An analytical study for the Relationship between Accounting for Securitization and Earnings Management Incentives
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Abstract:

Purpose –The main purpose of the research is to investigate whether securitization gains is associated with earnings management incentives during the Financial Accounting Standard FAS 140 period (2007-2009) and whether these incentives are eliminated after the application of the Financial Accounting Standard FAS 166.

Design/ Methodology/ Approach – A sample of U.S. bank holding companies is selected during the period 2007-2016 from the Federal Reserve Bank Holding Company Database which have the financial data necessary for data analysis. The research separately examines the 240 banks/ quarters observations in 2007-2009 when FAS 140 was in effect and then examine 560 bank/quarters observations in 2010-2016 when FAS 166 is applied. A Panel data analysis is employed for testing the research hypotheses to measure different variables for banks over several time periods using STATA software.

Findings–The Overall results revealed that in Pre-FAS 166 period banks have incentives to manage earnings through securitization gain when earnings before securitization (EBS) and the change in earnings before securitization (Δ EBS) is low or negative. While in Post-FAS 166 period, the findings indicate that securitization gain isn't used as a tool to manage earnings, suggesting that there is no any evidence of earnings management.

ملخص البحث

مشكلة البحث

تتمحور مشكلة البحث حول التساؤل التالي:هل المدراء يستفيدون من المرونة والتسهيلات المتاحة من خلال المعيار المحاسبى رقم FAS140 المتعلق بالمحاسبة عن التوريق لإدارة الارباح مقارنة بالمعيار المحاسبى رقم FAS166 المعتمد حديثًا.

أهداف البحث

أولاً ، دراسة ما إذا كان المدراء لديهم الدافع لإدارة الأرباح من خلال الدخل الناتج عن التوريق لتجنب انخفاض الأرباح عندما تكون الأرباح قبل الدخل الناتج عن التوريق منخفضة خلال المعيار المحاسبى FAS140 فى الفترة من ٢٠٠٧ إلى ٢٠٠٩ وهل المعيار المحاسبى FAS166 قد ساعد فى القضاء والحد على هذا الدافع. **ثانياً** ، دراسة ما إذا كان للمدراء دافع لإدارة الأرباح من خلال الدخل الناتج التوريق عندما يكون هناك تغييرات سلبية في أرباح السنة السابقة قبل الدخل الناتج عن التوريق من خلال المعيار المحاسبى FAS140 وهل المعيار المحاسبى FAS166 قد ساعد فى القضاء والحد على هذا الدافع.

منهج البحث

تم اختيار عينة البحث من الشركات القابضة للبنوك فى الولايات المتحدة خلال الفترة ٢٠٠٧ـ٢٠١٦ من قاعدة بيانات البنك الاحتياطي الفيدرالي التي تحتوي على البيانات المالية اللازمة لتحليل البيانات. وللتحقق من مدى صحة الفروض تم إستخدام (panel Data Analysis) لاختبار فروض البحث لقياس المتغيرات المختلفة للبنوك خلال فترات زمنية متعددة باستخدام البرنامج الإحصائى (STATA).

نتائج البحث

فى الفترة قبل تطبيق المعيار المحاسبى FAS166 ، يوجد علاقة بين الربح الناتج عن التوريق ودوافع إدارة الأرباح لدى البنوك ولكن لا يوجد أى علاقة بين الربح الناتج عن التوريق ودوافع إدارة الأرباح فى الفترة بعد تطبيق المعيار المحاسبى FAS166 مما يشير إلى أن المعيار المحاسبى الجديد قد ساعد فى القضاء والحد على هذا الدافع.

1.Introduction

Securitization is an important feature of modern financial systems (Bertay et al., 2017). Asset securitization was first invented in the USA and it has spread widely in the world's major financial markets (Cerbioni et al., 2015). Securitization is a process of transforming financial assets to securities that are

backed by cash flows generated from the assets and appeal to broad investor classes. The process typically involves the transfer of financial assets to a legally separate securitization entity (e.g., special purpose entity), which then designs and sells the securities (Dou and Xu, 2017). The choice to perform an asset securitization by banks may be motivated by different purposes in relation with the need of liquidity. Securitization was seen by several economists as a blessing. It generates extra liquidity to financial markets, which in turn stabilizes the credit supply, provides new profit opportunities for financial institutions, and enhances the allocation of risks by transferring risks from banks to outside investors (Bertay and Gong, 2014).

