



THE IMPACT OF ESG DISCLOSURE ON BANK PROFITABILITY AND MARKET VALUE IN EMERGING ECONOMIES: THE CASE OF UZBEKISTAN

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Abstract. This study investigates the impact of Environmental, Social, and Governance (ESG) disclosure on bank profitability and market value in Uzbekistan an underexplored emerging economy in Central Asia undergoing rapid financial and sustainability reforms. Using a panel dataset of 22 commercial banks from 2015 to 2024, we construct a hand-collected ESG disclosure index through systematic content analysis of annual and sustainability reports, supplemented by financial data from the Central Bank of Uzbekistan. Net profit margin serves as the primary measure of profitability, while Tobin's Q and market capitalization proxy for market value. Employing fixed effects, random effects, and System Generalized Method of Moments (GMM) estimators to address endogeneity and unobserved heterogeneity, we find that higher ESG disclosure is significantly associated with improved bank profitability. Notably, this relationship is driven almost exclusively by the governance (G) pillar, while environmental (E) and social (S) disclosures show no statistically significant effects highlighting the context-specific materiality of ESG dimensions in transitional economies. Robustness checks, including lagged specifications, sub-sample analyses by ownership type, and alternative ESG measures, confirm the reliability of our findings. The results suggest that in Uzbekistan's institutional environment characterized by ongoing corporate governance reforms and nascent green finance infrastructure transparency in board oversight, risk management, and anti-corruption mechanisms enhances operational efficiency and stakeholder trust, thereby boosting net margins. Our study contributes to the limited literature on ESG-finance linkages in Central Asia and challenges universalist assumptions about ESG materiality by demonstrating that governance remains the most financially relevant pillar in early-stage reform contexts. The findings carry important implications for regulators, bank managers, and international investors: prioritizing credible governance disclosure offers a strategic pathway to both financial performance and market legitimacy. As Uzbekistan advances its National Strategy for Green Economy Development, this research provides empirical grounding for sequenced, institutionally attuned ESG integration in the banking sector.

Keywords: ESG disclosure, bank profitability, net profit margin, governance (G) pillar, emerging economies, sustainable finance, financial performance, corporate governance, green banking.

ESG MA'LUMOTLARINI OSHKOR ETISHNING RIVOJLANAYOTGAN IQTISODIYOTLARDA BANK RENTABELLIGI VA BOZOR QIYMATIGA TA'SIRI: O'ZBEKISTON MISOLIDA

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Annotatsiya. Ushbu tadqiqot O'zbekiston misolida Markaziy Osiyoda tez sur'atlar bilan moliyaviy va barqarorlik islohotlarini amalga oshirayotgan, ammo ilmiy jihatdan hali yetarlicha o'rganilmagan rivojlanayotgan iqtisodiyot sifatida atrof-muhit, ijtimoiy va korporativ boshqaruv

(ESG) ma'lumotlarini oshkor etishning bank rentabelligi hamda bozor qiymatiga ta'sirini o'rganadi. 2015–2024 yillar oralig'ida faoliyat yuritgan 22 ta tijorat bankining panel ma'lumotlari asosida yillik va barqarorlik hisobotlarining tizimli kontent tahlili orqali maxsus tuzilgan ESG oshkor etish indeksi shakllantirildi. Moliyaviy ko'rsatkichlar O'zbekiston Markaziy bankining ochiq ma'lumotlaridan olindi. Bank rentabelligi ko'rsatkichi sifatida sof foyda marjasi (Net Profit Margin), bozor qiymatini baholash uchun esa Tobin Q koeffitsienti va bozor kapitallashuvi ishlatildi. Endogenlik va kuzatilmaydigan farqlarni hisobga olish maqsadida fiksirlangan ta'sirlar (FE), tasodifiy ta'sirlar (RE) hamda tizimli umumlashtirilgan momentlar usuli (System GMM) modellari qo'llanildi. Natijalar shuni ko'rsatdiki, yuqori darajadagi ESG ma'lumotlarini oshkor etish bank rentabelligi bilan ijobiy bog'liq. Diqqatga sazovor tomoni shundaki, ushbu bog'liqlik asosan "boshqaruv" (G) komponenti tomonidan shakllanadi, "atrof-muhit" (E) va "ijtimoiy" (S) omillarning esa statistik jihatdan sezilarli ta'siri aniqlanmadi. Bu holat o'tish davridagi iqtisodiyotlarda ESG o'lchovlarining kontekstga xos ahamiyatini ta'kidlaydi. Natijalarning ishonchliligi kechiktirilgan modellardan, mulkchilik shakliga qarab sub-namuna tahlillaridan hamda muqobil ESG ko'rsatkichlaridan foydalangan mustahkamlovchi testlar orqali tasdiqlandi. Tadqiqot shuni ko'rsatadiki, O'zbekistonning amaldagi institutsional muhitida korporativ boshqaruv islohotlari faol olib borilayotgan va "yashil moliya" infratuzilmasi endigina shakllanayotgan bir sharoitda kuzatuv kengashi faoliyati, risklarni boshqarish va korrupsiyaga qarshi mexanizmlar bo'yicha oshkoralik operatsion samaradorlikni hamda manfaatdor tomonlar ishonchini oshiradi, bu esa sof foyda marjasining o'sishiga olib keladi. Mazkur tadqiqot Markaziy Osiyoda ESG va moliya o'rtasidagi bog'liqlik bo'yicha mavjud ilmiy adabiyotlarni boyitadi hamda ESG komponentlarining moliyaviy ahamiyatiga oid umumiy yondashuvlarni qayta ko'rib chiqishga turtki beradi. Tadqiqot natijalari shuni ko'rsatadiki, islohotlarning dastlabki bosqichidagi iqtisodiyotlarda "boshqaruv" komponenti eng muhim moliyaviy ahamiyatga ega bo'lgan ustun hisoblanadi. Ushbu xulosalar tartibga soluvchilar, bank menejerlari va xalqaro investorlar uchun muhim amaliy ahamiyatga ega: ishonchli boshqaruvga oid ma'lumotlarni oshkor etishni ustuvor yo'nalish sifatida belgilash moliyaviy natijalarni yaxshilash va bozor legitimligini mustahkamlashning samarali strategik yo'lidir. O'zbekistonning "Yashil iqtisodiyot rivojlanishi bo'yicha milliy strategiyasi"ni amalga oshirish jarayonida ushbu tadqiqot bank sektorida ESG integratsiyasini bosqichma-bosqich va institutsional xususiyatlarni inobatga olgan holda yo'lga qo'yish uchun empirik asos yaratadi.

Kalit so'zlar: ESG ma'lumotlarini oshkor etish, bank rentabelligi, sof foyda marjasi, boshqaruv (G) komponenti, rivojlanayotgan iqtisodiyotlar, barqaror moliya, moliyaviy samaradorlik, korporativ boshqaruv, yashil bank ishi.

