

## The New Thinking of the SMEs Transformation and Upgrading in Shaanxi Province: from the Internet Finance Perspective

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**Abstract:** On the basis of defining the connotation of the transformation and upgrading of small and medium-sized enterprises (SMEs), combining with the practice of the SMEs transformation and upgrading in Shaanxi province, with the intention of solving financing demand in the process of transformation and upgrading of SMEs, this paper analyzes emphatically four common transformation and upgrading connotations of the and its financing demand characteristics including management transformation, business model transformation, industry transformation and enterprise upgrading for SMEs in Shaanxi province, and discusses the characteristics and advantages of Internet finance means including P2P (Peer to Peer) lending, crowd funding and e-commerce finance when solving the problem of the financing demand and proposes a feasible strategy for the bottle-neck of financing from a new perspective. Based on this analysis, this paper further proposes the policy advice of making full use of Internet finance as means, and combing SMEs, Internet finance enterprises and government working together to promote the transformation and upgrading of SMEs.

**Keywords:** small and medium-sized enterprises; transformation and upgrading; Internet finance

### INTRODUCTION

With the rapid development of the national economy in Shaanxi Province in recent ten years, small and medium-sized enterprises (SMEs) which have been developing at a high speed, have become more and more important in economy. According to statistics, at the end of 2013, the whole province's the SMEs has reached 1.47 million, providing jobs for over 8 million people, and increasing value accounts for 50.4% of the province GDP [1], and contribution rate was 61.6% to above designated size economy. But in recent years, as the speed of China's macroeconomic growth slows down, the SMEs in Shaanxi Province also face unprecedented challenges since they come across a series of problems as rising labor costs, insufficient market demand, backward technical equipment and technology, extensive management and lack of internal momentum growth, etc. How to solve these problems fundamentally matters the survival and development of the SMEs in our province. Now our country is in the transition period of economic development, whose economy is driven by innovation rather than the traditional factor, so it requires SMEs to adapt to the new situation, and fundamentally change their developing mode, achieving their transformation and upgrading. From the perspective of the connotation of the transformation and upgrading, the transformation is a change from one state to another, which means the companies need to convert between different industries and different development models [2]. And the upgrading is a the process for an enterprise or an

economy to move towards an area which owns a more profitable capital and a more intensive technology [3], whose external performance is the increase of the added value of enterprise products. And whether it is restructuring or upgrading, companies needs a large amount of money for new industries, new investing areas, new technology, or research and development of new technology. Without adequate financial support, the transformation and upgrading is like an empty talk, and it is difficult to achieve actual effect. Finance is the core of modern economy, and the essence of financial operation is to bridge the gap between savers and investors, and to construct the channels for the funds to transfer from the surplus sectors to the shortage ones. However, the long-term information asymmetry between banks and SMEs has led to an increase of the transaction cost of bank loans to SMEs [4-5]. Besides, due to the great operating risk and difficult mortgage of the SMEs [6], SMEs are vulnerable to the credit rationing of financial institutions. Therefore, in order to meet the financing needs to transit and upgrade, it is imperative for the SMEs to seek more convenient financing channels.

Recent development of Internet banking has brought lightness for SMEs to meet the financial needs of the transformation and upgrading. Xie Ping [7], and Zhang Wei [8] believe that in the Internet financial model, information processing and risk assessment, through the network way, can make full use of financial data and modern information technology to reduce the

degree of information asymmetry in the market, and the supplier and demander of funds can transact directly, which reduces the term matching of funds and risk sharing cost. Lin Hui [9], Houston [10], Li Jianjun [11] and other scholars have further elaborated the roles of the P2P lending network, crowd-funding, supply chain finance, cloud computing and private credit system of big data in solving the financing difficulties of SMEs, and pointed that the P2P network lending helps the SMEs financing, improves the transparency of mutual transactions, which also makes the borrowers be able to use the capital at low interest rates, crowd-funding and small-micro economy financing have good matching, effectively reducing the searching cost of financing.

The literature review shows that present studies lack the study of the relationship between the Internet banking and the transformation and upgrading of SMEs, lack the detailed analysis on the connotation, strategy and restricting factors in the implementation process of the transforming and upgrading of SMEs. And the unspecific studies also make the proposed strategies weak in operation. Besides, the existing researches mainly concentrate on the eastern region, especially in Jiangsu and Zhejiang provinces, and there is little research on the western region. Due to the obvious differences in the level of economic development, industrial types and economic environment between the eastern and western regions, these studies have greatly weakened its function in practice of the transformation and upgrading of SMEs in Shaanxi. Based on this, this paper starts from the connotation and the financial demand of the transformation and upgrading of SMEs in Shaanxi Province, studies the features and advantages of Internet banking in the process of meeting the financial need of SMEs transformation and upgrading, and puts forward the policy suggestion for the Internet financial support on upgrading transformation of SMEs in Shaanxi province.

