

**Fair Value Accounting and Gains from Asset Securitizations:  
A Convenient Earnings Management Tool with Compensation Side-Benefits**

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## **Fair Value Accounting and Gains from Asset Securitizations: A Convenient Earnings Management Tool with Compensation Side-Benefits**

### **Abstract**

The accounting rules for securitizations give managers considerable discretion over the size of the reported gains from securitizations. This discretion comes in part from ambiguity in the accounting rules over what is meant by “fair value” as well as discretion over the discount rates, prepayment rates, and default rates selected when calculating fair value. We present results assuming that: (i) the gain is completely discretionary; and (ii) the gain is influenced by factors that affect the firm’s spread between lending rates and its cost of capital. Both sets of results suggest that firms report larger gains when pre-securitization earnings are low and when pre-securitization earnings are below the prior year’s level. These results are consistent with the discretion offered by the accounting rules being used by managers to engage in earnings management. We next investigate whether CEOs are rewarded for the gains that they report. We find that CEO compensation is as sensitive to securitization gains as it is to other components of earnings. This suggests that compensation committees treat securitization gains as a regular component of earnings. Finally, we examine the effect of various governance mechanisms that are likely to reflect how informed about the accounting and/or how independent the board is. We find weak evidence that less smoothing occurs in firms with more independent boards. However, we find no evidence the board characteristics affect the weight placed on the reported gain relative to that placed on other components of earnings.

Keywords: securitizations, fair value, earnings management, financial expertise, outside directors, gains

## **1 Introduction**

Securitization transactions are complex, involve multiple parties, and produce a host of risk and valuation issues. The advantage of securitizing long-term receivables is that the bank or issuer has an immediate source of cash and is no longer exposed to the risk of holding the receivable. Instead, this risk is diversified among a large number of investors who can have the cash flow pay-offs specifically tailored to their needs. As a consequence of these advantages, securities resulting from securitizations were among the largest segment of the debt market in 2005, totaling \$7.4 trillion. By comparison, the Treasury market was valued at \$4.1 trillion in 2005 (Bond Market Association, 2005).

Securitizations, however, can also have unanticipated costs, as exemplified by the current financial crisis. Since the receivables are “sold” to a special purpose entity (SPE), a moral hazard exists whereby management faces incentives to lower credit standards since the firm no longer bears the full cost of defaults. This can result in adverse selection where firms with lower quality receivables are more likely to want to sell them. Once the receivables are “sold,” the firm no longer has the stream of future cash payments from the receivables. This can result in business strategy risk because when demand for the underlying product that creates the receivables slows, the issuer can face cash constraints. Finally, the accounting rules governing securitizations require derecognition of the receivables once they are transferred to a qualifying SPE. This accounting creates asymmetric information problems because the firm’s risk exposure is opaque to its owners.

In this paper, we focus on the accounting for securitizations and examine consequences of the accounting rules that allow for *derecognition* of the receivables. When a firm “sells” its

receivables, it receives cash and any difference is recorded in income as either a gain or loss. Throughout the paper, we refer to the income effect as a “gain” since gains are typically reported. (Indeed, the Wall Street term for the SFAS No. 140 rules governing the accounting for securitization is “gain on sale” accounting.) Our sample consists of firms that retain an interest in the receivables, that is less than 100 percent of the cash flows relating to the receivables are sold. We argue that allowing derecognition of the receivables in such cases provides ample opportunity to manipulate earnings because the retained cash flows are required to be recorded at *fair value* when no active market value is likely to exist. For example, a recent *New York Times* article describes how the Chief Financial Officer of New Century Financial presented the details of gain on sale accounting at industry seminars and conferences, and promoted it to Wall Street analysts as “an insider’s look at New Century.” The article cites industry specialists as saying “[t]he thing about gain on sale accounting is that you can create a machine that just manufactures earnings out of thin air” (see “Accounting said to hide lender losses” in *The New York Times*, May 1, 2007).

We have three objectives in this paper. Our first objective is to determine whether managers use the high level of judgment and discretion obtained through implementing fair value accounting rules to report larger gains when doing so would improve perceptions of their performance. Boosting gains is not costless to managers because over-optimism in the current period increases the probability of recording impairments in future periods. Therefore, managers are likely to time discretionary gains to periods in which the expected benefits are larger. We examine two circumstances in which we expect their incentives to be relatively strong. The first is when the firm has low pre-securitization earnings (i.e., earnings before the securitization gain). When earnings are low, managers are likely to face greater scrutiny by investors and regulators,

are less likely to receive bonuses and options, and will have more trouble attracting employees and customers. In these circumstances, the benefits of reporting higher income in the current period are likely to be greater than the potential cost of a future write-down. Likewise, when pre-securitization earnings is high, managers face less incentive to record gains and could even prefer to report a loss. The second circumstance is when unmanaged earnings are below the prior year's level. Prior research suggests that firms are rewarded for reporting positive earnings changes (e.g., Barth, Elliot, and Finn, 1999) and that managers provide earnings comparisons which emphasize improvements (e.g., Schrand and Walther, 2000). Our evidence is consistent with reported gains being relatively larger in both of these cases.

In a typical asset sale, management can cherry pick the assets to record gains or losses. Securitizations also offer this cherry picking or transaction based earnings management with the added discretion of fair-valuing the retained interest. In fact, securitizations are frequently done at the end of the quarter giving management flexibility in determining the proportion of receivables to sell to achieve desired accounting outcomes (Dechow and Shakespeare, 2008).<sup>1</sup> It is also difficult for financial statement users to evaluate the reasonableness of the reported gain as the accuracy of the reported gain can only be determined as future events unfold. Recent events in the subprime mortgage industry illustrate this problem.<sup>2</sup> When subprime mortgage

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<sup>1</sup> Based on our discussions with structured finance groups at the Big Four accounting firms, the most typical time for companies to enter into securitization transactions is within 10 days of the quarter end.

<sup>2</sup> Credit losses and asset write-downs recorded by large banks and securities firms related to subprime mortgages exceed \$150 billion. Because mortgage loans are often securitized, loan originators had incentives to grant risky loans, and investors could not effectively monitor the quality of these loans (see "Securitization: When it goes wrong" in *The Economist*, September 20, 2007). Wall Street firms that sold asset-backed securities had strong incentives to increase volume because many of the costs associated with securitizations are fixed. And the credit-rating agencies, which are paid by the securitizers rather than by the investors, had incentives to provide high ratings to new securities and had little incentive to review their ratings subsequently (see "FBI probes accounting in subprime securitization" in *Financial Week*, January 30, 2008 and "SEC drift said to prevent action on credit crunch" in *Investment News*, February 25, 2008). Currently, the Federal Bureau of Investigation (FBI) is investigating 16 unnamed companies for possible accounting (valuation-related) fraud and / or insider trading activity related to the subprime lending crisis. Similarly, the Securities Exchange Commission (SEC) has made more than three dozen inquiries, and has added reforming credit-rating agencies and examining suitability

companies underestimate forecasts of default (either intentionally or unintentionally), they boost gains in the current period. It can take several years for the underestimates to be revealed because it can take years for firms to realize the full extent of their incorrect forecasts.<sup>3</sup> In the meantime, managers are compensated based on earnings affected by their forecasts, and their firms are able to raise additional financing to loan to new subprime customers. For example, Countrywide Financial reported gains from securitizations totaling \$22.6 billion from 2001 through 2006. During the same period, the Chief Executive Officer (CEO) of Countrywide, Angelo Mozilo, received compensation totaling nearly \$400 million.<sup>4</sup> However, in the second half of 2007, Countrywide recorded losses of \$1.6 billion related to its loans, and more losses followed, with a further \$704 million loss being recorded to cover the costs of obligations on its lines of credit. The *ex post* settling up problem described in Leone, Wu, and Zimmerman (2006) appears to be at work in the current credit crisis. The compensation and retirement packages granted to the CEOs of corporations deeply involved in the current mortgage crisis were the subject of recent regulatory hearings by the Committee on Oversight and Government Reform. However, to our knowledge, no executives have been forced to pay back bonuses based on earnings inflated by securitization “gains.”<sup>5</sup>

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requirements for selling complex asset-backed securities to its regulatory agenda. The companies involved in the FBI and SEC probes include subprime lenders, major investment banks that securitize these loans, and banks that hold the mortgage-backed securities (see “FBI widens new around subprime industry” in *Business Week*, January 30, 2008, p. A13).

<sup>3</sup> For example, Countrywide Financial stated that its computer models did not take into account the possible effects of exceeding the loss levels that cut off reimbursements from the SPE (see “Countrywide posts \$421.9 million loss for quarter; results underscore challenges facing Bank of America” in *The Wall Street Journal*, January 30, 2008).

<sup>4</sup> See “In search of a subprime villain: Countrywide’s Mozilo is being cast for the part, but it’s hard to pin this mess on one man” in *Business Week*, February 4, 2008.

<sup>5</sup> During the time period we examine, most securitization transactions resulted in reported gains. However, because of the credit crisis in the latter part of 2007, many firms have recorded large write-offs related to these transactions. Interestingly, the board of directors of Washington Mutual decided to exclude these losses when setting management compensation, even though the gains were included in earlier time periods (see “WaMu Board shields executives’ bonus” in *The Wall Street Journal*, March 5, 2008, p. A3).

Our second objective is to examine CEO pay-sensitivity to securitizations gains. Prior research provides evidence that management compensation is sensitive to accounting earnings (e.g., Sloan, 1993) and that boards of directors will “look behind the earnings number” in certain circumstances and will adjust compensation. For example, Dechow, Huson, and Sloan (1994) show that boards appear to filter out the effects of restructuring charges on executive cash compensation, and Gaver and Gaver (1998) find different compensation sensitivity for reported gains versus losses. We build on this research by first showing that accounting rules for securitizations provides ample opportunity to manage earnings. We then document that these gains have similar pay-sensitivity as regular components of earnings. Note that the magnitude of securitizations and their impact on earnings is large. In our sample 13 percent of the firms report gains sufficient to convert an accounting loss to a profit. In addition, the average gain increases reported earnings by more than 38 percent.

Our third objective is to investigate whether boards of directors play a monitoring role in determining either the size of the reported gains or in determining the sensitivity of CEO compensation to reported securitization gains. We investigate several aspects of corporate governance that we believe would correlate with director independence and the board’s ability to monitor management. These include whether the compensation or audit committee includes a financial expert that is likely to understand the accounting for securitization transactions; whether a female director sits on the board; whether the directors were on the board before the CEO was appointed; and whether the proportion of outside board members is in the top quartile of the distribution (i.e., more than 90% of board members are non-executives).

Our results concerning the effect of governance on CEO compensation are mixed. We find weak evidence that reported gains are smaller and that less smoothing with securitization

gains occurs when more than 90% of board members are outsiders. However, other governance variables do not appear to play a role in determining the size of the reported gain. In addition, we find no reliable relation between pay-sensitivity to the gain and governance characteristics. Note that one could argue that if contracts are efficient, then finding that gains are given the same weight as other components of earnings could be consistent with an equilibrium where it is optimal to reward the CEO for gains, even if they are discretionary (Core, Guay, and Randall, 2005). In addition, Core, Guay, and Larcker (2003) suggest that unless beliefs about optimal incentive levels are systematically biased, we should expect compensation contracts to be efficient, on average. However, such arguments assume that boards of directors, and compensation committees in particular, understand fair value accounting rules and securitization transactions. This is an open question since even some auditors do not appear to fully understand the application of fair value accounting rules (Johnson, 2007). Therefore, either our tests lack the power to detect the importance of governance mechanisms or the governance mechanisms we examine have little effect on the monitoring of managers or on earnings management (e.g., Larcker, Richardson, and Tuna (2007)).

Our results build on concurrent research by Karaoglu (2005) who investigates whether firms cherry pick loan sales to improve regulatory capital and engage in securitizations to improve earnings. However, Karaoglu (2005) focuses exclusively on banks and their regulatory reports and uses data under SFAS No. 125 (i.e., 1997 through 2000), while our sample covers a broad range of industries and uses data under SFAS No. 140 (i.e., 2000 through 2005). SFAS No. 140 requires firms to disclose their gains and so we are able to identify more firms that engage in securitizations and are able to measure the gains with less error. Our research also builds on early work by Hand, Hughes, and Sefcik (1990) that examines motivations for firms



engaging in insubstance defeasances. In the 1980s, many firms removed debt from their balance sheets and reported gains by setting up irrevocable trusts to pay off the debt. Managers had discretion over the timing and amount of the debt defeased, and hence the reported gains. Securitizations are comparable transactions but relate to an asset rather than a liability. Similar to Hand et al. (1990), our findings suggest that firms undertake real transactions, at least in part, for their accounting benefits.

Our paper proceeds as follows. In the next section, we discuss the accounting rules for securitizations and how gains are created. In section 3, we provide our predictions. Section 4 provides our sample selection and tests of earnings management. Section 5 presents our examination of executive compensation, and section 6 examines the role of corporate governance. Section 7 concludes.