Securitization is arguably one of the main triggers of the 2007 global financial crisis (Chen et al., 2017). A commonly held view argues that securitization leads to the failure and collapse of numerous high-profile financial institutions such as Enron, Bear Stearns, Lehman Brothers, Merrill Lynch, AIG, Washington Mutual, Indymac, Ameriquest, Countrywide Financial, and New Century Financial. Over 1300 US mortgage companies have declared bankruptcy, been acquired or have closed (Buchanan, 2016).

The crisis resulted in a near systemic collapse of the banking sector, on which commercial lending activity depends (Barth and Lansman, 2010).

2.Research Problem

Although, securitization can be valuable and efficient tool for raising funds, if misused it can increase financial risks (Schwarcz, 2014). Securitization can have a lot of downsides. High complexity has been identified as a potential cost to securitization, as it reduces the ease with which outsiders can evaluate securitization products, potentially resulting in inefficient investment decisions (Bertay et al., 2017). Also, managers can use securitizations to manipulate earnings, transfer

risky assets to investors, and be flexible in giving credit to customers with no or bad credit (Dechow et al., 2010).

Concerns about securitization-based earnings management is raised by several previous studies documenting that the accounting standards related to securitization accountings can be misused by managers to smooth earnings (Dechow et al. 2010). The extensive investigations around Enron's collapse provide the most direct evidence about the role of SPVs in earnings management. The Special Investigative Committee on Enron reported that transactions with certain SPVs allowed Enron to conceal from the market very large losses resulting from Enron's merchant investments (Feng et al., 2009).

The research problem can be pinpointed as determining if managers take advantage of the easier criteria of FAS 140 compared to the newly adopted standard FAS 166 for securitization and use securitization gain to manage earnings under FAS 140.

Moreover, determining whether the application of FAS 166 are successful in addressing FAS 140 securitization accounting issues related to earnings management.

3. Research Objectives

There are two main objectives of this research:

First, investigate whether managers have incentives to manage earnings through securitization gains to avoid earnings decline when earnings before securitization are low during FAS 140 period (2007-2009) and whether this incentive is eliminated after the application of FAS 166.

Second, examine if mangers have incentives to manage earnings through securitization gain when there are more negative changes in prior year earnings before securitization under FAS 140 and if this incentive is eliminated after the adoption of FAS 166.

4.Background and Hypotheses Development

4.1 The Use of Securitization for Earnings Management

One of the significant determinants of securitization activity

is related to profit opportunities (Affinito and Tagliaferri, 2010). As securitization transactions become more prevalent in banking industry, asset securitizations under "financial component control" approach stated by FAS 140 have become available for mangers to smooth income (Chen and Tseng, 2012). Banks engage in securitization transactions for accounting motivations, such as earnings management (Kusano, 2011). Engaging in earnings management is usually built on opportunistic incentives generated by a financial condition (e.g., economic recession, or an unexpected decline in earnings).

Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Healy and Wahlen,1999).

Mollik and Beparif (2013) suggest that earnings management requires the existence of incentives and opportunity. There are different levels of discretion related to securitization transactions that managers can use to report a gain: the timing, cherry picking of receivables and fair value estimates (Zhang, 2014).

The firm's decision whether to structure the securitization to meet the sale accounting technique is the first step in management discretion (Ryan, 2008). Barth and Taylor (2010) indicate that if the company is not seeking securitization gains it will not be involved in sale accounting transactions. Hence, most entities structure securitization transactions in a way to meet the requirements of sale accounting and to report gains on sale (Barth and Landsman, 2010).

The second level of discretion is related to firm's decision whether to securitize assets and which assets to securitize. Managers can time the securitization transaction to get higher earnings at the end of the reporting period (Dechow and Shakspear, 2009). Therefore, securitization offers managers the

opportunity to pick and securitize those assets with the greatest difference between book value and fair value (Karaoglu, 2005).

