

# China-Hungary Green Bond Cooperation: A Review and Promising Prospects\*

Bin Hu  – Chaoyi Chen  – Yueran Zhang 

*Amid increasing climate change challenges, the European Union (EU) aims to reduce net greenhouse gas emissions by 90 per cent by 2040, necessitating substantial green financing, which aligns with China's commitment to carbon neutrality by 2060. This shared objective creates opportunities for deeper collaboration in green finance and technology. Hungary, a key partner in China's green finance initiatives within the EU, has significantly strengthened its economic ties with China. This paper reviews past China-Hungary green bond collaborations and offers recommendations to enhance future cooperation. Key suggestions include improving communication and coordination to manage financial risks, advocating for bidirectional green bond market openings, establishing mutual recognition mechanisms for green bond standards and enhancing transparency through improved information disclosure systems.*

## 1. Introduction

Amid the increasing frequency of extreme weather events and the growing urgency to address climate change, the EU proposed a climate target in February 2024 to reduce net greenhouse gas emissions by 90 per cent compared to 1990 levels by 2040 (European Commission 2024). Achieving this ambitious goal requires significant green financing and investment to facilitate adjustments and transitions in areas such as energy structure and the decarbonisation of industrial sectors. As shown in *Figure 1*, the EU will need to invest approximately EUR 660 billion annually across all scenarios. In the preferred scenario (S3), annual investments will amount to EUR 710 billion during the first decade (2031–2040), gradually decreasing in the period from 2041 to 2050. The 2040 target also provides regulatory certainty for long-term investments needed to meet the 2030 target.

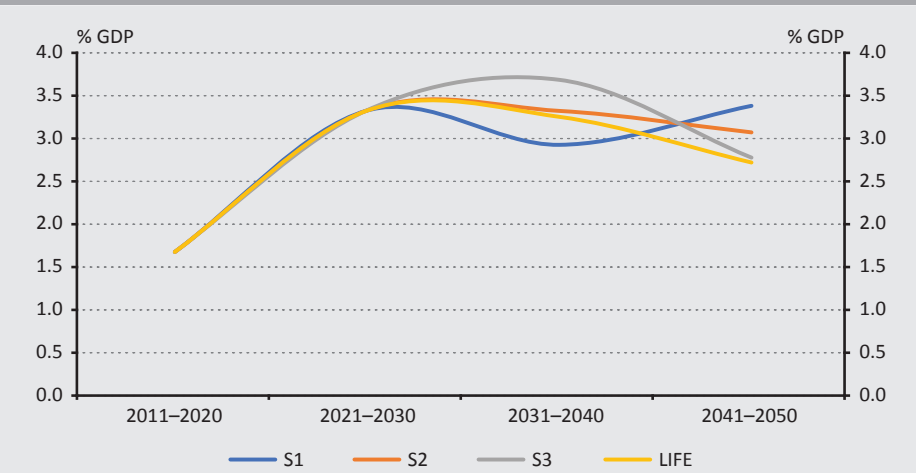
---

\* The papers in this issue contain the views of the authors which are not necessarily the same as the official views of the Magyar Nemzeti Bank.

*Bin Hu: Tsinghua University, Associate Professor and Director of Global Climate Governance Research at Institute of Climate Change and Sustainable Development. Email: hub@tsinghua.edu.cn*  
*Chaoyi Chen: Magyar Nemzeti Bank, Senior Education and Research Expert; Budapest Metropolitan University, Visiting Lecturer. Email: chenc@mnbb.hu*  
*Yueran Zhang: Renmin University of China, Student. Email: zhangyueran666@163.com*

The views expressed here are the authors' and not necessarily those of the Tsinghua University, Renmin University or the Magyar Nemzeti Bank (Central Bank of Hungary).

**Figure 1**  
Average Annual Energy System Investment Needs (Percentage of GDP)



Note:

S1: a net GHG reduction target in 2040 of up to 80 per cent;

S2: a net GHG reduction target in 2040 of 85–90 per cent;

S3: a net GHG reduction target in 2040 of at 90–95 per cent;

