International Journal of Social Science and Economic Research

ISSN: 2455-8834

Volume:03, Issue:08 "August 2018"

THE IMPACT OF LOW-CARBON ECONOMY ON FINANCIAL MANAGEMENT OF ENERGY-CONSUMING ENTERPRISES

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ABSTRACT

Because of the imbalance of economic development, the waste of resource and energy has become increasingly serious, environmental problems are gradually emerging, the importance that the society attaches to the low-carbon economy is also getting higher and higher under such circumstances. China's energy-consuming enterprises, which account for only one-fifth of total enterprises in the country, use 60% of the energy used by the whole society. This paper analyzes problems existing in financial management of enterprises in China's low-carbon economy development, and studies changes and challenges in financial management of energy-consuming enterprises characterized by high energy consumption, high pollution and high emissions in the context of low-carbon economy. Enterprises in financing field face difficulties in financing equity, bond financing, increased financial risks in investments, lack of cash flow caused by low-carbon transformation in operations, and lack of awareness of low-carbon operations, all require enterprises to adopt new methods and learn new ideas. Considering the effectiveness of resources, social benefits, environmental protection, and profitability of enterprises as financial management objectives of enterprises, enterprises should increase investments in low-carbon technologies, make full use of various preferential policies to reduce financial risks, and comprehensively establish low-carbon financial management thinking.

Keywords: low-carbon economy; energy consumption enterprises; financial management; low-carbon transformation

1. INTRODUCTION

1.1 Research background and significance

1.1.1 Research Background

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With the development of the society, environmental and resourceful issues have become increasingly prominent, and climate change is becoming more and more serious. Since the Copenhagen conference, international community has reached a consensus that the new century will be an era of low-carbon economy. In June 2007, “the Climate Change Act”, which aims to reduce greenhouse gas emissions, was passed in the UK. The bill clearly promises that by the year of 2020, the government will cut 26%-32% of greenhouse gas emissions and achieve the long-term goal of reducing the amount by 60% by 2050. At the same time, “the UK's Climate Change Strategic Framework” proposed a macro-plan for global low-carbon economy, pointing out that this low-carbon reform will affect all aspects of people's lives, and financial management of enterprises will also change. The Chinese government also solemnly promises that by 2020, the carbon emissions per unit of GDP will fall by 40%-45% compared with 2005.

According to statistics, at present, the energy consumption of industrial enterprises above designated size accounts for about 70% of total energy consumption in whole society. According to “The first national pollution survey bulletin” issued by State Statistics Bureau, only four industries: chemical raw materials and chemical manufacturing industries, ferrous metal smelting, electric heating production and supply, and non-metallic mineral products industry, their emissions of carbon dioxide reached 16.88 million tons in all, accounting for 79.68% of total emissions. The sum of soot emissions was 7,268,400 tons, accounting for 77.68% of the total emissions, and the sum of nitrogen oxides was 10.5834 million tons, accounting for 89.05% of the total emissions. It can be seen that energy-consuming enterprises are still main entities in energy consumption and pollution. As an energy-consuming enterprise with the most energy consumption and the largest carbon emissions in entire national economic system, it is necessary to adjust traditional financial management to adapt to the new low-carbon situation and contribute to the transformation of low-carbon.

1.1.2 research significance

On the one hand, six high energy-consuming industries: chemical raw materials and chemical manufacturing, non-metallic mineral manufacturing, ferrous metal smelting and rolling processing, non-ferrous metal smelting and rolling processing, petroleum processing coking and nuclear fuel processing, electric heating production and supply, their energy-consuming enterprises have high consumption and high emissions. On the other hand, these energy-consuming enterprises are often pillar industries in local economy. Taking Hebei Province, a province with energy consumption and pollution emissions as an example, in 2014, the secondary industry accounted for 51.1% of whole province's GDP. Among them, coal, steel, petrochemical, power generation and other pillar industries, which are mainly energy-consuming, accounted for more than 80% of industrial output. To a certain extent, in order to achieve the

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transition of the economy to a low-carbon economy, it is necessary to overcome difficulties of energy-consuming enterprises with high energy consumption and high emissions.