## **2.1 Understanding the securitization process and the reporting of gains**

Securitizations typically occur in the financial services industry (e.g., repackaging of corporate loans, home loans, personal loans, etc.) but they are also common in retail (e.g., store credit cards), manufacturing (e.g., auto leases), and real estate (e.g., time-shares, loans for land, domestic and commercial properties). In a typical securitization transaction, a firm sells the rights to a cash flow stream from a pool of financial assets such as mortgages, loans, and leases to a SPE. The SPE issues securities (usually bonds) to outside investors and uses the proceeds of this issuance to pay the firm for the rights to the cash flow stream. The investors are repaid by the SPE when cash flows related to the securitized financial assets are collected. The accounting rules require any cash flow streams retained by the firm, other than for servicing rights, to be fair valued. This is a difficult calculation requiring considerable judgment on the part of management because actively traded markets for the retained assets do not exist.

During our sample period, SFAS No. 140, paragraphs 68 through 70 provided implementation guidance for the measurement of fair values of instruments. However, ambiguity in measurement remains even with this guidance. For example, SFAS No. 140, paragraph 70 refers to “reasonable and supportable assumptions and projections” without defining what these might be.<sup>6</sup> SFAS No. 140 requires a transfer of financial assets to be treated as a sale when the following three conditions have been met: (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 (SFAS No. 140, paragraph 9). Therefore, the current approach to accounting for asset securitizations uses the concept of “surrender of control” to determine when to derecognize the assets. If the firm has retained control over the assets, then it must account for the transaction as a collateralized borrowing. Under this treatment, the receivables would remain on the books until the customers pay, and any cash received from securitizations would be recorded as borrowings. If the firm is deemed to have surrendered control over the assets, then the transaction is accounted for using sale accounting. Here, the receivables are removed from the books and the cash is recorded. In a typical securitization, the firm retains some interest in the securitized assets. A conceptual issue for accounting is what degree of involvement is permissible to qualify for sale accounting. However, it is not difficult for a firm to comply with the sale requirements of SFAS No. 140 even when the firm retains a significant amount of risk, so almost all firms structure securitization transactions to ensure that the requirements for the sale accounting treatment are met.

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<sup>6</sup> In September 2006, the Financial Accounting Standards Board issued SFAS No. 157, in part to address the lack of implementation guidance in applying the definition of fair value and to clarify the implementation of the fair value rules. SFAS No. 157 defines fair value as the price at which two willing market participants would exchange the asset or liability, and establishes a three-level framework for measuring fair value.

As stated previously, any cash flow streams retained by the firm, other than for servicing, are fair valued, with firms now having the option to fair value servicing rights under SFAS 156. The fair value calculation is based on management assumptions about the likelihood of default, prepayment rates, and discount rates. In many cases, such as banks selling mortgages, credit card-based loans, long-term installment payments on products such as car leases, and land leases, receivables are sold within a few days, weeks, or months of the contract initiation. Therefore, differences between the market value of the receivables and the book value of the receivables resulting from interest rate fluctuations are likely to be small. Given this, how do firms derive gains from securitization?

To better understand the source of the gains, we discuss three scenarios that have the same underlying cash flows and risk but are accounted for in different ways. For simplicity, we focus on the role of the discount rate and its affect on the size of the gain. Note, however, that when a firm treats a securitization as a sale, additional assumptions must also be made about prepayment rates and default risk among the various tranches. These assumptions are also open to management discretion and could, in fact, have a larger impact on the size of the reported gain. However, to keep our scenarios simple, we assume these are accurately forecasted and focus on the discount rate and its implication for the gain.

We start with a firm (ABC) that initially raises \$3.08 cash from investors at the beginning of time zero. In Scenario A the firm borrows from creditors and uses this cash plus the equity investment to make home loans that are simplified to have a pay back period of three years. In Scenario B, the firm immediately refinances the loan by creating a QSPE and securitizing the receivables. This scenario shows the effect of the off-balance sheet arrangement. Scenario C is

the same as B, but now the retained interest is valued at a 10 percent discount rate and a gain is recorded.

#### Scenario A: Collateralized borrowing and the receivables on the books

ABC identifies customers that require financing for new homes. It organizes a contract where home owners will receive \$24.87 and will pay the money back in three installments of \$10. It organizes with creditors to borrow \$21.79 and agrees to pay the money back in three equal installments of \$8.00. The implied interest rate on the ABC borrowings is 5 percent. The borrowing is collateralized against the receivables so as home owners pay their mortgages, the first eight dollars that arrives each period is paid to the creditors. ABC's profit from the deal is the spread between the lending rate at 10% and the borrowing rate at 5%, the greater the leverage, the larger the return to the equity holders. ABC has found a profit opportunity in the market where it has identified home owners whose "true" risk is lower than the interest rate they are charged. Exhibit 1 provides the cash flows for the deal. The deal creates undiscounted cash flows of \$2.92 for equity holders and generates an internal rate of return to equity holders of 42 percent. Therefore, as long as equity holders have a cost of capital of less than 42 percent the firm should do the deal. Exhibit 1 also provides the balance sheet and income statement. In Year 1, the return on equity is 45 percent and is close to the internal rate of return on the deal. Leverage is high at 77 percent, suggesting that the deal involves significant risk for equity holders.

#### Scenario B: Off balance sheet arrangements and the creation of the SPE

ABC decides immediately after borrowing the money from the initial creditors and making the loan to home owners to undertake a securitization. Figure 1 presents the securitization transaction. The firm (the securitizer) transfers the receivables to a special purpose

entity. This SPE then sells classes of securities representing parts of the cash flow stream (tranches) to outside investors. There are two tranches: the firm sells 80 percent of the cash flows to outside investors as Tranche A (the senior tranche) and retains 20 percent of the cash flows in Tranche B (the subordinated tranche). Tranche A is approved by a credit rating agency and given an AAA rating and as a consequence investors are willing to pay \$21.79 to earn a 5 percent return. Firms typically retain the default risk and prepayment risk in Tranche B. It is often referred to as the “toxic waste.” The journal entries so far are as follows:

DR Cash		21.79	
	CR	Receivables	24.87

How should the firm value the retained interest? Concept Statement No. 7 indicates that when “management’s estimates are the only available information” the objective is “to estimate the price likely to exist in the marketplace, if there were a marketplace” (SFAC No. 7, highlights). Since nothing has happened to alter the receivable cash flow streams, this would suggest that the price of the entire stream of cash flows should be equivalent to the carrying value of the receivables on the firm’s books (a value of \$24.87 using the *market rate of 10%*). A similar conclusion is reached by the AAA’s Financial Accounting Standards Committee (1996, p. 181) in their comment letter on the accounting for securitizations. They argued that “...*unless a fundamental attribute of the underlying asset has changed, the fair value of the items exchanged should be equal to their carrying amounts, implying no gain at transfer.*”

Scenario B follows the recommendation implied by Concept Statement No. 7 and suggested by the AAA Financial Accounting Standards Committee. This scenario assumes that the *fair value* of the receivables is \$24.87 and prorates it between the two securities. The difference between the fair value of \$24.87 and the cash received of 21.79 is \$3.08. Therefore, Tranche B has a fair value of \$3.08. ABC immediately uses the cash raised by Tranche A to

pay-off their existing loan for 21.79. The firm can now remove the receivables as well as the loan from its books.

DR Retained Interest	3.08	
DR Original Loan	21.79	
CR Cash		21.79

In Scenario B the accounting return on equity is very similar over the three year period to that reported in Scenario A. However, this high return in year 1 now appears to have been created with no leverage. In addition, in year 1 return on assets improves from 6% in Scenario A to 35% in Scenario B. For a growing company, the off-balance sheet arrangement gives the appearance of a less risky firm even with no gain recognition.

Scenario C: Retained interest is valued at 10% and a gain is recorded

Most firms report gains from securitizations. In our sample, we find that 76 percent of firms report a gain. In Scenario B, the internal rate of return on the retained interest was 42 percent. In Scenario C we use a discount rate of 10 percent to determine the value the retained cash flow stream. This results in a value of \$4.97 for the retained interest. Adding the present value of Tranche A (\$21.79) to the present value of the retained interest (\$4.97) gives a value of \$26.76. Therefore, the total proceeds (cash and retained interest) received by the firm has a fair value of \$26.76, with the fair value of the retained interest represents 19% ( $\$4.97/\$26.76$ ) of this total fair value. The book value of the portion retained is \$4.72 ( $19\% * \$24.87$ ). The firm transfers \$24.87 in receivables and receives cash of \$21.79 and retained interest with a book value of \$4.72, resulting in a gain of \$1.64. Finally, the firm marks the retained interest to its fair value resulting in an additional \$0.25 ( $\$4.97 - \$4.72$ ) recorded into other comprehensive income.<sup>7</sup>

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<sup>7</sup> The firm could choose to classify the security as a trading security and therefore the \$0.25 would be recognized directly into income.

How could the receivables suddenly increase in value when there are no interest rate fluctuations? SFAS No. 140 requires firms to allocate the previous carrying value between the assets sold and the retained interest based on their relative *fair values* (paragraph 10). The examples contained in SFAS No. 140 all show gains being recorded (e.g., paragraph 57). One justification for the gain is that by splitting up the cash flows the firm has found new creditors who can have the cash flows tailored to their needs and are willing to pay a premium (a lower discount rate) for these cash flows. The sum of the parts is worth more than the whole.

Alternatively, it could be argued that Tranche B is not as risky as 42% because the firm has identified unique homeowners who are less risky than the 10 percent rate they are charged. The lower discount rate could reflect the “true” discount rate, which in the case of our simple firm is just ABC’s ability to borrow at lower rates than it lends.

Note that the total cash flows paid to the retained interest are \$6.00. All that has changed between Scenarios B and C is the timing of income recognition. In Scenario B, the firm has to wait until cash is received to record the gain (as interest revenue). In Scenario C, the gain is front-loaded and recognized in earnings immediately. The benefits of the accounting are clearly seen in the ratio calculations. Return on equity immediately increases to 61% at the time of the transaction plus another 10% is received in year 1. There is no leverage and return on assets is reasonable. The key however, is to realize that the firm has discretion over the *timing* of the transaction and hence when the gain will be recorded. In addition, the firm has choice in the *discount rate* and this determines the size of the gain. Note that if the firm continues to grow (does more securitizations) continued profits will be shown. However, if growth slows and no deals are done, a sharp decline in earnings will occur (as shown in years 2 and 3). In addition, if defaults occur, ABC cash flow stream dries up quickly since they bear the default risk.

Scenarios B and C highlight the off-balance sheet nature of the receivables and debt. Landsman, Peasnell, and Shakespeare (2008) investigate whether investors view securitizations as loans or as sales. Their results are consistent with investors treating the securitizations as loans. Niu and Richardson (2006) show that the off-balance sheet debt related to securitizations has, on average, the same risk-relevance for explaining the capital asset pricing model beta as the firm's on-balance sheet debt. In addition, Niu and Richardson (2006) find that securitization gains are perceived by investors as less reliable than other components of earnings for valuation. Their results suggest that firms which engage in relatively more off-balance sheet securitizations have less reliable reported gains. Our discussions with debt rating agencies also suggest that in evaluating ABC's risk, debt rating agencies would consolidate the SPE. However, the disclosures do not provide sufficient information to completely reconsolidate the receivables and loans back on the books and therefore are not sufficient to perfectly undo the accounting. Therefore, we investigate whether directors acting in the interest of shareholders intervene and place less weight on the gain when compensating management.

### **3 Predictions**

We predict that managers have incentives to increase reported earnings using gains from securitizations when earnings are low or negative. As the firm's pre-securitization income (earnings before the gain from securitizations) rises, there is less incentive to securitize assets in the current year, or if a securitization is undertaken to generate cash flow, to report a gain. Managing the assumptions to report a gain is not costless because in future years, optimistic



assumptions will have to be reversed with the adjustment being reported in income.<sup>8</sup> Therefore, we predict a negative relation between the size of the gain and pre-securitization earnings.

*P1: Discretionary gains are larger in firms with low pre-securitization income.*

We also predict that firms will have stronger incentives to boost discretionary gains when unmanaged earnings fall short of the prior year's earnings and, as discussed previously, to record discretionary losses when unmanaged earnings exceed the prior year's earnings.

*P2: Discretionary gains are larger in firms that have more negative changes in their pre-securitization earnings.*

An alternative approach that could be used to investigate the effect of management's incentive to boost or smooth earnings is to analyze forecast errors. Prior research suggests that managers face incentives to meet or just beat analysts' forecasts (e.g., Degeorge, Patel, and Zeckhauser, 1999; Burgstahler and Eames, 2006). We do not report results using forecast errors because of problems with measurement error and interpretation.<sup>9</sup>

If directors understand that the gain is highly discretionary and dependent on future outcomes, then they may choose to place less weight on the gain than other components of income when compensating executives.

*P3: CEO pay is less sensitive to securitization gains than to other components of earnings.*

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<sup>8</sup> Any subsequent adjustments to the reported gain would show up as a change in the value of the retained interest which is typically classified as an available for sale security. Thus, for most firms, this change would be reported as a component of other comprehensive income rather affecting net income.

<sup>9</sup> We have two reasons for not pursuing analysts' forecasts as a benchmark. First, we do not have clear predictions on the sign of discretionary gains for firms that just meet or beat expectations since firms can meet by managing the gain up or down depending on the level of premanaged earnings, and small sample sizes for these groups of firms make developing powerful tests difficult. Second, we do not know whether analysts include forecasts of the gain in their earnings forecasts. If analysts correctly forecast the gains or losses (including any earnings management of the gain), then we will mechanically find a negative relation between the size of the gain and forecast errors (where forecast errors are calculated as actual "premanaged earnings" less the forecast) since our measure of actual "premanaged earnings" will be too low for firms with gains and too high for firms with losses. This makes interpreting the results difficult.