#### **ANALYSIS OF THE CONNOTATION OF SMES TRANSFORMATION AND UPGRADING AND ITS FINANCIAL NEEDS IN SHAANXI PROVINCE**

The 360 Encyclopedia defines the term “industrial transformation and upgrading” as: a process for the industry to transit from low added value to high added value, from high pollution and high energy consumption to low pollution and low energy consumption, and from extensive developing styles to intensive ones. And Baidu Encyclopedia defines it as: one with an advanced industrial structure, which is more conducive to economic and social development. The above two definitions are the most authoritative interpretation at present, but they are too broad and not specific enough. There have been a lot of domestic studies on the achievements of industrial transformation and upgrading, but few of them have clearly defined the connotation of the transformation and upgrading, let

alone studied the specific motivation or the style of the transformation and upgrading. Since a clear definition of the concept is the premise of academic research, this paper, based on the research results of two scholars of Wu Jiayi and Wang Jifa, makes a detailed analysis of the concept of transformation and upgrading, just as follows:

The transformation and upgrading of enterprises is an ever-changing process for the enterprises to enhance their sustainable competitiveness, improve the added value of the products and services, and get a new operating direction; is a process for the enterprises to develop from low technical level, low added value to high ones; is the micro level and the ultimate goal of the industrial transformation and upgrading. Enterprise transformation and upgrading is divided into two aspects of transformation and upgrading, of which transformation can be separated into endogenous transformation and exogenous transformation according to its motivation.

Motivation of endogenous transformation is to analyze the enterprise from the internal perspective, and find that the non optimal use of enterprise resources and capabilities leads to its reduction of market competitiveness [12]. Endogenous transformation enterprises are divided into four types: management transformation, business model transformation, product transformation and market transformation. The management transformation is a shift towards a new and more effective resource integration paradigm. This paradigm can not only be a new effective integration of resources so as to achieve the whole process management of organizational goals, but also can be a new specific resource integration and the detailed management of goal setting etc [13]. Business transformation model is a process of changing the value creation logic from one point to another. It focuses on the dynamic evolution process of incumbent firms in different types of business models [14]. Product transformation, to take product structure adjustment as an example, is an activity the enterprise has to adjust to the products and their combining state, trying to realizing the desired goal. It may include: adjustment of the proportional relation between products, increase of new products and product upgrading for multi-product enterprises; change of a single product enterprise to a multi-product one; and change of a multi-product enterprise to a single one, etc [15]. In market transformation, the enterprise subdivides and identifies the market, selects the best potential market, and studies customer preferences in order to provide better service for customers and create value [16]. The main methods are as follows: ①to identify and analyze the new market demand; ②to develop and design new products; ③to deliver new products to customers through marketing activities to meet the new market demand.

Motivation of exogenous transformation refers to the fact that even after a change, the enterprise with its existing resources and capabilities, has difficulty in obtaining a new developing space; or since the external industrial environment has led the enterprise to grow in recession, the enterprise should now turn its light to the nascent economic field in and out of the industry, seeking new economic growth point which owns more developing space. And the exogenous transformation refers to the transformation of the industry, like diversification strategy and complete withdrawing from the original industry.

Upgrading, as mentioned above, is a process of moving towards a more profitable capital and technology intensive economy in the form of an enterprise or an economy, which performs as the increase of the added value of the product. The main way to upgrade is technological innovation, which focuses on the development of new products, improvement of the technical content of products, and creation of brand products, etc..

In the following, based on the above-mentioned definition and classification of the transformation and upgrading, combining with the practice of SMEs in Shaanxi Province, this paper focuses on connotation of the four strategies: the management transformation, the business model transformation, industry transformation and upgrading of enterprises, and analyzes their corresponding demand for funds.

#### **Analysis of the connotation of SMEs management transformation and its financial needs**

The transformation of enterprise management mainly includes two aspects: one is the enterprise changes its management mode, like the state-owned enterprises establish a modern enterprise system, have a company system reform, and improve the corporate governance structure; the other is to maintain the original management mode, only to change some specific management way. Usually, when the enterprise management mode changes, its specific management style will also have a change [17].

