, but it carries over most of SFAS 125's provisions without reconsideration. SFAS 140 became effective for fiscal years ending after December 15, 2000. In addition to replacing Statement 125 and rescinding FASB Statement No. 127, *Deferral of the Effective Date of Certain Provisions of FASB Statement No. 125,* this Statement carries forward the actions taken by Statement 125 mentioned previously.

Aligned with SFAS 125, SFAS 140 provides accounting and reporting standards for transfers and servicing of financial assets and extinguishments of liabilities. These standards are based on consistent application of a financial-components approach that focuses on control. Under the control approach, after a transfer of financial assets, an entity recognizes the financial and servicing assets it controls and the liabilities it has incurred, derecognizes financial assets when control has been surrendered, and derecognizes liabilities when extinguished. SFAS 140 provides consistent standards for distinguishing transfers of financial assets that are sales, from transfers that are secured borrowings.

The two broad amendments to SFAS 140 are i) enhancements to the disclosure of financial information by companies and ii) clarifications to the treatment of special purpose entities (SPEs). Reporting entities are required to provide more information about assumptions used to determine the fair value of retained interests and the gain or loss on financial assets sold in securitisations. Furthermore, the circumstances in which a SPE can be considered qualifying are clarified. The clarification of a qualifying special purpose entity (QSPE) is important for identifying the circumstances in which the assets held by a QSPE should appear in the consolidated financial statements.

AMENDMENT 2: Statement No. 156, *Accounting for Servicing of Financial Assets - an amendment of FASB Statement No. 140*

Statement No. 156 (SFAS 156) amends FASB Statement No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities*, with respect to the accounting for separately recognized servicing assets and servicing liabilities (MSRs are one example). In March 2006, the issuance of SFAS 156 amended SFAS 140. Early adoption of SFAS 156 is allowed as of January 1, 2006, with the provisions being mandatory as of the beginning of the first fiscal year that begins after September 15, 2006. SFAS 156 require that all separately recognized servicing assets and servicing liabilities be initially measured at fair value, if practicable.

After the initial recognition of servicing assets and servicing liabilities at fair value, SFAS 157 provide entities the option to elect subsequent fair value measurement by asset/liability class. The option to elect subsequent fair value measurement to the class of servicing asset / liability seeks to simplify the accounting of SFAS 140. The option achieves this by providing for income statement recognition of the potential offsetting changes in fair value of the servicing assets, servicing liabilities, and related derivative

instruments. An entity that elects to subsequently measure servicing assets and servicing liabilities at fair value is expected to recognize declines in the fair value of the servicing assets and servicing liabilities more consistently than by reporting other-than-temporary impairments. For example, under SFAS 140, MSRs – a separately recognized servicing asset - are measured at an amount less than fair value at initial recognition. In contrast, SFAS 156 requires MSRs to be initially recognized at their fair value. SFAS 156 provides the reporting entity the flexibility to either: a) carry MSRs at fair value with changes in fair value recognized in current period earnings; or b) continue recognizing periodic amortization expense and assess the MSRs for impairment as originally required by SFAS 140 (thus, derivative instruments taken out to hedge MSRs exposure need to meet the regulations of SFAS 133 for fair value accounting).

AMENDMENT 3: Statement No. 166, *Accounting for Transfers of Financial Assets—an amendment of FASB Statement No. 140* and **Statement No. 167,** *Amendments to FASB Interpretation No. 46(R)*

SFAS 166 amends SFAS 140, and the new standards contained in SFAS 166 are required to be applied for the reporting periods beginning after November 15, 2009. The fundamental amendment made to SFAS 140 is the removal of the concept of a qualifying special-purpose entity and through SFAS 167 the removal of the exception of applying FASB interpretation 46(R), *Consolidation of Variable Interest Entities* (FIN 64(R)). The financial-components approach used in SFAS 140 is modified, and restrictions are placed on the circumstances in which a transferor has not transferred the original financial asset to an entity that is not consolidated with the transferor in the financial statements.

In order to evaluate whether a portion of financial assets transferred is appropriate to meet sale accounting, the reporting entity needs to assess the definition of a *participating interest* (SFAS 166 paragraph 8B). For the transfer of an entire financial asset, group of

entire financial assets and participating interests in an entire financial asset, to be eligible for sale accounting control must be relinquished (consistent with SFAS 140) and the entire financial asset cannot be divided into components before the transfer unless those components meet the definition of a participating interest (SFAS 166 paragraph 11). Thus, the reporting entities that relied on the two-step transfer (SFAS 140 paragraph 27), in combination with FIN 64(R), to avoid having to consolidate the second transfer, will have to bring those transactions on balance sheet unless both transfers cover entire financial assets or participating interests.

In summary the reporting entity will only be able to avoid consolidation of the *variable-interest* entity if the transferor can show that they do not have power to direct the activities of the *variable-interest* entity in a way that will impact the entity's economic performance and that the transferor does not have the obligation to absorb losses of the *variable-interest* entity, and/or the right to receive benefits from the *variable-interest* entity.

