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THE IMPACT OF GREEN BANKING GUIDELINES ON THE SUSTAINABILITY PERFORMANCE OF BANKS

THE CHINESE CASE

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Key Points

- Financial sector sustainability regulations are an efficient means to support the green economy and to foster financial sector stability.
- The central banks of the Group of Twenty (G20) countries should introduce green banking policies similar to the Chinese Green Credit Policy to support banks to finance the green economy.
- Green banking policies must be supported by implementation guidelines that help the banking sector assess environmental risks and opportunities in financial decision making.

The negative environmental impact of many economic activities has been problematic for Chinese economic growth. Currently, China emits more than 23 percent of global greenhouse gas emissions (Vaughan and Branigan 2014) and air and water pollution have become major threats for human health and economic development (Chan and Yao 2008; Shao et al. 2006).

In 2007, the People's Bank of China (PBoC) established an internationally recognized program on green finance (Zadek and Robins 2015) — the Green Credit Policy (China Banking Regulatory Commission [CBRC] 2012; International Finance Corporation [IFC] n.d.), which introduced guidelines and regulations for integrating environmental issues into financial decision making (Bai, Faure and Liu 2013), in particular in commercial lending decisions that focus on banks and other lenders directly. It is still unclear, however, what effect this policy has on both Chinese banks' sustainability performance and their financial stability.

The Chinese Green Credit Policy and the Green Credit Guidelines

Three agencies, the Ministry of Environmental Protection, the PBoC and the CBRC (Aizawa and Chaofei 2010) are responsible for the Green Credit Policy.[1]

Based on the Green Credit Policy, the PBoC developed the Green Credit Guidelines, implemented in 2007 (see Box 1 for chapter 1 of the guidelines). The guidelines demand that banks put restrictions on loans to polluting industries and offer adjusted interest rates depending on the environmental performance of the borrowers' sectors. Pollution control facilities, and borrowers involved in environmental protection and infrastructure, renewable energy, circular economics, and environmentally friendly agriculture qualify for loans with reduced interest rates (Zhao and Xu 2012), while polluting industries should pay higher interest rates.

1 In 1995, the PBoC published its Notice on Implementation of Credit Policy and Strengthening of Environmental Protection Works. The policy asked financial institutions to implement the national environmental protection policy in credit activities. Since then, the Chinese environmental agency has worked with banking authorities to identify companies that fail to comply with pollution standards or that bypass environmental assessments for new projects. The Green Credit Policy restricts polluting companies from receiving loans and forces them to focus their business on environmentally friendly projects to get access to new credit.

In addition to flexible interest rates, lenders are asked to reduce the number of loans to polluting industries, and to withdraw loans that have already been provided if environmental controversies or instances of non-compliance occur (Jin and Mengqi 2011). This will reduce the environmental risks of Chinese lending portfolios that may have negative impacts on the financial sustainability of lenders. Consequently, Chinese banks have introduced environmental policies (Chan-Fishel 2007), strategies and assessment systems to evaluate the environmental performance of clients.

Although the intentions of the Green Credit Guidelines are clearly positive, problems with the implementation of the policy, and the relatively short length of time the guidelines have been in place, mean it is not possible to draw clear conclusions about their success (Zhang, Yang and Bi 2011; Jiguang and Zhiqun 2011; Hill 2014). Although some Chinese banks, such as the Industrial and Commercial Bank of China, significantly increased the number of "green borrowers" since the implementation of the guidelines, other banks have been struggling to transform the guidelines into greener lending practices (Zhao and Xu 2012). Some studies suggest that the financial sector can significantly influence sustainable development (Scholtens, Cerin and Hassel 2008; Stephens and Skinner 2013). The question remains, however, whether sustainability integration in the form of green lending can also create financial benefits and financial stability for the lending institutions and for the financial sector.

With regard to the implementation of the Green Credit Policy, Duan Jin and Niu Mengqi (2011) suggest the need for a general improvement to environmental risk assessment practices in Chinese banks in order to meet the requirements of the Chinese Green Credit Guidelines. So far, Chinese banks, like many banks in other countries, have struggled in assessing the environmental risks of their borrowers that could turn into financial credit risk for the lender (Mengze and Wei 2015). If banks have the capacity to assess environmental and social risks as well as opportunities, they will be able to create both a positive impact on sustainable development and a stable financial sector by avoiding credit risks caused by the environmental risks of their borrowers (Weber, Scholz and Michalik 2010).

Finally, it is important to clarify that the Chinese Green Credit Policy is not the only regulation that focuses on financial sector sustainability. Countries such as Brazil, Bangladesh and Nigeria have also introduced regulations and guidelines focusing on the impact of the banking sector on the environment and sustainable development (Zadek and Robins 2015). However, these guidelines were implemented after the Chinese Green Credit Policy, are less focused on green lending and are less strictly enforced (Weber and Oni 2015).