For SMEs in Shaanxi Province, the reform of state-owned ones started earlier. During the "fifteen" period, 5122 state-owned SMEs have been restructured, accounting for 90.8% of the total number of enterprises. In order to further improve the enterprise reform, Shaanxi Province promotes SMEs to list on the new third board. By the end of August 2016, 129 SMEs in Shaanxi have listed on the new third board, among which 12 are state-owned enterprises. The provincial government hopes during the "13th Five-Year" period, over 200 SMEs will list on the new third board. It also hopes by 2020, all the provincial state-owned enterprises can complete the reform of the shareholding system, and those that don't have listing conditions can

list on the OTC market like the new third board. Although the reform of state-owned SMEs is inevitable, in reality, the restructuring process is hindered because of the shortage of funds. In the reforming case of SMEs in Zhucheng County, Shandong Province, for example, by the end of 2000, the loan balance, provided by the state-owned commercial banks for the enterprises to reform, reached 2.5 billion yuan, an increase of 1 billion than in 1992 [18]. As a county in Shandong Province, Zhucheng needs billions of loans to reconstruct the corporations. So if the reform of state-owned enterprises is to develop in the whole province of Shaanxi Province, the demand for funds will be greater. In the reform, all employees of the enterprise must first completely terminate the labor relations with their original enterprises, and the enterprises should not only employ the best according to the two-way choice principle, but also need to resettle the laid off staff. Besides, if the state-owned enterprises want to establish a modern enterprise system, they have to build a contingent of highly qualified managers and cultivate a large number of outstanding entrepreneurs, all of which requires investment of human resources. And a large amount of capital needs to be constantly invested in the follow-up period of the enterprise restructuring. If there is a lack of the capital, all the previous efforts may be wasted. Therefore, in order to ensure the successful completion of the restructuring of SMEs, a large number of funds must be invested for a long term.

#### **Analysis of the connotation of SMEs business model transformation and its financial needs**

The transformation of the business model is that the basic logic of the value creation of enterprises has changed, usually the new value creation logic is imported into the field of social production and creates higher value for the service object. value creation logic has been changed under the Internet era, and the previous business model has gradually been subverted, companies began take business model under the environment of Internet as a strategic choice and more and more traditional enterprises transform to e-commerce business model to enhance enterprise performance [19].

Shaanxi province also proposed to promote the popularization of e-commerce applications of SMEs and encourage them to use third party e-commerce service platform for online procurement and sales. In 2014, online shoppers reached 10.05 million in Shaanxi Province, and the online shopping usage was 57.6%. The rapid development of the online shopping market has provided an opportunity for the transition of traditional business to e-commerce business model. According to a survey by Shaanxi Provincial Bureau of Statistics, 37.9% of the SMEs are actively developing e-commerce, using the "Internet plus" mode to broaden their operating channel (see Table 1). By the end of 2014, there have been more than 1000 small micro electricity suppliers which have a certain scale, over

2000 individual electricity suppliers in Xianyang City, Shaanxi Province and the annual turnover of the electricity suppliers is 6 billion yuan. E-commerce provides a new path for the transformation of business model, but the development of e-commerce requires the enterprises to invest in human resources and advertising costs. Since the enterprises have to promote their products through a series of marketing modes like the information collection, market analysis and online dissemination of product information, it is a necessity to recruit senior electric and technical personal as well as

management personnel. The advertising cost is also necessary to develop the online retailing. The annual advertising costs of average online shop is about 200~300 thousand yuan, roughly accounting for 5%~10% of the product turnover. Since the Shaanxi Province wanted the e-commerce transactions to reach 700 billion yuan in 2020, then the province's advertising expenditure will exceed 40 billion yuan in 2020, which is a great number of money. Thus, the transformation of SMEs to e-commerce requires a lot of money to support.

**Table 1: ways of transformation and upgrading for SMEs**

main types	main ways	percentage(%)
management transformation	meticulous management	27.2
business model transformation	development of e-commerce, Broadening of the operation channel through "Internet+" mode	37.9
industry transformation	industry adjustment, extension of industrial chain	42.9
upgrading of enterprises	product development, improvement of technical content	62.1

Data source: Shaanxi Province Bureau of Statistics Note: questionnaire has multiple choices

### **Analysis of the connotation of SMEs industry transformation and its financial needs**

Industry transformation refers to enterprises need to adopt industrial transfer strategy, seek the new economic growth point with more space for development and make it get new vitality when the competitive advantage of industry is facing a recession and enterprises are facing a gloom development prospect. From the perspective of industrial development model, the industry transformation can be reflected in the transformation of traditional industries to new energy, new materials and other strategic emerging industries. The transformation among industries may be the implementation of diversification strategy, or completely withdrawing from the original industry and entering into the new industry [12]. Strategic emerging industry is the navigation guidance of the future economic development and the industrial transfer direction. The "13th Five Year Plan of Shaanxi province strategic emerging industries development" proposed that it is needed to accelerate the development of strategic emerging industries, and further optimize the industrial structure.

