

THE IMPACT OF THE COMPETITIVE ENVIRONMENT IN COMMERCIAL BANKS ON GREEN FINANCE DEVELOPMENT: THE CASE OF UZBEKISTAN

Melikuzieva Dilrabo Mukhitdinovna

PhD Student, Tashkent State University of Economics

ORCID: 0009-0006-2734-8981

E-mail: delchibayeva@gmail.com

Phone number: +998 88 703 83 88

Abstract

The transition to a green economy has become a central priority of Uzbekistan's development agenda, and the banking sector is the principal channel for mobilising finance toward environmentally sustainable investment. While the determinants of green finance have been widely studied, the role of banking competition has received limited attention, especially in emerging, bank-based economies. This article develops a conceptual-institutional framework for the relationship between competition in the commercial banking sector and the development of green finance in Uzbekistan. The institutional analysis shows that Uzbekistan's banking-reform strategy and its green-finance legal framework constitute two mutually reinforcing policy tracks. The article concludes that fostering a competitive banking environment is a promising, under-used lever for accelerating green finance, and offers policy recommendations tailored to Uzbekistan.

Keywords: Banking competition, green finance, green credit, ESG, fintech, financial intermediation, Uzbekistan.

Introduction

Over the past decades, climate change has become one of the most significant threats to economic development, financial stability and environmental security. The 2015 Paris Agreement set the goal of limiting global warming to 1.5°C, and meeting this goal requires far-reaching transformations in the financial sector. Green finance and the green economy have therefore moved to the centre of international policy.

Green finance denotes a set of instruments aimed at financing environmentally sustainable activity — green loans, green bonds, sustainable investment funds and ESG-based mechanisms. The banking sector occupies a special place in this system: as financial intermediaries, commercial banks directly influence the allocation of investment resources toward environmentally sustainable projects.



The literature has extensively examined the determinants of green finance — regulatory incentives, technological innovation, public awareness and foreign direct investment [1]. However, one institutional determinant — the competitive environment among banks — has been relatively under-researched, particularly in bank-based emerging economies with shallow capital markets. Competition is a key mechanism for improving the efficiency of the financial sector, prompting banks to create new products and capture new market segments; green finance is emerging as precisely such a promising segment.

This issue is especially salient in Uzbekistan, where two mutually reinforcing policy tracks are being implemented simultaneously. First, the banking-system reform strategy (PF-5992, 2020) and the New Uzbekistan Development Strategy (PF-60, 2022) are raising the level of banking competition by expanding private-capital participation and creating a level competitive playing field. Second, the green-economy transition strategy (PQ-4477, 2019), measures to improve its efficiency (PQ-436, 2022), the National Green Taxonomy (Cabinet Resolution No. 561, 2023) and green-housing and green-economy programmes (PF-26 and PF-16, 2025) are building the green-finance infrastructure. The intersection of these two tracks creates a favourable analytical setting for studying this relationship.

Existing research has not sufficiently examined the relationship between the competitive environment in banking and green finance development in Uzbekistan as a distinct object. The aim of this study is to analyse this theoretical and institutional relationship. The research question is: “How does the competitive environment in commercial banks affect green finance development?” The contribution is threefold: theoretical (integrating competition and green-finance theories into a single conceptual model), institutional (assessing Uzbekistan's current legal framework) and practical (policy recommendations). The article is organised as follows: Section 2 presents the literature review and propositions, Section 3 the conceptual framework and methodology, Section 4 the analysis and discussion, and Section 5 the conclusions and recommendations.

2. Literature review

The theoretical foundation of the study rests on three perspectives. According to Schumpeterian innovation theory, competitive pressure compels organisations to innovate in order to sustain profitability; in competitive markets banks seek new avenues beyond traditional income streams, and green finance becomes a logical strategic choice. The resource-based view (RBV) shows that banks build distinctive capabilities — green-project evaluation models, ESG data systems — to achieve competitive advantage, thereby reducing information asymmetry. Financial-intermediation theory (Diamond, 1984) interprets the bank as an intermediary that undertakes delegated monitoring under conditions of information asymmetry [2].

