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The Research on the Problems of the Project Finance in the Energy Saving Service Industry of China and Its Countermeasures

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Abstract

The paper aims to examine the development of new financing models for project finance to attract private investors to finance large Chinese energy infrastructure projects. In particular, the paper investigates the uniqueness of the project finance as a rapidly growing field in finance, the financial characteristics of the project bond market as one of the vehicles for funding energy projects, and the role of the credit support provided by the government to promote the bond-based financing schemes. The paper is organized as follows. Section 1 provides a general description of project finance. Section 2 identifies the economic reasons for using project finance and assesses the role of the project bond market to fund project finance in the energy industry. Section 3 evaluates the proposed financial support from the Chinese Investment Bank and the Chinese Union to boost the Chinese project bond market. Final sections discuss policy implications and conclude.

Key words: Project finance; Energy industry; Project bond; Credit enhancement

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INTRODUCTION

Many studies have highlighted the development of energy projects is fundamental competitiveness, productivity, long term growth, modernization, and energy supply sustainability and efficiency. Long-term investment is a vital driver for a sustainable growth, employment and financial stability. Large energy infrastructure projects require decades of revenues to amortise the high upfront investment and long-term financing schemes. It requires a long-term vision (policy-makers, regulation and financial institutions) rather than a focus on short-term results, especially on investments with significant positive externalities for growth. According to the 13th five-year-plan of China, by 2020 there will be considerable investment needs in energy, transport and information and communication technology infrastructures (Zhang, 2011). It estimates that by 2020 the investment needs for energy, transport and ICT infrastructures will amount to 2 trillion RMB. The debate concerning the funding of long-term investments has grown considerably in recent years in China. Due to limited bank lending capacity, long-term bank lending could not be sufficient to finance energy projects in China.

In addition, it is necessary to attract an increasing amount of private capital to finance long-term investments. In order to do so innovative financing models and new financial instruments are needed. To increase investment in projects that promote structural change and sustainable growth, the Chinese government launched the stakeholders' consultation on 28 February 2011. The principal idea behind the Chinese 2020 Project Bond Initiative is to provide support to project companies issuing bonds to finance large-scale infrastructure projects. This initiative recognizes that capital markets are an alternative source of funding for energy projects. It is supported by the Chinese Government in order to build on existing experience. Project finance has proven to be a useful financing technique throughout the world

and across many industry sectors. Project finance has long been used to fund large-scale energy projects (such as power generation facilities, oil and natural gas pipelines, electric utilities, chemical plants, water and waste water treatment facilities, renewable energy and green technologies, etc.) both in the developed world as well as developing countries. The percentage of capital investment worldwide that are financed on a project basis is likely to increase in the future.

Project finance may be defined as the raising of funds to finance an economically separable capital investment project in which the providers of the funds look to the cash flows from the project as the source of funds to service their loans and provide a return on equity capital invested in the project. The basic characteristic of project finance is that lenders loan money for the development of a project solely based on the specific project's risks and future cash flows. This highlights a key feature of project finance due to the capacity to generate cash flows to ensure the repayment of loans and adequate returns on equity capital. A revenue stream from the project large enough is a prerequisite for project financing.

Project finance should be distinguished from conventional direct finance. In the direct finance model, lenders look to the firm's entire asset portfolio to generate the cash flow to service their loans. In the project finance model, lenders look to the single project as a distinct legal entity. The main difference between corporate finance and project finance is that the assets are financed as stand-alone entities rather than as part of a corporate balance sheet. The project must be able to generate sufficient funds to cover all operating costs and debt service while still providing an acceptable return on the equity invested in the project. Project finance depends on a detailed evaluation of a project's construction, operating and revenue risks, and their allocation between investors, lenders, and other parties through contractual and other arrangements.

The development of new financing models for project finance is likely to attract private sector investor to finance large Chinese energy infrastructure projects in a difficult public financial context. Innovative financing techniques are offering more financing options in the energy industry. The project bond could be a useful long-term financial instrument to mobilize the necessary financing to meet China's strategic energy infrastructure needs. Nevertheless, it will depend on the exact characteristics of the projects and the corresponding project bonds.

1. THE ANALYSIS OF THE FINANCIAL STRUCTURE FOR PROJECT FINANCE IN THE ENERGY SAVING INDUSTRY

Project finance is a useful technique for financing large projects that can be organized as a stand alone company.

