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INDICATORS AND METHODS FOR ASSESSING INTERBANK COMPETITION ENVIRONMENT: THE CASE OF UZBEKISTAN BANKING SECTOR

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Abstract. This article provides comprehensive analysis of indicators and methods for assessing the interbank competition environment in Uzbekistan's banking sector based on empirical data from 2020-2024.

Аннотация. В данной статье проведен комплексный анализ индикаторов и методов оценки межбанковской конкурентной среды в банковском секторе Узбекистана на основе эмпирических данных 2020-2024 годов.

Annotatsiya. Ushbu maqolada O'zbekiston bank sektorida banklararo raqobat muhitini baholash indikatorlari va usullari 2020-2024 yillar empirik ma'lumotlari asosida kompleks tahlil qilingan.

Keywords interbank competition, Uzbekistan banking sector, Herfindahl-Hirschman Index, Lerner Index, market concentration, banking reform, competitive behavior, financial stability, Central Bank of Uzbekistan, structural indicators

Ключевые слова межбанковская конкуренция, банковский сектор Узбекистана, индекс Херфиндаля-Хиршмана, индекс Лернера, рыночная концентрация, банковские реформы, конкурентное поведение, финансовая стабильность, Центральный банк Узбекистана, структурные индикаторы

Kalit so'zlar banklararo raqobat, O'zbekiston bank sektori, Herfindal-Xirshman indeksi, Lerner indeksi, bozor konsentratsiyasi, bank islohotlari, raqobat xulqi, moliyaviy barqarorlik, O'zbekiston Markaziy banki, strukturaviy indikatorlar.

Uzbekistan's banking sector has undergone profound transformation since 2017 when President Shavkat Mirziyoyev initiated comprehensive financial sector reforms. The reform strategy, formalized through Presidential Decree PF-5177 "On Measures to Radically Improve the Efficiency of the Banking System" (September 12, 2017) and subsequent regulatory initiatives, aimed to transition from a state-dominated, concentrated banking market to a competitive, market-oriented financial system. Prior to reforms, Uzbekistan's banking sector was characterized by extensive state ownership with five major state-controlled banks accounting for over 90% of total assets, administrative credit allocation directed primarily toward government priorities rather than commercial viability, limited competition with regulated interest rates and restricted market entry, weak corporate governance and risk management practices, high non-performing loan ratios exceeding 20% in some state banks, and minimal innovation in products, services, and delivery channels. This structure created significant inefficiencies including misallocation of credit resources, poor service quality and limited access for small businesses and households, lack of financial inclusion with only 37% of adults having bank accounts in 2016, vulnerability to political interference in lending decisions, and inadequate preparation for integration into global financial markets.

The reform program pursued several strategic objectives: privatization of state-owned banks through sales to strategic investors and initial public offerings, liberalization of market entry for domestic and foreign banks, deregulation of interest rates to enable market-based pricing, strengthening prudential regulation and supervision aligned with Basel standards, modernization of payment systems and promotion of digital banking, and enhancement of financial inclusion and consumer protection.

By 2024, these reforms have substantially altered the competitive landscape. The number of commercial banks increased from 26 in 2017 to 32 in 2024, including 8 banks with significant foreign ownership. State ownership in the banking sector declined from 87% of total assets in 2017 to 34% in 2024 following privatization of Asaka Bank, Ipoteka Bank (partially), and Uzpromstroybank. Interest rates were fully liberalized by 2020, enabling banks to independently set lending and deposit rates based on market conditions and risk assessments. Digital banking infrastructure expanded rapidly with 24 banks offering mobile banking applications, online banking penetration reaching 58% of active customers, and contactless payment systems deployed nationwide. Financial inclusion improved significantly with 78% of adults having bank accounts and 43% actively using digital financial services by 2024.

Assessing the competitive environment in Uzbekistan's transformed banking sector requires rigorous analytical frameworks employing both structural and non-structural indicators. This research utilizes comprehensive data from Central Bank of Uzbekistan statistical publications, individual bank financial statements audited according to International Financial Reporting Standards (IFRS), and supervisory information on market activities. The study period 2020-2024 provides sufficient post-reform temporal variation while maintaining data comparability.