APPENDIX D

FAIR VALUE ACCOUNTING

TABLE 29
DEVELOPMENT OF FAIR VALUE ACCOUNTING

Year	Description
1887	The 1887 Act mandated reporting requirements to Regulate Interstate Commerce / the railroads, by requiring the firms to file annual report with the ICC. However, the ICC could not compel use of uniform accounting methods because this power was negated by the Supreme Court in 1898 (Bonbright 1920).
1898	Roosevelt urged the ICC to adopt a more comprehensive approach to regulation based on the Supreme Court's 1898 Smyth v. Ames opinion. In that case, the court reviewed a Nebraska state law governing maximum railroad freight rates and ruled that a public utility was entitled to receive a *fair return* on the *fair value* of the property used in providing a public service (Grout and Jenkins 2001; Sivakumar and Waymire 2003). Because the ruling did not define the specifics of these concepts, this case was subject to ambiguous interpretation for several decades
1906	The Hepburn Act: affirmed the Interstate Commerce Commission (ICC) authority to set uniform accounting and disclosure rules (Sivakumar and Waymire 2003). The ICC used its new power under the Hepburn Act to mandate depreciation accruals for firms' assets. ICC depreciation rules required monthly accruals based on the straight-line method for assets that included locomotives, freight cars, passenger cars, and other types of equipment beginning in fiscal 1908
1933	The Securities Act (1933): enacted in the aftermath of the stock market crash of 1929 and in the depths of the Great Depression to remedy problematic aspect of the stock market. Furthermore the 1933 Act gave the SEC power to institute accounting rules and review firms' financial statements (Benston 1969). Among others things, the Act required specific accounting disclosure requirements to be made by firms. Importantly, the commission did not allow firms to give investors estimates of future earnings and statement of assets at fair market value.
1934	The Securities Exchange Act (1934): prescribed corporations with over $1mil in assets and 500 stockholders prescribe annual and semi-annual financial reports (amended 1964)
1947	The Committee on Accounting Procedure introduced the term market to non-financial assets in its Accounting Research Bulletin No. 29 Inventory Pricing. This bulletin prescribes that inventory be valued at *lower of cost or market (Barlev and Haddad 2003)*. The term market was defined to mean *current replacement cost* (by purchase or production).
1973	The FASB, a judicial-like standards setting body was established and after a few years of operation, it considered the concept of fair value. For example, in SFAS 13 (1976) requires fair value for leases (paragraphs 26 and 28). In SFAS 35 (1980), requires the use of pension funds (paragraph 104)

Year	Description
1990	Douglas Breeden, then the chairman of the SEC, declared that the fair value is the only relevant measure and suggested that all financial institutions should be required to report all of their financial investments at market values. This statement was referred to as "most significant initiative in accounting principles development in over 50 years" (Hendriksen & Van Breda 1992, p. 575).
1992	FASB's began introducing the fair value accounting paradigm with the issuance of Statement no. 107 (1991), Disclosure About Fair Value of Financial Instruments in 1992. SFAS 107 was the first statement that required the inclusion of fair values (Barth et al. 1996).
1993	FASB issued SFAS 115 (1993) Accounting for Certain Investments in Debt and Equity Securities. This was the first statement that required companies to recognize their financial claims at fair value.
1996	SFAS 125 (1996) expands on the procedures for determining the fair value of assets in circumstances where quoted market prices are not available. The Standard also considers valuation techniques such as "option-pricing models, matrix pricing, option-adjusted spread models, and fundamental analysis" (paragraph 43). These procedures are important, since they specify the tools and provide a sound background for the use of fair value accounting in the measurement and reporting the reporting entity's assets and liabilities.
1998	The pronouncement of SFAS 133 (1998) is a major phase in the promotion of the fair value accounting. It prescribes a comprehensive framework of accounting that standardizes accounting for derivatives and hedging activities. SFAS 133 states that derivatives must be carried on the balance sheet at fair value and that changes in their fair value, with the exception of those related to certain hedging activities, must be recognized in the income statement when they occur
2000	The issuance of SFAS 140 (2000)*Accounting for Transfers and Servicing of Financial Assets and Extinguishment of Debt* allowed for fair value measurement when practicable, for the initial measurement of liabilities and derivatives incurred and obtained as part of a transfer of financial assets
2001	The issuance of SFAS 141 (2001a), *Business Combinations* established fair value measurement as equivalent to the "cost" of acquiring a business; and the issuance of SFAS 142(2001b), *Goodwill and other Intangible Assets* required initial recognition of acquired intangibles at fair value and set fair value as a benchmark for impairment analysis; SFAS 144(2001c), *Accounting for the Impairment or Disposal of Long-Lived Assets* requiring the use of fair value measurement to assess whether long-lived assets are impaired
2003	Issuance of SFAS 150 (2003), *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity* required certain financial instruments classified as liabilities to be recognized initially and subsequently at fair value.
2004	SFAS 123 (2004), *Share-Based Payment* requiring stock-based compensation granted to employees to be recognized using a fair-value-based method.

Year	Description
2006	FASB issued SFAS 157 (2006c), Fair Value Measurement. This statement provides a single definition of fair value, together with a framework for measuring fair value, which FASB believes (p. 6) should result in increased consistency and comparability in fair value measurements. The expanded disclosures about the use of fair value to measure assets and liabilities should provide users of financial statements with better information about the extent to which fair value is used to measure recognized assets and liabilities, the inputs used to develop the measurements, and the effect of certain of the measurements on earnings (or changes in net assets) for the period. Also, in 2006 SFAS 140 was amended by SFAS 155 (2006a), *Accounting for Certain Hybrid Financial Instruments* and by SFAS 156 (2006b), *Accounting for Servicing of Financial Assets* requiring fair value measurement on initial recognition of all separately recognized servicing assets and liabilities and permitting fair value measurement of hybrid instruments that contain an embedded derivative.
2007	Issuance of SFAS 159 (2007b), *The Fair Value Option for Financial Assets and Financial Liabilities* permits fair value measurement for many more financial assets and liabilities; and the revision of SFAS 141 (2007a), *Business Combinations* requires fair value measurement for all assets acquired and liabilities assumed in a business combination.
2008	September 30 (2008), the SEC and FASB offered guidance to reporting entities regarding the determination of fair value of assets and liabilities in the current economic environment; October 3, 2008, Congress passed the Emergency Economic Stabilization Act of 2008 and Section 132 of Title I granted authority to the SEC to suspend by rule, regulation, or order, the application of SFAS 157 for any issuer or with respect to any class or category of transaction if the SEC determines that it is necessary or appropriate in the public interest and is consistent with the protection of investors.

