

The Globalization of Chinese Energy Companies: The Role of State Finance



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ABSTRACT

This study examines the extent to which the Chinese state has facilitated the globalization of Chinese energy companies. In just over a decade, Chinese energy companies have fast become household names across the world, either through trade, foreign direct investment, or through development bank loans. In terms of exports, China's largest sectors are petroleum, photovoltaics, and coal but with respect to foreign investment Chinese energy companies are overwhelmingly concentrated in oil and gas. Despite the fact that China's energy firms are increasing their use of domestic and global capital markets, we find that state finance has been the primary driver of the globalization of Chinese energy firms, with the China Development Bank and the Export Import Bank of China playing the leading role on the globalization of China's global oil and gas companies. In arriving at these findings, we explain the dynamics of the Chinese financial system and how it supports the globalization of China's energy companies.

1. INTRODUCTION

The purpose of our study is to understand China's expansion into global energy markets. In addition to the rising volume of energy commodities the country sources from all over the world as the world's largest consumer, evidence of China's expanding energy footprint has been mounting on two fronts over the past 15 years. First, and contrary to the conventional wisdom, China has increasingly become a major provider of energy products and services to countries across the globe through trade, especially in the realm of hydropower, photovoltaics (PV), wind turbines, energy efficiency technologies, batteries, as well as thermal power plants. Second, China is emerging as a major provider of capital for the global energy markets in terms of both green field investment and mergers and acquisitions (M&As).

Different from many economies around the world, however, the state still plays a predominant role in the country's energy sector. A corollary of this state dominance is that much of the country's recent expansion on the global energy markets has been spearheaded by its state-owned enterprises (SOEs) active in the energy domain. Given the speed and scale of this expansion, which will be documented in this study, there is little surprise that it has not only captured the imagination of many but also spawned much discussion over the national security and governance implications for countries bearing witness to the activities carried out by Chinese energy companies.¹

Despite this growing interest in China's rise as a global energy player, there has been a glaring gap in literature. Except for a very small number of studies focusing on some specific regions, such as Latin America and Africa,² little ink has thus far been spilled over how the country actually finances its increasingly globalized energy footprint. Among the very few studies that have looked into the financing aspect of China's engagement with the global energy markets, almost none have provided any detailed analysis of how China mobilizes its financial system to support the global expansion of its energy companies, what determines its selection of specific financing vehicles, and the broad policy implications of the way China finances its global engagement.

With this study, we seek to fill the lacuna and make an initial attempt to provide a comprehensive assessment of how China integrates its energy system and financial system to support the expansion of its energy companies on the global energy markets. We advance three central claims. First, while the capital markets have become increasingly accessible and instrumental in meeting the broader financing needs of companies in China, their role in financing the global expansion of Chinese energy companies remains largely circumscribed. This reflects an inherent preference of the state to use state channels to mobilize capital to turns its 'national champions' into global ones. Second, the structural weaknesses of the country's financial markets and the inherent state preference makes state financing the primary option for the Chinese energy companies seeking global expansion. There are three arrows in the Chinese state financing quiver—fiscal budgets, state-owned commercial banks (SOCBs), and policy banks. Out of the three, the policy banks, the China Export and Import Bank (CHEXIM) and the China Development Bank (CDB) in particular, represent the most potent instrument of state financing. Third, by playing such a prominent role in financing the global expansion of its energy companies, the

1 Examples include David Zweig and Bi Jianhai, "China's Global Hunt for Energy," *Foreign Affairs* 84, no. 5 (2005); Maite J. Iturre and Carmen Amado Mendes, "Regional Implications of China's Quest for Energy in Latin America," *East Asia*, no. 27 (2010); Zhongxiang Zhang, "The Overseas Acquisitions and Equity Oil Shares of Chinese National Oil Companies: A Threat to the West but a Boost to China's Energy Security," *Energy Policy* 48 (2012); Mahamat K. Dodo, "The Securitization of China's Engagement with Africa: EU Energy Security Strategy," *Journal of Alternative Perspectives in the Social Sciences* 5, no. 4 (2014).

2 Deborah Bräutigam and Kevin P. Gallagher, "Bartering Globalization: China's Commodity-Backed Finance in Africa and Latin America," *Global Policy* 5, no. 3 (2014): P.656; Kevin P. Gallagher and Amos Irwin, "Exporting National Champions: China's Outward Foreign Direct Investment Finance in Comparative Perspective," *China and World Economy* 22, no. 6 (2014); "China's Economic Satecraft in Latin America: Evidence from China's Policy Bank," *Pacific Affairs* 88, no. 1 (2015).

two policy banks, particularly the CDB, have turned themselves, as well as China into a leader in global energy finance.

It is almost certain that we are likely to observe China's more active use of state financing as it accelerates the pace of "going out" and executes the recently rolled-out Belt Road Initiative under Xi Jinping's leadership. Given that a huge fraction of this state financing goes to the area of energy and infrastructure, the growing provision of Chinese development finance could lessen energy and infrastructural supply bottleneck, contribute to poverty reduction, and even facilitate low-carbon development around the world. Nevertheless, a growing dependence on the provision of Chinese state financing carries some risks too. One potential drawback is that China's dependence on public finance means that the country's contribution to global energy finance will be sensitive to its policy cycles at home as well as the stability and healthiness of the country's financial system.

We organize the study in nine sections. In Section 2 we will provide an estimate of the scale of China's expansion on the global energy markets. In Section 3 we will elucidate why the role of capital market in the global expansion of Chinese companies is circumscribed. After explaining how the state mobilizes capital for the energy industry in Section 4, we will anatomize the role of fiscal financing and state-owned commercial banks in Section 5 and 6, respectively. In section 7 we will consider the role of policy banks. Following this high-level discussion, we will present a case study in Section 8 to examine the role of CDB in financing the country's global energy footprint, after which we conclude in Section 9.

2. THE GLOBALIZATION OF CHINA'S ENERGY FOOTPRINT

In a very short period China has transformed into a leading energy player in the global economy. Its energy tentacles have extended to almost every corner of the globe. This global footprint has three primary manifestations—trade, outward foreign direct investment (OFDI), and cross-border mergers and acquisitions (M&As) in the area of energy and energy technologies.³

As Table 1 illustrates, China has become one of the most significant energy exporters in the world economy—providing more than \$476 billion in energy exports since 2000.⁴ In all sectors but natural gas and coal, China's export growth far outpaced world export growth in the same sector during the period. In relative terms, China now provides more than half of what the United States does to world markets. But in some sectors China has already emerged as the world's leading exporter. For example, in hydropower and photovoltaics (PV) China's exports are four and five times larger than those of the United States. China also exports twice as many technologies for energy power plants than does the United States and comprises 18 percent of the global market—whereas US exports of power plant technology are nine percent of global market share.

³ The globalization of energy also occurs through formation of joint ventures, licensing, consulting contracts, and joint research and development (R&D). Kelly Sims Gallagher, *The Globalization of Clean Energy Technology: Lessons from China* (Cambridge, Massachusetts: The MIT Press, 2014).

⁴ Author's calculations based on the UN COMTRADE database.

Table 1: China as a global exporter of energy

	China			
	Total Exports (00-13)	Percent of World Exports (2013)	Percent Change (00-13)	World Percent Change (00-13)
Petroleum and petroleum products	211,017,455,356	1.2%	392%	239%
Natural Gas	12,225,686,022	0.5%	182%	304%
Coal and coal equipment	39,485,226,646	4%	-46%	406%
Hydro equipment	2,735,457,925	17%	781%	89%
PV equipment	173,724,851,858	44%	2482%	397%
Nuclear fuel and equipment	390,886,822	0.8%	163094%	100%
Wind Equipment	8,865,052,686	6%	1731%	277%
Power Plants	28,205,873,075	18%	2325%	151%
	United States			
	Total Exports (00-13)	Percent of World Exports (2013)	Percent Change (00-13)	World Percent Change (00-13)
Petroleum	599,869,323,560	3%	1003%	239%
Natural Gas	86,060,428,508	3%	815%	304%
Coal and coal equipment	86,436,824,196	10%	320%	406%
Hydro equipment	674,938,575	4%	18%	89%
PV equipment	30,407,820,454	8%	59%	397%
Nuclear fuel and equipment	3,736,997,858	7%	156%	100%
Wind Equipment	19,331,255,016	14%	403%	277%
Power Plants	13,770,096,477	9%	5%	151%

Source: authors' calculations based on data drawn from the United Nations COMTRADE database

Nevertheless, it should be noted in some cases the large growth figures are a result of the fact that China exported close to nothing in such markets fifteen years ago. A case in point is the rise of PV cells as China's second largest energy export. China's PV exports are now the most competitive on the planet, and penetrated 44 percent of the global market by 2013. But in 2000 China merely captured four percent of the global PV market share. Further, China is also a global leader in the export of power plants, especially in hydroelectric dam and advanced coal-fired power generation equipment, holding just under 20 percent of the world markets respectively. The rise of China as a major energy technology exporter, especially in the area of power generation and clean energy technology, as Kelly Sims Gallagher notes, is highly dependent upon its ability to import, digest, absorb, modify and indigenize foreign technologies. However, it is worth noting that China has thus far been unable to indigenize gas turbines.⁶

Chinese companies are increasingly investing abroad as well. According to our calculations shown in Table 2, the cumulative amount of China's global energy investment in this century is \$258 billion, including both greenfield OFDI and M&As. Upon close examination, three stylized facts about Chinese global energy investment stand out. First, although it represents only 3.54 percent of global FDI in energy, China has significantly increased its global energy investment from the beginning of the 21st century to the present. Second, Chinese energy companies appear to have demonstrated a clear preference for M&As over greenfield investment, with the former accounting for 82 percent of the total and the latter 18 percent. Third, despite an overall upward trajectory, Chinese global energy investment accelerated

5 Gallagher, *The Globalization of Clean Energy Technology: Lessons from China*.

6 The authors thank Kelly Sims Gallagher for making the point.

substantially in the aftermath of the 2008 global financial crisis. As an illustration, the amount of total Chinese investment in the period of 2008-2015 is more than \$211 billion, which is 4.5 times of that in the period of 2000-2007. Furthermore, this post-2008 acceleration continues to favor a tilt toward M&As. For instance, Chinese M&A investment in the period of 2008-2015 was almost six times the amount of the 2000-2007 period while greenfield investment doubled. To be discussed later, this upsurge derives primarily from the attempt of Chinese energy companies and financial institutions to take advantage of the investment opportunities brought forth by the collapse of commodities prices following the 2008 global financial crisis.

Table 2: China's participation in global green field investment and M&As in energy

(in millions of US dollar)	2000-2007	2008-2015	Total	World Total	Chinese % in World Total
Greenfield	\$14,556	\$31,268	\$45,824	\$1,281,730	3.57%
M&A	\$31,922	\$180,220	\$212,228	\$5,999,193	3.54%
Total	\$46,478	\$211,488	\$257,966	\$7,280,923	3.54%

Source: author's calculations based on data drawn from the FDintelligence, a greenfield investment database, and the DealLogic, a M&A database.

In terms of sectoral distribution, as Table 3 reveals, the overwhelming majority of Chinese overseas energy investment flows into fossil fuels. So far as greenfield investment is concerned, fossil fuels account for 90.25 percent of the Chinese investment whereas renewables represent just 9.07 percent of the total. Hydro has an almost negligible share, which is only 0.68 percent. There is no transaction in the sector of nuclear. The same dynamics are also mirrored in Chinese global M&As in energy. For instance, over 95 percent of Chinese M&As take place in fossil fuels, with oil and gas and electric power generation⁷ attracting four fifths and one sevenths respectively, whereas renewables take slightly less than five percent. Hydro and nuclear are minor. There are only two deals in the hydro sector and one in the nuclear sector.

Table 3: Sectoral distribution of Chinese global M&As in energy

Sector	Deal Value (\$ million)	percentage	Deal Number	percentage
Electric Power	31,538.44	14.86%	95	22.25%
Oil and Gas	170,675.40	80.42%	309	72.37%
Solar, Wind and Renewables	10,013.17	4.72%	20	4.68%
Hydro	0.60	0.00%	2	0.47%
Nuclear	0.00	0.00%	1	0.23%
total	212,227.61		427	

Source: author's calculations based on data drawn from the FDintelligence and Deallogic databases

In terms of regional distribution, Chinese energy investment is truly global. Nevertheless, the Chinese OFDI and M&As are characterized by different dynamics. So far as the Chinese greenfield investment in energy is concerned, as Table 4 illustrates, almost all (99.2 percent of the total to be precise) occur in emerging economies. Emerging Asia is the region where most greenfield investment go, and has a share of 39.30%. Middle East and North Africa is a close runner-up, accounting for 36.83%. Central Asia takes 16.29%, winning the third place. All other regions have significantly lower shares than these three. There is no greenfield investment in industrial Europe.⁸

⁷ DealLogic Database separates electric power as a single category. It does not distinguish the type of fuel the power plants use.