It should be emphasised that the effect of competition on the financial sector is two-directional. Under the “competition-stability” view, competition can reduce risk by driving banks toward efficiency and innovation [3]. Under the “competition-fragility” view, excessive competition may compress interest margins and constrain banks' capacity for long-term lending [4]. While acknowledging both directions, this study argues that in Uzbekistan's context — reform-driven, regulated competition — the net-positive direction prevails: supervised competition stimulates innovation and the development of green products.



The empirical literature supports this view. Xiang and Ma (2025), analysing 276 Chinese cities, found that a reduction in banking concentration (HHI) substantially strengthens regional green finance, that this effect operates through two channels — credit capacity and firm entry — and that it is stronger in less financially developed regions [1]. Nguyen (2026) confirmed the positive contribution of green finance to bank stability in ASEAN [5]. Saydaliev and Chin (2023) document the contribution of green financing to macroeconomic stability [6], and Soundarrajan and Vivek (2016) point to the necessity of green finance in developing countries [7]. On this basis, the following propositions are advanced:

P1: Intensifying banking competition stimulates green finance development.

P2: Banking competition stimulates green finance development by expanding banks' credit capacity.

P3: Banking competition stimulates green finance development by attracting the entry of green firms and projects.

This relationship is amplified by the level of ESG integration, fintech development and regulatory support (moderators).

Table 1. Propositions and their theoretical basis

Proposition	Mechanism	Theoretical basis
P1	Competition → green finance development (overall)	Schumpeterian innovation; competition-stability view
P2	Credit capacity: green-project evaluation, customised products	RBV; financial intermediation (Diamond, 1984)
P3	Firm entry: lower entry barriers, preferential terms	Competition-innovation; market differentiation

Source: author's elaboration (based on Xiang & Ma, 2025; Diamond, 1984).

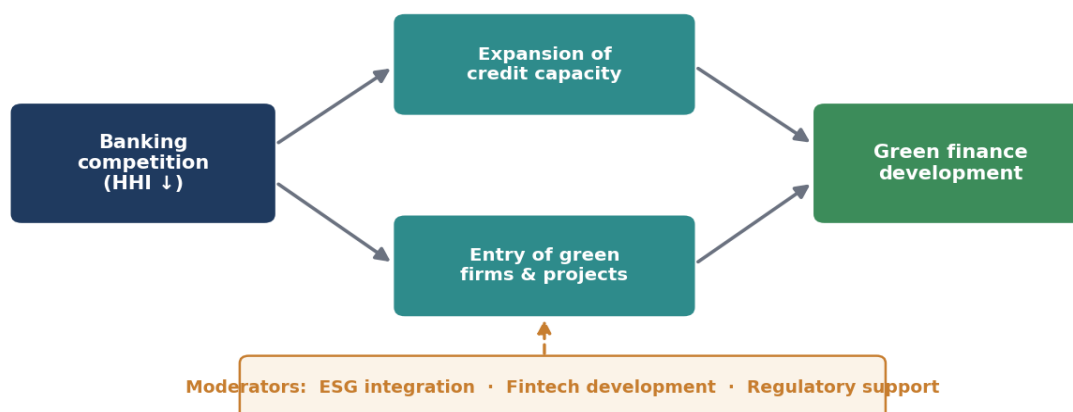
3. Conceptual framework and methodology

The study relies on a conceptual-institutional analysis combined with benchmarking against international empirical evidence. This approach was chosen because a centralized statistical category for green credit at the bank level has not yet been established in Uzbekistan; therefore, at the first stage a conceptual model is built on the basis of available normative and descriptive data, while full econometric estimation is identified as the subsequent research stage. The data sources are: the normative legal acts of the Republic of Uzbekistan, descriptive statistics from the Central Bank and CERR, the project databases of donor institutions (EBRD GEFF), and peer-reviewed international literature.