Information compounded from the Financial Accounting Standards Board Pre-Codification Standards identified in the text; Benston (1969); Barlev and Haddad (2003); Hendriksen and Van Breda (1992); SEC (2008)

TABLE 30
REFERENCE TO FAIR VALUES BY THE FASB PRIOR TO SFAS 157

Standard	Reference to Fair Values
SFAS 107	Disclosure About Fair Value of Financial Instruments (Dec. 1991) requires all entities to disclose the fair value of financial instruments, both assets and liabilities recognized and not recognized in the balance sheet. The information disclosed is to be pertinent to estimating the value of the financial instruments recognized. SFAS 107 extends SFAS 105, Disclosure of Information about Financial Instruments with Off-Balance-Sheet Risk and Financial Instruments with Concentrations of Credit Risk.
SFAS 115	Accounting for Certain Investments in Debt and Equity Securities (May 1993): (Paragraph 3a) The fair value of an equity security is readily determinable if sales prices or bid-and-asked quotations are currently available on a securities exchange registered with the Securities and Exchange Commission (SEC) or in the over-the-counter market, provided that those prices or quotations for the over-the-counter market are publicly reported by the National Association of Securities Dealers Automated Quotations systems or by the National Quotation Bureau
SFAS 125	Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities (Jun. 1996): exerts from Paragraph 42 – 45: The fair value of an asset (or liability) is the amount at which that asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale. Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis for the measurement, if available. If quoted market prices are not available, the estimate of fair value shall be based on the best information available in the circumstances. The estimate of fair value shall consider prices for similar assets and liabilities and the results of valuation techniques to the extent available in the circumstances. Examples of valuation techniques include the present value of estimated expected future cash flows using a discount rate commensurate with the risks involved, option-pricing models, matrix pricing, option-adjusted spread models, and fundamental analysis. Valuation techniques shall incorporate assumptions that market participants would use in their estimates of values, future revenues, and future expenses, including assumptions about interest rates, default, prepayment, and volatility. Estimates of expected future cash flows, if used to estimate fair value, shall be the best estimate based on reasonable and supportable assumptions and projections. All available evidence shall be considered in developing estimates of expected future cash flows. If it is not practicable to estimate the fair values of assets, the transferor shall record those assets at zero.
SFAS 133	Accounting for Derivative Instruments and Hedging Activities (1998): (paragraph 17) All derivative instruments shall be measured at fair value. If expected future cash flows are used to estimate fair value, those expected cash flows shall be the best estimate based on reasonable and supportable assumptions and projections. All available evidence shall be considered in developing estimates of expected future cash flows.
SFAS 140	Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities (2000); Paragraph 68 – 72 The fair value measures are retained from SFAS 125

Standard	Reference to Fair Values
SFAS 142	Goodwill and Other Intangible Assets (Jun. 2001): Paragraph 23-25: Fair value definition is consistent with SFAS 125, as is the requirement to use quoted market prices as the basis for the measurement were available. However, the market price of an individual equity security (and thus the market capitalization of a reporting unit with publicly traded equity securities) may not be representative of the fair value of the reporting unit as a whole. Consistent with SFAS 125 if quoted market prices are not available, the estimate of fair value shall be based on the best information available, including prices for similar assets and liabilities and the results of using other valuation techniques. If a present value technique is used to measure fair value, estimates of future cash flows used in that technique shall be consistent with the objective of measuring fair value. Those cash flow estimates shall incorporate assumptions that marketplace participants would use in their estimates of fair value. If that information is not available without undue cost and effort, an entity may use its own assumptions. In estimating the fair value of a reporting unit, a valuation technique based on multiples of earnings or revenue or a similar performance measure may be used if that technique is consistent with the objective of measuring fair value.
SFAS 144	Accounting for the Impairment or Disposal of Long-Lived Assets (Aug. 2001) (paragraph 22-24); Fair value definition is consistent with SFAS 125, as is the requirement to use quoted market prices as the basis for the measurement were available. However, in many instances, quoted market prices in active markets will not be available for the long-lived assets (asset groups) covered by this Statement. In those instances, the estimate of fair value shall be based on the best information available, including prices for similar assets (groups) and the results of using other valuation techniques. A present value technique is often the best available valuation technique with which to estimate the fair value of a long-lived asset (asset group). Paragraphs 39–54 of FASB Concepts Statement No. 7, *Using Cash Flow Information and Present Value in Accounting Measurements,* discuss the use of two present value techniques to measure the fair value of an asset (liability). The first is expected present value, in which multiple cash flow scenarios that reflect the range of possible outcomes and a risk-free rate are used to estimate fair value. The second is traditional present value, in which a single set of estimated cash flows and a single interest rate (a rate commensurate with the risk) are used to estimate fair value. Either present value technique can be used for a fair value measurement. However, for long-lived assets (asset groups) that have uncertainties both in timing and amount, an expected present value technique will often be the appropriate technique. If a present value technique is used, estimates of future cash flows shall be consistent with the objective of measuring fair value. Assumptions that marketplace participants would use in their estimates of fair value shall be incorporated whenever that information is available without undue cost and effort. Otherwise, the entity may use its own assumptions.