⁸ Industrial Europe includes Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal,

Table 4: Geographical distribution of greenfield energy OFDI from China

Region	Investment (in millions of USD)	%	
Asia-Emerging	\$18,009.60	39.30%	Emerging Economies \$45,475.55 99.24%
Middle East and North Africa (MENA)	\$16,877.50	36.83%	
Central Asia	\$7,463.65	16.29%	
Latin America	\$1,370.00	2.99%	
Sub-Saharan Africa	\$1,301.00	2.84%	
Central Eastern Europe	\$453.80	0.99%	
North America	\$200.00	0.44%	Industrialized Economies \$348.35 0.76%
Asia-Industrial	\$148.35	0.32%	
Total	\$45,823.90	-	

Source: author's calculations based on data drawn from the FDintelligence and Dealogic databases

In contrast with Chinese greenfield OFDI, more than half of the M&A goes to industrialized economies as shown in Table 5. It is worth noticing that industrial Europe, Latin America tend to have deals with higher value, which is shown by a significantly bigger share when calculated by deal value other than number of deals. However, Emerging Asia, MENA and Central Eastern Europe are the opposite. In other words, there are more deals there but they are generally smaller, which is shown by a significant lower share when calculated by deal value other than number of deals.

Table 5: Global distribution of Chinese energy M&As

Region	Deal Value (\$ billion)	%	Deal Number	%
Asia-Emerging	19277.2	9.08%	77	18.03%
Asia-Industrial	36447.47	17.17%	88	20.61%
Central Eastern Europe	6102.49	2.88%	21	4.92%
Industrial Europe	49709.04	23.42%	50	11.71%
Latin America	31027.57	14.62%	41	9.60%
MENA	3327.3	1.57%	17	3.98%
North America	53289.22	25.11%	105	24.59%
Sub-Saharan Africa	13047.32	6.15%	28	6.56%
Total	212227.61		427	

Source: author's calculations based on data drawn from the FDintelligence and Dealogic databases

3. THE ROLE OF CAPITAL MARKETS

As shown in the preceding section, China's energy footprint now extends to almost every quarter of the world and carries significant financial weight. In monetary terms, its energy exports are now close to half a trillion dollars while its global energy investment in the form of OFDI and M&As have exceeded a quarter trillion dollars. There thus arises a key question: how does China finance this enormous scale of expansion on the global energy markets?

In the West, financial markets are the first place to turn to. What about China? Are the financial markets capable of financing the global expansion of the Chinese energy companies around the world? Thanks to the gradual financial liberalization in China over the past three decades, especially the country's

Spain, Switzerland, United Kingdom.

deepening integration into the international financial system following its entry into the World Trade Organization (WTO) in 2001, Chinese energy companies are increasingly able to leverage the capital markets, including both the debt markets and equity markets at home and abroad, to raise funding for their global expansion.

To begin, the gradual liberalization of the country's bond market has not only contributed to its expansion but also helped to transform it into a real option for Chinese energy companies in need of capital for expansion. Since 2004 the People's Bank of China (PBOC) and the country's securities regulators have been working to diversify beyond banks as the country's predominant source of social financing and to enhance the role of the bond market in meeting the country's growing financing needs. This push received a boost in the aftermath of the 2008-2009 global financial crisis as Beijing put brakes on the country's runaway credit expansion and searched for an alternative way to channel more capital to cash-strapped companies. Cumulatively, these steps have not only simplified regulatory approvals but also lowered transactions cost for corporate bond issuance in China. A case in point is the growing popularity of the medium-term-notes (MTN) since 2008, which (by virtue of no regulatory approvals) turn out to be more cost attractive than commercial loans with the same length of maturity.⁹

As a result of this new wave of calculated liberalization, the corporate bond market in China has experienced the fastest growth over the past five years since its inception in the mid-1980s. Measured by market value, the corporate bond market expanded more than 14 times between 2009 and 2014 and now accounts for over one third of the country's bond market,¹⁰ which is now the third largest in the world trailing behind the one in the United States and Japan. Against this backdrop, bond issuance has become another form of corporate financing Chinese energy companies turns to support their expansion at home and abroad. For example, in 2014 the Shanghai Electric Group Company issued 6 billion yuan of A share convertible bonds to support the construction of its three overseas power projects in Iraq, India, and Vietnam respectively, and to inject capital into its subsidiaries at home.

Meanwhile, the tightening credit market at home, the depressed interest rate abroad (especially in the United States and Europe), and a strong Chinese currency made it cheaper for Chinese companies to issue debt overseas than domestic bonds.¹¹ Indeed, over the past couple of years Chinese companies accumulated piles of dollar debt. According to Dealogic, the new issuance of dollar debt by Chinese companies added to a total of \$135 billion from 2010 to 2014, registering a five folds increase in five years.¹² This surge in China's dollar-denominated corporate debt is primarily led by the country's energy companies, together with its property developers. For instance, through their publicly listed subsidiaries the country's three national oil companies—China National Petroleum Corporation (CNPC), China National Petrochemical Corporation (SINOPEC), and China National Offshore Corporation (CNOOC) collectively issued dollar bonds worth \$7.6 billion and \$9.5 billion in 2012 and 2013 respectively while the State Grid Corporation (SCO) raised a total of \$5.5 billion from dollar-denominated bonds in 2013 and 2014.

This debt financing continued in spite of the rising cost associated with the U.S. dollar appreciation against yuan. For instance, PetroChina became the largest global oil and gas bond issuer in 2015 with its

9 Liao Shiguang, "Shangshi Gongsi Zhongqi Piaoju Rongzi De Yingxiang Yinsu Yanjiu (a Research on the Factors of Medium-Term Notes Financing of Listed Companies)," *Zhengquan Shichang Daobao* (Securities Market Herald), no. 3 (2011).

10 Michele Leung, "The Rise of China's Corporate Bond Market," *Indexology* (S&P Dow Jones Indices: McGraw Hill Financial, 2014).

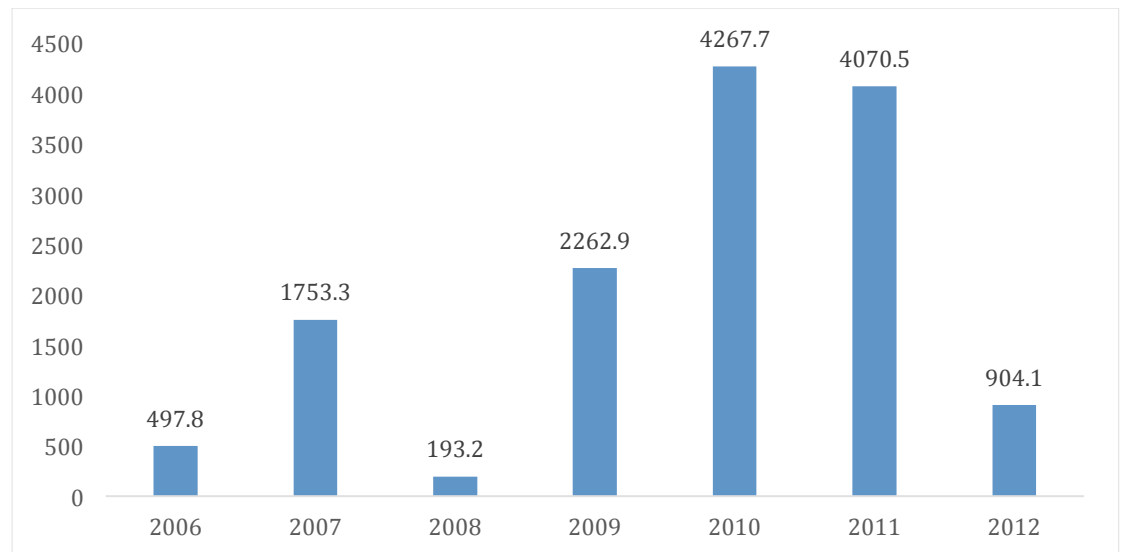
11 For example, the interest rate for a five-year loan in China is much higher than that interest rate associated with a 10-year or 30-year dollar denominated bond in 2011.

12 Fiona Law, "Yuan Slide Takes Toll on Chinese Firms," *Wall Street Journal*, August 13 2015.

bond issuance of \$2.1 billion, which accounted for 42% of the market share.¹³ For others, the European quantitative easing and Euro depreciation against yuan has made it more attractive to issue Euro debt.¹⁴ A case in point is the State Grid Corporation of China that raised €1 billion (\$1.15 billion) from its two tranches of its euro bond offering in 2015. To be sure, some proportion of this debt financing has been used for international expansion. As an illustration, the CNOOC Limited used the \$4 billion of dollar-denominated bonds it issued in Asia outside of Japan to repay a \$6 billion short-term bridge loan the company borrowed to acquire Nexen for \$15.1 billion.

Next, equity financing represents another option the capital markets provide. It can take the form of initial public offering (IPO), secondary equity offering (SEO), or allotment. As is true with debt financing, Chinese energy companies can pursue equity financing both at home and abroad for their international expansion. Indeed, the public listing of the subsidiaries of the three Chinese national oil companies (NOCs)—PetroChina, the Sinopec Limited, and the CNOOC Limited—constituted a milestone in their global expansion.¹⁵ Similarly, the public listing of Chinese renewable energy companies at home and abroad directly contributed to the rise of China as a leading global provider of wind turbines, PV cells, and solar panels. For instance, the year of 2010 marked the peak of Chinese IPOs both at home and abroad. At the end of June in 2010, there were 28 Chinese renewable energy companies listed in domestic stock markets and 31 listed on five international stock markets—Hong Kong Stock Exchange, the Nasdaq, the New York Stock Exchange, and the London Stock Exchange.¹⁶ Similarly, the year of 2010 and 2011 also saw the peak of renewable energy IPO in China as shown in Figure 1.

Figure 1: Capital raised by renewable companies from IPOs in China (million US dollar)¹⁷



Source: Zero2IPO Research Institute

Additionally, Chinese energy companies can mix debt financing and equity financing and engage in various forms of hybrid financing, such as convertible bond (a form of corporate debt that can be turned into common stocks of the issuing company or cash of equal value upon its maturity) or stock warrants

¹³ Hafeeza Rahman, “Global Oil and Gas Bonds Issuance at Lowest Level in Eight Years,” (Dealogic, 2016).

¹⁴ Annoymous, “Chinese Firms Turn to Euro Bonds as Dollar Funding Costs Rise,” Reuters, February 17 2015.

¹⁵ Annoymous, “Chinese Firms Turn to Euro Bonds as Dollar Funding Costs Rise,” Reuters, February 17 2015.

¹⁶ She Jian, “Haineiwai Xinnengyuan Qiye Shangshi Qingkuang Fenxi (an Analysis of the Publicly Listed Renewable Energy Companies in China and Abroad),” (Shengzhen: Shenzhen Stock Exchange Comprehensive Research Institute, 2010).

¹⁷ Zero2IPO Research Institute, “2013 Nian Zhongguo Xinnengyuan Hangye Touzi Yanjiu Baogao (a Research Report on the Renewable Energy Industry Investment in China in 2013),” (Beijing: Zero2IPO Research Institute, 2013).