Box 1: Chapter 1 of the Green Credit Guidelines

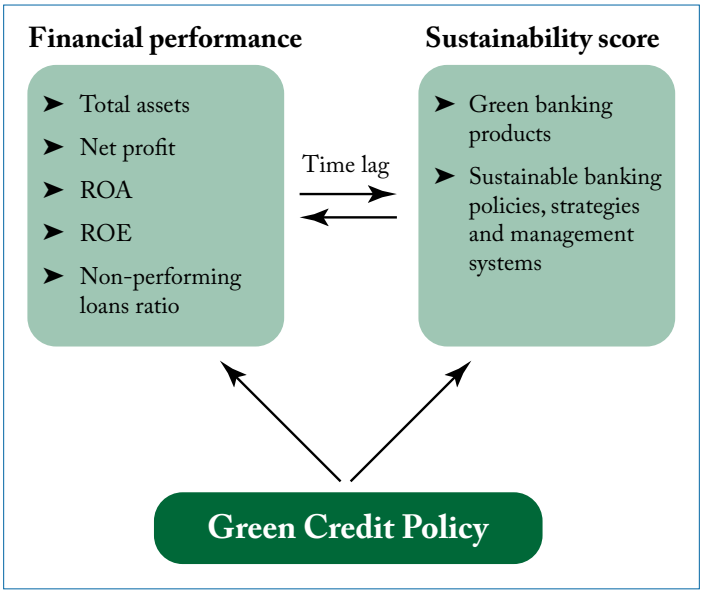
1. The Guidelines are developed on the basis of the *Banking Industry Regulation and Administration Law of the People's Republic of China* and *Commercial Banking Law of the People's Republic of China*, with a purpose to promote green credit growth among banking financial institutions.
2. The Guidelines apply to policy banks, commercial banks, rural cooperative banks and rural credit unions established within the People's Republic of China (hereafter referred to as banks).
3. Banks shall promote green credit as a strategy, support economy to grow in a green, low-carbon and recycled model through business innovation, manage environmental and social (E&S) risks, improve banks' own E&S performances, and in doing so optimize credit structure, improve services and contribute to the transformation of economic growth pattern.
4. Banks shall effectively identify, assess, monitor, control or mitigate E&S risks in business operations, develop E&S risk management systems, strengthen credit policies and processes that are related. E&S risks as used in the Guidelines refer to potential impact and risks brought to the environment and communities by banks' clients and their primary supply chains through construction, production and operational activities, which include such E&S issues as energy consumption, pollution, land, health, safety, resettlement, eco-system protection, climate change, etc.
5. China Banking Regulatory Commission (CBRC) is responsible for the supervision and administration of banks' green credit operations, and E&S risk management.

Source: IFC (n.d.).

The Connection between the Sustainability of Chinese Banks and Their Financial Performance: Main Findings

One main goal of the Chinese Green Credit Policy is to mitigate the financial sector's financial risk and to increase the financial performance of lenders. The connection between the sustainability of Chinese banks and their financial performance was analyzed. The results will also help to provide an understanding of the possible effects of the Green Credit Policy on the sustainability and financial performance of Chinese banks. A regression analysis was conducted with total assets, net profit, return on assets (ROA), return on equity (ROE) and the non-performing loan ratio as financial indicators, and the existence of green banking products and services (such as loans, mortgages, funds, indices, asset management, bonds, microfinance, project finance, savings and investment banking) as well as sustainable banking

Figure 1: The Connection between Sustainability and Financial Performance



Source: Author.

policies, strategies and management systems as indicators of sustainability performance (see Figure 1).

To control for cause and effect, panel regression and Granger causality were used (Granger 1969). This method uses a time lag between the cause and the effect. The cause, for instance the sustainability performance, is measured in year *x* and the effect, the financial performance, is measured in year *x*+1 and vice versa. The results presented in Table 1 suggest that there is a correlation between financial performance indicators and sustainability performance in Chinese banks. Since the analysis found significant effects in both directions — the sustainability score has a positive effect on the financial performance and vice versa — a third variable, for instance regulations such as the green credit policy, may have an impact on sustainability and financial performance (Weber 2016). This result suggests that the Green Credit Policy achieves its goal of influencing the financial sector's sustainability and its stability.

Furthermore, the analysis demonstrates a significant increase in the sustainability performance of Chinese banks between 2009 and 2013 (see Figure 2).