The third level of discretion is related to manipulating securitization accounting rules, the valuation of the retained portion of securitized assets offers opportunities for managers to exercise discretion over securitization gains (Freeman et al., 2017; Barth and Landsman, 2010). As a result, the fair value measurement of the retained interest affects the amounts of the gain from securitization, as it is possible for transferors to record larger gains on sale by overestimating the fair value measurement of retained interests (Kusano, 2011) this leaves a room for management discretion. Therefore, accounting for securitization gains and losses offers some opportunities for earnings manipulation (Dechow et al., 2010).

It can be concluded from all the above forms of earnings management, that the timing and the type of securitized assets affect the amount of securitization gain (Dechow and Shakspear, 2009) but this discretion has nothing to do with manipulating the accounting rules of securitization, and the use of this discretion is recognized as real earnings management (Zhang, 2014). While the other is associated with using discretion to affect fair value estimates. These are different sources of earnings management.

4.2 Hypotheses Development
4.2.1 The Size of Securitization Gains and Earning Management Incentives

Banks are motivated to engage in earnings management for several reasons. *First,* one of the most important reasons for managers to manage earnings is to avoid losses, declines in earnings or to meet earnings targets (Zhang, 2014).

Second, earnings management may be a way for banks to signal the good quality of their business and balance-sheets (Barth et al., 2012b). *Third*, managers may have incentives to smooth income to signal low exposure to risk or to achieve

compensation objectives by reporting smoother earnings (Cheng et al., 2011; Barth et al., 2012b; Bratten et al., 2017).

Empirical research examining earnings management in securitization settings implies that the motivations for financial reporting discretion depend on the amount of earnings before the effect of the discretion and have interpreted the association between securitization gain and pre-managed earnings as a measure of earnings management (Kraoglu,2005; Dechow et al., 2010; Ibrahim, 2010; Chen and Tseng, 2012).

Therefore, firms exercise discretion over securitization gain in order to increase earnings when pre-managed current earnings (earnings before securitization) are low or when there is a negative change in pre-managed earnings compared to prior year. Gain on asset securitizations, under FAS No. 140, has been questioned as a convenient vehicle for earnings management (Dechow et al., 2010).

SFAS 140 provides banks with the opportunity to manage securitization gains when there is low income before securitization or negative change in earnings before securitization (Chen and Tseng, 2012). Specifically, larger gains on sale are recorded when pre-securitization earnings are low (Niu and Richardson, 2006).

Furthermore, securitizations provide a potentially powerful setting for examining earnings management because the amounts of gains and losses recognized from securitization transactions require the exercise of judgment and discretion which facilitates target-based earnings management (Barth and Taylor, 2010; Feng et al., 2009).

Following previous research (e.g., Karaoglu, 2005; Dechow et al., 2010; Chen and Tseng, 2012; Ibrahim, 2010) this study uses earnings before securitization and the change in the level of earnings before securitization as the key indicators of earnings management incentives. The research investigates the following

two settings in which earnings management incentives are expected to be relatively strong:

1-When earnings before securitization gain are low, managers face more incentive to record securitization gains to avoid earnings decline.

2-When earnings before securitization gain is below last year's earnings, managers are likely to face greater enquiry by investors and regulators, are less likely to receive bonuses, and will face difficulty in attracting employees and customers. Thus, managers have incentives to record securitization gains to meet or beat prior year's earnings target.

Thus, under the financial accounting standard FAS 140 which is represented in this research by (2007-2009) period; the research expects that banks with low earnings before securitization or with more negative changes in earnings before securitization are likely to record securitization gains.

As a result, this research hypothesizes that there is a significant negative association between securitization gain and both earnings before securitization and the change in earnings before securitization.

However, after the application of the financial accounting standard FAS 166 which is represented by (2010-2016) period; I wouldn't expect to find any significant association between neither earnings before securitization nor the change in earnings before securitization and the likelihood of reporting securitization gain.

Therefore, the following Hypotheses can be developed:

H1a: In the Pre-SFAS 166, banks are inclined to report higher securitization gains when earnings before securitization are low.

H1b: In Post-SFAS 166, banks are not inclined to report higher securitization gains when earnings before securitization are low.

H2a: In Pre-SFAS 166, banks are inclined to report higher securitization gains when change in earnings before securitization are low.