(a derivative that confers the right to buy or sell equity at a certain price). For instance, in 2004 the CNOOC Limited launched a \$850 million five-year, zero-coupon convertible bond in the international capital market to finance its acquisition of the Tangguh gas project in Indonesia and Australia's Gorgon gas project.¹⁸

Despite this substantial improvement in the ability of Chinese energy companies to leverage capital market over time, the fledgling nature and structural weakness of the country's capital market has constrained its role during the time frame of the study. The country's capital market exhibits a systematic bias in favor of the SOEs against the privately owned enterprises which not only perpetuates the state dominance in the country's energy sector but also calls into question the overall benefit of its growing accessibility for the country's POEs, especially those specialized in wind and solar power. For instance, in comparison with their SOE counterparts, the POEs in the electric power industry and renewable energy companies show a distinct preference for direct finance that includes credit bond financing and equity financing.¹⁹ However, in reality the total capital the renewable energy companies raise from direct finance are very small. Some estimate only 10% of investment in China's renewable sector comes from direct finance.²⁰ This systematic discrimination against POEs is also evident with respect to debt financing. As far as commercial finance is concerned, the SOEs can secure loans with an interest premium of 7-9% whereas the POEs, especially those small and medium enterprises, have to pay a premium way above 10% (which can hover at 18-24%).²¹ A similar divergence is also evident in China's bond market. Indeed, beneath the rapid growth of the country's corporate bond market is the troubling reality that over 90% of the corporate bonds are issued by SOEs.²²

Further, in spite of its growth, the direct finance market, which includes both the bond market and the stock market, is faced with some serious difficulties. A careful look at the evolution of direct finance in China points to a more than two-fold growth in the total share of corporate bonds and equity financing in the country's total social financing between 2002-2012.²³ However, the fluctuations of their share between 2007 and 2012 and their decline in 2013 speak to the difficulties Chinese companies in general face when issuing corporate bonds or launching IPOs in China. Amidst the country's effort to curb debt expansion, issuing corporate bonds has become a lot more difficult in a credit-tightening environment. This is evidenced by a decline of 20% of the total capital Chinese companies raised in 2013.²⁴ Meanwhile, the lengthy regulatory controls and the resultant rent seeking regarding issuing IPOs in China, together with the arbitrary and frequent government intervention (as evidenced by the nine occasions of government forced stock market closure between 1994 and 2015), continue to plague the world's second largest stock market and erode its reliability as a source of corporate financing. As a result, the share of equity financing in China's TSF has actually been on the decline since 2007.²⁵ A similar trend is mirrored in terms of the aggregate amount of capital raised from stock markets in China, which, as Figure 2 illustrates, has decreased persistently since 2010.

18 CNOOC Limited, "Cnooc Limited Raises Financing through Issue of Us\$850 Million Zero Coupon Convertible Bonds," news release, November 15, 2004, http://www.cnoccltd.com/art/2004/11/25/art_8441_1130701.html.

19 Cheng Desheng and Li Hongxia. "Diangai Huo Zhi Hangye Rongzi Jiegou Bianhua" (Electric Reforms May Change the Industry's Financing Structure), November 17, 2014, *Zhongguo Nengyuan Bao* (China Energy News), p.15.

20 Zhang Wenliang, "Rongzi Kunju: Guangfu Fengdian Qiye Ruhe Yingdui" (Financing Dilemma: How Can the Wind and Solar Companies Cope?), *Zhongguo Jingmao Daokan* (China Economic and Trade Herald), December 22, 2015.

21 Jiang Aiguo. "Jiemi Qianhuang ji Sixiang Duice" (A Decoding of the Credit Crunch and Four Recommendations), 21 *Shiji Jingji Baodao* (21st Century Business Herald), December 6, 2013, P. 11.

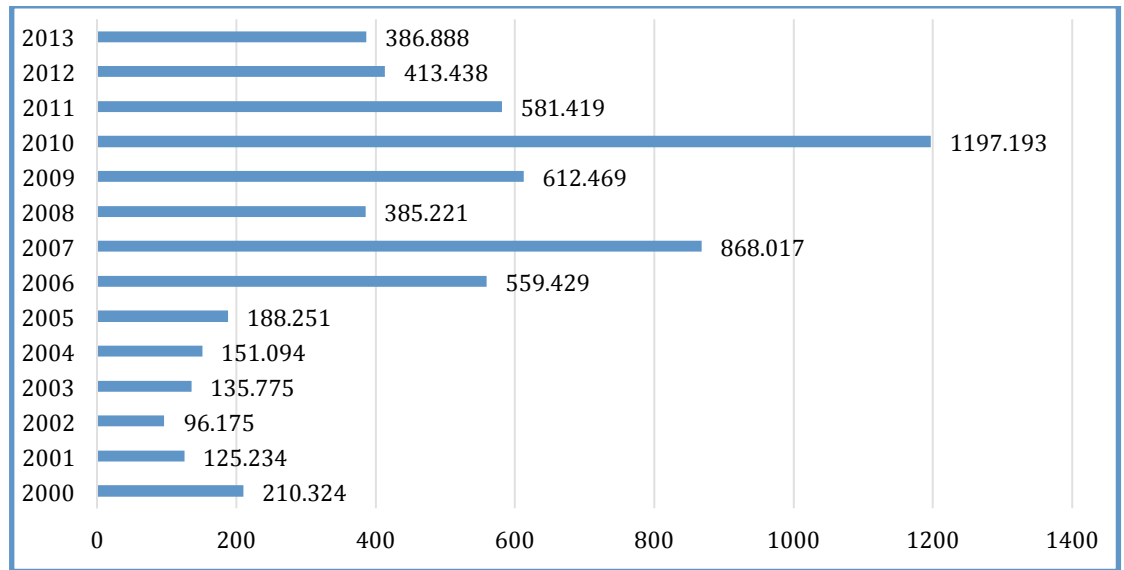
22 Leung, "The Rise of China's Corporate Bond Market."

23 The Statistics Bureau of the People's Republic of China, *China Statistical Yearbook* (Beijing: China Statistical Press, 2014).

24 Ibid.

25 Ibid.

Figure 2: Capital raised from stock markets in China per year (billion yuan)²⁶



Source: China Statistical Yearbook 2014

Consequently, Chinese energy companies have been compelled to turn to the capital markets abroad to raise capital for their domestic and international expansion. Table 6 shows that as the Chinese government shut down the domestic stock markets for IPOs in 2013 and subsequently tightened the IPO approval process, Chinese companies accelerated their fundraising efforts on the international capital markets. This is also consistent with Chinese companies' increasing reliance on the international capital markets for global expansion. According to the Ministry of Commerce of the People's Republic of China, overseas financing added up to \$17.8 billion in 2013, accounting for 34.7% of the \$51.37 billion worth cross-border M&As Chinese companies made for the same year.²⁷ However, the data does not break down by sector, thus we have little clue about how much of this overseas financing goes to the energy sector. Nor do we know how much of the overseas financing comes from commercial lending versus capital markets.

²⁶ Ibid.

²⁷ Li Zhipeng and Shen Mengxi, "Zhongguo Qiye Jingwai Binggou Caiwu Anpai Xianzhuang, Wenti Ji Gaijing De Jianyi (Current Accounting Arrangement of Chinese Enterprises Engaged in Cross-Border Mergers and Acquisitions, Its Issues, and Recommended Fixes)," *Zhongguo Zhuce Kuaijishi (The Chinese Certified Public Accountant)* 4, no. 3 (2015), <http://www.cicpa.org.cn/knowledge/fzyhydzzz/201504/page09.html>.

Table 6: Capital raised by Chinese companies from stock markets (billion yuan)²⁸

	Domestic Stock Markets	Overseas Stock Markets	Total	Share of Domestic Stock Markets	Share of Overseas Stock Markets
2007	433.929	264.965	698.894	62.1%	37.9%
2008	99.378	46.149	145.527	68.3%	31.7%
2009	183.405	180.929	364.334	50.3%	49.7%
2010	480.395	221.965	702.36	68.4%	31.6%
2011	291.463	118.753	410.216	71.1%	28.9%
2012	109.895	65.616	175.511	62.6%	37.4%
2013	0	126.752	126.752	0.0%	100.0%
2014	87.244	328.393	415.637	21.0%	79.0%
2015	158.614	195.531	354.145	44.8%	55.2%

Source: Zero2IPO Research Institute

Nevertheless, our limited data indicates that only a small group of energy companies are able to issue IPOs overseas and overseas equity financing accounts for a very small proportion of the total funds Chinese companies raised from abroad. For instance, the year of 2013 and 2014 only witnessed two and four energy IPOs, which raised \$221 million and about \$3.5 billion respectively, accounting for merely 1.2 and 6.8% of total overseas equity financing Chinese companies raised for the same year.²⁹

Thus, despite their growing importance, the capital markets, both at home and abroad, remain a marginal player so far as the financing of the Chinese energy companies' global expansion is concerned. On the one hand, the domestic capital markets in China remain a creation of the state, subject to the state intervention and invariably biased in favor of the state-owned enterprises (SOEs). In this sense, the capital markets in China are never given the real chance to realize their potential. Thus, the question is not if the capital markets can but if they are allowed to finance the global expansion of Chinese energy companies. On the other hand, while foreign capital markets represent an external option they are often too selective and demanding to accommodate the financing needs of a vast number of Chinese energy companies. Thus, the capital markets, domestic or foreign, are insufficient to finance the global expansion of the Chinese energy companies.

4. THE ROLE OF THE STATE IN ALIGNING THE FINANCE AND ENERGY INDUSTRY

The fact that the capital markets play a growing yet still marginal role in financing the global expansion of Chinese companies means the state is left to bear the brunt of the burden of capital mobilization. Before discussing the various forms of state financing and how it is carried out, we will first shed light on how the Chinese state integrates its finance and energy systems.

Fundamentally speaking, in addition to state ownership, there are two channels through which the Chinese state aligns its financial system with its energy companies. First, it does so implicitly through the CCP's human resources department. Basically, the Central Organization Department of the CCP

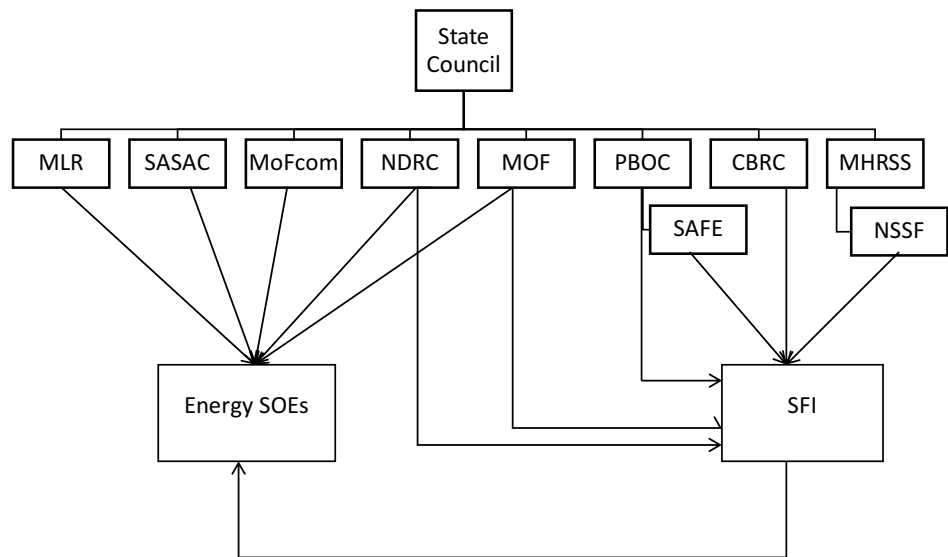
²⁸ Zero2IPO Research Database

²⁹ Li Nanzhu, "Zhongguo Qiye Jingwai IPO Niandu Baogao (2013) (the Overseas IPO of Chinese Enterprises in 2013)," (Shanghai: Shanghai Stock Exchange, 2014); Li Nanzhu and Zheng Yujiang, "Zhongguo Yiqe IPO Niandu Baogao (the Annual Report of the Chinese Enterprise Ipos for 2014)," (Shanghai: Shanghai Stock Exchange, 2015).

Central Committee appoints the top-tier executives of China's energy SOEs and large state-owned financial institutions (SFIs), especially the state-owned commercial banks and policy banks to be discussed later, and assigns them bureaucratic ranks comparable to the manner in which it appoints its high-level local and central government officials.³⁰ This power over personnel not only constitutes a mechanism through which the CCP steers the strategic direction of the country's energy SOEs and SFIs, but it also incentivizes compliance of the SOEs and SFIs with government priorities through the political incentives that can lead them to a higher position in the country's political hierarchy. As a matter of fact, there are plenty of instances where energy SOE executives have assumed top local or national leadership positions in China; likewise, local and national leaders, retired or incumbent, occasionally find themselves turning into top SOE executives in China.³¹ This means that the SOEs, in the energy domain or beyond, constitute both the training ground for leaders in China and the revolving door for the Chinese political system. Thus, once the CCP endorses "going out" as a national strategy, the top leaders of government, major SFIs, and SOEs all take cues. This is clearly evidenced by the implementation of China's international petroleum policy over the past 20 years.³²

Second, the Chinese state forges the alignment through coordination between its energy-germane and finance-germane bureaucracies. As illustrated in Figure 3, the Chinese government relies primarily on eight central bureaucracies, half related to energy and another half related to finance to promote the integration between its energy SOEs and its state-owned financial institutions (SFIs), especially the four major state-owned commercial banks (SOCBs) and two development banks.