However the extent that boards intervene in determining CEO pay is likely to depend on their power relative to the CEO, their knowledge of the accounting, as well as their level of independence. Therefore we investigate whether boards that appear to be stronger in the above characteristics intervene to a greater extent than boards that do not have these characteristics. Alternatively, directors could influence the size of the gain directly by questioning the accounting reports. As a consequence we could observe smaller gains and less income smoothing in firms that have more informed or more independent directors.

*P4: There is less earnings management using gains from securitizations in firms that have more informed or more independent directors.*

*P5: CEO pay is less sensitive to securitization gains than to other components of earnings when the firm has more informed or more independent directors.*

#### **4 Sample selection and earnings management results**

We use Edgar to search the 10-K filings of all firms filing with the Securities and Exchange Commission (SEC) during the period September 2000 to December 2005 inclusive. We selected this time period because this is when SFAS No. 140 became effective and under SFAS No. 140, firms are required to disclose more details about their securitizations. We read each firm's 10-K and require sample firms to disclose gains, proceeds from securitizations undertaken during the year, the fair value of the retained interest, and adverse changes at the year-end. We collected additional financial statement data from Compustat or directly from the firms' financial statements when the data were not available from Compustat. Finally, we collected annual returns from the Center for Research in Security Prices monthly files. This yielded a sample of 305 firm-year observations, representing 96 firms that report gains from securitization. Because the large majority of our sample firms report gains from securitization, we generally focus, in the text, on that group of observations. However, we retain those firms

which report securitization losses or no income effect from securitizations. We perform the regression analyses that follow using the maximum number of observations available because not all variables are available for all observations.

Table 1 describes the industry composition and the size of the recognized gains in our sample. Not surprisingly, financial institutions make up the largest portion of the sample, with the top five (4-digit SIC code) industries all being financial institutions (SIC codes 6020, 6141, 6162, 6035, and 6199). However, approximately 41 percent of sample firms are from other industries. These non-financial institutions securitize a range of financial assets including store credit cards (e.g., SIC codes 5311 and 5621) and automobile loans and leases (e.g., SIC codes 3711 and 5500), consistent with the growth in asset securitizations beyond residential mortgages.

In all of our empirical tests, we scale the gain by prior year equity, which is positive for all sample observations. We do this because our objective is to examine the economic importance of the gain's effect on income. Revenue could be used as an alternative deflator but this is also problematic since revenue is difficult to identify for financial institutions. In addition, equity is a more meaningful measure of capital than assets for financial institutions because assets under management can be very large.

Note that the average magnitude of the gains from securitization varies widely across industries – from a loss of 5 percent to a gain of 55 percent of equity. Figure 2 provides a graphical representation of the distribution of the gains. In our sample, 76 percent of firms report gains, 9 percent report no gain or loss, and 15 percent report losses from securitizations.

**[Table 1 and Figure 2 here]**

Table 2 provides descriptive statistics on the gain divided by the prior year equity. The average gain is 10 percent of equity, while the median is 1 percent of equity. We calculate pre-

securitization earnings as earnings before the gain. We calculate the change in pre-securitization earnings as the difference in pre-securitization earnings from the current year to the previous year, scaled by prior year equity. Earnings is bottom-line net income reported in the 10-K.

In our tests we attempt to isolate the component of the gain from securitization that has been “managed” or is discretionary. We provide two measures of the “discretionary” gain. A reading of Concept Statement No. 7 and letters commenting on the accounting rules for securitization suggests that the reporting of gains should, in theory, be very rare. Therefore, our first measure assumes that the entire gain from securitization is discretionary. Our second measure assumes that the gain reflects the spread between the firm’s cost of capital and the interest rate charged to customers. We predict that the size of the gain varies with economic factors (the firm’s competitive environment, the underlying receivable volatility, and the extent to which securitizations represent the main source of cash flows for the firm). Our second measure controls for these factors when determining the discretionary portion of the gain. These include the following:

- **Investment opportunity set facing the firm (Industry Effect):** We expect the size of the spread to vary by industry, based on the competitiveness of the market for customers, as well as on the efficiency of the securitization market. Therefore, we include the median level of gains from securitizations deflated by assets for the 2-digit SIC code industry-year (*Indust\_Gain*) in our model. If there are less than five firms in an industry in a particular year, we set the industry adjustment to zero.
- **Volatility in the receivable cash flows:** We cannot measure the volatility of the receivable cash flows directly so we use two proxies. The first is *Adverse\_Change/RI*. The value of retained interest that appears in the balance sheet represents an estimate of the expected (*mean*) discounted future cash flows. Adverse change disclosures provide an estimate of the *variance* related to these future cash flows. A higher variance is suggestive of more uncertainty about the value of the asset. We expect that firms with larger adverse changes relative to their retained interest will report larger gains and losses.<sup>10</sup> Firms are required to

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<sup>10</sup> Ceteris paribus, lower risk assumptions (e.g., discount rate risk, prepayment risk, or default risk) result in smaller adverse changes and higher values for retained interest, and hence, larger gains. Therefore, if risk is constant across firms and observed differences are due to “managing” the assumptions, we would expect a negative relation between the gain and adverse changes.

disclose the effect that two levels of changes in at least one key assumption would have on the value of retained interest. These key assumptions include prepayment risk, default risk, and the discount rate used to value the retained interest. Most firms disclose the effects of changes at the 10 and 20 percent levels for more than one key assumption. Because changes in these assumptions are not independent (e.g., a change in interest rates may also affect prepayment rates and default rates), we cannot simply sum the effects to find the combined effect on retained interest. Therefore, we measure the sensitivity of the value of the retained interest to changes in assumptions as the maximum change in the value of retained interest due to a change in any one of these assumptions.

Our second risk proxy is firm-specific market volatility (*Mkt\_Vol*). This measure is not as specific to securitizations as the adverse change measure; however, we expect it to be positively correlated with receivable cash flow volatility. Recall that in securitizations, the firm retains most of the risk related to the receivables.<sup>11</sup> Therefore, equity volatility should reflect this residual risk. We calculate this variable by regressing the monthly stock returns on the value-weighted NYSE/AMEX index and taking the standard deviation of the residuals. Higher market volatility is indicative of a firm that is potentially making more risky loans and charging higher rates to customers.

- **Reported discount rates:** Holding prepayment rates, default rates, the proportion of receivables securitized, and duration constant, higher discount rates imply lower present values of retained interest. This, in turn, suggests lower reported gains (i.e., a negative relation between discount rates and gains). Firms report the discount rate that they use for securitizations in a standardized fashion, typically either an average point or a range estimate. We obtain this variable, when available, from the notes to the financial statements. Note, also, that firms do not report prepayment rates or default rates in a consistent fashion and so we do not collect this information from the financial statements.
- **Securitization activity:** Securitizations represent a business strategy (making money from the spread) and a source of financing. We expect spreads to be larger for firms in which securitizing is a major part of their business. We proxy for this effect in two ways. First, we examine the number of segments in which the firm operates. If a firm operates in only one segment, then we expect the gain (as a percent of equity) to be larger, since securitizations are likely to be a greater proportion of business activities (Segment). Second, we calculate free cash flows (cash from operations plus cash from investing) less proceeds from securitizations, deflated by prior period equity (*Pre\_Sec\_FCF*). Firms that have more negative free cash flows are more likely to need to raise additional financing and so engage to a greater extent in securitizations. We therefore expect a negative relation between the gain and *Pre\_Sec\_FCF*.<sup>12</sup>

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<sup>11</sup> Gorton and Souleles (2006) provide evidence that for credit card securitizations, firms implicitly guarantee that third party investors do not suffer any losses, suggesting that firms may indeed retain all of the risks.

<sup>12</sup> Prior research suggests that firms take actions to increase reported earnings when issuing securities because doing so can increase the value of the securities sold (e.g., Dechow, Sloan, and Sweeney, 1996; Rangan, 1998; Teoh, Welch, and Wong, 1999). A cash-constrained firm (i.e., one that has negative *Pre\_Sec\_CF*) is therefore more likely to have incentives to increase reported earnings. To extent that this proxy captures incentives to boost gains, this reduces the power of our discretionary gain tests performed later in the paper.

Table 2 provides descriptive statistics and correlations for the economic determinants of securitization gains. The average industry gain is approximately five percent of equity. The adverse change relative to retained interest is on average 13 percent. This can be interpreted as implying that for a 20 percent change in a key assumption (such as a change in the discount rate), the retained interest changes by 13 percent. The average discount rate is 11.78 percent. Table 2 also reports variables that act as controls for economic factors that could potentially influence the size of the reported gains. Segment is an indicator variable for whether the firm has more than one segment. Eighty-seven percent of firms have more than one segment. Regulate is an indicator variable set equal to 1 if the firm is in SIC codes 6020, 6035 or 6036. Approximately 36 percent of observations are in regulated industries.

Table 2, Panel B presents the correlations between variables included in our regression analyses. We find that the gain is positively correlated with the industry gain (0.50), and positively correlated with the market volatility. The correlation between the discount rate and the gain is positive and significant. The reason we do not observe a negative correlation (i.e., lower discount rates, higher retained interest, and larger gains) could be due to the fact that assumptions concerning prepayment rates, default rates, and cash flow duration also affect the size of the gain and are likely to vary in cross-section. However, consistent with higher discount rates being used by more risky firms, we find a positive correlation between the discount rate and both the adverse change and the market volatility. As predicted, both measures of the importance of securitization activity are negatively correlated with the gain.

**[Table 2 here]**

Table 3 presents our examination of the relation between securitization gains and incentives to engage in earnings management. Table 3, Panel A reports results where the

independent variable is *pre-securitization earnings*. Consistent with our prediction, we document a negative coefficient on pre-securitization earnings. Specifically, regression (1), where we assume the entire gain is earnings management, supports this prediction. Regressions (2) through (5) contain various controls intended to isolate the discretionary component of the gain; again, the coefficient on pre-securitization earnings is negative. In all tests, we include the industry gain and then add various proxies for volatility, discount rates, and the volume of securitizations. Note that our models have high explanatory power (adjusted R<sup>2</sup>s of greater than 60 percent). In all models, the strong negative relation between securitization gains and pre-securitization earnings holds.

Table 3, Panel B presents results using the change in pre-securitization earnings as the incentive to engage in earnings management. There are fewer observations in this analysis because our time-series is relatively short and we require sample firms to have undertaken a securitization. Consistent with prediction P2, we find a negative coefficient on the change in pre-securitization earnings. This relation is significant in regression (1), where we assume that the entire gain is earnings management, and it holds across regressions (2) through (5), which include various controls so that only a portion of the gain is assumed to be discretionary. Thus, the results in Table 3 are uniformly consistent with management using the discretion allowed under fair value accounting rules to report securitization gains to manage earnings.

**[Table 3 here]**

Figure 3 presents the disclosed discount rates used to value the retained interest. We provide this figure as another way of documenting the discretionary nature of reported the gains. Recall from Exhibit 1, Scenario B that if firms are valuing the retained interest using an internal rate of return method to discount cash flows, they should report fairly high discount rates. Interestingly, however, the most popular discount rate used in the sample is 12 percent, and

while the choice of discount rates appears to be relatively arbitrarily, it is generally at or below 12 percent. Note that lower discount rates imply larger reported gains.<sup>13</sup> Figure 4 provides the impact of the reported gain on earnings. For 8% of firms, income is still negative after the gain, for 13% of firms, income switches from negative to positive, and 13% of the firms report a loss. The average impact of the gain on earnings is a 38% percent increase, while the median impact is a 3% increase. Figure 4 suggests that for many firms, the gain has a material impact on reported earnings.

**[Figure 3 and 4 here]**

## **5 The sensitivity of CEO compensation to reported securitization gains**

In this section we investigate whether gains from securitizations are treated as regular income or whether compensation committees acknowledge that these gains are of low reliability and place less weight on this component of earnings. In our regressions, we use the entire gain as our measure of discretionary gain. Our results (untabulated) are qualitatively similar when we add control variables.

We hand-collect CEO compensation variables directly from the firms' proxy statements because compensation and governance data for a large portion of our sample is unavailable from machine-readable databases. We measure total compensation as the sum of the option grant value and annual compensation (i.e., salary and bonus) and all other compensation, obtained from the Summary Compensation Table. Table 4, Panel A provides descriptive statistics on this measure as well as on annual returns (which are included in our regressions as a control variable). Total compensation is on average \$10.08 million. The dependent measure in our

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<sup>13</sup> A recent SEC enforcement action taken against Conseco suggests that this discretion can be used to manage earnings (Account and Auditing Enforcement Release No. 1973/March 10, 2004 File No. 3-11428). The release notes that top management specifically managed the assumptions underlying the value of Conseco's retained interest to increase earnings and to avoid writing down the retained interest.



compensation regression analyses is the log of total compensation (as in Perry and Zenner (2001), Engel, Gordon, and Hayes (2002), Hall and Murphy (2002), Harford and Li (2007), and Core, Guay, and Larcker (2008), among others). We control for heteroskedasticity and possible correlation of the residuals within firm clusters using Rogers standard errors (Peterson, 2007).<sup>14</sup> We also control for whether the firm is in a regulated industry (although we make no specific prediction about the effect of this on compensation) and for stock price performance (which we predict to have a positive relation with compensation).

