

# THE GAME BETWEEN SECURITIZATION AND CAPITAL REGULATION<sup>1</sup>

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**Abstract:** In the implement of Basel Accord, problems like regulatory capital arbitrage came up for the shortcomings of the accord. Securitization and other financial innovations have provided opportunities to reduce the regulatory capital requirements with little or no reduction in the overall economic risks. The possibility of regulatory capital arbitrage was caused by the inaccurate classification of the risks of different assets under Basel Accord. One of the routine methods is asset securitization, which will create value for banks while damaging the effect of the capital adequacy ratio as a prudential policy instrument. To deal with RCA (regulatory capital arbitrage), the most important is to match the regulatory capital to different assets and cut the motivation from the source so as to unify regulatory capital and economic capital.

**Key words:** Capital Adequacy Ratio, Asset Securitization, Arbitrage Regulation

## 1. INTRODUCTION AND OVERVIEW

In 1988, Basel Accord was adopted and implemented all over the world. It unified the formation of capital and determined each risk weight for different assets in and out of the balance sheet, regulated the goal ratio between capital and risk assets, which provided a level for measuring the risk exposure of the international banking financial institutions. But some problems happened in the implement of this accord, RCA is a typical innovation giving great impetus to the effect implement. Now China is also bounded with the 1988 accord, the regulatory agency will counter with the challenge from the problem of regulatory capital arbitrage.

The direct reason for securitization is Basel Accord. Under the frame of this accord, banks have but two options to achieve boosting their capital ratio (a) increasing the capital appearing in the numerators of the ratio, or (b) decreasing the total risk-weighted assets appearing in the denominators. Apart from these traditional adjustments, banks may attempt to boost reported capital ratios by “cosmetic” methods such as RCA through reorganizing assets and diversifying risks, which do little to enhance underlying safety and soundness.

To the mean and value of securitization, scholars give different understandings from each angle. John Henderson (1988), from the financing process and product effect, thought that securitization was a process in which assets in credit institutions would be moved out of the balance sheet, then investors bought those negotiable instruments insuring the liabilities with no or limited recourse to the initial creditor. Gardener (1995) thought through securitization, credit of the open market could substitute the

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closed credit of banks or other financial institutions. Jason H.P. Kravitt (1996) gave his view that assets financing could become more efficient by utilizing advanced knowledge to foresee financial reports and to perfect the organization. With development of theories, they have become more close to practice. John deason(1998) came up with a more accurate definition: securitization was a process in which the receivable accounts cash flows of the sponsor would be changed into steady repayment cash flows, so the sponsor could mobilize funds through issuing bonds . And these bonds had limited recourse to the credit of receivable accounts but the sponsor.

Practically, when banks are required to maintain the capital adequacy ratio beyond their willing, they will deal with the regulatory capital level as "regular tax" (Donahoo and Shaffer, 1991). Banks tend to avoid it or make it minimum by regulatory capital arbitraging. A lot of research shows that the behavior of banks would be affected by "regular tax" including minimum capital requirement 、 required reserves and other deposit insurance premiums (Cumming ,1987; Baer and Pavel,1988; Berger and Udell,1993 and Jagtiani et al,1995 ; Koppenhaver,1989). Whether or not to carry out RCA and the scale would be realized by cost-benefit analysis to achieve the expected reduction of organizational cost (Cumming, 1987; Pennacchi, 1988; James, 1988; Chhikara and Hanson, 1993).

Early in the 1970s, securitization initialized in the USA to promote the liquidity of the second market of MBSs (mortgage backed securities) under the strict financial regulations. And in the 1980s it was introduced into European countries and then Asia in 1990s. America is the most developing countries in securitization and has the biggest securitization market in the world. Advanced computer processing system and developed financial market provide huge room to the liquidity of ABSs (Assets backed securities). Perfect and elastic laws create broad flat form for the complex securitization. The UK is the biggest securitization market in Europe. It has loose system to promote development of securitization. Different from America and the UK, Italia developed international securitization because of the barriers from internal finance and laws. In Asia, securitization just has the first step. To some extent we have gone into this field, and some laws and regulations have been promulgated. At present, in the United States and Britain ,the asset securitization experience 、 maturity of the technology and continuous innovation are the best examples we should learn from.