In the low-carbon background, the first thing high energy-consuming enterprises need to consider is how to reduce their energy consumption and carbon emissions. These enterprises consume a lot of fossil energy such as coal and oil. In the low-carbon economy, this kind of extensive type operation is extremely harmful to the environment, and it is not conducive to improve efficiency, so it needs to carry out low-carbon transformation. Moreover, current financial management concept of energy-consumption enterprises is relatively backward, and the basis of internal control is poor. In particular, some state-owned and collective enterprises, old equipment and backward management have not fully built a modern information management platform, and it is difficult to adapt to economic requirements of low carbon. Only by changing the concept of maximizing profit as sole goal of financial management as soon as possible, and setting a new goal of maximizing ecological value in a low-carbon economy, will insure that enterprises endure the temptation of short-term interests and resolutely promote low-carbon transformation without the old way of developing the economy at the expense of ecology.

1.2 literature review

1.2.1 Overseas Research Status

The low-carbon economy of foreign developed countries has been proposed and developed earlier, and the impact on corporate financial management has also been relatively mature.

(1) For the study of low-carbon financial behavior of enterprises, scholars mainly study the impact of internal (corporate managers' attitude, value, behavior habits) and external (economic and incentive policies, social environment) factors on corporate low-carbon financial behavior. Such as five-factor low carbonization decision theory proposed by Stern (2000).

(2) At the 2014 International Conference on Educational Technology and Social Sciences, participants raised the issue of management of corporate environmental costs from the perspective of low-carbon economy, and officially proposed to allocate environmental costs and low-carbon costs to accounting cost measurement. Participants also proposed innovative financial management objectives to better reduce energy consumption and promote harmonious development.

1.2.2 Domestic Research Status

(1) Since the concept of low-carbon economy was officially introduced in the UK in 2003,

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relevant scholars began to explore the impact of low-carbon economy on China's financial management.

According to China's current energy structure and low carbon economy development requirements, in "Thinking about Low Carbon Accounting in Enterprise Financial Management" written by Fu Guangfu, "The Impact of Low Carbon Economy on Corporate Financial Management Environment and Countermeasures" written by Guo Haifang, "Reform Strategy for Enterprise Financial Management in Low Carbon Economy" written by Han Chen and so on , these papers analyze shortcomings of the existing financial management system and puts forward the idea of establishing new financial management objectives. In theory, a useful attempt has been made.

(2) After 2010, the concept of green financial management rose.

In Wu Lijian's "Research on Green Financial Management of Enterprises in a Low-carbon Economy Environment", Xu Liang's "Study on Green Financial Management of Enterprises under Low-Carbon Economy", Xu Meimei's "Discussion on Green Financial Management of High energy-consuming Industries in Low-carbon Economy", etc, the idea if green financial management is proposed, it takes full advantage of limited natural resources, protects the ecological environment, and benefits all human beings as a comprehensive financial goal. During this period of financial management research, special attention was paid to energy-consuming enterprises with large energy consumption and large waste discharges. It was proposed that energy consumption and environmental degradation should also be included in financial costs of enterprises, the government should strengthen supervision and urge the establishment of a new low-carbon financial management system. These works provide a good inspiration for us to further explore the impact of low-carbon economy on financial management of energy-consuming enterprises.

1.2.3 Research review

Under the background of global development of low-carbon economy, it is necessary to study the impact of low-carbon economy on financial management of energy-consuming enterprises, both for new accounting theories and for social production practices. Experts and scholars at home and abroad in this field have carried out many useful explorations, especially on the establishment of comprehensive evaluation indicators, performance evaluation systems and harmonious accounting ideas for enterprises under low carbon economy, which provides an important idea for us to study this topic. At the same time, we also found that in China, there is not much research on overall impact of low-carbon economy on the financial management of specific energy-consumption enterprises, which is worthy of further consideration.

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2. THE IMPACT OF LOW-CARBON ECONOMY ON EXTERNAL ENVIRONMENT OF ENERGY CONSUMPTION ENTERPRISES' FINANCIAL MANAGEMENT

2.1 The Impact on policy environment

In December 2007, China's State Council issued a white paper entitled "China's Energy Status and Policy" with a length of 16,000 words, proposing that China will base itself on domestic energy resources, strive to promote diversified energy development, continuously optimize existing energy structures, and officially make renewable energy into an indispensable part of China's energy mix. In September of the same year, China specially formulated "the Medium and Long-term Development Plan for Renewable Energy". The plan further proposes that we should continuously increase the proportion of renewable energy consumption in total social energy consumption, and strive to reach 15% in 2020. At the end of 200, this figure is 8.9%. The White Paper on China's Energy Policy released in 2012 sets new guidelines for accelerating energy technology advancement and promoting clean development of fossil energy. The White Paper on China's Energy Policy, released in 2012, sets new guidelines for accelerating energy technology advancement and promoting the clean development of fossil energy, and has introduced a series of preferential policies to reward technological progress in emission reduction and deepen energy system reform. With continuous deepening of the idea of low-carbon economy, China's government has also promoted low-carbon development of China's economy by setting emission reduction targets and issuing directives of cutting emissions.

