MEETING ANALYSTS' FORECASTS THROUGH SECURITIZATION, AND VALUE RELEVANCE OF SECURITIZATION: A GLOBAL PERSPECTIVE

by

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ABSTRACT

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Based on a sample of 71 companies that follow U.S. GAAP and 41 companies that follow IFRS for the period between 2005 and 2010, I examine: a) the impact of different approaches in accounting standards, FASB Statement 140 (control-based) and IAS 39 (risk-based approach), on earnings management (measured by meeting/beating analysts' forecast) using fair-value accounting in securitization transactions; b) the association between securitization gain and change in the value-relevance of an accounting performance measure, return on equity (ROE); c) the association between securitization gain and earnings management after controlling for the components of a firm's competitive advantage; d) the joint effect of IFRS and the level of investor protection on earnings management using securitization transactions.

I use multivariate linear regression and nonlinear Logit models with panel and cross-sectional data. My contributions to the literature are: a) I shed light on the controversy about fair-value accounting in relation to securitization; b) in relation to FASB Statement 140 (FASB ASC 860) and IAS 39, I provide evidence to support the idea of convergence of accounting standards; c) I show that IFRS is effective under any level of investor protection. To the best of my knowledge, these issues are not addressed in prior studies.

For companies following U.S. GAAP, I show evidence of earnings management for the period 2005-2006 (before the financial crisis of 2007). However, my results show

that the discount rate is not used for manipulating fair value of retained interest (partial interest in secured assets), and there is no positive relationship between securitization gain and competitive advantage for any time period. Also there is no indication of earnings management for the 2008-2010 periods.

I find that the IFRS regulations associated with securitization are intense and reduce the extent of earnings management under any level of investor protection. Furthermore, my findings show that in the first two periods, 2005-2006 and 2008-2009, companies that operate under strong anti-director laws experience higher securitization gain. It appears that the securitization market is more efficient in countries where investors are granted more power to exercise their rights. Lastly, the results do not show any change in the value-relevance of return on equity.

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CHAPTER I

INTRODUCTION

I. OVERVIEW

Securitization is a method of financing, but manipulation in securitization transactions has the potential to affect many stakeholders. In the United States alone, $2 trillion of the debt issued in 2006 were securitized assets (Securitization Market Activity.png 2010). During 2005 Hong Kong's securitization activities increased by 84 percent compare to the previous year (Banking Policy Departmen 2005). Furthermore, the Chinese firms' use of securitization is also an indication of the popularity of securitization activities. The fast expansion of financing through securitization shows the importance of securitization transactions in the world, including in the United States.

Securitization is a popular financing tool that involves several parties. Through securitization of financial assets, the seller can create cash and transfer the risk of holding receivables to another party (Dechow et al. 2010). The buyer of receivables finances the purchase by issuing securities, backed by expected future cash flows of securitized assets, to a third party. Depending on how management constructs the transaction, securitization can be accounted for as a sales transaction or it can be recorded as a secured borrowing, which results in an increase in the company's leverage. Managers have incentives to construct the securitization transaction to meet the sale criteria, which does not increase the leverage, but does create immediate access to cash, improves efficiency ratios, and increases profits (Dechow and Shakespeare 2009). Accounting standards that govern securitization transactions, including fair-value accounting, are complex and

controversial. Skeel (2011) posits that only a small group of Americans was really familiar with the securitization process until they witnessed their tax money being used to save large failing banks and financial institutions[1]. Furthermore, a study by Niu and Richardson (2006) shows that investors believe that the value-relevance of earnings is higher when securitization gain is not included in earnings.

Critics have argued that the flexibility and vagueness of the existing fair-value accounting standards contributed to the recent financial crisis (Wallison 2008a & 2008b; Whalen 2008; Forbes 2009). Prior studies argue that accounting standards for securitization under International Financial Reporting Standards (IFRS) are more rigid compared to the United States Generally Accepted Accounting Principles (U.S. GAAP) (Adhikari and Betancourt 2008). Using a sample of 96 U.S. firms, Dechow et al. (2010) show that managers use fair-value accounting to manage earnings through securitization.

Using a different time period than that of Dechow et al. (2010) and including companies that follow IFRS, I investigate whether easier criteria for securitization under U.S. GAAP allow managers to use fair-value accounting to meet/beat analysts' forecasts, and whether I can find similar results for companies complying with IFRS for securitization. My study differs from that of Dechow et al. (2010) in three main aspects. First, they selected a sample from the period between 2000 and 2005, which is before the financial crisis of 2007, while I selected a time, 2005-2010, that covers periods both before and after the financial crisis. Second, my study includes the effect of the new

[1] At this point, the public had lost faith in the regulatory system. In order to assure Americans, the Dodd-Frank Act, the Wall Street Reform and Consumer Protection Act, was signed into law in 2010. This new law is intended to closely regulate companies.

standard set after 2005 for fair-value accounting[2]. Third, I investigate the role of securitization in earnings management, measured by meeting/beating analysts' forecasts, under U.S. GAAP and IFRS.

For securitization transactions, U.S. companies before 2010 followed completely different rules under SFAS 140 (ASC 860)[3] than companies that complied with IFRS for securitization under IAS 39. My study is important because there are continuous efforts from European and U.S. standard-setters to converge national accounting standards with a set of globally-accepted high-quality accounting standards. It is important to see how SFAS 166 has narrowed the gap in accounting standards between U.S. GAAP and IFRS.

In this dissertation, I have three objectives, which are the topics of my three-paper dissertation. The first objective deals with the opportunistic behavior of managers when

[2] In order to reduce the differences between accounting standards set by FASB and ISBA in regard to financial assets and securitizations activities, FASB, in June of 2009, published statement no. 166, Accounting for Transfers of Financial Assets, which was a revision to Statement no. 140, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities. This new standard requires more disclosures on transfer of financial assets, specifically when firms retain partial interest in the transferred assets, which consequently exposes the firm to risk. The new regulation has also set new criteria for derecognizing financial assets. Under this statement, "qualifying special-purpose entity" is eliminated. The Financial statements prepared from the beginning of 2010 should reflect the impact of the new standard. The new standard influences my papers as well; therefore, I expand my data from 2005 to 2010 to show the impact of differences in accounting standards and the impact of the new standard.

[3] SFAS 140, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities, is now FASB ASC 860. FASB's Accounting Standards Codification is an online storage of current U.S. GAAP organized based on topics and into two levels of guidance (authoritative and non-authoritative). FASB ASC 860 is about transfer and servicing of asset.

using fair-value accounting in securitization transactions. There are several reasons for managers to manipulate earnings upward or downward. Their actions could be totally protective of the company or out of concern for their own interests. Managers are concerned with the company's reputation, credit rating, stock value, and investors' reactions, as well as their own bonuses and compensation. Managers use different approaches to achieve earnings targets.

In the first paper, I investigate whether managers take advantage of the easier criteria of SFAS 140 (risk based) compared to IAS 39 (control based) for securitization, and use fair-value accounting to manage earnings. Considering the changes in accounting standards and the possibility of convergence, the question is "Would accounting under IFRS change the opportunistic behaviors of managers?"

Managers also can time the securitization transactions to show higher income at the end of the period, or they can use a "cherry-picking" approach, which means selling assets with higher price appreciation to show higher gains. Securitization gain may also result from a company's competitive advantage and not earnings management. Therefore, the second objective that I am addressing relates to a prior study by Barth and Taylor (2010) that suggests that managers do not need to manage earnings when their companies have a unique ability to generate more financial assets (i.e., loans) and earn positive income by selling them. Thus, my second paper investigates whether the source of securitization gain is a) earnings management or b) competitive advantage.

Countries that permit/require their firms to adopt IFRS are governed by different legal systems, which are also enforced with various degrees of rigor. Prior studies show

that accounting standards are more effective in countries with stronger investor-protection laws (e.g., Hung 2001; Leuz et al. 2003). Furthermore, prior studies show that investors value earnings more when the earnings exclude securitization gain (e.g., Niu and Richardson 2004). Therefore, my last objectives are to examine the impact of securitization gain on the value-relevance of an accounting measure for companies that follow U.S. GAAP, as well as to examine the dual effect of IFRS and investor protection on earnings management for companies that have adopted IFRS and operate under different legal systems.

My dissertation provides several contributions. First, my dissertation sheds light on the controversy about fair-value accounting in relation to securitization. Second, in relation to SFAS 140 and IAS 39, I provide evidence to support the idea of convergence of accounting standards with the IFRS. Also, by expanding the observations to the end of 2010, this dissertation provides evidence on the improvement of financial reporting with regard to securitization as a result of the new SFAS 166 (an amendment to SFAS 140, FASB ASC 860). Third, I offer an explanation as to whether securitization gain is merely the result of a manager's discretion or a result of the company's competitive advantage. Fourth, the findings show whether IFRS, which claims to consist of high-quality accounting standards, is more effective in an environment with more investor protection. Finally, in the last part of the dissertation, I investigate the impact of securitization gain on the value-relevance of return on equity. To the best of my knowledge, these issues have not been investigated or addressed in prior studies.

In this dissertation, I attempt to examine the following research questions:

Research Questions for Paper 1:

What is the impact of different approaches of specific accounting standards, IAS 39 (risk-based approach) and SFAS 140 (control-based approach), on meeting analysts' forecasts using fair-value accounting in securitization transactions? Does the new statement, SFAS 166, improve securitization accounting?

Research Question for Paper 2:

Is there any association between securitization gain and meeting analysts' forecasts after controlling for the components of the firm's competitive advantage?

Research Questions for Paper 3:

a) Does securitization gain decrease the value-relevance of return on equity as a proxy for the accounting performance measure?

b) What is the joint effect of IFRS and investor protection on meeting analysts' forecasts using securitization transactions (risk-based approach)?

The remainder of this dissertation continues with a background on securitization, fair-value accounting, and each paper's executive summaries, followed by the three papers.

II. BACKGROUND

In the following, I provide information about key topics that are closely related to the research questions raised and discussed in this dissertation.

Fair-Value Accounting

In economies in which the capital market is a source of financing, the measurement of financial instruments is critical to decision-makers (Deaconu et al.

2009).Therefore, accounting regulators, the FASB and the Securities and Exchange Commission (SEC), have established standards to improve the quality of financial reporting; however, we still face many challenges. The SEC is strongly-focused on determining factors and issues related to valuation methods. Beside the standard-setters, consulting and auditing companies are also concerned with the measurement issues in the valuation of financial instruments, and they have conducted many studies to investigate these issues (e.g., Deaconu et al. 2009).

It is true that at the time of issuance or purchase of assets and liabilities, the historical cost and market/fair value are generally the same, but over time, historical accounting fails to recognize the changes in the value of assets and liabilities. Consequently, a company's financial figures do not reflect the true performance (Wallace 2006). In addition, historical cost-accounting has been criticized for not offering relevant and up-to-date information to investors and other users of financial reports. Consequently, the FASB has made a radical change and recommended the use of fair-value accounting, and required firm provision of additional disclosures of important information such as interim disclosure of financial instruments' fair value, techniques used for fair-value estimation, and inputs to recurring and non-recurring fair-value measurements (Grant Thornton 2010).

The FASB and the IASB have recently been promoting the adoption of fair-value accounting since both organizations believe that fair-value accounting produces relevant financial information (Barlev and Haddad 2003; Landsman 2006; Fiechter _2010). However, there is a divided opinion about this accounting treatment, and many blame the

recent financial crisis on fair-value accounting (Laux and Leuz 2009, 2010). Prior studies argue that the flexibility offered by fair-value accounting creates opportunities for management to manipulate earnings (Dechow et al. 2010).

SFAS 157, Fair-Value Accounting Measurements

Under historical cost accounting, assets are recognized at their market value at the time of purchase, and any appreciation in their value is unrecognized until assets are removed from the owners' books. However, a decrease in the value of assets is recognized immediately. Even though historical cost-accounting provides reliable information because the purchase price of an asset is known and clear, the data based on historical cost-accounting lacks relevancy because an asset's market value is often not the same as its purchased value, and users of financial statements need up-to-date information to make decisions. On the other hand, under fair-value accounting, any increase or decrease in the value of assets will affect financial statements. The difficulty with recording assets at their fair value is that some assets are not traded in the market regularly, and the determination of their market/fair value is based on management estimations which are subject to their opportunistic decisions.

To reduce the problem with fair-value estimation, FASB issued SFAS 157 (now FASB ASC topic 820)[4], a guideline that uses different levels of input to assess the value of assets and liabilities. The first levels of input are prices of identical assets from transactions by dealers in active markets. However, when identical assets are not

[4] SFAS 157 was codified into FASB Accounting Standard Codification Topic 820, Fair Value Measurements and Disclosures, in 2009.

available, models which use the second-level inputs, prices of similar assets and other related data, should be employed to value assets and liabilities. In cases where identical or similar assets are not available, level-three inputs, unobservable inputs (models), are used in assessing the value of assets and liabilities.

Starting with level-two inputs and increasing with level three, the ambiguity of estimation creates opportunities for discretion and manipulation by management. Deaconu et al. (2009) argue that currently SFAS 157 is the only professional guidance in the United States with clear direction for fair-value determination for financial-reporting purposes. Nevertheless, even though SFAS 157 offers helpful guidance for fair-value measurement, when the market value of the retained portion of a securitized asset is not available, managers are able to take advantage of the flexibility of fair-value estimation to manipulate gain from securitization (Bartov 1993; Karaoglu 2005; Dechow et al. 2010).

Securitization

Since the early 1970s, firms have been securitizing their financial assets, such as receivables, often to a special-purpose entity, which in turn issues securities backed by the expected cash flows from the securitized assets. This practice has become very popular all over the world. In the United States alone, close to four trillion dollars of issued debts were mortgaged or asset-backed securitized bonds during 2003[5]. During the same period in the European countries, securitized debts reached more than 217 billion Euros (Adhikari and Betancourt 2008).

[5] Bond Market Association, 2004.

Figure 1 shows the structure of a simple securitization, in which a company transfers pools of assets, such as trade receivables, to a Special-Purpose Entity (SPE), which issues securities backed by the expected cash flows from the transferred assets and pays cash from the sale of securities to transferring firms (Adhikari and Betancourt 2008). A servicing company, usually the transferring company, collects the cash flows.

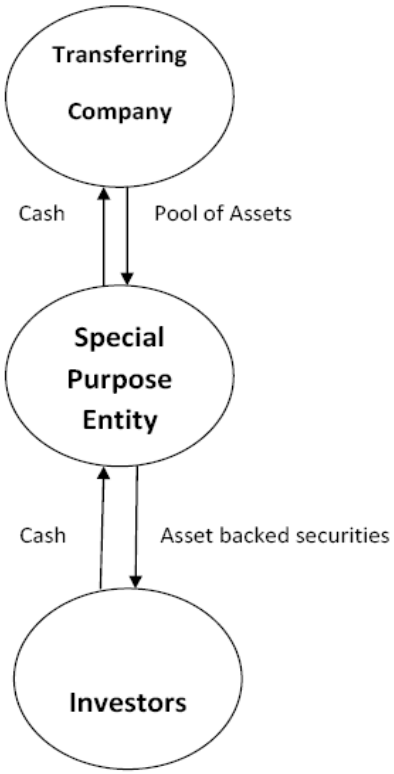

Figure 1. Securitization

There are many problems related to the accounting for securitization transactions that both the FASB and the IASB have been trying to solve. U.S. companies have been following SFAS 140 (FASB ASC 860) since 2000, and most international companies are following IAS 39, issued by the International Accounting Standard Board (IASB) in

2003. SFAS 140 is based on the financial-component approach that focuses on transfer of control, while IAS 39 emphasizes the transfer of risk. The main issue under both standards is whether the transaction qualifies as a sale of assets or as a secured borrowing. Under SFAS 140, it is not hard for managers to construct the securitization as a sales transaction even when the company maintains partial interest in the asset. Securitization can generate a gain through different approaches, including:

1- Real earnings management: Firms securitize assets to increase earnings when managers expect low or volatile earnings.

2- Cherry-picking: Based on historical cost-accounting, assets are reported at their costs when purchased, and the difference between their cost and fair value is recognized as a gain/loss when assets are sold. Therefore, for the purpose of securitization, managers can pick and sell those assets which appreciated most.

3- Accounting policies and rules: In situations in which the transferor retains interest in the securitized assets, fair-value accounting is used to estimate the value of retained interest when its market value is not available. The estimation of asset value is subject to the manager's discretion[6].

4- Timing of transaction: Managers can also time the securitization transaction to have higher earnings at the end of the reporting period.

Table 1-1 is a summary of securitization-related issues and benefits. As an example, securitization can increase profit and improve the efficiency ratios.

[6] In 2009 FASB published Statement no. 166, a revision to FASB 140. The new standard has increased the conditions for sales accounting.

Table 1-1: Summary of Securitization and Related Issues.

Securitization	What can be securitized	Benefits	Who securitized
Securitization is a process by which 1-intangible and liquid assets are monetized into cash 2-risk related to the specific assets are separated from the transferor's (i.e., the originator) own credit and operating risk, and 3-securities are issued to investors which are designed for the specific risk tolerance profile of such investors.	-Residential mortgage loans -Home equity mortgage loans -Commercial real estate mortgage loans -Automobile loans -Automobile leases -Boat loans -Credit card receivables -Student loans -Equipment loans -Time share loans -Manufactured housing loans -Legal fees -Aircraft leases -Franchisee loans Trade receivables -Insurance receivables -Leveraged buyout loans -Healthcare receivable -High yield securities -Repackaged securities -Tax liens -Non-performing loans -Industrial loans -Future flow receivables -Royalty receivable -Motorcycle loans -Mutual fund fees	1-the securitization markets are very active and well developed, 2- issuers of asset backed securities can access both the public and private markets quickly, 3-many domestic and foreign investors purchase asset backed securities, so the sponsors of securitization can secure an alternative base of investors from their investor based for equity of debt offerings, 4-the asset backed securities are structured with certain credit enhancements and the credit rating of such securities can be higher than the rating of originator or sponsor of the securitization, 5-intnagible and illiquid asset can be monetized into cash, and 6-from an accounting standpoint, so long as the securitization complies fully with the accounting rules for sale accounting treatment, an originator can achieve "off-Balance Sheet Treatment", which means that the liabilities of the Issuing SPE resulting from the issuance of the asset backed securities are not consolidated with or recognized by the originator on its balance sheet, but the cash proceeds realized from the sale of the assets are recognized by the originator on its balance sheet, thus enhancing the originator's debt-to-equity ratio.	Some companies use securitization when bank financing or corporate debt and equity markets are not feasible because either 1-the companies have too much debt or are financially distressed, 2-the companies' stock price is low, 3-the capital markets are not receptive to the companies' offering of new debt or equity, or 4- the companies are restricted from issuing additional debt by their credit arrangements.

This table is a summary of paper by Kerman Senterfitt (2006).

International Financial Reporting Standards (IFRS)

Before the adoption of IFRS, European countries followed their own domestic accounting standards. In an attempt to make financial information more comparable across countries, standard-setters developed IFRS, a common set of standards claimed to produce comparable and informative financial reports and reduce the information asymmetry between companies and their investors. Therefore, investors' costs of collecting, processing, and comparing information are expected to decline.

Armstrong et al. (2010) find positive reaction to European countries' adoption of IFRS and interpret this result as an indication that investors perceive IFRS adoption as having greater benefits than costs in the adoption and implementation of new standards. Nonetheless, Armstrong et al. (2010) in further tests find that investors in countries in which the enforcement of accounting standards is not strong are concerned about the implementation of IFRS.

The European Union (EU) has been focusing on the integration of capital markets across countries and, hence, from the beginning of 2005, all companies listed on the European Union stock exchange are required to prepare their annual financial statements using IFRS.

Even though the IASB issues IFRS, the European Commission (EC), which is a private-sector standard setter, needs to approve the standards proposed by the IASB before companies in EU countries are required to apply them. Furthermore, the EC accepts a standard only when it meets three main criteria:

1- Standards cannot be contrary to the European Union principle.

2- Using standards should produce understandable, reliable, relevant, and comparable reports.

3- Standards should be beneficial to all stakeholders in Europe.

New technology, advanced communication devices, Internet, and speedy transportation have expanded the market for business and have reduced the barriers of transactions and contracts across countries. The international market creates opportunities. At the same time, it means that firms have to deal with different cultures and business environments. To mitigate the problems associated with international business, countries around the world have been trying to harmonize the accounting standards, and the International Accounting Standard Board (IASB) is the organization that is responsible for setting standards to achieve the harmonization.

