A Study of the Risks of Securitization of Internet Financial Assets in China

A Case Study Based on Jingdong IOUS

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ABSTRACT
The successful issuance of JingDong IOUS has made a great innovation for Chinese internet finances. Therefore, this paper will study the risks of securitisation of Chinese internet finance assets based on Jingdong IOUS as a case study. The analysis concludes that there are seven main risks (market risk, liquidity risk, credit risk, policy risk, personnel risk, natural disaster, monopoly risk); meanwhile different risk control methods are proposed for the above issues and other unexpected event risks.

Keywords: *Jingdong, Jingdong IOUS, Internet finance, financial risk, risk control.*

1. INTRODUCTION

Jingdong is a representative Chinese company in the B2C e-commerce business, with its main source of revenue being the retail sale of goods. Jingdong IOUS is a new financial service launched by Jingdong Mall in 2014, targeting individual consumers with high creditworthiness in Jingdong's online mall. Asset securitisation refers to the process of issuing asset-backed securities (ABS) based on the future cash flow generated by the underlying assets as the backing for repayment, and credit enhancement through a structured design. It is the first Internet asset securitisation product in China, making a great innovation for Chinese Internet finance. This article will use Jingdong IOUS as a case study to dissect the possible risks of Chinese internet finances and propose corresponding risk control methods. The research in this paper will be of great value to the promotion of asset securitisation in the Internet finance sector, and will have positive significance in promoting the stable development of Internet finance and maintaining the safety of the financial market.

2. LITERATURE REVIEW

Among the studies related to this paper, there has already been literature discussing asset securitization with the case of "Jingdong IOUS". Du Zhonghe introduces the securitisation case of Jingdong IOUS receivables based on the characteristics of internet finance, such as internet-based credit activities, internet-based risk control, and internet-based business model, takes Jingdong IOUS ABS as an example, analyses the advantages and disadvantages of securitisation of internet consumer finance assets, and puts forward suggestions to accelerate the development of asset securitisation in three aspects: improving the activity of the asset securitisation market, strengthening information disclosure, and improving the risk segregation mechanism. The three aspects put forward suggestions to accelerate the development of enterprise asset securitisation [1]. Zhou Wencheng and Lv Lei study the specific application of asset securitisation in Internet enterprises with the help of analysing the case of Jingdong IOUS's accounts receivable, and also provide some suggestions and assistance to enterprises that will implement accounts receivable securitisation [2]. Wu Beibei studied and analyzed the asset reorganization theory and credit enhancement theory in the asset securitization of Internet consumer financial enterprises [3].

A considerable part of the literature focuses on exploring risk identification and risk control in asset securitisation. Zhang Jingbo takes the securitisation of "Jingdong IOUS" as an example to analyse the structural design of the securitisation of Internet consumer finance credit assets, reveal the inherent risks of the securitisation of Internet consumer finance credit assets, and propose risk control strategies to strengthen social credit management and improve credit rating risk supervision capacity [4]. Huang Qinhong et al takes Jingdong IOUS as the research object, introduces the structure and advantages and disadvantages of the securitisation of JingdongIOUS accounts receivable, and puts forward suggestions that the relevant system for setting up the market should be accelerated, the types of underlying assets should be increased, and the mechanism for risk segmentation should be improved [5]. Min Wenyu deeply analyzes the motivations of Jingdong IOUS asset securitization and discusses pricing benefits, and analyzes the risks and problems in the process of Jingdong IOUS asset securitization from the three aspects of basic assets, transaction structure and participants [6].

Based on the above existing literature, there are three possible contributions to this paper. First, the choice of topic is novel. There are relatively few studies on Chinese Internet finance, and this paper uses Jingdong IOUS as a case study for analysis to further enrich the relevant literature. Secondly, this paper adopts a richer, more comprehensive, and complete idea, comprehensively plumbing the seven aspects of financial risks and risk control measures. Thirdly, given that China is the largest developing country, the conclusion of this paper is of great theoretical and practical values and can enhance the Chinese experience and case studies of other countries.

3. DEFINITION OF BASIC CONCEPTS

3.1. JingDong

Jingdong is a representative Chinese company in the B2C e-commerce business model, with its main source of revenue being merchandise retailing. Jingdong officially entered the e-commerce sector in 2004; in May 2014, it was officially listed on the NASDAQ Stock Exchange, the first Chinese integrated e-commerce platform to be successfully listed in the US; in October 2012, it acquired a third-party payment company, NetBank Online, and officially began to lay out its payment system; in March 2013, the domain name of Jingdong Mall was changed to JD.COM. In March 2013, the domain name of Jingdong Mall was changed to JD.COM, and in the same year, Jingdong Finance Group started to operate independently. Jingdong's main business model is to buy goods from major manufacturers and sell them independently in its online mall. The advantages and disadvantages of this business model are obvious. The advantages are that Jingdong has less internal competition, which allows for more unified management and consistency, which in turn leads to higher overall profits. The disadvantage is that the market is too large, the flexibility is too low, the product range cannot be expanded quickly and it is easy to have disputes with suppliers.