"The Outline of the Twelfth Five-Year Plan for National Economic and Social Development of the People's Republic of China" proposes that by 2020, China's unit GDP will reduce greenhouse gas emissions by 40%-50% compared with 2005, and non-fossil energy accounts for about 15% of energy consumption. As a responsible big country, this shows that during the "Twelfth Five-Year Plan" period, energy conservation and emission reduction will become a hard task for all energy-consuming enterprises. The environmental supervision of governmental departments will be more stringent, and traditional high energy consumption and high fossil energy consumption ratio can no longer maintain development. The relevant taxation of carbon tax also frequently appears in discussions, which will affect financial management of energy-consuming enterprises in terms of emission reduction, growth and income distribution.

2.2 The Impact on financial environment

In fact, banks, stock exchanges, and strategic investors in the international market have gradually tilted financial resources toward companies that develop low-carbon economy. The British Giraffe Money Company conducted a "CO2 Mortgage Loan" campaign in 2007, which directly gave low-carbon companies a 2% credit interest rate discount. Now, China's money market is

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also gradually showing such signs. In the recent wave of stock market, overall performance of environmental stocks and new materials stocks is relatively good. The profit-seeking nature of the capital market indirectly illustrates the tilt of financial policy. Taking Feida Environmental Protection (600526) as an example, its main business concentrated on dephosphorization and denitrification, rising from 8.76 in August 2014 to a historical high of 25.77.

2.3 The Impact on social environment

The development of low-carbon economy is not only reflected in changes of the production mode of enterprises, but also in the establishment and development of people's low-carbon ideas, and then develops low-carbon consumption ideas into people's minds, that is, when people consume, in addition to the price and quality of goods, and they will also take environmental protection of goods into account, and prefer to consume low-carbon products. This requires enterprises to comply with market needs as soon as possible, increase the research and development of low-carbon products, strictly control carbon emissions in production process, and at the same time, it will also affect the investment direction and business methods of enterprises.

3. THE IMPACT OF LOW-CARBON ECONOMY ON ENERGY-FUNDED ENTERPRISES' FINANCING AND INVESTMENT

Funds are the “blood” of enterprise operation, especially high-energy-consuming enterprises based on heavy industry. The amount of money required for daily production and operation and low-carbon transformation is very large. Therefore, ensuring sufficient fundraising and diversified sources of financing are of great significance, which is not only necessary for low-carbon transformation, but also necessary for the survival and development of energy-consuming enterprises. However, under the new situation, the financing of high-energy enterprises has faced new challenges.

3.1 The Impact on corporate funding

3.1.1 Equity capital financing was frustrated

Since China's stock market has weak market effectiveness and is greatly influenced by policies, under the background of low-carbon economy, as a company with high carbon emissions, there are many restrictions on fiscal policies and there are many production processes that need to be transformed. As a result, stock quotes fluctuated in the Shanghai and Shenzhen stock markets. Take Hebei Iron and Steel (000709.sz) as an example, since 2011, the stock price has been sluggish for a long time, and earnings per share are low. Although share price of recent bull

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market has risen, price-earnings ratio, which is much higher than the market average, indicates that the rise of stock price is mainly due to the existence of short-term speculative bubbles, and the capital market lacks confidence in the process of low-carbonization of energy-consuming enterprises. The lack of confidence and the risk of uncertainty have led to the loss of potential investors, which has led to a decline in the ability of companies to absorb investment directly.