Before 2005, about 100 countries either required or allowed their listed companies to apply IFRS, the standards set by IASB (Brackney and Witmer 2005); however, the current number of companies has increased to 117 (Chadha 2010). The United States is a longtime supporter of the accounting harmonization and has entered into an agreement for convergence of U.S. GAAP and IFRS (Norwalk Agreement 2002). Even the Sarbanes-Oxley Act of 2002 requires the FASB to focus on international convergence and high-quality standards. Nevertheless, early in 2010, the SEC announced (following SEC Roadmap 2008) that firms cannot start applying IFRS before 2015 (Johnson and Leone 2010). It seems that the SEC's decision is not exactly what companies want since, according to a survey conducted by KPMG, about 49% of

American CEOs would like to have the option of IFRS adoption before 2015 (Chadha 2010).

Comparing SFAS 140 (ASC 860) with IAS 39

The two standards differ in their accounting rules for securitization. SFAS 140, which is based on a financial-component approach and focuses on transfer of control, allows for sales accounting if control is either complete or partial. Under IAS 39, which focuses on the transfer of risk, firms use various measurement methods based on managers' intention toward financial assets. Under SFAS No. 140, transfer of financial assets is a sale when:

1- The transferred assets have been isolated from the transferor,

2- The transferee has the right to pledge or exchange the assets, and

3- The transferor does not maintain effective control over the assets (ASC 860).

The first condition assures that in the case of financial problems, the transferor's creditors have no access to the securitized assets. If these three conditions hold, then the transaction qualifies as a sale, the revenue is recognized and the asset is removed from the transferor's books, and the carrying value of the transferred asset is allocated among the new financial components based on fair values. If any of the above conditions are not met, then the transaction is considered to be a secured borrowing, in which case the level of the transferor's leverage will increase.

Accounting for securitization under IAS 39 differs significantly from accounting under SFAS 140. Following IAS 39, we first determine the portion of a financial asset that is being evaluated for the purpose of de-recognition. Normally, the transferor needs

to apply the de-recognition test for the entire asset even if the transferor is transferring only a portion of the financial asset. In special cases, however, such as when the transferred portion includes one of the: a) explicitly identified cash flows, b) fully proportionate share of explicitly identified cash flows, or c) fully proportionate share of cash flows, the de-recognition test is not applied.

The next steps are the de-recognition steps, starting with checking whether the asset's cash flow has expired. An asset is de-recognized when its cash flow has expired; otherwise, we need to establish whether a transfer has happened or not. A transfer takes place when the contractual right to the cash flow of a financial asset is transferred, or the contractual right to the cash flow is retained and the cash flow is transferred to a third party given the following three specific conditions:

1- The transferor must pass all the collected cash flows without any delay; however, the transferor can invest the cash flows in cash or cash equivalents.
2- The transferor can sell securities only to pay the third party,
3- The transferor is obligated to transfer only the cash flows collected.

If the above conditions are not met, then the asset cannot be de-recognized. When the above conditions are met, the next step is to check the transfer of the risks and rewards. An asset is de-recognized when substantially all the risks and rewards are transferred[7].

[7] Note: In order to decide whether risks and rewards have been transferred, we need to compare the entity's exposure to variability in the amount and timing of the transferred asset's net cash flows before and after transfer. When this variability in relation to changes in the transferred asset's future net cash flows is not significant, then substantially all the risks and rewards have been transferred. Conversely, when after the transfer of asset, a firm's exposure to variability

Adhikari and Betancourt (2008) argue that in most securitizations, neither of the two situations (retaining or transferring substantially all the risks and rewards) happens, and as a result, in most securitizations under IAS 39, we need to examine the control over the asset to determine the de-recognition. In transactions where the transferee is able to sell the transferred asset to a third party, control is transferred (not retained) and the asset is de-recognized. However, since in securitization transactions, an entity sells the assets to a special-purpose entity (SPE) which is not permitted to sell transferred assets, in most securitizations, control is retained by the transferor, and we should look at the form of control retained by the transferor.

The criteria for meeting the sales transaction under SFAS Statement 140 are easier than those under IAS 39, allowing managers to structure the securitization as sales transactions even when they retain partial interest in the securitized assets. Consequently, managers can use subjective assumptions to manipulate earnings through fair-value valuation of the retained interest.

The challenging issue relating to securitization for followers of both the U.S. GAAP and the IFRS is the accounting for securitization transaction. Deciding on whether the transaction is a sale of an asset or is a secured borrowing creates problems. Secured borrowing increases the liabilities, while the sale of an asset requires the removal of the asset from the balance sheet and recognition of gain/loss (the difference between proceeds received and book value of the asset). Therefore, the criteria employed in

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does not change, then substantially all the risks and rewards have been retained (Adhikari and Betancourt 2008) and the asset is not de-recognized.

deciding whether the transaction is a sale or secured borrowing will result in different financial numbers. Under SFAS 140, a financial-components control approach is used, while under IAS 39, a risk and reward and financial-components approach is used. The definitions and detailed comparisons of these two approaches are explained in Table 1-2.

Table 1-2
Comparisons of Provisions of SFAS 140 and IAS 39

Issue	SFAS 140	IAS 39
De-recognition	Financial Components Control Model Control is surrendered if three tests are met: 1. Assets must be isolated from the transferor and the transferor's creditors 2.Ttransferee can freely pledge or exchange Transferred assets 3. Transferor does not effectively maintain control through a repurchase agreement If these three conditions are met, the transferor records a "sale" using the financial components approach. If the three conditions are not met, the transaction is accounted for as a secured borrowing	Risk and Rewards and Financial Components Control Model. Also adds concept of "continuing enrolment" Multiple steps required to evaluate de-recognition: Pre de-recognition step: 1. Determine if all or part of asset must be evaluated De-recognition steps: 1. Evaluate if rights to cash flows expired 2. Determine if transfer has taken place 3. Apply risk and reward approach 4. Apply control approach 5. Apply continuing involvement Essentially, starting with de-recognition step 1, at each step, an entity evaluates whether d-recognition and/or recognition is appropriate. If no conclusion is reached, the entity moves on to the next step.

This table is adopted from Adhikari and Betancourt (2008).

III. EXECUTIVE SUMMARIES

In the first paper, CHAPTER II, I investigate U.S. companies that are engaged in securitization transactions and test the possibility of earnings management using securitization. I find evidence of earnings management using securitization for the period 2005-2006 (before the financial crisis) for companies following U.S. GAAP. My results do not support the discount-rate hypothesis. That is, the discount rate, as well as fair value, is not the main source of earnings management. One possible explanation for the observed positive association between meeting/beating analysts' forecasts and securitization gain during 2005-2006 is that under SFAS No. 140, the conditions for sales-accounting securitization were easily met, and managers were able to manage earnings. I did not find the same results for 2008-2009 because during this period, companies were under more scrutiny as they faced financial difficulties. Under this condition, the opportunity for securitization was low, and managers became more conservative (a claim that has not yet been empirically tested).

In the second paper, CHAPTER III, I study U.S. companies that have reported a securitization gain during 2005-2006 (before the financial crisis), 2008-2009 (after the crisis), and 2010 (when financial statements reflect the impact of SFAS Statement 166). The result of regression analysis is that there is a significant association between meeting/beating earnings forecast and securitization gain during the period before the crisis, indicating that the earnings management is the source of securitization gain and not competitive advantage. However, there is no positive correlation between securitization gain and competitive advantage for any time period. Also, there is no indication of

earnings management for the period 2008-2010. It is argued, but not yet proven, that companies have become more conservative since the issuance of SFAS 166.

Finally, in the third paper, CHAPTER IV, I first study IFRS companies that are engaged in securitization transactions, and test the possibility that earnings management using securitization transactions among companies that operate under different legal systems and anti-director laws is less. My findings indicate that companies that are engaged in securitization transactions and operate under IFRS, on average, exhibit no earnings management. The explanation I suggest is that IFRS regulations with regard to securitization are intense enough to reduce the extent of manipulation of financial statements under any type of investor protection. Then I use all U.S. companies that are engaged in securitization transactions to examine the value-relevance of an accounting-performance measure, return on equity. My findings indicate that, in the first period (2005-2006), the value-relevance of return on equity decreases as a result of securitization gain. This was not the case for the second period (2008-2009) and the third period (2010).

CHAPTER II

PAPER ONE: FAIR VALUE, SECURITIZATION, AND EARNINGS MANAGEMENT

I. INTRODUCTION

Since the 1970s, securitization has become a popular method of raising capital. However, securitization transaction is highly complex and can create information asymmetry between management and investors. Some investors are informed, understand the complexity, and can make educated decisions. Credit-rating agencies, to some degree, are able to inform the public and reduce the information asymmetries (Iscobucci et al. 2006). Nevertheless, the complexities related to the securitization process still can allow managers to act opportunistically and offer low-value (high-risk) assets to less-informed investors.

Prior research claims that managers can generate gains from securitization by taking advantage of the flexibilities incorporated in fair-value accounting rules when estimating the value of securitized assets (Dechow et al. 2010). Dechow et al. (2010) show that managers use rules of fair-value accounting to pick a discount rate that creates higher gain when estimating the fair value of securitized assets. The main goal of my first paper is to investigate the prior study's findings, extend their research further by looking at a different timeframe, and also to investigate companies following IAS 39 for securitization transactions. I posit and show that under U.S. GAAP, managers do use securitization to meet/beat analysts' earnings forecasts. I also show that IFRS' rigid rules for securitization reduce the possibility of managers manipulating earnings.

Securitization is a complex process and involves fair-value accounting, which is criticized for being flexible. However, both the Financial Accounting Standard Board (FASB) and the International Accounting Standard Board (IASB) promote fair-value accounting to increase the information-relevance of financial reports (Barlev and Haddad 2003; Landsman 2006; Fiechter 2010). On the other hand, critics of fair-value accounting blame the flexibility and subjectivity of fair-value accounting for many economic problems and financial crises (Laux and Leuz 2009, 2010). Consequently, the shortcoming of fair-value accounting affects accounting for asset securitization because fair-value estimation is used in securitization transactions when the transferor of assets retains partial interest in the sold assets (Karaoglu 2005; Hunton et al. 2006; Dechow et al. 2010). Depending on how management constructs the transaction, securitization can be accounted for as a sales transaction or it can be recorded as a secured borrowing, which means an increase in the firm's leverage. Securitizations can open the door to earnings manipulation and other unacceptable practices by managers. Managers can use securitizations to manipulate earnings, transfer risky assets to third parties, and be lenient in giving credit to customers with no or bad credit (Dechow et al. 2010).

Another issue that of late has been extensively and inconclusively debated by regulators, standard-setters, the global investment community, and the accounting profession is the convergence of the U.S. GAAP and International Financial Accounting Standards (IFRS) to create a higher-quality set of accounting standards. Standard-setters around the world are trying to create a single set of accounting standards that produces comparable financial statements for all firms worldwide, since the majority of companies

have subsidiaries or branches in more than one country, and investors prefer financial reports that are more comparable and understandable.

Lately, a number of studies have focused on the issues related to the convergence of the U.S. GAAP and IFRS. Examples of these issues are the market reactions to companies adopting IFRS and managerial discretion under IFRS standards (Hamberg et al. 2009; Armstrong et al. 2010). Since the main focus of this dissertation is securitization, and studying securitization involves many other issues, such as accounting policies across countries and accounting requirements under U.S. GAAP and IFRS, these issues are examined in relation to each other as a holistic approach. Fair-value accounting, securitization, and investor protection have not been fully studied in combination.

An important question for participants in the U.S. capital market is whether convergence with international accounting standards would benefit the U.S. economy. The accounting standards of both U.S. GAAP and IFRS have been challenged in terms of their complexity, relevance, and usefulness, so the main purpose of this dissertation is to address these challenges in relation to the securitization process. I expect my results to provide evidence to support the standard-setters' efforts to evaluate the possibility of total convergence of the two standards. Investors also need to have access to higher-quality reports and to assess which method better protects their wealth against the opportunistic actions of managers.

The rest of this paper is organized as follows. First, I offer background and explanation on some important issues, and then continue with hypothesis development, data collection, empirical tests, results, and conclusions.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Earnings Management

Most associates of firms base their relationship with the company on the firm's earnings. The firm's senior executives are evaluated and rewarded based on company earnings (Healy 1985), most banks give loans to companies with good performance, and boards of directors use earnings to evaluate the management. Therefore, if the earnings are below the analysts' expectations, the company may face many problems, such as difficulty in raising capital, purchasing supplies, keeping valuable employees, and sustaining a good reputation, as well as losing stock value, and many others.

To investigate the importance of earnings, Graham et al. (2005) conducted a survey which showed that more than 73 percent of the 400 interviewed CFOs revealed that analysts' forecasts of earnings per share (EPS) is very important, and meeting that forecast is critical. Also, 65% of participants admitted that reporting a profit is important enough to manipulate earnings (Graham et al. 2005). According to the financial press, the following three benchmarks are very important to a company's CEO: 1- showing profit, 2- having sustainable earnings, and 3-meeting analysts' forecasts (Degeorge et al. 1999).

Considering the importance of earnings, studies find that managers use several methods of managing earnings, starting with using accruals (which is very common), setting allowances for doubtful accounts, and the sale of assets or securitization

(Subramanyam 1996; Lee 2007). On the other hand, Cahan et al. (2008) show that managers use income-smoothing in order to communicate with investors about the company's future.

Other studies show that U.K. firms actually avoid missing analysts' forecasts; specifically, they show that managers in the U.K. generally don't like negative-earnings surprises (Gore et al. 2007; Athanasakou et al. 2009). Also, studies have shown that the market perceives negative-earnings surprises as bad news and rewards positive-earnings surprises (Skinner and Sloan 2002; Athanasakou et al. 2009). Brown and Caylor (2005) show evidence of a significant increase in rewards (penalty) of meeting (missing) earnings forecasts. Consequently, managers are very concerned about analysts' earnings forecasts.

Furthermore, a prior study shows that earnings management is a common practice all over the world; however, companies in European countries manage earnings more often than their American counterparts (Leuz et al. 2003). Following prior studies (e.g., Degeorge et al.1999; Kasznik and McNichols 2002; Graham et al. 2005; Lee 2007), I use meeting or beating analysts' forecasts as a proxy for earnings management.

Fair-Value Accounting

Research shows that fair-value accounting and its required disclosures produce information that investors value; however, the quality and amount of information depend on the measurement and estimation methods used by managers (Landsman 2006). The SEC strongly supports fair-value accounting (as the sole accounting method) based on the idea that fair-value accounting can reduce the motivation for management opportunistic

behavior using the existing complexity of mixed accounting standards (historical and fair-value) (Landsman 2006). Paananen (2009) finds evidence that investors value the increase in the level of disclosures required by fair-value accounting because by using the fair-value accounting, they believe they can better predict the company's future performance and make better and more educated decisions.

Contrary to investors, preparers of financial reports believe that when unrealized gains and losses are included in income, the profit volatility will rise (Cloney 1996). Byrne et al. (2008) find that U.K. firms' managers show different levels of conservatism in relation to the implementation of the fair-value accounting, and these variations (in their estimation) create inconsistencies in reports across different companies.

Most research on fair value is concerned with its flexibility in different areas, such as measurement of intangible assets (e.g., Deaconu et al. 2009). Fair-value estimation issues have also created concerns in relation to asset securitization, and many studies are devoted to this dilemma. Dechow and Shakespeare (2009) examine how managers utilize the timing of asset securitization to increase the benefits of the transaction. A comprehensive comparison of securitization under the U.S. GAAP and the IFRS standard by Adhikari and Betancourt (2008) and management earnings-manipulation in securitization by Dechow et al. (2010) are among other studies in this line of research. Even the SEC points out the problem with fair-value measurement for financial instruments that are not traded in the active market, and asset valuation based on managers' estimation.

Barlev and Haddad (2003) argue that fair-value accounting, unlike historical cost accounting, is more value-relevant and better portrays the real financial position and income of a company, helps limit agency costs, and improves management efficiency. Laux and Leuz (2009) investigated whether fair-value accounting really did cause economic problems and concluded that fair-value accounting could not have added to the financial and economic problems. Degeorge et al. (1999) and Brown and Caylor (2005) also show evidence that managers believe avoiding quarterly losses has the highest priority. However, further research shows that managers' concerns have changed recently, and the findings by Degeorge et al. (1999) are not applicable over time (Dechow et al. 2003; Graham et al. 2005). Additional investigation by Brown and Caylor (2005) shows that, in every sample year, managers are most concerned with avoiding negative earnings surprises. A good explanation for this result is that managers strongly favor the development of credibility with investors and other stakeholders and try to improve the company's stock price (Graham et al. 2005). Managers are afraid of losing their jobs, their bonuses, the firm's stock price, and their reputation. Consequently, they don't want to miss earnings thresholds.

Hypothesis Development

Dechow et al. (2010) investigate the association between income-smoothing and the securitization gain of a sample of American firms during the period when SFAS No. 140, which is based on a financial-component approach and focuses on transfer of control, was in effect. They show evidence of income-smoothing, and they relate this earnings management to vagueness incorporated in fair-value accounting. Under SFAS

140, constructing the transaction as the sale of an asset and de-recognizing the asset is easily done, even when the transferor retains partial interest in the asset (Niu and Richardson 2006). Dechow et al. (2010) argue that since, under SFAS No. 140, the fair value of expected future cash flows of the retained portion of a securitized asset must be estimated when no active market value is available, managers are able to pick a discount rate that creates higher gains or lower losses.

SFAS 140 follows the "surrender of control" concept to determine the accounting for securitized assets. If the transaction meets the specific criteria (explained earlier) and the transferor does not have control over the transferred assets, then the transaction is accounted as a sale. However, if the criteria are not met and the transferor retains control, then the transaction is accounted as a secured borrowing, the receivables remain on the transferor's books, and any amount received in the transaction is recorded as borrowing.

Accounting for securitization under IAS 39 is more complicated and follows a combination of "risk and reward" and "control" approaches. The criteria for de-recognition under IAS 39 are rigid (Adhikari and Betancourt 2008); however, if transaction meets a set of criteria (explained earlier), and the transferor maintains control through withholding of a subordinated interest, then the transferor uses the financial-component approach (control) and allocates the carrying value of the asset between the components based on fair values (Adhikari and Betancourt 2008). Adhikari and Betancourt (2008) show that most securitizations which meet the criteria for sales

transaction and de-recognition of assets under U.S. GAAP (FAS 140) would not be qualified for de-recognition under IAS 39[1].

Given that it is not possible to observe or calculate earnings manipulation directly, we need to examine the possibility of earnings management indirectly. According to the Agency Theory, there is a conflict of interest between management and investors. First, executives are typically motivated to engage in earnings management primarily because their compensation and bonuses are tied to the reported earnings, and when they have the opportunity to do so, they have the ability and knowledge to manipulate numbers to meet their earnings targets. Second, management also has an incentive to manipulate financial statements to comply with debt covenants. Since the standards issued by IASB over the last few years have changed the measurement method from historical cost to fair value, managers are able to estimate the fair value for assets that are not being traded in the actual market.

The simplicity of criteria under SFAS 140 creates opportunities for managers to sell financial assets and generate gain using the flexibilities of fair-value accounting. However, rigid criteria for securitization under IAS 39 prevent managers' discretionary actions. As a result, I expect to find earnings management measured by meeting/beating analysts' forecast for companies complying with SFAS 140 only. The existence of incentives, along with the opportunities and capability to manipulate accounting numbers,

[1] The accounting for securitization under standards set by the SFAS 140 and by the IASB (IAS 39) were very different; however, in 2009 the FASB issued a new standard (SFAS no.166) which reduces the differences between the two standards. Thus, this paper investigates the securitization under both standards before and after the issuance of the new rules.

provide rationalization to management to engage in earnings management as stated in the following hypotheses[2]. Given that meeting/beating analysts' earnings forecasts are extensively used as a proxy for earnings management in prior studies (e.g., Degeorge et al. 1999; Kasznik and McNichols 2002; Graham et al. 2005; Lee 2007), I have used the same proxy in my study.

H1: There is positive association between meeting or beating analysts' forecasts and securitization gain under both risk-based and control-based approach.

I test the above hypothesis for companies that follow U.S. GAAP (control-based or financial-components approach) and IFRS (risk-based approach) separately, and expect that my findings only support the hypothesis for companies that follow U.S. GAAP.

Dechow et al. (2010) argue that the discount rate is the tool for showing securitization gain, so following their study, I investigate this claim and predict that there is a negative association between the discount rate and securitization gain under U.S. GAAP. Therefore, I hypothesize that:

H2: For companies that follow U.S. GAAP (control-based approach), there is a negative association between securitization gain and discount rate used in fair-value estimation.

III. DATA COLLECTION AND METHODOLOGY

This section discusses the data collection and the methodology used in this study.

[2] Earnings management in these hypotheses is defined as any attempt by management to meet or beat analysts' forecasts of annual earnings.