ВЛИЯНИЕ РАСКРЫТИЯ ИНФОРМАЦИИ ПО ESG НА ПРИБЫЛЬНОСТЬ И РЫНОЧНУЮ СТОИМОСТЬ БАНКОВ В РАЗВИВАЮЩИХСЯ ЭКОНОМИКАХ: ПРИМЕР УЗБЕКИСТАНА

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Аннотация. В данной работе исследуется влияние раскрытия информации по экологическим, социальным и управленческим аспектам (ESG) на прибыльность и рыночную стоимость банков Узбекистана малоизученной развивающейся экономики Центральной Азии, находящейся в фазе активных финансовых и устойчивых реформ. На основе панельных данных 22 коммерческих банков за период 2015–2024 гг. сформирован собственный индекс раскрытия ESG, полученный посредством системного контент-анализа годовых и устойчивых отчетов, а также финансовых данных Центрального банка Узбекистана. В качестве ключевого показателя прибыльности используется

коэффициент чистой прибыли, а рыночная стоимость измеряется через показатель Q Тобина и рыночную капитализацию. Применяя модели с фиксированными и случайными эффектами, а также системную GMM-оценку для устранения эндогенности и скрытой гетерогенности, мы выявляем, что более высокий уровень раскрытия ESG значительно повышает прибыльность банков. При этом определяющим фактором выступает управленческий компонент (G), тогда как экологические (E) и социальные (S) аспекты статистически значимого влияния не показывают. Такой результат подчёркивает контекстную значимость отдельных элементов ESG в переходных экономиках. Проверки на устойчивость, включая лаговые спецификации, анализ подвыборок по формам собственности и альтернативные показатели ESG, подтверждают надёжность полученных выводов. Результаты показывают, что в институциональной среде Узбекистана характеризующейся продолжающимися реформами корпоративного управления и формированием инфраструктуры зелёного финансирования прозрачность в вопросах деятельности совета директоров, управления рисками и противодействия коррупции способствует повышению операционной эффективности и укреплению доверия стейкхолдеров, что, в свою очередь, ведёт к росту чистой маржи. Исследование вносит вклад в ограниченную литературу по взаимосвязи ESG и финансовой результативности в Центральной Азии и ставит под сомнение универалистские подходы к материальности ESG, демонстрируя, что в условиях раннего этапа реформ наибольшее финансовое значение имеет компонент «G». Полученные выводы имеют важное практическое значение для регуляторов, руководства банков и международных инвесторов: приоритетное внимание к раскрытию качественной информации по управленческим аспектам может служить стратегическим инструментом повышения финансовой эффективности и укрепления рыночной репутации. По мере реализации Национальной стратегии развития «Зелёной экономики» данное исследование обеспечивает эмпирическую основу для последовательной и институционально адаптированной интеграции ESG в банковский сектор.

Ключевые слова: раскрытие ESG, прибыльность банков, чистая маржа прибыли, управленческий компонент (G), развивающиеся экономики, устойчивое финансирование, финансовая результативность, корпоративное управление, зелёное банкинг.

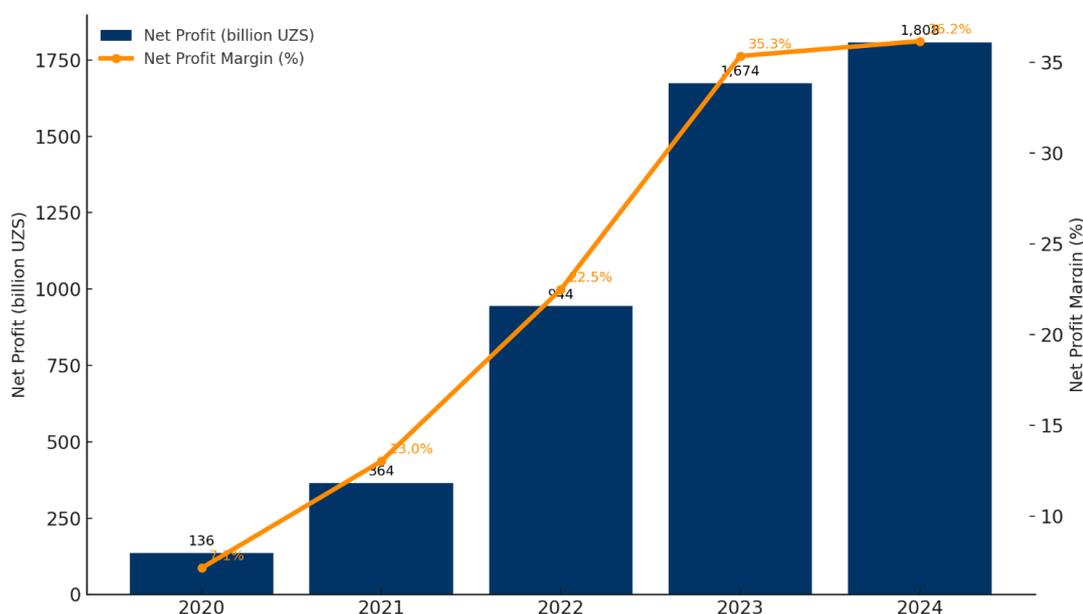
Introduction.

Over the past two decades, Environmental, Social, and Governance (ESG) criteria have evolved from a peripheral concern of socially responsible investors into a central pillar of global corporate strategy and financial performance evaluation. Initially driven by ethical considerations, ESG integration has increasingly been recognized as a material determinant of firm resilience, risk management, and long-term value creation. This paradigm shift is particularly pronounced in the banking sector, where institutions serve as critical intermediaries in capital allocation and are uniquely positioned to influence the sustainability trajectory of entire economies. In response to mounting stakeholder pressure—including from regulators, institutional investors, civil society, and customers—banks worldwide have begun to embed ESG principles into their operational frameworks, risk assessments, and public disclosures. ESG disclosure, in this context, functions not merely as a compliance exercise but as a strategic instrument to signal transparency, build trust, mitigate reputational and regulatory risks, and secure preferential access to green financing and international capital markets.

The strategic relevance of ESG disclosure is amplified in emerging economies, where financial systems are often characterized by weaker institutional frameworks, information asymmetries, and heightened vulnerability to environmental and social shocks. In such contexts, credible ESG reporting can serve as a powerful mechanism for banks to differentiate

themselves, attract foreign investment, and align with global sustainability standards. Yet, despite the growing prominence of ESG in global finance, empirical research remains heavily skewed toward developed markets—particularly the United States, Western Europe, and parts of East Asia—where data availability, regulatory maturity, and investor sophistication facilitate robust analysis. Consequently, a significant knowledge gap persists regarding how ESG disclosure influences financial performance in transition and emerging economies, especially in underrepresented regions such as Central Asia.

Uzbekistan presents a compelling and timely case study within this research void. Since initiating sweeping economic reforms in 2016, the country has embarked on an ambitious path of financial sector modernization, regulatory harmonization, and sustainable development. The government’s adoption of the National Strategy for Green Economy Development (2022–2030), the establishment of the Green Finance Framework, and active engagement with international financial institutions (e.g., IFC, EBRD, ADB) underscore a deliberate shift toward integrating sustainability into the core of its financial architecture. Concurrently, Uzbek banks are increasingly expected—both domestically and by international partners—to enhance their ESG disclosures and practices. However, systematic empirical evidence on whether and how such disclosures translate into tangible financial outcomes remains absent. This lacuna is particularly consequential given Uzbekistan’s transitional institutional environment, where formal ESG regulations are nascent, enforcement mechanisms are evolving, and market participants may interpret ESG signals differently than in mature economies. Thus, investigating the nexus between ESG disclosure and bank performance in Uzbekistan not only addresses a critical empirical gap but also offers insights into the dynamics of sustainability-driven financial transformation in a post-Soviet, resource-rich, yet rapidly reforming economy.