Table 4, Panel B presents the results of the following regressions:

$$\text{Log TotComp} = \alpha + \beta_1 \text{earnings} + \varepsilon \quad (1)$$

$$\text{Log TotComp} = \alpha + \beta_1 \text{earnings} + \text{controls} + \varepsilon \quad (2)$$

$$\text{Log TotComp} = \alpha + \gamma_1 \text{gain} + \gamma_2 \text{pre-securitization earnings} + \varepsilon \quad (3)$$

$$\text{Log TotComp} = \alpha + \gamma_1 \text{gain} + \gamma_2 \text{pre-securitization earnings} + \text{controls} + \varepsilon \quad (4)$$

We first show that compensation is positively associated with earnings. We scale earnings-related measures by the book value of equity in the prior year for two reasons. First, return on equity is a common performance target in the financial industry (which comprises a significant portion of our sample). Second, due to the large variation in the composition of assets across sample industries, it is a preferable measure to return on assets in our setting. However, we include assets in the regression to control for compensation related to the value of the assets under management.

We then decompose earnings and examine the compensation weight placed on the securitization gain.

- (i) If the coefficient on the gain is equal to zero, then this implies that the compensation committee ignores securitization gains when setting compensation.

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<sup>14</sup> Recent papers using this technique include Sundaram and Yermack (2007), Caramanis and Lennox (2008), and Daniel, Denis, and Naveen (2008).

- (ii) If the coefficient on the gain is equal to the coefficient on pre-securitization earnings, then this implies that the compensation committee acts as if the securitization gain is as reliable as other income components.
- (iii) If the coefficient on the gain is greater than zero but is less than the coefficient on pre-securitization earnings, then this implies that the compensation committee places less weight on the gain, possibly due to reliability concerns.

Regression (1) in Table 4, Panel B indicates that CEO compensation is sensitive to earnings ( $\gamma_1 = 1.37$ ). Regression (2) shows that the compensation sensitivity to earnings holds after controlling for size (assets), whether the firm is regulated (Regulate), and stock price performance over the prior fiscal year (Annual\_Return). Regression (3) decomposes earnings into the securitization gain and pre-securitization earnings but excludes the control variables. Regression (3) indicates that the gain receives lower, but still positive, weight relative to other components of earnings. Finally, in regression (4), we include control variables. The coefficient on the gain is 0.66 and the coefficient on pre-securitization earnings is 0.51. An F-test indicates that we cannot reject that the two coefficients are equal. Thus, regression (4) indicates that compensation is sensitive to securitization gains and compensation committees appear to treat securitization gains as a regular component of earnings. These results do not support P3.

**[Table 4 here]**

## **6 The role of governance**

The results in Table 4 suggest that compensation is sensitive to the reported gains and appear to be treated as a regular component of earnings. However, it is possible that there is cross-sectional variation in the sensitivity CEO compensation to the gain depending on

governance structures.<sup>15</sup> In addition, more informed or more independent directors could potentially directly intervene and influence the size of the reported gain. Thus, we examine the effect of the following governance characteristics, using information that we obtain from the firms' proxy statements.

- ***Financial expertise on either the compensation committee or the audit committee:*** We consider directors with backgrounds in finance or banking to be financial experts.

Although this definition differs from that in the Sarbanes-Oxley Act of 2002, we posit that because understanding securitizations requires a strong financial background, for our purposes, a director should be considered to have financial expertise only if (s)he is likely to understand the securitization activities of the firm and the effect of these activities on the financial reports. This expertise should allow the expert to provide stronger monitoring. Consistent with the view that financial experts add value and that market participants distinguish between types of financial experts, DeFond, Hann, and Hu (2004) find that the market reacts positively to the appointment of accounting financial experts, but not to the appointment of nonaccounting financial experts or to nonexperts, to the audit committee.

- ***Proportion of non-executive directors on the board:*** Outside directors generally face fewer conflicts of interest with respect to monitoring the CEO.

Prior literature suggests that outside directors may be more effective monitors (Fama, 1980; Fama and Jensen, 1983; Brickley and James, 1987; Hermalin and Weisbach, 1998; Byrd and Hickman, 1992; Beasley, 1996; Dechow, Sloan, and Sweeney, 1996; Farber, 2005; Adams and Ferreira, 2007). Moreover, earnings quality is higher when boards are more independent (Beasley, 1996; Dechow, Sloan, and Sweeney, 1996; Klein, 2002).

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<sup>15</sup> Prior research finds that weak governance is associated with poor quality accounting information (Menon and Williams, 1994; Dechow, Sloan, and Sweeney, 1996; Beasley, Carcello, Hermanson, and Lapides, 2000; Carcello, Hermanson, Neal, and Riley, 2002; Klein, 2002; Anderson, Mansi, and Reeb, 2004; Farber, 2005).

- ***Existence of a female director:*** Female directors are more likely to be viewed or to “outsiders” than male directors and so be more likely to question the CEO.

Prior research suggests that less homogenous boards are less likely to move in lock step and are more likely to question actions of the CEO (Kesner, 1988; Bilimoria and Piderit, 1994; Talmud and Izraeli, 1999; Hillman, Cannella, and Harris, 2002; Adams and Ferreira, 2004).<sup>16</sup> Moreover, research shows that heterogeneity generally increases group-level outcomes like creativity and the quality of decision-making (Bantel and Jackson, 1989; Jehn, Northcraft, and Neale, 1999; Milliken and Martins, 1996) because diverse groups tend to consider more perspectives (Watson, Kumar, and Michaelson, 1993). Thus, observing a female director may indicate that the board is open to different opinions and may be less dominated by the CEO or other insiders.

- ***Proportion of Directors appointed before the CEO:*** Directors appointed by the CEO are likely to have views and opinions that are more in line with those of the CEO, and so the directors on the board before the CEO is appointed are likely to be more independent.

Prior research suggests that boards are more independent when the CEO has less involvement with director selection (Boeker, 1992; Wade, O’Reilly, and Chandratat, 1990; Zajac and Westphal, 1995; Shivdasani and Yermack, 1999; Adams, Almeida, & Ferreira, 2005). Wade et al. (1990) suggest that board members are likely to feel as sense of obligation to the CEO responsible for their appointment. Thus, the higher the proportion of directors elected before the CEO was appointed, the more independent the board.<sup>17</sup>

Table 5, Panel A provides descriptive statistics related to our measures of monitoring. The results indicate that 50 percent of the firm-year observations have a financial expert on the compensation committee and 63 percent have a financial expert on the audit committee. The

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<sup>16</sup> Also see “Casting a wider net” in *The Wall Street Journal*, June 21, 2004.

<sup>17</sup> This variable has a correlation with CEO tenure (number of years as CEO) of -0.68 consistent with CEOs with longer tenures appointing more directors and so likely having more power over boards.

average board in our sample has 12 members and of these, 82% are outside board members and 11% female. The average proportion of CEO-appointed directors is 36%.

Table 5, Panel B provides correlations between the gain, earnings, compensation, and the governance variables as we measure them in the analyses that follow. Here, we convert three of the governance measures to indicator variables:

- *Female Indicator* equals 1 when there is a female on the board, 0 otherwise;
- *Outside Directors Indicator* equals 1 when more than 91% of the board is comprised of outsiders, and 0 otherwise (this is the upper quartile of the % Outside Director distribution).

Note that Table 5, Panel A indicates that there is not a great deal of variability in the proportion of outside directors since even at the lower quartile, outside directors comprise of 76.92% of the board and the median is 85.71%. Therefore, we form an indicator for boards in the upper quartile since these are likely to be relatively more independent, and so are more likely to intervene;

- *Appointed before CEO Indicator* equals 1 when half or more of the directors were already board members when the CEO was selected, and 0 otherwise.

In other words, this variable indicates firms where the CEO has appointed less than half of the board members, and so is less likely to exert power over the board.

**[Table 5 here]**

Unconditionally, securitization gains are negatively associated with the log of total compensation. However, earnings are positively associated with total compensation, and pre-securitization earnings are negatively associated with securitization gains. Therefore, to examine the relation between securitization gains and compensation, it is necessary to control for earnings. The existence of a financial expert on the compensation committee is positively correlated with the gain (0.23) but the existence of a financial expert on the audit committee has no relation to the gain. When more than 90% of board members are outsiders, gains are smaller

(-0.17). Gains are also smaller when a female sits on the board (-0.27), and when more than half of board members were appointed before the CEO (-0.21). However, board characteristics are likely to vary cross-sectionally with firm characteristics, so in Table 6, we investigate whether governance variables play a role after controlling for other factors that affect the size of the gain.

In Table 6, Panel A, we run the following regression:

$$\text{Securitization gain} = \alpha + \beta_1 \text{ pre-securitization earnings} + \beta_2 \text{ corporate governance} + \beta_3 \text{ pre-securitization earnings} * \text{corporate governance} + \beta_i \text{ controls} + \varepsilon \quad (5)$$

Our prediction is that  $\beta_2$  will have a negative sign (i.e., gains are smaller when there exists the governance variable of interest) and that  $\beta_3$  will have a positive sign (i.e., there is less smoothing where there exists the governance variable of interest). Our financial expertise variable considers whether a financial expert sits on the audit committee (rather than on the compensation committee) because audit committee members presumably have greater involvement in determining reported financial outcomes. We provide an F-test to determine whether examine whether  $\beta_1 + \beta_3 = 0$ . An insignificant F-statistic suggests that existence of the governance mechanism eliminates the smoothing of the gain. We have the same predictions in Panel B, where we use a change specification for pre-securitization earnings.

The results in Table 6, Panel A indicate that  $\beta_2$  is significantly negative only when the governance variable is the Outside Directors Indicator.  $\beta_3$  is positive and significant for the Outside Directors Indicator and for the Appointed before CEO Indicator, suggesting less smoothing in the presence of these governance mechanisms. However, the F-statistic is insignificant only for the Outside Director Indicator. Therefore, our results suggest that securitization gains are less likely to be used to smooth pre-securitization earnings only in firms with boards where more than 90% of directors are outsiders. In Table 6, Panel B, we find that only when 50 percent of board members were appointed before the CEO came to power is there

any evidence that the reported gain is smaller and there is less smoothing. Other governance variables are not associated with the size of the reported gain. The results in Table 6 provide only weak support for P4.

**[Table 6 here]**

Table 7 examines the sensitivity of CEO compensation to securitization gains in the presence of monitoring. Our financial expertise variable now considers whether a financial expert sits on the compensation committee since this committee is more relevant for determining CEO compensation. We posit that a financial expert should understand that the fair value accounting rules used to determine gains are discretionary. All other governance variables are the same as in Table 6.

In Table 7, we report results from the following regression:

$$\text{Log TotComp} = \alpha + \gamma_1 \text{ gain} + \gamma_2 \text{ pre-securitization earnings} + \text{controls} + \varepsilon \quad (6)$$

Regression (1) includes only observations where there is a financial expert on the compensation committee while regression (2) includes only observations where there are no financial experts on the compensation committee. We run separate regressions since this facilitates interpretation of the relative weights on the gains versus the pre-securitization earnings for each subgroup. The regressions where the monitor is present is shaded. In regression (1), we find that CEO compensation is sensitive to both components of income (i.e., to the securitization gain and to the pre-securitization earnings). The F-test indicates that the two components receive the same weight. Regression (2) indicates that when there are no financial experts on the compensation committee, earnings components are given *no* weight in determining CEO compensation (since the coefficients on both variables are not significantly different from zero). However, we also

find that no weight is placed on stock returns. Therefore, this regression may lack power since we are unable to infer how CEOs are compensated for this subset of firms.

Regression (3) includes only observations where the proportion of outside directors is in the upper quartile of the distribution while regression (4) includes remaining observations where the proportion of outside directors is in the bottom three quartiles of the distribution. The results from regression (3) indicate that when the proportion of outsiders on the board is high, the securitization gain receives no weight in determining CEO compensation but pre-securitization earnings are weighted positively. However, the F-test reveals that the difference between the weight placed on these two coefficients is not significant. The results of regression (4) reveal that both earnings components are given positive and equal weight in determining CEO compensation when the proportion of outsiders is low since both coefficients are positive and significant and the F-test for a difference between these two coefficients is not significant.

Regression (5) includes only observations where a female director sits on the board and regression (6) includes only observations where there are no female board members. The results are similar in both regressions. Here, we find that compensation is as sensitive to both the reported gain and to other components of earnings, and because the F-test does not reject that the coefficients are equal, these components of earnings have an equal effect on CEO compensation.

Finally, regression (7) includes only observations where 50 percent or more of the board were appointed before the CEO came to power and regression (8) includes all remaining observations. The results for regression (7) and (8) are similar. Both show that CEO compensation is affected by the gain and by pre-securitization earnings, and because the F-test does not reject that the coefficients are equal, that CEO compensation is as sensitive to the gain as other components of earnings.



Overall, our results do not support prediction P5 and suggest that CEO compensation is generally as sensitive to the gains from securitizations as to other components of earnings, even in the presence of governance variables that we predicted were likely to represent more informed directors and more independent directors. They suggest that either our measures are not appropriate and our tests lack power, or that board of directors chose not to distinguish between earnings generated from securitization gains versus other components of earnings when awarding CEO pay, even when relatively informed and independent.

