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## Article

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# Regulation and innovation in digital finance: The transformation of Latvia's banking sector

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## ABSTRACT

The Latvian banking sector presents a policy and institutional puzzle: it maintains high loan interest rates despite low loan-to-deposit ratios and limited lending activity within the European Union. Anchored in credit rationing theory, this study investigates the institutional, regulatory, and technological factors influencing credit allocation. The examination is based on semi-structured interviews conducted with 29 senior experts and decision-makers from regulatory authorities, government ministries, and commercial banks, all of whom play a direct role in influencing Latvia's financial sector. Thematic analysis reveals constraints associated with regulatory-induced risk aversion, structural barriers to lending, borrower opaqueness and informality, the role of the state in facilitating lending, fintech integration challenges, and banking sector transformation. The findings demonstrate how compliance-driven institutional behavior, limited competition, and information asymmetries contribute to restricted lending. This study contributes to digital finance literature by showing how regulatory frameworks and institutional context in small EU economies influence the diffusion of financial innovation and credit access.

## 1. Introduction

In 2022 and 2023, European central banks increased interest rates in response to the continent's growing inflation (European Central Bank, 2024b). This policy shift created challenges for bank loan portfolios. Banks with large fixed-rate portfolios faced profitability pressures due to rising funding costs, while those with variable-rate loans faced increased default risks as borrowers struggled with higher repayments (Ely et al., 2022). Additionally, interest rate hikes encouraged depositors to seek alternatives—such as money market funds or cryptocurrencies—especially where banks were slow to raise savings rates. This created potential liquidity risks, possibly forcing banks to liquidate assets at a loss.

While these pressures were felt across Europe, their effects have varied by country. In Latvia, a persistent puzzle has drawn attention: despite a low loan-to-deposit ratio—indicating excess liquidity—the country maintains high interest rates and low loan issuance relative to the EU average (European Central Bank, 2024a). This pattern, also visible in Lithuania and Estonia but more pronounced in Latvia (Rupeika-Apoga et al., 2020), raises questions about the underlying

drivers of credit supply constraints.

Latvia's financial sector, though regionally aligned with its Baltic neighbors, has followed a distinct trajectory since joining the EU in 2004 and the Eurozone in 2014. Once a hub for non-resident banking, it underwent deep structural reform following the 2018 closure of ABLV Bank, which triggered one of the EU's strictest AML regimes (Gise-Sproge et al., 2021; Moneyval, 2019). Today, the sector is shaped by a small number of dominant banks, strict compliance requirements, and limited competition. Unlike Estonia's digital openness or Lithuania's fintech growth, Latvia remains constrained by its legacy of compliance, low credit penetration, and a persistent shadow economy (Sauka & Putnins, 2024). These conditions make Latvia a revealing case for studying how regulatory intensity and institutional behavior affect credit availability in small EU economies.

While the analysis includes regional insights, the study focuses on Latvia, where lending constraints are most acute. It addresses two research questions:

- RQ1: What are the primary reasons for Latvian banks' low loan volumes?  
RQ2: What structural, technological, or policy trends are shaping the future of Latvia's banking sector?

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To explore these questions, the study applies credit rationing theory (Stiglitz & Weiss, 1981), which explains how lenders limit credit access due to informational asymmetries, adverse selection risk, and moral hazard—factors that are magnified in highly regulated or opaque environments. The combination of financial system concentration, borrower opaqueness, and compliance pressure in Latvia is a prime example of these dynamics.

Methodologically, the study draws on qualitative data from 29 semi-structured expert interviews conducted between January and June 2024. Participants include representatives from Latvia's central bank, commercial banks, ministries, academia, and consumer organizations. The findings offer a system-wide view of how institutional, regulatory, and behavioral forces intersect to shape credit allocation.

This study contributes to the literature on banking sector adaptation and financial innovation in small EU economies in three key ways.

First, while previous research has examined lending constraints during periods of rising interest rates (Cenzon & Szabó, 2024; Rigbi, 2012), this study provides a detailed institutional analysis of Latvia's specific case—characterized by high loan interest rates, low credit issuance, and excess deposits.