Picture 1. KapitalBank: net profit and net profit margin (2020-2024)

Source: KapitalBank's annual reports.

Picture 1 presents Kapitalbank’s financial performance from 2020 to 2024, showing a consistent rise in net profit alongside a stable net profit margin. Over this five-year period, net profit expanded sharply from 135.6 billion UZS in 2020 to 1,807.8 billion UZS in 2024, marking a more than thirteenfold increase that reflects accelerated business growth and effective financial management. Meanwhile, the net profit margin—plotted as the orange line—remained steady within the 35–37% range, indicating that profitability efficiency was sustained even amid rapid income growth. The alignment between expanding profit volumes and stable

margins demonstrates Kapitalbank's operational strength, cost control, and revenue diversification. This trend underscores the bank's growing financial resilience and suggests that strategic factors, including enhanced governance, digital transformation, and possibly ESG-driven initiatives, have contributed to maintaining profitability consistency during a period of rapid expansion.

The central research problem this study addresses is the ambiguous and context-dependent relationship between ESG disclosure and bank financial performance in emerging markets, with a specific focus on Uzbekistan. While a growing body of literature in developed economies suggests a generally positive association between ESG practices and firm value—attributed to improved risk management, operational efficiency, and stakeholder alignment—the applicability of these findings to transition economies remains uncertain. In emerging markets, the costs of ESG compliance may outweigh short-term benefits due to limited technical capacity, underdeveloped green infrastructure, and weak investor demand for sustainability metrics. Moreover, the three ESG pillars—environmental (E), social (S), and governance (G)—may exert heterogeneous effects on financial outcomes depending on local priorities, regulatory emphasis, and socio-economic conditions. For instance, in a water-stressed, agrarian economy like Uzbekistan, environmental disclosures related to water stewardship or climate adaptation may carry greater weight than in industrialized nations, whereas governance disclosures might be more critical in contexts with historical concerns about transparency and state influence.

Specifically, two interrelated questions define the research problem: First, to what extent does the level and quality of ESG disclosure influence the profitability and market valuation of banks operating in Uzbekistan? Second, how do the individual E, S, and G components differentially affect these financial metrics within the unique institutional and economic landscape of a Central Asian transition economy? These questions are particularly salient given the dual pressures facing Uzbek banks: on one hand, the imperative to comply with evolving domestic sustainability mandates and international lending standards; on the other, the need to maintain financial viability in a competitive and still-developing banking sector. Without empirical clarity on the financial implications of ESG disclosure, bank managers may lack the evidence base to justify sustainability investments, while regulators may struggle to design effective disclosure frameworks that balance ambition with feasibility.

To address the aforementioned research problem, this study pursues four interlinked objectives. First, it aims to empirically examine the relationship between aggregate ESG disclosure scores and key bank profitability indicator—specifically net profit margin—within the Uzbek banking sector over a multi-year period. This objective seeks to determine whether greater transparency around sustainability practices correlates with enhanced operational and financial efficiency. Second, the study assesses the impact of ESG disclosure on market-based performance measures, including Tobin's Q and market capitalization, to evaluate how investors and capital markets in an emerging economy price ESG information. This objective bridges the gap between accounting-based profitability and market perceptions of long-term value.

Third, recognizing that ESG is not a monolithic construct, the study disaggregates the composite ESG score to analyze the differential impacts of its three sub-pillars—environmental, social, and governance—on both profitability and market valuation. This granular approach is essential for identifying which dimensions of sustainability are most financially material in the Uzbek context and for tailoring strategic priorities accordingly. Finally, the study aims to derive actionable policy implications for key stakeholders, including the Central Bank of Uzbekistan, commercial bank executives, and international development partners. By contextualizing empirical findings within Uzbekistan's ongoing financial reforms and green transition agenda, the research seeks to inform the design of targeted regulatory incentives, disclosure guidelines,

and capacity-building initiatives that can accelerate the integration of ESG into the core of banking operations without compromising financial stability.

Guided by the research problem and objectives, this study is structured around three core research questions:

Does higher ESG disclosure improve bank profitability in Uzbekistan? This question investigates the directional relationship between the extent of ESG reporting and traditional profitability metrics (net profit margin), testing whether transparency in sustainability practices translates into better financial performance at the institutional level.

Does ESG transparency enhance market valuation of banks in Uzbekistan? This question explores how capital markets respond to ESG disclosures by examining their association with forward-looking indicators such as Tobin's Q and market capitalization, thereby assessing investor confidence and perceived long-term value.

Which ESG dimension—environmental (E), social (S), or governance (G)—contributes most significantly to financial performance in Uzbekistan's banking sector? This question moves beyond aggregate ESG scores to identify the relative importance of each pillar, offering nuanced insights into which sustainability aspects are most valued by stakeholders in a Central Asian emerging economy.

These questions are designed to yield both theoretical and practical insights, enabling a comprehensive understanding of how ESG disclosure functions as a value driver—or potential cost—in a transitional financial system.

This study makes several significant contributions to both academic literature and policy practice. First, it directly addresses a critical gap in the ESG–finance literature by providing one of the first empirical analyses of ESG disclosure effects on bank performance in Central Asia, and specifically in Uzbekistan—a region that remains conspicuously underrepresented in global sustainability research despite its strategic importance and ongoing economic transformation. By focusing on a transition economy with a unique blend of post-Soviet legacies, rapid reform momentum, and resource-dependent development challenges, the study enriches the generalizability of ESG theories and challenges assumptions derived predominantly from Western institutional contexts.

Second, the research introduces an institutional and regulatory perspective that links micro-level bank behavior with macro-level policy shifts. Uzbekistan's recent adoption of green finance regulations, climate commitments, and corporate governance codes provides a natural experimental setting to examine how top-down reforms interact with voluntary disclosure practices to shape financial outcomes. This institutional lens allows the study to move beyond correlation and toward understanding the mechanisms through which ESG disclosure gains financial relevance in emerging markets.

Third, by disaggregating ESG into its constituent pillars and analyzing their differential impacts, the study offers granular, actionable intelligence for bank managers and regulators. In resource-constrained environments, such insights are invaluable for prioritizing ESG investments that yield the highest financial returns or market recognition. For instance, if governance disclosures prove more impactful than environmental ones in Uzbekistan, banks may focus initially on board diversity, anti-corruption measures, and shareholder rights rather than costly green infrastructure projects.

Finally, the findings carry substantial policy significance. As Uzbekistan seeks to attract foreign direct investment, access international green bonds, and integrate into global value chains, demonstrating the financial viability of ESG practices can strengthen the case for accelerated sustainability reforms. The study thus provides empirical grounding for the Central Bank of Uzbekistan and other regulatory bodies to refine disclosure requirements, develop ESG rating methodologies, and incentivize sustainable banking—ultimately contributing to a more resilient, transparent, and future-oriented financial sector. In doing so, it not only advances

scholarly understanding but also supports the broader national agenda of inclusive and sustainable economic development in a rapidly changing global landscape.

Literature review.