The main constructs are defined as follows. Banking competition is the inverse of banking concentration, measured by the Herfindahl-Hirschman Index (HHI) or CR3; a lower value denotes higher competition. Green finance development is proxied by the share of green (donor) credit lines and green loans in the bank's portfolio. The mediators are credit capacity and the entry of green firms; the moderators are ESG integration, fintech development and regulatory support. The study's conceptual model is presented in Figure 1.



Figure 1. Banking competition and green finance development: a conceptual model



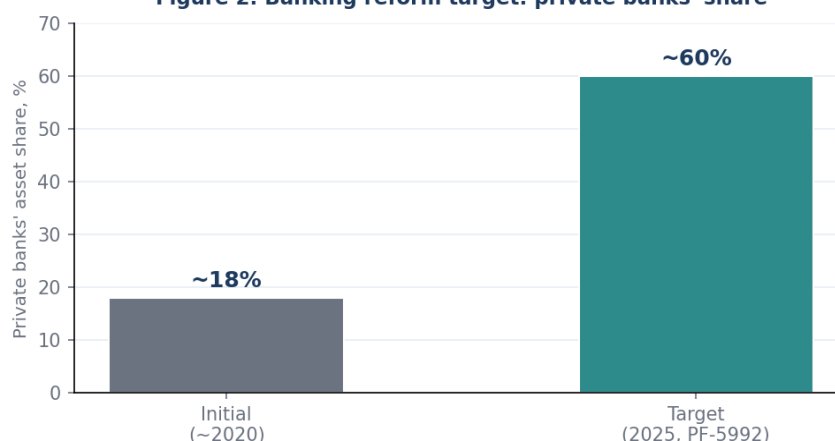
Source: author’s elaboration.

4. Analysis and discussion

4.1. The competitive environment in Uzbekistan's banking sector

Uzbekistan's banking system has historically been characterised by the dominance of state banks. At present the system comprises roughly 33 commercial banks, some with state ownership and some with private and foreign capital. The banking-system reform strategy (PF-5992, 12 May 2020) set the goal of raising the share of private banks' assets from about 18 per cent to 60 per cent by the end of 2025 and of attracting strategic foreign investors (Figure 2). Privatisation is underway in practice: a controlling stake in Ipoteka Bank passed to OTP Bank (Hungary); IFC and FMO participate in the capital of Hamkorbank; and DEG and Triodos participate in Ipak Yuli Bank. These processes are steadily creating the basis for an intensifying competitive environment in the banking system.

Figure 2. Banking reform target: private banks' share



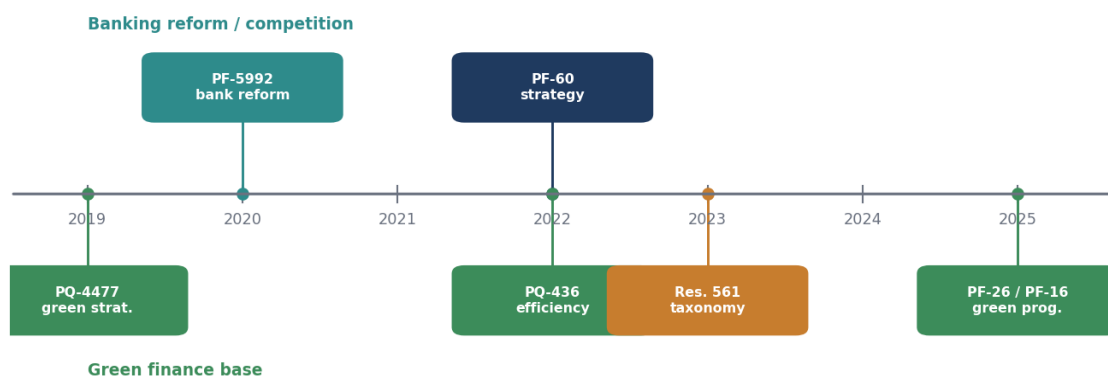
Source: author's elaboration based on Decree PF-5992.