Second, it introduces an expert-informed, qualitative perspective in a field largely dominated by quantitative approaches to financial sector analysis (Adão et al., 2022; Chowdhury et al., 2024; Koch & Islam, 2024).

Third, by applying and extending credit rationing theory (CRT), the study offers a theoretical contribution by demonstrating how regulatory intensity, shadow economy activity, and compliance burdens jointly reinforce risk-averse lending. This adaptation of CRT helps explain credit rationing in small, highly regulated economies and informs policy design in comparable EU contexts.

The next chapter delves into a comprehensive literature review, while Chapter 3 describes the research methodology, including the qualitative and data analysis methods. Chapter 4 summarizes the thematic analysis findings, while Chapter 5 interprets the findings and their implications. Finally, Chapter 6 summarizes the study's key findings and future research directions.

## 2. Literature review

This study is guided by two core research questions:

(RQ1) What are the primary reasons for Latvian banks' low loan volumes?

(RQ2) What structural, technological, or policy trends are shaping the future of Latvia's banking sector?

To address these questions, several theoretical frameworks may be considered, each offering valuable insights into credit allocation, banking behavior, and sectoral transformation. Some of these frameworks are particularly relevant for understanding the structural constraints underlying RQ1, while others contribute more directly to the analysis of evolving institutional and technological dynamics associated with RQ2.

For RQ1, explanatory strength can be found in bank competition and market power theories, which argue that limited competition reduces incentives to serve higher-risk or marginal borrowers. Bank competition and market power theories have their roots in industrial organization, particularly in the work of Chamberlin (1933) on monopolistic competition and Bain (1956) on market concentration. These ideas were later adapted to the banking sector, with modern empirical applications developed by Claessens and Laeven (2004) and Beck et al. (2004), who demonstrated that reduced competition may limit access to credit and raise lending margins. This is particularly relevant in Latvia, where the banking sector is dominated by a small number of universal banks (Bukovskis, 2022).

Risk-based pricing theory offers another partial explanation. According to this model, banks price loans to reflect borrower risk in order to preserve profitability (Strahan, 1999). However, in environments

with poor financial disclosure, informal accounting practices, or weak enforcement mechanisms, risk is difficult to observe and price accurately. In such cases, higher interest rates may exacerbate adverse selection and moral hazard, leading to lower lending volumes (Stiglitz & Greenwald, 2003). In the Latvian context, where borrower documentation is often incomplete and many small businesses operate informally, these theoretical limitations are especially pronounced—making risk-based pricing less effective and pushing lenders toward more exclusionary credit practices (Konovalova & Savchina, 2022).

Institutional theory provides a broader framework, emphasizing how formal rules (e.g., regulatory frameworks, legal protections) and informal norms (e.g., trust, financial culture, compliance conservatism) shape market behavior (North, 1990). Applied to financial systems, institutional theory highlights why lending outcomes may vary across countries, even within a harmonized monetary union (Beck & Levine, 2008; Laeven & Levine, 2009). Latvia's regulatory tightening after the 2018 ABLV Bank collapse, its legacy of non-resident banking, and its large shadow economy make institutional factors particularly salient (Fedotova, 2020).

In the case of RQ2, theories related to regulatory innovation and technological change—including open innovation theory (Chesbrough, 2019) and regulatory sandbox frameworks (Zetzsche et al., 2017)—help explain how structural reforms and emerging technologies may reshape the future of banking. Empirical evidence supports these frameworks: Xu et al. (2025) show that while fintech adoption can improve bank performance, its transformative effects often depend on regulatory adaptability and institutional openness. Similarly, Felipe et al. (2025) demonstrate how Industry 4.0 technologies are reconfiguring operational models in commercial banks but also note that internal capabilities and policy support remain critical to sustaining impact. Yet, in many contexts, digital transformation can also exacerbate exclusion: Martínez De Ibarreta et al. (2025) document how branch closures and digital barriers have undermined financial inclusion in Spain, especially among vulnerable groups.