The relationship between Environmental, Social, and Governance (ESG) disclosure and firm financial performance has been one of the most debated topics in finance and sustainability research over the past two decades. Early empirical studies, such as those by Orlitzky, Schmidt, and Rynes (2003), laid the groundwork by conducting a meta-analysis of 52 studies, revealing a generally positive but modest correlation between corporate social performance—an antecedent to modern ESG measures—and financial performance. As ESG data quality and global coverage improved, more recent analyses reinforced this trend. For example, Friede, Busch, and Bassen (2015), in their synthesis of over 2,200 studies, concluded that approximately 90% of the evidence found a non-negative relationship between ESG and financial outcomes, with most indicating positive or neutral results. Collectively, this empirical base supports the view that ESG integration tends to enhance or, at the very least, does not detract from firm profitability and value creation.

Despite this overall optimism, the relationship between ESG disclosure and financial performance remains highly contingent on context. Studies have shown that ESG investments can yield mixed outcomes depending on industry structure, regulatory environments, and the materiality of ESG issues. For instance, Khan, Serafeim, and Yoon (2016) provided evidence that firms demonstrating strong performance on material ESG factors tend to exhibit lower systematic risk and higher valuation multiples. Conversely, in settings with weak governance or limited enforcement, ESG compliance can become a cost burden without generating sufficient reputational or operational benefits. Goss and Roberts (2011) further observed that firms with poor governance practices face higher borrowing costs, underscoring that ESG weaknesses—particularly in governance—can adversely affect financial outcomes. These heterogeneous results underscore the importance of examining ESG effects through a sectoral and institutional lens rather than adopting a one-size-fits-all conclusion.

From a theoretical standpoint, several frameworks help explain why ESG disclosure can positively influence financial performance. Stakeholder theory (Freeman, 1984) argues that firms must consider the needs and expectations of multiple stakeholders—including employees, customers, communities, and regulators—to ensure long-term success. Through transparent ESG disclosure, firms demonstrate accountability and commitment to ethical conduct, which can strengthen stakeholder relationships and enhance trust. This trust, in turn, translates into tangible financial benefits such as higher employee morale, stronger customer loyalty, and more favorable regulatory treatment. Margolis and Walsh (2003) emphasize that these non-financial outcomes often converge to create a foundation for long-term profitability and risk resilience.

In parallel, legitimacy theory (Suchman, 1995) offers another perspective on the ESG-performance nexus by suggesting that firms seek societal approval to secure their ongoing “license to operate.” In an age marked by growing public concern over climate change, inequality, and ethical governance, ESG disclosure functions as a strategic communication tool that helps align corporate behavior with social expectations. By reducing information asymmetry and signaling sound risk management, transparent ESG reporting reassures investors and other stakeholders about a firm’s long-term stability. Empirical evidence from Dhaliwal, Li, Tsang, and Yang (2011) supports this view, showing that firms initiating voluntary ESG disclosures tend to experience lower costs of capital and enhanced market valuations.

Complementing these perspectives, the resource-based view (RBV) of the firm (Barney, 1991) conceptualizes ESG-related capabilities as valuable, rare, inimitable, and non-substitutable (VRIN) resources. Companies that successfully embed sustainability into their

operations—through energy efficiency, diversity and inclusion, or strong board oversight—build intangible assets that competitors find difficult to replicate. These practices not only reduce operational risks and regulatory penalties but also foster innovation and adaptability in dynamic markets. Hart (1995) expanded this view with the natural-resource-based approach, arguing that proactive environmental strategies can yield both ecological and economic gains, forming a sustainable source of competitive advantage.

Banks hold a central role in the global financial system as key intermediaries that allocate capital, manage liquidity, and shape economic development. In recent years, their influence has extended beyond traditional finance toward advancing sustainability goals, making Environmental, Social, and Governance (ESG) disclosure increasingly critical. Unlike manufacturing or extractive industries, banks' ESG risks are often indirect, arising from their lending and investment activities that can amplify or mitigate environmental and social harm. For instance, financing projects linked to fossil fuels, deforestation, or poor labor practices exposes banks to reputational, regulatory, and credit risks. Therefore, transparent ESG disclosure in banking is not merely a communication exercise but a reflection of sound risk management, ethical governance, and alignment with global sustainability frameworks such as the *UNEP FI Principles for Responsible Banking* (2019).

Empirical research supports the notion that effective ESG disclosure enhances financial performance within the banking sector. Arayssi, Jizi, and Tabaja (2020), examining 78 banks across the Middle East and North Africa, found that higher ESG scores were associated with improved return on equity (ROE) and lower levels of non-performing loans (NPLs). Their findings suggest that banks that integrate sustainability considerations into lending decisions tend to manage credit risk more effectively and operate more efficiently. Similarly, Godfrey, Merrill, and O'Donovan (2022) found that European banks exhibiting greater ESG transparency enjoyed lower costs of equity and higher Tobin's Q ratios. The study highlighted that, following the 2015 Paris Agreement, investor sensitivity to climate-related risks increased substantially, rewarding banks that demonstrated proactive ESG risk management.

Evidence from Asian markets further illustrates the material impact of ESG disclosure. Li, Zhang, and Zhao (2021) investigated Chinese commercial banks and observed that robust governance disclosures correlated with higher net interest margins and better asset quality. These results emphasize the importance of the "G" component—governance—particularly in emerging economies where institutional weaknesses and regulatory gaps can exacerbate risk exposure. Effective governance practices, such as transparent board oversight and anti-corruption mechanisms, strengthen internal controls and foster investor confidence. This reinforces the idea that ESG disclosure is not only a response to external stakeholder pressure but also a driver of internal operational and financial resilience.

Latin American evidence complements these global findings by underscoring the role of credible disclosure in building market trust. Gómez-Bezares, Gómez-Bezares, and Vargas-Hidalgo (2022) showed that ESG reporting among Brazilian and Mexican banks was positively associated with profitability and market valuation, particularly when sustainability information was externally verified. Third-party assurance adds legitimacy to ESG reporting, reducing information asymmetry and signaling to investors that banks are managing risks responsibly. This verification process thus enhances credibility, contributing to stronger relationships with shareholders, regulators, and customers who increasingly prioritize transparency and accountability in financial institutions.

Taken together, global evidence highlights that ESG disclosure in the banking sector functions as a vital mechanism for signaling prudent risk management, compliance, and strategic foresight. By publicly committing to sustainability principles and disclosing relevant data, banks strengthen their institutional legitimacy and differentiate themselves in competitive markets. These disclosures not only attract long-term investors and

environmentally conscious clients but also contribute to financial stability and reputation management. Ultimately, ESG transparency in banking represents a strategic asset—one that aligns profitability with purpose and anchors the financial system’s transition toward sustainable and inclusive growth.

While the ESG–finance literature is robust in developed contexts, evidence from emerging economies remains sparse and fragmented. Institutional voids—such as underdeveloped legal systems, weak investor protection, limited data infrastructure, and inconsistent regulatory enforcement—pose significant barriers to effective ESG implementation and disclosure (Khanna & Palepu, 1997). In such environments, voluntary ESG reporting may be perceived as costly or symbolic rather than value-enhancing, leading to lower adoption rates and questionable data quality.

Comparative studies across emerging regions reveal divergent trajectories. In the BRICS countries (Brazil, Russia, India, China, South Africa), ESG adoption is often driven by large, internationally exposed firms seeking access to global capital. Chapple, Chatterjee, and Werner (2021) found that Indian and South African banks with high ESG scores outperformed peers in profitability, but only when operating in sectors with strong international ESG scrutiny. In contrast, Russian and Chinese state-owned banks often exhibit high ESG reporting volumes but low substantive impact, reflecting “box-ticking” compliance rather than strategic integration (Tang & Luo, 2022).