Standard	Reference to Fair Values
SFAS 146	Accounting for Costs Associated with Exit or Disposal Activities (Jun. 2002) Paragraph 3: The fair value of a liability is the amount at which that liability could be settled in a current transaction between willing parties, that is, other than in a forced or liquidation transaction. Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis for the measurement, if available. If quoted market prices are not available, the estimate of fair value shall be based on the best information available in the circumstances, including prices for similar liabilities and the results of using other valuation techniques. (A3) However, for many of the liabilities covered by this Statement, quoted market prices will not be available. Consequently, in those circumstances fair value will be estimated using some other valuation technique.
SFAS 153	Exchange of Nonmonetary Assets (Dec. 2004); A nonmonetary exchange shall be measured based on the recorded amount of the nonmonetary asset relinquished, and not on the fair values of the exchanged assets, if any of the following conditions apply: a) The fair value of neither the assets received nor the asset relinquished is determinable within reasonable limits (paragraph 25); b) The transaction is an exchange of a product or property held-for-sale in the ordinary course of business for a product or property to be sold in the same line of business to facilitate sales to customers other than the parties to the exchange c) The transaction lacks commercial substance (paragraph 21).
SFAS 157	Fair Value Measurements (Sept. 2006) provides a single definition of fair value (paragraph 5) whereby fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. To increase consistency and comparability in fair value measurements and related disclosures, the fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (*Level 1*) and the lowest priority to unobservable inputs (*Level 3*) (paragraph 22).

Appendix E

SENSITIVITIES FOR CHAPTER 4

Table 31

The Impact of Mortgage Sales on the Pricing of Banks' *Level 3* Assets

Song et al. (2010) Liability segregation

		Model 1[(a)]	Model 2[(a)]	Model 3[(a)]	Model 4[(a)]	Model 5[(a)]	Model 6[(a)]	Model 7[(a)]	Model 8[(a)]	Model 9[(a)]
Intercept	?	3.2395 **	5.6997 ***	7.5751 ***	6.1815 ***	5.9548 ***	5.8517 ***	5.5791 ***	5.6031 ***	5.8022 ***
Other Assets	+	0.7020 ***	0.6974 ***	0.6547 ***	0.6608 ***	0.6706 ***	0.6745 ***	0.6760 ***	0.6779 ***	0.6806 ***
Level 1 Assets	+	0.9760 ***	0.9664 ***	0.8986 ***	0.8851 ***	0.8943 ***	0.9022 ***	0.9043 ***	0.9051 ***	0.9071 ***
Level 2 Assets	+	0.8387 ***	0.8343 ***	0.7691 ***	0.7724 ***	0.7829 ***	0.7837 ***	0.7857 ***	0.7863 ***	0.7884 ***
Level 3 Assets	+	**0.4789** **	**0.4779** **	**0.4964** **	**0.8207** ***	**0.8140** ***	**0.8063** ***	**0.8093** ***	**0.8152** ***	**0.8214** ***
Other Liabilities	-	-0.7206 ***	-0.7156 ***	-0.6674 ***	-0.6730 ***	-0.6842 ***	-0.6856 ***	-0.6878 ***	-0.6898 ***	-0.6929 ***
Level 12 Liabilities	-	-0.6865 ***	-0.6865 ***	-0.6532 ***	-0.6630 ***	-0.6561 ***	-0.6596 ***	-0.6623 ***	-0.6639 ***	-0.6648 ***
Level 3 Liabilities	-	-1.2701 *	-1.2417 *	-1.0655	-1.0371	-0.9377	-0.7856	-0.7899	-0.7680	-0.7851
Income	+	2.6270 ***	2.5202 ***	1.3678 ***	1.3406 ***	0.1886	0.1586	0.1731	0.1778	0.1846
Quarter	?		-1.0560 ***	-0.8098 ***	-0.7898 ***	-0.7711 ***	-0.8564 ***	-0.7158 ***	-0.7185 ***	-0.7963 ***
Loss	-			-6.9696 ***	-7.0037 ***	-6.9695 ***	-7.0878 ***	-7.0599 ***	-7.0404 ***	-6.9615 ***
Securitization	+				1.8890 **	2.1459 **	2.7639 ***	2.6753 ***	2.6016 ***	2.4877 ***
Securitization * Level 3 Assets	-				**-0.4525** **	**-0.4354** *	**-0.3963** *	**-0.4045** *	**-0.4054** *	**-0.4066** *
Securitization * Income	+					1.5489 ***	1.6174 ***	1.5957 ***	1.5887 ***	1.5821 ***
Securitization Level	-						**-0.2107** ***			
Securitization Level (Q1)	-							**-0.1942** **		
Securitization Level (Q2)	-								**-0.1948** **	
Securitization Level (Q3)	-									**-0.167** **
Wald test: Level 1 Assets =1[(b)]		0.01	0.03	0.28	0.36	0.31	0.26	0.25	0.25	0.24
Wald test: Level 2 Assets =1[(b)]		0.96	1.01	2.10	2.06	1.88	1.84	1.82	1.82	1.81
Wald test: Level 3 Assets =1[(b)]		3.59 *	3.61 *	3.70 *	0.42	0.37	0.41	0.40	0.37	0.35
Wald test: Level 1 Assets = Level 3 Assets [(b)]		4.17 **	4.04 **	3.05 *	0.06	0.08	0.11	0.11	0.1	0.09
Wald test: Level 2 Assets = Level 3 Assets[(b)]		2.66	2.60	1.67	0.05	0.01	0.01	0.01	0.01	0.02
N		1592	1592	1592	1592	1592	1592	1592	1592	1592
Adjusted R Squared		0.477	0.483	0.524	0.528	0.532	0.538	0.537	0.536	0.535

Price: closing share price measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline. All variables are measured on a per share basis for bank$_j$ for the immediate quarter unless specified otherwise. *Other Assets:* assets that do not require fair value measurement. *Level 1 Assets*: assets that require fair value measurement using quoted prices in active markets for identical assets. *Level 2 Assets*: assets that require fair value measurement using inputs other than quoted prices observable for the asset either directly or indirectly. *Level 3 Assets*: assets that require fair value measurement using unobservable inputs. *Total Liabilities*: all liabilities that do not require fair value measurement and all liabilities that require fair value measurement. *Income*: income before extraordinary items. *Financial quarter*: takes the value of 1for March quarter, 2 for June quarter, 3 for September quarter, 4 for December quarter. *Exchange*: takes the value 1 if bank$_j$ is listed on the New York Stock Exchange, 0 otherwise. *LnSize:* Log of total assets. *Loss*: takes the value of 1 if bank$_j$ made a loss, 0 otherwise. *Securitization:* takes the value of 1 if bank$_j$ sold loans in the financial quarter, 0 otherwise. Securitization variables as specified previously. [(a)]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [(b)]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1; **p<.05; *** p<.01.

