

# Research on the Securitization of affordable Housing Assets - Taking Nanjing Dayanggou Social Housing Asset Securitization Project as an Example

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**Abstract:** *With the development of economy and the acceleration of urbanization, the existing housing cannot meet the needs of all residents. Therefore, the government needs to strengthen the construction of low-income housing to meet the people's housing demand. But it also makes the government spending grow rapidly, which creates a large capital demand, so it needs to be financed from appropriate channels. Asset securitization is a widely used financing mode at present, and it has certain practical significance to combine with the shantytown renovation project. This paper takes the case of asset securitization of public security housing in Dayanggou as an example to discuss the significance of asset securitization for this kind of project financing, analyze the source of risks and provide relevant improvement methods. This also provides a reference for other security housing asset securitization projects.*

**Keywords:** Asset securitization; Construction of affordable housing; Beneficial right of trust

## 1. Introduction

### 1.1 Urban affordable housing background

Since the reform and opening up, China's economic development has achieved a qualitative leap. With the development of economy, China's urbanization process has been accelerating. According to the data released by the National Bureau of Statistics in 2019, the urbanization rate of the registered population in China has increased from 35.3% in 2012 to 43.37%. However, new problems are emerging. When a large number of rural people continue to flood into cities and concentrate in urban areas, the supply of housing will be in short supply and the housing price will also rise, making it impossible for many people of middle or lower income to buy houses. Therefore, behind the rapid development of China's real estate market in recent years is the real demand brought by urbanization.

After nearly two decades of exploration and practice, China has gradually established a working mechanism in which local governments are responsible for the construction of low-income housing and the central government provides support. The State Council and relevant departments have formulated measures for the construction and management of low-rent housing, affordable housing, public rental housing and the renovation of rundown areas, basically forming a policy framework for urban housing that combines market supply with government support and focuses on market supply, and initially establishing a housing security system.

### 1.2 Types of government-subsidized housing in urban areas

According to the Report of the State Council on the Construction and Management of Indemnificatory Housing in Urban areas, there are two ways of housing security: physical security and monetary subsidies.

According to the mode of supply, the indemnificatory housing can be classified as the indemnificatory housing for rent and the indemnificatory housing for purchase. Affordable housing for the purchased type includes affordable housing, commodity housing at limited prices, and various types of housing for renovation in rundown areas.

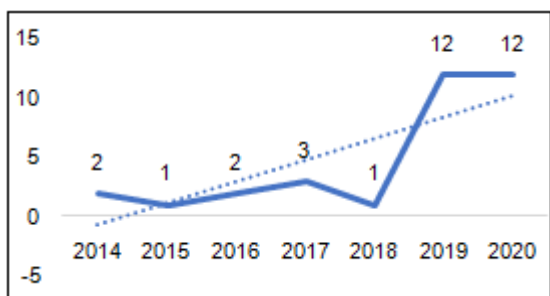
### 1.3 The combination of asset securitization and affordable housing

Most of the funds needed for the construction of affordable housing come from government subsidies, and the sources of funds are relatively single. And the nature of the affordable housing itself determines that it cannot bring high profits, so it is difficult to attract investment. Therefore, the construction of affordable housing has created the need to broaden the source of funds.

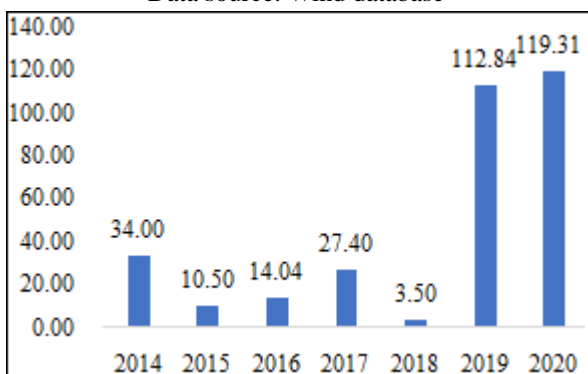
At this time, many scholars put forward the application of asset securitization in the affordable housing project, which is undoubtedly a good financing choice. Many advantages of asset securitization in financing are also reflected in the affordable housing project, and there have been successful cases of affordable housing asset securitization before.