3.2. Jingdong IOUS

Jingdong Baibao is a new financial service launched by Jingdong Mall in 2014, targeting individual consumers with high creditworthiness in Jingdong Online Mall. The concept is "spend first, pay later". Jingdong White Label has the following six features:

First, Jingdong IOUS is essentially an enterprise's accounts receivable, which is a liquid asset. When a credit-qualified customer makes a purchase at Jingdong Mall, he or she can open a "Jingdong IOUS" to spend money first and pay it back later, so in practice, Jingdong IOUS is an account receivable of an internet company, which is a liquid asset of Jingdong.

Secondly, the amount of Jingdong IOUS is small, and there is high liquidity risk. According to Jingdong Mall, after completing the risk rating on the Jingdong Mall website, users will receive a certain amount of credit, but the maximum credit limit is only RMB 15,000. Moreover, the consumer groups for which Jingdong IOUS is intended are relatively fragmented and the amount of receivables varies in size, so the liquidity of Jingdong IOUS is much lower than that of cash or cash equivalents, which has the disadvantage of insufficient realisation ability and is subject to liquidity risk.

Thirdly, there is an interest payment requirement for Jingdong IOUS. Users can use their Jingdong IOUS to make purchases at Jingdong Mall as soon as they have obtained their credit line. The repayment options available to users are deferred repayment and installments. The deferred repayment option has a maximum term of 30 days and does not require the payment of interest charges; the installments have a term of 3 to 24 months and require the payment of the corresponding interest.

Fourthly, Jingdong IOUS is an online consumer loan model supported by pure credit. Jingdong IOUS is mainly assessed online, i.e. the credit rating of the user is assessed quantitatively through data, and the IOUS business can be opened when a certain level is reached, with the opening process generally taking a few minutes. Although the assessment is fast, the online approval may result in the possibility of fraud by consumers who do not have the ability to repay the loan or who deliberately cheat to obtain the loan by disguising their consumption data. In addition, this kind of pure credit-backed consumer loan, even if the preliminary audit technology is perfect, will cause great losses to the enterprise once the credit risk occurs due to the lack of collateral for security.

Fifth, the bad debt rate and default rate of Jingdong IOUS are high. The bad debt rate and default rate of Jingdong IOUS depends on the customer's credit problems, financial situation, and other reasons. If a user fails to repay the loan on time, it will lead to an increase in the bad debt rate of Jingdong IOUS. In addition, Jingdong's customers are distributed all over the country, and they are not clustered together. And the consumer loan model supported by pure credit has determined that the cost of recovering funds is also high.

Sixth, there are specific consumer scenarios for Jingdong IOUS. The main purpose of the launch of Jingdong IOUS is to promote the increase in the volume of merchandise transactions in the mall, to release the potential demand of consumers, and also to enhance the user shopping experience, thus increasing the stickiness of mall users. Therefore, Jingdong IOUS is generally used in its shopping mall.

3.3. Asset Securitisation

Asset securitisation is the process of issuing asset-backed securities (ABS) backed by the future cash flows generated by the underlying assets as repayment and credit enhancement through a structured design. Firstly, asset securitisation is a form of financing that involves the issuance of tradable securities backed by a specific portfolio of assets or specific cash flows. Secondly, asset securitisation is a process whereby illiquid credit assets that are expected to generate stable cash flows are packaged and sold to a special purpose vehicle (SPV), which then splits and restructures the expected returns and risks of the credit assets and converts them into marketable securities for sale through internal and external credit enhancement.

The basic process of a complete securitisation financing is that the originator sells the securitised assets to a Special Purpose Vehicle (SPV) or the SPV actively purchases the securitised assets, which are then pooled by the SPV into an Assets Pool, which is then backed by the cash flows generated by the pool to issue securities in the financial markets. The cash flows from the pool are then used to finance the issuance of securities in the financial markets, and the cash flows from the pool are used to pay off the securities issued.