Data Collection

I used LexisNexis and several key words to find all companies in the U.S. and in the world that have used securitization transactions during the periods 2005-2006 and 2008-2010 and have almost all of the related data. I have come up with a total of 355 company-year observations for 71 companies that follow the U.S. GAAP, and a total of 205 company-year observations for 41 companies that follow IFRS. Dechow et al. (2010) made a similar study in the period between 2000 and 2005 and collected a total of 96 companies. Given that the size of securitization activities has declined significantly since the 2000-2005 period, I believe the chance I have missed any company that is engaged in securitization activities and have not included it in my list is extremely low. For IFRS[3] companies, the search was much harder since companies across countries use different terms for one concept. I used "securitisation", "securitization", "financial asset", "receivable", and many more key terms to find companies with securitization activities. I reviewed companies' annual financial reports (10-K) and hand-collected the securitization data including income from securitizations, fair value of the retained interests (U.S. companies only) in securitized assets, and discount rates used in estimating fair values. LexisNexis and Google Finance were extremely helpful in finding companies' financial reports, stock information, email addresses, and phone numbers.

For the most part, non-U.S. companies did not report the discount rate that they had used to estimate fair value, and only mentioned that they used the related period's

[3] My data consists of companies which have adopted IFRS by 2005 (APRA 2004; PWC 2011; EUROPA 2011).

discount rate, so I had to look that up in a very time-consuming process. I used companies following U.S. GAAP and companies following IFRS to test the hypotheses. In addition, I used : a) the Research Insights (COMPUSTAT) database to collect the financial data, b) the Center for Research in Security Prices (CRSP) database to collect monthly stock returns and stock prices, c) the SEC's Edgar database to look at companies' 10-K reports, d) the Institutional Brokers' Estimate System (I/B/E/S) to collect analysts' earnings and return forecasts, and e) Lexis-Nexis and other online sources as well as direct phone calls and email to individuals in Europe.

Under SFAS 140[4], firms are required to provide more information, such as income from securitization, amount of gains, interest rates employed by managers, fair values of retained assets in securitization, and adverse changes at the end of the year. The data collection for companies following IFRS was complicated by the fact that each country has different requirements, and companies use different terminology for reporting the same concepts. In contrast to U.S. companies, which disclose information in a simple and straightforward method, IFRS companies are not required to disclose information such as the discount rate used in estimating fair value or the amount of retained interest in securitized assets.

[4] FASB statement no. 166, the revision to SFAS no. 140, has increased the required disclosure level; therefore, U.S. companies' annual reports under GAAP should be more informative.

Methodology

In this paper, I investigate securitization under U.S. GAAP and IFRS and test whether managers take advantage of fair-value accounting to meet or beat analysts' forecasts using gain on sale accounting securitization.

Earnings management:

As I mentioned earlier, consistent with prior studies (e.g., Degeorge et al. 1999; Kasznik and McNichols 2002; Graham et al. 2005; Lee 2007), I use meeting or beating analysts' forecasts as a proxy for earnings management. I define MEET=1 when earnings surprise is non-negative and MEET= 0 when earnings surprise is negative. Earnings surprise is the difference between actual earnings and median analysts' earnings forecasts. There are some companies that normally do well year-after-year and meet the earnings forecasts regardless of securitization gain. Consequently, if a company's earnings before securitization gain do not meet the forecast and the company can construct a securitization that raises the income enough to meet or beat the forecast, then there is a high probability that the company is engaged in earnings management since the manager has discretion in estimating the fair value of retained interest in sold securities.

Therefore, I use the following Logit model to test my first hypothesis (H1). I separately run the same model both for companies that follow the U.S. GAAP and companies that follow IFRS. The positive sign of the coefficient of SEC-GAIN supports my hypotheses.

$$P\,(\text{MEET}_{it}) = f\,(\beta_0 + \beta_1 \text{SEC-GAIN}_{it} + \beta_2\,\text{PRESEC-EAR}_{it} + \beta_3 \text{IND-GAIN}_t + \beta_4\,\text{ADV-CHAN/RT}_{it} + \beta_5\,\text{MKT-VOL}_{it} + \beta_6 \text{DIS-RATE}_{it} + \beta_7\,\text{SIZE}_{it} + \beta_8\,\text{SEG}_{it}) \quad \ldots (1\text{-}1)$$

Where:

$MEET_{it}$: Is a dummy variable equal to one when earnings surprises are non-negative and zero otherwise. Earning surprise is the difference between actual earnings and median analysts' earnings forecasts for firm i in year t (Collected from I/B/E/S).

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and it is scaled by last year's stockholders equity.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i at the end of year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

Consistent with Dechow et al. (2010), I use the following control variables:

$INDU\text{-}GAIN_{t}$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

$ADV\text{-}CHAN/RI_{it}$: Adverse change divided by retained interest for firm i at the end of year t used as a proxy for risk. Adverse change is a measure of volatility in expected future cash flows of financial assets.

$MKT\text{-}VOL_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

$DIS\text{-}RATE_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[5].

Additional control variables used in this model are:

$SIZE_{it}$: Natural log of total assets for firm i at the end of year t.

[5] U.S. companies are required to report the discount rate that they use in fair value calculation.

SEG_{it}: Number of operating segments for firm i at the end of year t.

***Investment Opportunity**:*

Depending on the efficiency and competitiveness of the industry, the size of spread[6] should vary. To control for this variation in the industry, INDUSTRY-GAIN is defined as the median level of gains from securitizations deflated by equity in the industry by year.

Receivables Cash Flows Volatility:

Dechow et al. (2010) use two proxies for risk because the volatility in expected cash flows from securitized receivables[7] is not directly measurable. Managers use estimation to calculate the fair value of the retained interest in securitized assets as the present value of future expected cash flows[8]. The adverse change collected from notes and disclosures to financial statements represents an estimate of the variance related to the expected future cash flows (Dechow et al. 2010).Therefore, higher variance is indicative of higher volatility of assets. Consequently, firms with greater adverse change in relation to the retained securitization interest should show higher gains or losses. When estimating the fair value of retained interest in securitized assets, managers have to make assumptions about the discount rate used to calculate the present value of future expected

[6] The difference between the asking price and the bid of stock or other security is called bid-ask spread.

[7] Volatile cash flows increase the risk.

[8] U.S. companies report estimated fair value of the retained interest in securitization in their Balance Sheets. They also report the sensitivities of the estimated fair values to adverse changes to assumptions in the notes to financial statements.

cash flows, default risk, and prepayment risk. Therefore, a manager can show higher gain by assuming lower risk, which results in lower adverse change and higher gain.

ADVERSE-CHANGE/RI*:* This is the first proxy for risk and is defined as adverse change divided by retained interest (from the 10-k filing). The second proxy for risk is the firm-specific market volatility (MAR-VOL). In some securitizations, the transferor assumes all the risks, which means that the third party is at no risk if the company faces financial problems (Gorton and Souleles 2006). Therefore, the volatility of the market should be directly related to the volatility of receivable cash flows. To calculate this variable, I first regress the monthly stock returns on the value-weighted NYSE/AMEX index and then find the standard deviation of the residuals of this regression.

DIS-RATE*:*The discount rate reported by the firm in the notes to the financial statement. Discount rate has an important role in the size of the gain from securitization transaction, and a lower (higher) discount rate can result in larger (smaller) gain.

SEG*:* The number of segments in the company. Companies for which securitization is an important source of financing should have a higher gain (as a percentage of equity capital) when they operate in one segment only.

Additional control variables:

SIZE: The natural log of the market value of equity. Larger companies have more securities to use for financing.

LEVERAGE: Total liabilities scaled by prior-year equity. Companies with a higher level of liability are more likely to mange earnings to meet forecasts.

Discount Rate

Next, following the Dechow et al. (2010) argument that managers use desirable discount rates in the estimation of fair-value accounting to smooth earnings, I investigate whether managers' discretion on discount rates plays any role in meeting or beating forecasts. When securitizations meet the sale's requirement, the transferor removes all the receivables from its records and collects cash from the buyer. When the transferor firm retains partial interest in the sold receivables, managers use estimation to fair value the future cash flows related to their interests in the securitized assets (Dechow et al. 2010). When estimating the fair value of the cash flows of the retained interest, managers might use a lower discount rate to show higher fair value and higher gain. Therefore, I use a regression model similar to that used by Dechow et al. (2010), with some additional variables.

To test H2, I use the following multivariable linear regression model separately for U.S.

companies.

$$\text{DIS-RATE}_{it} = \beta_0 + \beta_1 \text{SEC-GAIN}_{it} + \beta_2 \text{PRESEC-EAR}_{it} + \beta_3 \text{INT-SEC-PRE}_{it} + \beta_4 \text{LVRG}_{it} + \beta_5 \text{SIZE}_{it} + \beta_6 \text{LIQUIDITY}_{it} + \beta_7 \text{BETA}_{it} + \beta_8 \text{ROA}_{it} + \varepsilon_i \quad \ldots (1\text{-}2)$$

Where:

DIS- RATE $_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[9].

[9] U.S. companies are required to report the discount rate that they use in fair value calculation.

SEC-GAIN$_{it}$: Securitization gain for firm i at the end of year t is collected from the firm's 10K and is scaled by last year's stockholder equity.

PRESEC-EAR$_{it}$: Earnings before securitization gain for firm i at the end of year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

INT-SEC-PRE$_{it}$: The interaction variable between securitization gain and earnings before securitization gain for firm i at the end of year t.

Other control variables:

LVRG$_{it}$: Total liabilities divided by total assets for firm i at the end of year t.

SIZE $_{it}$: Natural log of total assets for firm i at the end of year t.

LIQUIDITY$_{it}$: Total cash and cash equivalent divided by total assets for firm i at the end of year t.

BETA$_{it}$: A measure of the systematic risk for firm i in year t (collected from COMPUSTAT).

ROA$_{it}$: Return on assets for firm i at the end of year t (collected from COMPUSTAT).

Variables used in the equation are as defined above. The significance and negative sign of the coefficient of SEC-GAIN supports my second hypothesis (H2).

IV. RESULTS

Table 2-1 presents the descriptive statistics for all U.S. companies used to test the hypothesis. The study consists of 71 companies with 355 company-year observations from the beginning of 2005 up to the end of 2010, excluding 2007. The extreme financial and economic changes during 2007, including the bankruptcy of high-profile companies,

credit crunches, and damaged investors' confidence, had extraordinary impacts on the market, and financial reports did not represent the normal course of business during this period. I have divided the data into three time periods to control for the effects of economic and financial changes. I use a Logit model with panel data for the first two periods (2005-2006 and 2008-2009) and a Logit model with cross-sectional data for the third period (2010). Using the residual analysis, all outliers are detected and removed from the regression model. In the residual analysis, I ran the original model and calculated the residual-squared then plotted the residual-squared against each independent variable to find outliers.

Table 2-1
Descriptive Statistics for Paper One
(companies following U.S. GAAP – Control based approach)
(Year 2007 is the crises year and is excluded from the analyses)

Panel A: 2005-2006

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$MEET_{it}$	142	0.2535211	0.436567	0	0	1	0	1
$SEC\text{-}GAIN_{it}$	143	0.0096119	0.072749	0	8.45E-07	0.0002409	0.00	0.83
$PRESEC\text{-}EAR_{it}$	142	0.019833	0.171974	-0.0000822	1.60E-06	0.0003064	-0.59739	1.599
$INDU\text{-}GAIN_{t}$	142	9.999261	77.19853	0.0259588	0.2875352	3.299046	-0.5885	920.1
$ADV\text{-}CHAN/RI_{it}$	142	-0.245455	2.723875	-0.001154	0	0	-32.4408	3E-04
$MKT\text{-}VOL_{it}$	142	0.0277697	0.038971	0.0034914	0.0156763	0.0367135	0.00	0.236
$DIS\text{-}RATE_{it}$	130	0.1420754	0.13874	0.1	0.11225	0.1385	0.06	0.98
$SIZE_{it}$	126	9.229762	2.565112	7.5475	8.965	10.78	1.97	14.45
SEG_{it}	142	2.732394	2.126881	1	2	4	1	10

Table 2-1
Descriptive Statistics for Paper One (Continued)

Panel B: 2008-2009

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$MEET_{it}$	142	0.542254	0.499975	0	1	1	0	1
$SEC\text{-}GAIN_{it}$	142	0.018526	0.093198	0	0.0002059	0.0102173	0.0000	0.490933
$PRESEC\text{-}EAR_{it}$	142	0.015754	0.449393	-0.0100816	-0.0002268	0.0000568	-1.67161	4.918738
$INDU\text{-}GAIN_{t}$	142	0.691559	1.233717	0.0302982	0.15334	0.6233758	-0.12179	6.185644
$ADV\text{-}CHAN/RI_{it}$	142	-0.00085	0.017072	-0.001015	-0.0000339	O	-0.064	0.183898
$MKT\text{-}VOL_{it}$	142	0.068028	0.064254	0.0102884	0.0531474	0.0947665	0.0000	0.279185
$DIS\text{-}RATE_{it}$	136	0.140136	0.134514	0.1	0.11	0.13205	0.06	0.98
$SIZE_{it}$	124	9.244106	2.669727	7.290797	8.966519	11.0027	3.619851	14.6145
SEG_{it}	142	2.669014	1.991905	1	2	4	1	10

Panel c: 2010

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$MEET_{it}$	71	0.542254	0.499975	0	1	1	0	1
$SEC\text{-}GAIN_{it}$	71	0.577465	0.497479	0	0.0000136	0.0003102	0.00000	0.170963
$PRESEC\text{-}EAR_{it}$	71	0.006407	0.025225	-0.0000654	0.0000415	0.0605711	-0.17096	0.964404
$INDU\text{-}GAIN_{t}$	71	0.068115	0.186212	0.0025677	0.0289697	0.1151988	-1.93064	3.639035
$ADV\text{-}CHAN/RI_{it}$	71	0.214401	0.709928	-0.0006022	-1.02E-07	0	-0.16894	0.230888
$MKT\text{-}VOL_{it}$	71	-0.00049	0.03463	0.0072358	0.0538238	0.0832345	0.00000	0.166453
$DIS\text{-}RATE_{it}$	67	0.052035	0.043184	0.1	0.1061	0.13	0.0394	0.974
$SIZE_{it}$	59	0.137149	0.136754	7.408278	9.15173	11.06695	3.633922	14.63305
SEG_{it}	71	9.330365	2.721738	1	2	4	1	10

Where:

$MEET_{it}$: Is a dummy variable equal to one when earnings surprises are non-negative and zero otherwise. Earnings surprise is the difference between actual earnings and median analysts' earnings forecasts for firm i in year t (Collected from I/B/E/S).

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and is scaled by last year's stockholder equity.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i at the end of year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

INDU-GAIN$_t$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

ADV-CHAN/RI $_{it}$: Adverse change divided by retained interest for firm i at the end of year t used as a proxy for risk. Adverse change is a measure of volatility in expected future cash flows of financial assets.

MKT-VOL $_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

DIS- RATE $_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[10].

SIZE $_{it}$: Natural log of total assets for firm i at the end of year t.

SEG $_{it}$: Number of operating segments for firm i at the end of year t.

Table 2-2 contains the results from the Pearson correlation matrices. Any variable with a strong correlation to other variables has been eliminated from my models. The three panels of Table 2-2 represent the for each time period. As shown in the tables, there are some significant correlations (indicated by * as marginally significant or p-value between 0.05 and 0.1, ** as significant or p-value between .01 and 0.05, and *** as highly significant or p-value less than 0.01) among variables; however, none of the correlations show any sign of multicollinearity. The common rule of thumb for identifying multicollinearity is a variance inflation factor (VIF) of 10 or more, or tolerance of 0.1 or less. Another way is to examine the bivariate correlations between independent variables and look for a correlation of 0.7 or higher. Lastly, muticollinearity may be present when the overall model is significant but none of the independent variables are significant. After dropping variables that show a high bivariate correlation, my analysis does not show any of the above symptoms.

[10] U.S. companies are required to report the discount rate that they use in fair value calculation.

Table 2-2
Correlation Matrices for Paper One
(companies following U.S. GAAP – Control based approach)

Panel A: 2005-2006

	$SEC\text{-}GAIN_{it}$	$PRESEC\text{-}EAR_{it}$	$INDU\text{-}GAIN_{t}$	$ADV\text{-}CHAN/RI_{it}$	$MKT\text{-}VOL_{it}$	$DIS\text{-}RATE_{it}$	$SIZE_{it}$
$SEC\text{-}GAIN_{it}$	1						
$PRESEC\text{-}EAR_{it}$	-0.2478***	1					
$INDU\text{-}GAIN_{t}$	0.0024	0.1229	1				
$ADV\text{-}CHAN/RI_{it}$	0.114	-0.045	-0.0177	1			
$MKT\text{-}VOL_{it}$	-0.0396	0.0425	-0.0024	-0.0072	1		
$DIS\text{-}RATE_{it}$	0.0288	-0.033	-0.0191	-0.0128	0.0033	1	
$SIZE_{it}$	0.0667	0.0807	0.1747*	0.1641*	-0.2565***	0.0243	1
SEG_{it}	0.2734***	-0.022	0.0679	-0.0249	0.1595*	-0.116	0.2137**

Panel B: 2008-2009

	$SEC\text{-}GAIN_{it}$	$PRESEC\text{-}EAR_{it}$	$INDU\text{-}GAIN_{t}$	$ADV\text{-}CHAN/RI_{it}$	$MKT\text{-}VOL_{it}$	$DIS\text{-}RATE_{it}$	$SIZE_{it}$
$SEC\text{-}GAIN_{it}$	1						
$PRESEC\text{-}EAR_{it}$	0.0289	1					
$INDU\text{-}GAIN_{t}$	0.1161	0.0412	1				
$ADV\text{-}CHAN/RI_{it}$	-0.0345	-0.2424***	0.0975	1			
$MKT\text{-}VOL_{it}$	0.061	-0.0722	-0.0743	-0.094	1		
$DIS\text{-}RATE_{it}$	0.0067	-0.0223	0.0673	0.019	-0.0522	1	
$SIZE_{it}$	0.0958	-0.0029	0.0394	-0.1414	0.3079***	-0.085	1
SEG_{it}	-0.0298	-0.0692	-0.0884	0.0987	0.2484***	-0.056	0.1803**

Panel C: 2010

	$SEC\text{-}GAIN_{it}$	$PRESEC\text{-}EAR_{it}$	$INDU\text{-}GAIN_{t}$	$ADV\text{-}CHAN/RI_{it}$	$MKT\text{-}VOL_{it}$	$DIS\text{-}RATE_{it}$	$SIZE_{it}$
$SEC\text{-}GAIN_{it}$	1						
$PRESEC\text{-}EAR_{it}$	-0.2161*	1					
$INDU\text{-}GAIN_{t}$	0.1087	0.3848***	1				
$ADV\text{-}CHAN/RI_{it}$	0.4344***	-0.1817	-0.0763	1			
$MKT\text{-}VOL_{it}$	-0.0814	-0.0294	0.0995	-0.1637	1		
$DIS\text{-}RATE_{it}$	-0.0149	0.0142	-0.0005	-0.4119***	-0.0336	1	
$SIZE_{it}$	0.0039	0.2301*	0.1507	0.0762	0.0804	-0.16	1
SEG_{it}	0.0912	-0.0439	-0.0786	-0.031	0.1831	0.1362	0.1816

Where:

SEC-GAIN$_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and it is scaled by last year's stockholder equity.

PRESEC-EAR$_{it}$: Earnings before securitization gain for firm i at the end of year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

INDU-GAIN$_t$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

ADV-CHAN/RI $_{it}$: Adverse change divided by retained interest for firm i at the end of year t used as a proxy for risk. Adverse change is a measure of volatility in expected future cash flows of financial assets.

MKT-VOL $_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

DIS- RATE $_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[11].

SIZE $_{it}$: Natural log of total assets for firm i at the end of year t.

SEG $_{it}$: Number of operating segments for firm i at the end of year t.

Table 2-3 contains the result of three Logit models. This table shows a significant positive association between SEC-GAIN and meeting/beating analyst forecasts only for the 2005-2006 period. This result supports my hypotheses and is consistent with the findings by Dechow et al. (2010). However, I did not find any indication of earnings management for the other two periods because the coefficient of SEC-GAIN is not significant at any acceptably meaningful level. My analysis shows that mortgage companies and other financial institutions during 2005-2006 were doing extremely well by generating and selling loans. During this period, many people weren't familiar with the securitization process. However, the fall of large banks and financial institutions was a wake-up call to investors. Consequently, I speculate that managers became more conservative during the 2008-2009 period. The result for the 2010 period suggests that

[11] U.S. companies are required to report the discount rate that they use in fair value calculation.

the new revision to SFAS 140, SFAS 166, which changed the criteria for securitization accounting, has been effective.