Under the guidance of the policy, SMEs in Shaanxi province are gradually transforming into strategic emerging industries. In 2013, the strategic emerging industries of Shaanxi province realized added value of 150.82 billion yuan; there are 2721 enterprises with strategic emerging industry activities in the second and third industry corporate units, of which the above designated size enterprises accounts for 48%. Comparing with traditional industries, strategic emerging industries shows a huge space for development, by 2015, the added value of strategic emerging industries of Shaanxi province has reached 183.4 billion yuan.

SMEs need consult and service costs of transition to the emerging industry, such as the stock right and intellectual property rights of target enterprise through mergers and acquisitions is one of the effective ways to promote the technology mature acceleration, and in the process of mergers, SMEs need science and technology and financial intermediary agent such as law firms, accounting firms, assets evaluation firms, and the emerging industry has higher technology levels, demands higher human resources, whether cooperation between enterprises and universities or the talents introduction of enterprises need capital investment. Therefore, the transformation to strategic emerging industries of SMEs needs financial support, even if there is a good market prospects but lacking of funds, SMEs will face the risk of failure. Taking "Spring City" as an example, it has made big profits through the production of ham sausage, but in a relatively short period of time it has increased investment in the medicine and real estate business industry, and buy and annex 17 companies which are in different industry, extending its business to meat products, medicine, real estate, however, after the transformation of new industries, the operation of the company faces a serious shortage of funds, resulting in the company's business in trouble [20]. Therefore, the SMEs industry transformation should not be constrained by money, otherwise it will make the process of transformation and upgrading to a halt, or even lead to the failure of the transformation and upgrading.

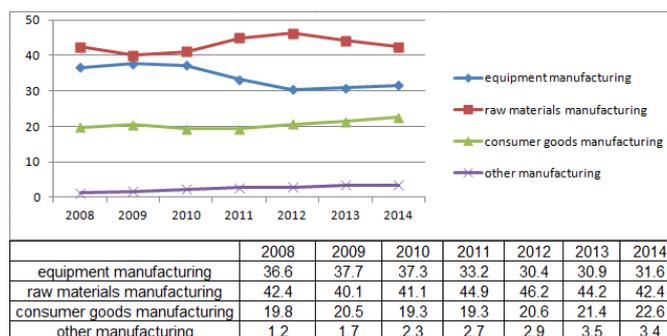
### **Analysis of the connotation of SMEs updating and its financial needs**

Gereffi [3] divided upgrading into the following four levels from the perspective of the global value chain resource allocation: (1) the upgrading of inner-enterprises. From the production of low price to high price goods, from simple to complex products,

from a small amount of demand to a large number of orders; (2) the upgrading among enterprises. From the production of standardized products to personalized products; (3) the upgrading of local or internal country. From simple assembling to more complex OEM or even OBM, more forward or backward linkages in the local or domestic; (4) upgrading of international region. From bilateral, asymmetric, intra regional trade to full regional cooperation. The global value chain studies value creation and profit distribution which is based on the industrial division system. According to Gereffi's classification of upgrading to the enterprise, the upgrading of SMEs in Shaanxi province belongs to the upgrading of the local or internal country, enhancing the competitiveness of SMEs in Shaanxi province is needed. In 2013, the industrial operating income of SMEs is 1.4 trillion yuan, accounting for 55.78% of operating income of SMEs, of which manufacturing business income is 1.1 trillion yuan, accounting for 79% of the income of small and medium-sized industrial enterprises SMEs, and 44.06% of SMEs, therefore, the upgrading of the manufacturing industry is the core content and an important part of upgrading of SMEs.

The industrial structure of Shaanxi province is mainly focused on the exploitation of raw materials and

the primary processing of the upstream of the industrial chain, while developed provinces are focused on the consumer end of middle and downstream area. Taking the manufacturing sector as example, in 2008~2014, Shaanxi Province, the proportion of raw materials manufacturing industry has remained 40% or more, the proportion of consumer manufacturing accounted for only about 20% (see Figure 1). And the manufacturing industry of eastern provinces has been upgrading from low value-added heavy industry to the high added value, but Shaanxi province still takes energy and chemical industry as the pillar industry; the development of equipment manufacturing industry with high added value and high technology industry is slow. In 2013, the total profit and tax and extra charges of main business of the equipment manufacturing industry of above designated size in Shaanxi province is lower than the national average of 19.9% and 11.4%. High tech industry accounted for the proportion of above a designated scale industrial output fell from 13.1% in 2005 to 7.4% in 2013. The high technology industry the main business income of the domestic ranking from 11 in 2005 fell to 17 in 2012; the domestic economic situation forced the upgrading of the manufacturing industry of Shaanxi province.