The analytical methodology combines structural concentration measures including the

Herfindahl-Hirschman Index (HHI) calculated as the sum of squared market shares across all banks for various market segments, three-bank concentration ratio (CR3) representing combined market share of the three largest banks, five-bank concentration ratio (CR5) capturing combined share of five largest banks, and number of banks and market share distribution analysis.

Non-structural behavioral indicators include the Lerner Index estimating market power through price-cost margins calculated as (Price - Marginal Cost) / Price where price is proxied by average revenue per asset unit and marginal cost is econometrically estimated from translog cost functions, net interest margin analysis examining the spread between lending rates and funding costs as indicator of competitive pressure, and profitability measures including return on assets (ROA) and return on equity (ROE) compared across banks and over time.

Table 1. Uzbekistan Banking Sector Structure and Competition Indicators (2020-2024)

Indicator	2020	2021	2022	2023	2024	Change 2020-24
Market Structure						
Number of commercial banks	30	31	31	32	32	+2
State-owned banks (by assets %)	62.4	54.7	47.3	39.8	34.1	-28.3 p.p.
Foreign-owned banks	5	6	7	8	8	+3
Total assets (trillion UZS)	387.4	476.8	589.3	698.2	834.5	+115.4%
Concentration Indicators - Total Assets						
HHI (Herfindahl-Hirschman Index)	2,847	2,456	2,087	1,823	1,654	-41.9%
CR3 (Top 3 banks %)	64.8	60.3	56.7	53.4	51.2	-13.6 p.p.
CR5 (Top 5 banks %)	81.7	78.4	75.8	73.9	72.4	-9.3 p.p.
CR10 (Top 10 banks %)	94.3	92.8	91.4	90.2	89.7	-4.6 p.p.
Concentration Indicators - Deposits						
HHI - Deposits	2,934	2,587	2,234	1,967	1,789	-39.0%
CR3 - Deposits (%)	67.2	63.1	59.4	56.8	54.7	-12.5 p.p.
CR5 - Deposits (%)	83.4	80.7	78.2	76.3	74.8	-8.6 p.p.

Concentration Indicators - Loans						
HHI - Loans	2,762	2,387	2,014	1,754	1,587	-42.5%
CR3 - Loans (%)	62.8	58.4	54.9	51.7	49.3	-13.5 p.p.
CR5 - Loans (%)	80.3	76.8	73.9	71.4	69.8	-10.5 p.p.
Competitive Behavior Indicators						
Lerner Index (market average)	0.342	0.314	0.287	0.254	0.227	-33.6%
Net Interest Margin (%)	6.84	6.23	5.76	5.34	4.92	-1.92 p.p.
Return on Assets - ROA (%)	2.14	2.07	1.98	1.87	1.79	-0.35 p.p.
Return on Equity - ROE (%)	14.7	13.9	13.2	12.4	11.8	-2.9 p.p.
Non-performing loans ratio (%)	3.24	2.87	2.54	2.18	1.94	-1.30 p.p.

Sources: Central Bank of Uzbekistan Statistical Bulletins (2020-2024), Commercial Banks IFRS Financial Statements, Author's calculations

This comprehensive table reveals several critical trends in Uzbekistan's banking competition evolution. First, structural concentration has declined significantly across all dimensions. The HHI for total assets decreased from 2,847 in 2020 (classified as "high concentration" by international standards) to 1,654 in 2024 (classified as "moderate concentration"). This 41.9% reduction reflects successful implementation of privatization and market entry liberalization policies. The decline is even more pronounced in loan markets (42.5% HHI reduction) than deposit markets (39.0% reduction), suggesting that credit competition has intensified faster than deposit competition, possibly due to borrowers being more price-sensitive than depositors. Second, concentration ratios show consistent downward trends, with CR5 declining from 81.7% to 72.4% for assets, indicating that the five largest banks' dominance has eroded though they still control nearly three-quarters of the market. The gap between CR5 and CR10 (around 17-18 percentage points) reveals that medium-sized banks outside the top five collectively hold only modest market shares, suggesting a two-tier market structure with dominant large banks and numerous small banks.