Figure 3: Aligning the energy and financial bureaucracies in China



The four energy-germane bureaucracies include the Ministry of Land and Resources (MLR), the State-Owned Assets Administration and Supervision Commission (SASAC), the Ministry of Commerce (MOFCOM), and the National Development and Reform Commission (NDRC).³³ They support

30 Douglas J. Elliot and Kai Yan, "The Chinese Financial System: An Introduction and Overview," in John L. Thornton China Center Monograph Series (John L. Thornton China Center: Brookings Institution, 2013).

31 Erica Downs, "Business Interest Groups in Chinese Politics: The Case of the Oil Companies," in *China's Changing Political Landscape: Prospects for Democracy*, ed. Cheng Li (Washington D.C.: Brookings Institution Press, 2008); Kong, *China's International Petroleum Policy*.

32 *China's International Petroleum Policy*.

33 "Governing China's Energy in the Context of Global Governance," *Global Policy* 2, no. Special Issue (2011).

the global expansion of Chinese energy companies from different perspectives. As a steward of the country's natural resource rights, the MLR supports the global expansion of Chinese energy companies for two primary reasons. First, its assessment that the country's resource base is insufficient to fuel the country's drive toward industrialization, urbanization, and motorization motivates its support. Second, a desire to gain access to advanced technologies to unlock the country's abundant unconventional oil and gas resources also drives its support. As the designated owner of all SOEs in China, the SASAC is behind Chinese energy companies' cross-border expansion as a way to promote the preservation and enhancement of the state-owned assets in the country's energy sector. The MOFCOM approaches the issue from the viewpoint of international commerce and the country's economic diplomacy. It oversees the credentials of the Chinese energy companies that get to trade or invest abroad in energy goods and services. It also coordinates the country's foreign aid policy and supports the expansion of Chinese energy companies from an economic statecraft point of view. The NDRC constitutes the central processing unit (CPU) of the country's macroeconomic planning and developmental coordination. It is primarily concerned about the availability and affordability of its energy services and products and it retains power over project approval both at home and abroad.

The Ministry of Finance (MOF), the People's Bank of China (PBOC), the China Banking Regulatory Commission (CBRC), and to a lesser extent the Ministry of Human Resources and Social Security (MHRSS) are the four finance-germane bureaucracies that constitute the ultimate source of financial support for the global expansion of Chinese energy companies. The significance of the MOF is three-fold. First, as the custodian of the state budget the MOF can use the state coffers to support Chinese energy companies' cross-border expansion. Second, the MOF oversees the linchpin of the country's financial system—the China Investment Corporation (CIC). Originally created as a sovereign wealth fund (SWF) to diversify the country's expanding foreign exchange (FOREX) reserves out of the rivalry between the MOF and the PBOC over who has more say over FOREX reserves management,³⁴ the CIC was eventually housed under the MOF and has since made extensive equity investment in some strategic sectors, including energy and mining.³⁵ In reality, the CIC's significance goes beyond a SWF and it actually constitutes the shadow "financial SASAC." This is shown through its 2007 acquisition of Central Huijin, which is the largest shareholder of most of the country's largest banks, including the so-called "big four" state-owned commercial banks (SOCBs)—the Industrial and Commercial Bank of China (ICBC), the China Construction Bank (CCB), the Bank of China (BOC), and the Agricultural Bank of China (ABC). The CIC, again through the Central Huijin, is also the largest shareholder of the China Development Bank (CDB), which is, as to be discussed later, the world's largest policy bank and one of the most important players in financing the global expansion of Chinese energy companies. Third, in addition to indirect ownership over banks through the CIC, the MOF also possesses direct ownership. For example, it is the largest shareholder of the Bank of Communications (BoComm) and the second largest shareholder of the CDB. Thus, the MOF can mobilize financial support for the global expansion of the Chinese energy companies through the central state budget, the CIC and the SOCBs, and the CDB.

The PBOC is important for three reasons. First, it used to set the bank deposit rates, bank lending rates, and the benchmark rates for the country's bond markets (although it completely liberalized interest rates in December 2015.) These rates the PBOC set affected not only the availability of financing but also the cost of financing in China. Second, it oversees the country's colossal FOREX reserves through the State Administration of Foreign Exchange Reserves (SAFE) and two SWFs under its watch—the SAFE Investment Company Limited (SAFEIC) and the Silk Road Fund, both of which are tasked to

34 Carl E. Water and Fraser J. T. Howie, *Red Capitalism* (Singapore: John Wiley & Sons Singapore Pte Ltd., 2012).

35 Jacob N. Koch-Weser and Owen D. Haacke, "China Investment Corporation: Recent Developments in Performance, Strategy, and Governance," (Washington D.C.: U.S.-China Economic and Security Review Commission, 2013). Xiaolei Sun et al., "China's Sovereign Fund Investments in Overseas Energy: The Energy Security Perspective," *Energy Policy*, no. 65 (2014).

preserve and enhance the value of the country's FOREX reserves. Perceived as a competitor to the CIC, the SAFEIC also makes overseas equity investment in a wide range of assets, including energy. For example, according to *The Economist*, the SAFEIC disclosed holdings worth £1.2 billion of energy assets in FTSE 100 companies in 2011.³⁶ Finally, through a capital injection of \$45 billion in August 2015, the PBOC became the largest shareholder of the China Export and Import Bank (CHEXIM), the policy bank designed to promote the country's international trade (including Chinese energy companies' exports.)

The China Banking Regulatory Commission (CBRC) is relevant because it regulates the lending practice of the country's SOCBs. Specifically, it sets parameters on whether the banks can lend and how much they lend to Chinese companies for overseas M&As. The SOCBs went through three phases of evolution regarding loans for overseas M&As: 1) prior to 2008, they were barred from such lending; 2) between 2008 and 2015, they were only permitted to issue loans no more than 50% of funding required for overseas M&As for a period of no more than five years only if they had a professional detachment for due diligence and risk management; and 3) starting from February 2015, the CBRC adjusted the cap to 60% of the funding required for overseas M&As, extended the lending period to seven years, and relaxed requirements for collaterals from the borrowers.³⁷

Finally, the Ministry of Human Resources and Social Security (MHRSS) should also be considered as a finance relevant bureaucracy because it oversees another SWF—the National Social Security Fund (NSSF). With a dual role as both institutional investor and stakeholder of some of the largest SOCBs, the NSSF manages assets deriving from enterprise annuities in China that are worth over 1.5-trillion-yuan (\$240 billion) on behalf of the state.³⁸ For example, the NSSF is the largest stakeholder of the BOC's H shares issued in the Hong Kong Stock Exchange,³⁹ and it is also a minority shareholder of the CDB. In addition, to seek better returns, the NSSF increased the proportion of the assets it can invest in overseas stocks and funds, including those of energy, from 6.7 percent to 20 percent in November 2009.⁴⁰

In short, with the power over personnel and bureaucratic coordination, the Chinese state is able to mobilize financial resources from the state to its energy SOEs seeking international expansion. This mobilization takes three forms—capital mobilization through the fiscal budget, capital mobilization through the SOCBs, and capital mobilization through its policy banks, to which the discussion the discussion now turns.

5. THE ROLE OF FISCAL BUDGETS

Although used less often than during the era of the centrally-planned economy, the Chinese state exercises the option of mobilizing capital out of its central budget directly for its developmental priorities. Indeed, one way the state channels credit to its energy companies for international expansion is to build the state financing into its fiscal budget. For instance, as part of China's SOE reforms, the state started to once more collect dividends from its centrally-owned SOEs in 2007, which it abandoned between

36 *The Economist*, "China's Investment in the Ftse 100: Is It Safe?," *The Economist* (2011).

37 China Banking Regulatory Commission, "Zhongguo Zhengjianhui Guanyu Yingfa Shangye Binggou Daikuan Fengxian Gaunli Zhiying De Tongzhi (Notice of China Regulatory Commission on Issuing the Guidelines on the Risk Management of M&A Loans of Commercial Banks)," (Beijing: China Banking Regulatory Commission, 2008).

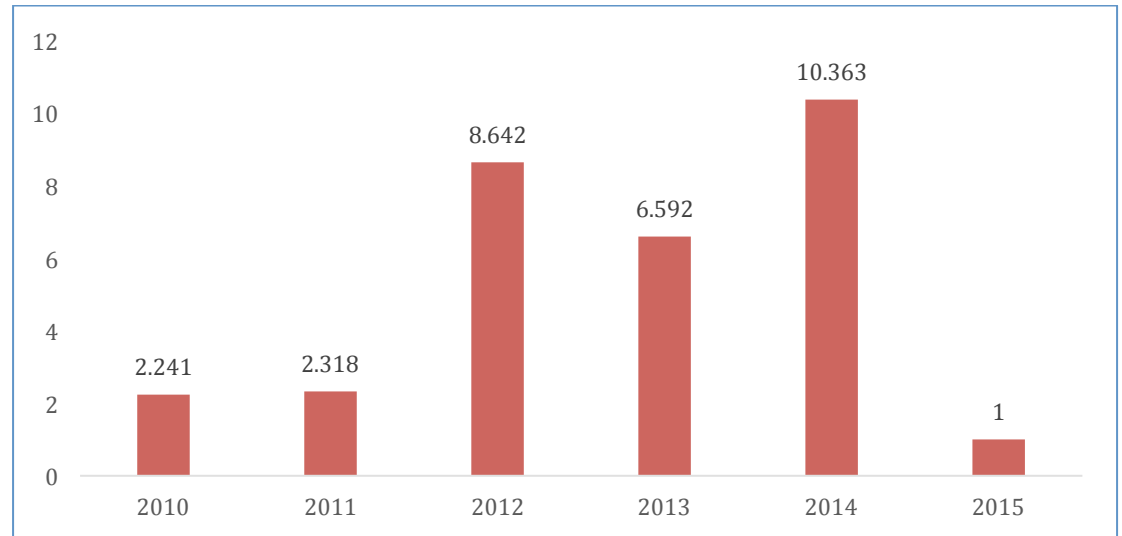
38 State Social Security Fund of the People's Republic of China, "Quanguo Shehui Baozhang Jijing Lishihui Jijing Niandu Baogao (the Annual Report of the State Social Security Fund for 2014)," (Beijing: State Social Security Fund, 2014).

39 Bank of China, "Bank of China Annual Report 2014," (Beijing Bank of China, 2014).

40 Liu Liqian, "Jiemi Shebao Jijin Sanci Xuanpin Jingwai Touzi "Guanjia" (Demystifying the Three Attempts of the State Social Security Fund to Hire a "Steward" to Manage Its Overseas Investment)," *Zhengquan Ribao (Securities Daily)* (2011), http://news.xinhuanet.com/fortune/2011-06/17/c_121546900.htm.

1994 and 2006. This extra income allowed the state to incorporate a new line item in its annual budget to support the international expansion of its SOEs (most of which have been focused on the resources sector during the time frame of this study) as shown in Figure 4. According to the annual budget released by the MOF between 2010 and 2015, the central government of China has provided over 31 billion yuan for the past six years to its centrally-owned SOEs for international expansion, especially in the resources sector.

Figure 4: Operational budget of state-owned capital for cross-border investment (billion yuan)⁴¹



Source: Ministry of Finance of the People's Republic of China

There were a variety of measures designed to liberalize the country's outward direct investment regulatory regime and provide Chinese companies with more information about where and what to invest abroad⁴² (both beyond the scope this study). In addition to these various reforms, fiscal financing represents a state-driven campaign to implement the broadly defined "going out" strategy China has adopted since 2000 to promote the globalization of the Chinese economy beyond the energy sector alone. This type of fiscal financing has three primary manifestations. Sometimes, it is offered as a direct subsidy. Other times, it is given as loans with interest discounts. Still other times, it is provided as direct capital in support of Chinese energy companies' cross-border expansion.

Specifically, the MOF (together with the MLR and the MOCOF) has established three special funds pertinent to the overseas expansion of the Chinese energy sector. Broadly speaking, this support is focused on three areas. The first fund covers risk exploration of mineral resources abroad. For instance, in 2003 the MOF and the MLR established a special fund out of the state budget for risk exploration of overseas mineral resources.⁴³ This primarily supports Chinese cross-border search abroad for hard commodities such as copper, iron, lead, zinc and nickel. Although the oil and gas sector is excluded, this fund is applicable to coal and uranium. For example, the Third Brigade of the Coal Geological Bureau of Henan Province received 1.8 million yuan (about \$285,000) from the special fund to conduct

41 Author's compilation based on data from the Ministry of Finance, <http://yss.mof.gov.cn/zhengwuxinxi/caizhengshuju/>

42 Li Ping and Xu Dengfeng, "Zouchuqu" Zhanlue: Zhidu Xingcheng Yu Gaige Zhanwang (the "Going out" Strategy: The Evolution of It Supporting Institutions and Prospects for Reform)," Guoji Jingji Hezuo (International Economic Cooperation), no. 5 (2008).