**Fig-1: Gross value of industrial output proportion of different kinds of manufacturing industries from 2008-2014 (%)**

(source : Shaanxi Province Bureau of Statistics)

In view of this, the manufacturing industry in Shaanxi province needs to upgrade from raw materials manufacturing to consumer manufacturing, equipment manufacturing and high-tech industries, and enhance the added value of manufacturing products. From the perspective of the connotation of enterprise upgrading, its essence is to continue to carry out technological innovation, so that products and processes can be upgraded gradually. The improvement of technological innovation capability depends on the R&D investment, but comparing with other developed provinces, the investment of Shaanxi SMEs on R&D is obviously at a disadvantage. In 2013, R&D funds of small and medium-sized industrial enterprises in Shaanxi province only accounted for 25.4% of the enterprises above a designated scale, the average R&D funds is 780 thousand yuan, which might be equivalent to 24.1% average level of R&D funds investment of small and

medium-sized industrial enterprises of Beijing, 52.3% of Jiangsu and 53.1% of Shanghai. Currently, there are only 303 SMEs in Shaanxi province which have R&D institutions, accounting for only 6.7% of the number of SMEs, and it is lower than the 24.2 and 12.1 percentage points of Jiangsu and Zhejiang respectively. And the average original equipment price of SMEs R & D institutions is 55547thousand yuan, which is equivalent to 19.9% equipment price of large enterprises. Therefore, in order to enhance the technological innovation ability of SMEs, and promote the transformation and upgrading of SMEs, it is needed to increase the R&D investment, and make them have the ability to establish R&D institutions, buy enterprise R&D equipments and improve the enterprise R&D condition.

## THE CHARACTERISTICS AND ADVANTAGES OF THE INTERNET FINANCE IN TRANSFORMATION AND UPGRADING FINANCING OF SMES

The above analysis shows that the capital problem is directly related to the success or failure of the transformation and upgrading of SMEs, which is the key issues to be resolved. However, for a long time, because of the information asymmetry between SMEs and the bank, mortgage difficulty, low credit level and the small enterprise scale of the SMEs, financing channels such as the bank financing, direct financing and private financing and others are blocked. Seeing that the traditional financing channels is difficult to meet the transformation and upgrading financial needs of SMEs, and in order to ensure the smooth implementation of the transformation and upgrading strategy, looking for new financing channels is extremely urgent. At present, the integration of Internet technology and traditional finance lead to the development of the Internet finance, which can effectively reduce the information asymmetry and financing threshold, bring new hope for SMEs to solve the problem of funds demand of transformation and upgrading.

### The characteristics and advantages of P2P lending in the transformation and upgrading financing of SMEs

P2P Internet lending, also known as “peer-to-peer lending”, is an Internet financial model emerged with the development of Internet and the arising of private finance. With the help of IT technology, P2P Internet lending breaks through the limitation of acquaintances and geographical conditions, making the strangers lending possible [21], expanding the credit group and solving the dilemma of raising money difficultly of private finance, realizing the butt joint between social spare cash and the demanding for money for SMEs to upgrade and transform. According to statistics of the native place of 146 thousand borrowers from 16 platforms such as Renren Dai, Guangxindai, Hongling Venture (excluding P2P platform in Shaanxi province), counted by Zero One Research Institute, borrowers’ native places are not limited to Yangtze River Delta region, they come from the whole country, of which 3083 borrowers are from Shaanxi province, accounting for 2.11%. Shandong province accounted for more than 10.71%, ranking in the first place [22]. The P2P Internet platform of Jingkaidai in Shaanxi Province benefit four places such as Shaanxi, Hubei, and Ningxia and Zhuhai, 109 people borrowed money from this platform in 2014, there were 1625 investors in this platform; the number of investor is about 14.91 times the number of borrowers, which is conducive to the spreading of the loan risk and can reduce loan losses for both sides.