Table 2-3
Regression Results for Paper One
(companies following U.S. GAAP – Control based approach)

$$P\,(MEET_{it}) = f\,(\beta_0 + \beta_1 SEC\text{-}GAIN_{it} + \beta_2\, PRESEC\text{-}EAR_{it} + \beta_3 IND\text{-}GAIN_t + \beta_4\, ADV\text{-}CHAN/RT_{it} + \beta_5\, MKT\text{-}VOL_{it} + \beta_6 DIS\text{-}RATE_{it} + \beta_7\, SIZE_{it} + \beta_8\, SEG_{it}) \quad \ldots (1\text{-}1)$$

	2005-2006			2008-2009			2010		
$MEET_{it}$	Coef	z-value	P>|z|	Coef	z-value	P>|z|	Coef	t-value	P>|t|
$SEC\text{-}GAIN_{it}$	1.5553***	2.48	0.013	-0.1126063	-0.18	0.854	-3.32317	-0.88	0.381
$PRESEC\text{-}EAR_{it}$	0.2200965	0.46	0.642	0.616486	1.34	0.181	0.606789	1.49	0.142
$INDU\text{-}GAIN_t$	-0.000414	-0.06	0.951	-0.0055166	-0.11	0.912	0.007691	0.07	0.948
$ADV\text{-}CHAN/RI_{it}$	0.0009092	0.06	0.951	2.223908	0.17	0.869	0.208303	0.05	0.964
$MKT\text{-}VOL_{it}$	-0.4942993	-0.43	0.667	0.2205576	0.27	0.783	3.254642*	1.85	0.071
$DIS\text{-}RATE_{it}$	0.5097591*	1.79	0.073	-0.1521506	-0.47	0.638	0.638787	0.93	0.356
$SIZE_{it}$	0.0086485	0.47	0.638	0.0456265**	2.14	0.033	0.013958	0.49	0.624
SEG_{it}	-0.0291212	-1.31	0.189	-0.0396732	-1.62	0.104	-0.03824	-1.23	0.226
_cons	0.1836335	0.99	0.323	0.272108	1.38	0.167	0.30561	1.06	0.294
Adj. r-squared:	0.1277**			0.0980			0.0532		

(Significance at the levels of 10%, 5%, and 1% are indicated by *, **, and ***)

Where:

$MEET_{it}$: A dummy variable equal to one when earnings surprises are non-negative and zero otherwise. Earning surprise is the difference between actual earnings and median analysts' earnings forecasts for firm i in year t (Collected from I/B/E/S).

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and is scaled by last year's stockholder equity.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i at the end of year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

$INDU\text{-}GAIN_t$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

$ADV\text{-}CHAN/RI_{it}$: Adverse change divided by retained interest for firm i at the end of year t used as a proxy for risk. Adverse change is a measure of volatility in expected future cash flows of financial assets.

$MKT\text{-}VOL_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

DIS- RATE $_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[12].
SIZE $_{it}$: Natural log of total assets for firm i at the end of year t.
SEG $_{it}$: Number of operating segments for firm i at the end of year t.

Dechow et al. (2010) argue that managers use a discount rate as a tool to manage earnings when the company retains partial interest in a securitized asset. Since managers need to use assumptions in calculating the fair value of expected cash flows from the retained portion, they have some discretion in choosing a suitable discount rate in their calculations. From the first regression, I found evidence of earnings management using securitization only during the first period (2005-2006); therefore, I next ran a multivariate regression on data from 2005-2006 to test whether a discount rate was used for earnings management. The fair value of the retained interest is calculated as the present value of the stream of the future cash inflows. The higher the discount rate, the lower the fair value will be, and vice versa. Prior research concludes that a discount rate is used to manipulate the fair value of the asset. That is, prior research found a negative association between securitization gain and discount rate so, consistent with prior studies, I expected the sign of a discount rate to be significant and negative.

Table 2-4 shows the results of a multivariate regression using panel data that tests the association between discount rate and securitization. The result shows no any association between a securitization gain and discount rate, which does not support my hypothesis and is not consistent with findings by Dechow et al. (2010).

[12] U.S. companies are required to report the discount rate that they use in fair value calculation.

Table 2-4
Regression Results for Discount Rate as Dependent Variable
(for companies following U.S. GAAP – Control based approach)

$$DIS\text{-}RATE_{it} = \beta_0 + \beta_1 SEC\text{-}GAIN_{it} + \beta_2 PRESEC\text{-}EAR_{it} + \beta_3 INT\text{-}SEC\text{-}PRE_{it} + \beta_4 LVRG_{it} + \beta_5 SIZE_{it} + \beta_6 LIQUIDITY_{it} + \beta_7 BETA_{it} + \beta_8 ROA_{it} + \varepsilon_i$$

$DIS\text{-}RATE_{it}$	Coef.	z	P>|z|
$SEC\text{-}GAIN_{it}$	-0.03643	-0.26	0.791
$PRESEC\text{-}EAR_{it}$	0.001803	0.05	0.963
$INT\text{-}SEC\text{-}PRE_{it}$	-0.31183	-0.53	0.595
$LVRG_{it}$	0.001019	0.04	0.971
$SIZE_{it}$	0.005396	0.79	0.431
$LIQUIDITY_{it}$	0.014814	0.23	0.818
$BETA_{it}$	-0.00063	-0.14	0.889
ROA_{it}	9.74E-06	0.1	0.916
_cons	0.093883	1.3	0.192

Adj. R-Squared: 0.0415

(Significance at the levels of 10%, 5%, and 1% are indicated by *, **, and ***)

Where:

$DIS\text{-}RATE_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[13].

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and is scaled by last year's stockholder equity.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i at the end of year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

$INT\text{-}SEC\text{-}PRE_{it}$: The interaction variable between securitization gain and earnings before securitization gain for firm i at the end of year t.

$LVRG_{it}$: Total liabilities divided by total assets for firm i at the end of year t.

SZE_{it}: Natural log of total assets for firm i at the end of year t.

$LIQUIDITY_{it}$: Total cash and cash equivalent divided by total assets for firm i at the end of year t.

$BETA_{it}$: A measure of the systematic risk for firm i in year t (collected from COMPUSTAT).

ROA_{it}: Return on assets for firm i at the end of year t (collected from COMPUSTAT).

My results show the existence of earnings management under U.S. GAAP during 2005-2006, the period before the financial crisis, so I next examine whether there is any association between securitization gain and meeting/beating earnings forecast for

[13] U.S. companies are required to report the discount rate that they use in fair value calculation.

companies following IFRS. Tables 2-5 and 2-6 (each consists of data for three different periods) present the descriptive statistic and correlation matrices for firms following International Financial Reporting Standards (IFRS). Definitions of data are the same as those provided earlier in this dissertation for companies following U.S. GAAP. As I mentioned earlier, using the residual analysis, all outliers are detected and removed from the regression model. In the residual analysis, I ran the original model and calculated the residual-squared, then plotted the residual-squared against each independent variable to find outliers. As I also described earlier, after dropping variables that show high bivariate correlation, my analysis does not suffer from any of the multicollinearity symptoms.

Table 2-5
Descriptive Statistics for Paper One (for companies following IFRS - Risk based approach)
(Year 2007 is the crises year and is excluded from the analyses)

Panel A: 2005-2006

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$MEET_{it}$	80	0.5375	0.501738	0	1	1	0	1
$SEC\text{-}GAIN_{it}$	74	0.022002	0.106325	0	0.0019531	0.0128746	0.00000	0.910598
$IND\text{-}GAIN_{t}$	74	-14.2838	47.5746	-7.789807	-0.5931541	-0.0572534	-303.686	4.366204
$MKT\text{-}VOL_{it}$	66	0.048073	0.039585	0.0242425	0.04053	0.065125	0.00051	0.26875
$DISRATE_{it}$	64	0.107488	0.03375	0.08925	0.11	0.13	0.03	0.16
$SIZE_{it}$	74	18.20715	3.317118	15.32291	18.73759	20.02763	12.50103	26.1
$LVRG_{it}$	74	0.777839	0.298365	0.6806379	0.9347776	0.9573288	0.00000	0.993505
$LIQUIDITY_{it}$	74	0.048623	0.069203	0.0060965	0.0212892	0.0621536	0.000593	0.282788
ROE_{it}	74	0.687838	2.611719	0.08	0.15	0.19	-0.1	14.94

Table 2-5
Descriptive Statistics for Paper One (Continued)

Panel B: 2008-2009

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$MEET_{it}$	80	0.3625	0.483755	0	0	1	0	1
$SEC\text{-}GAIN_{it}$	78	0.030455	0.179768	0	0.000206	0.0179769	0.00000	0.551792
$IND\text{-}GAIN_{t}$	78	-18.5787	46.30486	-11.3191	-1.150923	-0.0784411	-245.624	24.55209
$MKT\text{-}VOL_{it}$	64	0.10723	0.075354	0.044645	0.09527	0.1592425	0.00068	0.31341
$DISRATE_{it}$	73	0.107658	0.035969	0.088	0.11	0.13	0.025	0.18
$SIZE_{it}$	78	18.65359	3.283764	16.70366	19.36101	20.29982	12.16645	26.4
$LVRG_{it}$	78	18.65359	3.283764	0.8001556	0.9369088	0.9534939	12.16645	26.4
$LIQUIDITY_{it}$	78	0.00013	0.019413	0.0108583	0.0320459	0.0604727	-0.07974	0.07085
ROE_{it}	78	0.046706	0.050908	-0.0225	0.055	0.13	9.39E-05	0.24

Panel C: 2010

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$MEET_{it}$	39	0.48718	0.50637	0	0	1	0	1
$SEC\text{-}GAIN_{it}$	38	0.018478	0.140588	0	0.0005991	0.0145284	0.00000	0.443686
$IND\text{-}GAIN_{t}$	38	10.7467	23.19061	0.0616094	0.9218992	11.57394	-5.23691	98.50879
$MKT\text{-}VOL_{it}$	32	0.077935	0.051869	0.03444	0.074205	0.110185	0.00016	0.23027
$DISRATE_{it}$	37	0.105622	0.033862	0.089	0.11	0.1295	0.025	0.164
$SIZE_{it}$	38	18.67024	3.353848	16.52661	19.17263	20.81655	12.23658	26.4
$LVRG_{it}$	38	0.815693	0.252192	0.8068669	0.9330751	0.9540754	0.002057	0.99725
$LIQUIDITY_{it}$	38	0.044301	0.047555	0.0145737	0.0342155	0.0642847	0.000417	0.251354
ROE_{it}	38	1.884737	12.72118	0.0275	0.07	0.1325	-5.68	77.98

Where:

$MEET_{it}$: A dummy variable equal to one when earnings surprises are non-negative and zero otherwise. Earning surprise is the difference between actual earnings and median analysts' earnings forecasts for firm i in year t (Collected from I/B/E/S).

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and it is scaled by last year's stockholder equity.

$INDU\text{-}GAIN_{t}$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

$MKT\text{-}VOL_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

$DIS\text{-}RATE_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[14].

$SIZE_{it}$: Natural log of total assets for firm i at the end of year t.

$LVRG_{it}$: Total liability scaled by total assets for firm i at the end of year t.

$LIQUIDITY_{it}$: Total cash and cash equivalents scaled by total assets for firm i at the end of year t.

ROE_{it}: Return on equity for firm i in year t (collected from COMPUSTAT).

[14] U.S. companies are required to report the discount rate that they use in fair value calculation.

Table 2-6

Correlation Matrices for Paper One (for companies following IFRS - Risk based approach)

Panel A: 2005-2006

	$SEC\text{-}GAIN_{it}$	$IND\text{-}GAIN_{t}$	$MKT\text{-}VOL_{it}$	$DISRATE_{it}$	$SIZE_{it}$	$LVRG_{it}$	$LIQUILIDY_{it}$
$SEC\text{-}GAIN_{it}$	1						
$IND\text{-}GAIN_{t}$	0.0455	1					
$MKT\text{-}VOL_{it}$	0.1754	-0.067	1				
$DISRATE_{it}$	-0.1788	-0.2105	0.071	1			
$SIZE_{it}$	-0.085	0.3746***	-0.0308	-0.0344	1		
$LVRG_{it}$	-0.2633**	-0.0508	-0.058	0.0096	0.3267***	1	
$LIQUILIDY_{it}$	0.0207	-0.0447	0.0119	0.0264	-0.3172***	-0.2443**	1
ROE_{it}	-0.0179	0.0124	0.0339	0.2734**	-0.0244	0.1172	0.3905***

Panel B: 2008-2009

	$SEC\text{-}GAIN_{it}$	$IND\text{-}GAIN_{t}$	$MKT\text{-}VOL_{it}$	$DISRATE_{it}$	$SIZE_{it}$	$LVRG_{it}$	$LIQUILIDY_{it}$
$SEC\text{-}GAIN_{it}$	1						
$IND\text{-}GAIN_{t}$	-0.0783	1					
$MKT\text{-}VOL_{it}$	-0.0194	-0.1338	1				
$DISRATE_{it}$	0.2783**	0.0136	0.0957	1			
$SIZE_{it}$	-0.1014	0.4713***	-0.1036	-0.009	1		
$LVRG_{it}$	-0.222*	0.3126***	0.1304	-0.0089	0.4181***	1	
$LIQUILIDY_{it}$	0.0342	-0.218	-0.0616	-0.014	-0.0795	-0.2005*	1
ROE_{it}	-0.0221	0.0657	-0.1462	0.305***7	-0.0659	0.1048	-0.127

Panel C: 2010

	$SEC\text{-}GAIN_{it}$	$IND\text{-}GAIN_{t}$	$MKT\text{-}VOL_{it}$	$DISRATE_{it}$	$SIZE_{it}$	$LVRG_{it}$	$LIQUILIDY_{it}$
$SEC\text{-}GAIN_{it}$	1						
$IND\text{-}GAIN_{t}$	0.2352	1					
$MKT\text{-}VOL_{it}$	0.2816	-0.0494	1				
$DISRATE_{it}$	0.2177	0.0098	0.1158	1			
$SIZE_{it}$	0.044	-0.3817**	0.2921	-0.0683	1		
$LVRG_{it}$	0.1464	-0.2039	0.0693	-0.0475	0.446***	1	
$LIQUILIDY_{it}$	-0.0903	-0.0445	-0.0666	-0.1369	-0.1081	-0.3182*	1
ROE_{it}	-0.0351	-0.0709	-0.0296	0.2449	-0.0591	0.101	-0.148

Where:

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and is scaled by last year's stockholder equity.

$INDU\text{-}GAIN_{t}$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

$MKT\text{-}VOL_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

DIS- RATE $_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[15].
SIZE $_{it}$: Natural log of total assets for firm i at the end of year t.
LVRG $_{it}$: Total liability scaled by total assets for firm i at the end of year t.
LIQUIDITY$_{it}$: Total cash and cash equivalents scaled by total assets for firm i at the end of year t.
ROE $_{it}$: Return on equity for firm i in year t (collected from COMPUSTAT).

Table 2-7 shows the results of three models that test the relationship between securitization gain and meeting/beating forecast over three timeframes (2005-2006, 2008-2009, 2010) for companies following IFRS. As the results show, there is no association between dependent variables and securitization gain. Thus, I cannot support the hypothesis for companies that follow IFRS because I have not found any evidence of earnings management. Therefore, my prediction is supported, suggesting that IFRS criteria for securitization are harder to meet, so the opportunity for earnings management is lower for companies following IFRS.

[15] U.S. companies are required to report the discount rate that they use in fair value calculation.

Table 2-7
Regression Results for Paper One (for companies following IFRS - Risk based approach)

$$P\,(MEET_{it}) = f\,(\beta_0 + \beta_1 SEC\text{-}GAIN_{it} + \beta_2\, IND\text{-}GAIN_t + \beta_3\, MKT\text{-}VOL_{it} + \beta_4 DIS\text{-}RATE_{it} + B_5 SIZE_{it} + \beta_6 LVRG_{it} + \beta_7 LIQUIDITY_{it} + \beta_8\, ROE_{it})$$

	2005-2006			2008-2009			2010		
$MEET_{it}$	Coef	z-value	P>|z|	Coef	z-value	P>|z|	Coef	t-value	P>|t|
$SEC\text{-}GAIN_{it}$	-0.06146	-0.15	0.882	0.5745409	1.34	0.181	0.6169389	1.42	0.163
$INDU\text{-}GAIN_t$	-0.00132	-0.65	0.512	0.0018842	0.72	0.474	0.002392	0.93	0.358
$MKT\text{-}VOL_{it}$	-1.4978	-1.08	0.279	1.762245*	1.86	0.063	1.793045	1.86	0.069
$DIS\text{-}RATE_{it}$	4.26615	1.5	0.134	0.1583458	0.08	0.937	-0.5050987	-0.22	0.823
$SIZE_{it}$	0.001483	0.04	0.97	-0.0195633	-0.6	0.55	-0.0250704	-0.79	0.434
$LVRG_{it}$	-0.2587	-0.81	0.418	0.0053445	0.02	0.984	-0.0596433	-0.23	0.821
$LIQUIDITY_{it}$	-1.27417	-0.87	0.386	-0.7735758	-0.57	0.569	-0.6754125	-0.5	0.617
ROE_{it}	0.016694	0.71	0.48	0.0048943	0.73	0.463	0.0052923	0.81	0.421
_cons	0.336406	0.39	0.7	0.5798773	0.87	0.385	0.6678149	0.92	0.365
Adj. r-squared:	0.2863			0.2249			0.0437		

(Significance at the levels of 10%, 5%, and 1% are indicated by *, **, and ***)

Where:

$MEET_{it}$: A dummy variable equal to one when earnings surprises are non-negative and zero otherwise. Earning surprise is the difference between actual earnings and median analysts' earnings forecasts for firm i in year t (Collected from I/B/E/S).

$SEC\text{-}GAIN_{it}$: Securitization gain for firm i at the end of year t is collected from firm's 10K and is scaled by last year's stockholder equity.

$INDU\text{-}GAIN_t$: Average securitization gain of companies in the same industry at the end of year t deflated by the stockholders' equity.

$MKT\text{-}VOL_{it}$: Market volatility for firm i at the end of year t as a proxy for risk.

$DIS\text{-}RATE_{it}$: Discount rate for firm i at the end of year t used in estimation of fair values of assets[16].

$SIZE_{it}$: Natural log of total assets for firm i at the end of year t.

$LVRG_{it}$: Total liability scaled by total assets for firm i at the end of year t.

$LIQUIDITY_{it}$: Total cash and cash equivalents scaled by total assets for firm i at the end of year t.

ROE_{it}: Return on equity for firm i in year t (collected from COMPUSTAT).

[16] U.S. companies are required to report the discount rate that they use in fair value calculation.

V. CONCLUSIONS

The criteria for securitization differ under U.S. GAAP and IFRS. SFAS 140 (revised by SFAS statement 166 in 2009) is criticized for having easier criteria than IAS 39 set by IFRS. Dechow et al. (2010) used a sample of U.S. firms for the period before 2005 and find evidence of earnings management through securitization.

In this dissertation, I first used all U.S. companies that are engaged in securitization transactions and test the possibility of earnings management using securitization. I examine all companies that have completed data for three time periods to capture changes in the economy and regulations. I find evidence of earnings management for the period 2005-2006 (before the financial crisis) for companies following U.S. GAAP. I have found support for one of my hypotheses only; however, my results do not support the discount-rate hypothesis. That is, my findings show that the discount rate is not used for manipulating fair value of retained interest. The possible explanation for the observed positive association between meeting/beating analysts' forecasts and securitization gain during 2005-2006 is that, as studies show under SFAS No. 140, the conditions for sales-accounting securitization was easily met and managers were able to manage earnings. However, I have not found the same results for 2008-2009 because during this period, companies were under a lot of scrutiny as they faced financial difficulties. Under this condition, the opportunity for securitization was low, and managers became more conservative. For companies following IFRS, as I expected, the results do not show any evidence of earnings management because the criteria to meet sales-accounting securitization is harder. The same is true for companies that followed

U.S. GAAP during the second and third period (2008-2009, 2010). It appears that since the economic crisis of 2007, managers are under more scrutiny and investigation. In other words, the opportunity cost of earnings management has become extremely high, and that is why the occurrence of earnings management has declined during the last few years.

In summary, the results indicate that Statement 166 has reduced the differences between the GAAP and the IFRS in regard to securitization activities[17]. This is an example that shows convergence with IFRS can be beneficial to U.S. investors.

[17] In order to reduce the differences between accounting standards set by FASB and ISBA in regard to financial assets and securitizations activities, FASB, in June of 2009, published statement no. 166, Accounting for Transfers of Financial Assets, which was a revision to Statement no. 140, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities. This new standard requires more disclosures on transfer of financial assets, specifically when firms retain partial interest in the transferred assets, which consequently exposes the firm to risk. The new regulation has also set new criteria for de-recognizing financial assets. Under this statement, "qualifying special-purpose entity" is eliminated. The Financial statements prepared from the beginning of 2010 should reflect the impact of the new standard. The new standard influences my papers as well; therefore, I expanded my data from 2005 to 2010 to show the impact of differences in accounting standards and the impact of the new standard.