## **7 Summary and conclusion**

SFAS No. 140 provides the conditions required for securitization transactions to be treated as sales. The conditions are legalistic in nature and so the vast majority of securitizations are accounted for using the sales accounting treatment. When receivables are transferred to an SPE, the firm removes the receivables from its books, increases cash by the amount of cash received, and creates an asset (called “retained interest”) that reflects the firm’s ownership stake in the future cash flows of the securitized assets. Any difference is recorded as a gain or loss from securitization and is reported in the income statement.

Our tests focus on the discretion afforded under fair value accounting and asset securitization rules, and specifically, on management’s discretion in selecting discount rates because unlike prepayment rates or default rates, there is never a "realization" that the discount rate was wrong. That is, with hindsight, financial statement users know whether defaults were greater than predicted, but are unable to determine whether discount rates were unrealistically low. This is precisely why discount rates are a valuable earnings management tool in our setting.

In our view, it is this very uncertainty around the assumptions that creates a problem when fair value accounting is used for non-active markets.<sup>18</sup>

We discuss three scenarios to aid in understanding the gains reported from securitizations. We point out that there is ambiguity in the meaning of “fair value” of the retained interest. A reading of Concept Statement No. 7 suggests that when no market price is readily available, the firm should use the market interest rate that applies to the receivables sold. This suggests that gains from securitizations would be rare. However, SFAS No. 140 has very limited guidance on how to calculate the fair value and what assumptions should be used. Therefore, the choice of the assumptions is highly discretionary and can have a large impact on the magnitude of reported gains.

We provide two approaches for identifying the discretionary gain. Our first approach assumes that the entire gain is discretionary, and our second approach controls for various economic factors that could affect the size of the reported gain. Both approaches yield similar results: We find that firms are more likely to report larger gains when pre-securitization income is low or is below last year’s level. This suggests that managers use the flexibility available when applying fair value accounting rules to manage earnings.

We next investigate whether CEO compensation is sensitive to the reported gains and whether gains are treated as a regular component of earnings for compensation purposes. We find that CEO compensation is sensitive to the reported gains and that the gains appear to be treated as a regular component of income.

Finally, we investigate whether outside monitors intervene and reduce the sensitivity of CEO compensation to reported securitization gains. We examine four monitors: (i) the existence

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<sup>18</sup> Our private discussions with investment bankers and accountants who structure these deals confirmed this view. They specifically stated that discount rates were selected after determining the desired gain.

of a financial expert on either the audit committee or the compensation committee; (ii) a high proportion of non-executive outside director representation on the board (i.e., more than 90% of the directors are outsiders); (iii) the existence of a female director; and (iv) the proportion of directors that were elected on to the board before the CEO was appointed. Our results suggest that CEO compensation is sensitive to gains from securitizations and is treated as a regular component of earnings even in the presence of these monitoring mechanisms. However, we do find some weak evidence that reported gains are smaller and are less managed when the proportion of outside directors is large. Overall, our results suggest that even in the presence of relatively informed directors and/or more independent directors, there is no intervention to reduce the sensitivity of CEO compensation to reported gains. Thus, the CEOs in our sample appear to have benefited from reporting larger gains.

Our research raises questions about the appropriateness of current accounting for asset securitizations allowed by the FASB. Our findings suggest that gains from securitizations are used to smooth earnings, and that CEOs are compensated on these gains as if they were part of regular income even though the gains may never be realized as cash. These combined findings suggest that a change in accounting rules away from “gain on sale” accounting is desirable. Asset derecognition is a difficult conceptual issue (Schipper and Yohn, 2007) and the FASB has recently proposed a significant change which could result in the majority of existing structures being brought back onto balance sheet. This would presumably reduce the prevalence of gain on sale accounting, although it may be a bit late given the current credit crisis. However, another facet of the problem – judgments used in determining fair values for complex securities that do not trade in active deep markets – could be even more pervasive in the financial statements of financial institutions. SFAS No. 157 introduces implementation guidance for the measurement

of fair value. While this standard is a considerable improvement over the guidance available in the time period we study, it is not a panacea. There will always be considerable judgments required in valuing securities when markets are inactive. Thus, financial statements should be sufficiently transparent so that users can understand the implications of those judgments.

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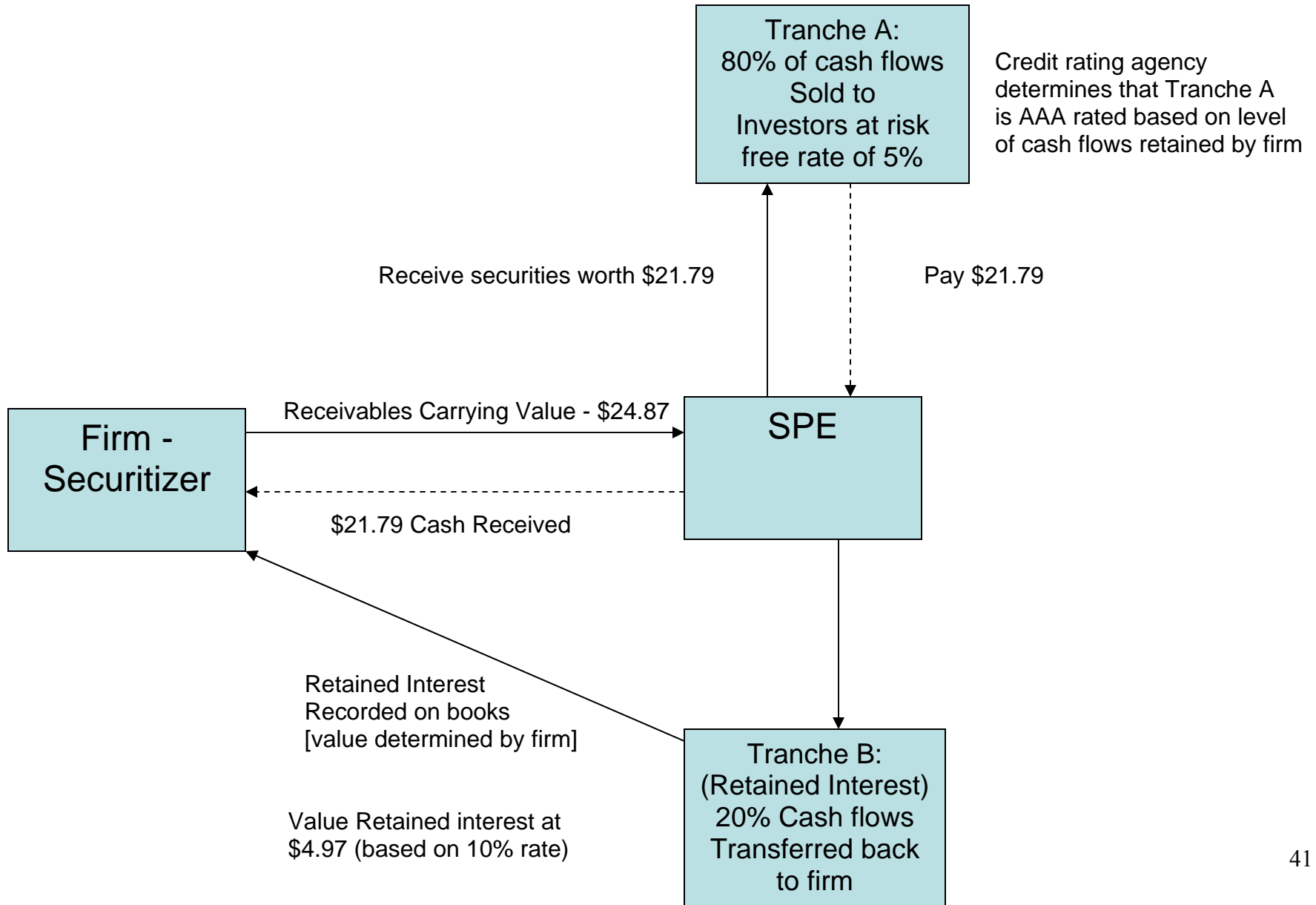
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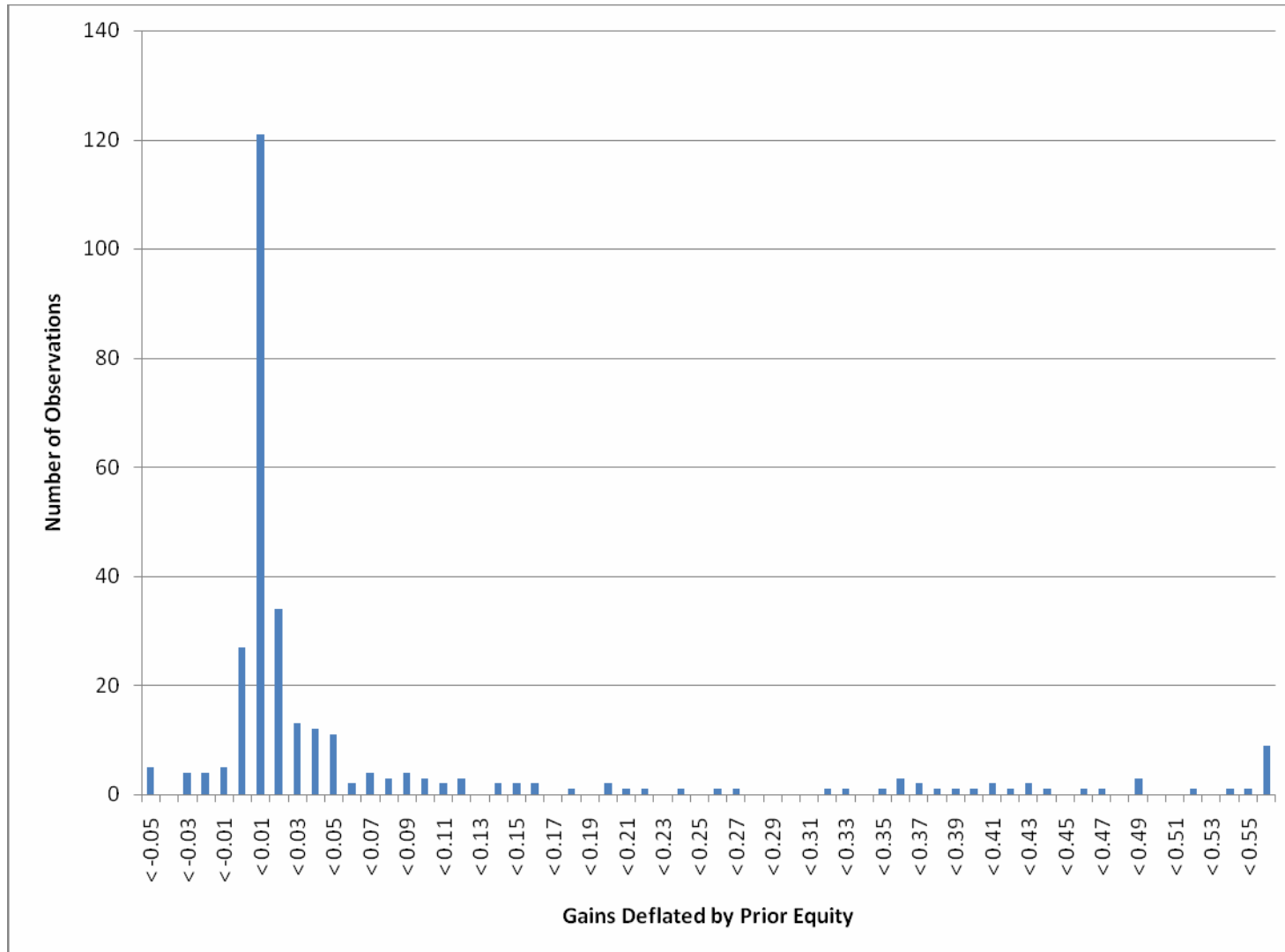
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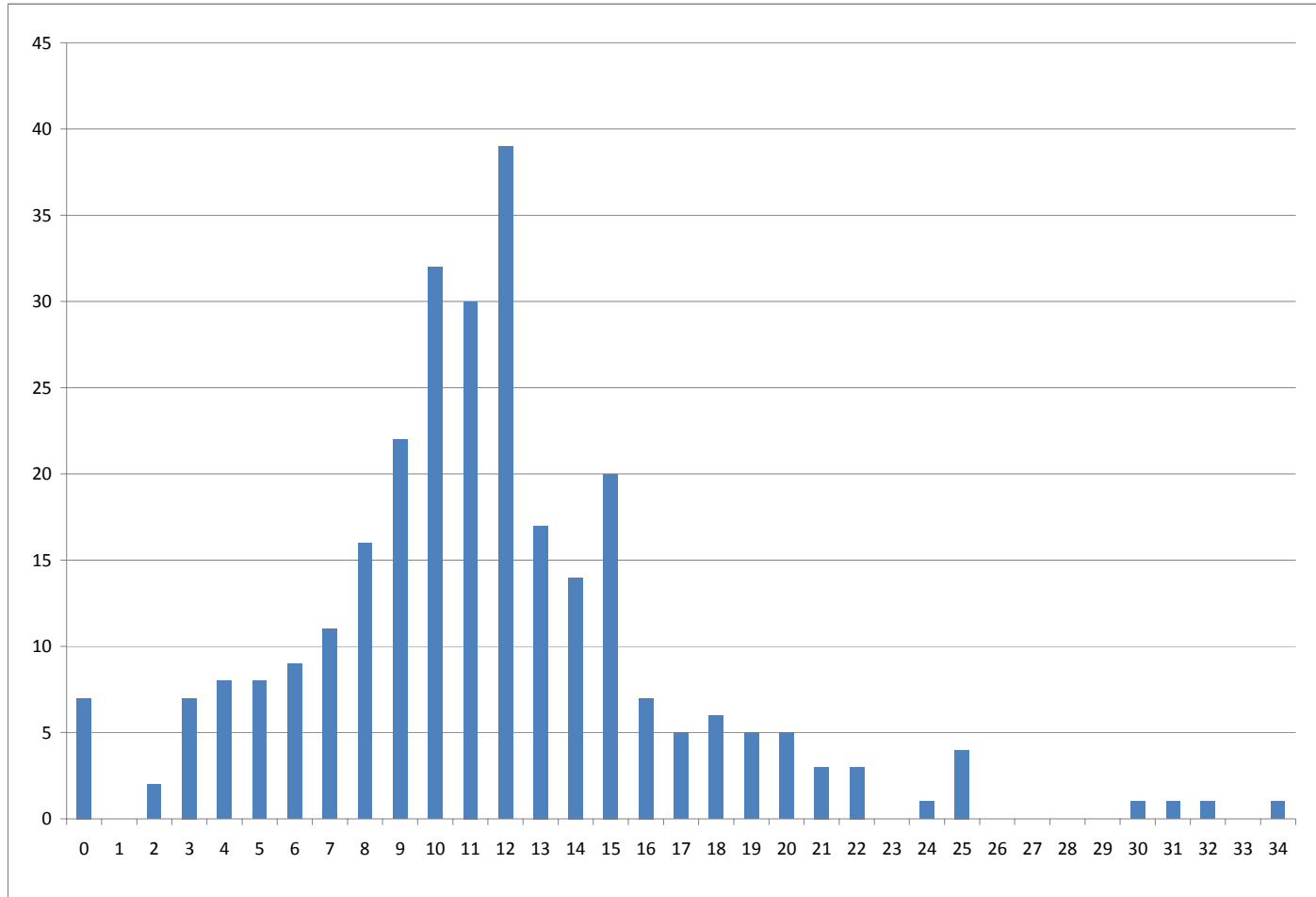
**FIGURE 1**  
*A "Typical" Asset-Backed Securities Issue*