### 1.4 The current situation of the securitization market of affordable housing assets

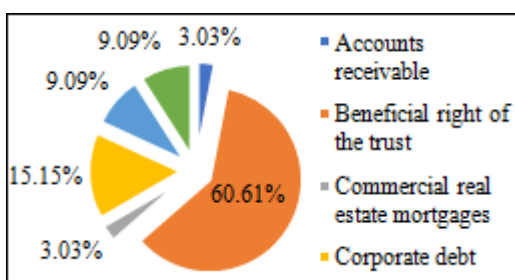
Over the past 14 years, 33 securitized products of low-income housing assets have been issued, with a total issuance amount of 32.1592 billion yuan.



**Figure 1.1:** The number of securitization of low-income housing assets from 2014 to 2020  
Data source: Wind database



**Figure 1.2:** The issuance scale of indemnificative housing asset securitization from 2014 to 2020  
Data source: Wind database



**Figure 1.3:** The proportion of the issuance quantity of various underlying asset securitization products in the total issuance quantity  
Data source: Wind database

## 2. Related Concepts and Theoretical Basis

### 2.1 The feasibility of securitization of low-income housing assets

Since the enterprise asset securitization financing mode, it attaches great importance to China Securities Regulatory Commission and other relevant institutions, released a

series of laws and regulations to specification, as "asset-backed special plan for the record management method", the securities companies and fund management company, a subsidiary of the regulations on asset securitization, etc., analysis from the perspective of market development, enterprise asset securitization financing environment is good, risk prevention measures are complete, to ensure that its actual effect. Shanty towns housing construction in the early demand for money is larger, the construction of subject usually need to use a variety of different financing channels at the same time to the early stage of the project financing, but due to the shanty towns of housing for long construction cycle, along with advance of the project, of a lot of debt financing will be approaching maturity, in the face of debt service pressure, construction of the main body can be through the enterprise asset securitization financing way, to early to repay the debt. In fact, in the construction of affordable housing, some enterprises have successfully applied the financing model of enterprise asset securitization, which can provide reference and reference for other enterprises. Based on this, it is feasible to apply the financing mode of enterprise asset securitization in the construction of affordable housing.

### 2.2 Trust usufruct asset securitization related theory

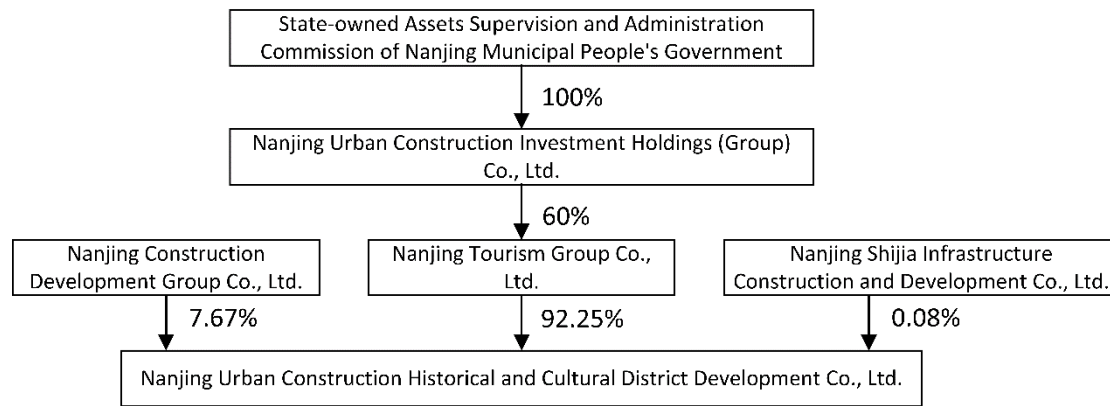
"Beneficial asset securitization of trust" is an innovative way of asset securitization, which is used in the case of this paper. "The beneficial right of the trust assets securitization" that is to join the trust funds, cash flow to the inside of the beneficial right of the trust as the foundation of the underlying asset pool of assets, namely the beneficial right of the trust in the future stable cash flow generated by paid as support, through structured credit enhancement manner, the activities of the issuance of asset-backed securities.

## 3. Nanjing Dayanggou security housing asset support special plan case introduction

### 3.1 Special plan issue background

#### 3.1.1 Brief introduction of the original equity holder

Nanjing Urban Construction historical and cultural Block development Co., LTD. Was established on June 21, 2006. Legal representative CAI Ming, the company's business scope includes: block development and construction, real estate development; Investment and planning consultation in cultural industry; Urban environmental engineering design and construction; House repair management, etc.