In the domestic market, computer technology and other areas, Japan 、 Italy and France are not as good as the USA, So the administrators in these countries hold a cautious and more stringent attitude towards securitization. But these countries are also under the specific circumstances of promoting domestic securitization process and becoming spectacular emerging markets.

There are some defects in Basel Accord in risk measurement approaches, different divisions of different risk assets are not defined accurately, which result in the possibility of bank regulatory capital arbitrage. For example, when the banks sell their assets to enhance the provision of credit, like credit guarantee as recourse, In fact by loss Drawing, is 100% risk weight; If these are not secured assets owned by banks, they are called "direct credit substitute" based on the bank's credit as an alternative to business credit, which are applied to the 8% capital requirement. For the big difference in risks measuring ,banks can lower capital requirements by simply changing the asset structure and risk disposal arrangements, and then reach the regulatory capital requirements without increasing the bank's capital burden or risk adjusted total assets.

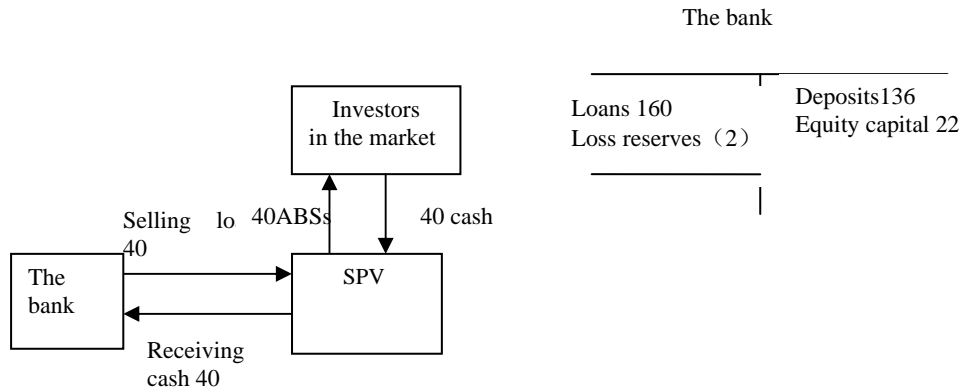
## **2. THE SPECIFIC OPERATION OF REGULATORY CAPITAL ARBITRAGE ASSET SECURITIZATION**

Asset Securitization is a normal means in RCA, which is utilized the tremendous differences between real economic portfolio risks an corresponding risks measured according to Basel Accord, to reduce the bank's total risk assets and capital requirements bypassing the capital regulation. On the surface, it reaches the level of capital adequacy ratio, in fact much lower than under the Basel Accord capital requirement. Below we have examples to show the specific operation of regulatory capital arbitrage asset securitization.

(a) The capital adequacy without asset securitization.

Supposing a bank has 200 Yuan loans, 176 Yuan from deposits and 22 Yuan from equity capital and 2 Yuan from loss reserves. Ignoring taxes, the core capital and total capital adequacy ratios of the bank are 11% and 12%.

(b) The capital adequacy with Non-risk retained assets securitization

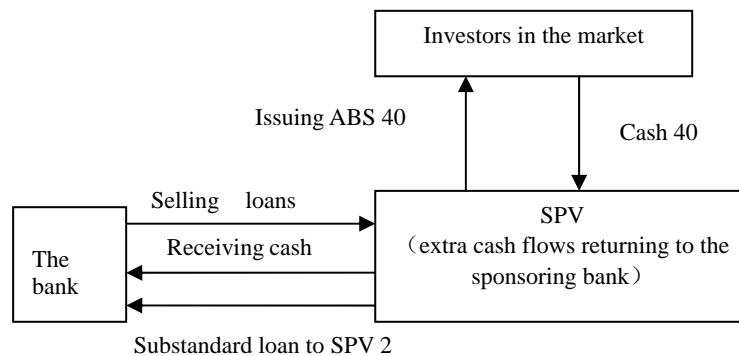


**Fig.1 The capital adequacy with Non-risk retained assets securitization**

Here the bank securitized 40 Yuan loans on the balance sheet and sold to the SPV and achieved a real sale. The SPV issued 40 Yuan ABSs and then sold to investors. Non-risk was retained in this approach because the banks had a real sale of it's assets without providing credit enhancement or recourse. So the assets (loans) could be moved out of the balance sheet, and the provision of this bank had been improved.