43 Water and Howie, Red Capitalism.

prospecting and appraisal in Block EL27542 in Amadeus, Australia in March 2012.⁴⁴ Similarly, the No. 264 Brigade of the Nuclear Geological Bureau of Jiangxi Province received an award from the fund to look for uranium overseas in 2011.⁴⁵ According to the circular issued by the MOF and the MLR in 2005 and 2010, this special fund gives direct subsidies to cover up to 50% of the pre-development costs related to due diligence, appraisal, prospecting, and provides loan discounts if Chinese companies have to borrow for the actual cross-border mineral resource development.⁴⁶

The second fund covers the front-end expenses of Chinese overseas investment in resources and foreign economic cooperation projects, especially those related to oil and gas, metals, and non-metal resources. These expenses are defined as costs Chinese resource-focused companies incur before registering in their targeting destination or entering into a business contract, which includes expenses for consulting services, legal advisory, feasibility studies, and bidding. While offering no indication of the magnitude of the funding, the joint circular issued by the MOF and the MOFCOM in 2004 about this line of support set the following cap on how much it covers: 1) no more than 4% of approved investment; 2) no more than 4% of the contractual amount; 3) no more than 50% of the prior period expenses; 4) no more than 4 million yuan (about \$590,000) per project; and, no more than 8 million yuan (about \$1.18 million) per entity per year.⁴⁷

The third fund targets a broad range of activities broadly defined as foreign economic and technological cooperation. Established by the MOF and the MOFCOM in 2005, it went through three iterations. Initially called the Special Fund for Foreign Economic and Technological Cooperation, it was renamed as the Special Fund for Foreign Investment Cooperation in 2013 and then subsequently changed to the Special Fund for Foreign Trade and Economic Development in 2014. Despite the change, the special fund has maintained continuity in terms of the cross-border activities it supports, which include those related to: 1) outward investment, 2) foreign cooperation in agriculture, forestry, fisheries, and mining, 3) contracting of foreign projects, 4) foreign labor service cooperation, and, 5) design consultation.⁴⁸ Furthermore, over time this special fund has incorporated elements included in the above-mentioned funds. Similar to the special fund for front-end expenses, it also provides direct subsidies up to the 15% of the amount of investment made by the qualified Chinese entity or the contractual amount related to front-end expenses including the following: legal, technical, and commercial consultation fees, survey and inspection fees, fees for compiling project feasibility study reports and safety evaluation reports, fees for purchasing regulatory documents, bidding documents and other materials, and fees for translating regulatory documents, bidding documents, and other materials. In addition, it also subsidizes the following five categories of expenses: 1) insurance and freight for transporting foreign resources back to China, 2) personal accidental injury insurance for Chinese employees working abroad, 3) expenses

44 Xue Shanshan, "Woju Huode Shouge Guowai Kuangchan Ziyuan Fengxian Kancha Zhuangxiang Zijing Xiangmu (Our Bureau Won the First Project Supported by the Risk Exploration Special Fund)," (The Henan Coal Mine Geological Bureau, 2013).

45 Zhu Xuefeng, Zhang Hui, and Zhang Xi, "Bajing Taixia Chunchao Ji: Jiangxi Sheng Hegongye Dizhiju 264 Dadui Zhanxing Fazhan Jujiao (Spring Tides Are in a Hurry: A Look at the Transition of the No.264 Brigade of the Nuclear Geological Bureau of Jiangxi Province)," (2015), http://www.zgkyb.com/zhuankan/20150512_16802.htm

46 The Ministry of Finance of the People's Republic of China and The Ministry of Land and Natural Resources of the People's Republic of China, "Caizhengbu Guotu Ziyuan Bu Guanyu Yinfa Guowai Kuangchan Ziyuan Fengxian Kancha Zhuangxiang Zijing Guanli Banfa De Tongzhi (the Notice of the Ministry of Finance and the Ministry of Land and Natural Resources on Printing and Circulating the Measures About the Overseas Mining and Resource Exploration Special Fund Administration)," news release, August 10, 2010, http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefagui/201007/t20100722_329313.html.

47 Rahman, "Global Oil and Gas Bonds Issuance at Lowest Level in Eight Years."

48 The Ministry of Commerce of the People's Republic of China and The Ministry of Finance of the People's Republic of China, "The Supplementary Circular of the Ministry of Finance and the Ministry of Commerce on the Support of the Prior Period Expenses of Overseas Investment in Resource and Foreign Economic Cooperation Project in 2004," (The official web site of Invest in China The Ministry of Commerce of the People's Republic of China The Ministry of Finance of the People's Republic of China, 2005).

dealing with overseas emergencies caused by terrorism, war, natural disaster, or any other force majeure, 4) expenses on adaptability training for dispatched contract workers, and insurance premium of overseas insurance paid by Chinese enterprises. On top of these two types of direct subsidies, this fund also offers loan discounts that are consistent with the base interests issued by the PBOC.⁴⁹

However, quantifying the magnitude of the fiscal financing the state uses to support the global expansion of its energy companies presents a daunting challenge. While the MOF, the MLR, and the MOFCOM publish notices on the administration of these special funds, they provide little information on the magnitude of their support for the energy sector. Occasionally, the Chinese media disclose some numbers indicative of the overall size of these funds. For example, according to the China Securities Daily, by the end of 2009 the MOF has provided 735 million yuan (about \$108 million) to the Special Fund for Risk Exploration of Foreign Mineral Resources.⁵⁰ However, we have little knowledge about how much support has gone to the energy sector and how that support compares with the funding Chinese energy companies have raised from other sources to finance their global expansion. Our conjecture is that fiscal financing is one of the weakest arrows in the state financing quiver.

6. THE ROLE OF STATE-OWNED COMMERCIAL BANKS

In comparison with the fiscal financing, a more potent state financing vehicle is state-owned banks. There are two categories of state-owned banks—the state-owned commercial banks (SOCBs) and the the Join Stock Commercial Banks (JSCBs). The former includes the aforementioned “big four” SOCBs—the ICBC, the CCB, the BOC, the ABC, plus the BoComm (which altogether represent 41% of the total assets in the Chinese banking industry) while the latter includes 12 provincial and municipal banks that account for 18.2% of the market share.⁵¹ However, unlike the SOCBs, the JSCBs are primarily focused on the domestic market and evidence little growth in international operations.⁵² Thus, we will focus principally on the the role of the SOCBs in financing the global expansion of Chinese energy companies around the world.

Two major policy shifts midwived the growing involvement of commercial banks in Chinese energy companies’ globalization drive. To be specific, the decision by the State Council and the China Banking Regulatory Commission (CBRC) to allow commercial banks to issue loans for equity investment beginning 2008, coupled with the commercial banks’ implementation of the broadly defined “going out” strategy, helped to usher in a surge of M&As by Chinese companies both at home and abroad. According to a senior CBRC official, the cumulative amount of acquisition loans issued by banks in China totaled 580 billion yuan (over \$90 billion) between 2008 and 2013 from nothing in prior years; meanwhile, the number of M&As launched by Chinese companies at home and abroad jumped from 3568 to 4077 during the 2008-2013 period.⁵³

49 The Ministry of Finance of the People’s Republic of China and The Ministry of Commerce of the People’s Republic of China, “Notice of the Ministry of Finance and the Ministry of Commerce on the Application for Special Funds for Foreign Economic and Technical Cooperation in 2012,” (Beijing: The Ministry of Finance of the People’s Republic of China and The Ministry of Commerce of the People’s Republic of China, 2012).

50 Anonymous, “Haiwai Tankuang Zijing Mingnian Jiama Caizheng Zhuanxiang Zijing Jiada Touru (the Overseas Resource Exploration Fund Will Grow Next Year While the Fiscal Special Fund Will Increase Its Support),” China Securities Daily, December 1 2009.

51 China Banking Regulatory Commission, “CBRC Annual Report 2014,” (Beijing: China Banking Regulatory Commission, 2014).

52 Carola Saldias and Linas Grigaliunas, “Chinese Banks Going Overseas through Loans, Investment Securities and Offshore Rmb Bonds,” (Milan, Italy: Dagong Europe Credit Rating, 2014).

53 Anonymous, “Yinjianhui Guaiyuan: Xiayibu Jixu Zhichi Shangye Yinhang Binggou Daikuan (CBRC Official: To Continue Sup-

At the forefront of this acquisition lending are the country's state-owned commercial banks. For instance, between 2009 and 2015 the Bank of China (BOC) alone have provided acquisition loans for 188 overseas projects totaling \$56.3 billion,⁵⁴ some of which lent direct support for the expansion of Chinese energy companies. This was evidenced by the BOC's provision of \$103 million to the Shaanxi Yanchang Petroleum for its takeover of the Canada-based Novus Energy for \$220 million in 2013. Meanwhile, Chinese energy companies have become increasingly comfortable borrowing from international banks. For instance, to finance its \$3.04 billion acquisition of Tuas Power from Singapore state investor Temasek Holdings in 2008, the Huaneng Group borrowed from a banking syndicate including Crédit Agricole, BNP Paribas, China Export and Import Bank (CHEXIM), BOC, DBS Group, and Oversea-Chinese Banking Corporation.

While the China Banking Regulatory Commission (CBRC) lifted the ban in 2008 with its release of The Guidelines on the Risk Management of M&A Loans of Commercial Loans in 2008 (updated in 2015), it still capped the maximum amount of M&A loans to 50% of the total M&A costs and limited the length of the M&A loans to seven years (for a variety of reasons beyond the scope of the study). The combination of these requirements are sure to conspire against Chinese energy companies seeking larger loans for overseas M&As with long payoff cycles. Added to this legal impediment is the propensity of commercial banks in China to demand credit guarantee and collaterals at home for loans used for overseas activities, which further reduces the number of Chinese energy companies qualified to borrow commercial loans for international expansion.

Table 7: Structure of Total Social Financing in China⁵⁵

	Bank loans	Corporate bonds	Equity financing	Direct finance	Shadow banking ⁵⁶
2002	95%	2%	3%	5%	
2003	88%	1%	2%	3%	8%
2004	84%	2%	2%	4%	10%
2005	83%	7%	1%	8%	7%
2006	77%	5%	4%	9%	12%
2007	67%	4%	7%	11%	20%
2008	73%	8%	5%	13%	12%
2009	76%	9%	2%	11%	11%
2010	60%	8%	4%	12%	26%
2011	63%	11%	3%	14%	20%
2012	58%	14%	2%	16%	23%
2013	55%	10%	0%	11%	30%

Source: The Statistics Bureau of the People's Republic of China

Further, the past decade has seen a persistent and substantial erosion of the importance of banks in China's TSF.⁵⁷ As illustrated in Table 7, at the beginning of the millennium banks alone provided almost

porting Commercial Banks' Offering of Merger and Acquisition Loans)," Xinlang Caijing (Sina Finance), <http://finance.sina.com.cn/hy/20141115/111020828137.shtml>.

54 Bank of China, "Zhonghang 1486 Yi Meiyuan Zhichi Qiye 'Zouchuqu' (Bank of China Mobilized \$148.6 Billion to Support the 'Going out' of Chinese Enterprises)," news release, March 21, 2016, http://www.boc.cn/aboutboc/bi1/201603/t20160321_6573591.html.

55 The Statistics Bureau of the People's Republic of China, China Statistical Yearbook.

56 Shadow banking includes loans by trust companies, entrusted loans, and bankers' acceptance.

57 It is worth noting that the People's Bank of China did not introduce the term TSF until after the 2008 global financial crisis when shadow banking had become very important and the PBOC perceived the need for a more comprehensive statistical

all the financing in China but by 1993 their share of TSF was reduced to slightly over half. The two primary factors that crowded out banks are the growth of direct finance in China, the implications of which for China's global energy footprint will be discussed in the next section, and the surge of the so-called "shadow banking," whose share of the TSF grew by 22 percent in a matter of 10 years. According to a recent joint study by three scholars of the New York University, the Shanghai Advanced Institute of Finance, and the Tsinghua University, 1) regular constraints on banks, 2) competition strategy of small banks against big banks, and 3) low deposit rates constitute the three primary factors that have contributed to the rapid growth of shadow banking in China, which includes all investment products that are all off-the-balance sheet of banks, especially wealth management products.⁵⁸ However, it is beyond the scope of this study to assess the impact of shadow banking on the country's financial system or its energy investment both at home and abroad. While there are signs that some shadow banking recent found way to the country's stock market and real estate market, the fact of the matter is that no one knows the destination of all the shadow banking in China.

