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경영학 석사학위 논문

Motivations for Securitization:
Empirical Evidence from Financial
Companies of Korea
자산유동화 목적에 관한 실증 연구
- 한국의 금융회사를 중심으로 -

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경영학과 경영학 전공

이 혜 진

Motivations for Securitization: Empirical Evidence from Financial Companies of Korea

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ABSTRACT

Motivations for Securitization: Empirical Evidence from Financial Companies of Korea

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This study investigates the motivations for securitization of banks and specialized credit financial businesses (“SCFBs”) such as card companies and installment financing companies of Korea. I hypothesize and provide evidence that banks securitize assets, specifically non-performing loans, to increase regulatory capital ratio, while SCFBs securitize assets, specifically assets other than non-performing loans, to raise funds for operating and investing activities. Furthermore, I find that banks with capital management motivation increase securitization transactions near the end of each quarter, while SCFBs with fund raising motivation do not show such seasonality clearly.

This study contributes to the literature by extending the range of study to the securitization of SCFBs and comparing two different industries simultaneously with respect to the motivations. Also, the finding that securitization transactions with capital management motivation increase near the financial reporting date can give implications to regulators and users of financial information.

Key Words: Securitization, Bank, Specialized Credit Financial Business, Capital Adequacy Ratio, Cash Flows from Operating and Investing Activities, NPL, Timing

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I. INTRODUCTION

In this paper, I investigate the motivations for securitization of banks and specialized credit financial businesses (“SCFBs”) ¹ of Korea. Among financial companies, only the two industries are actively engaging in securitization activities, providing sufficient data for empirical analysis. Most overseas studies regarding securitization use only bank data because of the banks’ major role in the securitization market. But uniquely in Korea, the securitization of SCFBs exceeds that of banks in both number and amount. Based on the different characteristics and regulations of the two industries, I expect banks securitize assets mainly for increasing regulatory capital ratio (capital management) while SCFBs securitize assets mainly for raising funds. And different motivations are expected to be related to the securitized asset types: NPLs ² versus non-NPLs. Additionally, I examine whether banks with capital management motivation increase securitization transactions near the end of each quarter while SCFBs with fund raising motivation do not show such seasonality.

In a typical securitization, the asset owner (usually called “originator” or “sponsor”) transfers assets to a legally isolated entity (called “SPE³”), which issues one or more types of asset-backed securities (“ABS”). Even though securitization provides

¹ SCFBs include credit card companies, facilities leasing and installment financing companies under SCFB Act.

² NPLs(Non-Performing Loans) are referred to the loans classified as “substandard”, “doubtful” or “presumed loss” according to the related laws and regulations. And I use “non-NPLs” to refer the loans other than NPLs classified “normal” or “precautionary”.

³ SPEs(Special Purpose Entities) are also referred to as SPVs(Special Purpose Vehicles) or VIEs(Variable Interest Entities).

legitimate way for raising funds by isolating and homogenizing cash flows and business risks of a specific asset class, much of the discussion around securitization has centered on the financial reporting benefits such as hiding debts and managing earnings when the originator avoids consolidating the SPE in its financial statements (Feng et al. 2009). Representatively, Enron's accounting scandal in 2001 and financial crisis triggered by sub-prime mortgages in 2008 showed the intrinsic risks related to the securitization.

Securitization in Korea started substantially in 1999 the next year when the Korean government enacted 'Asset Backed Securitization Act ("ABS Act")' to overcome the financial crisis started in the late 1997. The ABS Act resolved various legal obstacles for securitization. Based on the ABS Act, securitization market has rapidly grown both in quantity and quality. In the early period, securitization was mainly used by public organizations and financial companies to sell insolvent assets accumulated on a large scale due to the financial crisis. From KRW 6.8 trillion in 1999, total ABS issuance grew to KRW 50.9 trillion in 2001. After the end of restructuring of financial companies, total ABS issuance has decreased in amount, but the participants and the structures of securitization have been diversified. Banks and SCFBs are the major originators of securitization, making up 18.3 percent and 31.2 percent respectively of the total ABS issuance on average.

The motivations for securitization of regulated industries can be inferred from the laws and regulations. Under the deposit insurance system, banks have incentive to take more risks to increase the value of shareholders' equity with the leverage and riskiness

of bank assets. In response to this moral hazard problem, regulators impose capital requirements. However, off-balance sheet activities such as loan sales or loan securitization permit banks to sell a portion of the cash flows associated with new investment opportunities that they would pass up if restricted to deposit financing (James 1987). Hence, regulatory capital requirements have been widely proposed as a main motivation for bank securitization (Karaoglu 2005). Using Korean bank data, Moon(2009) shows that in case of banks with unhealthy financial position, securitization transactions increase as BIS ratio decreases.

Regulator also imposes prudential capital requirements on SCFBs similar to banks, but without deposit, SCFBs have limitation in increasing the risks of assets using borrowed capital. SCFBs can raise fund only through borrowing or issuing bonds, and the costs of the external financing increase as the debt level increases. Because of these restrictions, securitization can be an alternative way of fund raising for SCFBs.

Therefore, I predict that banks and SCFBs have different motivations for securitization, capital management and fund raising respectively. And I expect the capital management incentive increases as the regulatory capital ratio decreases, and the financial needs increase as the financial assets grow resulting in decrease in cash flows from operating and investing activities. Based on this reasoning, I hypothesize that banks' securitization amount is negatively associated with regulatory capital ratio while SCFBs' securitization amount is negatively associated with cash flows from operating and investing activities.

Additionally, I predict NPL securitization is more strongly related to the capital

management motivation while non-NPL securitization is more strongly related to the fund raising motivation. Transferring NPLs is more effective way to increase capital ratio than transferring non-NPLs because NPLs get more weights in calculating risk-weighted assets than non-NPLs. By contrast, non-NPLs are more suitable assets as collateral for fund raising purpose because they can be provided as large homogeneous asset pools with stable cash flows. Hence, my second hypothesis combined with the first hypothesis is that banks' NPL securitization amount is negatively associated with regulatory capital ratio while SCFBs' non-NPL securitization amount is negatively associated with cash flows from operating and investing activities.

Furthermore, based on the above hypotheses regarding motivation, I predict that bank managers deliberately decide when to securitize while SCFB managers are less focused on timing. As banks have to disclose regulatory capital ratio every quarter, they have incentive to increase securitization transactions near the end of every quarter to meet the target capital ratio. However, SCFBs do not need to increase securitization near the end of quarter if their motivation is fund raising, and rather they need to securitize assets throughout a year. So I set the hypothesis that banks increase securitization transactions near the end of each quarter while SCFBs securitize assets around a year.

Using a sample of 16 banks and 17 SCFBs which engaged in securitization transactions based on the ABS Act during 1999 to 2010, I obtain 142 bank-year and 147 SCFB-year observations. The transactions occurred after 2011 when Korea adopted the International Financial Reporting Standards are excluded to eliminate the

effect of accounting standards change. The descriptive statistics show that on average banks and SCFBs securitize about 0.5 percent and 15.0 percent of total assets in a year, respectively. And among the securitized assets, the portion of NPL is about 57 percent in amount for banks while it is only 1.0 percent for SCFBs.

With respect to investigating the motivations for securitization, the regression results show that as the regulatory capital ratio is low, banks' securitization amount increases, but in SCFBs sample, any significant relation is not found between securitization amount and the regulatory capital ratio. And as cash flows from operating and investing activities decrease, SCFBs increase securitization but banks do not show any significant relation between securitization amount and cash flows from operating and investing activities. Dividing securitization amount into NPL and non-NPL backed transactions and regressing respectively, banks show the negative relation only between NPL securitization and regulatory capital ratio, and SCFBs show the negative relation only between non-NPL securitization and cash flows from operating and investing activities. Combined together, the regression results show that banks increase NPL securitization to increase BIS ratio while SCFBs increase non-NPL securitization to raise funds for operating and investing activities.

With respect to examining securitization timing, I find that banks increase securitization near the end of each quarter and chi-square test show that the distribution of the number of securitization transactions by month does not follow uniform distribution. SCFBs also show the tendency to increase securitization transactions near the end of quarter, but the chi-square test does not reject the null hypothesis that the

distribution follows uniform distribution.

This study makes two main contributions. First, to my knowledge, I provide the first documentation of comparing two different industries regarding the motivations for securitization. Prior studies tend to conduct focused examinations of banks only. Second, I contribute to the literature on the financial statement effects of securitization by showing that securitization timing is different according to the motivations for securitization. However, the size of observations is small and the result of this study may not be generalized to non-financial industries.

The remainder of the paper is organized as follows. Section II describes the institutional details of securitization. In Section III, research hypotheses are developed introducing prior literature. Section IV presents the empirical models and variables, and Section V describes the sample and data. Section VI reports the results of the regression analyses conducted to test the hypotheses. Section VII concludes.

II. INSTITUTIONAL BACKGROUND

2.1. Structures of Securitization

In the typical securitization process, an originator who is the owner of the securitized assets transfers the assets to an SPE, and the SPE issues one or more types of ABS, and the proceeds from the ABS issuance are given to the originator. The SPE pays principals and interests of ABS by the cash flows from the securitized assets, and in most cases, various types of credit enhancements are added to the structure to

guarantee the payment of ABS. Appendix 1 introduces some kinds of credit enhancements.

Specifically, according to the way of payment, securitization can be divided into amortizing and revolving structures. First, in the amortizing structure, the proceeds from the assets are directly and instantly used for the payment of ABS during the securitization period, so the unpaid amount of ABS decreases as time goes by till the maturity date. For example, a bank makes an asset pool consisting of 1,000 loans amounting to KRW 10 billion and transfers this asset pool to an SPE. The total principal of the loans is KRW 20 billion, but the bank records the loans as KRW 10 billion considering the possibility of default by accumulating loan loss provision of KRW 10 billion and transfers the loans at the book value. And according to the stress test done by a credit rating agency, KRW 7 billion senior notes and KRW 3 billion subordinated notes⁴ are issued. The senior notes are acquired by external investors but the subordinated notes are acquired by the bank. The maturity of the notes is 3-year, but prepayment is allowed before the maturity. Subordinate notes are paid after all the senior notes are paid. Figure 1 Panel A shows an example of amortizing structure.