These international findings resonate with the Latvian case. Despite active promotion of digital finance and fintech ecosystems, firms in Latvia face the same AML and compliance burdens as incumbent banks, which restricts their operational agility and reach (Saksonova & Pivroviča, 2025). The potential of digital innovation to expand access to credit remains constrained by the broader institutional environment, echoing patterns observed across similarly regulated EU economies.

However, rather than treating these theories as discrete or mutually exclusive, this study integrates them through the lens of credit rationing theory (CRT). Originally developed by Stiglitz and Weiss (1981), CRT provides a unifying framework that captures the interaction between borrower opacity, institutional conservatism, and financial risk aversion—making it particularly well-suited to examine both the present lending constraints (RQ1) and the institutional and technological shifts that may shape the future of the banking sector (RQ2).

CRT explains why lenders may rationally restrict credit, even when liquidity is ample, due to concerns about adverse selection and moral hazard. When borrower information is asymmetric and difficult to verify, raising interest rates can drive away lower-risk clients and attract those more likely to default. As a result, banks may prefer to limit loan issuance altogether, especially when institutional penalties for risk-taking are high. This mechanism has been widely validated in empirical studies across post-crisis, transitional, and developing economies. Beck et al. (2005) found that credit rationing is more pronounced in countries with weak legal enforcement and limited financial transparency. Temesvary and Banai (2017) demonstrate that banks across Central and Eastern Europe, despite having sufficient capital, curtailed lending to opaque borrowers following the global financial crisis. Siciliani (2020) further shows that post-crisis regulatory tightening in Southern Europe produced a banking culture of excessive risk aversion.

Latvia exhibits many of the conditions where CRT applies with particular force. Despite being well-capitalized and highly liquid,

Latvian banks maintain low loan-to-deposit ratios and some of the highest interest rates in the Eurozone. These outcomes are shaped by persistent structural factors: a large informal economy (Sauka & Putnins, 2024), low financial literacy, and a highly conservative regulatory environment following the ABLV Bank closure and subsequent AML reforms (Saksonova & Rožina, 2025). In such an environment, banks face strong institutional and reputational disincentives to lend to borrowers without impeccable documentation or collateral, even when credit demand exists. Extensions of CRT have incorporated these institutional dynamics, showing how compliance burdens, market structure, and policy signaling reinforce risk-averse lending behavior (Dell'Araccia & Marquez, 2004).

Accordingly, this study adopts CRT as its central theoretical framework for RQ1 and extends it to interpret sectoral change under RQ2. While insights from institutional theory and innovation scholarship support the analysis of regulatory reform and technological evolution, CRT offers the most coherent foundation for understanding both the entrenched barriers to credit access and the mechanisms through which they may be challenged.

Although Latvia's credit constraints have received attention in earlier research, existing studies are largely descriptive or based on quantitative analysis. To our knowledge, no prior studies apply credit rationing theory or adopt a qualitative, system-level approach to this topic. Rupeika-Apoga and Solovjova (2016) examine the barriers facing SMEs in Latvia, citing borrower informality, weak documentation, and financial illiteracy as key constraints—factors that align with CRT assumptions but are not interpreted through that lens. Tiutiunyk et al. (2022) document the scale and resilience of Latvia's shadow economy and its impact on formal credit markets, yet do not explicitly interpret these findings through the lens of CRT.

Research on post-2018 regulatory change (e.g., Gise-Sproģe et al., 2021; Krastiņš, 2023) focuses on Latvia's AML reforms and the resulting compliance burden for banks. These studies offer important descriptive context but do not theorize the behavioral consequences of risk-averse regulation on lending practices. Nor do they systematically examine how structural conditions—such as market concentration, borrower opacity, and policy conservatism—interact to produce credit rationing as a systemic outcome.

Despite existing research on Latvia's regulatory framework, shadow economy, and SME lending environment, there is limited engagement with these issues from a credit rationing perspective. By situating Latvia within this theoretical framework, the present study builds on and complements prior findings while offering a distinct interpretive lens on institutional credit constraints.