Thus, although the lack of detailed aggregate and time series data makes it almost impossible to estimate the precise magnitude of acquisition lending the commercial banks have provided for the global expansion the country's energy companies, we could arrive at some qualitative assessment. The above-mentioned three factors, namely the historical ban imposed on banks' acquisition lending, the current limits banks have to observe, and the declining importance of commercial lending in the country's TSF dictate that the role of commercial banks in the global expansion of Chinese energy companies is still likely to be circumscribed. Thus, they constitute the second most important arrow of the Chinese state financing quiver, playing a larger role than the fiscal budget but playing the second fiddle to the two Chinese policy banks.

7. THE ROLE OF POLICY BANKS

In addition to mobilizing fiscal financing from its central budget and channeling credit through the SOCBs, the Chinese state has created policy banks with explicit state guarantees to promote and pursue its strategic priorities in specific domains. As this type of financing intimately mirrors the Chinese state's policy thrust and developmental plans, it is essentially one form of policy financing.

Funded in 1994, solely owned by the Chinese government, and under the direct leadership of the State Council, the Export and Import Bank of China (CHEXIM) and the China Development Bank (CDB) are the principal conduits through which the state channels policy financing for the global expansion of Chinese energy companies. With an external focus at its inception, the CHEXIM is tasked primarily to facilitate the country's foreign trade and foreign economic cooperation. Thus, as the world's largest trade finance agency, the financing it provides to Chinese energy companies reflects a trade angle and often takes the form of export credits, credit guarantees, and concessional loans. In contrast, the CDB was initially an internally focused, quasi-fiscal bureaucracy designed to primarily assist with the state's domestic developmental priorities related to infrastructure, basic industries, and pillar industries. Over the past decade or so it has not only transformed itself into the leading engine of urban development in China, but it has also emerged as the world's largest financial institution for overseas loans in the aftermath of the 2008 global financial crisis. Despite the variance in the focus they target and the tools they employ, both the CHEXIM and the CDB have synchronized their support for the global expansion

indicator. The authors are thankful to Pieter Bottelier for altering us to historical context under which the term of TSF was first used in China.

58 Viral Acharya, Jun "QJ" Qian, and Zhishu Yang. "In the Shadow of Banks: Wealth Management Products and Bank Risk in China," Boston University Conference on Shadow Banking, April 13, 2016.

of Chinese energy companies with their execution of the state's going out strategy for the past 15 years.

Indeed, both the CHEXIM and the CDB have rallied under the banner of the going out strategy by establishing special loans in close coordination with the state's principal development planner the NDRC. The public notices on the purposes of these special loans illustrate the role of the two policy banks as the financial arm of the state. For instance, the NDRC issued joint statements with the CHEXIM and CDB in 2003 and 2005 respectively, singling out the following four priorities as the targeted areas for the special loans:⁵⁹

1. Overseas resource development projects which can make up for the relative insufficiency of domestic resources;
2. Overseas productive projects and infrastructure projects which can give impetus to the export of domestic technologies, products, equipment, and labor services, etc.;
3. Overseas research and development centers which may utilize internationally advanced technologies, management experiences and professional talents;
4. Overseas enterprise M&A projects which can improve the international competitiveness of enterprises, and accelerate exploration of international markets.

What is worth noting is not only the close overlap between the priorities these loans are designed to support and those highlighted under the state's going out strategy but also the prominence and relevance of energy behind every priority area.

With these special loan programs and their readiness to execute the state's going out strategy, the two policy banks have become the largest financier for the global expansion of Chinese companies for the past decade or so. According to a recent estimate, the total amount of outward foreign direct investment (OFDI) loans Chinese banks provided to support the going out of Chinese companies add up to more than \$144 billion between 2002 and 2012, out of which 88% came from the CDB and CHEXIM alone, whereas only 12% was contributed by the country's commercial banks.⁶⁰ In other words, the two policy banks have provided more than six times of the OFDI loans to Chinese companies for their overseas expansion than the commercial banks in China. Although this estimate applies to Chinese companies across all sectors, the proportional difference between the role of the two policy banks and that of the commercial banks in Chinese OFDI confirms a point we have made earlier, i.e. the role of commercial financing is quite limited in the global expansion of Chinese energy companies.

Other than the direct loans to foreign governments for energy-specific projects, both policy banks have also provided energy-backed loans around the world. While much of it goes to other projects, such as roads, railways, ports, housing, and other type of urban infrastructure, some end up in the energy

59 The National Development and Reform Commission of the People's Republic of China and The China Development Bank, "Guanyu Jin Yibu Jiaqiang Dui Jingwai Touzi Zhongdian Xiangmu Rongzi Zhichi Youguan Wentid De Tongzhi (Notice of the National Development and Reform Commission and the Ministry of Finance on Further Strengthening the Support for the Financing of Key Overseas Investment Projects)," (Beijing: The National Development and Reform Commission and the China Development Bank, 2005); The National Development and Reform Commission of the People's Republic of China and The Export and Import Bank of China, "Guojia Fagaiwei Zhongguo Jinchukou Yinhang Guanyu Dui Guojia Guli De Jingwai Touzi Zhongdian Xiangmu Geiyu Xindai Zhichi Youguan Wenti De Tongzhi (Notice of the National Development and Reform Commission and the Export and Import Bank of China on Providing Credit Support for the State-Encouraged Key Overseas Investment Projects)," (Beijing: The National Development and Reform Commission The Export and Import Bank of China, 2003); "Guanyu Dui Guojia Guli De Jingwai Touzi Zhongdian Xiangmu Geiyu Xindai Zhichi De Tongzhi (Notice on Providing Credit Support for the State-Encouraged Key Overseas Investment Projects)," (Beijing: The National Development and Reform Commission and The Export and Import Bank of China, 2004).

60 Gallagher and Irwin, "Exporting National Champions: China's Outward Foreign Direct Investment Finance in Comparative Perspective."

sector. A case in point is Angola's use of its energy backed-loans from China for its badly needed national reconstruction after its 27-year civil war ended in 2002. They are called energy-backed loans because they are given to energy-rich countries, which then use their future energy export as a way to guarantee their loan repayment. This practice has long been used by the French in Angola during its civil war and Japan in China during the 1990s. It has caught on with the two policy banks because it will reduce their loan default risks while giving them a prominent role in contributing to the country's endeavor to secure energy around the world, which is also integral to the going out strategy so far as the energy sector is concerned.

Different from the CDB, when engaging in global energy finance the CHEXIM is more inclined to participate in energy projects that involve exportation of Chinese materials, equipment, services, and technologies. Further, because it is the only bank in China designated to offer preferential or concessionary loans on the basis of the country's foreign aid budget, the interest rates it charges often times appear more favorable than those charged by the CDB.⁶¹ This propensity toward trade financing is illustrated by the prominent involvement of the CHEXIM in financing of hydropower dam construction in the Sub-Saharan Africa between 2000 and 2013. As evidenced in Table 10, between 2003 and 2010, the CHEXIM has provided over \$6.16 billion worth of lending for the construction of over 4,700 megawatts of hydropower in 14 Sub-Saharan African countries.⁶² Noticeably, every CHEXIM lending involves the participation of a Chinese hydropower engineering or electrical power company as a contractor. While this goes to the heart of the trade financing the CHEXIM practices globally, it also reveals the relatively unknown story of the CHEXIM's support behind the globalization of Chinese hydropower companies around the world, which has gained little traction in the relevant literature.⁶³ In contrast, despite its support for fossil fuels projects in Africa, the CDB has not financed any hydropower projects during the same time frame in the region.

Nevertheless, the magnitude of CDB's overall global energy finance far eclipses that of the CHEXIM. For instance, between 2000 and 2014 the CDB and the CHEXIM have provided more than \$128 billion worth of energy loans to governments around the world.⁶⁴ Out of the total amount, 67% comes from the CDB while the CHEXIM is responsible for the remaining 33%, meaning that the CDB's direct lending to foreign governments in the realm of energy is more than two times that of the CHEXIM. The comparison of the two policy banks in the provision of energy-backed loans reveals the same story line. Between 2002 and 2010, the CHEXIM has issued over \$17 billion energy-backed loans, slightly over half of which was lent out after the 2008 global financial crisis.⁶⁵ In contrast, between 2008 and 2015, the CBD has provided more than \$81 billion worth of energy-backed loans around the world.⁶⁶

Further, it outshines any alternative source of overseas energy financing in China. The capital market has structural weaknesses while the commercial banks are confronted regulatory constraints. Meanwhile, the previously mentioned fiscal financing is simply too small and too selective to make a real difference. Hence, the CDB constitutes the real force behind China's global energy expansion over the past 15 years. Therefore, any attempt to gain a deep understanding of how China finances the global expansion of its energy companies must begin with the CDB. Thus, we now turn to a detailed case study of how the CDB sources its funding and how it finances the globalization of Chinese energy companies.

61 Bräutigam and Gallagher, "Bartering Globalization: China's Commodity-Backed Finance in Africa and Latin America."

62 Deborah Brautigam, Jyhjong Hwang, and Lu Wang, "Chinese Financed Hydropower Projects in Sub-Saharan Africa," SAIS-China Africa Research Initiative Policy Brief, no. 8 (2015): p.7.

63 For example, please refer to Kristen McDonald, Peter Bosshard, and Nicole Brewer, "Exporting Dams: China's Hydropower Industry Goes Abroad," *Journal of Environmental Management*, no. 90 (2009).

64 Kevin P. Gallagher and Rohini Kamal, "Fueling Growth and Financing Risk: The Benefits and Risks of China's overseas energy finance," (Boston University: Global Economic Governance Initiative, 2016).

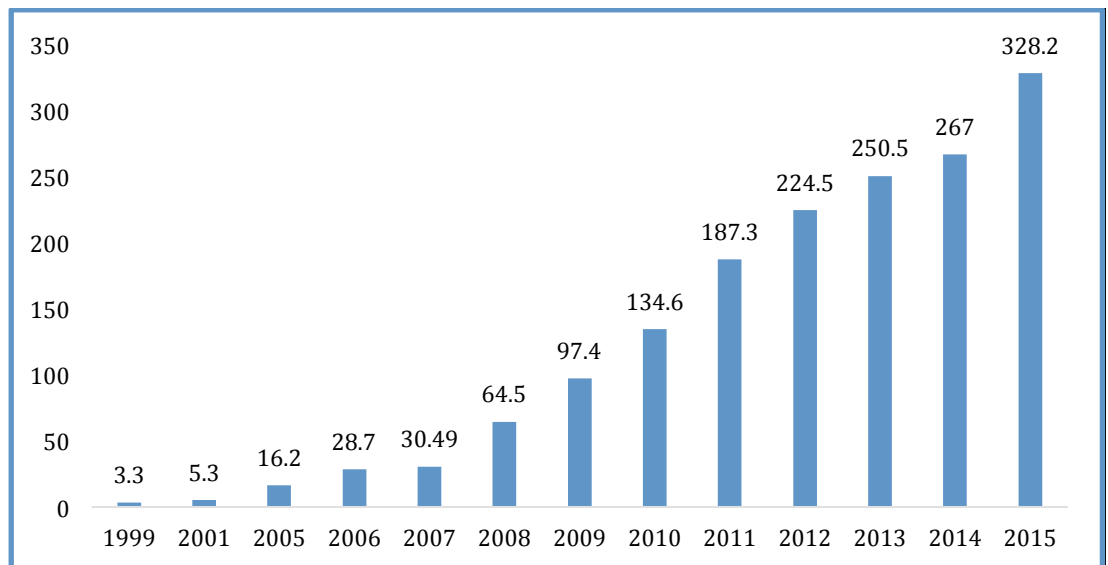
65 Bräutigam and Gallagher, "Bartering Globalization: China's Commodity-Backed Finance in Africa and Latin America," p.350; Gallagher and Irwin, "China's Economic Satecraft in Latin America: Evidence from China's Policy Bank," p.108.