Second, in the revolving structure, an SPE repeatedly buys assets from the originator to maintain the size of assets to a certain level during the securitization period, and at the maturity date of ABS, the SPE stops buying assets and with the proceeds from the assets it pays principals of ABS. This structure is mainly used for card receivables or accounts receivables with short term maturity, and the assets are not

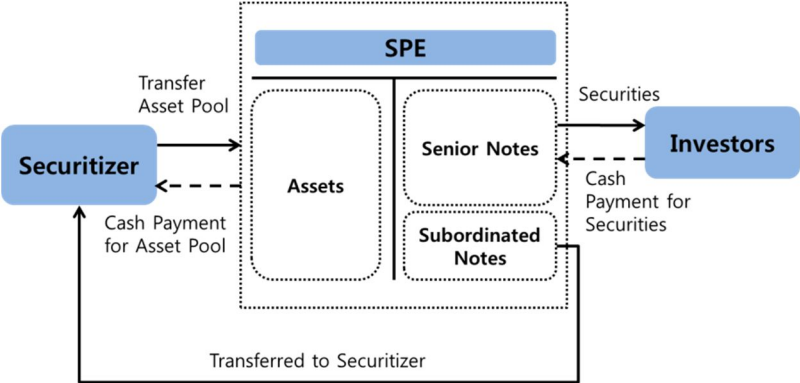
⁴ The ratio of subordinated notes to the total ABS is 29.1% on average in banks sample.

transferred as an individual receivable but as an account comprehensively. For the revolving structure, two steps are necessary. First, the accounts are transferred to a separate trust, and the trust issues senior and subordinated beneficiary certificates. And second, an SPE is established to be a senior beneficiary and issues ABS for external investors. For example, a card company trusts 10,000 customer accounts of card receivables amounting to KRW 10 billion, and the trust issues senior beneficiary certificate of KRW 9 billion, which is transferred to an SPE, and subordinated beneficiary certificate of KRW 1 billion⁵, which is acquired by the card company. Then the SPE issues only senior notes of KRW 9 billion with 3-year maturity and prepayment is not allowed. The trust repeatedly buys new receivables from the transferred accounts, and so the size of assets and liabilities are maintained at a certain level until the maturity date of ABS. Because of this revolved asset transferring process, implicit recourse is typically accompanied as a credit enhancement in the form that the originator buybacks the distressed accounts and instead transfers new active accounts. Through this implicit recourse, the SPE can maintain the quality of asset pool similar to that at the beginning of securitization. Figure 1 Panel B shows the revolving structure of securitization.

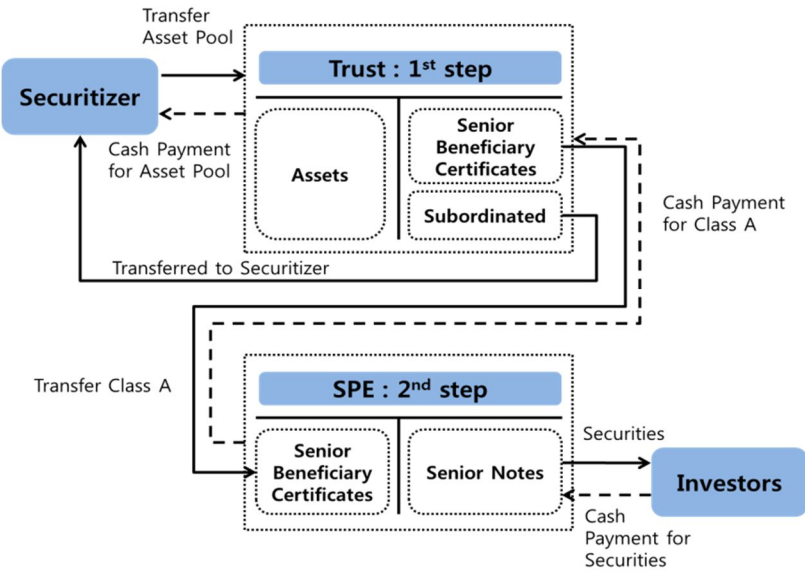
⁵ The ratio of subordinated notes to the total ABS is 5.8% on average in SCFB sample.

FIGURE 1
Structures of Securitization

Panel A: Amortizing Structure of Securitization



Panel B: Revolving Structure of Securitization



Panel A represents the typical amortizing structure of securitization and Panel B represents the typical revolving structure of securitization.

2.2. Accounting Standards

The key accounting issues regarding securitization are whether the securitization transaction in which an originator takes control or risk and reward of the securitized assets to some extent is to be recognized as asset sales or as borrowing, and how the originator's involvement can be estimated.

There are two approaches to discern asset sales and borrowing: control transfer approach and risks and rewards transfer approach. US GAAP takes the first approach in SFAS No. 140 'Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities'. According to the standard, an entity derecognizes financial assets when control has been surrendered, that is, it does not retain effective control over the assets through the right and obligation with respect to the accounting for separately recognized servicing asset and servicing liabilities. Meanwhile, IFRS takes the second approach in IFRS 9 'Financial Instruments'. According to the standard, an entity derecognizes assets when it has transferred substantially all of the risks and rewards of ownership of the asset. The two approaches seem to be converged especially after SFAS No. 156 'Accounting for Servicing of Financial Assets' was issued in March 2006 to amend SFAS No. 140.

The derecognition standards are revised toward strictly prohibiting originators' involvement of the risks and rewards of the transferred assets. Accounting scandals such as Enron and financial crisis triggered by ABS based on sub-prime mortgages are the motivation of revision of accounting standards. But also, the difference between accounting treatment and market perception may play a certain role in the revision.

There are studies that show transactions recognized as sales in accounting treatment are substantially recognized as borrowing in financial markets. Landsman et al.(2008) show in empirical study that financial market participants recognize the assets sold to SPE and the proceeds from the sale as the assets and liabilities of the originator respectively. Niu and Richardson(2006) find that for a sample of originators applying sales accounting guidance in SFAS No. 125/140 during the period 1997-2003, off-balance-sheet debt related to securitizations has, on average, the same risk-relevance for explaining market measures of risk (that is, CAPM beta) as on-balance-sheet debt. And Cheng et al.(2011) find that when market participants have a greater difficulty in estimating risk transfer, banks face greater information uncertainty (i.e., larger bid-ask spreads and analyst forecast dispersion).

Korean GAAP follows control transfer approach similar to US GAAP. Interpretation 52-14 ‘Accounting for Transferring and Factoring of Receivables’ was released in 1999 referring to SFAS No. 140. According to the Interpretation, the decision of sales accounting depends on the surrender of control. Uniquely, the interpretation includes the statement that the transactions occurred based on the ABS Act are generally regarded to satisfy the criteria of asset sales. But from 2011 when Korea fully adopted IFRS, the securitization transactions under the ABS Act also have to meet the complicating derecognition criteria of IFRS without any exception. Moreover, consolidation criteria under IFRS include power of control as well as ownership. So even though a transaction meets the derecognition criteria, it can be substantially nullified by consolidation of the SPE. In reality, after IFRS adoption, the

SPEs used for securitization are consolidated in many cases. In Appendix 2, US GAAP, IFRS and Korean GAAP related to securitization are summarized.

2.3. Securitization in Korea⁶

While US securitization market has been developed spontaneously based on common law system, Korea needed special legal ground to overcome the restrictions of code law system such as establishing bankrupt-remote SPE that had unalienable ownership of the assets transferred to it by the originator. So, Korean government enacted the Asset-Backed Securitization Act (“ABS Act”) on September 16, 1998 to sell quickly distressed loans which increased explosively after Asian currency crisis in late 1997. The ABS Act has eliminated many of the legal impediments that previously prevented securitization in Korea.

One of the most important features of the ABS Act was that it clarified issues of true sale and perfection in the case of asset transfers to an SPE. Prior to the Act, the laws did not easily differentiate between a true sale and a security providing. This distinction is important because it determines whether the originator’s estate may have a claim on the securitized assets in the event of bankruptcy. Application of the ABS Act removes this uncertainty and makes the transfer a true sale so that the originator no longer has power over the assets and the purchaser fully bears their risks. And perfection of asset sales to SPEs is also facilitated by the ABS Act. Asset transfers are

⁶ I refer to Chacko et al.(2005) especially with regard to the legal issues.

considered perfected against third parties as soon as a securitization is registered with the Financial Supervisory Service (“FSS”). Perfection vis-à-vis obligors occurs as soon as the originator provides them with notice of the transfer of their obligations. Obligor consent is not required for the transfer to be perfected. And in the aspect of taxation there are several exceptions favorable to SPEs. To prevent double taxation, the income of SPEs is fully deducted as far as they pay more than 90% of the income to their partners as dividend. And when SPEs acquire real estates based on the ABS Act, they get 50 percent reduction in paying acquisition and registration tax to local government based on the Restriction of Special Taxation Act.

And unlike in US and Europe, securitization in Korea depends heavily on originators and third-party guarantees. Almost all the subordinated ABS are acquired by originators and offshore deals are often fully wrapped by government or bank guarantees. This is considered to be attributed to the secured borrowing tradition of Korean financial market and undeveloped system in evaluating risks of assets. Government oversight is also unique feature of securitization in Korea. The ABS Act requires filing of securitization plan and transfer of assets on FSS, and FSS reviews the following of legal requirements including off-balance sheet and bankrupt remoteness opinions.

Enthusiastic adoption of foreign securitization techniques aimed at restructuring of financial institutions. From almost nothing in 1998, total ABS issuance grew to KRW 6.8 trillion in 1999 and KRW 50.9 trillion in 2001. Banks, security companies and government entities were the dominant originators during this period, attempting to

clean up impaired balance sheets by selling off non-performing assets. After the end of restructuring of financial companies, total ABS issuance has decreased in amount, but the participants and the structures of securitization have been diversified. Banks and SCFBs are the major originators of securitization, making up 18.3 percent and 31.2 percent respectively of the total ABS issuance on average. In Appendix 3, distinguishing facet of Korean securitization market is summarized by periods.

III. PRIOR LITERATURE AND HYPOTHESES

DEVELOPMENT

In this section, I compare banks and SCFBs in the aspects of laws and regulations to develop my hypotheses that banks and SCFBs have different motivations for securitization. In appendix 4, related laws and regulations are compared specifically.

Under the deposit insurance system, banks have incentive to take more risk to increase the value of shareholders' equity with the leverage and riskiness of bank assets. In response to this moral hazard problem, regulators impose capital requirements⁷. By reducing the risk of default, sufficient capital limits the gain that banks can enjoy on

⁷ In 1988, the Basel Committee of The Bank for International Settlements decided to introduce a capital measurement system commonly referred to as Basel I. Korea adopted the rule of BIS capital adequacy ratio since Asian financial crisis in 1997. According to the rule, banks are required to keep the ratio above 8 percent under which the authority takes prompt corrective action. BIS capital adequacy ratio is calculated by dividing equity capital by risk weighted assets. The equity capital consists of core capital (e.g. paid-in capital, capital surplus, retained earnings), supplementary capital (e.g. allowance for credit losses, subordinated bonds) and deductions (e.g. goodwill). And risk weighted assets are the sum of assets multiplied by risk weights from 0% to 100% according to the credit risks of the assets.

the margin from abusive increases in risk (Calomiris and Mason 2004). However, off-balance sheet activities such as loan sales or loan securitization permit banks to sell a portion of the cash flows associated with new investment opportunities. This ability permits banks to invest in loans with positive net present values that they would pass up if restricted to deposit financing (James 1987). Hence, regulatory capital requirements have been widely proposed as a main motivation for bank securitization (Karaoglu 2005). Using Korean bank data, Moon(2009) shows that in case of banks with unhealthy financial position, securitization transactions increase as banks' BIS ratio decreases.