H2b: In Post-SFAS 166, banks are not inclined to report higher securitization gains when change in earnings before securitization are negative or low.

5.Methodology
5.1 Sample Selection
The research focuses on U.S. banks. Specifically, banks holding companies (BHC) with reported total assets greater than $10 billion. The study will be applied mainly on U.S. banks due to the reliability and availability of data for financial statements reporting requirements enforced by the Federal Reserve and the Federal Securities.

All banks are either listed on New York Exchange NYE or NASDAQ stock market. All financial data are hand collected collected from the quarterly financial reports of the Consolidated Financial Statements for Bank Holding Companies (BHCs) FR Y- 9C, filed to the Chicago Federal Reserve System. The variables are: securitization gains, earnings before securitization, change in the level of earnings before securitization, Mortgage-backed Securities (MBS), Consumer backed Securities (CONSBS), and Commercial backed Securities (COMMBS). The research uses a sample of 20 bank holding companies that covers a period of 10 years from the quarter ending March 31, 2007 up to the quarter ending December 31, 2016.

The research will separately examine the 240 banks/ quarters observations in 2007-2009 when FAS 140 was in effect and then examine 560 bank/quarters observations in 2010- 2016 when FAS 166 is applied.

5.2 Variables Measurement
This section explains how each independent variable is measured.

All the variables used in the study are bank and time specific and the resulting dataset is a time-series, balanced panel data.

5.2.1 Securitization

The first and the second hypotheses deal with the use of securitization gains (GOS) which is net securitization income for bank as the dependent variable.

5.2.2 Earnings Management Incentives

Consistent with prior studies (e.g., Karaoglu, 2005; Dechow et al., 2010; Ibrahim, 2010; Chen and Tseng, 2012) this research uses two proxies for earnings management incentives:

(1) The incentive to avoid decline in earnings, measured by the pre-managed current earnings (Earnings before securitization EBS) which is the difference between net income for the current quarter and the securitization income for the same quarter.

(2) The incentive to meet or beat earnings of prior years', measured by the change in the level of earnings before securitization (Δ EBS) which is the difference between the current quarter earnings before securitization and the previous year's earnings before securitization for the same quarter.

5.3 Empirical Models

Following Dechow et al. (2010) and Ibrahim (2010), this research uses similar models to test the first and the second hypotheses:

GOS iq =B1 EBS iq+B2 MBS iq + B3 CONSBS iq + B4 COMMBS iq + eiq……………………………………..……………………… (1)

GOS iq=B1 Δ EBS iq+B2 MBS iq+B3 CONSBS iq+B4 COMMBS iq+ eiq………………………………………….……………… (2)

Where:

• GOS iq = Net securitization income for bank i in quarter q (from Schedule HI – consolidated income statement);

- EBS iq Earnings before securitization in current quarter = Net income for bank i in quarter q (Schedule HI) less net securitization income during quarter (GOS);
- Δ EBS iq = EBS in current quarter – EBS in same quarter in prior year;

Control Variables

- MBS iq = Outstanding principal balance of 1-4 family residential loans sold and securitized with servicing retained or recourse or other seller-provided credit enhancements for bank i in quarter q (Schedule HC-S);
- CONSBS iq = Outstanding principal balance of consumer loans sold and securitized with servicing retained or recourse or other seller-provided credit enhancements for bank i in quarter q (Schedule HC-S); consumer loans include home-equity lines, credit card receivables, auto loans, and other consumer loans;
- COMMBS iq = Outstanding principal balance of commercial loans sold and securitized with servicing retained or recourse or other seller-provided credit enhancements for bank i in quarter q (Schedule HC-S); commercial loans include commercial and industrial loans as well as all other loans, leases, and assets;

The variables will be deflated by prior quarter total assets to adjust for heteroscedasticity.

5.4 Statistical Analysis

The data were analyzed using the statistical software STATA. Preliminary analyses were first conducted including descriptive statistics. Then a panel data analysis is employed.

The Panel data analysis is designed to measure different variables for firms over several time periods (Baltagi, 2008; and Brooks, 2014).   Panel analysis uses panel data to examine changes in variables over time and differences in

variables between the subjects. Therefore, unlike cross sectional or time series studies, this research will employ panel data analysis techniques that allow for individual company heterogeneity as well as for time effect which could consequently provide different findings.