### 3. Methodology

#### 3.1. Study design

This study employs a qualitative research methodology to examine the structural, regulatory, and institutional factors contributing to limited credit issuance in Latvia and to explore the key trends shaping the future development of the country's banking sector. Given the complexity of these issues, qualitative inquiry allowed for an in-depth exploration of expert perspectives and institutional practices that are not readily accessible through quantitative methods (Beaudry & Miller, 2016).

Semi-structured interviews were selected for three primary reasons. First, this format enabled researchers to explore unanticipated issues that emerged during discussions—particularly useful for examining the dynamic relationships among regulation, competition, and credit allocation (Thomas & Harden, 2008). Second, it facilitated the collection of detailed, experience-based responses grounded in participants' professional roles (Merriam & Tisdell, 2016). Third, it allowed the interview protocol to be tailored to participants' institutional positions, enhancing relevance and depth (Rubin & Rubin, 2005).

The interview guide was developed collaboratively and iteratively, based on a literature-informed framework and refined through expert consultation (see Section 3.2).

Interview data were analyzed using Braun and Clarke (2006) six-phase thematic analysis process. To ensure the credibility and trustworthiness of the findings, multiple validation strategies were employed. An expert consultation group—comprising one representative from the banking regulator, two commercial-bank CEOs, and one representative from the Latvian Association of Economists—contributed to refining the interview guide and later reviewed preliminary coding decisions. Additional validation measures, including member checking and triangulation through focus groups and sectoral forums, are detailed in Section 3.5 (Validation).

#### 3.2. Interview guide development

The interview guide was developed through an iterative process informed by a focused literature review on banking competition, lending behavior, and institutional credit constraints in small EU economies. Initial drafts of the guide concentrated on concrete proposals to improve credit access—such as the potential impact of new commercial banks, the establishment of a state-owned bank, and simplification of account-opening procedures. These early questions used Likert-scale formats to assess the perceived effectiveness of various interventions.

Following a series of consultations with the expert group, the guide was substantially revised. The group emphasized that predefined solutions would yield limited insights and recommended reorienting the guide toward structural and institutional drivers of credit constraints. As a result, Likert items were replaced by open-ended questions designed to elicit deeper reflections on the competitive environment, regulatory behavior, borrower characteristics, and the evolving structure of the banking sector. These revisions ensured the guide captured both demand- and supply-side dimensions of the credit environment.

The final guide covered six areas: (i) competition and market concentration; (ii) institutional and regulatory barriers; (iii) borrower transparency and formality; (iv) fintech and digital transformation; (v) regional disparities in credit access; and (vi) expectations for future sector developments. Other relevant topics—such as monetary policy, bank profitability, and customer behavior—were intentionally excluded to keep the focus on institutional-level explanations, in line with credit rationing theory.

To ensure relevance and transparency, the guide was designed to align with the general principles of the CHERRIES framework (Syed et al., 2021), including clear inclusion criteria, consistency in question flow, and adaptation to participants' professional roles. The final version was reviewed and endorsed by the Latvian Association of Economists.

Interviews were conducted between January and June 2024, with scheduling shaped by participant availability—particularly among senior professionals whose institutional responsibilities required advance planning. Each interview lasted approximately one hour. The final interview guide, including the full question set, is provided in Appendix A.

#### 3.3. Sampling and participants

A purposive, judgment-based sampling strategy was used to select participants with specialized knowledge relevant to the Latvian banking sector. This approach is appropriate for qualitative research where depth of insight, rather than generalizability, is the priority (Creswell, 2009). To ensure broad sectoral coverage, participants were drawn from regulatory, commercial, policy, consumer, legal, and academic perspectives.

Inclusion criteria required that participants held a strategic, regulatory, or decision-making role within the Latvian banking sector or closely related areas and had significant recent professional experience (within the past five years) relevant to credit policy, banking operations,

or financial regulation.

Exclusion criteria applied to individuals without substantial recent involvement in the sector; persons engaged in unresolved legal disputes that could bias or constrain their responses; and participants whose perspectives duplicated others without offering additional insight.

The interview timeline extended from January to June 2024, with ongoing assessment of data saturation. Saturation was tracked through two mechanisms:

1. **Thematic monitoring:** after each interview, data were coded and compared against the developing thematic structure, with interviews discontinued once several consecutive sessions yielded no new codes or themes.
2. **Memo repetition:** interview summaries were reviewed for new conceptual contributions, and saturation was confirmed when these memos consistently reiterated previously established patterns.