Specifically, asset securitization can be used for capital management (increasing regulatory capital ratio) in two ways: risk management (decreasing risk-weighted assets) and earnings management (increasing equity capital). First, banks can decrease the default risks of assets by transferring risky loans which leads to the increase of regulatory capital ratio by decreasing risk-weighted assets. Even though banks retain some interests of the transferred loans by taking subordinated ABS and so substantially take similar risk exposure (Ryu 2007; Chen et al. 2008), the nominal amount of the subordinated ABS is smaller than that of the total loan amount⁸. Moreover, transferring riskier assets such as NPLs is more effective in increasing regulatory capital ratio than normal assets by decreasing assets of high risk weights. Appendix 5 contains examples of securitization effect on regulatory capital ratio.

⁸ To plug the loophole of this ratio calculation method(Basel I), Basel Committee of BIS set new standards called Basel II in 2004 which increase risk weights on the retained interests of originating banks by subtracting the amount from capital.

Second, securitization has timing effect on the capital ratio by earnings management. Capital ratio increases (decreases) at the date of securitization if the securitized loans have fair values exceeding (below) book values and thus, gains (losses) are recognized. If the interest rate of securitized loans is higher than discount rate used for estimating fair value of the loan, fair value exceeds book value because loans are booked on historical cost basis. And the gains from the securitization transaction occur as a result of accelerated early recognition of interest margin which would be recognized slowly for future periods if the loans are not transferred. Moreover, managers possibly overvalue the securitized assets to obtain larger gains because fair value accounting allows managers' discretion in estimating expected cash flows and discount rate. This is not costless because if gains are recognized due to the overvaluation of transferred loans, losses will be recognized from the retained interests in the future. Karaoglu(2004) finds that banks use gains from loan sales and securitizations to affect both earnings and regulatory capital. The gains can be attributed both to cherry-picking of loans whose market values exceed their book values and also to overvaluation of the retained interests that are carried at fair market value after the securitization. With broader range of industry data, Dechow et al.(2009) find that firms report larger gains when pre-securitization earnings are low and below the prior year's level. They conclude the accounting rules for securitizations give managers considerable discretion over the size of the reported gains from securitizations. Moreover, Dechow and Shakespeare(2009) show that securitization is used for window-dressing. They find that 41 percent of the transactions occur at the

end of each quarter and a half of the transactions occur during the last 5 days of the end of quarter.

Regulator also imposes prudential capital requirements⁹ on SCFBs similar to banks. Without deposit, however, SCFBs have limitation in increasing the risks of assets using borrowed capital. Banks are capable of raising fund through deposit, which is the main source without any limitation, as well as borrowing or issuing bonds¹⁰. On the other hand, SCFBs can raise debt capital only through borrowing or issuing bonds¹¹ and the costs of the external financing increase as the debt level increases. Because of these restrictions, securitization can be an alternative way of raising funds for operating and investing activities. Moreover, securitization of card or installment receivables with implicit recourse is efficient tool for financing. The revolving structure of securitization allows SCFBs to get long-term debts by providing short-term receivables as collateral. And SCFBs can raise external fund with lower interest rate because ABS is secured by receivables as well as originators' credit. Calomiris and Mason(2004) show that securitization using card receivables can be motivated by efficient contracting.

⁹ SCFBs are required to keep the adjusted capital ratio above 7 percent (8 percent for credit card companies) and when the ratio falls under the level, the authority takes prompt corrective action. The adjusted capital ratio is calculated by dividing equity capital by adjusted total assets. The equity capital consists of core capital (e.g. capital, capital surplus, retained earnings), supplementary capital (e.g. allowance for credit losses, subordinated bonds) and deductions (e.g. goodwill). And adjusted total assets are calculated as follows: total asset – (cash+ short term deposit without collateral agreement +government or public bond having term of less than 3 months) – deductible items.

¹⁰ As of December 31, 2010, the liabilities of commercial banks consist of deposits (73.6%), bonds (10.3%), borrowings (7.7%) and others (8.4%) (data from FSS website).

¹¹ As of December 31, 2010, the liabilities of SCFBs consist of bonds (62.4%), borrowings (26.0%), others (11.6%) (data from FSS website).

In summary, as banks and SCFBs are strictly regulated industries, the laws and regulations will affect the motivations of securitization. In other words, banks are likely to use securitization for capital management, and SCFBs are likely to use securitization for fund raising. I expect the capital management incentive increases as the regulatory capital ratio decrease, and the financial needs increase as the financial assets grow resulting in decrease in cash flows from operating and investing activities. So I set the hypothesis regarding the motivations for securitization as follows:

H1: Banks' securitization amount is negatively associated with regulatory capital ratio while SCFBs' securitization amount is negatively associated with cash flows from operating and investing activities.

Additionally, I predict NPL securitization is more strongly related to the capital management motivation while non-NPL securitization is more strongly related to the fund raising motivation. Above mentioned, with respect to the risk management, transferring NPLs is more effective way to increase capital ratio than transferring non-NPLs because NPLs get more weights in calculating risk-weighted assets than non-NPLs. By contrast, non-NPLs are more suitable assets as collateral for fund raising purpose because they can be provided as large homogeneous asset pools with stable cash flows. Thus, my second hypothesis combined with the first hypothesis is as follows:

H2: Banks' NPL securitization amount is negatively associated with regulatory capital ratio while SCFBs' non-NPL securitization amount is negatively associated with cash flows from operating and investing activities.

Furthermore, based on the hypothesis 1, I predict that bank managers deliberately decide when to securitize while SCFB managers are less focused on timing. In other words, as banks have to disclose regulated capital ratio every quarter, banks have incentive to increase securitization transactions near the end of every quarter to meet the target capital ratio. However, SCFBs do not need to increase securitization near the end of quarter if their motivation is for fund raising, and rather they securitize assets throughout a year. Thus, I set the hypothesis regarding the timing of securitization as follows:

H3: Banks increase securitization transactions near the end of each quarter while SCFBs securitize assets around a year.

IV. EMPIRICAL MODELS AND VARIABLES

To test the hypothesis of motivations for securitization(H1), I estimate regression model of the total securitization amount estimated by ABS issuance to average total assets (*ABS*) as a function of regulatory capital ratio (*CAPITAL*) of prior year, cash

flows from operating and investing activities (*CFOI*) of prior year, and control variables (*SIZE*, *ROE*, *NPL*). To test H2, dependent variables are substituted with the ratio of NPL securitization amount to average total assets (*ABS_NPL*) and the ratio of non-NPL securitization amount to average total assets (*ABS_NNPL*). I run the firm and year fixed effects regression models.

$$\begin{aligned}
 & \mathbf{ABS}_{i,t} \quad (\mathbf{ABS_NPL}_{i,t}, \quad \mathbf{ABS_NNPL}_{i,t}) \\
 & = \beta_0 + \beta_1 \mathbf{CAPITAL}_{i,t-1} + \beta_2 \mathbf{CFOI}_{i,t-1} + \beta_3 \mathbf{SIZE}_{i,t} + \beta_4 \mathbf{ROE}_{i,t} + \beta_5 \mathbf{NPL}_{i,t} + \varepsilon_{i,t}
 \end{aligned}$$

Where:

- ABS* = total amount of ABS issuance divided by average total assets;
- ABS_NPL* = amount of ABS issuance based on NPLs divided by average total assets;
- ABS_NNPL* = amount of ABS issuance based on non-NPLs divided by average total assets;
- CAPITAL* = regulatory capital ratio such as BIS ratio for banks and adjusted capital ratio for SCFBs;
- CFOI* = cash flows from operating and investing activities divided by average total assets;
- SIZE* = natural log of total assets;
- ROE* = net income divided by average total equity;
- NPL* = NPLs divided by total loans.

CAPITAL is the proxy for the capital management motivation. I predict banks show negative relation between *ABS* and *CAPITAL* while SCFBs do not show any significant relation between the two variables. *CFOI* is the proxy for the financial needs¹² as the growth of financial assets causes decreasing of cash flows from operating and investing activities. And I predict SCFBs show negative relation between

¹² Fend et al.(2009) use cash flows from operating and investing activities as the proxy for internal funds.

ABS and *CFOI* while banks do not show any significant relation between the two variables.

As the control variables, *SIZE*, *ROE* and *NPL* are included. As larger firms are likely to have homogenous assets large enough to be pooled for securitization and to possess greater technical expertise to handle the complexity of structured finance arrangements (Feng et al. 2009), I expect a positive coefficient of *SIZE* for both banks and SCFBs. Meanwhile, as for *ROE*, I expect negative sign for banks and positive sign for SCFBs. Unprofitable banks have incentive to increase net income through the gains from securitization transactions. However, SCFBs mainly use revolving structure and the implicit recourse binds ABS rating with originators financial position, and so profitable SCFBs are expected to raise funds more readily through securitization. With similar reason, as for *NPL*, I expect positive sign for banks and negative sign for SCFBs. Banks with more NPLs have incentive to decrease the bad assets through securitization. However, SCFBs with more NPLs have difficulties in issuing ABS due to the bad financial position. As a control variable, I prefer *NPL* to loan loss allowances because the latter is susceptible to managers' discretion (Karaoglu 2004).

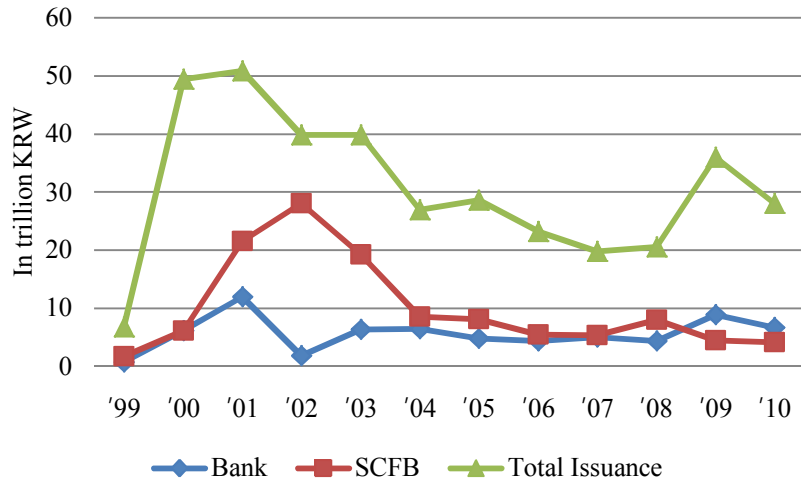
To test H3, I analyze the number of securitization transactions by month and do chi-square test. I expect the number of bank securitization do not follow uniform distribution while that of SCFBs follow uniform distribution.