**Figure 3.1:** Equity structure of Nanjing Urban Construction Historical and Cultural Block Development Co., LTD

**3.1.2 Motivation of asset securitization**

1) To meet the financing needs of enterprises  
 The success of asset securitization projects depends on the quality of cash flow, rather than being linked to the projects; Asset securitization belongs to private financing and is not strictly regulated. The project design is flexible and can meet various financing needs of enterprises. Nanjing Urban Construction Historical and Cultural District Development Co., LTD., following the trend of development, took the stable sales income of resettlement housing project as the repayment source of securitization, carried out the securitization project of affordable housing assets, and fulfilled the financing needs.

2) Reducing financing costs for enterprises  
 One of the major characteristics of asset securitization products is that it relies on the future cash flow of enterprises, which is highly correlated with the quality of underlying assets. Moreover, because of the true sale, it has a low correlation with the financing subject. In this way, the financing procedures of asset securitization projects issued by enterprises are simple, the landing speed is faster, and the cost is lower.

3) Optimizing the capital structure of enterprises  
 When an enterprise carries out asset securitization business, it can transform the assets with poor liquidity into the cash flow with strong liquidity for its daily operation. This not only improves the operating conditions of enterprises, but also optimizes some financial indicators.

**3.2 Nanjing Dayanggou security housing asset support special plan overview**

Merchants and melt - nanjingDaYangGou housing assets support special projects is the original rights and interests of people of nanjing urban construction historical and cultural blocks development co., LTD., nanjing enjoys shan

international trust & investment royal fine assets, on the basis of the beneficial right of the trust property trust by the plan administrator investment information on July 28, 2020 issuance of asset-backed securities. The basic assets in the form of the special plan are beneficial rights of the trust, and the underlying assets are actually the sales income of the underlying houses in the future.

**3.2.1 Basic information of asset-backed securities of Dayangou Affordable Housing Project**

This plan is established and issued by China Merchants Securities, with a total issuance amount of 740 million yuan, among which priority assets are supported

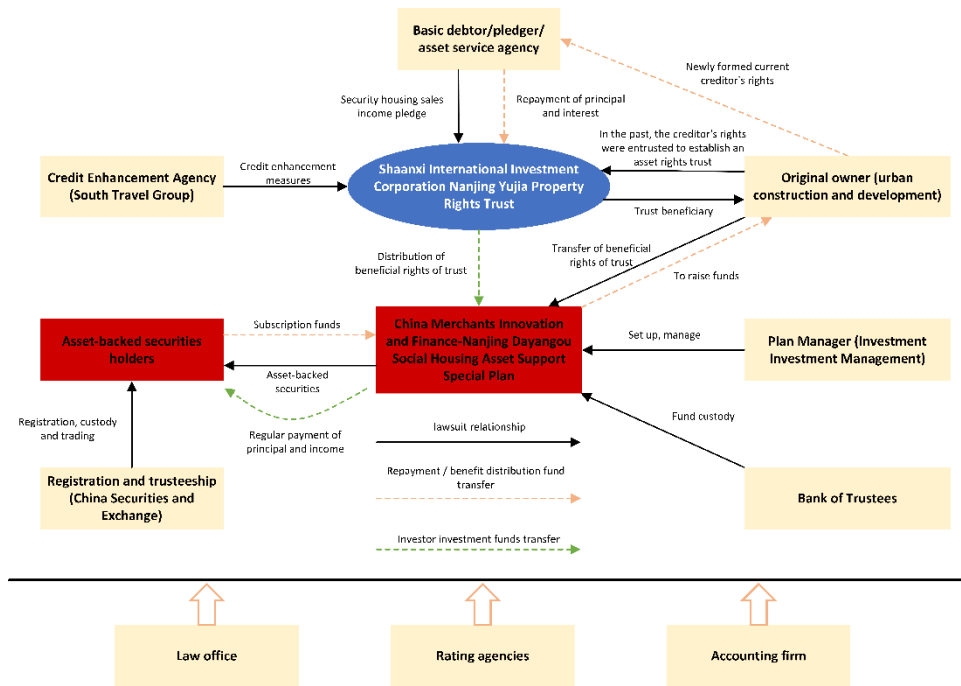
The total issuance of securities is 700 million yuan, divided into four grades of products from 01 to 04; The issuance of subordinated asset-backed securities totaled 40 million yuan and was fully subscribed by the original equity holders. The plan is expected to expire on June 19, 2023.