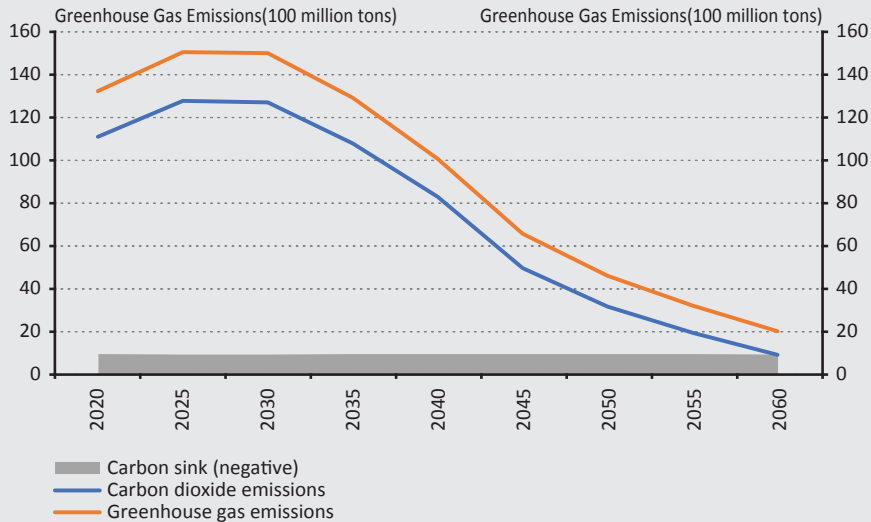
LIFE: assessing the impact of a shift in consumption patterns to more sustainable alternatives leading to a more efficient use of natural resources

Source: European Commission

As a global leader in renewable energy, China is the largest driving force behind the world’s energy transition. *Figure 2* illustrates China’s roadmap to achieving carbon neutrality by 2060, with investments in energy and energy-related industries projected to reach more than RMB 250 trillion.<sup>1</sup> Both China and the EU are currently on the fast track toward low-carbon transitions, with many complementary areas in low-carbon technologies and green finance, offering immense potential for cooperation. Given current global geopolitical uncertainties, China and the EU, as stabilising forces, should collaborate to address challenges, deepen their green sector cooperation and develop a model of mutual benefit and win-win outcomes.

<sup>1</sup> Tsinghua University Press: *China’s Carbon Neutrality Transformation Research Report (2035 and mid- to long-term)*, forthcoming

**Figure 2**  
**China's Path to Carbon Neutrality**



Source: *China's Carbon Neutrality Transformation Research Report (2035 and mid- to long-term)*, Tsinghua University Press, forthcoming

Hungary, a key partner in China's efforts to build an electric vehicle industry chain and enhance its green finance presence within the EU, has seen its economic and political trust with China deepen significantly. The two countries have become reliable and cooperative partners on the path to national development and revitalisation, as well as in maintaining global peace and stability. The Hungarian government consistently upholds independent domestic and foreign policies, firmly supporting East-West connectivity and opposing bloc confrontation (*Team et al. 2018*). Back to 2012, the "16+1" Cooperation between China and Central and Eastern European Countries was established, with Hungary as one of the participating countries (*Kong – Wei 2017*). On 7 July 2018, the 7th China Central and Eastern European Countries Leaders' Meeting was held, and the "Sofia Guidelines for the Cooperation between China and Central and Eastern European Countries" was released, proposing to carry out RMB financing and green bond cooperation with China, and to inject more capital into the green sectors of Central and Eastern European countries.<sup>2</sup>

Since China and Hungary announced their carbon neutrality timetable to the world in 2020, the two countries have continued to develop a positive and stable

<sup>2</sup> The State Council of the People's Republic of China: *Full Text: The Sofia Guidelines for Cooperation between China and CEE Countries*. [https://english.www.gov.cn/news/international\\_exchanges/2018/07/16/content\\_281476224693086.htm](https://english.www.gov.cn/news/international_exchanges/2018/07/16/content_281476224693086.htm)

cooperative relationship, using green finance as a link to promote the sharing of technological innovation and industrial transformation achievements. In 2020, when global foreign direct investment slumped, China's investment in Hungary actually increased, becoming Hungary's largest source of foreign investment for the first time, driven by green projects. In 2023, Hungary attracted foreign direct investment worth more than EUR 13 billion. China's direct investment in Hungary accounted for 58 per cent, once again becoming the largest source of foreign investment in Hungary. Hungary also continues to maintain its position as the largest investment destination country for China in Central and Eastern Europe.<sup>3</sup> In addition, the Chinese-Hungarian Technology Transfer Center, jointly funded by both countries, also focuses on projects in the fields of new materials, green and low-carbon, promoting the integration and green transformation of the industrial chain (*Du et al. 2024*).

There are many green finance tools, among which green bonds stand out as a top priority for international collaborations. As a key financial instrument, green bonds effectively channel capital into environmental and sustainable development projects (*Németh-Durkó – Hegedűs 2021*), aligning closely with the green development goals of both China and Hungary. Literature also supports the positive impact of green bonds on promoting green resource consumption efficiency (*Ye – Rasoulinezhad 2023*), enhancing economic growth (*Zhao et al. 2022*) and contributing to human development (*Thanh 2022*). For issuers, green bonds can provide new financing channels for their green projects, enabling them to obtain cheaper and longer term funds, better plan their development strategies, gain comparative advantages, and assist in transformation and development. For investors, green bonds not only provide opportunities to participate in emerging industries and earn more returns, but also help them avoid environmental risks. For the government, green bonds can guide idle funds from society to flow into green industries, effectively achieve public policy goals, and promote the sustainable development and transformation of growth mode of the country's economy (*Hong 2017*). In this context, cooperation between China and Hungary in the green bond sector aligns well with their shared interests.