66 Bräutigam and Gallagher, "Bartering Globalization: China's Commodity-Backed Finance in Africa and Latin America."

8. CASE STUDY: THE ROLE OF THE CHINA DEVELOPMENT BANK

Measured by the modest market share it captures of the banking industry in China at merely 5.4 percent,⁶⁷ the CDB pales in comparison with the “big five” SOCBs discussed earlier. However, a quick look at its outbound lending reveals a frequently under-appreciated reality. Over the past decade, as shown in Figure 5, its outbound loans registered a 19-fold increase. With a balance of \$328 billion at the end of 2015, it accounts for 29% of the outbound loans by all financial institutions in China.⁶⁸ This makes the CDB by far the largest financier for the global expansion of Chinese companies, including those specialized in energy. Internationally, the magnitude of both its assets and contributions to global finance has also eclipsed its peers. According to Zheng Zhijie, President of the CDB, with a total asset of over 12 trillion yuan (\$1.88 trillion) the bank is now twice the size of all development-oriented banks combined, including the World Bank.⁶⁹ In terms of outbound lending, just in Latin America and Caribbean in 2009 and 2010, the CDB loaned more than the World Bank, the Inter-American Development Bank, and the U.S. Export and Import Bank combined.⁷⁰

Figure 5: CDB’s foreign exchange loan balances (2005-2015) (unit: US\$ billion)⁷¹



Source: CDB Yearbooks and the CDB Research Academy

8.1 Where does the CDB source its funding?

The massive financing the CDB has mobilized for the expansion of companies both at home and abroad, particularly those specialized in energy, raises the question of where the bank sources its funding. On paper, CDB raises its funding from four primary sources: financial bonds, capital injection from the state, financial borrowing, and deposits.

67 China Banking Regulatory Commission, “CBRC Annual Report 2014.”

68 Zheng Yangpeng, “China Development Bank Overseas Loan Hits \$328.2 Billion,” China Daily, December 16 2015.

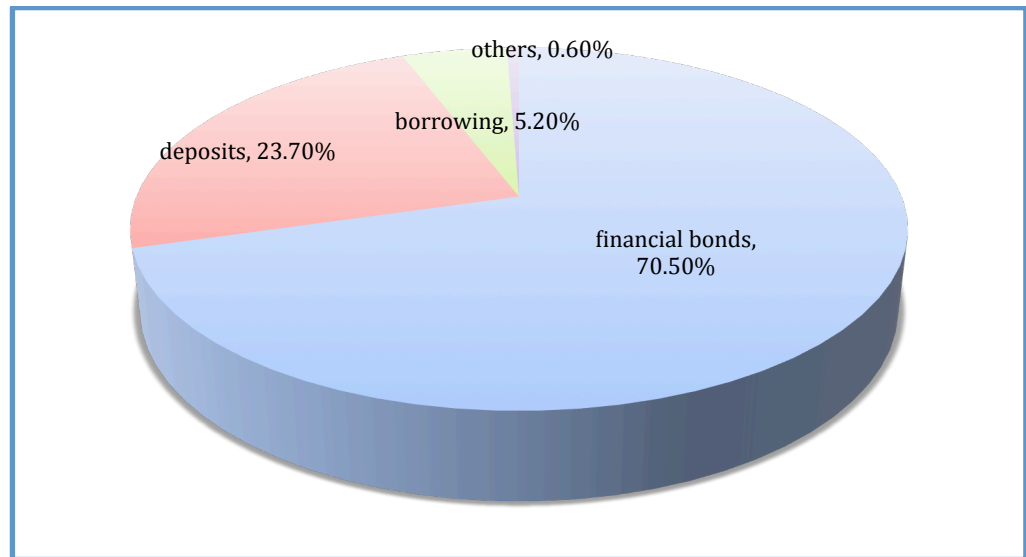
69 Ibid.

70 Kevin P. Gallagher, Amos Irwin, and Katherine Koleski, “The New Banks in Town: Chinese Finance in Latin America,” (Washington D.C.: Inter-American Dialogue, 2012).

71 CDB yearbooks 2005-2014, CDB Research Academy 2011, and Zheng Yangpeng, “China Development Bank Overseas Loan Hits \$328.2 Billion.”

Out of the four, financial bonds represent the most importance source of its funding. Between 1998 and 2002, financial bonds used to account for over 90% of its funding.⁷² While their share has declined over time in response to the CDB's effort to diversify its funding source, as Figure 6 indicates that financial bonds still account for over 70% of its funding now. Different from commercial banks, the CDB does not engage in the business of household deposits. Nevertheless, from 2000 it started to attract corporate deposits and by the end of 2014 deposits of various kinds, such as from corporates or financial institutions, have accounted for over 23% of its total funding. These deposits, however, are different from corporate savings and likely to be negotiated loans to CBD based on stimulus-related liquidity surpluses by a number of SOEs.⁷³

Figure 6: The CDB's funding in 2014⁷⁴



Source: The CDB Yearbook 2014.

The third source of its funding is financial borrowing, which now accounts for slightly over 5% of total funding. Finally, state capital injection, in the form of transfers from the MOF or the SAFE, used to be an important source but its importance has declined rapidly. Nevertheless, the state still injects capital into the CDB from time to time to pump up its capital adequacy ratio. For instance, before the central government launched the commercialization reform for the CDB, the Central Huijing Investment injected \$20 billion into the CDB from the country's FOREX reserves. Interestingly, the CDB received another capital injection of \$48 billion in July 2015 from the Sycamore Tree Investment Platform of SAFE (the designated administrator of China's FOREX reserves), as the government decided to turn it back into a policy bank;⁷⁵ this reversed the course it took since 2008.

In reality, the ultimate source of funding from which the CDB draws to support the global expansion of Chinese energy companies over the past 15 years is two-fold: households, both in China and abroad, and the country's FOREX reserves. To understand the linkage between households and the CDB one needs to anatomize how the bonds it issues constitute the most potent arrow in its quiver and how the CDB has become so addicted to bonds that it has essentially become a bond-based bank and the largest bond issuer in China (next to the MOF.) The fundamental reason why the CDB has always relied on

⁷² China Development Bank, China Development Bank Yearbook 2002 (Beijing: China Development Bank, 2002).

⁷³ The authors thank Pieter Bottelier for making this point.

⁷⁴ China Development Bank, China Development Bank Yearbook 2014 (Beijing: China Development Bank, 2014).

⁷⁵ Chen Jia, "Policy Banks Get \$90b Cash Infusion," China Daily, August 19 2015.

bonds is that it can count on the state backing to make its bonds risk free. Specifically, the state backing grants its bonds sovereign bond status, which essentially means the CDB does not need the approval of any rating agency when it issues bonds because they are perceived to carry a zero-risk weighting. This state backing was explicit and unambiguous between 1994 and 2007 when the CDB assumed a clear identity of a policy bank. However, this state backing became implicit and subject to annual approval between 2008 and 2014 during which it underwent the futile commercialization reform.

Further, this state backing makes the CDB bonds cost effective because the bank has a de facto captive market—the SOCBs. Indeed, the SOCB in China hold 80% of the financial bonds issue issued by the country’s policy banks, primarily the CDB but also including the China EXIM, and the China Agricultural Development Bank, and their holdings account for almost half of the total bonds they buy.⁷⁶ While the PBOC has long abandoned the practice of issuing orders to the country’s banking sector to purchase the financial bonds issued by the policy banks since 1998, the SOCBs remain these policy banks’ (especially the CDB’s) default customers. On the one hand, the CDB would be out of business if the SOCBs stopped buying the CDB bonds. Buying the CDB bonds also makes commercial sense for both the SOCBs and the CDB.⁷⁷ This is because with the CDB enjoying explicit and implicit state backing, the commercial banks run minimal risk in buying bonds in comparison with the risk of default they assume when lending to other non-SOEs. Meanwhile, the readiness of the SOCBs to buy up the majority of the CDB bonds also lowers the bank’s fund-raising cost by reducing the bank of the potential burden of maintaining thousands of retail branches and employees around the country.

A causal look at how the CDB raises funding from bonds does not reveal any trace of households, but it is this missing group that subsidizes the CDB’s transformation into China’s largest bond-based bank, which, as shown in Table 8, has on average issued about one fifth of the country’s total bonds annually between 2009 and 2014. The bonds the CDB issues account for over 20% of all the bonds issued in China. The SOCBs derive their deposits from their captive customers—the Chinese households—often at a suppressed rate. By suppressing the interest income on the households’ deposits, the SOCBs then afford to transfer the money to the CDB through its financial bonds at a very low cost. Meanwhile, the households are barred from directly investing in the CDB bonds because they trade primarily in the inter-bank markets. Thus, with little awareness and with little benefit, the households in China have become the ultimate source of cheap funding for the CDB.

Table 8: The CDB as a bond-based bank⁷⁸

	CDB bonds/total bonds issued in China	\$ amount raised from overseas bond issuance	Issuance of yuan-denominated bonds abroad
2014	17.70%		4.5 billion
2013	19.90%	\$865 million	5 billion
2012	20.27%	\$1.5 billion	25 billion
2011	20.80%		
2010	23.33%		5 billion
2009	24.26%	\$50 million	3 billion

Source: CDB Yearbooks

Further, China’s growing integration into the global financial system also allows the CDB to raise funds

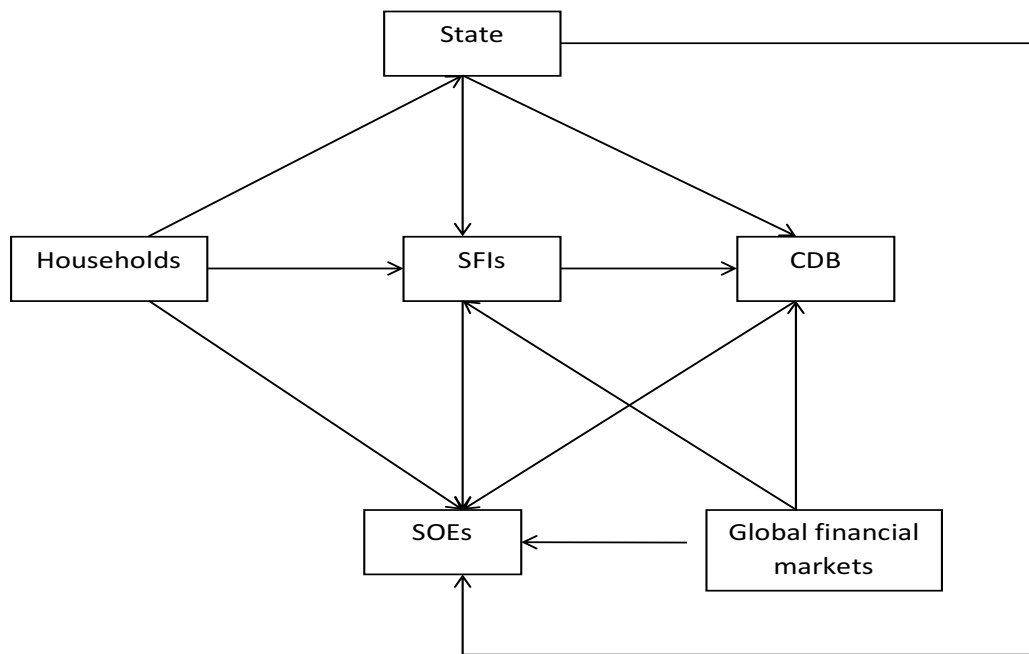
76 Xiao Huaiyang, “Zhengce Xing Jinrongzhai Duba “Zhaiquan Jianghu” 80% Bei Yinghang Chiyou (Policy Banks Dominate in China’s Bond Market and 80% of Their Bonds Are in the Hands of Banks),” China Securites Daily, June 12 2012.

77 Ibid., pp.69-70.

78 CDB Yearbooks 2009-2014

from abroad. In fact, the CDB has been issuing foreign currency-denominated bonds since 1994. In 2007 the CDB started to issue the yuan-denominated bonds around the world. One of the most prominent examples of its recent success in issuing overseas debt in its own currency (as highlighted in Table 14) dates back to 2012 when it sold 5 billion-yuan worth of bonds in Hong Kong and another 20 billion yuan to central banks in Africa. Although it pales in comparison with the amount of funding it raises from domestic bonds, Table 8 shows that the ability of CDB to issue debt beyond its shores has grown tremendously over time. Moreover, when it issues bonds overseas the international investors also treat them as de facto sovereign bonds. According to the CDB, by the end of July in 2015 the CDB has issued 28 billion yuan worth of Chinese currency denominated bonds overseas.⁷⁹ This is a remarkable development and it means China has finally earned an entry into a club exclusive to a few countries in the world, such as the United States, that enjoy the privilege to issue debt with zero risk globally at low rates. It also means that households around the world have become another ultimate source of the CDB funding and thus support the global expansion of the Chinese energy companies.

