

Development of Non-performing Assets Securitization of Chinese Commercial Banks

Wang Yan^{*}

Shanghai University, Shanghai 201800, China

yanwang0927@163.com

**corresponding author*

Keywords: Non-Performing Assets, Non-Performing Assets Securitization, Commercial Banks

Abstract: Compared with non-performing assets securitization, the traditional method of disposal of non-performing assets in such aspects as time, size, cash recovery level has many limitations. How to effectively play the advantage of non-performing assets securitization, the possible problems in the process of running and challenge, promote sustainable development of the non-performing assets securitization in our country, is facing at present academia and supervision department of one of the important topics. Based on the perspective of international comparison, this paper analyzes the non-performing assets securitization in our country faces obstacles, combing major foreign countries are summarized the experience of non-performing assets securitization, puts forward the Suggestions on strengthening the development of non-performing assets securitization in China.

1. Research Background

Affected by the COVID-19 pandemic and other factors, the balance of non-performing loans and the non-performing loan ratio of China's banking sector increased in 2020 compared with the same period in 2019. Data show that by the end of June 2020, the balance of non-performing loans of Chinese commercial banks reached 27,36.4 billion yuan, an increase of 501.2 billion yuan year-on-year, the non-performing loan ratio of 1.94%, an increase of 0.13 percentage points year-on-year, and the provision coverage ratio of 182.4%, a decrease of 8.21 percentage points year-on-year[1]. At the same time, the epidemic is still uncertain to some extent, and because the time lag of financial risks increases the possibility of delayed exposure of loan risks, non-performing loans may face greater upward pressure in the future. For example, concern loans and part of normal loans may be transferred to non-performing loans, which will put pressure on the provision coverage ratio and further pressure on the resolution of commercial banks' non-performing assets[2]. At present, commercial banks can only choose market-oriented methods, such as securitization, settlement and transfer of credit assets, when disposing of non-performing

asset risks. Compared with NPL securitization, the traditional disposal methods such as collection, reorganization, write-off and transfer of NPL have many limitations in terms of time, scale and cash recovery level. Then, how to play the advantages of Npas effectively, deal with the problems and challenges that may appear in its operation, and promote the sustainable development of Npas in our country is one of the important topics facing the academic circle and regulatory departments, as shown in Figure 1.

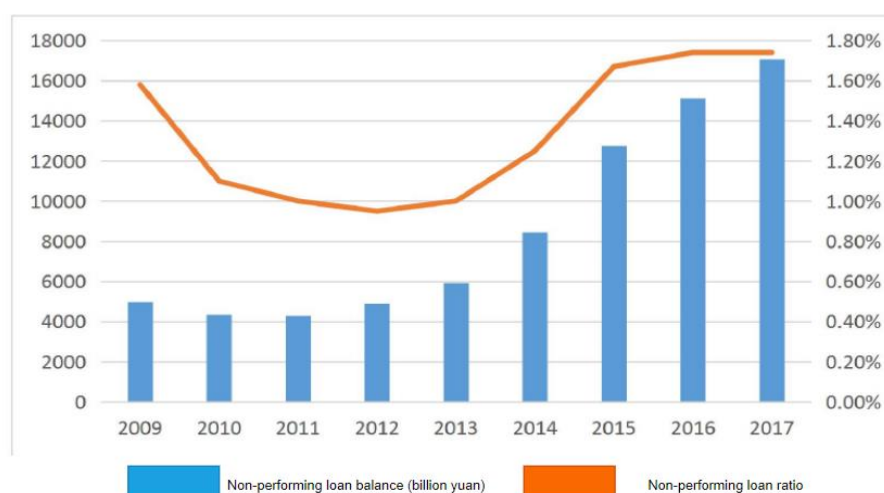


Figure 1. Trend chart of non-performing loans of commercial banks in China from 2009 to 2017 (Source: China Banking Regulatory Commission)

2. The Evolution of Non-performing Assets Securitization in our Country (Figure 1)



Figure 2. Distribution of non-performing loans and non-performing loan ratio of commercial banks in China (unit: 100 million yuan, %) from 2009 to 2017 (Source: China Banking Regulatory Commission)

2.1. NPL Securitization Exploration Stage (2003-2004)

The earliest exploration of non-performing asset securitization in our country can be traced back to 2003. Since there were no relevant regulations at that time, some financial institutions began to learn from the practical experience of developed countries and tried to carry out NPL securitization business. For example, Deutsche Bank and Cinda AMC disposed of the latter's non-performing assets of 2.55 billion yuan by means of asset securitization in 2003[3].