**FIGURE 2**  
*Distribution of Gains Scaled by Prior Equity*



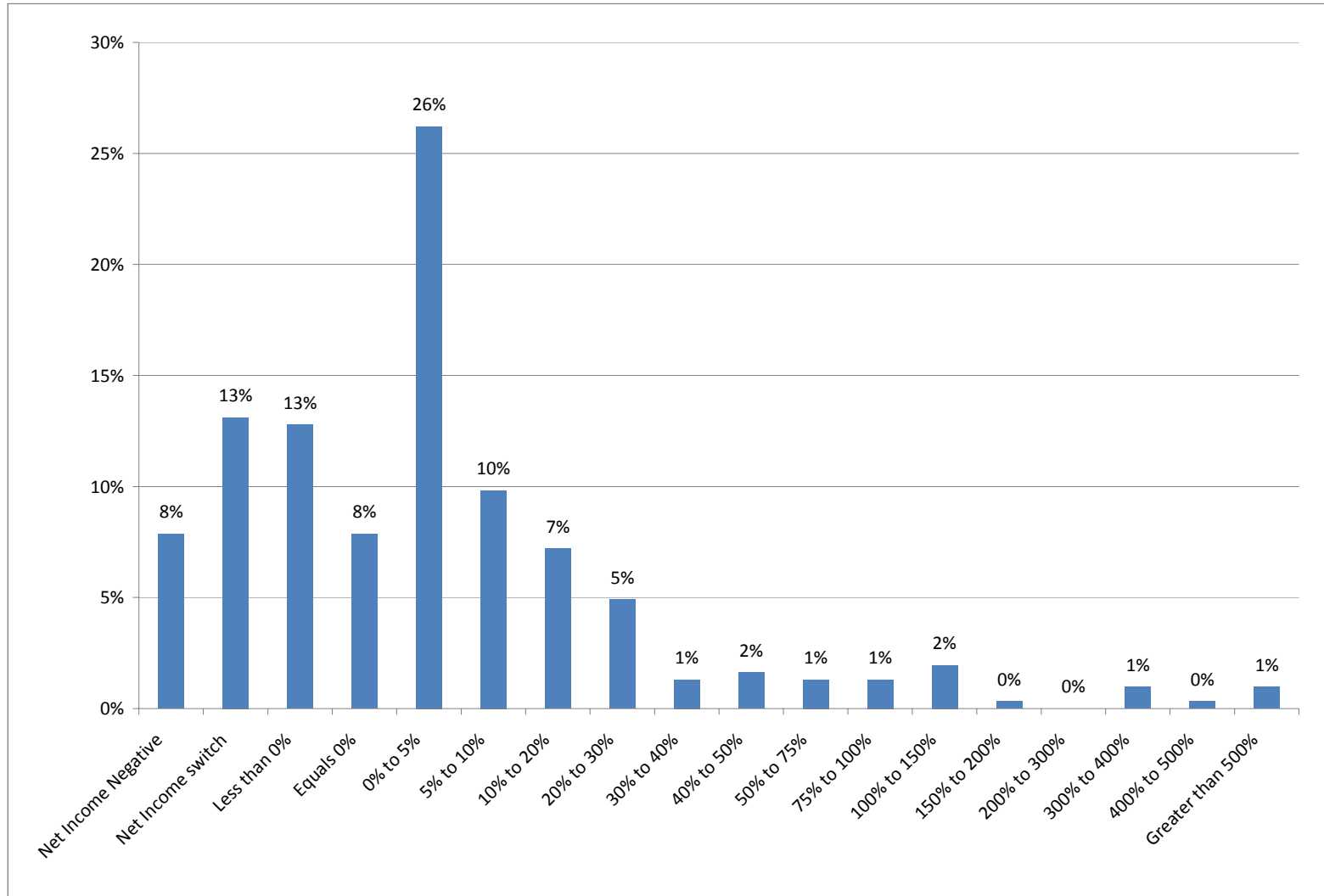
**FIGURE 3**  
*Distribution of Disclosed Discount Rates*



**FIGURE 4**

*The Distribution of the Impact of Securitization Gains on Reported Earning*

For 8% of firms, income is still negative after the gain, for 13% of firms, income switches from negative to positive, and 13% of the firms report a loss. Note that, the average impact of the gain on earnings is a 38% percent increase, while the median impact is a 3% increase.



### Exhibit 1

#### Cash flows related to the transaction (same for all scenarios)

	year 0	year 1	year 2	year 3	Sum
Cash inflows		10	10	10	30
PV @ 10%		9.09	8.26	7.51	
PV of future CF	\$24.87	17.36	9.09	0.00	
Cash outflows		8	8	8	24
PV @ 5%		7.62	7.26	6.91	
PV of future CF	21.79	14.88	7.62	0.00	
Cash profit (spread)		2	2	2	6
PV @ 42.42%	\$3.08	1.40	0.99	0.69	
PV of future cash flows		2.39	1.40	0.00	
IRR	42.42%				
Excess cash flows for equity investors ( $\$6 - 3.08 = 2.92$ )					

#### Scenario A: Receivables and Loan on balance sheet

Balance Sheet as of end of:	year 0	year 1	year 2	year 3	
Initial Investment					
Receivables	\$24.87	\$17.36	\$9.09	\$0.00	
Cash	3.08	\$0.00	2.00	4.00	6.00
<b>Total Assets</b>	<b>\$24.87</b>	<b>\$19.36</b>	<b>\$13.09</b>	<b>\$6.00</b>	
Loan	\$21.79	\$14.88	\$7.62	\$0.00	
Equity	3.08	3.08	3.08	3.08	
Retained Earnings	0	1.40	2.39	2.92	
Total equity	3.08	4.48	5.47	6.00	
<b>Total Liabilities and Equity</b>	<b>\$24.87</b>	<b>\$19.35</b>	<b>\$13.09</b>	<b>\$6.00</b>	
<b>Income Statement</b>					<b>sum</b>
Interest Income		2.49	1.74	0.91	5.13
Interest Expense		1.09	0.74	0.38	2.21
<b>Net Income</b>		<b>1.40</b>	<b>0.99</b>	<b>0.53</b>	<b>\$2.92</b>
ROE (income/beginning Equity)		45%	22%	10%	
Debt/Assets	88%	77%	58%	0%	
ROA (income/average assets)		6.32%	6.11%	5.53%	

**Scenario B: Refinance the loan by securitizing the receivables – no gain**

<b>Balance Sheet as of end of:</b>	<b>year 0</b>	<b>year 1</b>	<b>year 2</b>	<b>year 3</b>	
Retained Interest	\$3.08	\$2.39	\$1.40	\$0.00	
Cash	3.08	\$0.00	\$2.00	\$4.00	\$6.00
<b>Total Assets</b>	<b>\$3.08</b>	<b>\$4.39</b>	<b>\$5.40</b>	<b>\$6.00</b>	
Equity	3.08	3.08	3.08	3.08	
Retained Earnings	\$0.00	1.31	2.32	2.92	
<b>Total Equity</b>	<b>\$3.08</b>	<b>\$4.39</b>	<b>\$5.40</b>	<b>\$6.00</b>	
<b>Income Statement</b>					
Interest Income		1.31	1.01	0.60	
Interest Expense		0.00	0.00	0.00	
Net Income		<b>1.31</b>	<b>1.01</b>	<b>0.60</b>	
<b>Total income recognized from transaction</b>					
Gain (interest rate of 42.42%)	\$0.00				
interest income		2.92			
		<u>2.92</u>			
ROE (income/beginning equity)		42.46%	23.11%	11.03%	
Leverage		0.00%	0.00%	0.00%	
ROA (income/average assets)		35.02%	20.72%	10.45%	

<b>Retained Interest account</b>			
Beg	\$3.08	2.39	1.40
+ int	\$1.31	\$1.01	\$0.60
-cash	2	2	2
<b>End</b>	<b>\$2.39</b>	<b>\$1.40</b>	<b>\$0.00</b>



**Scenario C: Refinance the loan by securitizing the receivables – recognize gain**

<b>Balance Sheet as of end of:</b>	<b>year 0</b>	<b>year 1</b>	<b>year 2</b>	<b>year 3</b>
Initial Investment				
Retained Interest	\$4.97	\$3.47	\$1.82	\$0.00
Cash	3.08	\$0.00	\$2.00	\$4.00
<b>Total Assets</b>	<b>\$4.97</b>	<b>\$5.47</b>	<b>\$5.82</b>	<b>\$6.00</b>
Equity	3.08	3.08	3.08	3.08
Retained Earnings	\$1.89	2.39	2.74	2.92
<b>Total Equity</b>	<b>\$4.97</b>	<b>\$5.47</b>	<b>\$5.82</b>	<b>\$6.00</b>
<b>Income Statement</b>				
Interest Income		0.50	0.35	0.18
Gain on securitization	\$1.64			
Fair Value Retained Interest	\$0.25			
Comprehensive Income	<b>\$1.89</b>	<b>0.50</b>	<b>0.35</b>	<b>0.18</b>
<b>Total income recognized from transaction</b>				
Gain (interest rate of 10%)	\$1.64			
Fair Value Retained Interest	\$0.25			
interest income	\$1.03			
	<u>\$2.92</u>			
ROE (income/beginning equity)	61.40%	10.01%	6.35%	3.13%
Leverage	0.00%	0.00%	0.00%	0.00%
ROA(income/average assets)	61.40%	9.53%	6.15%	3.08%

<b>Retained Interest account</b>			
Beg	\$4.97	3.47	1.82
int	\$0.50	\$0.35	\$0.18
cash	2	2	2
<b>End</b>	<b>\$3.47</b>	<b>\$1.82</b>	<b>\$0.00</b>

**TABLE 1**  
*Industry Frequency by Firm-Year Observations*

SIC Code	SIC Name	N	Frequency	Gain/Prior Equity
6020	National Commercial Banks	92	30.16	0.011
6141	Personal Credit Institutions	24	7.87	0.413
6162	Mortgage Bankers and Loan Correspondents	17	5.57	0.523
6035	Savings Institutions, Federally Chartered	14	4.59	0.032
6199	Finance – Services	14	4.59	0.068
6798	Real Estate Investment Trusts	14	4.59	0.205
3711	Motor Vehicles and Passenger Car Bodies	13	4.26	0.041
5311	Department Stores	9	2.95	0.004
6211	Security Brokers, Dealers, and Flotation Companies	9	2.95	0.005
6153	Short-Term Business Credit Institutions, Except Agricultural			
2086	Bottled and Canned Soft Drinks and Carbonated Waters	6	1.97	-0.002
3523	Farm Machinery and Equipment	6	1.97	-0.011
3721	Aircraft	6	1.97	0.011
6111	Federal and Federally-Sponsored Credit Agencies	6	1.97	0.154
9997	Conglomerates	6	1.97	0.015
2631	Paperboard Mills	5	1.64	-0.005
3751	Motorcycles, Bicycles, and Parts	5	1.64	0.031
5063	Electrical Apparatus and Equipment, Wiring Supplies	5	1.64	-0.020
7510	Auto Rent and Lease, No drivers	5	1.64	0.097
3531	Construction Machinery and Equipment	4	1.31	0.001
3714	Motor Vehicle Parts and Accessories	4	1.31	-0.006
5500	Auto Dealers, Gas Stations	4	1.31	0.046
5731	Radio, Television, and Consumer Electronic Stores	4	1.31	0.056
6036	Savings Institutions, Not Federally Chartered	4	1.31	0.110
6172	Finance Lessors	4	1.31	0.256
7200	Personal Services	4	1.31	0.223
2451	Mobile Homes	2	0.66	0.017
3842	Orthopedic, Prosthetic, and Surgical Appliances and Supplies	2	0.66	-0.009
4911	Electric Services	2	0.66	0.008
5065	Electronics Parts and Equipment, Not Elsewhere Classified	2	0.66	-0.003
5621	Women's Clothing Stores	2	0.66	0.031
6311	Life Insurance	2	0.66	0.000
6799	Investors, NEC	2	0.66	0.042
7374	Computer Processing and Data Preparation and Processing Services	2	0.66	0.006
3823	Industrial Instruments for Measurement, Display and Control of Process Variables	1	0.33	-0.014
5070	Hardware, Plumbing, Heating Equipment Wholesale	1	0.33	0.014
5812	Eating Places	1	0.33	0.000
6153	Short-Term Business Credit Institutions, Except Agricultural	1	0.33	0.006
6531	Real Estate Agents and Managers	1	0.33	0.109