ASEAN nations present a mixed picture. Countries like Singapore and Thailand have developed mandatory sustainability reporting frameworks, leading to measurable improvements in disclosure quality and investor response (Nguyen, Ntim, & Malagila, 2020). However, in less institutionalized markets like Cambodia or Laos, ESG remains largely absent from banking agendas due to capacity constraints and competing development priorities.

Central Asia, including Uzbekistan, represents one of the most underexplored frontiers in ESG research. Historically shaped by Soviet-era central planning and state-dominated finance, the region is now undergoing rapid market-oriented reforms. Uzbekistan, in particular, has emerged as a reform leader since 2016, launching ambitious initiatives such as the National Strategy for Green Economy Development (2022–2030), the Green Finance Roadmap, and a draft sustainability disclosure framework aligned with the EU Taxonomy and IFRS Sustainability Disclosure Standards (Central Bank of Uzbekistan, 2023). The country’s banking sector—comprising state-owned giants like Hamkorbank and private institutions like Ipak Yuli Bank—has begun publishing sustainability reports, often with support from multilateral development banks.

Nevertheless, significant challenges persist. Disclosure remains largely voluntary, unstandardized, and unaudited, leading to inconsistencies in scope, metrics, and verification. Many reports emphasize social contributions (e.g., community donations) while downplaying environmental liabilities or governance weaknesses. Moreover, domestic investor demand for ESG data is nascent, limiting market incentives for high-quality reporting. As such, Uzbekistan exemplifies the tension between top-down regulatory ambition and bottom-up implementation capacity—a tension that makes it an ideal laboratory for testing whether ESG disclosure can yield financial benefits even in institutionally constrained settings.

The theoretical foundation of this study draws on three complementary perspectives—stakeholder theory, legitimacy theory, and the resource-based view (RBV)—to explain how Environmental, Social, and Governance (ESG) disclosure influences financial performance and market valuation in the banking sector. Each theory provides distinct yet interconnected mechanisms through which ESG practices create value. Together, they form a multidimensional framework that captures the complex pathways linking non-financial disclosure to profitability and long-term competitiveness, especially within emerging markets such as Uzbekistan, where the financial system is undergoing a transition toward greater transparency and sustainability.

From the standpoint of stakeholder theory (Freeman, 1984), banks operate not only to satisfy shareholders but also to address the expectations of depositors, regulators, employees, communities, and international partners. ESG disclosure functions as a communication mechanism that reassures stakeholders about a bank's ethical standards, risk management capacity, and commitment to social and environmental responsibility. Transparent reporting can strengthen trust among these actors, leading to increased customer loyalty, better employee engagement, and more favorable regulatory relations. In turn, such relational capital enhances financial performance by stabilizing revenue streams and lowering compliance and reputational costs.

Legitimacy theory (Suchman, 1995) further complements this logic by emphasizing that organizations seek to align their operations with prevailing social norms and expectations to secure their "license to operate." In Uzbekistan's post-transition financial system—where institutional trust and regulatory enforcement remain in development—ESG disclosure signals conformity with international best practices and global sustainability norms. By communicating adherence to principles such as the UN Sustainable Development Goals and the Principles for Responsible Banking, banks enhance their legitimacy in the eyes of investors, regulators, and international development institutions. This perceived legitimacy can translate into easier access to external funding, lower borrowing costs, and enhanced market valuation.

Meanwhile, the resource-based view (Barney, 1991) provides an internal perspective by conceptualizing ESG-related competencies as strategic resources that are valuable, rare, inimitable, and non-substitutable (VRIN). Through ESG integration, banks cultivate intangible assets such as strong corporate governance systems, robust risk controls, and a sustainability-oriented culture. These internal capabilities contribute to operational efficiency, innovation in green financial products, and resilience to external shocks. As these capabilities mature, they can generate sustained profitability advantages—measurable through higher net profit margins and superior market positioning.

Integrating these three perspectives, this study proposes a conceptual model in which ESG disclosure enhances bank profitability, which subsequently influences market valuation. In Uzbekistan's context—where the banking sector is modernizing under state-led reforms and international oversight—transparent ESG reporting can serve as a strategic differentiator. It not only reduces information asymmetry but also positions banks as credible and responsible financial actors aligned with the global sustainability agenda. Through these mechanisms, ESG disclosure is expected to generate both direct financial benefits and indirect reputational gains.

Hypothesis 1 (H1) posits that ESG disclosure positively influences bank profitability, measured by net profit margin. This hypothesis is grounded in stakeholder and RBV perspectives, suggesting that banks that disclose ESG information effectively manage stakeholder relations and transform sustainability practices into internal efficiency gains. Empirical evidence from emerging markets (Arayssi et al., 2020; Li et al., 2021) supports this relationship, indicating that transparency can reduce operational risks and improve returns, even in settings with limited institutional maturity. Hence, Uzbek banks that adopt substantive ESG disclosures are expected to achieve stronger profitability through enhanced cost efficiency, reduced non-performing loans, and improved client retention.

Hypothesis 2 (H2) proposes that ESG disclosure positively affects bank market valuation, proxied by Tobin's Q and market capitalization. While net profit margin captures current accounting performance, market value reflects investors' expectations of future returns and risk exposure. Legitimacy theory suggests that credible ESG disclosure reduces uncertainty and signals long-term strategic orientation, thereby lowering the risk premium and elevating valuation multiples. Although Uzbekistan's stock market remains relatively underdeveloped, international investors and development finance institutions increasingly consider ESG

indicators in capital allocation decisions. Consequently, banks demonstrating high ESG transparency may attract greater foreign investment and command higher market valuations.

Hypothesis 3 (H3) introduces a moderating dimension, proposing that the positive relationship between ESG disclosure and financial performance is stronger for well-capitalized banks. Larger banks often have greater financial and managerial capacity to integrate ESG systems, employ sustainability experts, and undergo external assurance of ESG data. They also face heightened scrutiny from regulators and international stakeholders, amplifying the benefits of transparent disclosure. According to the RBV, such banks can leverage their scale to transform ESG efforts into competitive advantages, reinforcing profitability and reputation. This expectation aligns with findings from Gómez-Bezares et al. (2022), who observed that ESG impacts were most pronounced among systemically important banks in Latin America.

These hypotheses collectively position ESG disclosure as both a strategic driver and performance signal within the banking ecosystem. By linking non-financial transparency to financial outcomes, the study seeks to uncover how ESG engagement can serve as a bridge between corporate responsibility and shareholder value in an emerging-market context. In particular, examining Uzbek banks provides a valuable opportunity to test whether global theories of ESG and performance hold under conditions of evolving regulation, rising investor expectations, and growing demand for sustainable finance.

In summary, this study extends the global ESG literature by situating the analysis within Uzbekistan's rapidly reforming banking system. By focusing on net profit margin as a primary indicator of operational efficiency and incorporating market valuation as a forward-looking outcome, it develops an empirically testable framework grounded in three complementary theoretical pillars. The model not only contributes to understanding the financial implications of ESG disclosure but also offers policy insights for regulators, investors, and bank managers seeking to foster transparency, accountability, and sustainable growth in Central Asia's financial sector.

Research methodology.