**Table 2: Native place distribution of 146311 borrowers form 30 platforms in 2014**

areas	number of people	proportion	areas	number of people	proportion
Shandong	15675	10.71%	Guizhou	2691	1.84%
Guangdong	12539	8.57%	Jiangxi	2560	1.75%
Jiangsu	12511	8.55%	Guangxi	2423	1.66%
Inner Mongolia	9713	6.64%	Beijing	2183	1.49%
Hebei	9278	6.34%	Shanghai	2033	1.39%
Liaoning	8933	6.11%	Heilongjiang	1858	1.27%
Unknown	8506	5.81%	Gansu	1296	0.89%
Henan	7525	5.14%	Tianjin	1231	0.84%
Fujian	6953	4.75%	Yunnan	1112	0.76%
Chongqing	5549	3.79%	Ningxia	499	0.34%
Hunan	5311	3.63%	Xinjiang	156	0.11%
Hubei	4902	3.35%	Hainan	117	0.08%
Sichuan	4659	3.18%	Qinghai	41	0.03%
Shanxi	3756	2.57%	Hong Kong	15	0.01%
Anhui	3305	2.26%	Xizang	11	0.01%
Shaanxi	3083	2.11%	Taiwan	4	0.00%
Zhejiang	2997	2.05%	Total	146311	100.00%
Jilin	2886	1.97%			

source: “White Book” of china P2P lending service industry in 2015

P2P Internet loan uses its platform as load intermediary; the borrowers in the loan platform exhibit loan object and request, investors bid and lend to borrowers; in this process, P2P Internet loan platform play the intermediary role of information matching, credit identification, interest rate formulation and legal documents drafting. This kind of financing mode makes

financial out of traditional financial intermediaries of commercial banks, securities and exchange; to a certain extent, the financial disintermediation is realized. Because the money lenders can be clearly informed of the borrower's information and capital flows; supplier and demander of funds can trade directly, risk pricing process is simplified and the market information

symmetry degree is higher, financing rates are more market-oriented, customers can be more conveniently and fast access to funds, which greatly reduces the cost of finance [23]. In 2014, the comprehensive loan interest rate of 23 platforms in 30 platforms is lower than 16%, and the average composite interest rate of P2P Internet loan platform of Shaanxi province in 2014 is 15.14% [24], among which the loan interest rate of

Jinkaidai is 8.36%, while private financing cost of the SMEs in Xi'an city is 5~7 times the benchmark interest rate of the bank. It can be seen that the innovation of the P2P lending financing model reduces the cost for the funds users, to a certain extent, solves the financing difficulties of SMEs, and brings new opportunities for the sustainable development of SMEs.

**Table 3: Comprehensive loan interest rate of 30 P2P platforms in 2014(%)**

808xindai	20.44	yinke.com	13.46
guangxindai.com	19.73	touna.cn	13.01
itbt.com.cn	19.13	niwodai.com	12.85
RJS.com	19.03	365edai	12.74
eloancn.com	18.90	nonobank	12.48
gcjr.com	18.47	RRJC	12.46
Yiqihao.com	18.14	renrendai	12.39
Weidai.com	15.86	yirendai	11.56
hlwjd.cn	14.97	wejjinsuo	11.42
Hongling Venture	14.70	9888.cn	11.01
Hepai Online	14.34	cnaidai	10.46
ppdai.com	14.22	jimubox	10.33
Dianrong.com	13.83	YIJIEDAI	10.00
wzdai.com	13.79	Lu.com	8.48
qaianBaBa	13.52	JKD.com	8.36

source : white book of China P2P lending industry (2015)

### The characteristics and advantages of crowd funding in the transformation and upgrading financing of SMEs

The crowd funding is a financing model based on the Internet; investors get the real assets or equity of borrowers through a small amount of financing investment. The crowd funding effectively match the supply and demand of funds by Internet technology, provides a new financing channel of low cost for SMEs and fill the vacancy in the traditional finance in the long-tailed market. By the end of June 30, 2015, more than 4 billion 500 million Yuan is raised by the platforms, benefiting 9 million SMEs. Comparing with bank loans, inner-source financing and private lending and other traditional financing methods, crowd funding has the advantages of high efficiency, low threshold and low cost. If the crowd funding is checked by the crowd funding platform, it can exhibit, finance, and operate on the platform with the aid of Internet. Comparing with layers of audit of bank, the audit of crowd funding platform is quicker and more efficient.

In order to prevent lending risk, financing institutions, mainly banks, set a high financing requirement for SMEs. As for the crowd funding, SMEs only has to exhibit the originality, feasibility and risk of project on the platform and can raise money form crowd if the relevant information is passed. In 2014, 52 projects came to online on Jingdong dongjia, and 38 succeeded with success rate of more than 73%. 30 projects came to online on Choudao, and 9 succeeded with success rate of more than 30%. The crowd

financing mode links the information between investor and borrower through the Internet platform, investor and borrower can communicate frequently through progress updates and feedback mechanism, which reduces information asymmetry and transaction costs [25], and the crowd funding platform only charge a certain percentage of commission, usually 5% of the total financing amount. Jingdong dongjia charges 3% of the total financing amount for commission if it is above 10 million; charges 5% if it is below 10 million.