The securitisation process generally involves the following parties: (1) the originator. The originator, also known as the original equity owner, is the original owner of the underlying assets of the securitisation, usually a financial institution or a large industrial or commercial enterprise. (2) A specific purpose vehicle or specific purpose trustee (SPV). This refers to an institution that receives assets transferred by the originator or holds the assets entrusted by the originator to hold the assets and issues securitised products based on those assets. The choice of SPV or trustee usually requires Bankruptcy Remoteness conditions, i.e. the originator's bankruptcy does not affect it. (3) Depositary of funds and assets. To ensure the safety of the funds and underlying assets for a specific purpose, institutions usually engage reputable financial institutions to hold the funds and assets in custody. (4) Credit enhancement institutions. This type of institution is responsible for enhancing the credit rating of the securitised product, for which it charges a fee to the institution for the specific purpose and assumes liability in the event of default of the securities. Some securitisation transactions do not require an external rating agency, but rather an internal rating using methods such as overcollateralisation. (5) Credit rating agencies. If the securitisation issue is a bond issue it must be credit rated by a rating agency prior to issuance. (6) Underwriter. The underwriter is the investment bank being responsible for the design of the securities and the underwriting of the issue. An underwriting syndicate may be formed if the securitisation transaction involves a large amount of money. (7) Investors in securitised products are the holders of the securitised products after the issuance.

3.4. Special plan for securitization of accounts receivable of Jingdong IOUS

On 28 October 2015, Jingdong Group launched the Jingdong IOUS Receivables Asset Securitisation Special Programme. This is the first securitisation product in China that uses the receivables of e-commerce enterprises as the underlying assets and the first Internet consumer finance product, providing a new financing idea and method for the same type of Internet companies and promoting the circulation of social capital as well as the development of the market economy. The main participating entities in the Jingdong IOUS Receivables Asset Securitisation are as follows: (1) the original equity owner, Beijing Jingdong Century Trading Company (a subsidiary of Jingdong Group); (2) the scheme manager is Huatai Securities Management Company Limited; and (3) the custodian is Industrial Bank.

4. KEY RISKS OF THE SECURITISATION OF JINGDONG IOUS'S ACCOUNTS RECEIVABLE

4.1. Market Risk

Market risk refers to the risk of changes in the price or value of derivatives due to adverse movements or sharp fluctuations in the market price of assets. Changes in market prices of underlying assets include changes in market interest rates, exchange rates, stock and bond quotes.

In the case of the Jingdong IOUS receivable Securitisation, the price of the credit product is the price of a consumer product, which is relatively stable over time for everyday consumer goods with less unanticipated price changes and therefore has less risks. Jingdong has also built its warehousing system, and its warehousing inventory can increase its ability to withstand the risk of price changes to a certain extent. For example, when dealing with international business, Jingdong IOUS poses certain risks due to fluctuations in exchange rates. If the exchange rate causes the price of an item to fall and fall below the cost of purchase, its inventory is hoarded at a high price. A user issuing a transaction request at that point could incur losses. However, if Jingdong has overseas warehousing capacity, it can use its warehousing capacity to regulate whether or not to sell the product. And when the price of the product is below cost, it can display "out of stock" on its website to prevent the transaction from taking place. This does not result in a loss of customer trust.

4.2. Liquidity Risk

Liquidity risk is the risk that purchases and sales will not be completed at the desired point in time due to insufficient market turnover or a lack of willing counterparties. Liquidity risk exists in all markets, such as securities, funds, currencies, etc. Liquidity risk is an unavoidable risk for the Jingdong IOUS. On the one hand, for internet consumer financial institutions such as Jingdong IOUS, large-scale microcredit is a financial product with no regular payback period, and it is impossible to accurately predict the demand for funds and the timing of repayment. Plus, repayment settlement date of Jingdong IOUS is not based on a fixed financial month but on the date of the occurrence of the transaction as a monthly cycle. It is therefore not possible to standardise the date of repayment of funds, which places high demands on capital reserves and is likely to result in the risk of insufficient liquidity in the event of a deviation from the forecast. On the other hand, the offering of the Jingdong IOUS asset-backed securities is primarily a private market offering with no more than 200 qualified investors as holders and the holders can only transfer the securities again within the category of qualified investors. This means that the asset-backed securities are illiquid and the holders of asset-backed securities are unable to liquidate the securities in the short term in order to raise capital or hedge risk, resulting in a high level of liquidity risk.

4.3. Credit Risk

Credit risk, also known as default risk, refers to the possibility that the borrower, issuer of the securities, or counterparty is unwilling or unable to fulfill the terms of the contract for various reasons and constitutes a default, resulting in losses to the bank, investors or counterparty.