Table 32
The Effect of Mortgage Sales on the Pricing of Banks' *Level 3* Assets
Goh et al. (2009) Liability segregation

		Model 1[a]	Model 2[a]	Model 3[a]	Model 4[a]	Model 5[a]	Model 6[a]	Model 7[a]	Model 8[a]	Model 9[a]
Intercept	?	3.2197 **	5.6884 ***	7.5597 ***	6.2197 ***	5.9971 ***	5.8889 ***	5.6249 ***	5.6497 ***	5.8452 ***
Other Assets	+	0.7162 ***	0.7119 ***	0.6678 ***	0.6675 ***	0.6803 ***	0.6824 ***	0.6840 ***	0.6862 ***	0.6887 ***
Level 1 Assets	+	0.9955 ***	0.9863 ***	0.9167 ***	0.8970 ***	0.9112 ***	0.9161 ***	0.9184 ***	0.9196 ***	0.9216 ***
Level 2 Assets	+	0.8529 ***	0.8488 ***	0.7824 ***	0.7798 ***	0.7937 ***	0.7926 ***	0.7948 ***	0.7957 ***	0.7977 ***
Level 3 Assets	+	**0.4767** **	**0.4756** **	**0.4943** **	**0.7704** ***	**0.7441** **	**0.7487** ***	**0.7500** ***	**0.7540** ***	**0.7594** ***
Other Liabilities	-	-0.7362 ***	-0.7315 ***	-0.6818 ***	-0.6806 ***	-0.6952 ***	-0.6947 ***	-0.6971 ***	-0.6994 ***	-0.7024 ***
Level 1 Liabilities	-	-2.5234	-2.5600	-2.3358	-1.8443	-2.2929	-2.0126	-2.0535	-2.0963	-2.1088
Level 2 Liabilities	-	-0.5942 **	-0.5922 **	-0.5687 **	-0.6008 **	-0.5696 **	-0.5881 **	-0.5886 **	-0.5880 **	-0.5882 **
Level 3 Liabilities	-	-1.3414 *	-1.3143 *	-1.1312 *	-1.0906	-1.0073	-0.8464	-0.8529	-0.8335	-0.8521
Income	+	2.6417 ***	2.5348 ***	1.3842 ***	1.3558 ***	0.1562	0.1325	0.1460	0.1497	0.1561
Quarter	?		-1.0599 ***	-0.8140 ***	-0.7919 ***	-0.7732 ***	-0.8563 ***	-0.7191 ***	-0.7218 ***	-0.7972 ***
Loss	-			-6.9500 ***	-6.9897 ***	-6.9486 ***	-7.0679 ***	-7.0397 ***	-7.0202 ***	-6.9434 ***
Securitization	+				1.8509 **	2.1051 **	2.7169 ***	2.6269 ***	2.5536 ***	2.4391 ***
Securitization * Level 3 Assets	-				**-0.3888** *	**-0.3463**	**-0.3235**	**-0.3296**	**-0.3283**	**-0.3291**
Securitization * Income	+					1.6208 ***	1.6754 ***	1.6557 ***	1.6506 ***	1.6443 ***
Securitization Level	-						**-0.2062** ***			
Securitization Level (Q1)	-							**-0.1891** **		
Securitization Level (Q2)	-								**-0.1895** **	
Securitization Level (Q3)	-									**-0.1612** **
Wald test: Level 1 Assets =1[b]		0.00	0.00	0.20	0.30	0.23	0.20	0.19	0.18	0.18
Wald test: Level 2 Assets =1[b]		0.80	0.84	1.89	1.95	1.71	1.69	1.67	1.67	1.66
Wald test: Level 3 Assets =1[b]		3.68 *	3.70 *	3.79 *	0.58	0.64	0.64	0.63	0.61	0.58
Wald test: Level 1 Assets = Level 3 Assets [b]		4.59 **	4.45 **	3.35 *	0.21	0.31	0.32	0.32	0.31	0.3
Wald test: Level 2 Assets = Level 3 Assets[b]		2.90 *	2.84 *	1.84	0.00	0.03	0.03	0.03	0.02	0.02
N		1592	1592	1592	1592	1592	1592	1592	1592	1592
Adjusted R Squared		0.478	0.484	0.524	0.528	0.533	0.538	0.537	0.536	0.535

Price: closing share price measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline. All variables are measured on a per share basis for $bank_j$ for the immediate quarter unless specified otherwise. *Other Liabilities:* liabilities that do not require fair value measurement. *Level 1 Liabilities*: liabilities that require fair value measurement using quoted prices in active markets for identical liabilities. *Level 2 Liabilities:* liabilities that require fair value measurement using inputs other than quoted prices observable for the liabilities either directly or indirectly. *Level 3 Liabilities*: liabilities that require fair value measurement using unobservable inputs. Other variables as previously defined. [a]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [b]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1 **p<.05 *** p<.01.