V. SAMPLE AND DATA

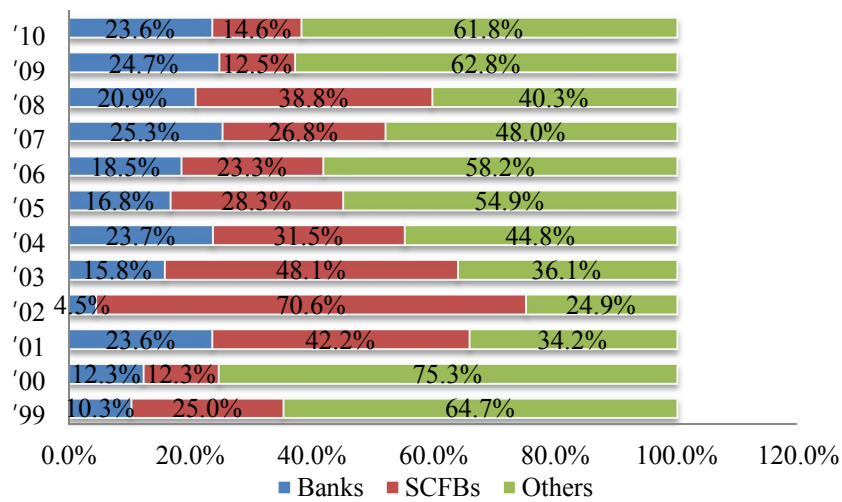
My sample is drawn from banks and SCFBs which securitized assets based on the ABS Act of Korea from 1999 to 2010. To control the effects of accounting standards change, I excluded the observations in year after 2011 when banks and SCFBs prepared financial statements according to the IFRS. Among financial companies, only the two industries are actively engaging in securitization activities, providing sufficient data for empirical analysis. Securities companies do mainly brokerage and their transactions occur mostly as a bridge. Insurance companies and savings banks rarely use securitization. And non-financial companies show low frequency in securitization, and public entities use securitization for certain policy objectives. So, I selected only banks and SCFBs among financial companies as samples. The transactions between multiple originators and one SPE are excluded because of the difficulties in separating ABS issuance amounts of each originator. Figure 2 Panel A shows the total ABS issuance including banks and SCFBs in amount and Panel B shows the ratios of bank and SCFB securitization to total ABS issuance. The ABS issuance originated by banks and SCFBs makes up about 18.3 percent and 31.2 percent respectively of total securitization on average.

Figure 2
Securitization of Banks and SCFBs

Panel A: ABS Issuance in Amount



Panel B: Ratio of ABS Issuance to Total Issuance



Panel A represents the total ABS issuance in amount under the ABS Act including the amount originated by banks and SCFBs. Panel B represents the ratio of ABS issuance originated by banks and SCFBs to total ABS issuance from 1999 to 2010.

Using a sample of 16 banks¹³ and 17 SCFBs¹⁴ which engaged in securitization transactions based on the ABS Act during 1999 to 2010, I obtain observations of 142 bank-year with 277 transactions and 147 SCFB-year with 347 transactions. The transactions are combined by firm and year. Among the securitization transactions, PF loans, P-CBO and P-CLO¹⁵ are excluded because these transactions are not based on the original assets of banks or SCFBs. Appendix 6 provides the list of banks and SCFBs included in samples.

And the main underlying assets of bank securitization are NPLs and comparatively the portion of normal mortgage securitization is small. The portion of NPL is about 57 percent in amount while the portion of mortgage is 30 percent in amount as Figure 3 Panel A shows. As for SCFBs, normal assets such as card loans and receivables and auto loans are the major securitized assets making up 94 percent of total securitization amount while NPL securitization makes up only 1 percent as Figure 3 Panel B shows.

The statistics of all the securitization can be obtained from the website of FSS. And the specific information of each transaction can be obtained from DART(dart.fss.or.kr). The financial information of each financial company can be obtained from KISVALUE, DART and FSS database (fisis.fss.or.kr).

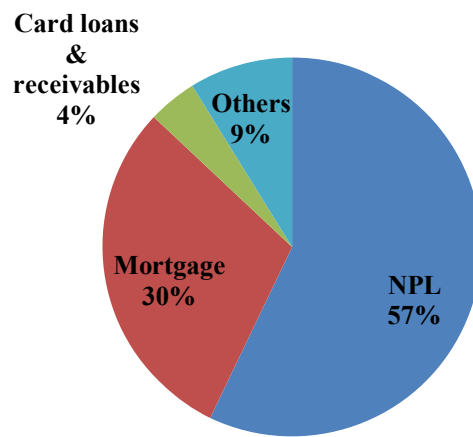
¹³ During the sample periods, 4 banks were merged by other banks, so now 12 banks are operating.

¹⁴ 8 card companies and 9 lease and installment financing companies are included. During the sample periods, 4 card companies and 2 lease and installment financing companies are merged, so now 4 and 7 companies respectively are operating.

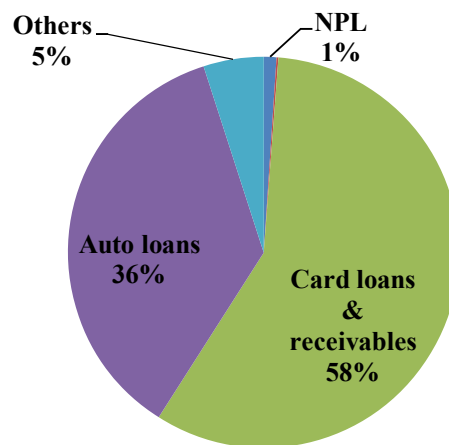
¹⁵ PF loans for construction are instantly sold to SPE because they are executed on the condition of securitization. P-CBO (Primary Collateralized Bond Obligations) or P-CLO (Primary Collateralized Loan Obligations) is a kind of policy financing on which the government provides guarantees of the payment for the companies with low credit ratings.

Figure 3
Securitization of Banks and SCFBs by Asset Types

Panel A: Banks



Panel B: SCFBs



Panel A and Panel B represent the portion of securitized assets of banks and SCFBs in amount respectively during 1999 to 2010. NPLs are referred to the loans classified as “substandard”, “doubtful” or “presumed loss” according to the related laws and regulations.

VI. RESULTS

6.1. Descriptive Statistics and Univariate Test

Table 1 shows the descriptive statistics of variables separately by banks and SCFBs. And Table 2 reports univariate tests of differences in the means (t-test) and medians (Wilcoxon rank-sum test) of the variables between the observations of banks and SCFBs. Almost all the variables are significantly different by industries. The extreme 1 percent of each tail of each variable is winsorized to mitigate the effect of outliers.

As shown in Panel A of Table 1, banks securitize only 0.5 percent of total assets while SCFBs securitize 15.0 percent of total assets in a year on average (*ABS*). Specifically the mean ratio of banks' NPL securitization amount to total assets is 0.3 percent which is about 60 percent of banks' total securitization (*ABS_NPL*). The mean ratio of SCFBs' NPL securitization amount to total assets is 0.1 percent which is only 1 percent of SCFBs' total securitization (*ABS_NPL*).

As for explanatory variable of capital management motivation (*CAPITAL*), the average regulatory capital ratio of banks is 11.9 percent, lower than that of SCFBs, 16.1 percent. And as for explanatory variable of fund raising motivation (*CFOI*), the average ratio of cash flows from operating and investing activities to total assets of banks is -6.3 percent and the volatility is 0.080, while the ratio of SCFBs is -11.6 percent and the volatility is 0.371. The means of *CFOI* are different between banks and

SCFBs at 10 percent significance level, but the medians of *CFOI* are not significantly different as Table 2 shows.

As for the control variables, the natural log of total assets of banks (*SIZE*) is 13.081, significantly larger than that of SCFBs, 9.866 on average. However, *ROE* shows no significant difference between banks and SCFBs in mean values, 9.9 percent and 18.7 percent respectively, and in median values, 14.1 percent and 14.7 percent respectively as Table 2 shows. The average ratio of bad assets to total assets (*NPL*) of SCFBs is 10.0 percent, significantly higher than that of banks, 2.6 percent.

And Table 3 presents the correlation coefficients of the variables. *ABS* and *ABS_NPL* have significantly negative relations with *CAPITAL* in case of banks (Panel A) but not in case of SCFBs (Panel B) as expected. But the correlation coefficients between each dependent variable (*ABS*, *ABS_NPL* and *ABS_NNPL*) and *CFOI* show mixed results. And in bank sample, large banks seem to be financially healthier than small banks as *SIZE* has positively related to *CAPITAL* and negatively related to *NPL*. However in SCFB sample, large SCFBs have lower regulatory capital ratio and less bad assets. Additionally, as the portion of bad assets (*NPL*) increases, banks increase *NPL* securitization (*ABS_NPL*) while SCFBs do not show any significant relation between the two variables.

Table 1 Descriptive Statistics of Variables

Panel A: Banks (N=142)

Variables	Mean	STD	Min	Q1	Median	Q3	Max
<i>ABS</i>	0.005	0.009	-	-	0.002	0.005	0.050
<i>ABS_NPL</i>	0.003	0.006	-	-	0.001	0.003	0.028
<i>ABS_NNPL</i>	0.002	0.007	-	-	-	-	0.050
<i>CAPITAL</i>	0.119	0.016	0.087	0.109	0.116	0.127	0.172
<i>CFOI</i>	-0.063	0.080	-0.289	-0.116	-0.058	-0.013	0.184
<i>SIZE</i>	13.081	0.961	11.005	12.288	13.204	13.774	14.751
<i>ROE</i>	0.099	0.208	-1.191	0.080	0.141	0.186	0.449
<i>NPL</i>	0.026	0.030	0.005	0.011	0.015	0.026	0.198

Panel B: SCFBs (N=147)

Variables	Mean	STD	Min	Q1	Median	Q3	Max
<i>ABS</i>	0.150	0.218	-	-	0.050	0.219	0.918
<i>ABS_NPL</i>	0.001	0.004	-	-	-	-	0.028
<i>ABS_NNPL</i>	0.149	0.218	-	-	0.047	0.219	0.918
<i>CAPITAL</i>	0.161	0.251	-1.269	0.115	0.159	0.273	0.484
<i>CFOI</i>	-0.116	0.371	-1.610	-0.198	-0.054	0.107	0.433
<i>SIZE</i>	9.866	1.455	6.967	8.654	9.949	11.195	12.259
<i>ROE</i>	0.187	1.447	-4.152	0.036	0.147	0.260	7.785
<i>NPL</i>	0.100	0.169	0.001	0.018	0.037	0.084	0.704

*, **, *** indicate significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed). Panel A and Panel B report descriptive statistics of banks and SCFBs respectively. First year(1999) observations are lost due to average amount computation. The extreme 1 percent of each tail of each variable is winsorized.