The concept of crowd funding comes from crowd sourcing and micro finance, in some ways, it can be seen as a part of crowd sourcing. In the crowd funding, the capital raiser's targets are often multiple and not simply limited to the financing, capital raiser can get creative project idea and breakthrough technology bottlenecks through crowd funding, and obtain external help of technology and management experience [26] which can make up the deficiencies of lacking of management experience and weak ability of independent innovation in the transformation and upgrading of SMEs. In addition, crowd funding is also conducive to reducing the risk of transformation and upgrading of SMEs. Under the crowd funding mode, the capital raiser demonstrate project information to the public through the platform, and public evaluate the project and decide whether to support or not and the investment amount, which can reflect the market future of product in a certain extent. This mechanism can make the enterprises understand the market demand of the products, avoid blind investment in innovation

projects, greatly reduce the production cost and risk management, so that products can better meet the needs of the market. In addition, in 2014, 5 projects of the 9 successful financing projects of Choudao are in TMT (technology, media and telecom) industry, 3 are in O2O field, and 1 is in traditional real economy field; 49.70% of 169 investors invest in the TMT industry, 15.39% invest in the O2O industry, 34.91% invest in the traditional real economy. From the successful financing projects industry and investors proportion of Choudao, crowd funding supports enterprise transformation and upgrading through capital allocation.

**The characteristics and advantages of E-commerce finance in the transformation and upgrading financing of SMEs**

E-commerce finance is a combination of e-commerce and finance; Ali Small Loans is a typical representative of the e-commerce finance. E-commerce finance obtains enterprise information through the Internet trading platform which plays a bridge role among the communication client, enterprise capital flow and information flow. However, the enterprise information is not limited to financial information, but also includes commodity transaction number, deal number and transaction volume which are the quantitative data index of medium SMEs operation state and credit condition. These multidimensional and dynamic data changes the way to make investment or credit decisions of the banks and other financial institutions through the analysis of corporate financial statements and other "hard information", so that the institutions has been changed that SMEs are rejected by traditional financial institution because of lacking of "hard information".

E-commerce finance digs into and analyze the behavioral data on the Internet through big data and cloud computing, builds model to compute the

probability of enterprise default and loan amount, realizes synchronous sharing of transaction data through cloud computing platform, which greatly reduces the loan transaction cost. Ali finance data shows that the current average cost of a single loan of Ali Small Loan is 2.3 yuan, while the average cost of a single loan of the traditional bank is at around 2000 yuan [27]. In addition, the modeling technology can also calculate the time and amount of SMEs' capital needs, so as to provide personalized financial services for SMEs.

The biggest operation mode difference of e-commerce finance and traditional commercial bank loan is that e-commerce finance uses e-commerce platform to connect downstream consumers and upstream of the SMEs, establishes credit management system without mortgage and guarantee based on the trade credit, trade record, order and inventory accumulated on the platform of the SMEs. The advantage of this credit system is that it alleviates the problem of credit rationing of SMEs due to lacking mortgage and collateral security. Through the iterating deduction and verification of large data model of enterprise e-commerce business data, the e-commerce finance establishes a financial risk control mechanism to monitor the risk state before, during and after the lending. Before the lending, e-commerce business data is turned out, enterprise management situation, credit status and solvency are analyzed; During the lending, Alipay and logistics system are used to monitor the capital flow, information flow and logistics flow and to make the credit risk warning in advance; after the lending, measures such as that the e-commerce shops are restricted or shut down are adopted, and potential risk will be informed the to other network clients. Due to the perfect risk control mechanism, Non-performing loan ratio of Ali Small Loan are remained at 0.52%, much lower than the bad debt rate about 1.7% of commercial bank mortgage loan products [28].

**Table 4: comparison between Ali Small Loan and traditional small loan**

comparing item	Ali Small Loan	traditional small loan
scope of business	orders for the loan has been carried out in the country and credit loan in Jiangsu, Zhejiang(except for Wenzhou), Shanghai and Guangdong	normally only operate in their home province
customer group	online merchants on the e-commerce platform	individual household and SMEs
transaction expense	pre-audited by information systems and low cost	operated manually and high cost
credit technology	"hard information" such as financial statement, security guarantees and credit scoring technology	"soft information" such as relational credit
inner operating risk	combine modern management belief and Internet technology, risk is relatively low	incomplete loan-extending process and management, risk is relatively high
default rate (2012)	0.52%	1.7%

Sources: literature arrangement

## **POLICIES AND SUGGESTIONS OF INTERNET FINANCE SUPPORTING TRANSFORMATION AND UPGRADING OF SMES**

The development of Internet finance provides a new investment and financing channels for capital supply and demand parties and the hope for SMEs' financial needs to transform and upgrade. Shaanxi province should seize the opportunity for the development of Internet finance, promote the integration of Internet finance and transformation and upgrading of SMEs and achieve the transformation and upgrading of SMEs with a new idea. So, it is needed for SMEs, Internet financial companies and the government to commit the upgrading of SMEs together supported by Internet finance.