Table 33
The Effect of Mortgage Sales on the Pricing of Banks' *Level 3* Assets
Survivor Bias

		Model 1[a]	Model 2[a]	Model 3[a]	Model 4[a]	Model 5[a]	Model 6[a]	Model 7[a]	Model 8[a]	Model 9[a]
Intercept	?	4.0048 ***	6.1343 ***	7.9793 ***	6.1288 ***	6.1273 ***	6.0604 ***	5.7810 ***	5.8129 ***	6.0049 ***
Other Assets	+	0.6143 ***	0.6133 ***	0.5811 ***	0.6061 ***	0.6056 ***	0.6012 ***	0.6038 ***	0.6057 ***	0.6083 ***
Level 1 Assets	+	0.9139 ***	0.9090 ***	0.8589 ***	0.8656 ***	0.8651 ***	0.8657 ***	0.8688 ***	0.8702 ***	0.8716 ***
Level 2 Assets	+	0.7400 ***	0.7402 ***	0.6936 ***	0.7160 ***	0.7155 ***	0.7090 ***	0.7121 ***	0.7128 ***	0.7148 ***
Level 3 Assets	+	**0.3152**	**0.3220**	**0.3616**	**0.8132** ***	**0.8096** ***	**0.7912** ***	**0.7952** ***	**0.8030** ***	**0.8118** ***
Total Liabilities	-	-0.6230 ***	-0.6220 ***	-0.5862 ***	-0.6120 ***	-0.6114 ***	-0.6040 ***	-0.6075 ***	-0.6095 ***	-0.6126 ***
Income	+	3.7778 ***	3.6453 ***	2.0467 ***	2.0521 ***	2.1676 **	2.1157 **	2.1465 **	2.1510 **	2.1593 **
Quarter	?		-0.9478 ***	-0.7468 ***	-0.7602 ***	-0.7601 ***	-0.8648 ***	-0.7100 ***	-0.7120 ***	-0.7876 ***
Loss	-			-7.0697 ***	-7.0717 ***	-7.0637 ***	-7.1768 ***	-7.1492 ***	-7.1413 ***	-7.0760 ***
Securitization	+				2.2238 **	2.2217 **	2.8402 **	2.7246 **	2.6467 **	2.5364 **
Securitization * Level 3 Assets	-				**-0.5896** **	**-0.5861** **	**-0.5086** **	**-0.5260** **	**-0.5284** **	**-0.5390** **
Securitization * Income	+					-0.1261	-0.0881	-0.1073	-0.1159	-0.1135
Securitization Level	-						**-0.2133** **			
Securitization Level (Q1)	-							**-0.1920** **		
Securitization Level (Q2)	-								**-0.1912** **	
Securitization Level (Q3)	-									**-0.155** *
Wald test: Level 1 Assets =1[b]		0.24	0.27	0.69	0.64	0.65	0.62	0.6	0.59	0.59
Wald test: Level 2 Assets =1[b]		2.98 *	2.96 *	4.50 **	3.92 **	3.99 **	3.99 **	3.97 **	4 **	4.03 **
Wald test: Level 3 Assets =1[b]		6.16 **	6.01 **	5.76 **	0.48	0.48	0.56	0.54	0.51	0.47
Wald test: Level 1 Assets = Level 3 Assets [b]		5.95 **	5.65 **	4.31 **	0.04	0.05	0.09	0.08	0.07	0.06
Wald test: Level 2 Assets = Level 3 Assets[b]		3.16 *	3.04 *	2.03	0.16	0.14	0.11	0.11	0.13	0.15
N		1316	1316	1316	1316	1316	1316	1316	1316	1316
Adjusted R Squared		0.4872	0.4919	0.5277	0.5321	0.5318	0.5377	0.5357	0.5349	0.5337

Price: closing share price measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline. All variables are measured on a per share basis for $bank_i$ for the immediate quarter unless specified otherwise. *Other Liabilities:* liabilities that do not require fair value measurement. *Level 123 Liabilities*: liabilities that require fair value measurement using quoted prices in active markets for identical liabilities and liabilities that require fair value measurement using inputs other than quoted prices observable for the liabilities either directly or indirectly and liabilities that require fair value measurement by using unobservable inputs. Other variables as previously defined. [a]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [b]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1 **p<.05 *** p<.01.

Table 34
The Effect of Mortgage Sales on the Pricing of Banks' *Level 3* Assets
Focus on *Level 3* Assets

		Model 1[a]	Model 2[a]	Model 3[a]	Model 4[a]	Model 5[a]	Model 6[a]	Model 7[a]	Model 8[a]	Model 9[a]
Intercept	?	2.9593 *	6.3880 ***	8.3400 ***	5.0709 **	4.4990 **	4.3666 **	3.9860 *	3.9613 *	4.2476 *
Other Assets	+	0.6470 ***	0.6426 ***	0.6273 ***	0.6366 ***	0.6373 ***	0.6338 ***	0.6371 ***	0.6405 ***	0.6483 ***
Level 1 Assets	+	0.9238 ***	0.9151 ***	0.8393 ***	0.8182 ***	0.8239 ***	0.8257 ***	0.8315 ***	0.8296 ***	0.8361 ***
Level 2 Assets	+	0.7818 ***	0.7773 ***	0.7381 ***	0.7382 ***	0.7403 ***	0.7319 ***	0.7366 ***	0.7384 ***	0.7454 ***
Level 3 Assets	+	**0.3848**	**0.3788**	**0.4443** *	**0.9239** ***	**0.9257** ***	**0.9123** ***	**0.9171** ***	**0.9286** ***	**0.9432** ***
Total Liabilities	-	-0.6567 ***	-0.6520 ***	-0.6352 ***	-0.6421 ***	-0.6426 ***	-0.6346 ***	-0.6393 ***	-0.6428 ***	-0.6516 ***
Income	+	2.9238 ***	2.7852 ***	1.6882 ***	1.6389 ***	-0.0411	-0.0807	-0.0596	-0.0530	-0.0476
Quarter	?		-1.4444 ***	-1.0657 ***	-1.0234 ***	-1.0122 ***	-1.1426 ***	-0.9440 ***	-0.9329 ***	-1.0470 ***
Loss	-			-7.1637 ***	-7.0807 ***	-6.9242 ***	-6.9999 ***	-6.9730 ***	-6.9445 ***	-6.8403 ***
Securitization	+				3.7663 ***	4.1945 ***	4.9540 ***	4.8477 ***	4.7664 ***	4.6316 ***
Securitization * Level 3 Assets	-				**-0.6530** ***	**-0.6369** **	**-0.5930** **	**-0.5996** **	**-0.6009** **	**-0.6008** **
Securitization * Income	+					2.0745 ***	2.1434 ***	2.1113 ***	2.1049 ***	2.0996 ***
Securitization Level	-						**-0.2484** ***			
Securitization Level (Q1)	-							**-0.2263** ***		
Securitization Level (Q2)	-								**-0.2299** **	
Securitization Level (Q3)	-									**-0.206** **
Wald test: Level 1 Assets =1[b]		0.06	0.08	0.3	0.38	0.36	0.35	0.33	0.34	0.31
Wald test: Level 2 Assets =1[b]		0.87	0.91	1.39	1.42	1.38	1.45	1.41	1.4	1.35
Wald test: Level 3 Assets =1[b]		3.71 *	3.80 *	3.23 *	0.05	0.04	0.06	0.05	0.04	0.02
Wald test: Level 1 Assets = Level 3 Assets [b]		3.31 *	3.33 *	1.94	0.11	0.08	0.06	0.06	0.07	0.09
Wald test: Level 2 Assets = Level 3 Assets[b]		2.91 *	2.94 *	1.64	0.56	0.42	0.40	0.40	0.44	0.48
N		914	914	914	914	914	914	914	914	914
Adjusted R Squared		0.4987	0.5094	0.5472	0.5565	0.5633	0.5729	0.5699	0.5689	0.5675