Variable Definitions:

- ABS* = total amount of ABS issuance divided by average total assets;
- ABS_NPL* = ABS issuance based on NPLs divided by average total assets;
- ABS_NNPL* = ABS issuance based on non-NPLs divided by average total assets;
- CAPITAL* = regulatory capital ratio such as BIS ratio for banks and adjusted capital ratio for SCFBs;
- CFOI* = cash flows from operating and investing divided by average total assets;
- SIZE* = natural log of total assets;
- ROE* = net income divided by average total equity;
- NPL* = NPLs divided by total loans.

**Table 2 Differences Between Banks and SCFBs
in Mean and Median**

Panel A: T-test

Variables	Mean		Diff.	t-value
	Banks	SCFBs		
<i>ABS</i>	0.005	0.150	-0.145	-8.01***
<i>ABS_NPL</i>	0.003	0.001	0.002	3.90***
<i>ABS_NNPL</i>	0.002	0.149	-0.147	-8.14***
<i>CAPITAL</i>	0.119	0.161	-0.042	-2.02***
<i>CFOI</i>	-0.063	-0.116	0.053	1.69*
<i>SIZE</i>	13.081	9.866	3.215	22.24***
<i>ROE</i>	0.099	0.187	-0.089	-0.73
<i>NPL</i>	0.026	0.100	-0.074	-5.22***

Panel B: Z-test

Variables	Median		Diff.	z-value
	Banks	SCFBs		
<i>ABS</i>	0.002	0.050	-0.048	-4.35***
<i>ABS_NPL</i>	0.001	-	0.001	9.33***
<i>ABS_NNPL</i>	-	0.047	-0.047	-7.76***
<i>CAPITAL</i>	0.116	0.159	-0.043	-6.47***
<i>CFOI</i>	-0.058	-0.054	-0.004	-0.17
<i>SIZE</i>	13.204	9.949	3.255	13.92***
<i>ROE</i>	0.141	0.147	-0.006	-1.11
<i>NPL</i>	0.015	0.037	-0.022	-5.99***

*, **, *** indicate significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed). Panel A and Panel B report univariate tests of differences in the means (t-test) and medians (Wilcoxon rank-sum test) of the variables between banks and SCFBs.

Variable Definitions:

- ABS* = total amount of ABS issuance divided by average total assets;
- ABS_NPL* = ABS issuance based on NPLs divided by average total assets;
- ABS_NNPL* = ABS issuance based on non-NPLs divided by average total assets;
- CAPITAL* = regulatory capital ratio such as BIS ratio for banks and adjusted capital ratio for SCFBs;
- CFOI* = cash flows from operating and investing divided by average total assets;
- SIZE* = natural log of total assets;
- ROE* = net income divided by average total equity;
- NPL* = NPLs divided by total loans.

**Table 3 Pearson(Spearman) Correlation Coefficients
above(below) the Diagonal**

Panel A: Banks

	<i>ABS</i>	<i>ABS_NPL</i>	<i>ABS_NNPL</i>	<i>CAPITAL</i>	<i>CFOI</i>	<i>SIZE</i>	<i>ROE</i>	<i>NPL</i>
<i>ABS</i>		0.638	0.750	-0.228	-0.035	0.003	-0.130	0.154
<i>ABS_NPL</i>	0.762		-0.027	-0.238	-0.050	-0.095	-0.208	0.309
<i>ABS_NNPL</i>	0.574	0.088		-0.097	-0.004	0.097	-0.010	-0.053
<i>CAPITAL</i>	-0.194	-0.135	-0.140		0.243	0.268	0.228	-0.342
<i>CFOI</i>	-0.102	-0.069	-0.165	0.207		-0.087	0.021	0.073
<i>SIZE</i>	0.377	0.393	0.300	0.272	-0.080		0.084	-0.267
<i>ROE</i>	-0.113	-0.006	-0.100	0.042	-0.067	-0.125		-0.717
<i>NPL</i>	0.231	0.252	0.076	-0.500	0.113	-0.225	-0.263	

Panel B: SCFBs

	<i>ABS</i>	<i>ABS_NPL</i>	<i>ABS_NNPL</i>	<i>CAPITAL</i>	<i>CFOI</i>	<i>SIZE</i>	<i>ROE</i>	<i>NPL</i>
<i>ABS</i>		0.026	1.000	0.007	-0.105	0.262	0.087	-0.120
<i>ABS_NPL</i>	0.115		0.002	-0.083	0.162	0.069	0.048	-0.042
<i>ABS_NNPL</i>	0.998	0.074		0.010	-0.109	0.260	0.082	-0.119
<i>CAPITAL</i>	-0.157	-0.160	-0.148		0.046	-0.170	-0.157	-0.479
<i>CFOI</i>	-0.034	0.269	-0.045	0.221		-0.196	0.113	0.231
<i>SIZE</i>	0.400	0.113	0.400	-0.337	-0.209		0.046	-0.265
<i>ROE</i>	-0.030	-0.175	-0.018	-0.087	-0.131	0.260		0.139
<i>NPL</i>	0.030	0.135	0.027	0.009	0.491	-0.285	-0.241	

Panel A and B report pair-wise correlations between variables. Bolded correlations are significant at the 5 percent level based on two-tailed critical values.

Variable Definitions:

- ABS* = total amount of ABS issuance divided by average total assets;
- ABS_NPL* = ABS issuance based on NPLs divided by average total assets;
- ABS_NNPL* = ABS issuance based on non-NPLs divided by average total assets;
- CAPITAL* = regulatory capital ratio such as BIS ratio for banks and adjusted capital ratio for SCFBs;
- CFOI* = cash flows from operating and investing divided by average total assets;
- SIZE* = natural log of total assets;
- ROE* = net income divided by average total equity;
- NPL* = NPLs divided by total loans.

6.2. Regression Results of Motivations and Asset Types of Securitization

Table 4 reports the results of OLS estimation of six regression models. I run the regression models on the subsamples of banks and SCFBs using three dependent variables: *ABS*, *ABS_NPL* and *ABS_NNPL*. For the test of H1, I use *ABS* as a dependent variable, and for the test H2, I divide *ABS* into *ABS_NPL* and *ABS_NNPL* and run the regression models respectively. I report t-statistics for the coefficients that are calculated using firm- and year- clustered standard errors.

The first column of Table 4 reports the results of the model with *ABS* as dependent variable in bank sample. The coefficient on *CAPITAL* is significantly negative ($t=-2.00$) consistent with my prediction. The negative relation becomes stronger ($t=-3.08$) between *ABS_NPL* and *CAPITAL* as shown in the second column of Table 4, whereas using *ABS_NNPL* as dependent variable, the negative relation with *CAPITAL* is no longer significant as shown in the third column of Table 4.

On the other hand, in SCFB sample, *ABS* show significantly negative relation with *CFOI* ($t=-1.86$) as the fourth column of Table 4 reports. When I divide *ABS* into *ABS_NPL* and *ABS_NNPL*, the significant negative relation is shown only between *ABS_NNPL* and *CFOI* ($t=-1.84$) as the fifth and sixth column of Table 4 report.

As expected, *SIZE* has positive relation with *ABS* but only significant in the relation with *ABS_NPL* of banks. And in SCFBs sample, as *ROE* increases, *ABS* and *ABS_NNPL* increase. However, different from the prediction, *ABS_NPL* and *NPL* show negative relation in bank sample. Considering the negative correlation between

SIZE and *NPL* (Table 3 Panel A), the negative sign between *ABS_NPL* and *NPL* can be understood in the context of *SIZE*.

In conclusion, I find support for H1 and H2. Regulatory capital ratio (*CAPITAL*) is a significant variable explaining bank securitization (*ABS*), but not that of SCFBs, whereas cash flows from operating and investing activities (*CFOI*) is a significant variable explaining SCFB securitization (*ABS*), but not that of banks. Specifically, banks increase NPL securitization (*ABS_NPL*) as regulatory capital ratio (*CAPITAL*) decreases, whereas SCFBs increase non-NPL securitization (*ABS_NNPL*) as cash flows from operating and investing activities (*CFOI*) decrease.

Table 4 Regression Results of Motivations of Securitization

$ABS_{i,t}$ ($ABS_NPL_{i,t}$, $ABS_NNPL_{i,t}$)

$$= \beta_0 + \beta_1 CAPITAL_{i,t-1} + \beta_2 CFOI_{i,t-1} + \beta_3 SIZE_{i,t} + \beta_4 ROE_{i,t} + \beta_5 NPL_{i,t} + \varepsilon_{i,t}$$

	Pred. Sign	Banks			SCFBs		
		(1) <i>ABS</i>	(2) <i>ABS_NPL</i>	(3) <i>ABS_NNPL</i>	(4) <i>ABS</i>	(5) <i>ABS_NPL</i>	(6) <i>ABS_NNF</i>
<i>CAPITAL</i> _{<i>i,t-1</i>}	-	-0.11* (-2.00)	-0.12*** (-3.08)	0.02 (0.43)	-0.00 (-0.01)	-0.00 (-0.73)	0.00 (0.02)
(β_1)							
<i>CFOI</i> _{<i>i,t-1</i>}	-	-0.00 (-0.34)	0.01 (1.08)	-0.01 (-1.56)	-0.09* (-1.86)	-0.00 (-0.71)	-0.09* (-1.84)
(β_2)							
<i>SIZE</i> _{<i>i,t</i>}	+	0.00 (1.60)	0.00** (2.54)	0.00 (0.32)	0.03 (1.59)	0.00 (0.72)	0.03 (1.58)
(β_3)							
<i>ROE</i> _{<i>i,t</i>}	-/+	-0.00 (-0.27)	0.01 (1.23)	-0.01 (-0.83)	0.02** (2.45)	0.00 (0.11)	0.02** (2.20)
(β_4)							
<i>NPL</i> _{<i>i,t</i>}	+/-	-0.09 (-1.41)	-0.09* (-1.82)	0.00 (0.03)	-0.07 (-0.53)	-0.00 (-0.99)	-0.07 (-0.50)
(β_5)							
Constant	?	0.00 (0.12)	0.00 (0.12)	0.00 (0.01)	-0.20 (-0.85)	-0.00 (-0.55)	-0.20 (-0.85)
(β_0)							
# Obs.		126	126	126	130	130	130
Adj. R²		0.081	0.400	-0.045	0.024	0.118	0.020

*, **, *** indicate significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed). The table reports the OLS estimation and t-statistics calculated using firm and year clustered standard errors. The first, second and third column report the regression results of bank sample and fourth, fifth and sixth column report the regression results of SCFB sample. *ABS*, *ABS_NPL* and *ABS_NNPL* are the dependent variables in each regression model. The extreme 1 percent of each tail of each variable is winsorized.