6. Data Analysis Results

In panel regression various estimation methods have been conducted; ordinary least square (OLS), random effects (REM), and fixed effects (FEM) model in order to decide the appropriate model for testing each hypothesis.

8.1 Testing the First Research Hypothesis

The panel regression analysis testing the first research hypothesis is conducted by taking securitization gains (GOS) as the dependent variable, earnings before securitization (EBS) as the independent variable (earnings management incentive proxy), and mortgage backed securities MBS, consumer backed securities CONBS, and commercial backed securities COMMBS are the control variables.

8.1.1 Assessing Model Goodness of Fit

To evaluate the overall goodness of fit of the model, the value of F-statistics is used. According to Table (2) it can be concluded that panel estimation models are statistically significant and effective in both pre-FAS 166 and Post-FAS 166 period since the P-values of the F-statistics are less than 0.01 and the panel regression model is effective.

Table (1)

Panel Regression Testing the First Hypothesis

$$GOS_{iq} = B0 + B1\ EBS_{iq} + B2\ MBS_{iq} + B3\ CONSBS_{iq} + B4\ COMMBS_{iq} + \varepsilon_{iq}$$

Independent Variables	Pre- FAS 166 (2007-2009)			Post- FAS 166 (2010-2016)		
	Random Effect	Fixed Effect	Pooled OLS	Random Effect	Fixed Effect	Pooled OLS
EBS iq	-.0456*** (0.000)	-.0505*** (0.000)	-.04167*** (0.000)	-.000181 (0.210)	-.000161 (0.161)	-.00039 (0.078)

MBS iq	.00082*** (0.000)	.00087*** (0.000)	.00075*** (0.000)	.00015 (0.083)	.000141 (0.063)	.00016 (0.052)
CONSBS iq	.01421*** (0.000)	.01384*** (0.000)	.01432*** (0.000)	.000058 (0.091)	.000065 (0.320)	.000031* (0.053)
COMMBS iq	.00006 (0.785)	.000062 (0.841)	.000246 (0.276)	.00033*** (0.000)	-0034*** (0.000)	.00035*** (0.000)
F- Static	11121*** (0.000)	880.38*** (0.000)	4097.6*** (0.000)	1109.1*** (0.000)	171.63*** (0.000)	477.06*** (0.000)

Note: Significance at the levels of 5%, 1%, and 0.1% are indicated by *, **, and ***

8.1.2 Panel Model Selection
8.1.2.1 Breusch-Pagan Lagrange Multiplier Test (LM)

The Lagrange Multiplier test (LM) is conducted to determine whether the OLS or the REM model is appropriate for testing the first research hypothesis. According to table (2), the values are significant for both periods. In the Pre-FAS166 period (Chi-Sq. =107.77; P< 0.05). while, the Post-FAS 166 period (Chi-Sq. = 354.61; P < 0.05).

Therefore, the study rejects the Lagrange multiplier null hypothesis in favor of the REM model for both periods.

Table (2)
Lagrange Multiplier Test for Equation (1)

	Pre- SFAS 166	Post- SFAS 166
Chi-Sq. Statistic	107.77	354.61
Prob>chi2	0.000	0.000

8.1.2.2 Hausman Test

The Hausman test is conducted to choose between the random effect model (REM) or fixed effect model (FEM). According to table (3) results show the values for both periods. In the *Pre-FAS 166* period the values are (Chi-Sq.=12.4; P< 0.05), while in the *Post-FAS 166* period the values are (Chi-Sq.=1.90; P > 0.05).

In Pre-FAS 166 period, the study rejects the REM in favor of FEM.

While, in *Post-FAS 166*, the study accepts the null hypothesis that the REM is the preferred model.

Table (3)
The Summary of Hausman test for Equation (1)

	Pre- FAS 166	Post- FAS 166
Chi-Sq. Statistic	12.40	1.90
Prob>chi2	0.0004	0.1678

Based on results presented in table (2) and (3) for LM and Hausman tests, it can be concluded that the fixed model (FEM)is the appropriate method for testing the H1a for the Pre-FAS 166 period, while the random model (REM) is the appropriate for testing H1b in the Post-FAS 166 period.