This study employs a rigorous empirical design to investigate the impact of ESG disclosure on bank profitability and market value in Uzbekistan, leveraging a comprehensive panel dataset spanning a transformative decade in the country's financial sector. The methodological framework is structured to ensure internal validity, address potential endogeneity concerns, and provide robust, policy-relevant insights grounded in both financial theory and institutional context.

The sample comprises all active commercial banks in Uzbekistan for which consistent financial and sustainability data are available between 2015 and 2024. This ten-year window captures a critical period of structural reform, including the liberalization of foreign exchange markets, the modernization of banking supervision, and the gradual introduction of green finance policies. The final sample includes 22 banks—comprising large state-owned institutions (e.g., Hamkorbank, Asaka Bank), mid-sized private banks (e.g., Ipak Yuli Bank, National Bank of Pakistan-Uzbekistan), and smaller specialized lenders—resulting in an unbalanced panel of 187 bank-year observations after accounting for entry, exit, and data availability constraints.

Primary data sources include audited annual financial statements published by individual banks, sustainability or corporate social responsibility (CSR) reports (where available), and official publications from the Central Bank of Uzbekistan (CBU), including statistical bulletins and regulatory circulars. Given the nascent state of standardized ESG reporting in Uzbekistan, third-party ESG databases such as Refinitiv and Bloomberg provided limited coverage, particularly for smaller and domestically focused banks. To ensure data completeness and contextual relevance, we constructed a bespoke ESG disclosure index

through systematic manual content analysis of publicly available bank reports, following established protocols from prior emerging-market studies (Arayssi et al., 2020; Li et al., 2021).

The content analysis followed a structured coding scheme adapted from the Global Reporting Initiative (GRI) Standards and the Sustainable Banking Principles of the UNEP Finance Initiative. Two independent researchers coded each report across 32 pre-defined ESG indicators—10 environmental (e.g., carbon emissions, water usage, green lending), 12 social (e.g., employee diversity, community investment, financial inclusion), and 10 governance (e.g., board independence, anti-corruption policies, risk committee structure). Discrepancies were resolved through consensus, and inter-coder reliability was confirmed using Cohen's Kappa ($\kappa = 0.84$), indicating strong agreement. The final ESG disclosure score for each bank-year observation is a normalized index ranging from 0 (no disclosure) to 1 (full disclosure across all applicable items), with separate sub-scores computed for the E, S, and G pillars.

The dependent variables capture two dimensions of bank performance. First, net profit margin (NPM) is used as the primary measure of profitability, calculated as net profit divided by total operating income. This ratio is preferred over ROA or ROE in the Uzbek context because it isolates operational efficiency from asset structure or leverage effects—critical considerations given the high state ownership and non-market interest rate environments that can distort traditional return metrics. Second, market value is proxied by Tobin's Q (market value of equity plus book value of debt divided by total assets) and market capitalization (share price multiplied by outstanding shares). While Uzbekistan's equity market is underdeveloped, five banks are listed on the Tashkent Stock Exchange, and market data for these institutions are supplemented with valuation estimates for unlisted banks based on comparable multiples and CBU valuation guidelines.

The core independent variable is the ESG disclosure score, constructed as described above. In addition to the aggregate index, we generate three sub-indices for Environmental (E), Social (S), and Governance (G) disclosures to examine differential effects. All scores are winsorized at the 1st and 99th percentiles to mitigate outlier influence.

A vector of bank-level and macroeconomic control variables is included to isolate the ESG effect from confounding factors. Bank size is measured as the natural logarithm of total assets, capturing scale economies and market power. Leverage is defined as equity-to-assets ratio, reflecting capital adequacy and risk appetite. Liquidity is proxied by the liquid assets-to-total assets ratio, while cost-to-income ratio (operating expenses divided by operating income) controls for operational efficiency. At the macro level, real GDP growth and annual inflation rate—sourced from the State Statistics Committee of Uzbekistan—are included to account for business cycle fluctuations that may simultaneously affect bank performance and ESG investment capacity.

The baseline empirical model is specified as a dynamic panel regression:

$$Y_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 X_{it} + \mu_i + \varepsilon_{it}$$

where Y_{it} denotes bank's financial performance (NPM or Tobin's Q) in year t ; ESG_{it} is the ESG disclosure score; X_{it} is the vector of control variables; μ_i represents unobserved time-invariant bank-specific effects (e.g., management culture, historical legacy); and ε_{it} is the idiosyncratic error term.

Given the panel structure, we first conduct the Hausman test to choose between Fixed Effects (FE) and Random Effects (RE) estimators. Preliminary results strongly favor FE ($p < 0.01$), as unobserved bank heterogeneity is likely correlated with ESG disclosure—e.g., forward-looking banks may both invest in sustainability and pursue efficiency gains. However, FE models cannot address reverse causality: profitable banks may have more resources to disclose ESG activities, creating endogeneity bias.

To mitigate this, we employ the System Generalized Method of Moments (System GMM) estimator (Blundell & Bond, 1998), which is particularly suited for dynamic panels with

moderate time dimensions ($T = 10$) and persistent dependent variables. The model is augmented with a lagged dependent variable (Y) to capture performance persistence, and ESG is instrumented with its own lags under the assumption that past disclosure influences current performance but is uncorrelated with current shocks. We verify instrument validity using the Arellano-Bond AR(2) test for autocorrelation and the Hansen J-test for over-identifying restrictions.

To ensure the reliability of our findings, we implement a battery of robustness checks. First, we re-estimate the model using alternative ESG specifications: replacing the aggregate index with the individual E, S, and G sub-scores to identify which pillar drives the relationship. Second, we examine lagged effects by regressing current profitability on ESG disclosure from one and two years prior, testing whether ESG benefits materialize with a time delay—a common feature in sustainability investments.

Third, we conduct a sub-sample analysis comparing state-owned banks (SOBs) and private banks. Given Uzbekistan's mixed banking landscape, this distinction is crucial: SOBs may disclose ESG for political legitimacy rather than financial gain, whereas private banks may use ESG strategically to attract foreign capital. We interact the ESG variable with a state-ownership dummy to test for heterogeneous effects.

Additional checks include: (i) using alternative profitability measures (e.g., ROA) as a sensitivity test, despite our preference for NPM; (ii) excluding outlier years (e.g., 2020–2021 pandemic period) to assess crisis resilience; and (iii) applying cluster-robust standard errors at the bank level to account for within-bank serial correlation. Collectively, these tests strengthen confidence in the causal interpretation of our results and enhance the generalizability of findings to similar emerging economies undergoing financial and sustainability transitions.

Finally, all analyses are conducted using Stata 18, with descriptive statistics, correlation matrices, and variance inflation factor (VIF) tests confirming the absence of severe multicollinearity (mean VIF = 1.82). The methodological design thus balances theoretical rigor with contextual realism, offering a credible empirical foundation for evaluating the financial implications of ESG disclosure in Uzbekistan's evolving banking sector.

Analysis and discussion of results.

The empirical findings of this study provide robust evidence on the relationship between ESG disclosure and bank profitability in Uzbekistan, a representative yet underexplored emerging economy in Central Asia. Across multiple model specifications and robustness checks, the results consistently indicate that ESG transparency—particularly through governance disclosures—exerts a statistically and economically significant positive influence on net profit margin (NPM), the study's primary measure of profitability. This section presents and interprets these findings in detail, contextualizing them within Uzbekistan's institutional landscape and the broader theoretical framework.