Variable Definitions:

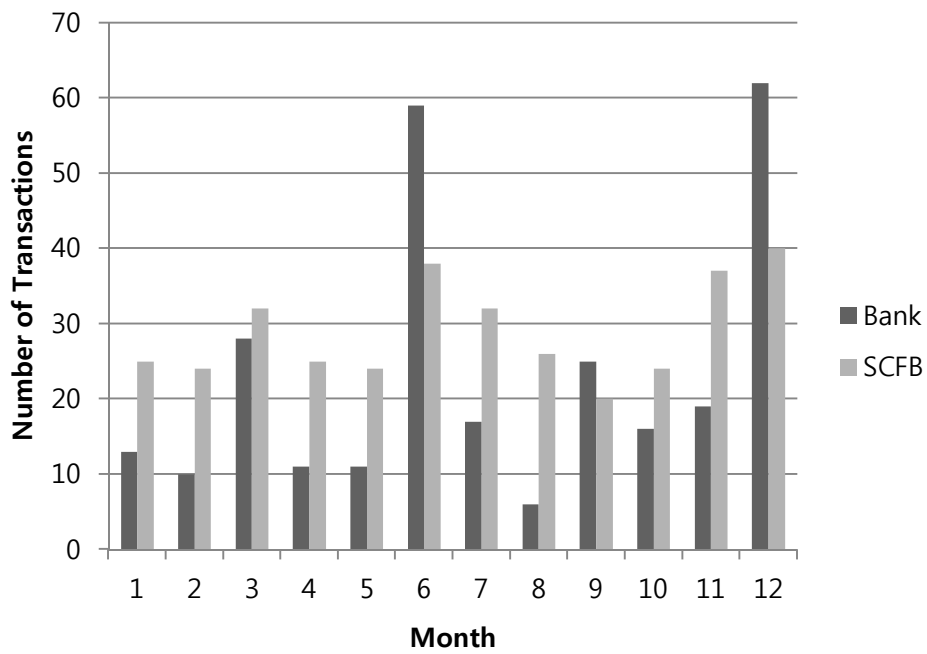
- ABS* = total amount of ABS issuance divided by average total assets;
- ABS_NPL* = ABS issuance based on NPLs divided by average total assets;
- ABS_NNPL* = ABS issuance based on non-NPLs divided by average total assets;
- CAPITAL* = regulatory capital ratio such as BIS ratio for banks and adjusted capital ratio for SCFBs;
- CFOI* = cash flows from operating and investing divided by average total assets;
- SIZE* = natural log of total assets;
- ROE* = net income divided by average total equity;
- NPL* = NPLs divided by total loans.

6.3. Chi-square Test on Securitization Timing

Figure 4 shows the distribution of the number of securitization transactions by month respectively for banks and SCFBs. And Table 5 compares the relative proportion of the monthly transactions between banks and SCFBs. Consistent with my prediction across all the quarters, banks engage in proportionally more securitization transactions in the third month of each quarter. For example, in quarter 1, 10.11 percent of all transactions for the year occurred in the third month for banks, compared to 4.69 percent and 3.61 percent in the first and second month respectively. In quarter 2, 3 and 4, similar pattern is shown without exception. And the chi-square test rejects the null hypothesis that the underlying distribution of transactions across 12 months follows a uniform distribution with a chi-square value of 164.31. SCFBs also show the tendency of increasing securitizations in the third month of quarter but the chi-square test does not reject the null hypothesis. The results support H3 that banks with capital management motivation purposefully decide the securitization time and increase securitization on the third month of each quarter, whereas SCFBs with financial motivation engage in securitization around a year.

Figure 4

**Distribution of Securitization Transactions
of Banks and SCFBs by Month**



The figure shows the distribution of securitization transactions of banks and SCFBs by month from 1999 to 2010.

Table 5 Distribution of Securitization Transactions by Month

Month of Quarter	Banks		SCFB	
	n	% of Quarter	n	% of Quarter
Quarter 1				
1	13	4.69%	25	7.20%
2	10	3.61%	24	6.92%
3	28	10.11%	32	9.22%
Total	51	18.41%	81	23.34%
Quarter 2				
1	11	3.97%	25	7.20%
2	11	3.97%	24	6.92%
3	59	21.30%	38	10.95%
Total	81	29.24%	87	25.07%
Quarter 3				
1	17	6.14%	32	9.22%
2	6	2.17%	26	7.49%
3	25	9.03%	20	5.76%
Total	48	17.34%	78	22.47%
Quarter 4				
1	16	5.78%	24	6.92%
2	19	6.86%	37	10.66%
3	62	22.37%	40	11.54%
Total	97	35.01%	101	29.12%
Total	277	100.00%	347	100.00%
Chi-square		164.31		16.63
(p-value)		<.0001		11.93%

This table reports the numbers and the ratios of securitization transactions of banks and SCFBs by month. n is the sum of all the securitization transactions occurred on each month from 1999 to 2010.

VII. CONCLUSION

In this paper, I investigate the motivations for securitization of two industries: banks and SCFBs. I focus on the difference of the motivations based on the different characteristics and related regulations. And I further examine how the motivations are associated with securitized asset types (NPLs versus non-NPLs) and securitization timing. Using 142 bank-year and 147 SCFB-year observations, I provide empirical evidence that banks have capital management motivation and SCFBs have fund raising motivation for securitization. And the different motivations are related to the different types of assets for securitization: banks increase NPL securitization as regulatory capital ratio decreases while SCFBs increase non-NPL securitization as cash flows from operating and investing activities decrease. Also, the motivations are related to the securitization timing: banks increase securitization transactions on the third month of each quarter while SCFBs do not show such seasonality.

There are few studies regarding securitization of Korea. Moreover the studies are limited to banking industry even though securitization is widely used by SCFBs. This study contributes to the literature by extending the range of study to the securitization of SCFBs and comparing two different industries simultaneously with respect to the motivations. Especially, the original function of securitization, fund raising, can be estimated empirically in the SCFB sample, whereas the side benefit of securitization, capital management, can be estimated in the bank sample. Also, the finding that securitization transactions with capital management motivation increase near the

financial reporting date can give implications to regulators and users of financial information. In addition, this study contributes to the domestic literature by using comparatively large sample and increasing the effectiveness of the study.

However, generalization is limited due to the use of small sample and only of financial companies. The low R^2 value of the regression model in SCFB sample requires more variables to explain SCFB securitization. Securitization is still less explored subject. Especially, in the circumstance that accounting standards and regulations related to off-balance sheet activities have been revised to be stricter than before, investigating how securitization market changes dynamically in terms of originators' motivations, structures and investor responses will be interesting.

Appendix 1

Introduction of Credit Enhancements in Securitization¹⁶

1. Internal Credit Enhancements

Senior-Subordinate Structure

To issue notes with different ratings, subordinated notes are necessary. The ratio of senior and subordinated note amount is decided by credit rating agencies which consider the hierarchy of notes the originator requires and the collectability of assets. For example, if an SPE issues ABS of KRW 10 billion, senior notes of AAA rating can be issued as much as KRW 7 billion, and senior notes of AA rating can be issued as much as KRW 1 billion, and subordinated notes of BBB rating can be issued up to KRW 2 billion based on the securitized asset quality. When some of the securitized assets have trouble in collection, the losses are absorbed by the BBB notes at first, and then AA notes will record losses. The different risk exposure causes the difference in interest rate of each note. For example the AAA notes will be issued at 5 percent interest rate while AA notes require 7 percent interest rate and BBB notes require 10 percent interest rate. This is the most common type of credit enhancement.

Implicit Recourse

An originator provides credit enhancement by guaranteeing the quality of transferred assets. When a portion of loans or receivables are overdue, then the

¹⁶ I refer to 'Introduction to Structured Finance' written by Fabozzi, Davis and Choudhry.

originator has implicit obligation to buyback the assets. Through this implicit recourse SPEs can maintain the quality of asset pool similar to that at the beginning of securitization. Implicit recourse is usually used in revolving structure.

Overcollateralization

If the total principal of transferred assets is larger than the principal of ABS, the excessive assets can absorb the losses from the rest of the assets, and as a result ABS investors can be protected from the losses to a certain point. For example if loans of KRW 12 billion are transferred to an SPE and the SPE issues only KRW 10 billion of ABS, then losses from the assets up to 20% do not affect the redemption of ABS. If the overcollateralized assets are not used for absorbing the losses, then the proceeds from those assets will be paid to the equity holder of the SPE, who are generally the originator.

Reserve Fund

SPE can reserve some fund in its own account in two ways. First, cash reserve funds are made by reserving some portion of the proceeds from the ABS issuance, and second, excess spread accounts are made by reserving excessive money from the transferred assets subtracting interests of ABS and various fees required to operate SPE every month. The excess spread accounts are based on the assumption that the reserve should be increased because the assets will deteriorate as time goes by. For example if the average interest rate of assets is 7 percent, and the various fees are 0.5 percent in

total, and the average interest rate of ABS is 6.3 percent, then 0.2 percent of cash could be reserved to a separate account and used to absorb the losses from the default of assets by priority.

2. External Credit Enhancements

A third party provides guarantee for the payment of ABS. For example, banks provide letter of credit, or security companies become a liquidity provider, or there are monoline insurance companies. However, these kinds of external credit enhancement are limited. For banks the risk weights on guarantee in calculating capital adequacy ratio is increasing, and the liquidity of securities companies are strictly limited by regulator. Some of the big monoline insurance companies, which developed in U.S. and do not exist in Korea, experienced bankruptcy after 2008 financial crisis because they guaranteed the payment of ABS which are defaulted due to the distress of sub-prime loans.

Appendix 2

Summary of Accounting Standards Related to Securitization

1. US GAAP

SFAS No. 140 ‘Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities’¹⁷ takes financial-components approach that focuses on control. Under the approach, after a transfer of financial assets, an entity recognizes the financial and servicing assets it controls and the liabilities it has incurred, and derecognizes financial assets when control has been surrendered, and derecognizes liabilities when extinguished. The transferor has surrendered control over transferred assets if and only if all of the following conditions are met:

1. The assets are legally isolated from the issuer,
2. The transferee is able to pledge for exchange the assets, and
3. The issuer does not retain effective control over the assets through the right and obligation to repurchase the assets or the unilateral ability to obtain specific assets (other than through a cleanup call at the end of the life of the securitization).

And SFAS No. 156 ‘Accounting for Servicing of Financial Assets’ was issued in March 2006 to amend SFAS No. 140 with respect to the accounting for separately

¹⁷ SFAS(Statement of Financial Accounting Standards) No. 140 replaced SFAS No. 125 and this Statement was effective for transfers and servicing of financial assets and extinguishments of liabilities occurring after March 31, 2001.

recognized servicing assets and servicing liabilities. The recognition of the transaction is as follows:

1. Derecognizes the securitized financial assets;
2. Records cash in the amount received and recognizes any noncash proceeds that are not beneficial interests in the securitized assets at fair value;
3. Recognizes retained ABS at the book value of the securitized assets times the fair value of the retained securities divided by the fair of the securitized assets;
4. Recognizes retained contractual interests other than ABS, including servicing assets and recourse liabilities, at fair value; and
5. Records a gain or loss on sale to make the journal entry balance.