Figure 7: who ultimately finances the CDB?



Second, in addition to household savings, the state has channeled some of its massive FOREX reserves to the CDB for it to support the global expansion of Chinese companies since 2008. This is motivated by the desire of the state to maintain and enhance the value of its FOREX reserves through a diversification away from U.S. treasury bonds, which have been their primary form of investment vehicle, and through the internationalization of the Chinese currency. The urgency for the FOREX diversification and its Renminbi internationalization gained traction in the leading up to the 2008 global financial crisis as China's reserves kept growing while the U.S. dollar lost strength in response to the quantitative easing policy adopted by the Federal Reserves. According to the Economic Observer, a leading business and finance newspaper in China, the country's FOREX reserves only carry a rate of return of 3% as opposed to the normal 10% frequently associated with foreign direct investment.⁸⁰ Meanwhile, the commodity price

⁷⁹ China Development Bank, "Jinrong Zhaiquan Yewu (the Financial Bonds Businesses)," China Development Bank, <http://www.cdb.com.cn/web/NewsInfo.asp?NewsId=5541>.

⁸⁰ Ouyang Xiaohong, "Jiekun Waichu "Gao Chengben Di Shouyi" Waiguanju Jichu "Weidai Ban" (to Solve the Challenge of "High Costs Low Returns" Confronting the Foreign Exchange Reserves the State Administration of Foreign Exchange Reserves Roll out "Entrust Loans")," Jingji Guancha Bao (The Economic Observer), January 19 2013.

collapse provides China with an opportunity to buy up resources and capital-constrained companies on the cheap. Against this backdrop, the Central Foreign Exchange Business Center of the SAFE entered into an agreement with the CDB in May 2008, according to which the former would allocate funding to the latter as entrusted loans to support the going out of Chinese companies. It turns out that much of the entrusted loans has gone to the energy and resource sector. According to a well-informed source from the CDB, by January 2013 the outstanding balance of the CDB's overseas loans had reached \$250 billion and over two-thirds of these actually came from the SAFE in the form of entrust loans,⁸¹ which the CDB then lends out to companies seeking international expansion. Essentially, the CDB has played the role of an intermediary that facilitates the SAFE to use the state's FOREX reserves to support the implementation of its going out strategy. In return, the CDB makes a profit on the basis of a commission it charges for serving as a bridge, which is about 10 basis points.⁸²

8.2 How does the CDB finance China's global energy expansion?

An in-depth look at the history of the CDB suggests that three factors have conspired to lead to a surge after 2008 in CDB's support for the global expansion of Chinese companies (and those focused on energy and resources in particular): 1) At the individual level, the desire of Chen Yuan to build a world class bank and super investment bank through the so-called third road has a lot of bearing on the way the CDB attempts to distinguish itself from the other policy banks and commercial banks as well as on the manner in which it conducts its global outreach. 2) At the organizational level, the intensifying competition emanating from the SOCBs and the growing pressure for the CDB to seek higher returns, together with the perceived opportunities presented by the commodity price collapse at the international level, constitute the incentive that drives the CDB's search for opportunities on the international front. 3) Finally, at the national level, the combination of the the state's going out strategy, its effort to enhance its resource security, and its drive to internationalize the Chinese currency sets out the strategic priorities for the CDB as the financial arm of the Chinese state. In addition to the timing of CDB's expansion into global energy finance, these factors have impacted the way the CDB approaches its overseas investment and financing. Nevertheless, the CDB has to balance this mix of individual, organizational, and national interests when financing the expansion of Chinese companies around the world.

First, the way the CDB engages in global energy finance reflects the desire of Chen Yuan, a member of a revered revolutionary family and chairman of the CDB between 1998 and 2013, to build a world class bank and his dream of building a super investment bank in China. In an interview with the Phoenix TV in August 2009, Chen Yuan disclosed his personal involvement in the initiative the CDB took to engage Petrobras, which soon attracted the attention of both governments during the President Lula's visit to China and evolved into a government-to-government project that involves Chinese energy companies.⁸³ This is also true with regard to the CDB's loan to Russia and Venezuela in 2009. In almost every case the CDB goes beyond just taking the initiative to explore finance or broker opportunities for the country's energy companies to expand overseas, it actually operates as a hands-on "chief financial advisor" for the Chinese energy companies involved. In the case of its energy-backed loans, the CDB has not only participated in designing its loan structure and interest rate arrangement but also assisted the Chinese government and the relevant Chinese energy companies with their negotiations and risk assessment.⁸⁴

81 Chen Xiaoyi, "Jiekai Waihui Chubei Weituo Daikuan De Shenmi Miansha (Unveil the Mysteries of the Entrust Loans of the Foreign Exchange Reserves in China)," (2014), <http://www.morningwhistle.com/website/news/9/36700.html>.

82 Ibid.

83 Chen Yuan, Zhengfu Yu Shichang Zhijian: Kaifa Xing Jinrong De Zhongguo Tansuo (between the Government and the Market: The Exploration of Development Finance in China) (Beijing: China CITIC Press, 2012), p.267.

84 Huang He, Zhang Yue, and Xue Tingfang, "Haiwai Shengyi: Guojia Kaifa Yinhang Ruhe Chengwei Kaifa Guojia Yinhang

Second, as a reflection of its organizational interests in seeking higher returns, the CDB actually provides loans with demanding terms. On the one hand, it often offers commercial rates that exceed those charged by peer financial institutions, such as the World Bank and International Bank of Reconstruction and Development (IBRD). A look at the interest rate arrangement associated with some of the CDB's energy-backed loans during this time frame confirms this point. For instance, in 2009 the CDB gave Brazil a \$10 billion loan at 280 basis points above the London Interbank Offered Rate (LIBOR) whereas the IBRD gave Brazil a \$43.4 million loan in 2000 at a variable spread of 30-50 points.⁸⁵ In the case of its loans to Ecuador in 2010 and 2011 at the amount of \$1 billion and \$2 billion, it charged a hefty premium of 6% and 6.9% respectively. As discussed earlier, when the CDB lends to Chinese energy companies, especially those in the renewable sector, its rates are on the higher side and require collaterals in the form of land, business license, and guarantees from their shareholders or the China Export and Credit Insurance Corporation (Sinasure). In addition, the CDB tends to build various mechanisms to ensure repayment and reduce the risk of default. For instance, in its loans to Ecuador, other than charging a high premium, the CDB also required the loan to be mortgaged on the country's oil export to China based on market prices.⁸⁶ In fact, it has adopted the same model when lending to Russia, Brazil, Venezuela, and Turkmenistan in 2009.

Finally, the CDB has demonstrated its adherence to the key priorities of the state. A case in point is that despite its propensity to offer commercial rates it does provide discounted loans. However, these loans are mostly provided to the Chinese energy SOEs. For instance, in September 2009 the CDB entered into a strategic agreement on long-term cooperation with CNPC, China's largest NOC, according to which the bank would provide the NOC with a credit line of \$30 billion over the next five years at a discounted rate for it to expand overseas.⁸⁷ Similarly, when it structures its energy-backed loans, it has shown sensitivity to the state's objective to promote the country's export and accelerate the internationalization of the Chinese currency. As an illustration, more than half of the \$20 billion loan the CDB lent to Venezuela in 2010 took the form of the Chinese Renminbi and involved the procurement of Chinese export.

With this mix of influence of individual, organizational, and national interests, however, could one predict the performance, impact and trajectory of CDB's expansion in global energy finance? The answer is likely to be negative. In fact, one would have to adopt a case by case approach because there is likely be a significant amount of variation depending on how these three influences are staggered at any given point of time. While the CDB has certainly become a world class bank in terms of its overseas loans, its engagement in global energy finance, and the volume of debt it issues, the answer as to the quality and performance of its overseas loans, especially its global energy finance, and its debt is far from certain. Although it is beyond the scope of this study to perform such an assessment, we already see the writings on the wall by looking at the bank's contribution to the running-away debt boom in China, the collapse of some of the leading solar and wind companies supported by the CDB (thanks to the overcapacity caused by its aggressive lending), and the growing risk of default of its \$50 billion-plus dollar it has lent to Venezuela (the economy of which is in deep water with the collapse of oil prices.) However, the decision of the State Council in April 2015 to turn the CDB back into a policy bank and the growing profile it plays in urbanization, especially shanty town renovation, at home and the "one road one belt" initiative abroad, have generated grounds for further expansion rather than contraction of the CDB in China and around the world.

(Overseas Businesses: How China Development Bank Turns into a Country Market Opening-up Bank)," Nanfang Zhoumo (Southern Weekend), April 17 2015.

85 Gallagher, Irwin, and Koleski, "The New Banks in Town: Chinese Finance in Latin America," p.11.

86 Ibid., pp.15-16.

87 Zhang Ye, "Guokaihang 2049 Yi Zhu Zhongshiyou Haiwai Tuozhan (China Development Bank Lends 204.9 Billion Yuan to Assist Cnpc with Its Overseas Expansion)," Jinghua Shibao (The Beijing Times), September 10 2009.

9. CONCLUSION

The past 15 years have seen a rapid expansion of China's global energy footprint in the area of exports, greenfield investment, M&As, and direct loans to governments around the world. This study has shown that such expansion is an outcome of an orchestrated effort by the Chinese state. The state's dominance in driving and leading this execution of expansion and provision of the necessary financing has stayed consistent. On the one hand, the energy SOEs, by virtue of their dominance of the energy sector at home, have played a leading role in carrying out this expansion, although energy POEs have recently started to catch up, especially in the realm of renewables. On the other hand, the state, much more than the capital market has provided the required financing for the global expansion of Chinese energy companies.

When financing the global expansion of its energy companies, the state has used its fiscal budget and sometimes turned to its SOCBs to mobilize capital, both channels have thus far have played a very limited role. Instead, China has relied greatly on the two policy banks, especially in the aftermath of the 2008 global financial crisis, to do the heavy lifting. The magnitude of its financing for Chinese overseas energy investment, M&As, and energy projects undertaken by governments around the world has made the CDB the largest financer for both Chinese and global energy projects.

Given China's growing dependence on foreign energy, it comes as little surprise that many an energy project financed by the CDB is designed to enhance the country's access to energy, investment opportunities, and technologies for Chinese energy companies to bring back home to unlock its resources buried by geology. Further, by facilitating the global expansion of Chinese energy companies, the CDB also promotes the export of their products, equipment, services, and technologies. Finally, financing the global expansion of the Chinese energy companies, especially with the help of the colossal FOREX reserves of the state, also conforms to the endeavor of the state to diversify its FOREX reserves and internationalize its currency. Thus, by throwing financial support at the global expansion of Chinese energy companies over the past 15 years, the CDB contributes to three priorities of the state, which are: the going out strategy, its energy security objective, and its endeavor to internationalize the Renminbi. As China promotes the Belt Road Initiative under Xi Jinping's leadership, one certainly sees a new frontier where the CDB will expand further internationally.

While this study has shed light on the magnitude, mode, and motivation of state financing for China's global energy footprint, it will be unable to answer a number of questions that are its byproducts. These include but are not limited to three questions. First, how will China's slowdown affect the CDB's appetite and ability to continue its engagement in global energy finance? The evidence thus far seems to point to a fragmented picture: while the Chinese energy companies have cut back on their OFDI and cross-border M&As over the past two years or so they have shown their readiness to expand under the "one road one belt" initiative whenever an opportunity presents itself. Second, how will the decision to transform the CDB back to a policy bank affect its global expansion? In theory, one would see more upward momentum down the road, but there are indicators that some of the deals the CDB has financed, such as those in Venezuela, could backfire and prompt questions about the performance and efficiency of the CDB's global energy finance, particularly in so far as its contribution to the country's energy security. Finally, Chen Yuan's departure from the CDB in 2013 raises a question about how the CDB will balance its organizational interest with the national interests when engaging in global energy finance. Does the departure mean that the CDB will become more of a state puppet now that it no longer has a powerful leader at its helm turning it into a financial empire of its own in many respects? Or does its involvement in the newly created Asian Infrastructure Investment Bank and the New Development Bank under the club of BRICs (Brazil, Russia, Indian, and China) give it more latitude to become an entity of

its own? As we come to an end of this study, we conclude with a humble notion of how much we still do not know about this increasingly important global player in international finance and suspect what we do not know could end up having the most important impact on China's financial statecraft.

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