It is an appropriate method of long-term financing for capital-intensive industries where the investment financed has a relatively predictable cash flow. A special purpose legal entity (project company) is a purely private company in which private investors bear the entire investment risk or a public-private company in which public and private partners share the investment risk (public-private partnerships). Project finance involves both an investment decision and a financing decision (Mao, 2010). One of the key structural features that characterize project finance is the distinction between the asset (the project) and the financing structure. The project company lies at the center of all the contractual and financial relationships in project finance scheme. Project financing arrangements involve many contractual relationships among multiple parties. Project finance builds on the set of numerous contracts that define the business and financial relationships:

(a) Supply contracts: They ensure adequate sources of supply.

(b) Construction contracts: They define the terms on which a qualified contractor will build the project facilities.

(c) Financial contracts: To raise debt and equity to finance the project.

(d) Operating contracts: To govern the day-to-day operation of the project company.

Project finance is an innovative model of financing projects. Its unique structural attributes provide valuable insights to identify the primary motivations for using project finance:

(a) Cash flow-based financing: Financing decisions are based on the cash flows that the project is expected to generate;

(b) Off-balance-sheet financing: The project finance allows investors to keep debt off the balance sheet. It involves the use of a special purpose vehicle (SPV) to isolate assets in a separate entity and fund a project with only limited recourse to the assets of external investors.

(c) High leverage financing: For equity investors, the appeal of project finance is that it can maximize equity returns. In project finance it is possible to achieve much higher leverage ratios than sponsors could otherwise sustain on their own balance sheets.

(d) Large project financing: Investors make use of project finance to fund projects that may be too large for one investor to undertake on its corporate balance sheet.

(e) Long-term financing: On average project finance loans have a longer term than corporate loans (Hua, 2011).

The project finance has two sources of funds: debt and equity. Debt is provided by lenders and equity is provided by investors in the project. The traditional debt-based financing model is the bank loan. It is the traditional way to raise long-term funding for long-term projects (Hu, 2012). Debt capital is provided by large financial institutions (traditionally commercial banks), including

international banks. Banks are the largest providers of debt project finance. It shows the importance of banking relationships in the project finance market. The need to raise capital, typically from banks, makes it significantly more difficult to finance projects with negative net-present-value. Convincing bankers to provide a large portion of the capital is an important constraint. Banks specifically focus on the ability of the project to make loan repayments. Banks may finance project companies directly or indirectly, through participation in syndicated loans. The latter are originally arranged and underwritten by large banks and then usually offered to domestic banks as sub-underwriters. Generally, large deals tend to be syndicated. In large projects, several banks are usually involved as financial advisers and lead managers, who will underwrite the debt and place it in the capital market. They normally divide responsibilities for various aspects of the project finance structure. Project bank loans have been concentrated in USA, Europe, Middle East, and Africa, where most of the large projects have been located. They have also been concentrated in the power industries, oil and gas, and the transportation industry, where most of the large projects have taken place.

Equity is the second source of capital to finance large projects. Typically the project sponsors provide the greatest proportion of initial project equity. Outside equity investors, usually financial institutions (commercial banks, investment funds specializing in project finance equity, equity vehicles), may invest equity in a project. Venture capital and private equity investors also serve as attractive sources for capital raising, as an increasing number of funds are investing in renewable energy and green technologies to diversify their portfolios. The size of cash distribution to equity investors is not specified contractually. It depends on the profitability of the project and the expected residual value of the project. Equity investors receive cash distribution after paying debt service. A reasonable return on equity investment is necessary to involve equity investors in the project. The return required by equity investors also varies depending on when they come into the project. Any project has different levels of risk over time and investors get into projects at different stages and with different investment strategies. Equity investors have a level of return on equity above which an investment is acceptable, and below which it is not. It depends on the cost of capital, the type of the project, the technology, the risks, the security package, etc..

2. THE ANALYSIS OF THE FUNCTION OF FUNDING PROJECT FINANCE IN THE ENERGY SAVING INDUSTRY

The financing of large-scale projects through bank debts has become more difficult because since the

financial crisis, the capital and liquidity requirements for commercial banks have become much stricter. We have put pressures on banks' balance sheets, while public budgets remain constrained. The tighter capital standards that are imposed on commercial banks have significantly reduced the available long term funding for projects in the energy industry. In addition, legal lending constraints with regard to loans to a single borrower and risk management guidelines can limit the availability of long-term funds to finance large projects in the energy industry. The latter can incentive banks to finance large projects through loan syndication.