Notably, following the National Assembly's decision on 28 May 2021, the Magyar Nemzeti Bank's mandate was extended to include support for the government's environmental sustainability policy, making it the first EU central bank to be granted a green mandate. Additionally, as the holder of the EU Council presidency in the second half of 2024, Hungary is poised to propose more constructive and pragmatic EU policies towards China,<sup>4</sup> creating new opportunities for China-Hungary

---

<sup>3</sup> China Briefing: *China-Hungary Bilateral Relations: Trade and Investment Outlook*. <https://www.china-briefing.com/news/china-hungary-bilateral-relations-trade-and-investment-outlook/>

<sup>4</sup> The State Council of the People's Republic of China: *Chinese, Hungarian FMs hold talks on closer ties*. [https://english.www.gov.cn/news/202404/25/content\\_WS6629a7b6c6d0868f4e8e6653.html](https://english.www.gov.cn/news/202404/25/content_WS6629a7b6c6d0868f4e8e6653.html)

cooperation. As the two major issuers of green bonds, China has enormous market potential, while the EU has rich experience in issuing green bonds. The two sides can carry out multi-level cooperation in the field of green bonds, thereby expanding the scope of use of RMB and EUR as the main valuation currencies in green bonds (Zhao – Zhang 2023).

Therefore, it is crucial to review China-Hungary green bond cooperation and provide future recommendations, especially in light of new global climate change challenges. This paper addresses this gap by offering a comprehensive overview of past EU-China and Hungary-China green bond collaborations and suggesting ways to strengthen future cooperation. Specifically, we recommend enhancing communication and coordination to manage financial risks; advocating for bidirectional green bond market openings to increase financing opportunities and support green projects; establishing mutual recognition mechanisms for green bond standards to unify the markets; and improving information disclosure systems to enhance transparency.

The rest of the paper is organised as follows: *Section 2* reviews the history of collaboration; *Section 3* presents recommendations for future collaborations; and *Section 4* concludes the paper.

## **2. Comprehensive Review of Green Bond Cooperation: China-EU and China-Hungary**

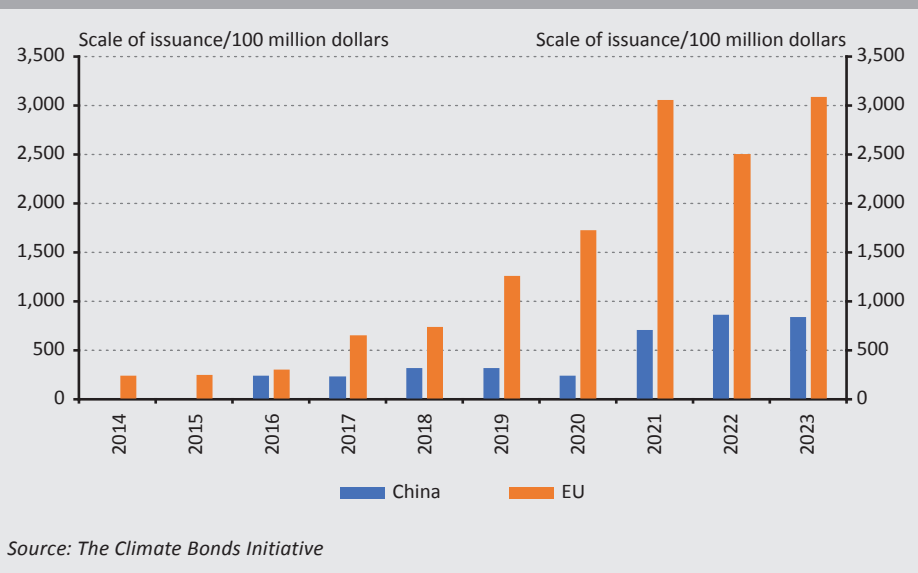
### **2.1. Historical Overview of China-EU Green Bond Cooperation**

The global green bond market began in 2007 with the issuance of the first “Climate Awareness Bond” by the European Investment Bank, positioning the EU as a leader in green bond development. Since then, Europe has gradually become one of the largest green bond issuance markets globally (Pan *et al.* 2024). As shown in *Figure 3*, in 2023, the EU’s green bond issuance amounted to USD 309.6 billion, accounting for 52.69 per cent of the global total. Green bonds have provided essential funding for Europe’s green and low-carbon development, with funds primarily directed toward renewable energy, energy efficiency and emissions reduction projects, thus driving the EU’s green and low-carbon transition (Sun 2022).