100%

**TABLE 2**  
*Descriptive Statistics and Correlations*

<b>Panel A: Descriptive Statistics</b>								
	N	MEAN	MEDIAN	STD. DEV.	25 %	75 %	MIN.	MAX.
Gain	305	0.10	0.01	0.31	0.0005	0.04	-0.25	2.76
Pre-securitization earnings	305	0.05	0.13	0.40	0.03	0.19	-3.01	1.15
Earnings	305	0.15	0.16	0.24	0.09	0.22	-2.65	1.14
Change in earnings	209	0.00	0.0002	0.19	-0.05	0.04	-0.71	1.21
<b>CONTROLS</b>								
Indust_Gain	305	0.05	0.005	0.11	0.002	0.06	-0.04	0.48
Adverse_Change/RI	293	0.13	0.07	0.20	0.03	0.13	0.00	1.02
Mkt_Vol	305	0.09	0.08	0.06	0.06	0.11	0.02	0.46
Discount_Rate	284	11.78	11.62	5.33	9.05	14.26	0.00	34.90
Pre_Sec_FCF	296	-4.57	-1.26	9.69	-3.49	-0.28	-74.06	2.97
Segment	305	0.87	1.00	0.34	1	1	0	1
Asset	305	130,427	24,304	250,991	3,530	94,456	97	1,494,040
Regulate	305	0.36	0	0.48	0	1	0	1

TABLE 2 (continued)

<b>Panel B: Correlations</b>											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Gain	<b>-0.80</b> 305	-0.07 305	<b>-0.34</b> 209	<b>0.50</b> 305	0.03 293	<b>0.39</b> 305	<b>0.17</b> 284	<b>-0.49</b> 296	-0.01 305	<b>-0.12</b> 305	<b>-0.19289</b> 305
Pre-securitization earnings (1)		<b>0.65</b> 305	<b>0.51</b> 209	<b>-0.34</b> 305	-0.08 293	<b>-0.46</b> 305	<b>-0.11</b> 284	<b>0.31</b> 296	<b>0.03</b> 305	<b>0.13</b> 305	<b>0.18</b> 305
Earnings (2)			<b>0.41</b> 209	0.06 305	<b>-0.10</b> 293	<b>-0.26</b> 305	0.04 284	<b>-0.11</b> 296	0.04 305	0.07 305	0.06 305
Change in Earnings (3)				<b>-0.17</b> 209	<b>-0.12</b> 202	-0.09 209	-0.10 198	0.10 205	-0.04 209	-0.03 209	-0.02 209
<b>Controls</b>											
Indust_Gain (4)					0.07 293	<b>0.21</b> 305	<b>0.23</b> 284	<b>-0.44</b> 296	0.01 305	-0.09 305	<b>-0.36</b> 305
Adverse_Change/RI (5)						<b>0.11</b> 293	<b>0.19</b> 277	-0.03 286	<b>-0.20</b> 293	-0.04 293	0.06 293
Mkt_Vol (6)							<b>0.11</b> 284	-0.09 296	<b>-0.15</b> 305	<b>-0.30</b> 305	<b>-0.27</b> 305
Discount_Rate (7)								<b>-0.25</b> 279	0.00 284	<b>0.18</b> 284	-0.00 284
Pre_Sec_FCF (8)									-0.01 296	0.09 296	<b>0.18</b> 296
Segment (9)										<b>0.14</b> 305	<b>-0.18</b> 305
Asset (10)											<b>0.12</b> 305
Regulate (11)											<b>0.12</b> 305

Notes: Each cell in panel B contains the correlation and number of observations. Bolded cells are significant at 10% or higher. Gain is defined as gains from securitizations (from the 10-K filings) divided by Prior Year Equity (Compustat item 60); Earnings is net income scaled by prior year equity; pre-securitization earnings is earnings before the gain scaled by prior year equity; Indust\_Gain is defined as the median level of gains from securitizations deflated by equity in the industry by year, where industries are defined at the 2-digit SIC code level; for industries with fewer than five observations, the median is set to zero; Adverse\_Change/RI is defined as Adverse\_Change divided by retained interest (from the 10-K filings); Mkt\_Vol is defined as the idiosyncratic standard deviation of each firm's stock returns; each firm's annual volatility is calculated by regressing the monthly returns in year t-1 on the value-weighted NYSE/AMEX index monthly returns for the same year and taking the standard deviation of the residuals of this regression; Discount\_Rate is from the 10-K filings; Pre\_Sec\_FCF is cash from investing (Compustat item 308) plus cash from investing (Compustat item 311) minus the proceeds from the securitization (from the 10-K filings) deflated by prior year equity. Segment equals one for firms with more than one segment, zero otherwise; Assets is Total Assets (Compustat Data Item 6); Regulate is set equal to one for firms in SIC codes 6020, 6035 and 6036.

**TABLE 3***Regressions Examining the Relation between Securitization Gains and Earnings Performance***Panel A: Relation between securitizations and earnings levels**

$$\text{Securitization gain} = \alpha_1 + \beta_1 \text{pre-securitization earnings} + \beta_2 \text{Controls} + \varepsilon$$

Dependent Variable is:	Predicted Sign	(1)	(2)	(3)	(4)	(5)
<b>Securitization Gain</b>						
Intercept		<b>0.13</b> <b>(9.70)</b>	<b>0.05</b> <b>(1.80)</b>	<b>0.06</b> <b>(3.32)</b>	<b>0.09</b> <b>(3.20)</b>	<b>0.08</b> <b>(6.54)</b>
Pre-securitization earnings	-	<b>-0.61</b> <b>(-12.42)</b>	<b>-0.51</b> <b>(-10.78)</b>	<b>-0.52</b> <b>(-10.37)</b>	<b>-0.55</b> <b>(-12.24)</b>	<b>-0.52</b> <b>(-10.80)</b>
<b>CONTROLS</b>						
Indust_Gain	+		<b>0.50</b> <b>(2.65)</b>	<b>0.50</b> <b>(2.63)</b>	<b>0.75</b> <b>(3.66)</b>	<b>0.52</b> <b>(2.67)</b>
Adverse_Change/RI	+				-0.08 (-1.49)	-0.08 (-1.67)
Mkt_Vol	+		0.21 (0.74)			
Discount Rate	-			0.003 (0.16)		
Pre_Sec_CF	-		<b>-0.01</b> <b>(-3.02)</b>	<b>-0.01</b> <b>(-2.63)</b>		<b>-0.01</b> <b>(-2.82)</b>
Segment	-				-0.002 (-0.06)	
Number of Observations		305	296	279	293	286
Adjusted R <sup>2</sup>		0.6438	0.7348	0.7304	0.7002	0.7357

**TABLE 3 (continued)**

**Panel B: Relation between securitizations and earnings changes**

$$\text{Securitization gain} = \alpha_1 + \beta_1 \Delta \text{pre-securitization earnings} + \beta_2 \text{Controls} + \varepsilon$$

Dependent Variable: <b>Securitization Gain</b>	Predicted Sign	(1)	(2)	(3)	(4)	(5)
Intercept		<b>0.11</b> <b>(3.28)</b>	<b>-0.15</b> <b>(-2.33)</b>	-0.001 (-0.04)	0.08 (1.00)	0.01 (0.70)
Change in pre- securitization earnings	-	<b>-0.57</b> <b>(-1.66)</b>	<b>-0.38</b> <b>(-1.90)</b>	<b>-0.42</b> <b>(-1.57)</b>	<b>-0.45</b> <b>(-1.66)</b>	<b>-0.42</b> <b>(-1.60)</b>
<b>CONTROLS</b>						
Indust_Gain	+		<b>0.72</b> <b>(2.26)</b>	<b>0.91</b> <b>(2.18)</b>	<b>1.29</b> <b>(3.00)</b>	<b>0.93</b> <b>(2.23)</b>
Adverse_Change/RI	+				-0.17 (-1.21)	-0.12 (-0.98)
Mkt_Vol	+		<b>1.80</b> <b>(2.34)</b>			
Discount Rate	-			-0.0001 (-0.03)		
Pre_Sec_CF	-		<b>-0.01</b> <b>(-2.91)</b>	<b>-0.01</b> <b>(-2.47)</b>		<b>-0.01</b> <b>(-2.66)</b>
Segment	-				-0.05 (-0.54)	
Number of Observations		209	205	196	202	199
Adjusted R <sup>2</sup>		0.1092	0.4985	0.3995	0.3246	0.4020

Notes: T-statistics for two-tailed tests are in parentheses. We control for heteroskedasticity and possible correlation of the residuals within firm clusters using Rogers standard errors (Peterson 2007). Gain is defined as gains from securitizations (from the 10-K filings) divided by Prior Year Equity (Compustat item 60); Earnings is net income scaled by prior year equity; pre-securitization earnings is earnings before the gain scaled by prior year equity; Indust\_Gain is defined as the median level of gains from securitizations deflated by equity in the industry by year, where industries are defined at the 2-digit SIC code level; for industries with fewer than five observations, the median is set to zero; Adverse\_Change/RI is defined as Adverse\_Change divided by retained interest (from the 10-K filings); Mkt\_Vol is defined as the idiosyncratic standard deviation of each firm's stock returns; each firm's annual volatility is calculated by regressing the monthly returns in year t-1 on the value-weighted NYSE/AMEX index monthly returns for the same year and taking the standard deviation of the residuals of this regression; Discount\_Rate is from the 10-K filings; Pre\_Sec\_FCF is cash from investing (Compustat item 308 ) plus cash from investing (Compustat item 311) minus the proceeds from the securitization (from the 10-K filings) deflated by prior year equity. Segment equals one for firms with more than one segment, zero otherwise; Assets is Total Assets (Compustat Data Item 6); Regulate is set equal to one for firms in SIC codes 6020, 6035 and 6036.

**TABLE 4***Tests Examining the Relation between CEO Compensation and Gains from Securitization***Panel A: Descriptive Statistics**

	N	MEAN	MEDIAN	STD. DEV.	25 %	75 %	MIN.	MAX.
TotComp	305	10.08	5.99	14.47	2.38	13.83	0.024	176
Log TotComp	305	15.42	15.60	1.47	14.68	16.44	3.20	18.99
Annual Return	303	0.16	0.08	0.54	-0.10	0.29	-0.94	3.96

**Panel B: Regression of the sensitivity of total compensation to earnings and securitization gains**

Independent Variable (Regression)	Predicted Sign	(1) Log TotComp	(2) Log TotComp	(3) Log TotComp	(4) Log TotComp
Intercept	?	<b>15.22</b> (110.80)	<b>10.76</b> (18.98)	<b>15.29</b> (105.64)	<b>10.71</b> (17.54)
Earnings	+	<b>1.37</b> (3.41)	<b>0.51</b> (2.51)		
Securitization Gain	+			<b>0.73</b> (1.52)	<b>0.66</b> (2.33)
Pre-securitization earnings	+			<b>1.31</b> (3.06)	<b>0.51</b> (2.61)
<b>CONTROLS</b>					
Log of Asset	+		<b>0.48</b> (8.58)		<b>0.48</b> (8.26)
Regulate	?		<b>-0.43</b> (-2.73)		<b>-0.42</b> (-2.67)
Annual_Return	+		<b>0.14</b> (1.81)		<b>0.14</b> (1.75)
<b><i>F-Test</i></b>					
Gain = Pre-securitization earnings				<b>4.90</b> (0.03)	0.46 (0.50)
Number of Observations		305	303	305	303
Adjusted R <sup>2</sup>		0.0474	0.5107	0.0595	0.5098

Notes: T-statistics for two-tailed tests are in parentheses. For F-tests, two-tailed p-values are in parentheses. We control for heteroskedasticity and possible correlation of the residuals within firm clusters using Rogers standard errors (Peterson 2007). TotComp is total compensation and consists of salary, bonus, and equity compensation as reported in the firm's proxy statement for the year that corresponds to the fiscal year of reported earnings; Log is the natural log; Earnings is net income deflated by prior year equity; Gain is gains from securitization deflated by prior year equity; pre-securitization earnings is net income before gains from securitization deflated by prior year equity; Asset is total assets; Regulate is set equal to one for firms in SIC codes 6020, 6035 and 6036; Annual Return is the compounded monthly return for the fiscal year, if a month return is missing it is set equal to the value weighted market return.