The banking sector will not be able to provide alone the amounts of debt that are required by large-scale energy projects. There is the need to find ways to mobilise private sector investors, without increasing direct public funding and public indebtedness. Identifying alternative long-term debt sources are critical in terms of available amounts for energy projects. With the "2020 Project Bond Initiative" the Chinese Government promotes credit support (payment guarantees or credits) provided by the People's Bank of China. The Chinese financial support aims to assure long-term financing for Chinese infrastructures against the background of increasingly limited public funding, and growing constraints on long term bank lending. The Chinese initiative does not aim at substituting bank financing, but at ensuring compatibility.

The proposed financial support from the People's Bank of China could take the form of a debt service guarantee or an additional layer of debt at the subordinated level. The debt service guarantee could be in the form of a contingent credit line provided to the project entity by the People's Bank of China, which would inject funds into the special entity if the project were unable to generate sufficient cash in the short to medium term to service its debt for any reason. In details, the project company issues project bonds on the capital market to finance an infrastructure project. Private investors (usually institutional investors) buy the project bonds. The project company repays the bond from its current revenues. The guarantee enters into force if and when the bond cannot be serviced from the current revenues "for any reason". In this case, the holders of the bond concerned are serviced by the People's Bank of China guarantee payments to the maximum of the previously determined guarantee sum. Rather than issuing a permanent guarantee, the People's Bank of China can also issue a credit to the project company to the maximum amount of 20% of the investment sum. The People's Bank of China's credit is an alternative to payment guarantees. A project company would divide its debt into two layers: A senior portion (project bond) to be placed with institutional investors, and a subordinated debt obligation, which would be underwritten by the People's Bank of China.

3. THE ANALYSIS OF THE COUNTERMEASURES IN FINANCING MODE OF ENERGY SAVING INDUSTRY

Involving best practices in financial engineering that may be used to enhance project attractiveness to potential investors and develop multiple financing structures to attract various investors to projects.

Firstly, create a capital market infrastructure for the European project bonds. The European Investment Bank may create a trading platform to improve liquidity and pricing, provide liquidity in the project bond market, provide a facility to purchase unsold project bonds (these could then subsequently be sold in the financial market).

We should encourage private investments by providing a supportive investor regulation. A new regulatory framework, friendlier with long-term investments, should involve accounting standards, prudential principles, corporate governance, and fiscal incentives; Attracting credit enhancement tools to produce the required ratings suitable for bond investor demand. A strong investment-grade credit rating of the project bonds might be the way to convince long-term investors to participate in large energy projects.

Secondly, encourage expertise to manage complex project finance transactions. In a pilot phase, it may be useful to undertake economic and financial analyses in order to collect good practices, exchange knowledge and methodological supports; we should evaluate the potential effects of the new banking regulation on project bond market (possible distortions are due to the treatment of project debt in capital requirement measures). Attracting high quality sponsors: project bonds represent a financing alternative and offer liquidity although it must compete with traditional bank loans; Involving best practices in financial engineering that may be used to enhance project attractiveness to potential investors and develop multiple financing structures to attract various investors to projects.

Thirdly, promote the creation of an international special purpose vehicle (SPV) to issue project bonds for cross-border energy projects; we should promoting the harmonization of national regulation and legal frameworks that help structure different financial schemes of project bonds and develop innovative financial instruments tailored to the energy sector; Involving an independent asset manager to provide monitoring, surveillance and reporting to bond investors.

Finally, Provide information on the opportunities for investing in project bonds related to projects in the energy industry; we should build effective financing partnerships

with the private sector. Most energy projects, renewable energy projects in particular, rely on government and public funding. Involving high quality projects: Well structured projects with high quality cash flows and financial robustness allow achieving investment grade rating. The repayment of project debt is totally dependent upon project cash flows (Huo, 2012).

CONCLUSION

The paper highlights several important characteristics of the project bond market. The project bond, as an innovative financial instrument, is a useful tool by helping to bring private and public funds together to finance projects of major public interest. Project bonds can attract capital market financing for long-term energy infrastructure projects.

Project finance is likely to be increasingly important in the future as China relies on it to develop their energy infrastructures. It can provide funding for investments in the energy industry that the public sector might not be able to undertake.

For the near future we can expect the development of expertise, lending and private placement capabilities to lower size threshold to access the bond market to fund projects in the energy industry. The exchange of best practices between China and other countries would be very helpful in this field. There is also increasing investors' interest in debt funds investing in energy infrastructures. New funding structures will be developed to meet the needs of the project finance market and balance the needs of investors with the needs of the public sector.

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