China’s green bond market was established in 2016. Although it started relatively late, it has developed rapidly. As shown in *Figure 3*, from 2016 to 2023, the issuance scale of green bonds in China has steadily increased, and by 2023, China had become the world’s largest issuer of green bonds. Key focus areas for green bond investments include clean energy and green transportation, which are important for supporting the “dual carbon” goals and contributing to China’s green, low-carbon, and high-quality economic and social development (Chen – Zhang 2022).

China and EU have accumulated mature experience in green finance development, particularly in policy framework construction and market practices. As global attention to environmental protection and sustainable development intensifies, green finance is becoming a new cornerstone of China-EU cooperation, propelling their comprehensive strategic partnership to new heights. Cooperation between China and the EU in the field of green bonds not only reflects their shared commitment to green development, but also injects new vitality into their economic and trade relations.

**Figure 3**  
**Scale of Green Bond Issuance in China and EU**



As China’s green finance policies and markets continue to evolve, the country is actively expanding its green bond business with Europe, enhancing its ability to attract European green capital. Since the Agricultural Bank of China’s issuance of the first offshore green bond on the London Stock Exchange in 2015, domestic financial institutions have been actively engaging in green bond activities in Europe (Zhao – Zhang 2023). In 2021, the International Platform on Sustainable Finance (IPSF), co-initiated by China and other economies, released the “Common Ground Taxonomy Instruction for Sustainable Finance,” which includes economic activities jointly recognised by China and the EU as contributing to climate change mitigation goals. This marks the initial establishment of green bond standards aligned with international practices in China (Ma – Wang 2021). To bolster the role of the Common Ground Taxonomy Instruction in supporting the development of the green finance market and cross-border flow of green capital, the Green Finance Professional Committee of the Chinese Finance Society has organised a group of

experts to label certain green bonds issued in the domestic interbank bond market.<sup>5</sup> As of 4 June 2024, China has successfully labelled 282 green bonds.<sup>6</sup>

## 2.2. Historical Overview of China-Hungary Green Bond Cooperation

Since Hungary's introduction of its "Opening to the East" policy and China's proposal of the "Belt and Road" initiative (BRI), cooperation between China and Hungary in the bond market has been notably prominent. Currently, Hungary is the only country to issue bonds simultaneously in both the onshore and offshore Chinese markets (*Fu – Gao 2023*). With the assistance of underwriters such as Bank of China, Hungary has issued bonds totalling RMB 7 billion, thereby expanding its financing channels (*Table 1*).

In the onshore market, Hungary issued RMB-denominated panda bonds in 2017 and 2018, becoming the first European sovereign issuer to return to the interbank market. This move facilitated financial cooperation between domestic and international institutions and enhanced connectivity in the bond market.<sup>7</sup> In the realm of green bonds, Hungary issued green sovereign panda bonds in 2021 and 2022. These bonds were used for qualified green expenditures under its green bond framework, which includes areas such as renewable energy, energy efficiency improvements, sustainable management of biological land resources, water and wastewater management, clean transportation and climate adaptation. These bond issuances support Hungary's transition to a low-carbon, climate-resilient and environmentally sustainable economic model.

In the offshore market, in 2015, the Magyar Nemzeti Bank launched the "Budapest Renminbi Initiative" to strengthen economic cooperation between China and Hungary, strongly enhance the international influence of the renminbi (RMB) and establish Budapest as the centre of the RMB offshore financial market in Central and Eastern Europe. As a result of this initiative, in 2016, with the assistance of Bank of China, Hungary issued RMB-denominated dim sum bonds in Hong Kong. This issuance attracted enthusiastic subscriptions from high-quality investors in Asia and Europe, making Hungary the first Central and Eastern European country to issue sovereign bonds denominated in RMB.<sup>8</sup>

---

<sup>5</sup> Financial News of China: *193 bonds selected for Common Ground Taxonomy, more convenient for foreign investors to invest in China's green bond market*. [https://www.financialnews.com.cn/sc/zq/202307/t20230719\\_275209.html](https://www.financialnews.com.cn/sc/zq/202307/t20230719_275209.html)

<sup>6</sup> Sina Finance: *The construction of Common Ground Taxonomy between China and Europe has achieved results, and the coverage will continue to expand*. <https://finance.sina.com.cn/money/bond/2024-06-04/doc-inaxqhff7982158.shtml>

<sup>7</sup> Bank of China *Bank of China successfully assists Hungary in issuing sovereign panda bonds again*. [https://www.boc.cn/aboutboc/bi1/201812/t20181218\\_14424250.html](https://www.boc.cn/aboutboc/bi1/201812/t20181218_14424250.html)