**TABLE 5**  
*Descriptive Statistics and Correlations*

<b>Panel A: Descriptive Statistics</b>								
	N	MEAN	Median	STD. DEV.	Lower Quartile	Upper Quartile	Min.	Max.
Financial Expert on Compensation Committee	303	0.50	0	0.50	0	1	0	1
Financial Expert on Audit Committee	303	0.63	1	0.48	0	1	0	1
% Outside Directors	303	82.4	85.71	10.77	76.92	90.91	40	95.45
% of Females on the Board of Directors	299	11.48	11.11	9.03	5.88	16.67	0	57.14
% of Directors appointed before the CEO	291	62.94	68.18	28.95	50.00	87.50	0	100



**Panel B: Pearson Correlations (p-values in parentheses)**

	Pre- securitization earnings	Change in Pre- Securitization Earnings	Earnings	Log (TotComp)	Financial Expert Compensation	Financial Expert Audit	Outside Directors Indicator	Female Indicator	Appointed before CEO Indicator
Gain	-0.77 (<.0001)	-0.27 (<.0001)	0.06 (0.3110)	-0.12 (0.0406)	0.23 (<.0001)	0.09 (0.1374)	-0.17 (0.0025)	-0.27 (<.0001)	-0.21 (0.0002)
Pre-securitization earnings		0.45 (<.0001)	0.66 (<.0001)	0.22 (0.0001)	-0.17 (0.0030)	-0.04 (0.4648)	0.15 (0.0102)	0.27 (<.0001)	0.28 (<.0001)
Change in Pre- Securitization Earnings			0.39 (<.0001)	-0.04 (0.5747)	0.005 (0.9447)	0.13 (0.0658)	-0.02 (0.7298)	-0.08 (0.2359)	0.11 (0.1244)
Earnings				0.21 (0.0003)	0.001 (0.9856)	0.04 (0.5362)	0.03 (0.6246)	0.11 (0.0523)	0.19 (0.0007)
Log(TotComp)					-0.03 (0.5599)	-0.12 (0.0347)	0.26 (<.0001)	0.29 (<.0001)	0.19 (0.0009)
Financial Expert Compensation						0.35 (<.0001)	-0.12 (0.0299)	-0.30 (<.0001)	-0.07 (0.2397)
Financial Expert Audit							-0.09 (0.1208)	-0.22 (0.0001)	0.01 (0.8847)
Outside Directors Indicator								0.24 (<.0001)	0.04 (0.5188)
Female Indicator									0.03 (0.6547)

Notes: Financial Expert on Compensation is set equal to 1 when there is a financial expert on the compensation committee, 0 otherwise; Financial Expert on Audit is set equal to 1 when there is a financial expert on the audit committee, 0 otherwise; %Outside Directors is the percent of outside directors on the board. Outside Director Indicator is set equal to 1 when over 91% of the board the observation is in the upper quartile of the distribution, % of Females on the Board of Directors is the percent of females members on the board of directors, Female is set equal to 1 if there is a female on the board of directors and zero otherwise, % of Directors appointed before the CEO takes office is the percent of directors on the board that were there before the CEO was appointed, Appointed before CEO indicator is set equal to 1 if more than 50% of the board was appointed before the CEO took office and zero otherwise, TotComp is total compensation and consists of salary, bonus, and equity compensation as reported in the firm's proxy statement for the year that corresponds to the fiscal year of reported earnings; Log is the natural log; Earnings is net income deflated by prior year equity; Gain is gains from securitization deflated by prior year equity; pre-securitization earnings is net income before gains from securitization deflated by prior year equity; Asset is total assets; Regulate is set equal to one for firms in SIC codes 6020, 6035 and 6036; Annual Return is the compounded monthly return for the fiscal year, if a month return is missing it is set equal to the value weighted market return.

**TABLE 6**  
*Tests Examining the Relationship Gains from Securitization  
and Corporate Governance*

**Panel A: Relation between securitizations gains and earnings and corporate governance**

Securitization gain =  $\alpha + \beta_1$  pre-securitization earnings +  $\beta_2$  corporate governance +  $\beta_3$  pre-securitization earnings \*  
corporate governance +  $\beta_i$  controls +  $\varepsilon$

Independent Variable (Regression)	Pred Sign	(1) Financial Expert on Audit Committee	(2) Outside Directors Indicator	(3) Female Indicator	(4) Appointed before CEO Indicator
Intercept		<b>0.09</b> (4.26)	<b>0.08</b> (6.07)	<b>0.05</b> (1.92)	<b>0.07</b> (3.26)
Pre-securitization earnings	-	<b>-0.70</b> (-4.90)	<b>-0.53</b> (-11.32)	<b>-0.55</b> (-15.78)	<b>-0.57</b> (-14.92)
Corporate Governance	-	-0.02 (-0.65)	<b>-0.08</b> (-5.99)	0.01 (0.45)	-0.02 (-1.05)
Pre-securitization*Corporate Governance	+	0.27 (1.38)	<b>0.44</b> (6.94)	0.09 (0.58)	<b>0.33</b> (3.83)
<b>CONTROLS</b>					
Indust_Gain	+	<b>0.53</b> (2.61)	0.50 (2.62)	<b>0.54</b> (2.79)	<b>0.49</b> (2.50)
Adverse_Change/RI	+	-0.08 (-1.54)	-0.09 (-1.95)	-0.06 (-1.43)	-0.08 (-1.58)
Pre_Sec_CF	-	<b>-0.01</b> (-2.83)	<b>-0.01</b> (-2.78)	<b>-0.01</b> (-2.84)	<b>-0.01</b> (-2.61)
<b>F-test</b>					
Pre-securitization earnings + Pre-securitization *Corporate Governance = 0		<b>219.36</b> ( <b>&lt;0.0001</b> )	0.25 (0.6182)	<b>101.78</b> ( <b>&lt;0.0001</b> )	<b>16.07</b> ( <b>&lt;0.0001</b> )
Observations		286	286	286	286
Adjusted R <sup>2</sup>		0.7624	0.7404	0.7372	0.7573

**TABLE 6 (continued)**

**Panel B: Relation between securitizations gains and earnings changes and corporate governance**

$$\text{Securitization gain} = \alpha + \beta_1 \Delta \text{pre-securitization earnings} + \beta_2 \text{corporate governance} + \beta_3 \Delta \text{pre-securitization earnings} \\ * \text{corporate governance} + \beta_i \text{controls} + \varepsilon$$

Independent Variable (Regression)	Pred Sign	(1) Financial Expert on Audit Committee	(2) Outside Directors	(3) Female Indicator	(4) Appointed before CEO Indicator
Intercept		0.01 (-0.29)	0.04 (1.67)	0.11 (1.12)	-0.01 (-0.67)
Change in pre-securitization earnings	-	-0.81 (-1.38)	-0.48 (-1.56)	-0.86 (-1.30)	<b>-1.12</b> <b>(-2.06)</b>
Corporate Governance	-	0.02 (0.65)	<b>-0.07</b> <b>(-2.60)</b>	-0.10 (-1.01)	<b>-0.10</b> <b>(-2.02)</b>
Change in pre-securitization earnings *Corporate Governance	+	0.53 (0.94)	0.38 (1.20)	0.64 (0.89)	<b>1.12</b> <b>(2.04)</b>
<b>CONTROLS</b>					
Indust_Gain	+	0.93 (2.16)	0.89 (2.23)	<b>0.82</b> <b>(2.27)</b>	<b>0.91</b> <b>(2.70)</b>
Adverse_Change/RI	+	-0.14 (-1.02)	-0.13 (-1.03)	-0.12 (-0.92)	-0.14 (-1.15)
Pre_Sec_CF	-	<b>-0.01</b> <b>(-2.67)</b>	-0.01 (-2.59)	<b>-0.01</b> <b>(-2.59)</b>	-0.01 (-2.41)
<b>F-test</b>					
Change in pre-securitization earnings + Change in pre-securitization earnings *Corporate Governance = 0		<b>6.11</b> <b>(0.0143)</b>	0.15 (0.6944)	4.05 (0.0456)	0.00 (0.9606)
Observations		199	199	199	199
Adjusted R <sup>2</sup>		0.4161	0.4121	0.4389	0.5439

Notes: T-statistics for two-tailed tests are in parentheses. For F-tests, two-tailed p-values are in parentheses. We control for heteroskedasticity and possible correlation of the residuals within firm clusters using Rogers standard errors (Peterson 2007). TotComp is total compensation and consists of salary, bonus, and equity compensation as reported in the firm's proxy statement for the year that corresponds to the fiscal year of reported earnings; Gain is gains from securitization deflated by prior year equity; pre-securitization earnings is net income before gains from securitization deflated by prior year equity; Asset is total assets; Regulate is set equal to one for firms in SIC codes 6020, 6035 and 6036; Annual Return is the compounded monthly return for the fiscal year, if a month return is missing it is set equal to the value weighted market return, Financial Expert on Audit is set equal to 1 when there is a financial expert on the audit committee, 0 otherwise, Outside Director Indicator is set equal to 1 when the observation is in the upper quartile of the distribution, Female Indicator is set equal to 1 if there is a female on the board of directors and zero otherwise, Appointed before CEO indicator is set equal to 1 if more than 50% of the board was appointed before the CEO took office and zero otherwise.

**TABLE 7**  
*Tests Examining the Sensitivity of CEO Compensation to Gains from Securitization  
and the Influence of Various Corporate Governance Monitors*

$$\text{Log (Total comp)} = \alpha + \gamma_1 \text{gain} + \gamma_2 \text{pre-securitization earnings} + \text{controls} + \varepsilon$$

Independent Variable (Regression)	Pred Sign	(1) Obs. with Financial Expert on Compensation Committee	(2) Obs. With No Financial Expert on Compensation Committee	(3) 91% of Board are Outside Directors ( top quartile)	(4) Boards with less than 91% Outside Directors (other quartiles)	(5) Obs. with Female Board Member	(6) Obs. With No Female Board Member	(7) Over half the board consists of directors elected before current CEO was appointed	(8) Boards where CEO has appointed over half the directors
Intercept	?	<b>10.98</b> (21.60)	<b>10.32</b> (8.62)	<b>11.48</b> (18.42)	<b>10.67</b> (15.18)	<b>10.59</b> (12.64)	<b>11.49</b> (19.74)	<b>11.72</b> (32.64)	<b>8.22</b> (5.51)
Securitization Gain	+	<b>0.60</b> (2.12)	0.91 (0.61)	0.85 (0.40)	<b>0.70</b> (2.22)	<b>1.61</b> (2.90)	<b>0.26</b> (1.80)	<b>0.40</b> (0.93)	<b>0.28</b> (1.59)
Pre-securitization earnings	+	<b>0.55</b> (2.65)	0.44 (0.89)	<b>1.26</b> (2.50)	<b>0.50</b> (2.49)	<b>1.09</b> (2.52)	<b>0.27</b> (3.66)	<b>0.72</b> (2.21)	<b>-0.07</b> (0.85)
<b>CONTROLS</b>									
Log of Asset	+	<b>0.47</b> (8.25)	<b>0.51</b> (4.70)	<b>0.40</b> (7.30)	<b>0.50</b> (7.36)	<b>0.48</b> (6.46)	<b>0.39</b> (6.02)	<b>0.39</b> (10.52)	<b>0.75</b> (5.21)
Regulate	?	<b>-0.38</b> (-1.37)	<b>-0.39</b> (-1.65)	<b>-0.37</b> (-1.93)	<b>-0.47</b> (-2.37)	<b>-0.40</b> (-2.33)	<b>-0.59</b> (-1.75)	<b>-0.39</b> (-2.43)	<b>-0.73</b> (-2.53)
Annual_Return	+	0.06 (0.66)	0.27 (1.24)	<b>0.48</b> (2.54)	0.07 (0.90)	<b>0.26</b> (2.33)	0.04 (0.59)	0.03 (0.36)	0.43 (2.22)
<b>F-Test</b>									
Gain = Pre-securitization earnings		0.07 (0.79)	0.09 (0.77)	0.06 (0.81)	0.72 (0.40)	1.01 (0.32)	0.00 (0.98)	0.45 (0.5025)	1.09 (0.30)
Observations		151	152	81	222	235	68	232	71
Adjusted R <sup>2</sup>		0.6073	0.4374	0.5807	0.4680	0.5130	0.2107	0.4900	0.5702

Notes: T-statistics for two-tailed tests are in parentheses. For F-tests, two-tailed p-values are in parentheses. We control for heteroskedasticity and possible correlation of the residuals within firm clusters using Rogers standard errors (Peterson 2007). TotComp is total compensation and consists of salary, bonus, and equity compensation as reported in the firm's proxy statement for the year that corresponds to the fiscal year of reported earnings; Gain is gains from securitization deflated by prior year equity; pre-securitization earnings is net income before gains from securitization deflated by prior year equity; Asset is total assets; Regulate is set equal to one for firms in SIC codes 6020, 6035 and 6036; Annual Return is the compounded monthly return for the fiscal year, if a month return is missing it is set equal to the value weighted market return.