Conclusions

The results of the analysis suggest that the environmental and social performance of Chinese banks improved significantly between 2009 and 2013 because the Green Credit Guidelines require banks to become active with regard to integrating environmental risks into their credit risk assessment procedures

Table 1: Regression Coefficients for the Sustainability Score and Financial Figures with the Dependent Variable Delayed for One Year

Dependent variable	Independent variable	Coefficient	R square	Significance
Sustainability score	Total assets	.038	.46	< .00001
Total assets	Sustainability score	4.093	.45	< .00001
Sustainability score	Net profits	.044	.50	< .00001
Net profits	Sustainability score	5.569	.52	< .00001
Sustainability score	ROA	.122	.03	< .00001
ROA	Sustainability score	.639	.02	.0009
Sustainability score	ROE	.072	.01	< .00001
ROE	Sustainability score	.535	.02	.0069
Sustainability score	Non-performing loans	-.016	.0002	.2023
Non-performing loans	Sustainability score	.451	.014	.3117

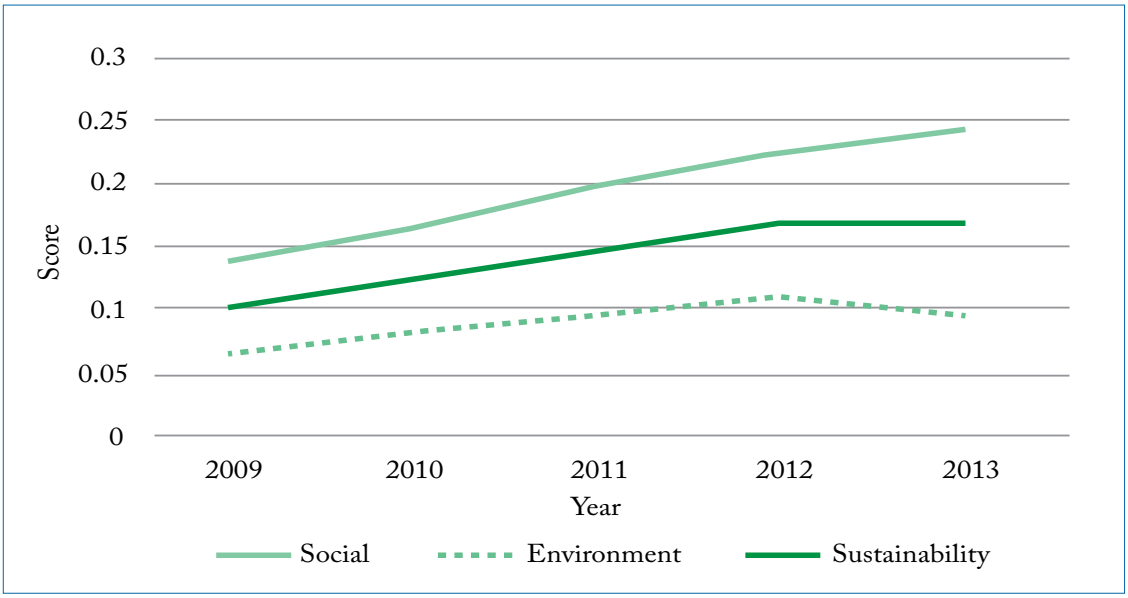
Source: Author.

(Aizawa and Chaofei 2010; Zhang, Yang, and Bi 2011). The increase is in-line with other studies that found a general increase in corporate sustainability in Chinese firms during the same period (Weber 2014; Xun 2012).

The findings suggest that financial sector sustainability regulations such as the Green Credit Policy influence Chinese banks to integrate environmental and social issues into their business strategies, products and services. The results of different studies demonstrate that government-supported and -enforced corporate sustainability drives Chinese banks to improve their sustainability performance through engagement in green finance. Institutional pressure caused by the Green Credit Policy (Bai, Faure and Liu 2013) led to an improvement in the sustainability performance of banks, credit unions and other financial institutions involved in the lending business.

Although the Chinese Green Credit Policy seems to be a successful approach, very few financial regulators and central banks in other countries have integrated similar sustainability issues into financial sector regulations (Oyegunle and

Figure 2: Development of the Sustainability Score of Chinese Banks between 2009 and 2013



Note: The score represents the ratio of sustainability policies, strategies, processes, products and services compared to the maximum of 1.
Source: Author.

Weber 2015). It seems, however, that the Chinese policy is efficient and that it would make sense for other G20 countries to implement similar guidelines in order to promote a greener financial sector and economy, and to mitigate financial risks caused by climate change and other environmental impacts. The new Task Force on Climate-related Financial Disclosures of the Financial Stability Board (FSB) seems to be a first step toward integrating environmental risks into financial sector risk assessment and management.

Furthermore, analysis of Chinese banks, as well as of banks in Germany (Weber, Scholz and Michalik 2010) and in Bangladesh (Weber, Hoque and Islam 2015) demonstrates that green lending also has a positive impact on the financial returns and the financial stability of banks. Significant correlations exist between green banking activities and total assets and net profits. As a consequence, it makes sense to integrate environmental risk assessment and management into conventional financial risk assessment and management to increase the quality of risk assessment tools and to reduce the credit default ratio.