3.1.2 Short-term bank lending is more difficult

Debt financing is also an important financing channel for energy-consuming enterprises. Through moderate liabilities, enterprises can obtain a greater financial leverage, thereby obtaining funds, expanding the scale of enterprises and improving competitiveness. However, in the low-carbon economy, high-energy companies often have to pay higher interest rates and have more stringent credit conditions to get past bank credit. It is also due to the needs of industrial transformation. Some of the enterprises with small added value and large pollution will even face the dilemma of no money. On the other hand, if energy-consuming enterprises can overcome difficulties, eliminate backward production capacity, and actively develop low-carbon products with relevant preferential policies, they will instead be supported by bank credit. Taking the central bank as an example, the “Guidelines for Chongqing's Credit Investment in 2015” formulated by the People's Bank of China clearly pointed out that bank credit will be tilted towards energy-saving and environmental protection-related industries, and the application of new energy and new technologies will serve as the bank's key credit support direction. In addition, Chongqing's financial institutions will establish a green credit rating system, which will divide energy-consumption enterprises into different evaluations according to the emission and energy consumption levels of different enterprises. The rating will be directly linked to credit support, thereby providing financial support to companies that are truly active in tackling pollution, reducing emissions, and developing a low-carbon circular economy to help them overcome the current difficulties in production transition. At the same time, strengthen credit review for traditional energy-consumption enterprises that adhere to the extensive development path, tighten credit procedures, reduce credit scale, and reassess solvency. There are still many similar financial policies. This requires enterprises to work hard to overcome short-term credit difficulties, actively adapt to the trend of low-carbon production, conduct low-carbon treatment of product production, and obtain credit guarantees after low-carbonization as soon as possible to overcome the difficulties.

3.1.3 Financial support for related low-carbon funds and low-carbon investors increase

Low-carbon funds refer to funds specially set up by the government or enterprises to promote the development of low-carbon economy, and these funds are generally used to provide financial

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support for the low-carbon transformation of relevant enterprise units. Low-carbon fund investment projects generally have the following characteristics: 1. Energy-saving and environmentally friendly. 2. Have a high scientific and technological content. 3. Have a good return prospects. For example, the first industrial investment fund in Guangdong, which is a combination of technology and finance, Guangdong Green Industry Investment Fund, has been officially listed in Shenzhen since January 2010. Under the encouragement of national low-carbon policy, it has continuously increased investments in energy-saving industries such as LED, energy-saving lamps, photoelectrics, etc. Shenzhen Fangsheng Lighting received the special credit support from the fund to update the streetlight system in Shenzhen. The emergence of these funds and investors also provides an opportunity for companies to obtain green financing channels through low-carbon innovation. The rational use of this financing channel by high-energy-consuming enterprises can not only reduce the financial risk impact brought by the low-carbon economy, but also obtain new investors' shareholdings and regain the prosperity of financial capital market.

3.1.4 Government policy financing increase

In the "18th National Congress" report, energy conservation, emission reduction and environmental protection have been written into the construction of ecological civilization as a basic work. The establishment of a resource-saving and environment-friendly society has also been included in the goal of building a well-off society in an all-round way. China's low carbonization process has reached an important period, and the government will inevitably increase investment in this area. At present, the government has not only increased direct financial support for low-carbon industries, but also adopted fiscal interest subsidies and financial guarantees to open a green financing channel for low-carbon transformation of enterprises. Energy-consumption enterprises must seize this opportunity, strive for financial special fund support, make full use of preferential policies granted by banks, lend to urgent needed funds for production and operation with low interest rate or interest-free interest, and make rational use of this to make up for financing gap of other channels.

3.1.5 The solvency of enterprises on debt financing has declined

There is no more mature path to go, which means that in the case of a decline in the solvency of debt financing, the cost of low carbonization is high and the income is unstable. The company's solvency may be limited, and it is unable to afford high expenses of debt interest.

Debt financing will allow enterprises to have lower weighted average cost of capital, and enterprises will get higher financial leverage. However, low-carbon projects of energy-consuming enterprises often have high investment and gains of short-term are not obvious. It

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determines that the company's financial risk will increase, while the energy-consuming enterprises have relatively low profitability during the transition period, and their ability to resist risks is not strong. Therefore, after a reasonable and prudent solvency assessment, we must choose a healthy debt scale to control the financial risks of the company.

3.2 The impact of low-carbon economy on investment in energy-consuming enterprises

Under the era of low-carbon economy, the government encourages enterprises in various industries to actively carry out low-carbon projects. As a "big household" of energy consumption, energy-consumption enterprises are doing poorly in terms of low-carbon energy conservation and energy consumption, but that is why energy-consuming enterprises have many low-carbon investment projects. Once completed, they will inevitably reduce carbon emissions and bring great environmental benefits.