CHAPTER III

PAPER TWO: SECURITIZATION GAIN, COMPETITIVE ADVANTAGE AND EARNINGS MANAGEMENT

I. INTRODUCTION

In this paper, I examine whether gain from securitization is the product of earnings management or the result of a firm's competitive advantage. Companies sell or securitize assets to gain several benefits, such as generating capital, transferring risks to a third party, and improving financial ratios. Securitization can generate gain for several reasons which I am investigating in this paper using all companies that follow the U.S. GAAP.

Prior studies provide evidence that managers use accounting for valuation of retained interest in securitized assets to record gain (Bartov 1993; Karaoglu 2005; Dechow et al. 2010). Retained interest is the portion of the receivables that the company is holding and has not yet sold. However, Barth and Taylor (2010, BT hereafter) argue that a positive income from securitization could be realized because the company has a competitive advantage in originating financial assets and selling them at a profit. Therefore, BT suggests that this gain is not necessarily the consequence of earnings management. BT also suggests that a gain can be realized from cherry-picking, which means that for the purpose of securitization, managers select assets that have appreciated most in their values as compared to their historical costs. Karaoglu (2005) finds evidence that supports the cherry-picking theory suggested by BT.

Dechow et al. (2010) investigates securitization and earnings smoothing using flexibility in fair-value accounting for estimating the retained interest in securitized asset for a sample of American companies. Karaoglu (2005) investigates loan sales and loan transfer (securitization) and earnings management for a sample of American banks. In my second paper, consistent with BT's proposition, I investigate whether the companies that follow U.S. GAAP and securitize assets realize gain because of their competitive advantage in creating loans and financial assets or because of management discretion. Existing studies have focused most on securitization and earnings management by companies or banks which follow the U.S. GAAP; however, I expand my study to examine the possible determinants (earnings management vs. competitive advantage) for the reported gain from securitization.

Asset securitization has significantly changed the field of finance. It improves liquidity for financial institutions, helps in utilizing capital at its highest level, and opens more opportunities for investment. Nevertheless, securitization is a complex process and involves accounting approaches such as fair-value accounting, which is very controversial (Wallison 2008a & 2008b; Whalen 2008; Forbes 2009;Gaschler 2010; Skeel 2011). Fair-value accounting is a method of accounting which requires or allows the users to report assets and liabilities at their market values when preparing financial statements. However, fair-value accounting rules are complex, flexible, and subject to user's discretion when estimating the value of financial instruments. Since asset securitization has become very important in the financial market, it is important for investors, standard-setters, lawmakers, auditors, and other players in the market to know

the way firms use this method for generating capital. The result of this section should help investors in figuring out whether a firm's reported securitization gain is a sign of competitive advantage or of managers' opportunistic acts.

The remainder of this paper is organized as follows. First, I offer background and explanation on some important issues, and then I continue with hypothesis development, data collection, empirical tests, results, and conclusions.

II. BACKGROUND AND HYPOTHESES DEVELOPMENT

In this section, I provide information about key components of this study, including securitization, fair-value accounting, earnings management, and competitive advantage. I also develop the hypotheses of this study.

Securitization

Securitization is a method of generating cash through which sellers of assets can transfer part of ownership's risks and benefits to a third party who is willing or able to assume the risks. In this process, the interest in a pool of assets is sold to a special-purpose entity. Adhikari and Betancourt (2008) simply define securitization as "a tool for financing a pool of assets."

Before the 1970s, when securitization first started, banks were basically portfolio lenders, and they would hold onto loans until the loans were paid off. Since the1970s, securitization has become very common, and companies (financial and non-financial) use the new approach of pooling together receivables, loans, and other financial assets, and issuing securities that are backed by the expected cash flows from pooled assets.

As shown in Figure 1 and discussed earlier, in a simple securitization process, the selling firm (the transferor of assets) transfers the ownership of a pool of assets to a special-purpose entity (SPE), which is usually owned by the transferor firm and can be a trust or corporation. Next, the SPE issues securities backed by the interest in the expected cash flows from the pooled assets, and transfers proceeds from the sale of securities to the transferor of assets. A servicing company, usually the transferor firm, collects the cash flows over the life of the assets and passes it to investors through the special-purpose entity.

Investors are usually risk-averse; therefore, the securitization transaction is structured in such a way that the transferred assets are separated from transferor's other assets in order to limit the investors' risk should the transferor faces financial problems. The limitation in risk increases the investors' demand for securitized assets. As a result, firms are able to raise capital with lower costs than in conventional borrowing. Securitization can benefit the seller in different ways and, because of its benefits, it has become so important that in the United States alone, more than fifty percent of debt issued in 2003 was securitized assets[1]. During the same period, European countries increased their securitization by about 38 percent[2] over the previous year. A single, 1.6 billion-dollar-securitization transaction by a Chinese firm in 2003 also shows that securitization has become a worldwide financial activity.

[1] Source: Bond Market Association (2004)

[2] Source: European Securitization Forum (2004)

Table 3-1 is a summary of the parties involved in securitization, and the possible benefits and risks affecting each party.

Table 3-1
Parties, Benefits, and Risks Involved in Securitization

Parties Involved	Benefits	Risks involved in securitization process
Originators of loans	Increase the return on capital - Lower borrowing costs - Create additional capital - Better asset/liability management	Originator of assets can be in risk when facing financial difficulties. As a result, their creditors can go after the company's sold assets.
Investors	Securitized assets offers - Better yields - Increase market liquidity - Better protection - Flexible payment stream which best suits the investors	Moral Hazard: Management can cherry-pick the assets that have a bad repayment history. Complexity: The complexity of accounting for securitization reduces the transparency; therefore, this makes the prediction and analysis of security performance very difficult. Valuation: Valuation of securities for which market value is not available.
Borrowers	Increase availability of credits	

Securitization can be structured as secured borrowing or as a sales transaction. Managers prefer the sales transaction because it allows them to eliminate the sold assets from their balance sheet and recognize a gain/loss which is equal to the difference between the book value and sale price of the assets. However, in the case of secured borrowing, the asset is not removed from the balance sheet, and the liability is increased

by the amount of cash received for the assets. The problem with secured borrowing is the increase in the firm's leverage, which is not desirable. Niu and Richardson (2006) show that the leverage ratio of a sample of American firms would have been significantly higher if the transferors had accounted their sale of assets as secured borrowing. Nevertheless, the accounting for securitization is not simple, and it becomes more complicated when it is not clear whether transaction is treated as a secured borrowing or a sales transaction.

Both types of securitization (secured borrowing and sale) have great impact on financial statements. Firms can sell any asset that generates cash flow, from the most common one, which is trade receivables, to other kinds of assets, such as automobile and mortgage loans, and receivables from credit cards.

Fair-Value Accounting

Fair-value accounting basically means reporting assets and liabilities at their fair values. Determining the market price of some assets is difficult, specifically when a country is going through economic and financial crises, and the market value of some assets are not available. As a result, the fair value of assets has to be subjectively estimated. Therefore, critics blame fair-value accounting for the recent financial crisis. They argue that in these situations, models based on subjective estimation are used for assessing the fair value of assets whose active market prices are not available (Laux and Leuz 2009). Byrne et al. (2008) find evidence that managers implement fair-value accounting with different levels of conservatism. Other studies also show that unobservable or unavailable values result in estimation of fair values which are subject to

estimation errors (Barth and Landsman 1995). Fiechter and Meyer (2009) use a sample of 552 U.S. companies and investigate the association between measurement of fair-value accounting and earnings management. They find that managers in their sample firms use the complexity of fair-value measurement for managing earnings. Another study by Ryan (2008) also provides evidence showing that when market prices for some liquid assets are not available, estimation of fair value can be open to earnings manipulation.

Earnings Management

Prior studies show many reasons for managers to manage earnings. Income smoothing (Bartov 1993; Graham et al 2005), components of compensation (Shrieves and Gao 2002; Bergstresser and Philippon 2006; Shuto 2007), the IPO process (Teoh et al. 1998; Li et al. 2006), loan covenant (Bartov 1993; El-Mahdy 2010), and beating or meeting analysts' earnings forecasts (Athanasakou et al. 2009; Abarbanell and Lehavy 2003) are some factors which motivate discretionary decisions. However, factors which encourage earnings management are not the focus of this paper, and my goal is to show that managers use fair-value accounting estimation of retained interest in securitized assets to show gains in order to meet analysts' forecasts.

Historical cost accounting requires assets to be recognized at their acquisition costs when purchased, and any appreciation in the value of asset is not recognized unless the ownership of the asset is transferred to another party. When a firm sells assets, managers can take advantage of historical accounting rules to record the gain in two ways. Managers can cherry-pick those assets with the greatest difference between their historical costs and market fair values to obtain a higher gain. Or, managers can achieve

desirable gains by taking advantage of the flexibility entangled with the fair-value accounting estimation of retained interests in the securitized assets (Dechow et al. 2010).

Consolidation and de-recognition are the two issues essential to accounting for securitizations, of which the latter is related to our study. When the securitized asset is removed from transferor's books, and the transferor's involvement in the asset is stopped, the accounting and de-recognition is simple. However, accounting for securitization becomes complicated when the transferor stays involved with the sold assets "either in the form of servicing, recourse, or retention of some of the cash flows" (Adhikari and Betancourt 2008, 77).

In situations where the transferor keeps partial interest in the pooled assets, and the market value of the retained portion of assets is not available, the fair-market value of the retained interest has to be estimated. This estimation is usually based on private information and the discretion of managers.

Competitive Advantage

Porter (1985) was the first to promote low-cost or differentiation strategies as a way for firms to achieve competitive advantage. Barney (1996) defines competitive advantage as a strategy which creates value and is dominated by one firm, where competitors cannot imitate the strategy easily. Firms can achieve competitive advantage through a well-designed strategy (e.g. differentiation) or through the possession of rare/unique resources. Using either method, firms can improve performance and offer better-quality services which, in turn, win customers' loyalty. Kulatunga (2007) argues

that firms can gain competitive advantage by jointly using their distinguished skills and rare resources.

As mentioned before, studies showed evidence of earnings management using fair-value accounting through securitization. Barth and Taylor (2010) defend fair-value accounting by arguing that securitization gain could be the result of companies' competitive advantage over unique resources or activities. In this dissertation, I control for the companies' competitive advantage and examine the earnings management in relation to securitization. Therefore, I control for components of firms' competitive advantage and investigate the claim made by Dechow et al., which states that managers use fair-value accounting rules to manage earnings. Thus I hypothesize:

H1: For companies that follow U.S. GAAP (risk-based approach), there is a positive association between securitization gain and meeting or beating financial analysts' forecasts after controlling for the components of competitive advantage.

III. DATA COLLECTION AND METHODOLOGY

This section discusses the data collection and methodology used in this study.

Data Collection

I used LexisNexis and several keywords to find companies in the U.S. that used securitization transactions during the periods 2005 -2006 and 2008-2010, and have almost all of the related data. I have come up with a total of 355 company-year observations for 71 companies that follow the U.S. GAAP. Dechow et al. (2010) made a similar study in the period between 2000 and 2005 and collected a total of 96 companies. Given that the size of securitization activities has declined significantly since the 2000-2005 period, I believe the chance that I have missed any company engaged in

securitization activities and not on my list is extremely low. I use "securitisation", "securitization", "financial asset", "receivable" and many more key terms to find companies with securitization activities. I went through companies' annual financial reports (10-K) and hand-collected the securitization data. LexisNexis and Google Finance were extremely helpful in finding companies' financial reports, stock information, email addresses, and phone numbers. In addition, I used : a) the Research Insights (COMPUSTAT) database to collect the financial data, b) The Center for Research in Security Prices (CRSP) database to collect monthly stock returns and stock prices, c) the SEC's Edgar database to look at companies' 10-K reports, d) the Institutional Brokers' Estimate System (I/B/E/S) to collect analysts' earnings and return forecasts, and e) Lexis-Nexis and other online sources.

Methodology

Shareholders of companies with competitive advantage in their fields enjoy higher benefits and values, which should increase their return on capital more than their cost of capital. Consequently, following Gjerde et al. (2010), from here on GKS, I use the following equation to calculate competitive advantage:

$$CA = ir - k \qquad \ldots (2\text{-}1)$$

Where:

CA is competitive advantage, ir is the internal rate of return on invested capital, and k is the corresponding cost of capital.

Companies with positive CA (return on capital is higher than risk-adjusted cost of capital) have a competitive advantage, which means that some of their activities are

creating more value. GKS take their calculations one step further to examine whether a company's source of competitive advantage is industry-based or resource-based. Therefore, they modify equation (1) as follows:

$$CA_{it} = (ir_{It} - k_{It}) + (ir_{it} - ir_{It}) + (k_{It} - k_{it}) \quad \ldots (2\text{-}2)$$

Where:

$CA_{IB} = (ir_{It} - k_{It})$ represents the industry-based competitive advantage, and is the difference between the industry's average return on capital, $\mathbf{ir_{It}}$ and the industry's average cost of capital. A positive CA_{IB} indicates that the industry is earning an average return higher than its average cost of capital. The industry's competitive advantage results from a superior advantage, such as barriers to entry.

$CA_{RB} = \mathbf{(\ ir_{it} - ir_{It}\ )} + (\ k_{It} - k_{it}\ )$ represents the resource-based competitive advantage. It is the sum of $RED_{RB} = \mathbf{(\ ir_{it} - ir_{It}\ ),}$ the difference between the firm's return and the industry's average return, and the resource-based competitive advantage: $RID_{RB} = (\ k_{It} - k_{it}\ )$, the difference between the industry average cost of capital and the firm's cost of capital. A positive RED_{RB} shows that, on average, the company is making higher returns than the industry, which could be a result of unique resources or a unique ability specific to that company. For example, a company may be able to generate loans better than its rivals in the industry. GKF view this variable as a risk-based advantage and suggest that both components of resource-based advantage be used since risk cannot

separated from return[3]. Following GKF, I use the annual accounting return on equity as a proxy for ir, which is the earnings divided by the book value of the stockholders' equity.

Cost of Capital

In prior studies, many methods were used to estimate the cost of capital. Scholars have criticized the cost-of-capital models for not providing firm-specific estimates, and also for the lack of empirical validity (Easton 2006). Jain (2005) uses eight different models to investigate the association between the cost of capital and electronic trading and finds different results. In another study, Dhaliwal et al. (2006) use accounting-based models to estimate the cost of capital. They examine the impact of corporate and personal tax on the association between the cost of capital and a company's leverage. Easton and Monahan (2005) use seven accounting-based models to estimate the cost of capital and test the validity of these models. Their results show that none of the estimated cost-of-capital models is reliable.

Nevertheless, even though all cost-of-capital models are criticized, they are widely used in practice and in empirical research. Therefore, for estimating the cost of capital, k, I adopt the following model from Easton et al. (2002), which is a variation of the residual income valuation model.

[3] A positive return difference could be the result of a firm's high-risk assets.

$$P_{it} = bps_{it} + \frac{E_t[(ROE_{it+1} - k_i) \times bps_{it}]}{(k_i - g_i)} \quad \ldots (2\text{-}3)$$

Where:

P_{it} : Price per share

bps_{it} : Book value per share

ROE_{it+1} : Return on equity (4 year expected cumulative dividend earnings per share after date t)

g_{it} : Growth rate (expected rate of growth in residual income)

k_{it} : Expected cost of capital

I have used the following model to test my hypothesis for different time periods, running the model three times - once for the period before the financial crisis (2005-2006), once for the period after the crisis (2008-2009), and lastly, once for 2010, in which the new Standard regarding securitization was issued[4]. The positive sign of the coefficient of MEET supports my hypothesis.

$$\text{SEC-GAIN}_{it} = \beta_0 + \beta_1 \text{MEET}_{it} + \beta_2 \text{CA}_{\text{IB, it}} + \beta_3 \text{RED}_{\text{RB, jt}} + \beta_4 \text{RID}_{\text{RB, jt}} + \beta_5 \text{PRESEC-EAR}_{jt} + \beta_6 \text{SIZE}_{it} + \beta_7 \text{LIQUDITY}_{it} + B_8 \text{BETA}_{it} + \beta_9 \text{ROA}_{it} + \varepsilon_j \quad \ldots (2\text{-}4)$$

Where:

SEC-GAIN_{it}: The gain from securitization obtained from companies' 10-K filing with the SEC for firm i in year t.

[4] Financial reports for 2010 reflect the impact of SFAS 166.

$MEET_{it}$: Equal to one when there is a non-negative earnings surprise and zero otherwise.[5]

$CA_{IB,\,it} = (ir_{It} - k_{It})$: The industry-based competitive advantage.

$RED_{RB,\,it} = (ir_{it} - ir_{It})$: The difference between the firm's return and the industry's average return.

$RID_{RB,\,it} = (k_{It} - k_{it})$: The difference between the industry's average cost of capital and the firm's cost of capital.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i in year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

$SIZE_{it}$: Natural log of total assets for firm i in year t.

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t.

$BETA_{it}$: Market-specific risk for firm i in year t.

ROA_{it}: Return on assets for firm i in year t.

IV. RESULTS

Table 3-2 represents the descriptive statistics for the variables used in regression analysis. The three panels of this table contain the information for the three periods used in the study (2005-2006, 2008-2009, 2010). I have divided my study into three periods to better capture the effects of changes in the economy and market. I consider 2007 to be the main period of crisis. The first period (2005-2006) covers the period before financial crisis, the second period (2008-2009) reflects the period after the financial crisis, and

[5] Earnings surprise is calculated as the difference between actual earnings and mean pre-announcement forecast.

finally the last period (2010) should show the impact of the new regulation for securitization. My study consists of 71 companies from 5 different industries with a total of 355 company-year observations. Securitization gains, pre-securitization earnings, and industry securitization gains are scaled by prior-year equity. Other control variables, such as liquidity and capital expenditures, are scaled by total assets. Using residual analysis, all outliers are detected and removed from the regression model. In the residual analysis, I ran the original model and calculated the residual-squared, then plotted the residual-squared against each independent variable to find outliers, which are eliminated from the analysis.

Table 3-2
Descriptive Statistics for Paper Two (companies following U.S. GAAP)
(Year 2007 is the crises year and is excluded from the analyses)

Panel A: 2005-2006

Variable	Obs.	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min.	Max.
SEC-GAIN $_{it}$	142	0.009612	0.073007	0	8.45E-07	0.00024	0.12204	0.830171
MEET $_{it}$	142	0.253521	0.436567	0	0	1	0	1
$CA_{IB, it}$	130	6.683923	2.047742	6.14	6.22	6.59	1.53	11.9
$RED_{RB, it}$	130	-0.10554	12.76548	-4.0975	-1.01	2.9975	-63.58	69.43
$RID_{RB, it}$	130	7.69E-05	3.261971	-2.04	0.08	1.955	-14.02	7.31
PRESEC-EAR $_{it}$	142	0.019833	0.171974	-0.0000822	1.60E-06	0.000306	-0.59739	1.599352
SIZE $_{it}$	126	9.229762	2.565112	7.5475	8.965	10.78	1.97	14.45
BETA $_{it}$	103	0.881825	0.810627	0.409	0.821	1.372	-4.175	2.82
LIQUIDITY $_{it}$	126	0.087852	0.339538	0.0102777	0.023939	0.055696	0.00000	3.570135

Table 3-2
Descriptive Statistics for Paper Two (Continued)

Panel B: 2008-2009

Variable	Observation	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min.	Max.
SEC-GAIN $_{it}$	142	0.018526	0.093198	0	0.0002059	0.0102173	0.0000	0.490933
MEET $_{it}$	142	0.542254	0.499975	0	1	1	0	1
$CA_{IB, it}$	130	2.808385	7.73002	-3.01	-2.13	6.06	-3.01	20.66
$RED_{RB,it}$	130	0.001923	18.62295	-6.38	-0.45	7.095	-79.84	77.46
$RID_{RB, it}$	130	-0.00077	3.911702	-2.22	0.5	2.7225	-15.85	7.24
PRESEC-EAR $_{it}$	142	0.015754	0.449393	-0.010081	-0.000227	0.000056	-1.67161	4.918738
$SIZEit_{it}$	124	9.244106	2.669727	7.290797	8.966519	11.0027	3.619851	14.6145
BETA $_{it}$	126	1.543659	2.602721	0.647	1.228	1.822	-0.664	28.652
LIQUIDITY $_{it}$	124	0.079873	0.206706	0.012406	0.026796	0.073368	0.00000	2.031702
ROA_{it}	90	0.381145	11.35542	-0.40725	0.737	4.09225	-71.658	17.307

Panel C: 2010

Variable	Observation	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min.	Max.
SEC-GAIN $_{it}$	71	0.006407	0.025225	0	0.000014	0.00031	0.003944	0.170963
MEET $_{it}$	71	0.577465	0.497479	0	1	1	0	1
$CA_{IB, it}$	65	4.031384	12.08958	-1.54	-1.45	2.89	-1.45	40.46
$RED_{RB, it}$	65	-0.00031	29.60198	-3.675	1.8	7.09	-87.15	169.14
$RID_{RB, it}$	65	0.001538	3.756628	-2.395	0.37	2.39	-12.48	7.8
PRESEC-EAR $_{it}$	71	0.068115	0.186212	-0.00006	0.000042	0.060571	-0.170963	0.964404
SIZE $_{it}$	59	9.330365	2.721738	7.408278	9.15173	11.06695	3.633922	14.63305
ROA_{it}	49	8.863857	34.90148	1.086	1.812	4.8375	-0.884	245.746

Where:
$SEC\text{-}GAIN_{it}$: Gain from securitization obtained from company's 10-K filing with the SEC for firm i in year t.
$MEET_{it}$: Equal to one when there is non-negative earnings surprise and zero otherwise.[6]
$CA_{IB, it} = (ir_{It} - k_{It})$: The industry-based competitive advantage.
$RED_{RB, it} = \mathbf{(\ ir_{it} - ir_{It}\ ):}$ Difference between the firm's return and the industry's average return.
$RID_{RB, it} = (\ k_{It} - k_{it}\ )$: Difference between the industry's average cost of capital and the firm's cost of capital.
$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i in year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.
$SIZE_{it}$: Natural log of total assets for firm i in year t.