Based on the fact that China's credit environment is still at a backward stage, the risk of default on personal loans is high. E-commerce companies carry out personal credit in the form of consumer finance and do not have access to the central bank's credit system. In addition, The construction of a personal credit system is not achievable in the short term, making it difficult to ensure that users do not default in bad faith or have a credit crisis. The credit limit is given according to the type of product purchased, the amount of the transaction, and the number of transactions, which do not provide an intuitive and realistic grasp of the customer's credit. Also, the final result of the credit limit approval based on this information will also lack objectivity, thus posing a greater credit risk. This is further exacerbated by the fact that the audit workload of internet consumer finance is extremely heavy and computer-aided, which could lead to fraud by consumers who do not have the ability to repay or who intend to fraudulently obtain loans by disguising their consumer data.

4.4. Policy Risk

Policy risk refers to the risk arising from changes in national macro policies (e.g. monetary policy, fiscal policy, industry policy, regional development policy, etc.) that result in market price fluctuations.

In recent years, Jingdong IOUS has started to launch new businesses such as installment rentals in an attempt to break through the virtual credit card mode of operation on the e-commerce platform, which will thus draw the attention of government regulators since then. At the same time, as online supply chain finance, it involves multiple participants, the laws and regulations in the areas in which each party’s regulations can differ, which also exacerbates the legal and policy risks that arise.

4.5. Personnel Risks

Personnel risk is the potential for employees to cause harm to the interests of the business due to poor operational management and systemic weaknesses.

As a large number of operations about online consumer finance are performed by computer systems, this means that a simple operation may affect a large number of users, and if there is a human error such as mispricing of a product, it could bring losses to the business. In the day-to-day management of Jingdong Financial ABS, there are numerous links involved in the middle, such as scheme administrators, custodians, asset servicing institutions, and third-party payment platforms, etc. A small error of Jingdong Financial ABS, whether it is a human mishandling or an error in the back-end operating system, can increase the risk of subscribers' returns.

The occurrence of a scheme administrator's asset management business qualification being withdrawn, the dissolution of management, the removal of relevant personnel or the declaration of bankruptcy by the court, and other circumstances can lead to the consequence that Jingdong Financial ABS being unable to continue to perform its duties due to uncontrollable factors.

4.6. Natural Disaster or Other Contingency Risk

Natural disaster or other contingency risk refers to the reduction of a company's ability to repay capital and interest due to unforeseen events, such as domestic emergencies, floods, epidemic epidemics, etc. Based on the analysis of the BOA, there are two main types of contingency risk.

The first is hardware failure. Internet-based consumer finance requires a large amount of network hardware as platform support. In order to maintain a large amount of transaction and user data, a large number of network servers are required for information storage and calculation, and if this hardware failure is due to natural or man-made factors (e.g. power outages, lightning strikes, etc.), it will lead to the failure of its trading platform and even the loss of transaction data. In addition, as Internet consumer finance is currently characterised by small amounts and a large frequency of transactions, the amount of data and access generated by a single user is already very large. Coupled with the huge number of internet users in China at present, when the hardware facilities of internet finance companies cannot cope with the demand for data storage and access generated by a large number of customers, it will also cause hardware failure, which will not prevent all customers from accessing the service, but will limit the scale of development of the industry and therefore require constant hardware upgrades to meet the demand.

The second is the risk of cyber attacks, which are attacks on data and hardware in the network that take advantage of the security vulnerabilities that exist in the network. Web-based internet consumer finance is exposed to the same risks of cyber attacks as other internet businesses. Hackers can modify user-side or server-side data through network security loopholes, such as forging login accounts, modifying sales prices and sales attributes of goods, or illegally authorising certain customers with poor credit to have higher credit privileges. This type of attack is stealthy and difficult to detect, and hackers can carry out continuous attacks by forging a large number of accounts. Another common attack method is to send a large number of access requests to the same server in a short period of time to encroach on the server's network bandwidth and prevent normal access requests, resulting in a short period of inaccessible network and other consequences. For example, Distributed denial of service attack (DDOS).

4.7. Monopoly Risk

Monopoly risk refers to the risk that one or a few companies in the industry will occupy a monopoly position, thereby undermining the level playing field of the market.

At present, "Jingdong IOUS" and "Antshower" have taken up most of the market for internet consumer finance, with Alipay, on which "Antshower" is based, showing signs of monopoly in the third party payment sector. For example, Alipay has used users' personal information and transaction records to contact family members and friends of defaulting customers to collect payments, which is a serious violation of the rights of defaulting customers and related users. This was a serious violation of the privacy rights of the defaulting user and the user in question, but the Alipay usage agreement indicates that this practice was in accordance with the agreement, and although the state authorities have since stopped this practice, the risk remains.