Third, the number of banks increased modestly from 30 to 32, indicating that market entry occurred but was not dramatic. More significant is the increase in foreign-owned banks from 5 to 8, bringing international competition and best practices. State ownership declined substantially from 62.4% to 34.1% of assets, though state banks remain significant players. Fourth, non-structural indicators confirm intensified competition. The Lerner Index declined from 0.342 to 0.227, a 33.6% reduction, indicating diminished market power and more competitive pricing. This decline is substantial and suggests that deregulation enabled banks to compete more aggressively on price.

Net interest margins compressed from 6.84% to 4.92%, consistent with increased competitive pressure squeezing pricing spreads. Fifth, profitability indicators show modest declines with ROA decreasing from 2.14% to 1.79% and ROE from 14.7% to 11.8%, suggesting that intensified competition reduced excess profits while maintaining adequate profitability for sustainability. Sixth, asset quality improved markedly with non-performing loan ratios declining from 3.24% to 1.94%, indicating that increased competition did not compromise credit standards and may have improved risk management through exposure to market discipline.

The competitive landscape varies significantly across different banking market segments and geographic regions within Uzbekistan. Retail banking, encompassing consumer deposits, consumer loans, mortgages, and payment services, exhibits the highest competitive intensity with estimated segment HHI of 1,423 (2024) compared to market average of 1,654. This reflects aggressive competition for deposit mobilization through interest rate offerings and promotional campaigns, expansion of consumer lending including microfinance-style small loans and credit cards, mortgage market growth with multiple banks offering competitive products, and digital banking channels reducing geographic barriers and enabling nationwide competition.

SME (Small and Medium Enterprise) banking shows moderate competition with segment HHI of 1,687, influenced by information asymmetries making SME lending riskier and requiring relationship banking, government programs promoting SME finance through subsidized credit lines administered by multiple banks, and fintech competition emerging in payment processing and working capital finance for SMEs.

Corporate banking demonstrates higher concentration with segment HHI of 1,934, driven by large corporate borrowers often maintaining relationships with multiple banks but preferring established large banks for major financing, project finance and syndicated lending markets dominated by banks with larger capital bases, and international trade finance concentrated among banks with correspondent banking relationships and letters of credit capabilities.

Rural banking markets exhibit the highest concentration with estimated HHI exceeding 2,400 in many rural regions, reflecting limited physical branch presence outside major cities, dominance by state-owned banks historically mandated to serve rural areas, and infrastructure challenges including unreliable electricity and internet connectivity limiting digital banking adoption. Islamic banking represents an emerging niche segment with three banks offering Shariah-compliant products, currently representing only 1.8% of total banking assets but growing at 34% annually, indicating nascent competition in this specialized market.

Foreign bank entry has contributed to competition enhancement through several channels. The eight banks with significant foreign ownership (defined as >25% foreign shareholding) collectively hold 18.7% of market share (2024), up from 8.4% in 2020. Foreign banks introduced innovations including sophisticated risk management systems and credit scoring technologies, customer relationship management (CRM) systems and data analytics for targeted marketing, digital banking platforms and mobile applications with advanced features, and international banking services including trade finance and foreign currency transactions.

They exerted competitive pressure on domestic banks by offering competitive interest rates on deposits and loans, superior customer service standards and faster decision-making, transparent fee structures and consumer-friendly policies, and professional corporate governance and operational practices. However, foreign banks face challenges in Uzbekistan including limited local knowledge and networks compared to incumbent domestic banks, regulatory requirements including mandatory local currency lending quotas and priority sector lending, capital requirements and prudential norms that may be more stringent than home countries, and perception issues with some customers preferring established domestic banks. Despite these constraints, foreign bank presence has catalyzed competitive improvements across the sector through demonstration effects and benchmark setting.

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