Price: closing share price measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline. All variables are measured on a per share basis for bank$_j$ for the immediate quarter unless specified otherwise. Securitization *Tally (Q2):* cumulative level of closed-end 1-4 family mortgage loans sold in the current financial quarter and the previous financial quarter. Securitization *Tally (Q3):* level of closed-end 1-4 family mortgages sold in the current financial quarter and the two previous financial quarters. Securitization *Level (Q4):* level of closed-end 1-4 family mortgages sold in the current financial quarter and the three previous financial quarters. [a]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [b]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1 **p<.05 *** p<.01.

Table 35
The Effect of Mortgage Sales on the Pricing of Banks' *Level 3* Assets
Focus on *Level 3* Assets and Survivor Bias

		Model 1[(a)]	Model 2[(a)]	Model 3[(a)]	Model 4[(a)]	Model 5[(a)]	Model 6[(a)]	Model 7[(a)]	Model 8[(a)]	Model 9[(a)]	Model 10[(a)]
Intercept	?	3.6978 **	6.3933 ***	8.0468 ***	4.9434 **	4.9761 **	4.9641 **	4.6054 **	4.5799 **	4.8137 **	4.6574 **
Other Assets	+	0.5033 ***	0.5000 ***	0.4799 ***	0.5141 ***	0.5138 ***	0.5018 ***	0.5078 ***	0.5104 ***	0.5156 ***	0.4722 ***
Level 1 Assets	+	0.6945 ***	0.6883 ***	0.6398 ***	0.6262 ***	0.6255 ***	0.6241 ***	0.6305 ***	0.6288 ***	0.6311 ***	0.6247 ***
Level 2 Assets	+	0.5968 ***	0.5947 ***	0.5648 ***	0.5880 ***	0.5873 ***	0.5722 ***	0.5796 ***	0.5809 ***	0.5852 ***	0.5944 ***
Level 3 Assets	+	**0.2428**	**0.2420**	**0.2875**	**0.8934** ***	**0.8805** ***	**0.8560** ***	**0.8628** ***	**0.8719** ***	**0.8838** ***	**0.2981**
Total Liabilities	-	-0.4926 ***	-0.4890 ***	-0.4675 ***	-0.5007 ***	-0.5005 ***	-0.4841 ***	-0.4919 ***	-0.4946 ***	-0.5003 ***	-0.4555 ***
Income	+	4.8077 ***	4.6278 ***	3.0819 ***	3.1392 ***	3.7105 *	3.3983 *	3.5479 *	3.5979 *	3.6506 *	2.9699 *
Quarter	?		-1.1695 ***	-0.9806 ***	-0.9700 ***	-0.9678 ***	-1.1130 ***	-0.9150 ***	-0.9015 ***	-0.9961 ***	-1.0968 ***
Loss	-			-5.9551 ***	-5.7945 ***	-5.7440 ***	-5.8781 ***	-5.8239 ***	-5.7927 ***	-5.7113 ***	-5.9198 ***
Securitization	+				3.3045 **	3.2844 **	3.9517 ***	3.8052 ***	3.7203 ***	3.6057 ***	4.5220 ***
Securitization * Level 3 Assets	-				**-0.7773** ***	**-0.7613** ***	**-0.6873** **	**-0.7045** **	**-0.7062** **	**-0.7144** ***	
Securitization * Income	+					-0.5742	-0.3204	-0.4434	-0.4827	-0.5121	0.1034
Securitization Level	-						**-0.2235** **				-0.2306 ***
Securitization Level (Q1)	-							**-0.1880** **			
Securitization Level (Q2)	-								**-0.1890** *		
Securitization Level (Q3)	-									**-0.16** *	
Securitization * Level 2 Assets											**-0.0492**
Wald test: Level 1 Assets =1[(b)]		1.41	1.47	2.08	2.26	2.28	2.31	2.24	2.26	2.24	2.3
Wald test: Level 2 Assets =1[(b)]		5.80 **	5.87 **	7.44 ***	6.54 **	6.64 **	6.71 **	6.62 **	6.67 **	6.73 **	4.96 **
Wald test: Level 3 Assets =1[(b)]		5.66 **	5.69 **	5.11 **	0.09	0.13	0.17	0.16	0.14	0.12	5.3 **
Wald test: Level 1 Assets = Level 3 Assets [(b)]		2.04	2.01	1.26	0.52	0.52	0.42	0.42	0.47	0.51	1.18
Wald test: Level 2 Assets = Level 3 Assets[(b)]		1.85	1.84	1.12	1.04	1.07	0.95	0.96	1.03	1.1	1.38
N		766	766	766	766	766	766	766	766	766	766
Adjusted R Squared		0.5329	0.5396	0.5617	0.5691	0.5686	0.5766	0.5732	0.5721	0.5709	0.5729

Price: closing share price measured on the trading day following the Federal Reserve Bank's 40 calendar day (after quarter end) deadline. All variables are measured on a per share basis for bank$_j$ for the immediate quarter unless specified otherwise. All variables as specified previously. [(a)]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [(b)]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1; **p<.05; *** p<.01.