At saturation, the final sample comprised 29 participants from across the Latvian banking ecosystem. Appendix B lists these individuals by role category and provides anonymized identifiers used for quote attribution in the Results section.

### 3.4. Data analysis

The interview data were analyzed using the six-phase thematic analysis process described by Braun and Clarke (2006). Below, each phase is described along with how it was implemented in this study.

#### *Phase 1: Familiarization with the Data*

Following ethical requirements and participant preferences—particularly those of senior commercial-bank executives—audio recordings were not used. Many participants expressed concerns about the potential reputational risks associated with the release or misinterpretation of sensitive information in public forums or social media. Some were categorically unwilling to participate if recordings were made. To ensure consistency across all cases, the research team applied a standard non-recording protocol.

Instead, detailed field notes were taken by the researchers and members of the expert consultation group during each session. These were reviewed immediately after each interview and consolidated in a shared spreadsheet, which then served as the master dataset. Familiarization was further supported through repeated reading of the consolidated notes and post-interview memo writing to capture preliminary reflections and emerging patterns. Each participant was assigned a unique role-based identifier (e.g., B1: Bank CEO, R2: Regulator) as listed in Appendix B, ensuring traceability while protecting anonymity.

#### *Phase 2: Generating Initial Codes*

Initial coding was conducted inductively. Each researcher independently reviewed the consolidated interview notes and applied descriptive codes to text segments that captured relevant information. Codes were entered and tracked in the shared Excel sheet. The team held comparison sessions to discuss the coding structure, resolve discrepancies, and group related codes. This process resulted in a preliminary list of 32 codes. Given the focused scope of the study and the relatively homogenous professional background of participants, this number was sufficient to capture the key patterns across the dataset. This process produced a preliminary set of 32 codes, which was refined through discussion and checked against incoming data until no new codes emerged.

#### *Phase 3: Searching for Themes*

The research team examined the set of codes to identify patterns and organize them into potential themes. Related codes were clustered together and labeled as candidate themes. For example, compliance costs, regulatory complexity, and supervisory burden were grouped under “Regulatory Constraints.”

#### *Phase 4: Reviewing Themes*

The initial candidate themes were reviewed against the full dataset

to assess coherence, distinctiveness, and alignment with the research questions. This led to merging or reframing some themes and discarding others that were too descriptive or overlapping. For example, the initial themes “Fintech Challenges” and “Neobank Market Entry” were merged and reframed as Fintech Integration Challenges, while content previously grouped under “Future Outlook” was distributed among more analytically grounded themes.

#### *Phase 5: Defining and Naming Themes*

The review process resulted in six final themes: (i) Regulatory-Induced Risk Aversion (RQ1), (ii) Structural Barriers to Lending (RQ1), (iii) Borrower Opacity and Informality (RQ1), (iv) The Role of the State in Facilitating Lending (RQ1 and RQ2), (v) Fintech Integration Challenges (RQ2), and (vi) Banking Sector Transformation (RQ2). A complete code–theme list is provided in Appendix C.

#### *Phase 6: Producing the Report*

The final set of themes was used to structure the results section of the manuscript. Each is presented in its own subsection, supported by paraphrased evidence from the interview notes and attributed to anonymized participant codes from Appendix B. Links between themes and the research questions are shown in Fig. 1, with full thematic mappings in Appendix C.

### 3.5. Validation

Validation procedures were built into multiple stages of the study to enhance credibility and ensure alignment between the analysis and sector realities.

**Expert Consultation:** The expert consultation group contributed at several stages of the study. During the early phases, the group advised on the design of the interview guide (see Section 3.2). They also reviewed the preliminary code structure and provided feedback on emerging themes. This iterative involvement ensured that the evolving analysis stayed relevant to institutional contexts and addressed systemic rather than isolated issues.

**Member Checking:** After interviews were completed and themes were developed, participants were given the opportunity to review a summary of the aggregated findings. Their comments were used to confirm the interpretive accuracy of the themes and clarify aspects where needed. This process allowed corrections of potential misinterpretations without compromising analytic independence.