**Table 3.1:** Basic information of asset-backed securities of Dayangou Affordable Housing Project

The name of the	CODE	Circulation/ (10,000)	Accounted for	Release rate	Credit Rating (current)
DaYangGou A1	168945	18000	24.32%	3.94%	AAA
DaYangGou A2	168946	26000	35.14%	4.10%	AAA
DaYangGou A3	168947	26000	35.14%	4.20%	AAA
DaYangGou A4	168948	4000	5.41%	0.00%	NR

Data source: According to the "Investment, Innovation and Financing - Nanjing Dayanggou Security housing Asset Support Special Plan Specification"

**3.2.2 Transaction structure and key participants**



**Figure 3.2:** Transaction structure of asset securitization projects

**Table 3.2:** Parties involved in the transaction of Nanjing Dayangou Affordable Housing Project

Scales agency/promotion agency	China Merchants Securities Co. LTD
Plan Manager/Manager	China Merchants Securities Asset Management Co. LTD
Custodian bank/Supervising bank/Custodian bank	China Minsheng Banking Consulting Co. LTD
Original interest/principal/creditor	Nanjing Urban Construction Historical and Cultural District Development Co. LTD
Spomsor/shortfall complement for promisee	Nanjing Tourism Group Co. LTD
Debtor/asset service agency/pledger	Nanjing Baixia Dilapidated Old house Reconstruction and Development Co. LTD
Trust company/trustee/pledger	Shannxi International Trust CO. ltd
An asset-backed securities registry	China Securities Depository & Clearing Co. LTD shanghai Branch
A place where senior asset-banked securities are circulated	Shanghai Stock Exchange
The rating agencies	Shanghai New Century Credit Evaluation investment Services Co. LTD
Cash flow forecasting agency	Zhonghua Accounting Firm

Data source: China Merchants Chuangrong - Nanjing Dayangou Security housing asset Support special plan specification

### 3.2.3 Underlying assets

The basic assets of this special plan refer to the beneficial rights of shaanxi International Investment · Nanjing Yucai

Property Right Trust enjoyed by the original stakeholders according to trust Contract and other trust documents.As the plan manager, China Merchants & Capital Management purchases the underlying assets from the original stakeholders of urban construction and development with the funds raised in the special plan, and pays the investment income and special plan expenses in installments with the future cash generated from the underlying assets flowing to the holders of asset-backed securities.

### 3.2.4 Credit enhancement measures

#### 1) Classification of senior/subordinated asset-backed securities

The design of this asset-backed product, the asset-backed securities to be sold are divided into senior asset-backed securities and subordinated asset-backed securities. Subordinated asset-backed securities are paid less than the senior asset-backed securities and are held by the original equity holders.This credit enhancement ensures the repayment of senior asset-backed securities on time.

#### 2) Balance payment

According to the commitment in the Difference Replenishment Commitment Letter, when the difference payment initiation event occurs, the difference replenishment promisee shall undertake the obligation to make up the difference where the special plan funds are insufficient to pay the special plan expenses and the principal and advance earnings of the senior asset-backed securities.The current asset-backed securities provide credit support for the senior asset-backed securities by setting the balance payment transaction structure, which reduces the credit risk of the senior asset-backed securities.

## 4 A Case Study of the Special Plan for the asset support of Nanjing Dayanggou Social Housing

### 4.1 Analysis of the problems existing in the asset securitization case

#### 4.1.1 The cash flow of the underlying asset is at risk in maturities

The final repayment of the asset-backed securities in the current period depends on the cash flow from the underlying rehousing sales in the future. However, the sales income of target houses is greatly affected by economic development or other factors. If the economic interference factors similar to the coVID-19 force majeure cause the underlying resettlement housing to fail to maintain the forecast sales, the repayment of the underlying resettlement housing may be affected, thus affecting the repayment of the senior asset-backed securities.

#### 4.1.2 Fund confusion and risk of misappropriation

The repayment source of the target creditor's rights is the sales income of the target placement house, that is, the future sales income of the target placement house lawfully enjoyed by the debtor. The fund is collected by the debtor through the sales income collection account, and transferred to the supervision account, there is a risk of confusion with the debtor's other operating income funds. At the same time, if the debtor fails to transfer the sales revenue from the sales revenue collection account to the supervision account in time as agreed, or misappropriates the fund, it will have a bad influence on the payment of the special plan of this period.

#### 4.1.3 The underlying assets did not achieve the expected results of real sales

The real sales of asset securitization not only refer to the real sales at the legal level, that is, the underlying assets are no longer the assets of the original equity holders, and the original equity holders' operating conditions cannot affect investors, but also refer to the real sales at the accounting level, that is, the assets do not appear on the balance sheet. But the underlying assets are hard to sell in real terms.

