



ESTABLISHING CHINA'S GREEN FINANCIAL SYSTEM

Detailed Recommendations 2: Develop Green Funds



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Detailed Recommendations 2: Develop Green Funds

By integrating the social and environmental concerns of investors and their financial investment objectives, green industry funds are endowed with the mandate to pursue maximal overall social welfare instead of purely commercial interests. Green industry funds not only proceed from an economic perspective but take into account the environmental impacts of investment objects as well.

(I) Definition of green industry funds

Green industry funds come in various types. In terms of the level of government participation, green funds can be divided into government-backed environmental protection funds, green funds of PPP, as well as purely market-based green funds; in terms of investment objects, green funds can be divided into green industry investment funds, green bond funds, green share funds, green hybrid funds, etc. These types of green funds have different objectives, fund sources, investments, operational mechanisms and organizational patterns.

Green industry funds are a category of green funds encouraged by the State Council. The *Opinions of the State Council on Strengthening Major Environmental Protection Work* promulgated in 2011 explicitly stipulate that environmental industry development funds should be established through multiple channels to broaden the financing avenues for the development of environmental industry. According to the *Interim Administrative Measures for Industry Investment Funds* (hereinafter referred to as the 'Measures') promulgated by the National Development and Reform Commission, industry investment funds refer to a collective investment system of interest and risk sharing through equity investment and operational management services for unlisted companies. Investment fund companies are established by offering fund shares to investors and fund managers will act as fund advisors or otherwise, fund advisors and custodians can be entrusted for the management and custodianship of fund assets to be invested in such areas as start-ups, corporate reorganization and infrastructure constructions. In addition, the Measures also stipulate that industry funds may only be invested in unlisted companies and that the investment areas reflected by the name of a fund shall account for no

less than 60 percent of the aggregate value of fund assets. Idle funds arising from the process of investment can only be deposited in the bank or used for the purchase of negotiable securities including treasury bonds and financial bonds. According to this regulation, green industry funds should be invested in unlisted green enterprises. In addition, more than 60 percent of the total value of fund assets should be invested in the area of green and environmental industries. Green industry funds fall into the category of industrial investment funds.

(II) Experiences of industry funds in developed countries

1. Characteristics of industry investment funds of the US, Japan and Europe

China's industry investment funds are reincarnated from Western venture investment and private equity funds and represent an innovation with both the common attributes of similar foreign funds and Chinese characteristics as well. In Western countries and Japan, Southeast Asia and Chinese Taiwan and Hong Kong, industrial investment funds mainly appear in the form of venture capital or venture investment funds.

2. Inspirations for China's green industry funds

International experiences of green industry funds provide us with the following inspirations:

First, green industry funds can broaden financing channels and create a diversified structure of investment entities. Many green projects are high risk and thus incompatible with the financing channels dominated by fiscal funds and bank credit. In the long run, green industry funds should be financed by the private sector. Policy and institutional adjustments should be made to broaden the financing channels of green industry funds and develop a diversified structure of investment entities with the joint participation of private capital, pension funds, financial institutions, overseas capital and government funds.

Second, efforts should be made to identify appropriate organizational patterns of green industry funds in light of Chinese characteristics. Restricted by existing laws and regulations, contract type and closed organizational patterns, green industry funds are appropriate for China's national situation. In the long run, limited partnerships are more suitable for green industry funds. By integrating capital with

professional talents and based on a clear division of rights, responsibilities and revenues, limited partnerships can increase the professionalism of decision-making and mitigate the potential risks and liabilities assumed by limited partners while incentivizing and restraining the conduct of managers.