<sup>8</sup> Bank of China: *Bank of China successfully assisted the Hungarian government in issuing the first sovereign bond*. [https://www.bankofchina.com/aboutboc/bi1/201604/t20160415\\_6725739.html](https://www.bankofchina.com/aboutboc/bi1/201604/t20160415_6725739.html)

**Table 1**  
**History of Hungary's Bond Issuance in China**

	Time	Content
Onshore Market	26 July 2017	Hungary issued RMB 1 billion in panda bonds
	17 December 2018	Hungary issued RMB 2 billion in panda bonds
	14 December 2021	Hungary issued RMB 1 billion in green sovereign panda bonds
	16 November 2022	Hungary issued RMB 2 billion in green sovereign panda bonds
Offshore Market	14 April 2016	Hungary issued RMB 1 billion in dim sum bonds in Hong Kong
<i>Source: Authors' work</i>		

In recent years, Hungary has leveraged its business-friendly environment, lower tax burden and automotive industry cluster effects to attract attention and investment from Chinese new energy companies seeking to expand into international markets, solidifying its position as a key hub for BRI cooperation (*Zhao 2024:92–95*).

In addition, Chinese banks are expanding their international bond issuance presence in the Hungarian market, continuously expanding and deepening financial cooperation with Hungary and the Central and Eastern European region, contributing to the development of China-Hungary economic and trade relations. Banks such as Bank of China, China Construction Bank and the Export-Import Bank of China have established branches in Hungary to provide follow-up services for Chinese enterprises entering the Hungarian market.<sup>9</sup>

In 2022, the Bank of China's Hungarian branch successfully completed an international issuance of USD 300 million in green bonds. This issuance advanced cooperation under the "Memorandum of Understanding on Promoting Investment Cooperation in the Field of Green Development" between China and Hungary and raised funds for green and sustainable projects such as photovoltaic power generation and wastewater treatment.<sup>10</sup>

In 2024, the Bank of China's Hungarian branch successfully issued the world's first BRI sustainable development bonds. These bonds are intended to support eligible project categories including renewable energy, sustainable water resources and wastewater management, affordable basic infrastructure and essential services.<sup>11</sup> The issuance of green bonds by the Bank of China in Hungary aims to actively promote green transformation and upgrading in the Central and Eastern European

<sup>9</sup> GuangMing Daily: *Hungary builds the demonstration zone for high-quality BRI development*. [https://news.gmw.cn/2024-05/11/content\\_37315860.htm](https://news.gmw.cn/2024-05/11/content_37315860.htm)

<sup>10</sup> China Economic Net: *Chinese institutions in Central and Eastern Europe successfully issue their first green bond*. [http://intl.ce.cn/sjjj/qy/202202/16/t20220216\\_37334046.shtml](http://intl.ce.cn/sjjj/qy/202202/16/t20220216_37334046.shtml)

<sup>11</sup> Bank of China: *Bank of China successfully issued the world's first batch of "the Belt and Road" sustainable development bonds*. [https://www.boc.cn/aboutboc/bi1/202406/t20240619\\_25094972.html](https://www.boc.cn/aboutboc/bi1/202406/t20240619_25094972.html)



region, offering high-quality financial services to support regional clients in implementing green strategies.

### **3. Strategic Recommendations for Enhancing China-Hungary Green Bond Cooperation**

Green development and economic growth are not contradictory, but are instead dialectically unified. Green development establishes an “ecological red line” that guides economic advancement, driving the comprehensive transformation and upgrading of economic and social systems. This, in turn, fosters a green, low-carbon industrial structure, promoting high-quality development that ensures harmony between humans and nature. Optimising industrial structures can lead to the creation of green production methods characterised by high technological content, low resource consumption and minimal environmental pollution, thereby generating new growth points for economic and social development (*Shi et al. 2020*).

Since the BRI was proposed, China has made significant contributions to the coordinated economic, social and environmental development of the countries involved in its green development efforts. Green finance has driven cooperation in key areas such as green infrastructure and green energy, encouraging Chinese enterprises to support the green development of BRI countries through foreign investment and collaboration. This approach not only promotes the low-carbon transformation of their economies and energy systems but also helps alleviate their financial challenges, accelerating their economic development (*Wang – Chen 2021*).

In recent years, investment cooperation between China and Hungary in green development sectors such as electric vehicles and clean energy has continued to gain momentum, injecting new vitality into mutually beneficial cooperation between the two countries. Companies such as CATL and BYD have invested in building factories in Hungary, bringing advanced manufacturing techniques and highly automated production lines for electric vehicles into the Hungarian market. This has helped enhance Hungary’s competitive edge in the global new energy vehicle market (*Du et al. 2024*).