In this case, the basic asset of the special plan is the beneficial right of the trust held by Nanjing Urban Construction Calendar, which cannot be separated from the special plan after being transferred to the special plan. The securitization project has Nanjing Tourism Group Co., Ltd. as the balance payment promisee, and Nanjing Tourism Group Co., Ltd. holds the original interest of Nanjing Urban Construction Historical and Cultural Block Development Co., LTD. 92.25% shares. The primordials again own all of the subprime securities. Such securitization makes the risks of the underlying assets impossible to be isolated from the operational risks of Nanjing Urban Construction Historical and Cultural Block Development Co., LTD. After the completion of the so-called "real sale" of the underlying assets, it also bears all the risks of asset securitization, which in essence is understood as a kind of collateral

financing, which is not conducive to the identification of the true sale of the underlying assets.

#### 4.1.4 Risks associated with credit enhancement measures

The special plan did, however, design credit enhancement measures such as the classification of senior/subordinated asset-backed securities and differential payments. However, the cash flow is still related to the operating condition of the original stakeholder since the actual sale of the asset has not been realized. In addition, the balance payer holds 92.25% of the original equity holder's shares, so the interests of investors cannot be protected in case of default.

#### 4.1.5 Market liquidity problem

First of all, asset securitization products are mostly designed for the classification of senior/subordinated asset-backed securities, and the original equity holders hold the subordinated asset-backed securities to provide guarantee for the products. Investors will think that asset securitization products are priority products of fixed income nature. Therefore, the purpose of investors to hold products has become to obtain fixed income, and lack of motivation to trade.

Secondly, the inter-bank market and the exchange market are two major domestic places that can carry out asset-backed trading. However, these two places are independent from each other and managed by different regulatory authorities respectively. Their market structures and characteristics are also quite different, making the market inefficient.

#### 4.1.6 Corporate asset securitization products are mostly issued by private placement

At present, asset-backed securities are usually issued in the form of privately raised bonds, and there are no strict mandatory regulations on the disclosure of such bonds. Although risk disclosure was carried out in the plan management specification of securitization in the early stage, laws, regulations and standards of regular disclosure were not formed in the later issuing process. In reality, after the risk has appeared, the plan management personnel carries on the temporary announcement, the investor only then can know the situation, causes the investor and the fundraiser information asymmetry situation.

### 4.2 Counter measures and Suggestions for optimizing asset securitization

#### 4.2.1 Reduce the solvency risk of the cash flow of the underlying assets

The success of asset securitization project depends on the quality of the underlying assets to a large extent. Therefore, it is very important for asset securitization project to select the underlying assets with good stability and high quality. Just as "you cannot put all your eggs in one basket", so the underlying assets should contain more types of assets rather than concentrate on one asset. The capital market is highly correlated, the risk of an enterprise may lead to a



crisis in an industry, and all walks of life are closely related. The failure of asset securitization projects caused by the problems of underlying assets is not just the failure of a project, but will have an impact on the market. Therefore, when designing securitized products, it is necessary to pay attention to the diversity of underlying assets.

#### **4.2.2 Realize the real sale of underlying assets**

China's asset securitization products stipulate that the original equity holders should hold subprime asset-backed securities. In China, most of the issued asset securitization products appear that the original equity holder holds all the subordinated asset-backed securities and the original equity holder or the enterprise strongly related to the original equity holder ACTS as the balance payment promisee of the project. Although, to a certain extent, such a practice provides credit support for asset securitization projects, it will also affect the real sale of underlying assets. In this regard, relevant laws and regulations should be issued to make the real sale of underlying assets. Enterprises unrelated to the original equity holders hold sub-asset-backed securities or act as balance payment promisors, which can also provide credit for asset securitization projects to a great extent.

#### **4.2.3 Improve the trading mechanism and enhance market liquidity**

The trading and transfer of credit asset-backed securities, enterprise asset-backed securities and asset-backed bills on a single platform will form a unified yield curve and enhance market liquidity. More investor participation also makes the market more active.

#### **4.2.4 Strengthen the disclosure of enterprise asset securitization products**

In order to improve the operation mechanism of asset securitization projects and improve the efficiency of asset securitization market, relevant departments should improve the securitization information disclosure mechanism to minimize the deadweight loss in the market caused by information asymmetry. In particular, the disclosure requirements should be detailed for the key contents such as the underlying assets, cash flow management, and the guarantee effect of the credit enhancement measures, including five elements of time, object, amount, change and reason. If the problem of information asymmetry between investors and financiers is improved, the liquidity of asset securitization products will also be enhanced, bringing about a virtuous circle.

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