**Triangulation:** findings were cross-validated through two additional forums. First, preliminary results were presented to a focus group organized by the Latvian Association of Economists, involving approximately 20 professionals from the financial ecosystem. Second, the refined findings were discussed during a public panel forum on future developments in Latvia’s banking sector. Feedback from both settings supported the resonance and applicability of the themes beyond the original interview set.

**Memoing and Audit Trail:** Throughout the data collection and analysis process, researchers maintained an audit trail of coding decisions, theme revisions, and interpretive notes. Post-interview memos captured emerging patterns and conceptual shifts, providing a transparent record of the analytic process.

### 3.6. Ethical research practices

All participants were provided with clear information about the study’s purpose, procedures, and their rights prior to the interview. Verbal informed consent was obtained after explaining the voluntary nature of participation, confidentiality measures, and intended data use. In accordance with ethical norms and participant preferences—particularly among senior financial-sector representatives—interviews were not audio-recorded. This approach and its implications are outlined in Section 3.4.

Participants were informed that they could withdraw at any point without penalty. All data were stored on secure, access-controlled

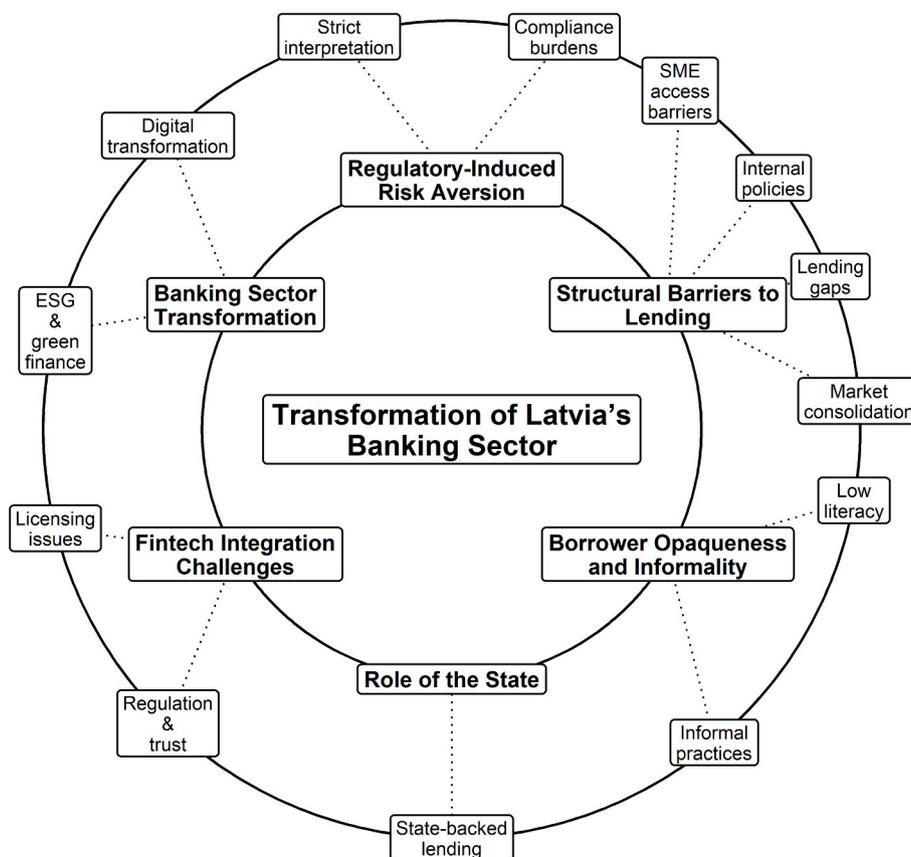


Fig. 1. Thematic map of final themes and codes. Source: Created by the authors based on thematic analysis results.

systems and handled in compliance with applicable data protection regulations.

#### 4. Results

This section presents the findings from 29 expert interviews using thematic analysis. The six first-layer themes reflect participants' perspectives on the two research questions, and the second layer contains the associated short-label codes (Fig. 1). Full code descriptions are provided in Appendix C (Codebook).