Additionally, companies such as China Machinery Engineering Corporation (CMEC) and Shanghai Electric have invested in constructing a 100-megawatt photovoltaic power plant in Hungary.<sup>12</sup> This has significantly improved Hungary’s clean energy utilisation, while also boosting local employment and economic development.

---

<sup>12</sup> People’s Daily: *Green development injects new impetus into China-Hungary mutually beneficial cooperation.* <http://en.people.cn/n3/2024/0513/c90000-20168869.html>

Today, Hungary is China's top investment destination and a key trading partner in the Central and Eastern European region.<sup>13</sup>

On 10 May 2024, China and Hungary issued a joint statement on establishing an all-weather comprehensive strategic partnership for the new era. Both parties recognised the positive role of the BRI in promoting economic growth and green development in both countries. They also expressed their commitment to encouraging financial institutions from both sides to provide financing support and financial services for trade and investment cooperation, further exploring the potential for cooperation in areas such as green finance, and continuing their collaboration on issuing green sovereign panda bonds.<sup>14</sup> Given the solid foundation and significant achievements in green bond cooperation between China and Hungary, the prospects for future collaboration in this area are promising.

### **3.1. Enhancing Communication and Coordination to Mitigate Financial Risks**

Since 2024, the EU has launched multiple investigations against Chinese enterprises under the Foreign Subsidies Regulation, increasing regulatory barriers for Chinese investments in Europe and significantly impacting the operations of Chinese banks within the EU.<sup>15</sup> As Hungary is set to assume the EU Council Presidency, it will play a leading role in EU-China cooperation. In the face of uncertainties in the financial cooperation environment, Hungary might assist in facilitating dialogue and consultation between China and the EU on critical issues such as financial regulatory policies, playing a positive and constructive role in fostering healthy interaction between the two sides. Additionally, Chinese banks operating within the EU should leverage their geographical advantages to effectively identify and mitigate potential risks associated with bond issuance, ensuring the provision of high-quality financing services.

### **3.2. Promote Bidirectional Opening of the China-Hungary Green Bond Market to Expand Financing Channels and Support Green Projects**

China possesses the world's largest green bond issuance market and extensive experience in green bond issuance (*CBI 2024*), while Hungary holds a significant financial position and influence in Central and Eastern Europe. By developing a bidirectional green bond market, both countries can share resources, exchange markets and create more development opportunities. Against the backdrop of the deepening alignment between China's BRI and Hungary's "Opening to the East" strategy, China and Hungary should enhance cooperation in emerging fields

---

<sup>13</sup> China Economic Net: *China-Hungary economic and trade cooperation is expanding day by day*. [http://www.ce.cn/xwzx/gnsz/gdxw/202405/09/t20240509\\_38995850.shtml](http://www.ce.cn/xwzx/gnsz/gdxw/202405/09/t20240509_38995850.shtml)

<sup>14</sup> The State Council of the People's Republic of China: *Full text: China-Hungary Joint Statement on the Establishment of an All-Weather Comprehensive Strategic Partnership for the New Era*. [https://english.www.gov.cn/news/202405/10/content\\_WS663d3b83c6d0868f4e8e6eb0.html](https://english.www.gov.cn/news/202405/10/content_WS663d3b83c6d0868f4e8e6eb0.html)

<sup>15</sup> Global Times: *China launches probe into EU's actions on Chinese firms under FSR*. <https://www.globaltimes.cn/page/202407/1315812.shtml>

such as clean energy, improving the quality and effectiveness of financial services for new productive development (Wang – Wang 2023). On the one hand, China and Hungary should continue their collaboration on issuing green sovereign panda bonds, providing more financing convenience for Hungary's sustainable development projects, and introducing more mature green bonds to the domestic market. On the other hand, China should explore a sovereign green bond issuance framework with Chinese characteristics, encouraging domestic financial institutions and enterprises to issue sovereign green bonds in Hungary as appropriate. This would demonstrate China's commitment to combating climate change, attract more international investors and align Chinese green bonds with global standards.

In addition, China and Hungary can continue to expand their green cooperation under multilateral mechanism, such as the framework of "16+1" Cooperation. Furthermore, on 18 October 2023, the BRI International Green Development Coalition (BRIGC) and its cooperation partners launched the Green Investment and Finance Partnership (GIFP), aiming to provide adequate, predictable and sustainable financing for green development in developing countries.<sup>16</sup> GIFP can leverage the professional advantages of its partners, actively promote green development investment and financing cooperation, help developing countries find climate adaptive growth paths and also benefit Chinese enterprises. The first list includes BRIGC and 16 institutions from China, the United Kingdom, the United States and Indonesia. Currently, no EU countries or regions participate.<sup>17</sup> If Hungary joins GIFP as the next group of members, China and Hungary can find the right combination of debt, equity, investment and grants, and Hungary can engage in productive financing in the energy and infrastructure sectors.