2. International Financial Reporting Standards

IFRS 9 'Financial Instruments'¹⁸ takes the risks and rewards transfer approach. Once an entity has determined that the asset has been transferred, it then determines whether or not it has transferred substantially all of the risks and rewards of ownership of the asset. If substantially risks and rewards have been retained, derecognition of the asset is precluded. If the entity has neither retained nor transferred substantially all of the risks and rewards of the asset, then the entity must assess whether it has relinquished control of the asset or not. If the entity does not control the asset then

¹⁸ The IASB(International Accounting Standards Board) replaces portions of IAS 39 with chapters in IFRS 9. In October 2010 the IASB decided to carry forward the requirements related to the derecognition of financial assets and liabilities unchanged form IAS 39.

derecognition is appropriate; however if the entity has retained control of the asset, then the entity continues to recognize the asset to the extent to which it has a continuing involvement in the asset.

3. Korean GAAP

Interpretation 52-14 'Accounting for Transfer and Factoring of Receivables' was issued in 1999 referred to SFAS No. 140. The transferor has surrendered control over the transferred assets if and only if all of the following conditions are met:

1. Transferor surrenders the right over the transferred financial assets. In other words, even though the transferor goes bankrupt or files for receivership, the transferor or the creditors of the transferor can't exert any right over the transferred financial assets.
2. The transferee has the unconditional right to sell or provide the financial assets as collateral.
3. The transferor can't exert effective control over the transferred financial assets.

Appendix 3

Summary of Korean Securitization Market by Periods

In Korea, securitization started substantially in 1999, the next year when the ABS Act was enacted. I summarize the features of securitization market by periods from 1999 to 2010 according to the originator or the asset types. Table 6 presents the securitization amount by originators and Table 7 presents the securitization amount by asset types.

Dealing with Insolvent Assets Incurred by Asian Financial Crisis (1999~2000)

In the late 1997 the Asian Financial Crisis caused companies and individuals to be financially distressed and, as a result, huge amount of bonds and receivables became insolvent. During 1999 to 2001, banks, security companies and trust companies sold those bad assets to SPEs on a large scale to set aside cash as much as possible and to protect domino-type bankruptcy. In 1999, total ABS issuance was KRW 6.8 trillion. And among ABS of KRW 49.4 trillion issued in 2000, KRW 26.7 trillion was issued by securities and trust companies using insolvent bonds, and ABS of KRW 5.8 trillion was issued by Korea Asset Management Company and Korea Deposit Insurance Corporation using insolvent loans, which made up 65.8% of total issuance in 2000.

Development and Side Effect of Card Receivable Securitization (2001~2003)

During this period, credit card assets have increased explosively and in the asset securitization market the deals using revolving structure increased. Accordingly, card

companies increased rapidly the size of securitization using card receivables, cash service receivables and card loans. Card receivable securitization made up 42.2% (KRW 21.5 trillion) of the total amount (KRW 50.9 trillion) in 2001, 70.6% (KRW 28.1 trillion) of the total amount (KRW 39.8 trillion) in 2002 and 48.1% (KRW 19.2 trillion) of the total amount (KRW 39.9 trillion) in 2003.

As the side effect of the radical increase of credit card use, the quality of card receivables had deteriorated rapidly since 2003. And eventually some SPEs suspended ABS payment temporarily. After this confusion the volume of card receivable securitization decreased.

Increase of Loan Securitization for Project Financing (2004~2007)

Since 2004, there was a boom of city development almost all the region of Korea. The developers needed huge money for buying lands and planning them. And financial companies used ABS to supply funds to that business, which is so called 'Project Financing'. As soon as banks provide funds to developers as loans, the banks sell the loans to SPEs and SPEs issue ABS based on the loans and the guarantee of construction companies involved in that project. In 2004 project financing loan ABS consist only 5.9% (KRW 1.6 trillion) of the total amount (KRW 27.0 trillion), however, in 2005 the portion increased up to 17.1% (KRW 4.9 trillion among KRW 28.6 trillion) and in 2006 25.4% (KRW 5.9 trillion among KRW 23.2 trillion). But in 2007, the project financing securitization decreased making up only 6.1% (KRW 1.2 trillion among KRW 19.8 trillion) as the real estate market started to shrink and therefore the

expected margin on the development project became low since late 2006.

Increase in Mortgage Backed Securities of Korea Housing Finance Corporation (“KHFC”) (2008~2012)

KHFC was established in 2004 to provide stable long-term funds to people who want to buy houses. It sells loans mortgaged by houses through banks and the loans are trusted for securitization. The mortgage backed securities have long maturity and high credit because the payment of the securities is guaranteed by the Korean government. Since 2008, the amount of KHFC loans has increased and the ratio of KHFC mortgage backed securities to the total amount increases up to 30.6% (KRW 11.0 trillion among KRW 36.0 trillion) in 2009, 30.0% (KRW 8.4 trillion among KRW 28.0 trillion) in 2010, 31.1% (KRW 10.1 trillion among KRW 32.4 trillion) in 2011, and 42.7% (KRW 20.3 trillion among KRW 47.5 trillion) in 2012.

Table 6 Securitization Amount by Originators

Originator	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Banks	0.7 (10.3)	6.1 (12.3)	12 (23.6)	1.8 (4.5)	6.3 (15.8)	6.4 (23.7)	4.8 (16.8)	4.3 (18.5)	5 (25.3)	4.3 (20.9)	8.9 (24.7)	6.6 (23.6)
SCFBs	1.7 (25.0)	6.1 (12.3)	21.5 (42.2)	28.1 (70.6)	19.2 (48.1)	8.5 (31.5)	8.1 (28.3)	5.4 (23.3)	5.3 (26.8)	8 (38.8)	4.5 (12.5)	4.1 (14.6)
Other Financial companies	0.8 (11.8)	29.6 (59.9)	10.4 (20.4)	3.4 (8.5)	7.7 (19.3)	3.3 (12.2)	2.3 (8.0)	0.6 (2.6)	1.1 (5.6)	2.4 (11.7)	5.3 (14.7)	2.4 (8.6)
Non-financial companies	0.2 (2.9)	0.9 (1.8)	4.1 (8.1)	6.3 (15.8)	5.7 (14.3)	5 (18.5)	7.6 (26.6)	8.8 (37.9)	3.4 (17.2)	1.2 (5.8)	5.9 (16.4)	4.3 (15.4)
Public Organizations	3.4 (50.0)	6.7 (13.6)	2.9 (5.7)	0.2 (0.5)	1 (2.5)	3.8 (14.1)	5.8 (20.3)	4.1 (17.7)	5 (25.3)	4.7 (22.8)	11.4 (31.7)	10.6 (37.9)
Total Issuance	6.8 (100)	49.4 (100)	50.9 (100)	39.8 (100)	39.9 (100)	27.0 (100)	28.6 (100)	23.2 (100)	19.8 (100)	20.6 (100)	36.0 (100)	28.0 (100)

The source of data is the press release of FSS available on the website of FSS (www.fss.or.kr). The amounts refer to the ABS issuance of each originator category expressed in trillion KRW. And the ratios in parentheses refer to the ratio of the ABS issuance of each originator category to the total issuance in each year expressed in percent.

Table 7 Securitization Amount by Asset Types

Asset Types	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Normal Loans	1.4 (20.6)	1.9 (3.8)	4.2 (8.3)	2.7 (6.8)	2 (5.0)	5.8 (21.5)	6.3 (22.0)	5.8 (25.0)	6.5 (32.8)	7.3 (35.4)	11.9 (33.1)	9.1 (32.5)
NPL	1.6 (23.5)	9.8 (19.8)	10.6 (20.8)	2 (5.0)	4.8 (12.0)	3.6 (13.3)	4.4 (15.4)	2.2 (9.5)	2 (10.1)	1.3 (6.3)	4.7 (13.1)	5.3 (18.9)
Auto, Card and Lease Loans	1.2 (17.6)	5.6 (11.3)	1 (2.0)	4.6 (11.6)	9.6 (24.1)	5.3 (19.6)	4.7 (16.4)	4.1 (17.7)	3.6 (18.2)	5.2 (25.2)	3.6 (10.0)	3.5 (12.5)
Card Receivables	-	0.9 (1.8)	20.6 (40.5)	22.2 (55.8)	9.9 (24.8)	3.6 (13.3)	3.4 (11.9)	1.1 (4.7)	1.5 (7.6)	2.7 (13.1)	1.8 (5.0)	0.8 (2.9)
Account Receivables	0.9 (13.2)	1 (2.0)	4.2 (8.3)	5.1 (12.8)	5.1 (12.8)	3.4 (12.6)	2.3 (8.0)	2.5 (10.8)	2.8 (14.1)	0.8 (3.9)	3 (8.3)	5.2 (18.6)
Bonds	-	27.7 (56.1)	8.7 (17.1)	1.9 (4.8)	6 (15.0)	2.9 (10.7)	1.6 (5.6)	0.7 (3.0)	1.6 (8.1)	2.4 (11.7)	8.1 (22.5)	2.9 (10.4)
Real Estate	0.6 (8.8)	1.2 (2.4)	0.9 (1.8)	0.6 (1.5)	0.9 (2.3)	0.8 (3.0)	1 (3.5)	0.9 (3.9)	0.6 (3.0)	0.1 (0.5)	0.1 (0.3)	-
Project Financing	-	-	0.1 (0.2)	0.6 (1.5)	0.7 (1.8)	1.6 (5.9)	4.9 (17.1)	5.9 (25.4)	1.2 (6.1)	0.8 (3.9)	2.8 (7.8)	1.2 (4.3)
Others	1.1 (16.2)	1.3 (2.6)	0.6 (1.2)	0.1 (0.3)	0.9 (2.3)	-	-	-	-	-	-	-
Total Amount	6.8 (100)	49.4 (100)	50.9 (100)	39.8 (100)	39.9 (100)	27.0 (100)	28.6 (100)	23.2 (100)	19.8 (100)	20.6 (100)	36.0 (100)	28.0 (100)

The source of data is the press release of FSS available on the website of FSS (www.fss.or.kr). The amounts refer to the ABS issuance of each asset type expressed in trillion KRW. And the ratios in parentheses refer to the ratio of the ABS issuance of each asset type to the total issuance in each year expressed in percent.