(c) The capital adequacy under securitization with recourse.

From Fig.2 we can see the assets were sold to the SPV, which enjoyed some recourse. The existence of recourse would not undermine the real sale, but its extent would decide the nature of the transaction. Dislike traditional modes of financing, asset securitization will achieve the specific assets pool primarily through the transferring of assets, and become an independent property different from credit of the sponsor. Actually, the transferring of assets can be identified as a "true sale" or "secured financing": as a "true sales", the assets are sold completely from the hands of the sponsor and terminated on the balance sheet, and the cash flow is generated as investment income to investors; but in case of "secured financing" ,the sponsor just borrows funds from investors with the assets as guarantee, so the assets would remain on the balance sheet, and investors could ask the sponsor for reimbursement if expected



**Fig.2 The capital adequacy under securitization with recourse**

earnings could not be achieved.

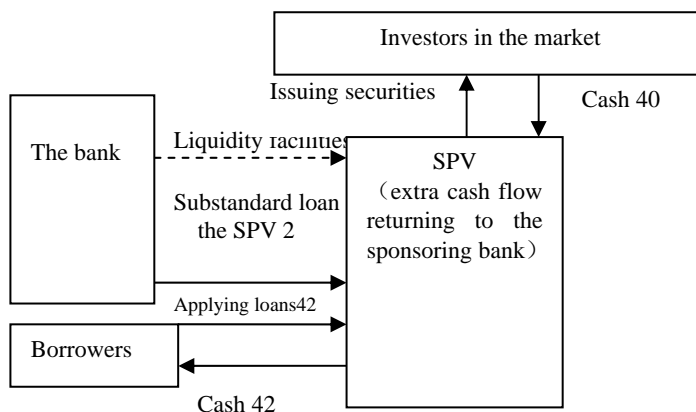
If the recourse is not higher than the historical record of the asset-backed defaults ratio, it is appropriate; but in case of transferring the assets with full recourse the sponsor will still bear the risks of possible assets loss and this transaction will be classified as secured loans, so neither the true sale nor risk isolation is achieved.

Here 42 Yuan loan was securitized as guarantee to the 40 Yuan ABSs issued by the SPV. The SPV will carry out structural adjustment to make the principal and interest from loan securitization over the cost of management and income paid to the investors in accordance with the contract agreement. So long as the assets could generate cash flow sufficient to cover the cost of the above, the excess cash flow will return to the sponsoring bank.

But if they want to upgrade the ABSs credit, requests for such credit enhancement by rating agencies are also growing. In Fig.2, 2 Yuan substandard loan was taken to the SPV. In fact, that was to concentrate credit risk of loan securitization to another financial instrument (that is, substandard loan). Compared with the initial potential loss, it became smaller, meanwhile the bank's capital adequacy ratio had been increased, and the core capital and total capital adequacy ratio reached 12.8% and 13.9%.

It should be noted that if the recourse is provided improperly, commercial banks will probably take great risks in event of defaults. Generally speaking, if the transferring of recourse is not higher than the historical record of the asset-backed defaults ratio, it can be adopted; but if the assets are transferred with full recourse, the sponsor will also bear the risks of assets loss, and the transaction will be classified as secured loans, so neither the true sales nor risk isolation purpose is achieved. Under this circumstance, no actual reduction in risk occurs; only the performance of report is improved, which is also prone to happen in securitization.

(d) The capital adequacy ratio when assets are neither owned nor sold by banks (no recourse)



**Fig.3 The capital adequacy ratio when assets are neither owned nor sold by banks (no recourse)**

Here securitized assets were neither owned nor sold by the bank, which just provided credit enhancement (in the form of 2 Yuan substandard loan), not the recourse, so the 8% capital requirement should be applied to this condition. The bank here provided liquidity facilities and determined, with the SPV, the conditions, arrangement, the range of repayment, obligation to repay and the fees charged. When the shortage of funds occurred, the SPV would be able to utilize liquidity facilities to repay interest of securities to investors timely. Meanwhile the core capital and total capital adequacy ratio reached 12.8% and 13.9% due to the risks reduction. In addition, the bank also gained fees with little risk.