### **3.3. Establish a Mutual Recognition Mechanism to Standardise and Unify Green Bond Markets in Both Countries**

Due to differences in resource endowments, stages of economic development and other factors between China and Europe, there are still significant discrepancies in the standards for supporting green finance, including scope, technical identification and information disclosure (Han 2022). These differences increase the cost of aligning green finance and can create information gaps in the market. China's green standards focus on improving energy efficiency and reducing greenhouse gas emissions, while the EU concentrates on mitigating climate change, laying the groundwork for its 2050 carbon neutrality goals, and includes aspects such as carbon capture and storage. The limited overlap in standards between China

---

<sup>16</sup> The State Council of the People's Republic of China: *Full text: Chair's Statement of the Third Belt and Road Forum for International Cooperation*. [https://english.www.gov.cn/news/202310/20/content\\_WS6531d31cc6d0868f4e8e0769.html](https://english.www.gov.cn/news/202310/20/content_WS6531d31cc6d0868f4e8e0769.html)

<sup>17</sup> Ministry of Ecology and Environment of the People's Republic of China: *The Green Investment and Finance Partnership launched in Beijing*. [https://www.mee.gov.cn/ywgz/gjjlhz/lsydyj/202310/t20231029\\_1044244.shtml](https://www.mee.gov.cn/ywgz/gjjlhz/lsydyj/202310/t20231029_1044244.shtml)

and the EU raises the costs of aligning green finance and introduces uncertainty into green bond cooperation. Unifying green bond standards would facilitate the issuance of green bonds across different markets, simplify comparisons between green bonds in various markets and reduce the barriers and costs associated with identifying green bonds (IIGF 2022). In the future, issuers of green bonds in China and Hungary should proactively align their bond designs with the “Common Ground Taxonomy Instruction for Sustainable Finance” to attract more institutional investors (Wen – Fan 2022).

At the same time, China and Hungary should establish green finance product standards that meet both countries’ environmental goals based on the common classification standards and regularly update them. This would include incorporating more projects with actual green contributions and gradually expanding the mutual recognition boundaries of China-Hungary green bonds. Both countries can lead this effort with financial technology, innovatively using blockchain, big data and other technological tools to more precisely identifying, labelling and monitoring green bonds that meet the standards, thereby reducing the certification costs for green bonds.

### **3.4. Enhance the Information Disclosure System to Improve Green Bond Transparency**

Green bond information-sharing platforms play a crucial role in aggregating information and improving market efficiency, facilitating the standardisation of green bond disclosures and increasing transparency and comparability of information. Issuers of green bonds can use these platforms to publicly disclose documents such as green bond frameworks, fund allocation reports and external review reports, which helps international investors access information more efficiently (Kolozsi *et al.* 2022). To enhance the quality of information disclosure and effectively prevent risks such as “greenwashing” and “green disguising,” China and Hungary should establish unified standards for disclosing the environmental benefits of green bonds. Creating a green bond information-sharing platform will enable standardised and measurable disclosure of environmental benefits, thus improving the overall transparency and reliability of green bond information.

## **4. Conclusion**

This paper provides a comprehensive review of the background and history of China-Hungary cooperation in green bonds and offers recommendations for deepening this collaboration. By strengthening mutual trust and fostering mutually beneficial cooperation in green finance, China and Hungary contribute positively to the global green bond market. Their cooperation has already achieved significant milestones and laid a solid foundation for future endeavours. To enhance their

collaboration further, China and Hungary should focus on promoting bidirectional market openings, advancing mutual recognition of green bond standards, improving transparency in information disclosure and strengthening communication and coordination in the green bond sector.