2.2. NPL Securitization Pilot Stage (2005-2008)

The former China Banking Regulatory Commission (CBRC) began a pilot program of securitization of credit assets worth 15 billion yuan in 2005. From 2006 to 2008, China's NPL securitization business entered a stage of rapid development, with a total product scale of 18.77 billion yuan. During this period, in order to ensure the healthy development of the credit asset securitization business, the relevant regulatory authorities have introduced a series of institutional measures, such as the "Provisions on the Accounting Treatment of the Credit Asset Securitization Pilot" and "Notice on Further Strengthening the Management of the Credit Asset Securitization Business".

2.3. NPL Securitization Pilot Stage (2005-2008)

In order to prevent the impact of the global financial crisis on our country, our country suspended its non-performing assets securitization business in January 2009.

2.4. NPL Securitization Restart Stage (2016 till now)

In May 2015, the pilot scale of credit asset securitization was expanded to 500 billion yuan, and "one registration, independent installment issuance" was encouraged, and credit ABS was allowed to be listed and traded on exchanges. In May 2016, the pilot program of NPL securitization was restarted, and successfully expanded in April 2017. In April 2018, the four ministries and commissions issued the "Guidance on Regulating the Asset Management Business of Financial Institutions" ("New Regulations on Asset Management")[4], which exempted the requirements of the securitization products in terms of maturity mismatch, net worth, multi-layer nesting and other aspects, which to a certain extent is beneficial to the investment of asset securitization and makes asset securitization become an effective way of "non-standard to standard transfer". In September of the same year, the Banking and Insurance Regulatory Commission issued the Measures for the Supervision and Administration of Commercial Banks' Financial Services (the "New Regulation on Financial Services"), which included asset-backed securities into the investment scope of financial products, further promoting the development of asset securitization business[5]. In September 2020, the China Banking and Insurance Regulatory Commission issued the Notice on Matters Related to the Information Registration of Credit Asset Securitization of Banking Financial Institutions, which began to implement the information registration system for credit asset securitization. In 2020, dealers associations launched asset-backed commercial paper (ABCP) on the basis of the existing mature ABN institutional framework, which filled the domestic gap and responded to the practical needs of the real economy, as shown in Figure 3.

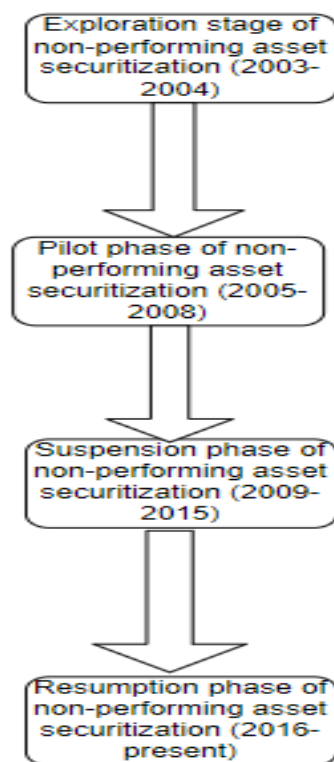


Figure 3. The evolution of non-performing asset securitization in China

3. Non-performing assets Disposal and Asset Securitization of Commercial Banks

3.1. How Commercial Banks Dispose of Non-Performing Assets

NPL securitization provides a choice for commercial banks to dispose of NPL, but it is not a conventional means, only applicable to the large-scale outbreak of NPL. According to the principle of asset portfolio, multiple non-performing assets can be combined, which can effectively improve the stability of future cash flow and achieve the purpose of risk diversification. Therefore, there are strict preconditions for the application of NPL securitization[6]. The scale of NPL should be large enough and the degree of project dispersion should be high enough.

The disposal methods of non-performing assets can be divided into two categories according to the market-oriented and non-market-oriented methods[7]. The non-market-oriented methods include: internal write-off, debt recovery (collection, bankruptcy, litigation); Market-based methods include: asset transfer (auction, sale, agreement transfer, usufruct transfer), debt-to-equity swap and asset securitization. Since most of the non-performing assets of commercial banks are non-performing loans, 90% of which are guaranteed by real estate mortgages, the most operable ways for the disposal of non-performing assets of commercial banks are litigation recovery, asset reorganization, diversified sale, debt-to-equity conversion, securitization and bankruptcy[8], as shown in Table 1.