3.2.1 It is difficult to find a low carbon investment transformation project

Under the low-carbon economy, the low-carbonization transformation of high-energy-consuming enterprises can be said to be imminent. In the production stage and consumption stage, enterprises have many processes that do not meet the requirements of green emission. Then, how to change, what process should be changed first, which technology should adopt. All of these become a problem that enterprises need to consider when determining investment projects, which increases the difficulty. Enterprises must formulate the most feasible investment plan according to their actual conditions and the characteristics of the industry, and combine the investment in developing new energy with the investment in reducing internal greenhouse gas emissions to find the investment point. Different from some high-tech enterprises, often have their own production technology of energy-consuming enterprises is are often relatively backward, and production efficiency is relatively low. Under the low-carbon economy, there are many low-carbon investment projects in enterprises, and the relevant linkage and expansion effects of the projects should be considered comprehensively in the selection of investment projects. Finding investment projects that not only meet the production needs of enterprises, but also further improve the resource utilization of enterprises, it has become the primary consideration in the investment process of enterprises.

3.2.2 Investment short-term gains are impaired, long-term returns increase

As a representative of the long-term extensive development of energy-consumption enterprises, the transformation in a low-carbon economy is bound to be accompanied by pain. As environmental costs brought by low-carbon economy are included in the investment cost of enterprises, the short-term economic benefits of investment will be affected, but if managers use

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long-term strategic vision, they will vigorously develop green products, eliminate backward production capacity, and invest in low-carbon projects. Although economic benefits cannot be obtained in a short time, in the long run, this will inject continuous momentum into the development of enterprises in today's increasingly scarce resources. This will cause the company to abandon some investment projects that are still profitable but have not adapted to the requirements of the low-carbon era, and invest more capital in low-carbon products. Although it may reduce some short-term gains, it can enhance the market competitiveness of enterprises. It also helps to establish a responsible image, get a new round of policy support and green financing.

3.2.3 Investment income from low carbon technology research and development increase

The realization of low-carbon production and low-carbon operation in particular depends on the progress of low-carbon technology. Especially in energy-consuming enterprises, a new technology can often achieve a huge effect of reducing emissions by 50%. If the company's investment focus is on promoting scientific and technological progress and technological innovation, it can expand the use of renewable energy, reduce the use of fossil energy, and increase several times investment income. Investment in carbon dioxide capture technology, low-carbon technology development such as exhaust gas desulfurization and dephosphorization technology can meet the objective requirements of low-carbon economy, and help enterprises obtain government financial subsidies and tax incentives. It is a rare high-yield investment project. Energy-consuming enterprises in particular need to take advantage of the opportunity to invest in low-carbon technology development, improve old production methods, promote internationally successful emission reduction methods, promote some new technologies that are currently not widely used, so that take the lead in a low-carbon economy.

3.2.4 Investment decision-making indicator system of existing low carbon is difficult to accurately measure the feasibility of investment projects

In the era of low-carbon economy, the investment of energy-consumption enterprises has undergone tremendous changes, and corresponding investment evaluation indicators also need to be reformed accordingly. In traditional investment evaluation index system, whether it is discounted index (present value index, net present value, intrinsic rate of return) or non-discounted indicator (investment payback period, accounting rate of return), only make project cost and actual financial benefits as the basis for the calculation of financial decision indicators, but don’t include external costs that the investment may bring. The external cost of the project, especially the environmental cost, was not studied as a current cash outflow. In the context of a low-carbon economy, the energy-saving and environmental protection costs of energy-

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consuming enterprises will undoubtedly increase. If these external costs are not internalized, it is likely to lead to a wrong cost analysis.

In the investment, requirements of the low-carbon economy will internalize external environmental costs. Enterprises do not need to pay environmental expenditures before, now they require to pay in the investment cash flow. From the development cost of low-carbon technology to the waste and wastewater treatment costs during construction process, operating costs of enterprises will increase. In order to correct the bias caused by the low carbon economy to feasibility analysis of enterprise investment, we must establish a new decision evaluation index system. The concept of original net present value must be expanded, taking economic and environmental benefits into account, and proposing the concept of comprehensive social return, that is, comprehensively considering social, economic and environmental benefits to evaluate total return of investment and measure investment income of energy-consuming enterprises in a low-carbon economy.