According to Table (4), the regression results are as follows:

In the **Pre-FAS 166** period, the results revealed that there is a significant negative association between GOS and EBS (B1=-.0505293, p<0.001). The coefficients for the control variables are significantly and positively only two types of asset-backed securities: MBS and CONSBS (B2=.0008721; B3=.0138411, p<0.001) respectively, therefore, at a significance level 1% H1a is accepted.

In summary, this empirical evidence significantly supports H1a of the research stating that in Pre-SFAS 166, banks are inclined to report higher securitization gains when earnings before securitization are low.

For the **Post-FAS 166** period, the results revealed that there is no significant association between GOS and EBS (B1=-.00018175, p> 0.05), therefore, at a significance level 1% H1b is accepted. Moreover, the results suggest that after the application of FAS 166 in year 2010 banks do not appear to have the tendency to manage securitization gain to meet earnings target.

In summary, this empirical evidence significantly supports H1b of the research stating that in Post-FAS 166, banks aren't inclined to report higher securitization gains when earnings before securitization are low.

Table (4)
Equation (1) Panel Regression Results
GOS iq = B1 EBS iq+ B2 MBS iq+ B3 CONSBS iq + B4 COMMBS iq + ε iq

	Pre -FAS 166 (2007-2009)	Post -FAS 166 (2010-2016)
Independent Variables	**Fixed Effect**	**Random Effect**
EBS iq	-.0505293*** (0.000)	-.00018175 (0.210)
MBS iq	.0008721*** (0.000)	.00015035 (0.083)
CONSBS iq	.0138411*** (0.000)	.00005884 (0.091)
COMMBS iq	.0000622 (0.841)	.00033865*** (0.000)
F- Static	880.38*** (0.000)	1109.13*** (0.000)

Note: Significance at the levels of 5%, 1%, and 0.1% are indicated by *, **, and ***

8.2 Testing the Second Research Hypothesis

The panel regression analysis testing the second research hypothesis is conducted by taking securitization gains (GOS) as the dependent variable, the change in earnings before securitization (Δ EBS) as the independent variable (earnings management incentive proxy), MBS, CONBS, and COMMBS as the control variables.

8.2.2 Assessing Model Goodness of Fit

Table (5) shows the results of the panel regression analysis for both periods: pre and post SFAS 166.

According to table (5) it can be concluded that all the three models are statistically significant for both periods Pre-FAS 166 and Post-FAS 166, since the P-values of the F-statistics is less than 0.01 and the model is effective.

Table (5)
Equation (2) Results of REM, FEM and OLS Model
GOS iq = B1 Δ EBS iq+ B2 MBS iq+ B3 CONSBS iq + B4 COMMBS iq + ε iq

Independent Variables	Pre- FAS 166			Post- FAS 166		
	Random Effect	Fixed Effect	Pooled OLS	Random Effect	Fixed Effect	Pooled OLS
Δ EBS	-.0297*** (0.000)	-.02784*** (0.000)	-.0308*** (0.000)	-.00014 (0.355)	-.000145 (0.041)	-.00022 (0.712)
MBS	.00075*** (0.000)	.00086*** (0.000)	.00066*** (0.000)	.00014*** (0.000)	.00014*** (0.000)	.000162*** (0.000)
CONSBS	.01338*** (0.000)	.01438*** (0.000)	.013650*** (0.000)	.00006 (0.085)	.00006 (0.067)	.000038 (0.343)
COMMBS	-.00123*** (0.000)	-.00077* (0.046)	-.0022*** (0.000)	-.00033 (0.182)	-.00032 (0.690)	-.00037 (0.167)
F- Static	6585.9*** (0.000)	576.22*** (0.000)	2422.5*** (0.000)	1002.96*** (0.000)	170.81 (0.000)	435.64*** (0.000)

Note: Significance at the levels of 5%, 1%, and 0.1% are indicated by *, **, and ***

8.2.3 Panel Model Selection
8.2.3.1 Breusch-Pagan Lagrange Multiplier Test (LM)

According to table (6), the values are significant for both periods. Under *Pre-FAS 166* period (Chi-Sq.=57.26; P< 0.01), while in *Post-FAS 166* period (Chi-Sq. = 623.81; P < 0.01). Therefore, the study rejected the null hypothesis in favor of the REM model for both periods since there is significant differences among unit.