Table 1. Non-performing loans of China's commercial banks from 2016 --- 2017

Main regulatory indicators (unit: 100 million yuan)	2016	2017 first quarter	2017 second quarter	2017 third quarter	2017 fourth quarter
non-performing loan balance	15122	15795	16358	16704	17057
of which:					
subprime loans	6091	6402	6556	6708	6250
suspicious loans	6640	6963	7367	7486	7965
loss loans	2391	2430	2436	2510	2842
Non-performing loan ratio	1.74%	1.74%	1.74%	1.74%	1.74%
of which:					
subprime loan rate	0.70%	0.70%	0.70%	0.70%	0.64%
suspicious loan rate	0.77%	0.77%	0.78%	0.79%	0.81%
loss loan rate	0.28%	0.27%	0.27%	0.26%	0.29%

Source: China Banking Regulatory Commission

(1) Methods of asset reorganization

Asset reorganization is the negotiation between commercial banks and debtors. Through a combination of various disposal methods, the debtor realizes the reduction, non-payment or delayed payment of principal and interest, and the commercial bank realizes the recovery of principal and interest as much as possible. Combinations generally include mergers, mergers, acquisitions, sales and so on. The restructuring of assets includes debt restructuring, enterprise restructuring, asset conversion and mergers and acquisitions, among which debt restructuring includes debt-for-equity swap, debt renewal, asset replacement, commercial debt-for-equity swap, discount realization and agreement transfer, etc. The asset restructuring cannot be promoted by a single bank or a single lender. The asset restructuring first requires the participation of multiple non-performing assets, the correct assessment of the asset value and future potential, and then the asset owners to work together to carry out cooperation. Currently, non-performing assets without cash flow need special approval from the government (such as tax department, market supervision and administration department) to start construction before payment. Therefore, asset restructuring is generally led by the government.

(2) Transfer of creditor's rights to equity

The conversion of creditor's rights to equity refers to the behavior that commercial banks negotiate with the borrower to change the creditor's rights to equity when it is impossible for the commercial bank to recover the principal and interest owed by the borrower in the form of money, which is generally referred to as "debt-equity conversion" in practice. The advantage of debt-to-equity swap lies in the fact that commercial banks can recover more principal and interest, while the disadvantage lies in the fact that commercial banks have to bear the operational risks of enterprises. In the past, the quota of 400 billion yuan for debt-to-equity swaps was reserved for commercial banks, asset management companies and debt-to-equity enterprises designated by the Economic and Trade Commission, instead of market-oriented debt-to-equity swaps. In the context of the "new normal" of the economy, debt-to-equity swap should become a normal market operation, and bad assets should be disposed according to the principle of market allocation of resources. The government will draw a red line that cannot be touched, and the behavior within the red line will be controlled by the "invisible hand" of the market.

(3) Diversification of sales methods

Diversification sale means that banks package, evaluate, price and auction non-performing loans, and then transfer and sell them to third-party buyers through intermediaries to realize the return of

loan funds. Diversified sale mainly includes the following ways: public auction, agreement transfer, bidding transfer, bidding transfer, packaging processing, subcontracting, etc. According to the different qualifications of the buyer, the sale of commercial banks' non-performing assets portfolio can be divided into the transaction of state-owned commercial banks' non-performing assets in the inter-bank non-performing assets market or the sale to asset management companies. The inter-bank market is not keen on each other's non-performing assets, because different banks have basically the same path on the situation of loans, the difficulty of recovery and the follow-up treatment methods.