Table 36
The Effect of Mortgage Sales on the Pricing of Banks' *Level 3* Assets
(Quarter effects 1)

Dependent Variable = *Share Price*

	Model 1[a]				Model 2[a]			
Independent Variables	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept	9.324	1.395	6.680	0.000 ***	7.287	1.521	4.790	0.000 ***
Other Assets	0.688	0.150	4.580	0.000 ***	0.705	0.151	4.660	0.000 ***
Level 1 Assets	0.940	0.183	5.140	0.000 ***	0.945	0.182	5.210	0.000 ***
Level 2 Assets	0.815	0.159	5.130	0.000 ***	0.830	0.159	5.210	0.000 ***
Level 3 Assets	0.456	0.239	1.900	0.029 **	0.779	0.298	2.620	0.005 ***
Total Liabilities	-0.706	0.167	-4.210	0.000 ***	-0.722	0.168	-4.290	0.000 ***
Income	1.479	0.262	5.650	0.000 ***	0.154	0.323	0.480	0.317
Quarter	-0.914	0.120	-7.590	0.000 ***	-0.852	0.120	-7.080	0.000 ***
Loss	-6.137	0.745	-8.240	0.000 ***	-6.283	0.755	-8.320	0.000 ***
Securitization					2.626	1.037	2.530	0.006 ***
Securitization * Level 3 Assets					-0.388	0.294	-1.320	0.095 *
Securitization * Income					1.721	0.463	3.710	0.000 ***
Securitization Level					-0.161	0.083	-1.930	0.028 **
n	1667				1667			
Adjusted R Squared	0.541				0.554			

Coefficient Tests	**F-stat**	**p-value**	**F-stat**	**p-value**
Wald test: FVA1 =1[b]	0.110	0.742	0.090	0.764
Wald test: FVA2 =1[b]	1.360	0.245	1.140	0.286
Wald test: FVA3 =1[b]	5.170	0.024 **	0.550	0.460
Wald test: FVA1 = FVA3[b]	5.420	0.021 **	0.370	0.542
Wald test: FVA2 = FVA3[b]	3.390	0.067 *	0.040	0.844

All variables are measured on a per share basis for the immediate quarter unless specified otherwise. Quarter takes the value of 1 for 1st quarter of the financial year, 2 for 2nd quarter of the financial year, 3 for 3rd quarter of financial year and 4 for 4th quarter of financial year. All variables as specified previously. [a]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [b]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1; **p<.05; *** p<.01

Table 37
The Effect of Mortgage Sales on the Pricing of Banks' *Level 3* Assets
(Quarter effects 2)

Dependent Variable = *Share Price*

	Model 1[a]				Model 2[a]			
Independent Variables	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**	**Coeff.**	**Robust Std. Err**	**t-stat Coeff. = 0**	**p-value**
Intercept	7.748	1.380	5.614	0.000 ***	5.888	1.509	3.900	0.000 ***
Other Assets	0.658	0.147	4.476	0.000 ***	0.677	0.149	4.560	0.000 ***
Level 1 Assets	0.911	0.181	5.028	0.000 ***	0.918	0.181	5.080	0.000 ***
Level 2 Assets	0.775	0.155	4.993	0.000 ***	0.791	0.156	5.070	0.000 ***
Level 3 Assets	0.468	0.234	1.999	0.023 ***	0.801	0.291	2.750	0.003 ***
Total Liabilities	-0.672	0.164	-4.094	0.000 ***	-0.690	0.165	-4.170	0.000 ***
Income	1.448	0.263	5.507	0.000 ***	0.193	0.336	0.570	0.283 *
Quarter	-0.812	0.144	-5.642	0.000 ***	-0.859	0.153	-5.620	0.000 *
Loss	-6.888	0.712	-9.671	0.000 ***	-7.005	0.716	-9.790	0.000 ***
Securitization					2.918	1.034	2.820	0.003 ***
Securitization * Level 3 Assets					-0.394	0.291	-1.350	0.089 *
Securitization * Income					1.627	0.473	3.440	0.001 ***
Securitization Level					-0.223	0.085	-2.640	0.005 ***
n	1667				1667			
Adjusted R Squared	0.525				0.544			

Coefficient Tests	**F-stat**	**p-value**	**F-stat**	**p-value**
Wald test: FVA1 =1[b]	0.240	0.625	0.210	0.650
Wald test: FVA2 =1[b]	2.100	0.149	1.790	0.182
Wald test: FVA3 =1[b]	5.160	0.024 **	0.470	0.496
Wald test: FVA1 = FVA3[b]	4.620	0.033 **	0.190	0.665
Wald test: FVA2 = FVA3[b]	2.560	0.111	0.000	0.968

All variables are measured on a per share basis for the immediate quarter unless specified otherwise. Qtr takes the value of 1 if 1st quarter of 2008, 2 if 2nd quarter 2008, ... 7 if 3rd quarter of 2009. All other variables as specified previously. [a]Standard errors adjusted for cluster effects arising from the same bank observations in separate quarters. [b]Wald test indicates whether the tested hypothesis can be rejected. Bolded values indicate primary variables of interest. * p<.1; **p<.05; *** p<.01.