5. RISK CONTROL OF THE SECURITISATION OF RECEIVABLES IN THE JINGDONGIOUS

5.1. Improving the Level of Warehouse Intelligence

Jingdong needs to improve the level of warehouse intelligence to ensure the standardisation, specialisation, and refinement of warehouse management; the inbound and outbound processes should be further subdivided on the basis of intelligent operations in an attempt to maximise warehouse resources; reduce intermediate links in the supply chain, lower inventories and reduce capital pressure, which in turn can reduce market risks arising from exchange rate fluctuations and changes in commodity prices by effectively adjusting inventories.

5.2. Increase Bond Liquidity by Relaxing Restrictions

If liquidity risk is to be reduced, activities in the secondary market can be increased. In the future, the requirements for investors can be appropriately relaxed to encourage diversification of investment entities and the introduction of insurance companies, asset management companies, and various funds, including pension funds, into the securitisation of Internet consumer finance assets.

5.3. Prevention and Control Strategies for the Application of Big Data

As Internet data not only involves consumer information but also includes various information related to people's daily life, such as social media data, online lending data, online shopping data, credit card data, loan repayment data, etc., its information is broad-spectrum and multi-dimensional. Using correlation and big data statistics, the variables related to personal credit among them can be analysed and combined with traditional credit data, and personal credit can be portrayed from a broader and more accurate perspective. The establishment of a data model system helps to accurately identify and analyse business risks, and finally, build a risk prevention and control system on top of the data model system.

5.4. Emphasis on Internet Finance Regulation

In terms of policies and laws, there are two points that Jingdong must pay attention to. Firstly, illegal absorption of public deposits; secondly, illegal fund raising. Through the analysis of Jingdong we can also find that the funds of the Jingdong model do not have the protection of a third-party deposit system similar to the funds, and the safety of the funds is worrying; many of the businesses of Jingdong have an unclear legal positioning due to the unsoundness of the legal system, so that they may step on the red line of the law, and need to pay attention to the possible regulatory policies and laws in the relevant areas.

5.5. Increase Training and Assessment of Relevant Personnel

In order to minimise personnel risks, professional training on "asset securitisation" can be provided on a regular basis, covering all the businesses involved in internet consumer finance, including consumer, finance, internet, risk prevention and control, risk identification, credit rating, etc. For the large shortage of business staff, short-term training courses could be organised for them by hiring senior personnel to focus on securitisation knowledge. Improve the professional and ethical quality of all practitioners in the “asset securitisation” process, and regulate their behaviour by setting up qualification exams, training, education and even disciplinary mechanisms.

5.6. Establishing Early Warning Mechanisms and Contingency Plans

On the one hand, the BOE should build an early warning mechanism for asset securitisation contingencies, play the role of risk monitor in all operational aspects of asset securitisation, track the operation of the project, identify, assess and evaluate the extent of deviation from a certain state in the operation process, issue early warning signals and transmit feedback to the local government and participating entities. This firewall type of advance warning mechanism allows sufficient time for participants to prepare countermeasures before risks occur and minimise risk losses. On the other hand, building contingency plans for asset securitisation emergencies, especially when risks arise, how to adjust, control and make good public opinion is the key points that must be considered to minimise losses and impacts.

5.7. Strengthening Tax Regulation

To strengthen the regulation of the taxation aspect of monopolies, it is suggested that a special adjustment tax on monopoly profits be added or raised on monopolies, thus to a certain extent being able to effectively control the profit level of monopolies and alleviate the monopoly risks that may be brought about by enterprises such as Jingdong IOUS.

6. CONCLUSION

Asset securitization not only brings dividends to Internet finance, but also hides various risks. If the possible risks cannot be effectively controlled, it will bring economic losses to enterprises and consumers, and even endanger the safety of the entire financial market, leading to the "economic crisis" of Internet finance. Therefore, studying the possible risks of Internet financial asset securitization and how to control these risks is of positive significance for promoting the stable development of Internet finance and maintaining the security of financial market.

Based on Jingdong IOUS as a case study, this paper concludes that there are market risk, liquidity risk, credit risk, policy risk, personnel risk, natural disaster, monopoly risk, or other unexpected event risks in the securitisation of Chinese internet financial assets. According to the conclusion, the paper further proposes seven corresponding policies to handle the risks. Warehouse intelligence should initially be enhanced, bond liquidity should be boosted via loosening restrictions, and then a further strategy needs to be adopted concerning the application and prevention of big data. In addition, Jingdong should lay emphasis on internet finance supervision, increase training and assessment of relevant personnel, and build early warning mechanisms and emergency plans, and the government needs to strengthen tax regulation.

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