(4) Asset securitization methods, as shown in Figure 4

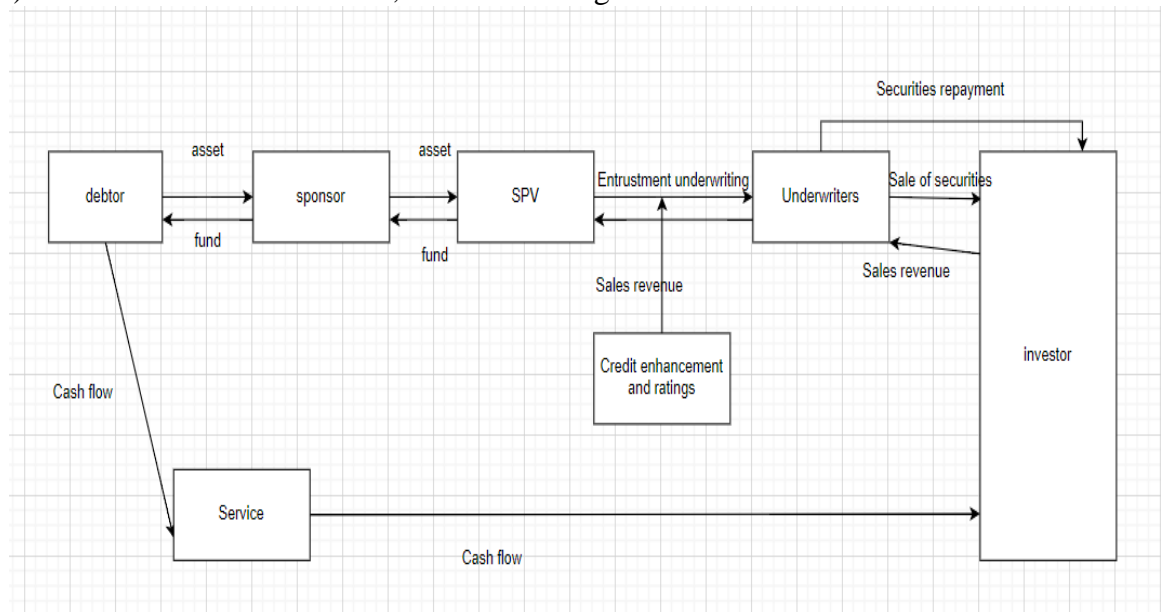


Figure 4. The basic process of securitization of non-performing assets

3.2. Theoretical Basis of NPL Securitization

(1) The principle of asset reorganization

Asset reorganization means that the originator selects its own non-performing assets and reorganizes the assets that will bring future returns and have certain homogeneity in a reasonable way, so as to reduce the related risks of non-performing assets and make them meet the standards of securitization. For a single non-performing asset, its ability to generate future returns and related risks are difficult to be independently estimated due to high uncertainty. However, when a large number of non-performing assets are screened and restructured to form a capital pool, although there are certain differences among various assets in the pool, on the whole, the recovery situation and risk level of cash flow recovery can be roughly estimated based on historical data and analysis methods, which also provides theoretical support for the pricing of NPL.

(2) Risk isolation principle

Risk isolation is the most significant feature of NPL, which is mainly achieved through "true sale", that is, the original owner packages the NPL and sells it to the SPV, and then the SPV undertakes the actual issuance of NPL. On the one hand, banks package the non-performing assets and sell them to the SPV, thus transferring the risks associated with the non-performing assets to the investors of the NPL. On the other hand, investors only need to bear the relevant risks of securities, and will not be affected by the operating risks of sponsors. Therefore, the risk isolation effect of bad ABS can protect the interests of sponsors and investors at the same time.

(3) Principle of credit enhancement

In securitization, credit enhancement mechanism is usually adopted to improve the credit rating of bad ABS, so as to reduce financing costs and attract investors. Credit enhancement can be mainly subdivided into external and internal. The former includes financial guarantee, bank letter of credit, balance payment, etc. The latter mainly includes overcoverage of principal, construction of limited/secondary structure and so on.

4. Problems Existing in Commercial bank NPL Securitization

4.1. Insufficient Liquidity

Insufficient liquidity in the secondary market and low turnover rate is an important problem of asset securitization. The average annual turnover rate of Chinese credit ABS is only 35%, the average annual turnover rate of corporate ABS is only 39%, while the average annual turnover rate of corporate bonds is 1067% and that of financial bonds is 1779%. The huge gap between the two reflects that investors still have big doubts about Npas, and Npas itself has a short development time, many problems need to be improved, complex structure and high investment risk. Currently, investors in the secondary market have low acceptance of NPAS. At the same time, most of our current Npas are issued and circulated in the inter-bank market. The investors are very single, and external individual investors are unable to participate in and become investment subjects. As a result, the inter-bank market is isolated from the securities market and lacks liquidity.

4.2. The Way of Credit Enhancement needs to be Improved

Credit enhancement is a very important part of the issuance of non-performing asset-backed securities by SPV. In order to reduce the issuance cost and attract investors to invest, credit enhancement is adopted to obtain a higher credit rating for the securities, improve the credit rating of the issuance and increase the market value of its asset portfolio in the financial market. Chinese commercial banks mainly adopt the priority/secondary absorption structure in credit enhancement of non-performing asset securitization[9], which can be issued only when the priority securities can be paid by the cash flow generated by the non-performing asset portfolio and the secondary securities can bear enough risks. Senior securities enjoy priority over secondary securities in terms of principal and interest repayment and loss distribution, so that the risks of senior securities are mostly absorbed by secondary securities[10]. At present, the credit enhancement method of the non-performing asset-backed securities of Chinese commercial banks is relatively simple, which cannot meet the further requirements of further reducing the risk, improving the guarantee and obtaining better credit enhancement effect.