## References

- Chen, X. – Zhang, M. (2022): *China's Green Bond Market: Characteristics, Facts, Endogenous Dynamics and Existing Challenges*. *International Economic Review*, 2022(1): 104–133. (in Chinese)
- CBI (2024): *China Sustainable Debt State of the Market Report 2023*. Climate Bonds Initiative. [https://www.climatebonds.net/files/reports/china\\_sustainable\\_debt\\_state\\_of\\_the\\_market\\_report\\_2023.pdf](https://www.climatebonds.net/files/reports/china_sustainable_debt_state_of_the_market_report_2023.pdf)
- Du, L. – Song, K. – Du, M. – Li, X. – Han, Y. (2024): *Potentials and Pathways of Carbon Financial Cooperation between China and Hungary under Carbon Neutrality Constraints*. *Journal of North China University of Science and Technology (Social Science Edition)*, 24(04): 126–132. (in Chinese)
- European Commission (2024): *2040 Climate Target*. European Commission. [https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2040-climate-target\\_en](https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2040-climate-target_en)
- Fu, B. – Gao, J. (2023): *The Prospect of Jointly Building the “the Belt and Road” and China-Hungary Economic and Trade Relations*. *World Affairs*, 2023(22): 58–59. (in Chinese)
- Han, M. (2022): *Research on the Foundation, Resistance, and Countermeasures of China EU Green Finance Cooperation under the carbon peaking and carbon neutrality goals*. *Theory Journal*, 2022(2): 65–73. <https://doi.org/10.3969/j.issn.1002-3909.2022.02.008> (in Chinese)
- Hong, Y. (2017): *International rules and inspirations for the operation mechanism of green bonds*. *Law Science*, 2017(02): 124–134. (in Chinese)
- IIGF (2022): *Interpretation of the Green Bond Principles of China*. International Institute of Green Finance of Central University of Finance and Economics. <https://iigf.cufe.edu.cn/info/1012/5636.htm> (in Chinese)
- Kolozsi, P.P. – Ladányi, S. – Straubinger, A. (2022): *Measuring the Climate Risk Exposure of Financial Assets – Methodological Challenges and Central Bank Practices*. *Financial and Economic Review*, 21(1): 113–140. <https://doi.org/10.33893/FER.21.1.113>
- Kong, H. – Wei, C. (2017): *Study on the “16+1” Cooperation Mechanism between China and Central and Eastern European Countries*. *Journal of Social Sciences*, 2017(11): 14–23. (in Chinese)

- Ma, J. – Wang, B. (2021): *Application of Common Ground Taxonomy*. China Finance, 24: 34–35. (in Chinese)
- Németh-Durkó, E. – Hegedűs, A. (2021): *Climate Change in the Capital Markets: A Study of Actively Managed Green Bond Funds*. Financial and Economic Review, 20(4): 38–64. <http://doi.org/10.33893/FER.20.4.3864>
- Pan, H. – Li, B. – Xing, Y. – Dai, Y. (2024): *Progress and Implications for the Development of the European Green Bond Market*. Financial Accounting, 2024(2): 51–54. (in Chinese)
- Shi, D. – Li, P. – Xu, M. (2020): *Industrial Structural Transformation and High-Quality Economic Development*. Fujian Tribune (The Humanities & Social Sciences Bimonthly), 9(9): 108–118. (in Chinese)
- Sun, Y. (2022): *Practice and Experience of EU Green Transformation*. People’s Tribune, 2022(10): 96–99. <https://doi.org/10.3969/j.issn.1004-3381.2022.10.025> (in Chinese)
- Team, R.C. – Yang, C. – Qi, X. (2018): *China-Hungary Economic and Trade Cooperation Under the “the Belt and Road” Initiative*. International Economic Cooperation, 2018(3): 66–70. (in Chinese)
- Thanh, Q.P. (2022): *Economic effects of green bond market development in Asian economies*. Journal of Risk Finance, 23(5):480–497. <https://doi.org/10.1108/JRF-08-2022-0216>
- Wang, X. – Wang, Z. (2023): *Routes and Strategies of Connecting Belt and Road Initiative with Open to the East Policy of Hungary*. Journal of Hebei Polytechnic University (Social Science Edition), 23(3): 120–124. <https://doi.org/10.3969/j.issn.2095-2708.2023.03.120> (in Chinese)
- Wang, Y. – Chen, Z. (2021): *Looking Back on the Green Investment of Chinese Enterprises in the “the Belt and Road” Initiative*. China Forex, 2021(20): 32–34. (in Chinese)
- Wen, J. – Fan, B. (2022): *Innovation under Common Ground Taxonomy*. China Finance, 2022(13):68–69. (in Chinese)
- Ye, X. – Rasoulinezhad, E. (2023): *Assessment of impacts of green bonds on renewable energy utilization efficiency*. Renewable Energy, 202(January): 626–633. <https://doi.org/10.1016/j.renene.2022.11.124>
- Zhao, L. – Chau, K.Y. – Tran, T.K. – Sadiq, M. – Xuyen, N.T. – Phan, T.T. (2022): *Enhancing green economic recovery through green bonds financing and energy efficiency investments*. Economic Analysis and Policy, 76(December): 488–501. <https://doi.org/10.1016/j.eap.2022.08.019>

Zhao, K. – Zhang Z. (2023): *China-EU Monetary Cooperation: Motivation, Challenges, and Paths*. *Journal of International Economic Cooperation*, 2023(05): 66–79. <https://doi.org/10.20090/j.cnki.gjjh.2023.5.6> (in Chinese)

Zhao, Z. (2024): *Hungarian market: a new gateway for Chinese cars to break through in Europe*. *Auto Review*, 2024(3): 92–95. <https://doi.org/10.3969/j.issn.2095-1892.2024.03.023> (in Chinese)