Table 1: Green PE funds of developed countries

	US	Japan	Europe
Fund sources	Mutual funds account for 54 percent, consortiums and insurance companies account for 11 percent each, and companies, 8 percent. Most fund sources of industry funds in the form of limited partnerships are pension funds (mainly corporate pension funds), individuals and households.	Financial institutions including securities companies, banks and insurance companies are major sources of industry investment funds in Japan and Europe with very few personal investments.	
Organizational pattern	Most US industry investment funds are in the form of limited partnership companies. As major investors, institutional investors such as pension funds and individual investors are limited partners who only assume limited liabilities without taking part in specific business operations: general partners are usually technical experts engaged in venture investments responsible for the identification, review and decision-making of investment projects and serve as directors of start-ups, provide guidance and oversight of corporate operation, take full charge of the business management of industry funds and assume unlimited liabilities. Despite a limited share of investment, general partners may extract a certain proportion of overhead cost from a fund's business revenues and share fund revenues upon fund maturity and termination.	Most of Japan's industry investment funds are owned by large corporations, banks and limited liability companies of local governments, with corporate internal structure modelled after banks featuring an organizational structure of separate functions including an investment department, a review department and an information department. Investing in one project requires the coordination of multiple departments, which results in inefficiency. Most business operation and management staff are from banks. Due to a conservative mindset and the lack of a technology background, they lack capabilities to conduct risk assessment and screening of start-up projects. As a result, only a small proportion of Japanese industry fund investments have been allocated to start-up projects.	Most of industry investment funds in Europe derive from banks and mainly invest in corporate expansion and M&As with an organizational pattern similar to Japan's.
Investment areas and stages	Start-up stage of high-tech companies	Sophisticated stage of corporate development with limited risks	
Capital exit mechanism	IPO and corporate M&A	IPO, corporate mutual shareholding	IPO, corporate M&A

Source: compiled by authors of this paper

Third, create the growth enterprise market (GEM) and the OTC market. The Growth Enterprise Market (GEM) of the US, Japan and Europe provides financing for emerging enterprises and an exit channel for venture capital. China's growth enterprise market (GEM) should try to reduce listing threshold and transaction costs, enhance market transparency and regulation and adopt a strict delisting system.

(III) The case for developing China's green industry funds

1. Necessity for developing green industry funds

The State Council and the Ministry of Environmental Protection have vigorously called for developing green industry funds, mainly as a result of pressure arising from the shortage of environmental protection funds. Prior to the 1990s, most environmental industry funds derived from government fiscal funds. With growing pressures of environmental protection, fiscal funds became insufficient and attracting private capital into environmental industry became an urgent priority.

Bank lending served as an early means of attracting private capital into the environmental protection sector. Therefore, within the green finance policy system, green credit was launched the earliest. However, bank lending is appropriate for mature enterprises, as loans generally require a mortgage guarantee or good corporate profitability, which are difficult to be satisfied by many newly established and high-risk environmental companies. Hence, it is necessary to provide these companies with equity investments through industry funds.

Demand for green industry funds also derives from the tendency towards large-scale environmental investments. Great differences exist in the demand of various environmental industries for financing. Financing demand for most companies in the sector of soil restoration, for instance, is between five million yuan and 50 million yuan (US\$ 0.8 – 8 million) while this figure would normally reach a few billion yuan for companies in the sector of wastewater treatment. It is unlikely for two or more wastewater plants to exist in the same region given their natural monopoly. In this situation, environmental infrastructure projects like wastewater treatment would require massive investments through multiple financing channels and methods and cannot be satisfied by a single financing channel. In addition, a company must possess sufficient capital in order to apply for bank loans. Otherwise, excessive leverage ratio would cause serious financial risks. For these reasons, industry funds are required to provide equity financing for large or high-risk environmental projects.

Green industry funds have the following advantages for environmental industry investments: first, green industry funds have a relatively long investment duration, which is generally over ten years and thus provides long-term and stable financing support for the environmental industry. Second, green industry funds are able to scatter risks within a certain range and thus will not be excessively averse to investment risks of individual projects. Third, green industry funds put a premium on long-term future corporate revenues, which will greatly increase the possibilities of

financing for companies that cannot be profitable in the short term but enjoy great potential in the long run.