Appendix 4
Summary of Laws and Regulations of Bank and SCFB

	Bank	Specialized Credit Finance Business (SCFB)		Reference
		Credit Card Business	Facilities Leasing & Installment Financing Business	
Establishment	authorization from FSC (Financial Services Commission)	License from FSC	Registering with FSC	Banking Act §8 SCFB Act §3
Capital adequacy ratio	$\frac{\text{Equity capital}}{\text{Risk-weighted assets}} \times 100$ $= \frac{(\text{Core capital} + \text{Supplementary capital} - \text{Deductions})}{\text{Risk-weighted assets}} \times 100$ <p>※ Risk-weights(corporate exposure): AAA ~AA- : 20%, A+ ~ A-: 50%, BBB+ ~ BB- : 100%, Under BB- : 150%, No rating : 100%</p>	$\frac{\text{Adjusted equity capital}}{\text{Adjusted total assets}} \times 100$ $= \frac{(\text{Core capital} + \text{Supplementary capital} - \text{Deductions})}{(\text{total asset} - (\text{cash} + \text{short term deposit without collateral agreement} + \text{government or public bond having term of less than 3 months}) - \text{deductible items})} \times 100$		Banking Detailed Regulation Appendix 3 SCFB Detailed Regulation Appendix 4
Prompt Corrective Action	Capital adequacy ratio under 8% ※based on consolidated financial statements	Adjusted Capital ratio under 8% ※ based on separate financial statements	Adjusted Capital ratio under 7% ※ based on separate financial statements	Banking Regulation 34~36 SCFB Regulation §17~19

	Bank	Specialized Credit Finance Business (SCFB)		Reference
		Credit Card Business	Facilities Leasing & Installment Financing Business	
Fund Raising	The term "banking business" means business of lending funds raised by bearing debts from many unspecified persons through the receipt of deposits, or through the issuance of securities and other bonds;	Only by the following methods: 1. Borrowing from financial institutions 2. Issuance of bonds or bills; 3. Sale of securities held; 4. Transfer of loaned credit held; 5. Others		Banking Act §2 SCFB Act §47
Limitation on total assets to capital	-	Prohibited expanding total assets in excess of ten times the equity capital <Amended Feb. 6, 2009; Mar. 21, 2012>		SCFB Act §48

	Bank	Specialized Credit Finance Business (SCFB)		Reference
		Credit Card Business	Facilities Leasing & Installment Financing Business	
Asset Classification	①Normal ②Precautionary (1~3month overdue) ③Substandard (more than 3 months overdue, expected recovery amount) ④Doubtful (3~12 months overdue, excess amount of expected recovery) ⑤Presumed loss (more than 12 months overdue, excess amount of expected recovery)	①Normal ②Precautionary(1~6 months overdue) ③Substandard(more than 3~6 months overdue, expected recovery amount) ④Doubtful(more than 3~6 months overdue, excess amount of expected recovery) ⑤Presumed loss(more than 6 months overdue, excess amount of expected recovery)		Banking Regulation §27 SCFB Regulation §9
Accumulating Allowance for Credit Loss	①Normal : 0.85%~2.5% ②Precautionary : 7%~50% ③Substandard : 20%~65% ④Doubtful : 50%~75% ⑤Presumed loss : 100%	①Normal : 0.5%~3% ②Precautionary : 1%~40% ③Substandard : 20% ~65% ④Doubtful : 75% ⑤Presumed loss : 100%		Banking Regulation §29 SCFB Regulation §11

Appendix 5

Examples of Securitization Effect on Regulatory Capital Ratio

Suppose that Bank K has \$100 par value of loans (100% of risk weight) and \$5 of equity after accumulating \$15 as expected losses from the loans. Before securitization, the BIS capital ratio is 5.88 percent. And if Bank K sells the loans to an SPE at \$85 the same as the book value (no profit or loss) and the SPE issues \$60 of senior notes which is acquired by external investors and Bank K gets the amount as cash (0% of risk weight). And the SPE issues \$25 of subordinated notes which Bank K acquires and records as investment securities. Then the capital ratio increases up to 20 percent from 5.88 percent because the amount of risk-weighted assets decreases by \$60. Figure 5 presents the capital ratio calculation.

Figure 5 Example of Securitization Effect on BIS Capital Ratio

	Before Securitization	After Securitization (Basel I)
Capital(A)	5	5
Risk-Weighted Assets(B)	$(100-15) \times 100\% = 85$	$60 \times 0\% + 25 \times 100\% = 25$
BIS Ratio(A/B)	5.88%	20%

Furthermore, suppose that Bank K has two kinds of assets, \$50 of Asset A and \$50 of Asset B with different risk weights, 50% and 100% respectively. Bank K expects losses from Asset B and reserves \$15 of loan loss provision. Before securitization, the

BIS capital ratio is 8.33 percent. And if Bank K sells Asset A to an SPE at \$50 the same as the book value (no profit or loss) and the SPE issues \$45 of senior notes which is acquired by external investors and Bank K gets the amount as cash. And the SPE issues \$5 of subordinated notes which Bank K acquires and records as investment securities. Then the capital ratio increases up to 12.50 percent. Meanwhile, if Bank K sells Asset B to the SPE at \$35 the same as the book value (no profit or loss) and the SPE issues \$25 of senior notes and \$10 of subordinated notes. Then the capital ratio increases up to 14.29 percent. So transferring bad assets is more effective in increasing BIS ratio than transferring good assets. Figure 6 presents the capital ratio calculation.

Figure 6 Example of Bad Asset Securitization Effect on BIS Capital Ratio

	Before Securitization	After Securitization	
		Asset A transferred	Asset B transferred
Capital(A)	5	5	5
Risk-Weighted Assets(B)	A: $50 \times 50\% = 25$ B: $(50 - 15) \times 100\% = 35$ A+B : 60	A: $45 \times 0\% + 5 \times 100\% = 5$ B: $(50 - 15) \times 100\% = 35$ A+B: 40	A: $50 \times 50\% = 25$ B: $25 \times 0\% + 10 \times 100\% = 10$ A+B: 35
BIS Ratio(A/B)	8.33%	12.50%	14.29%

Appendix 6

List of Banks and SCFBs Included in Sample

1. Banks 16(12)

Name	History
Kookmin Bank (Housing&Commercial Bank)	2001.11.1 newly established by merging of Kookmin(old) Bank and Housing & Commercial Bank, 2003.9.30 merged Kookmin Credit Card
Shinhan Bank (Cho Hung Bank)	2006.4.1 merged Cho Hung Bank
Hana Bank (Seoul Bank)	2002.12.1 merged Seoul Bank
Woori Bank (Peace Bank of Korea)	2001.12.31 merged Peace Bank of Korea
Industrial Bank of Korea	Owned by Korean government (68.6% as of 2011.12.31)
Korea Exchange Bank	2003.10.31 owned by Loan Star, 2012.2.9 owned by Hana Financial Group, 2004.2.28 merged Korea Exchange Credit Card
Standard Chartered Bank Korea	2005.9.12 renamed from Korea First Bank, 2000 owned by KFB Newbridge Holding(Private) Limited, 2005.4.15. owned by Standard Chartered NEA Limited(100%), 2009.6.30 owned by Standard Chartered Korea
Citibank Korea	(old) Hanmi Bank, 2004 owned by Citi bank Overseas Investment Corporation
Kyongnam Bank	2001.3.27 owned by Woori Finance Holdings
Kwangju Bank	2001.3.27 owned by Woori Finance Holdings
Daegu Bank	2011.5.17 owned by DGB Financial Group
Busan Bank	2011.03.15 owned by BS Financial Group

2. Card Companies 8(4)

Name	History
Shinhan Card (old, LG Card)	1985.12 established, 2007.3.23 owned by Shinhan Financial Group
Shinhan Card	2002.6 established, 2007.10.1. liquidated
Samsung Card	2004.2.1 merged Samsung Capital
Hyundai Card	2001.10 renamed from Diners Club Korea
Lotte Card	2002.12 merged the card business of Dong Yang Card
Kookmin Credit Card	2003.9.30 merged by Kookmin Bank
Korea Exchange Credit Card	2004.2.28 merged by Korea Exchange Bank
Woori Credit Card	2004. 3. 31 merged by Woori Bank and Kwangju Bank

3. Facilities Leasing & Installment Financing Companies 9(7)

Name	History
Hyundai Capital	2004 equity investment by GE Capital Corporation
Aju Capital	2009.8 renamed from Daewoo Capital
Lotte Capital	2008.7.1 acquired the business of Lotte Lease Japan
Han Kook Capital	1990 established
Starlease	1984.10.18 established, 2009.2.1 merged by Hyosung Capital
Hyosung Capital	1997.5.27 established, 2009.2.1 merged Starlease
JB Woori Capital	2011.9.8 owned by Jeonbuk Bank
CNH	(old) CNH Capital, 2009.9.2 converted to holding company and renamed, spin-off car rental business and established CNH Lease
Samsung Capital	2004.2.1 merged by Samsung Card

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국문초록

본 연구는 1999년부터 2010년까지 우리나라의 은행과 여신전문금융회사(신용카드사, 할부금융사 등)를 대상으로 자산 유동화의 동기가 업종에 따라 상이함을 실증적으로 검증하였다. 즉, 은행은 자기자본비율이 낮을수록 자산유동화 금액이 증가하고, 여신전문금융회사는 영업 및 투자활동으로부터의 현금흐름이 감소할수록 자산유동화 금액이 증가함을 보임으로써 은행은 주로 자기자본비율 관리 목적으로, 여신전문금융회사는 자금조달 목적으로 자산 유동화를 활용한다는 가설을 증명하였다. 또한 이러한 상이한 목적이 유동화 대상 자산과 유동화 시기에 영향을 미치는 것으로 분석되었다. 즉, 은행은 주로 자기자본비율을 증가시키는 데에 효과적인 부실채권 유동화를 통해, 여신전문금융회사는 자금조달에 유리한 정상채권 유동화를 통해 각각의 목적을 달성하였으며, 은행은 재무정보가 공시되는 매 분기말 가까이에 자산유동화를 증가시키는 반면, 여신전문금융회사는 상대적으로 연중 고르게 자산유동화를 실시하는 것으로 분석되었다.

본 연구는 은행에만 국한되어 있는 자산유동화 분야 연구에 여신전문금융회사를 포함함으로써 연구 범위를 넓히고, 자산유동화가 재무비율에 의도적으로 영향을 미치고자 하는 유인 뿐만 아니라, 자금조달을 위한 도구로 활용되고 있음을 실증적으로 검증함으로써 자산유동화에 관한 부정적인 시각에서 탈피하여 이를 보다 객관적으로

바라볼 수 있는 근거를 제시하였다는 데에 의의를 가진다. 한편, 자산유동화의 시기와 관련하여 자기자본비율 관리 목적인 경우 유동화 거래가 분기말에 증가한다는 분석 결과는 감독기관이나 재무제표 이용자에게 시사하는 점이 있을 것으로 기대된다.

주요어: 자산유동화, 은행, 여신전문금융회사, 자기자본비율, 영업 및 투자활동 현금흐름, 부실채권, 유동화 시기

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