### **3. THE IMPACT OF ASSETS SECURITIZATION**

Asset securitization is a double-edged sword both to banks and the financial market. Banks utilize regulatory loopholes to conserve capital through restructuring assets or formally changing risks. Meanwhile asset securitization has also brought some problems not just of the banking, also of the entire financial market's healthy development. Experience of Western developed countries tells us that the RCA could create value to banks, at the same time it may undermine the capital adequacy requirement as a prudent policy tool. So regulatory department should have a priori expectation towards this problem.

(a) Capital adequacy ratio will not be a true reflection of the risks the bank withstands. Under the framework of Basel Accord, difference exists between the real risks after asset securitization and the regulatory capital requirement according to adjusting results. Despite the preliminary and senior IRB methods have been taken into the new accord, such difference is hard to eliminate. One of the biggest risks is the "true sale" isn't achieved and defined as secured financing. Under this circumstance, the movement of assets out of the balance sheet is not realized. The bank doesn't reduce the original risks, in turn, it may get partial or total loss for the poor quality assets. Another problem is, the bank will, in order to maintain a good reputation, promise to repurchase assets sold when defaults occur, which definitely increases the risks to the bank.

(b) Asset securitization will damage the conventional capital requirement as a prudential regulatory policy tool. Along with the sustainable progress of securitization tools, the development of RCA will be more rapid and cost-reduced. Banks can significantly reduce their regulatory capital requirements with no or tiny decreasing of total operating risks. Regulators will be unable to judge whether the commercial banks have reached the capital standard. To some extent, capital regulation is only a formality and risks of bank could not really be constrained.

(c) As the existence of differences among different countries, the development extent of financial markets, supervision levels of the regulators, banking management and preferences of investors, asset securitization could not develop equally to all banks. It will create unfair competition; generally, the large international banks will gain more regulatory concessions.

(d) The conversion from non-flow loans to high-liquidity ABSs is realized by asset securitization. The gap between economic capital and regulatory capital makes banks taste benefits, which in turn encourages banks to securitize high quality assets, so the average quality of assets retained in the assets pool is decreasing and the 8% capital adequacy ratio is not enough. From above we see that the reported capital adequacy ratio often fails to reflect the true risk conditions, but has a misleading effect delaying corrective actions.

### **4. CONCLUSION AND SUGGESTIONS**

As asset securitization may bring the above problems, maybe regulatory authorities choose to limit asset securitization. In fact, this approach is not wise, in the long run financial innovations will be discouraged. From the international scope of experiences, we can reduce the adverse effects from assets securitization through the following measures:

(a) Methods to measure the true risks should be strengthened. According to the new Basel accord, capital adequacy constraints can be properly expanded and the accuracy, sensitivity and standardization of the risk measurement should be stressed so as to meet both of the corresponding capital exemption for some assets and the real capital requirements to the securitization risk exposure, making the bank regulatory capital gradually move closely to the economic capital.

(b) Efficiency of capital regulating should be strengthened to reduce cost. Regulatory authorities

should set up an incentive structural system to play the leading and authoritative function in the financial system. Internal rating system should also be perfected so as to reflect bank risks more sufficiently, and not simply to raise capital adequacy ratio invariably.

(c) The information disclosure in asset securitization should be strengthened. The eligibility of asset securitization is bound to be supervised and inspected. For the hidden nature and relatively stagnant regulation of the out of balance sheet businesses, according to the Basle Committee, participating banks in asset Securitization should fully disclose their participation information. Regulatory bodies will determine whether preferential capital should be given in accordance with relevant information, thus the participation of asset securitization transaction will be entirely under the public supervision, strengthening the banking prudential management and internal controls.

In China, asset securitization is a financial innovation for banks to broaden the financing channels and release risks. From the formation to a sound system, the development of any new things is a continuous process with understanding and practice. In short, the commercial banking sector is ought to improve risk measurement and management, perfect capital allocation and speed up the establishment of internal rating system; for capital regulation, the most important thing is to make regulatory capital requirements reflect the real risk measurement so as to eliminate the RCA motivation from the source, and ultimately achieving reunification of regulatory capital and economic capital. We can learn from the developed European commercial banks experience of asset securitization, refer to the Basel Committee's series of regulatory documents, and construct China's asset-backed securitization regulatory framework through reforming and innovation to guarantee reasonable risk controls of commercial banks and stability and security of the financial system.

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