2. Create green industry funds through a PPP model

Some low-profit green industries require government intervention in the form of green industry funds. Depending on the level of fiscal participation, green industry funds can be divided into green industry funds through a PPP model and green industry funds of a purely market-based nature. Environmental projects with a desirable profitability and investment return have no difficulty accessing financing. However, compared with the international investment and financing market for environmental protection, China's environmental industry remains in an early stage. Due to limited profitability and the significant risks of the environmental industry, it is necessary for the government to promote the development of green industry funds through a PPP model.

On the basis of their investment targets, green industry funds can be classified into region-based funds and industry-based funds that invest in one or a few select industries. The first type, region-based funds, will mainly invest in regional environmental projects that can span multiple industries. Two examples would be the Tianjin Eco-city construction fund and the pilot Hai River water system environmental fund. The second type, industry-based funds, will dedicate their resources not to certain geographical regions but rather to a single or a number of environmental industries, such as a new energy industry fund and a soil remediation industry fund. Regardless of their focus, green industry funds all require government assistance in their funding, but the extent of government input, as well as the level of intervening government – whether central, regional, or local, can vary depending on the characteristics of the fund. Generally speaking, local governments would play a dominant role in such aspects as fund-raising and investment allocation for green industry fund with significant regional attributes. First, because these funds have already specified their scope of investment as local environmental projects at their establishment, which have significant positive externalities to local economy, these funds should require greater involvement of the local government. The local government must support these funds by creating a cooperative relationship featuring explicit contracts, clear responsibilities and shared interests and risks between government and private capital. In addition, because these funds mainly target regional environmental programs, careful program planning and design can provide mutual benefits and risk control effects to other industry chains in the same region. By contrast, green industry funds that target certain environmental sectors often are already receiving indirect government support (such as subsidies for new energy programs that they invest in), frequently provide attractive returns to private investors, and have greater market potentials and externalities. Therefore, this second type of funds will only need a smaller proportion of funding support from the local government, and the local government will not register as a general partner of these funds, only as a limited partner.

3. Feasibility for establishing green industry funds

First, the overall policy environment is ready. According to the relevant provisions of the *Interim Administrative Measures for Industry Investment Funds*, industry investment funds can be divided

into venture investment funds, corporate M&A investment funds and infrastructure investment funds by different investment areas; obviously, green funds are infrastructure investment funds and consistent with the scope of investments under policy encouragement. Second, the *Opinions on Encouraging and Guiding the Healthy Development of Private Investments* have already identified various policies to encourage private capital participation in water conservation projects, land consolidation, the geological environment restoration of mines, support of private capital investments in urban sewage treatment and urban afforestation.

Third, the potential sources of fund capital are extensive. Potential financial sources for investments in green industry funds are extensive and include pension funds, insurance funds, state-owned enterprises (SOEs), private enterprises, government funds and overseas investors. Pension funds and insurance capital are seeking long-term investment opportunities and very interested in green industry funds focused on sustainable development, but lack sufficient avenues and fund management institutions with good performance. Many SOEs are also seeking green investment opportunities in the process of structural transition. Some international institutional investors that took part in various green investor networks are also seeking opportunities for green industry investments in China. Some private enterprises in China have already started to create green investment funds using their own capital.

(IV) Policy recommendations on promoting the development of green industry funds

Green industry funds will serve as the platform through which private capital can converge into professionally managed green investments and are an important supplement to green credits. In this section, we propose the following five recommendations to support the development of green industry funds:

(1) Encourage governments at all levels to sponsor or participate in green industry funds through a PPP model. The low-profit attribute of environmental industry requires government fiscal participation and support. Establishing green industry funds through a PPP model is an important means to propel the development of green industry funds. We believe that **government roles and participation methods should be determined according to the attributes of different green industry funds**. Generally speaking, local governments should play a dominant role in the raising and investment directions of green industry funds that have significant local attributes and local

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