### **SMEs should make full use of Internet finance platform**

As a result of high integration of traditional finance and Internet, Internet finance has the financing function of traditional finance and cross-border resource integration function of Internet. In order to make full use of resources, SMEs in Shaanxi province need Internet finance to give full play of the advantages in these two areas. SMEs need to use peer-to-peer lending to solve capital requirements in the process of transformation and upgrading; to use e-commerce finance to carry out the e-commerce trading; to promote the transition to e-commerce business model of SMEs; to use public financing to get enterprise project ideas or breakthrough technology bottleneck of enterprise, to make up the SMEs enterprises innovation short board, to enhance the technological innovation ability of enterprises, to enhance the transformation and upgrading power of SMEs.

### **Internet finance enterprises should support the transformation and upgrading of SMEs**

Because the credit market of large enterprises has been monopolized by commercial banks and capital markets, the existence of trade barriers makes it difficult for Internet companies enter into the credit market of large enterprises. On the contrary, SMEs credit market's entry barrier is low, SMEs credit market is difficult to be covered by the traditional finance, which provides a huge space for development for the Internet finance companies. In addition, in the economic transformation period, enterprises which can not implement transition and upgrading will gradually lose market competitive advantage and its profitability and repayment capacity will also decline, which may increase the credit risk. In the process of supporting the transformation and upgrading for SMEs, the Internet finance enterprises also optimizes their own resources allocation. Therefore, whether it is for the purpose of expanding the space development or of optimizing the loan structure considerations, Internet finance companies should support the transformation and upgrading of SMEs. Therefore, the Internet finance

enterprises itself should set up the SMEs research department, make full use of the unique advantage of talents in Shaanxi Province, strengthen cooperation between school and enterprise, cultivate professional financing talents of SMEs; give preferential treatment in the term of the loan and interest rates to these SMEs with technical advantages and development prospects in its transformation and upgrading process; actively explore the mechanism to provide financial services for the transformation the upgrade of SMEs, strengthen the independent evaluation of transformation and upgrading, increase credit and loan for the transformation and upgrading of SMEs on the premise of benefits.

### **Government should perfect Internet finance system**

Only operated in a sound system, Internet finance can have a positive role in the financing for SMEs. To this end, first, it is needed to perfect the regulatory mechanism of Internet finance. In order to promote the development the Internet finance enterprises of Shaanxi Province, the design of supervision system should abide by the proper supervision principle, should effectively prevent systemic risk, but also avoid excessive regulation which leads to the emergence of hidden barriers and inhibits the development of Internet finance. Secondly, it is needed to improve the intellectual property protection system. In crowd funding, in order to get investment, enterprises will exhibit creative solutions and project business plan as detailed as possible, therefore, in order to reduce the moral hazard of crowd funding, it is necessary to set up corresponding trade criterion for effective protection of intellectual property rights. Finally, it is needed to establish a sound credit rating system. P2P lending, crowd funding and e-commerce finance generally do not have guaranteed mortgage; borrowers' credit is the main basis for judgment. Therefore, in order to reduce the credit risk of Internet finance companies, Shaanxi needs to improve the personal and corporate credit system immediately.

## **CONCLUSION**

The SMEs in Shaanxi are facing many challenges in the process of development, and their transformation and upgrading is imperative. Whether it is transformation or upgrading, adequate financial support is needed, and the ability to solve the problem of financial needs will relate to the success of the transformation and upgrading of SMEs in Shaanxi. Due to the asymmetric information between SMEs and banks, as well as the mortgage difference, low credit level and other reasons of SMEs, traditional financing channels are difficult to meet the finance needs for SMEs transformation and upgrading. At present, the development of Internet finance can effectively reduce the information asymmetry and financing threshold, so that SMEs can enjoy a more flexible, convenient and low-cost financing services, bringing opportunities for

SMEs to solve the demand for funds of the transformation and upgrading, providing a powerful impetus to promote the transformation and updating of SMEs. The aid of the Internet finance means will become a new idea for SMEs to achieve transformation and upgrading.

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