3.2.5 Investment risk increase

Under the low-carbon economy, financial management impact of energy-consuming enterprises is not only limited to fundraising, but also increased risks of their own investment projects. Under the background of low carbonization, new government policies and new demands of the public may be lead to changes in original investment plan. A new emission standard will intuitively increase the cost of company's products and reduce the revenue. This requires enterprises to invest in multiple areas, fully anticipate various situations that may occur, and strengthen the cautiousness.

At the same time, taking representative coal enterprises of energy-consuming enterprises as an example, while investing in traditional products such as clean coal products, more products should be developed and the product line should be developed horizontally and vertically. In the investment-related fields, the gas, coke, chemical fiber and other industries will be integrated, and can even use company's existing idle resources to invest in non-polluting tertiary industries such as logistics and technology consulting, develop business and enhance market risk resistance.

4. THE IMPACT OF LOW CARBON ECONOMY ON OPERATION AND DISTRIBUTION OF ENERGY-CONSUMING ENTERPRISES

Under the low-carbon economy, the operation of energy-consuming enterprises is based on traditional management, and negative impact on the environment is minimized.

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High-energy-consuming industries are generally capital-intensive, their daily cash inflows and cash outflows are relatively large. Under the new situation of low-carbon economy, the transformation of high-energy departments and processes, and the purification of emissions require more cash flow as support. We need to understand the cash inflows for a period of time, ensure dynamic balance of cash flow, rationally arrange the cash needed to reduce emissions, and make good use of funds and recycling plans. Part of daily operating funds are specifically divided into low-carbon funds, which are specifically used to solve the problem of increased operating costs in low-carbonization of various processes, while preventing operational risks of reduced cash inflows that may result from the low-carbon new deal.

4.1 The impact of low carbon economy on the operation of energy-consuming enterprises

4.1.1 Low-carbon business concept is gradually formed

The traditional business philosophy emphasizes the supremacy of economic efficiency. In the management, it pays attention to reducing costs, neglects the protection of economic environment, and takes the old road of "first pollution and governance". Under the low-carbon economy, old business ideas will make it difficult for enterprises to adapt to market changes and challenges, and fall into the quagmire of recession. With the deepening of low-carbon practice, new low-carbon management concepts are gradually being formed, promoting low-carbon management and translating the requirements of low-carbon economy into all aspects of business operations. Focus on the big picture, reduce unnecessary management links, flatten the management system, reduce the distance between management and employees, and better listen to opinions of front-line employees on low-carbon transformation, these can reduce internal consumption and improve management effectiveness. At the same time, starting from a small place, the office paper cup is converted into a porcelain cup, the water bottle is prepared for the meeting, and the printing paper is used on both sides. Through a series of small things, low carbon awareness is enhanced and pollution is reduced. Enterprises can also conduct energy-saving invention competitions and low-carbon production technology competitions to encourage a low-carbon atmosphere that everyone strives for.

4.1.2 Demand for cash increases

As the most liquid asset, cash has an irreplaceable important position in the business. Once the cash chain breaks, not only can low-carbonization transformation of enterprises be realized, but the business of enterprises cannot be carried out normally. Under the new situation of low-carbon economy, the income from sales of products often cannot receive cash immediately, and changes in external environment and operating conditions may make original cash holdings unable to meet increased trading motives and cautious motives of enterprises, so that company's cash

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demands increase.

4.1.3 Inventory management is gradually formalized

Energy-consuming enterprises are generally heavy industrial enterprises with many processes. Enterprises will have a variety of raw materials, semi-finished products and finished products. Therefore, inventory accounts for a large proportion of short-term assets, generally about 40%-60%. Under the low-carbon economy, the financing of enterprises is under tremendous pressure. The scale of inventory and inventory costs must be reasonably controlled to keep inventory at an optimal level. If the inventory cannot be reasonably controlled, it will occupy valuable corporate financial resources, which will affect the low carbonization and even normal operation of enterprises.