4.3. Interest Rate Risk Exists

Interest rate is the fundamental factor affecting the profitability of Npas. In order to make profits, commercial banks will estimate the future development trend of interest rate to ensure that the issuance cost of NPAS is lower than the difference between the average interest rate of NPAS and the issuance rate of NPAS. When the market environment changes, the real development situation of interest rate deviates from the initial estimate of commercial banks, which may lead to the predicted interest rate being higher than the actual rate of the same rated financing securities in the same period, which seriously reduces the profit space of NPAS and makes commercial banks bear the risk of higher than expected interest cost.

5. Suggestions and Conclusions

5.1. Enhance Liquidity and Guide the Development of Secondary Market

The main reason for the lack of liquidity of NPL is that the investors are too monotonous. We should focus on developing diversified investors, gradually break the isolation between the inter-bank market and the securities market, and build a more dynamic, standardized and three-dimensional new market. On the basis of controlling market stability and reasonable investment, expand the scope of participants in the NPAS market, guide more individual investors and non-bank institutional investors to buy NPAS, and inject vitality into the asset-backed securities market. Meanwhile, commercial banks should make more perfect information disclosure and increase the explanation and publicity of NPAS. For domestic individual investors to dispel doubts, increase confidence, and gradually improve their acceptance degree, the increase in the number of asset securities market players can not only solve the problem of poor liquidity, but also enable commercial banks to diversify their own system of risks to achieve better development. On the basis of promoting the steady development of the domestic secondary market, the scale and level of the secondary market should be expanded. The door of asset securitization should be gradually opened to the outside world, and qualified foreign investors should be allowed to invest in non-performing asset-backed securities, which can inject a large amount of capital into the domestic market and further improve liquidity. Besides, foreign securities markets have been developing for a long time. Allowing foreign capital to enter will also bring advanced investment experience, promote the development of domestic securities markets and institutions, and improve their innovation.

5.2. Improve the Credit Enhancement System

Chinese commercial banks mainly adopt priority/secondary absorption structure, which means that priority/secondary absorption structure can make Npas have a good marketable and developing scale. The design of the structure should be further improved and multi-level design can be adopted when combining Npas to effectively avoid the loss of priority assets guarantee caused by the low thickness of secondary assets. The credit enhancement effect is weak. On the basis of improving the mainstream credit enhancement methods, we should develop and enrich other credit enhancement measures. Through the establishment of an interest balance account, the balance of the interest on the non-performing assets after deducting various expenses is deposited in a special account rather than transferred to the special purpose vehicle, so as to carry out self-enhancement of credit. The method of excess mortgage is adopted to establish a non-performing asset portfolio with an amount value greater than the principal of the issued Npas. The excess value is used as the guarantee of the principal of the issued securities. When the defaulted assets cannot be recovered, the excess value is used to compensate them. The asset pool structure is reorganized and bonds are issued in different layers. Since the credit rating of bonds of different grades is different, the credit rating of bonds of lower grade can be enhanced for the credit rating of bonds of higher grade. Adopt the way of issuing inferior bonds to all the bonds participating in the evaluation for credit enhancement. In addition to internal credit enhancement methods, external credit enhancement methods should be fully utilized to protect the interests of investors by setting up cash reserve accounts. The higher the degree of security, the higher the corresponding credit rating. External credit enhancement can also be obtained by relying on the strength of third parties through insurance companies providing insurance[11], cash collateral account (CCA), letter of credit (LOC), government using credit to guarantee the securitization of non-performing assets, and credit default swaps. However, it is not a long-term solution to rely on external credit enhancement measures, so we should improve and

optimize internal credit enhancement measures as the main theme to realize the further development of NPL securitization.

5.3. Adopt Floating Interest

The change of supply and demand in the current market greatly affects the change of interest rate, which leads to the aggravation of interest rate volatility. Floating interest rate can well adapt to this situation, pay interest according to the development of the capital market, avoid the gap between the expected interest rate and the real interest rate, and reduce the risk of interest payment cost. Specifically for the issuance of non-performing asset-backed securities, the recovery rate of non-performing assets is closely related to the market interest rate. When the market interest rate is lower than the estimated interest rate, if the fixed interest rate is continued to pay interest, it will bear a large risk of interest payment cost, or even cannot make up for the security issuance cost. Adopting floating interest rate to pay interest can effectively reduce the interest rate risk undertaken by both issuers and purchasers, reduce the losses suffered by issuers when interest rates fluctuate, ensure the interests of investors, and help financial institutions to adjust the scale of NPL securitization and issue decisions according to the changes of market interest rates.