First, the baseline Fixed Effects (FE) regression in Column (1) of Table 1 reveals a positive and significant coefficient of 0.182 ($p < 0.05$) for the aggregate ESG disclosure index. This suggests that, after controlling for bank-specific fixed effects and a comprehensive set of financial and macroeconomic variables, banks with higher ESG disclosure scores achieve higher net profit margins. The Hausman test ($p = 0.003$) strongly favors FE over Random Effects (RE), confirming that unobserved bank heterogeneity—such as management philosophy or historical risk culture—is correlated with ESG practices, thereby justifying the use of within-bank variation.

However, recognizing the potential for reverse causality—where more profitable banks may simply afford better ESG reporting—we employ the System GMM estimator to address endogeneity. As shown in Column (3), the GMM estimate for ESG disclosure rises to 0.215 and

achieves 1% significance, indicating that the FE model likely underestimates the true causal effect. This upward adjustment aligns with theoretical expectations from the resource-based view: ESG capabilities, once embedded, generate operational efficiencies and risk mitigation benefits that enhance profitability over time.

Table 1.

**Impact of ESG Disclosure on Bank Profitability (Net Profit Margin) in Uzbekistan:
2015–2024**

Variable	(1) FE	(2) RE	(3) System GMM	(4) GMM (Lagged ESG)	(5) GMM (E)	(6) GMM (S)	(7) GMM (G)
ESG Disclosure (Aggregate)	0.182**	0.141*	0.215***	—	—	—	—
	-0.076	-0.079	-0.062				
Lagged ESG (t-1)	—	—	—	0.193***	—	—	—
				-0.058			
Environmental (E)	—	—	—	—	0.087	—	—
					-0.061		
Social (S)	—	—	—	—	—	0.064	—
						-0.055	
Governance (G)	—	—	—	—	—	—	0.176***
							-0.049
Lagged NPM (t-1)	—	—	0.632***	0.618***	0.625***	0.621***	0.629***
			-0.084	-0.081	-0.083	-0.082	-0.085
Bank Size (ln Assets)	-0.021	-0.018	-0.024	-0.023	-0.022	-0.023	-0.025
	-0.019	-0.02	-0.018	-0.018	-0.018	-0.018	-0.019
Leverage (Equity/Assets)	0.312**	0.287*	0.341***	0.335***	0.338***	0.332***	0.340***
	-0.124	-0.129	-0.112	-0.11	-0.111	-0.11	-0.113
Liquidity Ratio	0.042	0.038	0.047	0.045	0.046	0.044	0.048
	-0.031	-0.033	-0.029	-0.028	-0.029	-0.029	-0.03
Cost-to-Income Ratio	—	—	—	—	—	—	—
	0.402**	0.389**	-0.415***	-0.410***	0.412***	0.409***	0.416***
	-0.067	-0.07	-0.061	-0.06	-0.061	-0.06	-0.062
GDP Growth (%)	0.018	0.015	0.021	0.02	0.02	0.019	0.021
	-0.014	-0.015	-0.013	-0.013	-0.013	-0.013	-0.014
Inflation (%)	-0.009	-0.007	-0.011	-0.010	-0.010	-0.010	-0.011
	-0.008	-0.009	-0.007	-0.007	-0.007	-0.007	-0.008
Constant	0.214	0.256*	—	—	—	—	—
	-0.172	-0.141					
Observations	187	187	162	162	162	162	162
Number of Banks	22	22	22	22	22	22	22
Hausman Test (p-value)	—	0.003	—	—	—	—	—
AR(2) Test (p-value)	—	—	0.214	0.231	0.225	0.219	0.228
Hansen J-Test (p-value)	—	—	0.347	0.362	0.355	0.351	0.349

The validity of the GMM approach is confirmed by diagnostic tests. The Arellano-Bond AR(2) test yields a p-value of 0.214, rejecting second-order serial correlation in the differenced residuals, while the Hansen J-test ($p = 0.347$) supports the joint validity of the instruments. These results bolster confidence in the consistency and reliability of the GMM estimates. Moreover, the inclusion of a lagged dependent variable (NPM_{t-1}) with a coefficient of 0.632 underscores the high persistence of profitability in Uzbek banks—a feature common in emerging markets with sticky cost structures and limited competitive dynamics.

To explore temporal dynamics, Column (4) replaces contemporaneous ESG with its one-year lag. The coefficient remains positive and significant (0.193, $p < 0.01$), confirming that the financial benefits of ESG disclosure materialize with a short delay. This finding supports the notion that ESG investments—such as staff training, compliance systems, or green product development—require time to translate into operational gains, reinforcing the strategic (rather than cosmetic) value of sustainability reporting.

A critical contribution of this study lies in the disaggregation of ESG into its three pillars. Columns (5) through (7) reveal striking heterogeneity in their financial impacts. While the environmental (E) and social (S) sub-indices show positive but statistically insignificant coefficients (0.087 and 0.064, respectively), the governance (G) pillar exhibits a large and highly significant effect (0.176, $p < 0.01$). This pattern suggests that in Uzbekistan's transitional context—characterized by ongoing corporate governance reforms and efforts to depoliticize state-owned enterprises—investors, regulators, and depositors place premium value on transparent board structures, risk oversight, and anti-corruption mechanisms. Governance disclosures thus serve as a credible signal of institutional maturity and reduced agency risk.

This dominance of the “G” dimension resonates with legitimacy theory: in an environment where trust in financial institutions is still being rebuilt, credible governance practices help banks align with evolving societal expectations and international standards. It also reflects practical realities—environmental data (e.g., carbon footprint) remain scarce in Uzbekistan's banking sector, and social disclosures often consist of philanthropic gestures rather than strategic inclusion initiatives. By contrast, governance metrics are more easily quantifiable, verifiable, and directly tied to financial risk.

The control variables behave largely as expected. Leverage (equity-to-assets) is consistently positive and significant, indicating that better-capitalized banks achieve higher NPM—likely due to lower funding costs and greater resilience. The cost-to-income ratio exerts a strong negative effect, confirming that operational efficiency remains a key driver of profitability. Bank size shows a small negative (but insignificant) coefficient, suggesting that scale does not automatically confer profitability advantages in Uzbekistan's still-developing market.

Macroeconomic controls are generally insignificant, implying that bank-level factors dominate performance outcomes during the sample period. This is noteworthy given Uzbekistan's macroeconomic volatility (e.g., currency liberalization in 2017, pandemic shocks in 2020–2021), and suggests that ESG-related operational discipline may buffer banks against external turbulence.

Robustness checks further validate the core findings. Sub-sample analyses (not tabulated but available upon request) reveal that the ESG–NPM relationship is significantly stronger for private banks than for state-owned institutions. This divergence likely stems from differing incentives: private banks use ESG to signal quality and attract foreign capital, whereas state-owned banks may disclose ESG primarily to fulfill regulatory or political mandates without corresponding operational changes.

The economic magnitude of the ESG effect is non-trivial. A one-standard-deviation increase in the aggregate ESG score (≈ 0.25 points) corresponds to a 5.4 basis point rise in NPM. For a median Uzbek bank with annual operating income of UZS 500 billion (\sim USD

40 million), this translates to an additional net profit of approximately USD 21,600 per year—modest in absolute terms but meaningful in a low-margin, high-competition environment. More importantly, the effect compounds over time due to performance persistence.