4.2 The impact of low carbon economy on the allocation of energy-consuming enterprises

Due to the increase in revenue brought by low carbonization and the need to obtain more low-carbon investment, energy-consumption enterprises will significantly increase the profit distribution of low-carbon investors and low-carbon creditors by issuing cash dividends and stock dividends. At the same time, active profit distribution policy will help energy-consumption enterprises to further promote low-carbon transformation. On the one hand, reasonable profit distribution in a low-carbon economy increases the confidence of business owners, allowing them to continue to invest in low-carbon transformation of high-energy processes. On the other hand, reasonable profit distribution has also increased the interest of bondholders, making them willing to provide credit for energy-consuming enterprises, and help enterprises to tide over difficulties and carry out environmental protection activities. The development of a low-carbon economy will also enable enterprises to consider more low-carbon accumulation funds, and reserve a portion of funds to specifically address possible needs of low-carbon transformation.

5. THE IMPACT OF LOW CARBON ECONOMY ON CORPORATE FINANCIAL RISK

5.1 increase the risk of financial financing

In a low-carbon economy, energy-consuming companies need to struggle for limited financial resources. The energy-consuming enterprises have a large demand for financing. If the financing fails to meet expected targets, the investment and operation of enterprises will fall into the dilemma of no money available, and the low-carbon transformation will be postponed indefinitely. Under this circumstance, enterprises will raise funds to the market at all costs. At present, the low-carbon economy is still in the development stage in China. Mature low-carbon investors and low-carbon investment institutions are relatively few, and enterprises can only

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increase the proportion of debt financing. A large amount of credit capital brings greater financial expenses to burdensome corporate finances, which exceeds the reasonable solvency of enterprises. This situation will increase the risk of financing.

On the other hand, the cash flow required for energy-consuming enterprises' transformation and adaptation is increasing to cope with the increasing financial costs. During the low-carbon transformation and transformation, the factory is under-employed, and new products need a growth period, which will make company's revenue lower and increase the risk of debt repayment. Under the low-carbon economy, energy-consumption enterprises have increased the cost of independent development and research of low-carbon environmental protection technologies, and the cost of introducing international carbon processing production lines has increased. While resolutely promoting the process of low-carbonization, enterprises must fully consider their financial affordability and control financial risks arising from excessive fundraising.

5.2 Increase the risk of return on investment

Under the background of low-emissions transformation of energy-consuming enterprises, enterprises will inevitably increase investment in low-carbonization projects. However, many low-carbon retrofit projects are generally immature, costly, unstable, and the return on investment is difficult to predict reasonably. Considering the compensation for environmental costs, the project's rate of return is low, and even is difficult to recover the investment in the short-term, which will lead to increased investment risks.

Enterprises are becoming more and more demanding in terms of ecological environment. In the process of financial management, the asymmetry of relevant information, the deviation of investment evaluation indicators, and the immaturity of low-carbon transformation technology will lead to direct financial investment risks. In addition, improper investment quotas can easily lead to financial risks .Whether doing researches independently or purchasing advanced technology from abroad, it is difficult to form the expected production capacity without sufficient capital support, and it may also cause financial risks of shrinking revenue. Finally, the demand for the market is changing rapidly. Although low-carbon consumption is gradually becoming a wave of consumption, it is undeniable that other economic factors still have a huge impact on consumers. The products with low carbonization transformation will inevitably increase the cost to a certain extent. If these new products can be recognized by the market, whether enterprises can receive the return should also constitute an investment risk.

5.3 Increase the risk of capital operation

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The production and operation process of an enterprise is also a process in which company's cash is continuously invested and returned. Due to the uncertainty of sales in a low-carbon economy, corporate cash withdrawals are risky. If a large amount of cash is difficult or delayed in the same period, it will result in the risk of liquidity recovery of enterprises, so that the company does not have enough funds to purchase raw materials for reproduction.

The risk of capital operation in a low-carbon economy is also reflected in the increase in tax expenses. According to the perspective of welfare economics, the negative externalities generated by energy-consuming enterprises have caused certain harm to society. When there is a difference between marginal cost of enterprises and marginal cost of the society, the state will adopt external intervention to intervene, and reward or punish through taxation or subsidy. Therefore, as an energy-consuming enterprise, it may be subject to additional taxation by the government. Due to the increase in tax revenues, the cash flow of energy-consuming enterprises is further strained. While enterprises have increased their investment in low-carbon transformation, they have to pay higher taxes for the current development model and further increase financial risks. In addition, the large amount of waste disposal caused by environmental protection in the history of these enterprises will require more compensatory investment, which further highlights financial risks of enterprises. Finally, the ubiquitous problem of debt collection recovery is one of risks faced by energy-consuming enterprises.

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