4.2. The normative-institutional base of green finance

The legal foundations of green finance have been built consistently (Figure 3, Table 2). The green-economy transition strategy (PQ-4477) was adopted in 2019, measures to improve its

efficiency (PQ-436) in 2022, the National Green Taxonomy (Cabinet Resolution No. 561) in 2023, and in 2025 a housing/mortgage decree introducing green-building standards (PF-26) and a state programme for the year of the green economy (PF-16). At the bank level, green lending currently flows mainly through donor credit lines (EBRD GEFF, ADB) — which is building green-lending capacity in local banks.

Figure 3. Two mutually reinforcing policy tracks (2019-2025)



Source: author's elaboration based on lex.uz data.

Table 2. Normative-legal base of green finance in Uzbekistan

Act	Date	Content
PQ-4477	04.10.2019	Strategy for transition to a green economy in 2019–2030
PQ-436	02.12.2022	Improving the efficiency of green-economy transition reforms
Resolution No. 561	25.10.2023	National green-economy taxonomy
PF-26	21.02.2025	Housing/mortgage market; green-building standards and certification
PF-16	30.01.2025	State programme for the year of the green economy

Source: author's elaboration based on lex.uz data.

4.3. Applying the propositions to Uzbekistan

The two tracks above — intensifying competition and the formation of a green-finance base — are linked through the conceptual model. As competition intensifies (P1), banks seek differentiation and new income sources and turn to green finance. This manifests through two channels: banks expand their capacity to evaluate green projects and create customised green products (P2), and they attract green firms and projects through preferential terms (P3). ESG integration, fintech solutions and regulatory support amplify this effect.

The international benchmark supports this logic (Table 3). Xiang and Ma (2025) found that the positive effect of competition on green finance in China is strongest precisely in the less financially developed regions — that is, competition fills structural financing gaps. Since Uzbekistan's financial system is also at a developing stage, this finding offers a promising signal for the local context: fostering competition may be an effective, but as yet under-used, lever for accelerating green finance.

Table 3. International empirical benchmark

Source	Context	Key finding
Xiang & Ma (2025)	China, 276 cities	HHI ↓ (competition ↑) → green finance ↑; stronger in less-developed regions
Nguyen (2026)	ASEAN, 83 banks	Green finance → bank stability ↑
Saydaliev & Chin (2023)	ASEAN	Green financing → macroeconomic stability

Source: author's elaboration based on the respective sources.

4.4. Discussion

The analysis indicates a positive and mutually reinforcing relationship between banking competition and green finance in Uzbekistan. At the current stage, the reliance of green lending on donor lines and the high share of state banks are best interpreted not as constraints but as development opportunities: deepening privatisation and competition prompts banks to innovate in green products, which in turn accelerates the gradual shift from donor capital to local capacity. In this way the two policy tracks — banking reform and the green-finance base — reinforce one another and shape a sustainable finance ecosystem.

5. Conclusions and recommendations

The study shows that banking competition is a promising, but as yet under-used, lever for accelerating green finance in Uzbekistan. Competition stimulates green finance through two main channels — the expansion of credit capacity and the entry of green firms — amplified by ESG integration, fintech development and regulatory support. Uzbekistan's banking-reform strategy and its green-finance base, as mutually reinforcing tracks, create a favourable institutional environment for this relationship.

The following recommendations are advanced:

- 1) Consistently deepen privatisation and a level competitive playing field within the banking-reform strategy (PF-5992);
- 2) Introduce, through the Central Bank, a separate statistical category for green loans and regular reporting based on the National Green Taxonomy (Resolution No. 561);
- 3) Encourage banks to innovate in green products (green mortgages, sustainability-linked loans) and standardise ESG disclosure;
- 4) Use fintech and digital solutions to reduce the cost of evaluating green projects;
- 5) Provide targeted support for green small and medium-sized enterprises and continue donor cooperation with a focus on strengthening local capacity.

A limitation of the study is the decentralised nature of green-credit data at the bank level. A promising direction for future research is to estimate the competition–green-finance relationship using full econometric methods (panel regression based on HHI) once green-credit statistics are established.



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