[6] Earnings surprise is calculated as the difference between actual earnings and mean pre-announcement forecast.

$BETA_{it}$: Market-specific risk for firm i in year t.
$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t.
ROA_{it}: Return on assets for firm i in year t.

Table 3-3 is presented in three panels to show the correlation matrices for companies from three time periods. As indicated in this table, some of the variables have significant (indicated by * as marginally significant or p-value between 0.05 and 0.1, ** as significant or p-value between .01 and 0.05, and *** as highly significant or p-value less than 0.01) relationship with each other; however, none of the correlations are of high magnitude[7]. The common rule of thumb for identifying multicollinearity is a variance inflation factor (VIF) of 10 or more, or a tolerance of 0.1 or less. Another way is to examine the bivariate correlations between independent variables and look for correlation of 0.7 or higher. Lastly, muticollinearity may be present when the overall model is significant but none of the independent variables are significant. After dropping variables that show a high bivariate correlation, my analysis does not show any of the above symptoms.

[7] As a rule of thumb, there is a serious correlation between two variables when the magnitude of correlation is higher than .7.

Table 3-3
Correlation Matrices for Paper Two (companies following U.S. GAAP)

Panel A: period 2005-2006.

Variable	$MEET_{it}$	$CA_{IB,\ it}$	$RED_{RB,\ it}$	$RID_{RB,\ it}$	$PRESEC\text{-}EAR_{it}$	$SIZE_{it}$	$BETA_{it}$
$MEET_{it}$	1						
$CA_{IB,\ it}$	-0.079	1					
$RED_{RB,\ it}$	0.0872	0.0023	1				
$RID_{RB,\ it}$	0.0279	0.0000	-0.1957*	1			
$PRESEC\text{-}EAR_{it}$	-0.041	-0.034	0.0485	-0.049	1		
$SIZE_{it}$	0.1396	-0.1842**	0.3573***	0.0321	0.0807	1	
$BETA_{it}$	0.0995	0.1124	0.4489***	0.005	-0.0139	0.3724***	1
$LIQUIDITY_{it}$	0.1268	0.0873	-0.0033	-0.095	0.0399	-0.2447***	-0.1031

Panel B: period 2008-2009.

Variable	$MEET_{it}$	$CA_{IB,\ it}$	$RED_{RB,\ it}$	$RID_{RB,\ it}$	$PRESEC\text{-}EAR_{it}$	$SIZE_{it}$	$BETA_{it}$	$LIQUIDITY_{it}$
$MEET_{it}$	1							
$CA_{IB,\ it}$	-0.2634***	1						
$RED_{RB,\ it}$	-0.018	-0.0001	1					
$RID_{RB,\ it}$	-0.0583	0.0001	0.1157	1				
$PRESEC\text{-}EAR_{it}$	0.0841	-0.066	0.0056	-0.046	1			
$SIZE_{it}$	0.2227**	-0.3683***	0.1254	0.1623*	-0.0029	1		
$BETA_{it}$	0.0785	-0.0762	0.0327	0.1534*	0.0181	0.0831	1	
$LIQUIDITY_{it}$	0.1542*	0.1061	0.1088	-0.045	-0.0349	-0.1957**	-0.01	1
ROA_{it}	0.015	0.1323	0.2358	0.0808	-0.0299	0.0527	-0.103	0.186*

Table 3-3
Correlation Matrices for Paper Two (Continued)

Panel C: period 2010.

Variable	$MEET_{it}$	$CA_{IB,\ it}$	$RED_{RB,\ it}$	$RID_{RB,\ it}$	$PRESEC\text{-}EAR_{it}$	$SIZE_{it}$
$MEET_{it}$	1					
$CA_{IB,\ it}$	-0.132	1				
$RED_{RB,\ it}$	-0.118	0	1			
$RID_{RB,\ it}$	0.0434	0	-0.04	1		
$PRESEC\text{-}EAR_{it}$	0.1509	-0.1135	0.1003	-0.0979	1	
$SIZE_{it}$	0.1603	-0.1868	0.119	0.2602**	0.2301*	1
ROA_{it}	0.089	-0.0827	0.1101	-0.1593	0.2013	0.2102

Note:

1- Pearson correlation is reported in the above tables. Significance at the levels of 10%, 5%, and 1% are represented by *, **, and ***.
2- To test for multicollinearity among variables, the Variance Inflation Index was used and no serious correlation was detected.

Where:

$MEET_{it}$: Equal to one when there is non-negative earnings surprise and zero otherwise.[8]

$CA_{IB,\ it} = (ir_{It} - k_{It})$: The industry-based competitive advantage.

$RED_{RB,\ it} = (ir_{it} - ir_{It})$: Difference between the firm's return and the industry's average return.

$RID_{RB,\ it} = (k_{It} - k_{it})$: Difference between the industry's average cost of capital and the firm's cost of capital.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i in year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

$SIZE_{it}$: Natural log of total assets for firm i in year t.

$BETA_{it}$: Market-specific risk for firm i in year t.

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t.

ROA_{it}: Return on assets for firm i in year t.

Table 3-4 is a summary of regression analyses for the three time periods. For the first two periods, I used multivariate-panel data-regression models to examine whether

[8] Earnings surprise is calculated as the difference between actual earnings and mean pre-announcement forecast.

companies reporting gain from securitization activities are likely to have manipulated earnings, or if any relationship exists between their competitive advantage variables and the securitization gain.

The results for period 2005-2006 indicate: 1) a strong positive association between securitization gain and meeting/beating earnings forecasts, which supports the hypothesis of this dissertation; 2) on the other hand, a highly significant negative association between PRESEC-EAR (proxy for manager's motivation for earnings management)[9] and securitization gain. Taken together, the overall results for 2005-2006 (the period when mortgage companies and financial institutions were strong in generating loans and selling them) support my hypothesis and are consistent with findings by Dechow et al (2010). The significant negative coefficient of PRESEC-EAR shows that managers had the motivation and opportunity to sell loans and earn positive income.

The second part of Table 3-4 represents the results for the period 2008-2009. As indicated in the table, there is no significant association between securitization gain, the dependent variable, and MEET, which indicates that securitization gain during this period (after the crisis) was not associated with earnings management. My interpretation of this result is that companies were under more scrutiny after the crisis and also, because of the problems with the mortgage companies, the number and magnitude of securitization activities had dropped significantly. However, the result shows significant negative association between one of two components of competitive advantage and SEC-GAIN.

[9] PRESEC-EAR is net income before the gain from securitization; therefore, when PRESEC-EAR is low or negative, managers might be motivated to manage earnings.

This result points out that competitive advantage could adversely affect securitization activities. The result also shows significant negative association between PRESEC-EAR and securitization gain, which means that managers still had the motivation to manage earnings. This finding is consistent with the severe economic crisis in the economy.

The last three columns of the table present results for 2010, in which a new standard, SFAS 166, was implemented. This change is expected to be reflected in companies' annual reports. My explanation for not having any significant relationship between meeting/beating forecast and SEC_GAIN during this period is that under the new standard, it is harder for companies to meet the conditions for sale accounting. Furthermore, the secured borrowing increases the amount of leverage on financial statements, which is generally not desirable. Nevertheless, my results do not show any association between the components of competitive advantage and securitization gain. This indicates that companies' competitive advantage is not responsible for securitization gain during this period. I should note that the explanatory power of the model in the first two periods is high (R-squared of 0.45 and 0.61, respectively), but it is low in the last period (R-squared of 0.01). The low explanatory power of the model in the third period can be attributed to its observations that are limited to only one year (2010).

Table 3-4
Regression Results for Paper Two (for companies following U.S. GAAP)

$$SEC\text{-}GAIN_{it} = \beta_0 + \beta_1 MEET_{it} + \beta_2 CA_{IB,\,it} + \beta_3 RED_{RB,\,jt} + \beta_4 RID_{RB,\,jt} + \beta_5 PRESEC\text{-}EAR_{jt} + \beta_6 SIZE_{it} + \beta_7 LIQUDITY_{it} + B_8 BETA_{it} + \beta_9 ROA_{it} + \varepsilon_j$$

	2005-2006			2008-2009			2010		
$SEC\text{-}GAIN_{it}$	Coef	z-value	P>|z|	Coef	z-value	P>|z|	Coef	t-value	P>|t|
$MEET_{it}$	0.0335847***	3.16	0.002	0.0002844	0.14	0.893	0.0017131	0.43	0.671
$CA_{IB,\,it}$	0.0016206	0.65	0.516	-0.001530***	-4.29	0.000	-0.0001058	-0.59	0.561
$RED_{RB,\,it}$	0.0005315	0.74	0.459	0.0000439	0.84	0.404	0.0000504	0.61	0.547
$RID_{RB,\,it}$	-0.0021454	-1.27	0.203	-0.0001185	-0.48	0.632	-0.0004267	-0.87	0.392
$PRESEC\text{-}EAR_{it}$	-0.350433***	-4.96	0.000	-0.975104***	-63.94	0.000	-0.0100657	-0.99	0.329
$SIZE_{it}$	0.0048983	0.97	0.332	0.0004201	0.98	0.327	0.0006031	0.69	0.492
$LIQUDITY_{it}$	-0.1612803**	-2.52	0.012	-0.0092278**	-2.14	0.032	-	-	-
$BETA_{it}$	-0.0036547	-0.35	0.729	-0.0000203	-0.07	0.946	-	-	-
ROA_{it}	-0.0000373	-0.34	0.733	-0.00000165	-0.02	0.986	-0.000027	-0.56	0.58
Cons.	-0.0337832	-0.58	0.565	0.0282041***	3.32	0.001	-0.002533	-0.28	0.78
Adj. r-squared:	0.4548 ***			0.6131***			0.0107		

(Note: Significance at the levels of 10%, 5%, and 1% are indicated by *, **, and ***.)

Where:

$SEC\text{-}GAIN_{it}$: The gain from securitization obtained from company's 10-K filing with the SEC for firm i in year t.

$MEET_{it}$: Equal to one when there is non-negative earnings surprise and zero otherwise.[10]

$CA_{IB,\,it} = (ir_{It} - k_{It})$: The industry-based competitive advantage.

$RED_{RB,\,it} = (\,ir_{it} - ir_{It}\,)$: Difference between the firm's return and the industry's average return.

$RID_{RB,\,it} = (\,k_{It} - k_{it}\,)$: Difference between the industry's average cost of capital and the firm's cost of capital.

$PRESEC\text{-}EAR_{it}$: Earnings before securitization gain for firm i in year t (also is a proxy for manager incentive for earnings management). All earnings data are collected from companies' 10-Ks filed with the SEC.

$SIZE_{it}$: Natural log of total assets for firm i in year t.

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t.

$BETA_{it}$: Market-specific risk for firm i in year t.

ROA_{it}: Return on assets for firm i in year t.

[10] Earnings surprise is calculated as the difference between actual earnings and mean pre-announcement forecast.

V. CONCLUSIONS

Securitization is a new concept and practice, and many individuals are not familiar with its complicated process. Securitization has become a popular method of financing over the past few decades. Nevertheless, prior studies show that the accounting standards related to securitization (e.g. fair-value accounting) can be misused by managers to smooth, time, or manipulate earnings (Karaoglu 2005; Hunton et al. 2006; Dechow et al. 2010). Barth and Taylor (2010) suggest that gain from securitization could also be a result of the company's competitive advantage, from a special ability or a unique resource.

I have used all companies that reported securitization gain during 2005-2006 (before the financial crisis), 2008-2009 (after the crisis), and 2010 (when financial statements reflected the impact of SFAS 166[11]). That is, my study consists of 355 firm-year observations. The result of regression analysis shows that there is a significant association between meeting/beating earnings forecast and securitization gain during the period before the crisis. However, there is no positive relationship between securitization gain and competitive advantage for any time period. Also, there is no indication of earnings management for the period 2008-2010. It is argued, but it has not yet been proven, that companies have become more conservative since the issuance of SFAS 166.

I believe that after the crisis year of 2007, companies were under more scrutiny, and also mortgage companies were facing many challenges, so the number and

[11] The criteria for securitization transaction under SFAS 140 are criticized for being too easy to be met sales condition (Niu and Richardson 2004).

magnitude of securitization activities dropped significantly. However, the result shows significant negative association between one of two components of competitive advantage and SEC-GAIN. This result points out that competitive advantage could adversely affect securitization activities. The result also shows significant negative association between PRESEC-EAR and securitization gain, which means that managers still had the motivation to manage earnings. This finding is consistent with the severe economic crisis. I also show that after FASB Statement 166 became effective at the beginning of 2010, it became harder for companies to meet the conditions for sale accounting, so the opportunity for earnings management declined. Lastly, I show that a company's competitive advantage is not responsible for securitization gain during this period.

CHAPTER IV

PAPER THREE: SECURITIZATION, INVESTORS' PROTECTION AND VALUE RELEVANCE

I. INTRODUCTION

In this part of my dissertation, I first investigate the impact of securitization gain on the value-relevance of accounting information. My next focus is on earnings management through securitization transactions by companies operating in different countries with a variety of laws and law enforcement regimes that follow International Financial Reporting Standard (IFRS). European regulators have required the companies operating in the European Union countries to adopt the IFRS since the beginning of 2005. The main objectives of this paper are to examine the market relevance of an accounting performance measure, return on equity, for companies that are engaged in securitization transactions, as well as to investigate the dual impacts of different legal systems and levels of investor protection on earnings management using asset securitization .

Securitization is a fast and easy approach for generating cash and transferring the risk of holding assets to a third party. Securitization occurs in different areas, from corporate loans, home loans, and personal loans to store credit cards, auto leases, and even song royalties. in many ways, securitization benefits a company. However, because of the complexity of issues and accounting standards related to securitization, problems may arise from the securitization process. Prior studies show that managers can use their discretion to increase gain through asset securitization (Hunton et al. 2006; Dechow et al. 2010).

Jenson and Meckling (1976) define:

> "…an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. If both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal."

Based on the Agency theory, investors usually have little faith in management. Therefore, investors do not place high value on managers' decisions, particularly when those decisions involve complex processes and ambiguous outcomes.

One of the accounting methods related to the securitization process that can give discretion to managers is fair-value accounting, which involves the estimation of unobservable asset values (Dechow et al. 2009). Fair-value accounting rules have been criticized for their complexity and vagueness, which could result in estimation errors or in earnings management (Barth and Landsman 1995; Fiechter and Meyer 2009; Zhou 2009).

In addition to problems with fair-value accounting, securitization transactions may have varying results in different countries because of factors such as differing accounting standards, legal systems, and levels of investor protection. The complexity tangled with accounting for securitization, and the differences in accounting standards and legal systems, make the resulting financial reports harder to compare across countries (Paananen 2009). Therefore, this topic is very important to participants in international markets. Investors, creditors, suppliers, audit firms, standard-setters, and policy-makers

are all interested in the quality of financial reports and whether financial reports represent the true picture of a firm's performance and financial position.

In this paper, I examine the value-relevance of securitization gain for companies that follow the U.S. GAAP, are engaged in securitization transaction, and have complete data for 2005-2006 and 2008-2010. Then I investigate the effects of different levels of investor protection on earnings management, using asset securitization for companies that follow IFRS, are engaged in securitization, and have complete data for 2005-2006 and 2008-2010. I expect to contribute to the literature by: 1) showing the impact of asset securitization on the value-relevance of return on equity (ROE) as a measure of accounting performance and 2) showing that countries with stronger investor protection experience less earnings management using securitization gain. The results of this study can be used by standard-setters and policy-makers when evaluating the standards and rules related to asset securitization.

The remainder of this paper is organized as follows. First, I offer background and explanation on some important issues and then continue with hypothesis development, data collection, empirical tests, results, and conclusions.

II. BACKGROUND AND HYPOTHESES DEVELOPMENT

Value Relevance

Securitization became a popular method of financing during the past few decades, and already by the end of the first quarter of 2007 there were 8.9 trillion dollars in asset-backed securities outstanding (Bond Market Association). The securitization process is very complex, and most people did not hear about it until the fall of mortgage and

financial institutions. The complexity of securitization transaction is due to its involvement with different accounting standards (e.g. fair-value accounting) and legal issues (relating to bankruptcy, tax, securities, and financial).

As I mentioned before, companies securitize a variety of assets, from credit-card receivables to mortgage loans, auto loan, and trade receivables. Prior studies show that investors are unable to easily value these types of assets (Berlin and Loeys 1988; Diamond 1989). Other studies claim and show that investors grant higher value to earnings when earnings exclude the securitization gain (e.g., Niu & Richardson 2006).

In this dissertation, I argue that the complexity of securitization transaction caused by the complexity of fair-value accounting increases information asymmetry and disagreement between investors and management, and hence decreases the value-relevance of accounting performance measures. Therefore, I hypothesize that:

H1: Securitization gain decreases the value-relevance of accounting performance measures in term of return on equity.

Investor protection

Securitization originated when a government-sponsored entity, the Government National Mortgage Association, known as "Ginnie Mae", started selling mortgage-backed securities in 1970 (Senterfitt 2006). A very common practice for most companies is to sell their receivables. Before the rise of the recent financial crisis, this practice was very popular, and firms used securitization to generate cash in order to lend to new customers. Beside the differences in accounting standards across countries, securitization transactions are also affected by the legal system of each country.

Currently, 117 countries with different legal systems and different levels of investor protection require or allow their firms to follow IFRS (Chadha 2010). Therefore, in this paper, I use companies that are engaged in asset securitization transactions, follow IFRS, and operate under different levels of investor protection, and investigate the earnings management using the assets securitization process. The issue of interest is whether strengthening investor protection can increase the quality of financial reports through reduced earnings management for adopters of IFRS. Prior studies show that firms in countries with a high level of investor protection are better valued (La Porta et al. 2002).

Investors are generally willing to pay more for financial assets when they face lower risk and feel their investments are better protected by laws. La Porta et al. (2000) claim and show that the quality of corporate governance in a country depends on the level of investor protection, and study shows that larger companies offer more information in countries with a high level of investor protection (Paananen 2009). La Porta et al. (1997) examine capital markets in 49 countries and find that countries with a lower level of investor protection have smaller equity and debt markets. Therefore, the size and the health of a country's capital market depend on regulations and the enforcement of those laws and regulations (La Porta et al. 1997). As an example, investors in Italy, Germany, and France are not as well-protected by strong legal systems as are investors in the United States (Hung 2001).

Basically, the legal systems of countries around the world can be grouped based on their origins, and we can categorize the commercial laws into common law, with

origins in English law, and civil laws, which were based on Roman law. Leuz et al. (2003) groups countries into three categories based on their similarities in legal and institutional features. This classification is similar to La Porta et al. (1997), who grouped countries into code-law and common-law. Basically, scholars focus on the background and development of legal systems and the source of regulations among other issues to group countries into two major categories, common law and civil-law countries. Civil-law generated from Roman law and depends heavily on scholars' development of regulations and codes.