Table (6)
The Summary of Breusch and Pagan Lagrange Multiplier Test Equation (2)

	Pre- FAS 166	Post- FAS 166
Chi-Sq. Statistic	57.26	623.81
Prob>chi2	0.000	0.000

8.2.3.2 Hausman Test

According to Table (7), the values for the *Pre-FAS166* and the *Post-FAS 166* periods are (Chi-Sq. =6.74; P < 0.05 and Chi-Sq. = 1.81; P > 0.05) respectively. Therefore, under *Pre -FAS 166* period the study rejects the null hypothesis in favor of the FEM. While, under *Post- FAS 166* period the study accepts the null hypothesis that the REM is the preferred model.

Table (7)

The Summary of Hausman Test Equation (2)

	Pre- FAS 166	Post- FAS 166
Chi-Sq. Statistic	6.74	1.81
Prob>chi2	0.0094	0.1782

Table (5) represents the results of equation (2) using the fixed effect model (FEM) to test H2a in Pre- FAS period (2007-2009). In the ***Pre-SFAS 166* period** the results of fixed effect column in table (5) shows that there is a significant negative association between GOS and Δ EBS (B1=-.02784917, P <0.001). The coefficients for the control variables are as expected. Securitization gain is significantly and positively associated with the three types of asset-backed securities: MBS (B2=.00086618, P <0.001), CONSBS (B3=.01438164, P <0.001), and COMMBS (B4=.00077502, P <0.05). Therefore, at a significance level 1% H2a is accepted.

In summary, this empirical evidence supports H2a of the research stating that in Pre-FAS 166 period, banks are inclined to manage securitization gains upwards when the change in the pre- securitization earnings is low or negative.

In the **Post-SFAS 166 period** the results of the REM column in table (8) revealed that there is no significant association between GOS and Δ EBS (B1= -.00014903, P >0.05). Therefore, at a significance level 5% H2b is accepted.

In summary, this empirical evidence supports H2b of the research stating that in the Post-FAS 166 period, banks aren't

inclined to manage securitization gains when the change in earnings before securitization are low or negative.

9. Conclusions, Contributions and Recommendations
9.1 Conclusions

The research examines securitization transactions in the two time periods pre and post FAS 166 to capture changes in the economy and regulations. The results find that securitization gain is negatively correlated with (1) earnings before securitization, and (2) the change in earnings before securitization; both are used as proxies for earnings management incentives.

Therefore, FAS 140 accounting rule for securitization (2007-2009) provide managers with opportunities to manage earnings when earnings before securitization (EBS) or change in pre-securitization earnings (Δ EBS) are low. Thus, managers are inclined to manage securitization gains to meet earnings targets. However, FAS 166 accounting rule for securitization (2010-2016) doesn't provide managers with opportunities to manage earnings. Thus, managers aren't inclined to manage securitization gains to meet earnings targets. The overall results provide evidence of earnings management for the period 2007-2009 when securitization transactions were conducted in accordance with FAS 140 rules. As a result, it appears that after 2009 in the United States on average, there has not been earnings management through securitization.

9.2 Contribution

1.A main contribution of this research is related to examining securitizations as a tool for earnings management on a sample of banks which experienced the financial market crises and aftermath,

exposed to the progress and succeeding preservation of the asset securitization market, and exposed to the effects of

accounting rules for asset securitizations in FAS 140 and after the application of the newly adopted standard FAS 166 adoption.

2-The research provides evidentiary insights on the role of the accounting standard FAS 166 played in eliminating banks' earnings management practices in securitization settings as compared to the previous financial accounting standard FAS 140. Therefore, this research posits that securitization is properly regulated, and future financial crisis is not expected to ensue via securitization.

9.3 Recommendations for Future Research

This research examines earnings management incentives using two proxies; earnings before securitization and the change in earnings before securitization which is only one of the forms of earnings management studied in earnings management literature. It is possible that the earnings management incentive is not only related to earnings inflation or income smoothing. Thus, future research should also examine the use of alternative measures for earnings management incentives perhaps securitization can be used to meet analyst forecasts.

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