5.4. Summary

The continuous increase of NPL is a major hindrance to the development of commercial banks and even our financial market. In this context, the securitization of NPL has become one of the effective ways to solve the problem. In the context of the COVID-19 pandemic[12-13], the number of non-performing assets has increased beyond normal, and the position of non-performing assets securitization has become increasingly important. With the continuous development of NPL, we are faced with practical problems such as imperfect laws and regulations, but NPL still has its unique advantages. In order to deal with a large number of NPL, the state has given policy support, and the assistance and international experience of the four major AMC have also promoted the standardization of NPL.

Every development has both advantages and disadvantages. The good side should not be denied because derivatives played a devastating role in the US financial crisis in 2008. Although at that time, the government worried that the NPL securitization in China appeared the same situation as that in the US at the same time, so the development of NPL in China was suspended[14]. However, after a strict review and cautious assessment by The State Council and the China Banking Regulatory Commission, the government confirmed that asset securitization was not the initiator of the financial crisis, and the risk of bubble economy could be avoided as long as strong supervision of asset securitization was implemented. In 2016, the first round of non-performing assets securitization of commercial banks was launched, and the central government made it clear that asset securitization was an important way to deleverage. Asset securitization plays a key role in serving supply-side structural reform, deleveraging, addressing the financing difficulties of real enterprises, and promoting the deepening of the financial market. It has promising prospects for future development[15].

Funding

This article is not supported by any foundation.

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

References

- [1] Cao Mengqiao. *Problems and Countermeasures of Non-performing Assets Securitization in Commercial Banks. Small and medium-sized Enterprise Management and Technology (Mid-day)*, 2021(11):85-87.
- [2] Chen Sixiao. *Practice, Reform and Development Research of non-performing Asset Securitization in China. Chinese Business Theory*, 2021(20):89-91.
- [3] Yin Jiuyong. *Risk and Prevention of clean Government in the Disposal of non-performing Assets. Banker*, 2021(09):26-29.
- [4] Wang Keqin. *Analysis of the Status quo and Operation Countermeasures of Commercial bank NPL Securitization. China Market*, 2021(24):43-44.
- [5] Zeng Lixue, Zhao Binyan, Yu Xunzhe. *Analysis on the development of non-performing assets securitization of Chinese commercial banks. Commercial Culture*, 2021(19):74-75.
- [6] Luo Qingyong. *Research on the Legal Issues of non-performing Assets Securitization of Chinese Commercial Banks. Heilongjiang University*, 2021.
- [7] Chen Y Y. *Financial Effect and risk impact of NPL securitization of ICBC. Donghua University*, 2021.
- [8] Zhu X W. *Obstacles and Countermeasures of non-performing assets Securitization of Chinese commercial banks. Productivity Research*, 2021(06):129-132.
<https://doi.org/10.52288/jbi.26636204.2021.07.07>
- [9] Zhang Zexu. *Analysis of Commercial banks' NPL Securitization. Management and Technology of Small and Medium-sized Enterprises (Upper magazine)*, 2021(06):70-71.
- [10] Wu Qian. *Analysis on the disposition of commercial banks' non-performing Loans. Banker*, 2021(06):54-58.
- [11] Xu Wenshuai. *Analysis on Problems and Countermeasures of Credit Enhancement of Bank NPL Securitization. Hebei University of Finance*, 2021.
- [12] Kim smiled. *Research on Disposal Management of Non-performing Assets of H Bank. Jiangxi University of Finance and Economics*, 2021.
- [13] Kong Dapeng, Zhang Ming. *The Latest development of Asset Securitization in China: Characteristic Facts, Driving factors and Main Problems. Financial Markets Research*, 2021(05):15-31.
- [14] Dong Xin. *Analysis of the development status and problems of non-performing asset Securitization in China. Heilongjiang Finance*, 2021(01):17-19.
- [15] Yang Ning, Zhang Xuelu. *Current situation of NPL securitization of Chinese commercial banks. China Foreign Investment*, 2021(01):73-75.
<https://doi.org/10.52288/mice.27069273.2021.03.09>