Three families of laws are recognized in the civil tradition: French, German, and Scandinavian. The French family was started in France under Napoleon and spread out to other countries in Europe and other parts of the globe via French soldiers. Italy, Poland, West Germany, part of Africa, Indochina, Oceania, Portugal, and Spain were influenced by French civil law, which, in turn, impacted the South American countries colonized by Spain and Portugal. German law code was developed later and has influenced countries in Europe and Asia. Some of the countries influenced by German law code are Austria, Czechoslovakia, Greece, Hungary, Switzerland, Yugoslavia, Japan, and Korea. The third family, the Scandinavian, is not as close to Roman law as are the other two families, and the four Nordic countries use this law with some national variations.

England's laws and the laws of those countries influenced by English law are part of common-law, which is developed by judges through the resolution of particular disputes. These laws moved to the British colonies such as the U.S., Canada, Australia, India, and other countries. Study shows that dissimilarity in legal origin is the reason for

differences in laws across countries (La Porta et al. 1998). La Porta et al. (1998) also find evidence that investors' legal rights are fewer in civil-law countries, and investors in common-law counties enjoy the highest level of protection. Also, regulations are better enforced in the common-law countries than in civil (code)-law counties.

Pagano et al. (1998) argue that only a few very large companies go public in Europe. The authors suggest that minority property rights are not protected in most European countries and, therefore, young and small firms are not able to attract investors. La Porta et al. (1997) argue that countries differ in their legal systems protection of investors, and they also enforce their rules and laws differently. They put countries into four categories, based on the origin of their legal systems. The first category includes countries that follow English law (common law[1]) which is created by judges. The other three categories are countries that follow French, Germany, or Scandinavians laws (civil law), which are created by scholars and legislators. La Porta et al. (1997) compare the legal rules and enforcement of 49 countries and find that stricter investor-protection rules are in place and better enforced in countries that follow common laws, and as a result, both shareholders and creditors are better protected in these countries. They also find that investors in French civil law countries have the lowest protection and quality of legal rules, and the levels of enforcement of rules in German civil law and Scandinavian civil law countries are in the middle.

[1] The background on legal systems are similar to previous studies (i.e., La Porta et al. 1997, 1998; Hung 2001)

La Porta et al. (1997) also find that companies located in common-law countries have better external-financing resources, and common-law countries have, on average, three times more outsider stockholders than French-civil-law countries. They conclude that legal rules and the enforcement of those rules play important roles in the capital market of a country. Mahoney (2001) finds evidence that the economy in common-law countries grows faster than in civil-law countries.

Leuz et al. (2003) examine the level of earnings management in companies from 31 countries around the world between 1990 and 1999 and find negative association between earnings management and the quality of both legal enforcement and minority shareholders' rights. High-quality legal systems protect outsiders, investors, by reducing the ability of the insiders, management, to misuse inside information for their own benefit. Strong investor protection makes sure that contract terms are followed and management is disciplined when needed. Leuz et al. (2003) measure the outside-investor protection by looking at minority-shareholders rights and the quality of the country's legal system.

Managers are generally against regulations that may reduce their freedom in selecting accounting alternatives or require them to provide more information to the public (Hunton et al. 2006). In code-law countries, firms are allowed to utilize alternative methods of accounting; therefore, managers have more opportunities to manipulate the earnings, and this suggests that the probability of earnings-smoothing is higher in code-law countries (Bartov et al. 2008).

La Porta et al. (1998) examine the quality of regulations protecting shareholders' rights and the laws that enforce those regulations. They find that common-law countries have stronger rules for protecting investors and are better able to enforce their regulations. Leuz et al. (2003) show a lower frequency of earnings manipulation in countries in which investor protection is strong.

Other studies provide evidence that the convergence of U.S. GAAP with IFRS improves the comparability of financial reports; nevertheless, a strong and effective legal system is necessary for this convergence to have positive results (Bradshow and Miller 2007). However, Street and Gray (2001) find that for some Western European countries such as Germany and France, compliance with IAS is lower.

In this section, I investigate the association between investor protection and earnings management measured by beating or meeting analysts' forecasts for companies that follow IFRS and are engaged in securitization transactions. Therefore, I investigate the association between securitization gain and earnings management for companies that operate in different countries with different legal systems and different investor protection. I use meeting or beating analysts' forecasts as a proxy for earnings management. Therefore, I hypothesize that:

H2: Meeting or beating analysts' forecasts for companies that use securitization transactions is lower in countries with stronger investor protection.

III. DATA COLLECTION AND METHODOLOGY

This section discusses the data collection and the methodology used in this study.

Data Collection

I used LexisNexis and several keywords to find companies in the U.S. and in the world that have used securitization transactions during the periods 2005-2006 and 2008-2010 and have almost all of the related data. I have come up with a total of 355 company-year observations for 71 companies that follow the U.S. GAAP, and a total of 205 company-year observations for 41 companies that follow IFRS. Dechow et al. (2010) made a similar study in the period between 2000 and 2005 and collected a total of 96 companies. Given that the amount of securitization activities has declined significantly since the 2000-2005 period, I believe the chance that I have missed any company that is engaged in securitization activities and is not on my list is extremely low. Finding information for non-U.S. companies has been extremely hard and time-consuming. The companies for which I was able to collect data disclose information using different terminology. I had to use "securitization", "securitisation", "financial asset", "loan and receivable", and many more keywords to find firms' information about financial and securitization activities. Some accounting systems do not explicitly require the disclosure of all activities and information. LexisNexis and Google Finance were my main sources of data collection for IFRS companies. The remaining data were collected using: a) the Research Insights (COMPUSTAT) database to collect financial data, b) the CRSP database to collect daily and monthly stock returns and stock prices, c) the SEC's Edgar database to look at the firms' 10-K reports, and d) the Database of the Institutional Brokers' Estimate System (I/B/E/S) to collect analysts' earnings and returns forecasts.

My study consists of 355 company-year observation for a total of 71 U.S. companies and 205 company-year observations for a total of 41 IFRS companies.

Methodology

Value Relevance:

In this section I examine the effects of securitization gain on market value of stocks for companies that are engaged in securitization transactions and follow the U.S. GAAP. Examining this issue is important because securitization is a method of financing, and securitization gain is an addition to the earnings. In this study, I examine the value-relevance of an accounting performance measure, return on equity, for companies that follow U.S. GAAP and are engaged in securitization transactions.

I collected both price and the number of shares outstanding from the CRSP database. I used the following model to test the first hypothesis of this dissertation.

$$MKT\_VAL_{it} = \beta_0 + \beta_1 SEC\text{-}GAIN_{it} + \beta_2 ROE_{it} + \beta_3 SEC\text{-}ROE_{it} + \beta_4 ROE\_LAG_{it} B_5 SIZE_{it} + \beta_6 LVRG_{it} + \beta_7 LIQUIDITY_{it} + \beta_8 SEG_{it} + \varepsilon_{it} \quad \ldots (3\text{-}1)$$

Where:

MKT_VAL_{it}: Market value of the equity at the end of the period scaled by total assets for firm i in year t

$SEC\text{-}GAIN_{it}$: Gain from securitization scaled by total equity for firm i in year t

ROE_{it}: Return on equity as a proxy for accounting performance for firm i in year t

$SEC\text{-}ROE_{it}$: Interaction variable between SEC-GAIN and ROE for firm i in year t

$SIZE_{it}$: Natural log of total assets which is used as a risk proxy for firm i in year t

$LVRG_{it}$: Total liability scaled by total assets for firm i in year t

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t

SEG_{it}: Number of operating segments for firm i in year t

Proxies for Investor Protection:

It is well established by prior studies that investors are better protected in common-law countries (La Porta et al. 1996, 1998; Johnson et al. 2000; Glaezer et al. 2001). Therefore, I use two proxies for investor protection which have been used in prior studies (e.g., Hung 2001). The first proxy for investor protection is the legal system, grouping countries into common-law and code-law. As did La Porta et al. (1997), I use Reynolds and Flores (1989) to categorize countries into legal families (common/code).

Investing in a company entitles the shareholder to voting rights, choosing directors and participating in critical corporation decision-making. Therefore, countries with higher-quality regulations and stronger law enforcement grant investors more power to exercise their rights. La Porta et al. (1996) show that strong anti-director rights highly encourage outside investors to participate in the market and discourage opportunism by managers. Consequently, the second proxy for investor protection is the anti-director rights index (ANTI) developed by La Porta et al. (1998) and employed by Hung (2001). This index is based on answers to the following five questions. Each country starts with zero points and gains one point when the country's action supports shareholders:

1- One point if country's rules allow stockholders to vote via mail, and zero points if stockholders must vote in person.

2- One point if shareholders are not required to deposit their shares before shareholder meeting and zero points otherwise.

3- One point if the country permits cumulative voting for directors and zero points otherwise.

4- One point when a shareholder with less than 5% of share capital is entitled to call for an extraordinary shareholder meeting. (Minority shareholders have more difficulty calling the meeting when the benchmark percentage is higher.)

5- One point for countries that allow the minority shareholders to take legal action against the directors.

Earnings Management:

In this section, I investigate earnings management through securitization under different levels of investor protection. Therefore, I use the following model to test my second hypothesis.

$$SEC\text{-}GAIN_{it} = \beta_0 + \beta_1 MEET_{it} + \beta_2 PRESEC\text{-}EAR_{it} + \beta_3 MEET\text{-}ANTI_{it} + \beta_4 MEET\text{-}LEGAL_{it} + \beta_5 ANTI_{it} + \beta_6 ANTI_{it} + \beta_7 LIQUIDITY_{it} + \beta_8 SIZE_{it} + \beta_9 ROA_{it} + \varepsilon_{it} \quad \ldots (3\text{-}2)$$

Where:

SEC-GAINit: Gain from securitization obtained from company's 10-K filing with the SEC for firm i in year t

MEETit: Equal to one when there is non-negative earnings surprise and zero otherwise for firm i in year t

PRESEC-EARit: Pre-securitization earnings for firm i in year t

LEGALit: A dummy variable for legal system for firm i in year t

ANTIit: Anti-director index for firm i in year t

$MEET\text{-}ANTI_{it}$: Interaction between MEET and ANTI for firm i in year t

$MEET\text{-}LEGAL_{it}$: Interaction between MEET and LEGAL for firm i in year t

$LVRG_{it}$: Total liability scaled by total assets for firm i in year t

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t

$SIZE_{it}$: Natural log of total assets which is a used as risk proxy for firm i in year t

ROA_{it}: Return on assets for firm i in year t

IV. RESULTS

Previously in this dissertation, I found evidence of earnings management during 2005-2006 for U.S. companies. In this section, I examine whether the securitization gain also reduces the value-relevance of an accounting measure, return on equity, in the U.S. market. Table 4-1 shows descriptive statistics for 355 company-year observations for 71 companies that follow U.S. GAAP, covering all three periods (2005-2006; 2008-2009; 2010). Using the residual analysis, all outliers are detected and removed from the regression analysis.

Table 4-1
Descriptive Statistics for Paper Three (companies following U.S. GAAP)
(Year 2007 is the crises year and is excluded from the analyses)

Panel A: 2005-2006

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
MKT_VAL_{it}	126	818.8264	1686.832	163.4584	361.2205	823.1911	.0313843	1506.515
$SEC\text{-}GAIN_{it}$	142	0.009612	0.073007	0	8.45E-07	0.000241	0.000000	0.830171
ROE_{it}	142	2.944484	16.93579	0.00002	0.01347	0.035977	-59.70085	159.9353
$SIZE_{it}$	126	9.229762	2.565112	7.5475	8.965	10.78	1.97	14.45
$MK\text{-}BK_{it}$	126	0.519636	3.438531	0.000012	0.001942	0.011179	-0.0000005	37.19008
$LVRG_{it}$	126	0.819813	0.669085	0.5963228	0.822354	0.913319	0.0786421	6.530481
$LIQUIDITY_{it}$	126	0.087852	0.339538	0.010277	0.023938	0.055699	0.0000000	3.570135
SEG_{it}	142	2.732394	2.126881	1	2	4	1	10

Panel B: 2008-2009

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
MKT_VAL_{it}	124	615.7134	1053.511	53.40761	206.7493	627.2644	.0238447	1694.786
$SEC\text{-}GAIN_{it}$	142	0.018526	0.093198	0	0.000205	0.010217	0.00000	0.490933
ROE_{it}	142	3.42803	46.15863	-0.000057	0.000752	0.013441	-167.565	495.8103
$SIZE_{it}$	124	9.244106	2.669727	7.290797	8.966519	11.0027	3.619851	14.6145
$MK\text{-}BK_{it}$	124	0.005761	0.008458	0.0000143	0.001944	0.009363	-8.5E-05	0.05015
$LVRG_{it}$	124	0.729326	0.269558	0.564727	0.832823	0.90164	0.005402	1.737622
$LIQUIDITY_{it}$	124	0.079873	0.206706	0.012406	0.026796	0.073368	0.000000	2.031702
SEG_{it}	142	2.669014	1.991905	1	2	4	1	10

Panel C: 2010

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
MKT_VAL_{it}	71	571.3472	794.7417	84.91694	249.8426	791.5049	12.765	1661.338
$SEC\text{-}GAIN_{it}$	71	0.006407	0.025225	0	0.000014	0.000310	0.000000	0.170963
ROE_{it}	71	7.45221	18.24313	0	0.018942	6.056313	-0.82136	96.4404
$SIZE_{it}$	59	9.330365	2.721738	7.408278	9.15173	11.06695	3.633922	14.63305
$LVRG_{it}$	59	0.775497	0.458612	0.587750	0.823102	0.889623	0.156986	3.814057
SEG_{it}	71	2.746479	2.08202	1	2	4	1	10

Where:
MKT_VAL_{it}: Market value of the equity at the end of the period scaled by total assets for firm i in year t
$SEC\text{-}GAIN_{it}$: Gain from securitization scaled by total equity for firm i in year t
ROE_{it}: Return on equity as a proxy for accounting performance for firm i in year t
$SIZE_{it}$: Natural log of total assets which is used as a risk proxy for firm i in year t
$LVRG_{it}$: Total liability scaled by total assets for firm i in year t
$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t
SEG_{it}: Number of operating segments for firm i in year t

The LIQUIDITY variable is dropped in 2010 because of its small number of observations.

Table 4-2 contains the correlation matrices for the three periods of this study. No problematic correlation among independent variables is observed except for MK-BK, which is dropped from regression analyses. Just as with my detailed explanations in the earlier section, the results do not show any sign of multicollinearity.

Table 4-2
Correlation Matrices for Paper Three (companies following U.S. GAAP)

Panel A: 2005-2006

	$SEC\text{-}GAIN_{it}$	ROE_{it}	$SIZE_{it}$	$MK\text{-}BK_{it}$	$LVRG_{it}$	$LIQUIDITY_{it}$
$SEC\text{-}GAIN_{it}$	1					
ROE_{it}	0.1794**	1				
$SIZE_{it}$	0.0667	0.1378	1			
$MK\text{-}BK_{it}$	0.1156	0.379***	0.219	1		
$LVRG_{it}$	0.0214	0.0009	-0.1457	0.0195	1	
$LIQUIDITY_{it}$	-0.0738	-0.0174	-0.2447***	-0.0271	-0.062	1
SEG_{it}	0.2734***	0.0955	0.2137**	0.1846**	0.1181	0.0087

Table 4-2
Correlation Matrices for Paper Three (Continued)

Panel B: 2008-2009

	$SEC\text{-}GAIN_{it}$	ROE_{it}	$SIZE_{it}$	$MK\text{-}BK_{it}$	$LVRG_{it}$	$LIQUIDITY_{it}$
$SEC\text{-}GAIN_{it}$	1					
ROE_{it}	0.2301***	1				
$SIZE_{it}$	0.0958	0.0556	1			
$MK\text{-}BK_{it}$	0.1867	0.0504	0.6863***	1		
$LVRG_{it}$	0.1137	0.0787	0.5142***	0.4087***	1	
$LIQUIDITY_{it}$	-0.0383	-0.05	-0.1957**	-0.1168	-0.2876***	1
SEG_{it}	-0.0298	-0.073	0.180**3	0.1531*	0.0117	0.06

Panel C: 2010

	$SEC\text{-}GAIN_{it}$	ROE_{it}	$SIZE_{it}$	$MK\text{-}BK_{it}$	$LVRG_{it}$
$SEC\text{-}GAIN_{it}$	1				
ROE_{it}	-0.0823	1			
$SIZE_{it}$	0.0039	0.2339***	1		
$MK\text{-}BK_{it}$	0.3743	0.007	0.7382***	1	
$LVRG_{it}$	-0.0454	-0.0077	0.05	0.3805	1
$LIQUIDITY_{it}$	0.0912	-0.0322	0.1816	-0.3365	0.0587

Where:
$SEC\text{-}GAIN_{it}$: Gain from securitization scaled by total equity for firm i in year t
ROE_{it}: Return on equity as a proxy for accounting performance for firm i in year t
$SIZE_{it}$: Natural log of total assets which is used as a risk proxy for firm i in year t
$LVRG_{it}$: Total liability scaled by total assets for firm i in year t
$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t
SEG_{it}: Number of operating segments for firm i in year t

The results of multivariate panel data regression for the first two periods, as well as the results for cross sectional model of the last period, are presented in Table 4-3. As the results show, the coefficient of ROE as well as the coefficient of interaction between ROE and securitization gain is not significant, indicating the lack of value-relevance for securitization gain. This finding is not consistent with the finding by Niu and Richardson

(2006), who conclude that securitization gains receive lower value by market. This finding does not support my second hypothesis for any period. The results also show that the coefficient of leverage is not significant in the period before the financial crisis year (2005-2006), indicating that investors have not penalized companies for their leverage before 2007. However, the coefficient of leverage is highly significant and negative after the crisis year (2008-2009 and 2010), indicating that the investors have become more sensitive about the companies borrowing after the crisis year and penalized them for their reported debt.

Table 4-3
Regression Results for Paper Three (companies following U.S. GAAP)

$$MKT\_VAL_{it} = \beta_0 + \beta_1 SEC\text{-}GAIN_{it} + \beta_2 ROE_{it} + \beta_3 SEC\text{-}ROE_{it} + \beta_4 ROE\_LAG_{it} B_5 SIZE_{it} + \beta_6 LVRG_{it} + \beta_7 LIQUIDITY_{it} + \beta_8 SEG_{it} + \varepsilon_{it}$$

	2005-2006			2008-2009			2010		
MKT_VAL_{it}	Coef	z-value	P>|z|	Coef	z-value	P>|z|	Coef	t-value	P>|t|
$SEC\text{-}GAIN_{it}$	-1852.75	-0.37	0.711	-783.7502	-0.6	0.551	4257.369	1.05	0.301
ROE_{it}	0.323248	0.03	0.979	-1.640679	-0.8	0.425	4.087757	0.56	0.582
$SEC\text{-}ROE_{it}$	34.71619	0.28	0.78	593.3049	1.05	0.293	246.9704	0.23	0.819
ROE_LAG_{it}	6.313194	0.4	0.687	-1.973393	-0.8	0.422	3.719184	0.57	0.571
$SIZE_{it}$	-511.72***	-2.9	0.004	-158.9867	-0.2	0.841	48.37349	1.09	0.285
$LVRG_{it}$	-142.538	-0.32	0.748	-253.997***	-3.79	0.000	-3725.28***	-7.78	0.000
$LIQUIDITY_{it}$	-1093.76***	-3.37	0.001	-323.0681	-0.1	0.92	-41.69201	-1.18	0.245
SEG_{it}	5.785015	0.04	0.968	-1.710824	-0.04	0.967	42.57369	1.05	0.301
_cons	6298.86***	3.61	0.000	3297.86***	5.05	0.000	3243.4***	8.36	0.000
Adj. r-squared:	0.4482***			0.5259***			0.5788***		

(Significance at the levels of 10%, 5%, and 1% are indicated by *, **, and ***)

Where:
MKT_VAL_{it}: Market value of the equity at the end of the period scaled by total assets for firm i in year t

$SEC\text{-}GAIN_{it}$: Gain from securitization scaled by total equity for firm i in year t
ROE_{it}: Return on equity as a proxy for accounting performance for firm i in year t
$SEC\text{-}ROE_{it}$: Interaction variable between SEC-GAIN and ROE for firm i in year t
ROE_LAG_{it} : Lag of Return on Equity for firm i in year t
$SIZE_{it}$: Natural log of total assets which is used as a risk proxy for firm i in year t
$LVRG_{it}$: Total liability scaled by total assets for firm i in year t
$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t
SEG_{it}: Number of operating segments for firm i in year t

I have adopted information from prior research to create Table 4-4, which consists of two proxies for investor protection (La Porta et al. 1996, 1998; Hung 2001). Legal system (LEGL) represents the legal system of the country, which is equal to one if the country has common-law system and zero if the country follows code-law system. Anti-director index was created by La Porta (1996) and used in many studies. The index is ranged from zero to five and calculated based on the answers to 5 specific questions listed on La Porta et al. (1998).