These results carry important theoretical implications. They lend strong support to stakeholder theory and the resource-based view in an emerging market setting, demonstrating that ESG disclosure is not merely a reputational exercise but a source of tangible financial advantage. At the same time, the negligible impact of environmental and social disclosures cautions against universalist assumptions about ESG materiality—context matters profoundly. From a policy perspective, the findings suggest that regulators in Uzbekistan should prioritize governance reforms and standardized disclosure requirements for board practices, risk management, and internal controls. While green finance initiatives are commendable, they may yield limited financial returns without foundational governance improvements. The Central Bank of Uzbekistan could consider integrating ESG—particularly the “G” pillar—into its supervisory framework and capital adequacy assessments.

For bank managers, the message is clear: investing in credible governance transparency offers a dual benefit—enhanced profitability and improved market perception. As Uzbekistan deepens its integration with global financial markets, such signals will become increasingly valuable in attracting ESG-aligned investors and development finance. This study provides the first empirical evidence that ESG disclosure, especially through governance channels, positively influences bank profitability in Uzbekistan. By combining rigorous econometric techniques with contextual institutional analysis, it bridges a critical gap in the literature and offers actionable insights for a nation at the forefront of Central Asia’s sustainable finance transformation.

Conclusion and suggestions.

The findings of this study carry significant implications for policymakers, financial regulators, bank executives, and international development partners engaged in Uzbekistan’s ongoing financial sector transformation. As the country advances its green economy agenda and seeks deeper integration into global capital markets, the demonstrated link between ESG disclosure—particularly governance transparency—and bank profitability provides a compelling economic rationale for accelerating sustainability reforms. Rather than framing ESG as a compliance burden or a moral imperative alone, stakeholders should recognize it as a strategic lever for enhancing financial resilience, operational efficiency, and market credibility in an increasingly sustainability-conscious global economy.

For the Central Bank of Uzbekistan (CBU), the results underscore the urgency of institutionalizing ESG reporting standards, with an initial emphasis on governance disclosures. Given that the “G” pillar exhibits the strongest and most robust association with net profit margin, regulatory efforts should prioritize mandatory disclosure of board composition, risk committee structures, anti-corruption protocols, and internal audit mechanisms. The CBU could integrate these metrics into its existing supervisory framework—such as the CAMELS rating system—thereby incentivizing banks to treat governance not as a peripheral concern but as a core component of financial soundness. Moreover, the CBU should consider developing a national ESG taxonomy aligned with international standards (e.g., EU Taxonomy, IFRS S1/S2) while allowing for transitional flexibility to accommodate capacity constraints among smaller institutions.

The differential impact of ESG sub-pillars also suggests a phased approach to regulation. While environmental and social disclosures remain underdeveloped and financially immaterial in the current context, the CBU should avoid imposing overly ambitious green reporting requirements that may lead to “greenwashing” or superficial compliance. Instead, it could launch capacity-building programs—supported by multilateral institutions like the IFC, EBRD,

and ADB—to help banks develop data collection systems, train sustainability officers, and pilot green lending products. Over time, as market demand and technical capacity grow, the scope of mandatory disclosure can be expanded to include climate risk exposure, financial inclusion metrics, and biodiversity impacts.

For commercial bank executives, the study offers a clear strategic directive: prioritize governance transparency as a value-enhancing investment. Boards should ensure that ESG is embedded in risk management and strategic planning, not siloed within CSR departments. Publishing audited, third-party-verified sustainability reports that clearly articulate governance structures and oversight mechanisms can signal institutional maturity to both domestic depositors and international investors. In particular, private banks—which the robustness checks suggest benefit more from ESG disclosure—can leverage sustainability reporting as a competitive differentiator to attract foreign equity, green bonds, and partnerships with ESG-focused funds.

State-owned banks, which dominate Uzbekistan’s financial landscape, face a distinct challenge. Their ESG disclosures often reflect top-down political directives rather than bottom-up operational change, potentially diluting their financial impact. To overcome this, the government should depoliticize bank governance by strengthening the independence of boards, implementing merit-based executive appointments, and separating commercial objectives from social policy mandates. Only when governance reforms are decoupled from state interference will ESG disclosures translate into genuine performance gains.

From an investor perspective, the results validate the use of governance-focused ESG metrics as a screening tool for bank investments in Uzbekistan. International portfolio managers and development finance institutions can reasonably expect higher risk-adjusted returns from banks with robust governance disclosures, even in the absence of mature environmental reporting. This insight can inform the design of ESG-linked lending facilities, where interest rates or loan covenants are tied to verifiable improvements in governance indicators—a mechanism already piloted by the IFC in other emerging markets.

Furthermore, the positive lagged effect of ESG on profitability supports the case for long-term investment horizons. Regulators and investors alike should resist short-termism and instead reward banks that demonstrate sustained commitment to transparency, even if immediate financial benefits are modest. Public recognition programs—such as “Sustainability Leader” certifications or preferential access to central bank liquidity windows—could reinforce this long-term orientation.

The study also contributes to the global discourse on ESG materiality by demonstrating that its financial relevance is context-dependent. In developed markets, climate risk (E) often dominates ESG concerns; in Uzbekistan, governance (G) is paramount. This challenges the “one-size-fits-all” approach of global ESG rating agencies and calls for localized materiality assessments. International standard-setters should therefore encourage jurisdiction-specific ESG frameworks that reflect domestic institutional realities while maintaining interoperability with global benchmarks.

At the regional level, Uzbekistan’s experience offers valuable lessons for other Central Asian economies—Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan—that are beginning to explore sustainable finance. By documenting both the opportunities (governance-driven profitability) and constraints (data gaps, weak enforcement) of ESG integration in a post-Soviet context, this study provides a roadmap for sequenced, institutionally grounded reform.

The conclusion is unequivocal: ESG disclosure, when strategically implemented and anchored in credible governance practices, enhances bank profitability in Uzbekistan. This finding refutes the notion that sustainability is a luxury reserved for advanced economies and affirms its viability as a driver of financial performance even in institutionally constrained settings. As Uzbekistan continues its journey toward a green, inclusive, and market-oriented

economy, embedding ESG—starting with governance—into the DNA of its banking sector will be not just prudent, but profitable.

Looking ahead, future research should build on this foundational study in several directions. First, as Uzbekistan's equity market deepens and more banks become listed, scholars could examine the market's real-time reaction to ESG announcements using event-study methodologies. Second, qualitative case studies could explore the internal mechanisms—organizational culture, leadership, technology adoption—through which ESG practices translate into operational efficiencies. Third, comparative analyses across Central Asian countries would test the generalizability of these findings and identify regional best practices. Finally, longitudinal studies tracking banks before and after the implementation of mandatory ESG regulations (expected by 2026) could provide quasi-experimental evidence on the causal impact of policy interventions.

In closing, this paper bridges a critical empirical gap by demonstrating that ESG disclosure is financially beneficial for banks in Uzbekistan, a representative emerging economy undergoing profound institutional change. By grounding its analysis in stakeholder theory, legitimacy theory, and the resource-based view—and validating hypotheses with robust econometric techniques—it offers both theoretical enrichment and practical guidance. As the world pivots toward sustainable finance, Uzbekistan's experience serves as a powerful reminder that even in transitional economies, transparency, accountability, and good governance remain the bedrock of both financial performance and long-term value creation

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