##### 4.1. Regulatory-induced risk aversion (RQ1)

Experts described Latvia's *compliance burdens* as a primary factor discouraging risk-taking in lending. *Regulatory fear*, particularly post-ABLV, has made banks highly conservative. One risk officer (B5) noted, "The fear of misinterpretation of AML rules makes banks say 'no' to borderline cases even if they are potentially good clients." A regulator (R1) stated, "Our goal was to clean the sector, but perhaps the pendulum swung too far."

This *regulatory-induced risk aversion* is not merely procedural but embedded in institutional culture. *Strict regulatory interpretation limiting risk appetite* leads to what some experts described as a "zero-fault" approach. This, in turn, discourages even moderate lending experimentation.

Bank and regulator participants (e.g., B5, R1) described cases in which SMEs seeking moderate working capital passed basic profitability and liquidity checks but were downgraded because bank risk models still weighted variables from the 2008–2009 global financial crisis. In addition, a portion of the firm's exports went to non-EU countries in the former Soviet Union (excluding Lithuania and Estonia), which triggered *compliance burdens*. Faced with potential compliance risk and

reputational exposure, the application was declined despite otherwise solid fundamentals.

This *regulatory-induced risk aversion* directly links to *structural barriers to lending* in the market, as discussed in the following section, where reduced competition leaves few incentives to challenge prevailing risk norms.

##### 4.2. Structural barriers to lending (RQ1)

Latvia's small market and *market consolidation* were consistently highlighted as *structural barriers to lending*. According to a bank executive (B1), "The market is really sized for maybe three or four universal banks; if the economy grows, more players could find a place." Experts noted that while *market consolidation* can be a rational outcome in a small economy, it also reduces consumer choice and can limit competition in certain segments.

An official from the Ministry of Economics (G2) explained, "SMEs in rural areas often face higher rejection rates. It's not because they're unviable, but because no bank has an incentive to create tailored products for them." Commercial banks echoed this, noting that lending to SMEs requires local insight and can be hindered by *SME loan access barriers* such as high servicing costs and a lack of tailored products.

Bank executives and policy makers (e.g., B1, G2) noted that firms in rural areas are often effectively excluded from loan consideration because lending policies focus on large cities and a limited radius around the capital. For applicants located well beyond this zone, credit assessments are handled by centralised units with little local market knowledge and high projected servicing costs. One participant observed that construction and development expenses outside Riga can match — or even exceed — those in the capital, partly because skilled workers have relocated to larger cities or abroad. In such cases, distance from banking hubs combines with uniform risk models to produce rejections, even for

otherwise viable projects.

These *structural barriers to lending* not only limit market reach but also amplify borrower-side challenges, such as *informal business practices* and *unregistered income*, compounding the difficulty of expanding credit access.

#### 4.3. Borrower opaqueness and informality (RQ1)

Many interviewees cited *informal business practices* and *unregistered income* as barriers to loan approval. A consumer advocate (C6) noted, “You can’t approve a loan when the income is informal and documents are improvised.” The informality is often rooted in tax avoidance and underreporting, especially in the SME sector.

Academic participants linked these issues to *poor financial literacy* and *weak documentation*. One finance professor (A2) explained, “Business owners lack training in balance sheet management and strategic borrowing. That makes credit assessment almost impossible.”

Bank and regulator participants (e.g., B4, R2) described the common Latvian practice of creating groups of limited-liability companies under a single owner. This structure allows the owner to limit personal loss in the event of bankruptcy — only one company fails while others remain active — and is often viewed as a prudent risk management strategy by entrepreneurs. However, banks frequently treat such arrangements as a sign of elevated credit risk, because the applicant company’s financial indicators may not reflect the owner’s overall liabilities. As a result, even firms with strong standalone performance can face rejection if their ownership structure signals potential opacity or risk shifting.

These *borrower opaqueness and informality* patterns intersect with the structural barriers to lending identified earlier, reinforcing a cycle in which both supply- and demand-side constraints shape credit outcomes.