Additionally, the author's cause-and-effect study based on Granger causality suggests that the Green Credit Policy influences both Chinese banks' green financial activities and their financial performance. On the one hand, the Chinese financial sector seems to become greener and on the other hand, it is able to create more sustainable financial returns and increase its assets. As a conclusion, the authors postulate that integrating sustainability into the financial sector through regulations influences the sector to achieve higher corporate sustainability and better financial performance at the same time. This connection can be used to justify the implementation of financial sector sustainability regulations, because they not only improve the sustainability performance of banks but also their financial performance and, consequently, their stability.

With respect to the implementation of sustainability regulations into the financial sector, this policy brief proposes that regulators offer implementation guidelines for banks of different sizes. After introducing the Green Credit Guidelines in China, the CBRC developed implementation guidelines to enable the banks to integrate them into their decision-making processes and strategies because studies found problems with the implementation of the policy into the day-to-day lending business due to missing environmental data from clients and missing environmental risk assessment tools (Zhang, Yang and Bi 2011). In line with these authors, this policy brief proposes implementation guidelines that take regional differences, and the business model, capacity and size of the financial institution into account in order to guarantee an effective application of sustainability regulations in the financial sector. Regional differences have to be taken into account because certain regions may, for example, depend on polluting industries. Rejecting credit in such regions would have significant negative effects on the local economies. Therefore, alternative industries have to be developed that offer investment and lending initiatives that are in line with green lending principles.

The business model of the banks must also be taken into account. Some financial institutions, such as credit unions or regional banks, are only allowed to conduct their business locally. For these types of institutions, it has to be guaranteed that they do

not suffer from the risk that occurs during the transformation to a greener economy.

The capacity and size of banks and other financial institutions are a major factor in their ability to adapt to new challenges. A shift to greener lending and investments requires the capacity to evaluate both environmental risks and opportunities. Without the knowledge, expertise and tools that are needed to assess environmental risks and opportunities, banks will not be able to channel their finances into a greener economy. Guidelines and training have to be developed for banks to prepare them to apply green credit policies appropriately and without putting themselves and their clients at risk.

Recommendations

Based on the author's research and analysis of the existing literature, this policy brief has the following recommendations for the G20 and the FSB:

- **Financial sector sustainability regulations are an efficient policy to support the green economy and to foster financial sector stability:** As either a stand-alone solution or in combination with general environmental regulations and voluntary codes of conducts, financial sector sustainability regulations can help to support the green economy and to appropriately manage banks' financial risks caused by environmental impacts. Central banks of the G20 countries and the FSB should collaborate with the IFC in developing these regulations. The IFC has already established a working group on financial sector sustainability regulations and is an ideal partner for linking the financial sector in different countries with regulators.
- **The central banks of the G20 countries should introduce green banking policies similar to the Chinese policy to support the financial sector financing the green economy:** The Green Credit Policy (as well as policies in other countries) seems to have an effect on both sustainable development and financial risk management. Therefore, G20 countries should implement these policies in order to achieve their goals with regard to a greener economy, climate finance and financial sector stability.
- **Green banking policies have to be supported by implementation guidelines that show the banking sector how to assess environmental risks and opportunities in the financial decision making:** Issuing guidelines and regulations on a topic that is new to the regulated industries has to be in tandem with implementation guidelines that show banks how to assess environmental risks and opportunities in their business, how to avoid and manage these risks and opportunities, how to find relevant data and, most importantly, how to integrate environmental aspects into their financial decision making. As environmental risks and sustainability aspects are new to many in the banking industry, capacity building has to be conducted in the form of guidelines, training and education.
- **The FSB and G20 should develop case studies that show the benefit of green economy finance:** The FSB and central banks may support their banks by providing data and cases that demonstrate the win-win situation of financing the green economy. There is still a widespread belief that achieving a green economy is more expensive and comes at the cost of economic development. However, many cases suggest that financing the green economy is actually less risky and provides similar returns to investments in polluting industries such as fossil fuel-based electricity. Therefore, financial sector sustainability regulations should be complemented by cases and data that demonstrate the business case of this approach.

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Olaf Weber joined CIGI as a senior fellow in March 2015. His research with CIGI focuses on sustainability and the banking sector, including sustainability guidelines and regulations for central banks and regulatory bodies. Olaf is associate professor at the School for Environment, Enterprise and Development. His research and teaching interests are in the area of environmental and sustainable finance with a focus on sustainable financial and credit risk management, socially responsible investment, social banking and the link between sustainability and financial performance of enterprises. Before joining the University of Waterloo he was head of the Sustainable Banking Group of the Swiss Federal Institute of Technology, Zurich.

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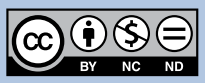

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