Table 4-4
Anti-director index and Legal system

Country	Legal system	Anti-director Index
Australia	1	4
France	0	2
Germany	0	1
Ireland	1	3
Netherland	0	2
Spain	0	2
Switzerland	0	1
U.K.	1	4

Table 4-5 represents descriptive statistics for companies that follow IFRS for the three periods of this study. I scaled the securitization gain (SEC-GAIN) and net income before securitization gain (PRESEC-EAR) by total stockholders' equity. Using the residual analysis, all outliers are detected and removed from the regression analysis. In the residual analysis, I ran the original model and calculated the residual-squared, then plotted the residual-squared against each independent variable to find outliers.

Table 4-5
Descriptive Statistics for Paper Three (companies following IFRS)
(Year 2007 is the crises year and is excluded from the analyses)

Panel A: 2005-2006

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$SEC\text{-}GAIN_{it}$	74	0.022002	0.106325	0	0.0019531	0.0128746	0.00000	0.910598
$MEET_{it}$	80	0.5375	0.501738	0	1	1	0	1
$PRESEC\text{-}EAR_{it}$	74	0.304472	1.23783	0.028681	0.111829	0.175138	-0.62813	10.4709
$ANTI_{it}$	80	3.075	1.133774	2	3	4	1	5
$LEGAL_{it}$	80	0.525	0.502525	0	1	1	0	1
$LVRG_{it}$	74	0.777839	0.298365	0.680637	0.934777	0.957328	0.00000	0.993505
$LIQUIDITY_{it}$	74	0.048623	0.069203	0.006096	0.021289	0.0621536	0.000593	0.282788
$SIZE_{it}$	74	18.20715	3.317118	15.32291	18.73759	20.02763	12.50103	26.1
ROA_{it}	74	5.204459	16.76111	0.4675	1.05	2.3075	-2.6	100

Table 4-5
Descriptive Statistics for Paper Three (Continued)

Panel B: 2008-2009

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$SEC\text{-}GAIN_{it}$	78	0.030455	0.179768	0	0.000206	0.017976	0.00000	0.551792
$MEET_{it}$	80	0.3625	0.483755	0	0	1	0	1
$PRESEC\text{-}EAR_{it}$	78	0.010979	0.212082	-0.0285631	0.0004471	0.088587	-0.51548	0.770801
$ANTI_{it}$	80	3.075	1.133774	2	3	4	1	5
$LEGAL_{it}$	80	0.525	0.502525	0	1	1	0	1
$LVRG_{it}$	78	0.809409	0.274231	0.8001556	0.9369088	0.9534939	0	1.003593
$LIQUIDITY_{it}$	78	0.046706	0.050908	0.0108583	0.0320459	0.0604727	0.000001	0.24
$SIZE_{it}$	78	18.65359	3.283764	16.70366	19.36101	20.29982	12.16645	26.4
ROA_{it}	78	2.107692	17.68556	-0.1725	0.435	0.99	-44.38	100

Panel C: 2010

Variable	Obs	Mean	Std. Dev.	25th %tile	Median	75th %tile	Min	Max
$SEC\text{-}GAIN_{it}$	38	0.018478	0.140588	0	0.0005991	0.0145284	0.0000	0.443686
$MEET_{it}$	39	0.48718	0.50637	0	0	1	0	1
$PRESEC\text{-}EAR_{it}$	38	0.011042	0.283357	-0.0028831	0.0222797	0.0741762	-1.18472	0.957723
$ANTI_{it}$	40	3.075	1.141018	2	3	4	1	5
$LEGAL_{it}$	40	0.525	0.505736	0	1	1	0	1
$LVRG_{it}$	38	0.815693	0.252192	0.8068669	0.9330751	0.9540754	0.002057	0.99725
$LIQUIDITY_{it}$	38	0.044301	0.047555	0.0145737	0.0342155	0.0642847	0.000417	0.251354
$SIZE_{it}$	38	18.67024	3.353848	16.52661	19.17263	20.81655	12.23658	26.4
ROA_{it}	38	3.172368	16.82162	0.11	0.825	2.0175	-22.1	100

Where:
$SEC\text{-}GAIN_{it}$: Gain from securitization obtained from company's 10-K filing with the SEC for firm i in year t
$MEET_{it}$: Equal to one when there is non-negative earnings surprise and zero otherwise for firm i in year t
$PRESEC\text{-}EAR_{it}$: Pre-securitization earnings for firm i in year t
$ANTI_{it}$: Anti-director index for firm i in year t
$LEGAL_{it}$: A dummy variable for legal system for firm i in year t
$LVRG_{it}$: Total liability scaled by total assets for firm i in year t

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t
$SIZE_{it}$: Natural log of total assets which is a used as risk proxy for firm i in year t
ROA_{it}: Return on assets for firm i in year t

Table 4-6 presents correlation matrices for companies in all three time periods. As this table shows, there are a few significant correlations among variables; however, none of them is higher than .7, except for LEGAL and ROA variables. The LEGAL variable is dropped from the analyses of all three periods, and the ROA is dropped from the first period analysis. The common rule of thumb for identifying multicollinearity is a variance inflation factor (VIF) of 10 or more, or a tolerance of 0.1 or less. Another way is to examine the bivariate correlations between independent variables and look for correlation of 0.7 or higher. Lastly, muticollinearity may be present when the overall model is significant but none of the independent variables are significant. After dropping variables that show a high bivariate correlation, my analysis does not show any of the above symptoms.

Table 4-6
Correlation Matrices for Paper Three (companies following IFRS)

Panel A: 2005-2006

	$MEET_{it}$	PRESEC-EAR_{it}	$ANTI_{it}$	$LEGAL_{it}$	$LVRG_{it}$	$LIQUIDITY_{it}$	$SIZE_{it}$
$MEET_{it}$	1						
PRESEC-EAR_{it}	0.0948	1					
$ANTI_{it}$	0.1953*	0.1858	1				
$LEGAL_{it}$	0.1719	0.0974	0.8187***	1			
$LVRG_{it}$	0.0723	0.0795	-0.1223	-0.0479	1		
$LIQUIDITY_{it}$	-0.0865	0.3455**	-0.0488	-0.0568	-0.2443**	1	
$SIZE_{it}$	-0.0089	-0.1631	-0.2525**	-0.3867***	0.3267***	-0.3172***	1
ROA_{it}	0.084	0.6273***	0.3587***	0.2081*	-0.1236	0.6232***	-0.2676**

Table 4-6
Correlation Matrices for Paper Three (Continued)

Panel B: 2008-2009

	$MEET_{it}$	$PRESEC\text{-}EAR_{it}$	$ANTI_{it}$	$LEGAL_{it}$	$LVRG_{it}$	$LIQUIDITY_{it}$	$SIZE_{it}$
$MEET_{it}$	1						
$PRESEC\text{-}EAR_{it}$	-0.0031	1					
$ANTI_{it}$	0.1575	-0.1042	1				
$LEGAL_{it}$	0.1966*	-0.0162	0.8187***	1			
$LVRG_{it}$	-0.0451	-0.04	-0.1988*	-0.1483	1		
$LIQUIDITY_{it}$	-0.1677	0.0626	-0.2343**	-0.2199	-0.2005*	1	
$SIZE_{it}$	-0.097	-0.1637	-0.1995*	-0.3747***	0.4181***	-0.08	1
ROA_{it}	0.1394	-0.0899	0.3176***	0.1853	0.0313	-0.166	-0.037

Panel C: 2010

	$MEET_{it}$	$PRESEC\text{-}EAR_{it}$	$ANTI_{it}$	$LEGAL_{it}$	$LVRG_{it}$	$LIQUIDITY_{it}$	$SIZE_{it}$
$MEET_{it}$	1						
$PRESEC\text{-}EAR_{it}$	0.1059	1					
$ANTI_{it}$	0.3389**	0.3165**	1				
$LEGAL_{it}$	0.285*	0.1727	0.8187***	1			
$LVRG_{it}$	-0.1016	-0.2213	-0.2048	-0.2967*	1		
$LIQUIDITY_{it}$	-0.1105	0.1027	-0.0231	-0.0592	-0.3182*	1	
$SIZE_{it}$	0.0156	-0.1003	-0.1799	-0.3587**	0.446***	-0.1081	1
ROA_{it}	0.1925	0.1121	0.3308**	0.2188	0.0065	-0.1718	-0.1188

Where:

$MEET_{it}$: Equal to one when there is non-negative earnings surprise and zero otherwise for firm i in year t
$PRESEC\text{-}EAR_{it}$: Pre-securitization earnings for firm i in year t
$ANTI_{it}$: Anti-director index for firm i in year t
$LEGAL_{it}$: A dummy variable for legal system for firm i in year t
$LVRG_{it}$: Total liability scaled by total assets for firm i in year t
$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t
$SIZE_{it}$: Natural log of total assets which is a used as risk proxy for firm i in year t
ROA_{it}: Return on assets for firm i in year t

To investigate the association between investor protection and earnings management using securitization, I use a multivariate-panel data regression to test for the first two periods and a cross sectional regression for the last one. The results are presented in

Table 4-7. The results show that the coefficients of interaction between MEET and LEGAL and the interaction between MEET and ANTI are not significant, indicating that companies that are engaged in securitization transactions and operate under IFRS experience, on average, no earnings management. This finding does not support the first hypothesis of this paper. The explanation I can suggest is that IFRS regulations are intense enough with regard to securitization to reduce the extent of manipulation of financial statements under any type of investor protection. The results also show that, in the first two periods, companies that operate under strong anti-director laws experience higher securitization gain. Finally, the results show that, in the second and third period, the model has higher explanatory power compared to the first period. The difference can be as a result of more predictability of variables in the last two periods.

Table 4-7

Regression Results for Paper Three (companies following IFRS)

$$SEC\text{-}GAIN_{it} = \beta_0 + \beta_1 MEET_{it} + \beta_2\ PRESEC\text{-}EAR_{it} + \beta_3 MEET\text{-}ANTI_{it} + \beta_4 MEET\text{-}LEGAL_{it} + \beta_5 ANTI_{it} + \beta_6 ANTI_{it} + \beta_7 LIQUIDITY_{it} + \beta_8 SIZE_{it} + \beta_9 ROA_{it} + \varepsilon_{it}$$

	2005-2006			2008-2009			2010		
$SEC\text{-}GAIN_{it}$	Coef	z-value	P>|z|	Coef	z-value	P>|z|	Coef	t-value	P>|t|
$MEET_{it}$	0.1190683	1.47	0.141	0.0941344	1.01	0.314	0.086019	0.57	0.574
$PRESEC\text{-}EAR_{it}$	-0.0029717	-0.27	0.789	-0.476460***	-7.07	0.000	-0.38359***	-5.48	0.000
$MEET\text{-}ANTI_{it}$	-0.0485189	-1.56	0.119	-0.0189002	-0.45	0.653	-0.015361	-0.26	0.795
$MEET\text{-}LEGAL_{it}$	0.0015855	0.03	0.98	0.0543293	0.54	0.589	0.0246164	0.23	0.823
$ANTI_{it}$	0.040972***	2.57	0.01	0.0496596***	2.65	0.008	0.0170804	0.75	0.46
$LVRG_{it}$	-0.0769156	-1.68	0.092	-0.0584866	-0.93	0.354	0.0231975	0.28	0.784
$LIQUIDITY_{it}$	0.0100235	0.05	0.961	0.482642	1.46	0.143	0.0076937	0.02	0.986
$SIZE_{it}$	-0.0000917	-0.02	0.984	-0.0036641	-0.64	0.522	-0.0019458	-0.3	0.766
ROA_{it}	-	-	-	-0.0007621	-0.78	0.437	-0.0008318	-0.66	0.517
_cons	-0.021758	-0.21	0.836	-0.0460575	-0.35	0.726	-0.0350959	-0.26	0.798
Adj. r-squared:	0.1733 *			0.5836 ***			0.4492***		

(Significance at the levels of 10%, 5%, and 1% are indicated by *, **, and ***)

Where:

$SEC\text{-}GAIN_{it}$: Gain from securitization obtained from company's 10-K filing with the SEC for firm i in year t

$MEET_{it}$: Equal to one when there is non-negative earnings surprise and zero otherwise for firm i in year t

$PRESEC\text{-}EAR_{it}$: Pre-securitization earnings for firm i in year t

$LEGAL_{it}$: A dummy variable for legal system for firm i in year t

$ANTI_{it}$: Anti-director index for firm i in year t

$MEET\text{-}ANTI_{it}$: Interaction between MEET and ANTI for firm i in year t

$MEET\text{-}LEGAL_{it}$: Interaction between MEET and LEGAL for firm i in year t

$LVRG_{it}$: Total liability scaled by total assets for firm i in year t

$LIQUIDITY_{it}$: Total cash and cash equivalent scaled by total assets for firm i in year t

$SIZE_{it}$: Natural log of total assets which is a used as risk proxy for firm i in year t

ROA_{it}: Return on assets for firm i in year t

V. CONCLUSIONS

In this dissertation, I first used U.S. companies and examined the value-relevance of an accounting performance measure, return on equity, for companies engaged in securitization transactions. I selected companies from three time periods to capture changes in the economy and regulations. My finding does not show any value-relevance for securitization gain in any of the three time periods (2005-2006, 2008-2009, 2010). This finding does not support my second hypothesis in any period and is not consistent with the finding of prior studies (e.g., Niu and Richardson 2006) which shows that investors believe that the value-relevance of earnings is higher when securitization gain is not included in earnings. The possible explanation for the lack of value-relevance of securitization gain in the period before the crisis is the complexity of calculation and the unfamiliarity of investors with the securitization process, as well as the existence of extensive varieties of securitized assets. After the crisis year, investors became more knowledgeable with the securitization process; however, the securitization activities have decreased greatly and lost their significance.

Then I use IFRS companies and test whether the possibility of earnings management using securitization transactions among companies that operate under different legal systems and anti-director laws is reduced. I collected data from three time periods to capture changes in the economy and regulations. My findings indicate that companies that are engaged in securitization transactions and operate under IFRS, on average, experience no earnings management. This finding does not support the first hypothesis of this dissertation. My interpretation is that IFRS regulations regarding

securitization are intense enough to reduce the extent of manipulation of financial statements under any type of investor protection.

My findings also show that, in the first two periods, companies that operated under strong anti-director laws experienced higher securitization gain. However, the results do not show any sign of earnings management (no significant association between securitization gain and meet or beat analysts' forecasts). This indicates that the securitization gain under strong anti-director laws did not result from earnings management even though I find strong negative association between proxy for managers' incentive for earnings management (income before securitization gain) and securitization gain for the last two periods. Finally, the findings indicate that in the second and third periods, the model has higher explanatory power compared to the first period. The difference can be a result of more predictability of variables in the last two periods.

CHAPTER V

RESULTS, CONTRIBUTIONS, AND POLICY IMPLICATIONS

I. DISCUSSIONS

Securitization is a popular financing tool through which the seller of financial assets (e.g. receivables/loans) can create cash and transfer the risk of holding receivables to another party. Depending on how securitization is constructed, it can affect the financial reports. If the transaction meets the criteria for sales, set by standard-setters (IFRS/FASB), the asset is removed from the balance sheet, and the difference between the sale's proceeds and book value is recognized as gain/lose. However, if the criteria for sales are not met, then the asset stays on the balance sheet, and liabilities increase by the amount of cash received.

Even though securitization became a popular financing activity over a short period of time and by one quarter of 2007 around nine trillion dollars in asset-backed securities were outstanding, most American were not familiar with the complexity involved in the securitization process. Therefore, the financial crisis, the fall of large banks, and the bailout shocked Americans hard. Thus, studying the complexities related to the securitization process and researching accounting standards that may reduce the problems is critical.

Prior studies suggest that managers can take advantage of the flexibility of accounting standards (e.g. fair-value accounting) and manage earnings using securitization process. Before the SFAS 166 in 2009, managers had no difficulty in constructing securitization transactions to meet the criteria for sales accounting under

Statement no. 140, even when the transferor of the asset retained partial interest in the securitized asset. Prior research claims that managers used desirable discount rates to show higher gains when they estimated the fair value of retained interests.

In this dissertation, I use different time frames than those used in prior studies, and I also include companies that follow IFRS (prior studies only used U.S. companies) to investigate the claim made by previous researchers. I included the periods before and after financial crises to investigate the impact of changes in market conditions and new regulations. Moreover, I included IFRS companies in my study to determine whether managers following IFRS have the same attitudes as managers of companies that follow U.S. GAPP because over the last few years, the biggest concern of standard-setters around the world has been the convergence with IFRS.

In addition, I investigated whether the companies' securitization gain is the result of their special competitive advantage of some unique abilities/resources or earnings management. Another issue which I tested is the possibility of earnings management using securitization under different levels of investor protection, and whether the securitization activities decrease the value-relevance of accounting numbers.

II. RESULTS

My overall results for companies following U.S. GAAP indicate that there is evidence of earnings management for the period 2005-2006 (before the financial crisis); however, I do not find any indication that the discount rate being used shows higher securitization gain. My results also show that there is a significant association between meeting/beating earnings forecast and securitization gain during the period before the

crisis. However, there is no positive relationship between securitization gain and competitive advantage for any time period. Also, there is no indication of earnings management for the period of 2008-2010. It is argued that companies have become more conservative after the issuance of SFAS 166.

My findings also indicate that companies that are engaged in securitization transactions and operate under IFRS, on average, experience no earnings management. My interpretation is that the IFRS regulations regarding securitization transactions are restrictive enough to reduce the extent of manipulation of financial statements under any type of investor protection. Furthermore, my findings show that in the first two periods, companies operating under strong anti-director laws experienced higher securitization gain. Therefore, I can argue that the securitization gain is not as a result of earnings management.

Lastly, my findings indicate a lack of value-relevance of return on equity for companies that follow U.S. GAAP. This finding does not support my second hypothesis in any period, and is not consistent with the finding of prior studies (e.g., Niu and Richardson 2006) which show that investors believe the value-relevance of earnings is higher when securitization gain is not included in earnings.

III. CONTRIBUTIONS

My dissertation is expected to make several contributions. First, I find evidence of earnings manipulation for the period before the crisis for companies that follow U.S. GAAP. However, lack of association between a discount rate used for estimating fair value of retained interest and securitization gain shows that fair-value accounting is not

responsible for earnings management. This result sheds light on the controversy about fair-value accounting in relation with securitization.

Second, I did not find any sign of earnings management using securitization for any time period under IFRS, so I conclude that IFRS provides higher-quality accounting policies for securitization, at least compared to SFAS 140. In addition, it is true that the result shows no earnings management during 2008 to 2010, but I cannot relate this result to the new standard (SFAS 166) because only the financial statement of the period 2010 was affected by the new standard. Therefore, I conclude that convergence with IFRS in relation to accounting for securitization will benefit the U.S. market.

I have not found earnings management for companies that follow IFRS under any level of investor protection. This finding is further evidence to support the idea of convergence with IFRS. In addition, my results show that the companies' competitive advantage is not responsible for generating securitization gain by companies that follow the U.S. GAAP. Finally, in the last part of the dissertation, I show the impact of securitization activities on the value-relevance of accounting performance measures. I find no value-relevance for ROE as a measure of accounting performance. To the best of my knowledge, these issues are not investigated or addressed in prior studies.

The policy implication of my findings is to support the convergence of the U.S. GAAP and IFRS with respect to securitization. Policy-makers and standard-setters can take into account the findings of my study in their decision process. My findings show that, after 2006 in the United States on average, there has not been earnings management through securitization, even though the related regulation was not changed until 2010. It

appears that the market participants in the securitization transaction have voluntarily changed their behavior and stopped using securitization to manipulate financial statements.

IV. LIMITATIONS

The most important limitation of this study has been the data collection for companies that follow IFRS. Even though currently more than 117 countries require or allow their registered companies to follow IFRS, not all of them have adopted IFRS at the same time. This created difficulties findings companies that adopted the IFRS, have securitization activities, and have complete data for five years. Another reason for having small sample is the fact that companies that follow IFRS are operating under different legal systems and use different languages and terms for their financial reporting. Furthermore, the economic and financial crises after 2007 have also decreased the volume of securitization activities. In short, decreased in the level of securitization activities coupled with unavailability of financial data for companies that follow IFR has negatively affected my sample size resulting in less power of my tests.

The one-year observations in 2010 have been another limitation of this study, which can be removed in the future when more time-series data will be available. Another important caveat is that the securitization is a useful vehicle and source of liquidity for most financial institutions, and any excessive restriction on securitization can contribute to market inefficiencies and must be avoided. To come up with an optimal level of restriction on securitization, academicians and scholars are encouraged to allocate more resources and put more efforts in this area of research.

In my study, I have used the anti-director index that has been used in the literature since 1996. Another index has recently been developed by La Porta that can be used in future related studies. The calculation of this new index requires a lengthy process including the completion of a comprehensive survey.

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