#### 4.4. The role of the state in facilitating lending (RQ1 & RQ2)

All participants were asked about potential *state bank proposals*. The idea of creating a state-owned commercial bank was uniformly rejected. A senior official (G1) emphasized, “The cost and risk profile make no sense. A state bank wouldn’t escape regulation and might attract only high-risk clients.”

Instead, participants consistently praised *Altum*, Latvia’s development finance institution, as a successful example of *state-backed lending*. An economist (B6) stated, “Altum fills a critical gap. Their guarantees help us take on clients we’d otherwise avoid.” Another participant (C9) noted, “Altum is particularly important outside Riga, where commercial banks have little interest.”

In practice, this often means young families or rural households can secure financing for home purchase or renovation only with *Altum* guarantees. In such cases, banks often declined applications outright due to low collateral values or location outside main urban lending zones. With *Altum* guarantees, these borrowers were able to secure loans that would otherwise be inaccessible. Interviewees highlighted that this form of *state-backed lending* not only enables individual projects but also sustains local construction and renovation activity in regions where private lenders remain reluctant to engage.

While *state-backed lending* through *Altum* can bridge gaps left by commercial banks, it operates within the same regulatory environment that shapes all market actors. This shared context is especially visible in the experience of fintech firms, whose innovations both respond to and are constrained by these institutional conditions.

#### 4.5. Fintech integration challenges (RQ2)

Experts were divided on whether fintech could meaningfully expand access to credit. Many pointed to *fintech licensing or scale-up challenges* and observed that fintech and neobanks face similar regulatory burdens to traditional banks, limiting their agility. A legal expert (L1) remarked, “The same AML rules apply, and that’s where many fintechs hit a wall.”

Others emphasized *regulation, trust, or monetization issues in fintech*. A commercial bank economist (B3) said, “Fintechs give free services, but you can’t scale if clients won’t pay. Without revenue, they can’t underwrite loans responsibly.”

Despite these constraints, fintechs were widely regarded as drivers of innovation. A *government advisor* (G2) stated, “Even if they don’t succeed directly, fintechs push banks to modernize.” One bank executive added that when a fintech offers a particularly promising technological or product solution, established banks often choose to acquire the company outright rather than compete with it. Such acquisitions, while preserving the innovation, may also limit the disruptive potential of fintech in expanding access to credit.

While fintech integration challenges continue to shape credit delivery and competition, they form part of a broader set of shifts — from *internet/mobile banking to ESG and sustainability expectations* — that are redefining strategic priorities in Latvia’s banking sector.

#### 4.6. Banking sector transformation (RQ2)

This theme encompasses *internet/mobile banking, digital transformation, ESG, green finance, sustainability expectations*, and geopolitical risk. Experts emphasized the rapid shift in customer expectations toward digital delivery. One digital banking specialist (B1) noted, “Our clients want everything mobile-first now. Physical branches are becoming obsolete.”

The sustainability agenda is also gaining momentum, particularly under EU regulatory pressure. A regulator (R2) stated, “Green finance is no longer optional. Banks must prepare to offer sustainable products.”

Several participants connected these trends to both geopolitical developments and demographic realities. A regional bank executive (B3) described how their institution accelerated investment in mobile infrastructure and green product lines after EU sustainability requirements coincided with geopolitical tensions that disrupted traditional cross-border banking relationships. At the same time, demographic shifts — particularly a shrinking and aging population — were prompting strategic reconsideration of branch networks and customer engagement models. As one academic (A3) reflected, “With a smaller, older customer base, banks will need to rethink not only product offerings but the entire service model.”

These *banking sector transformation* drivers intersect with earlier themes, as *internet/mobile banking, digital transformation and ESG, green finance, sustainability expectations* shape the design of future credit products and influence how regulatory, market, and borrower-related constraints play out in Latvia’s banking ecosystem.

## 5. Discussion

The findings address two core questions: why credit volumes in Latvia remain low (RQ1) and how structural and technological shifts may influence the banking sector’s development (RQ2). These dynamics reflect key elements of credit rationing theory, where lending is shaped less by capital availability and more by information asymmetries, risk perception, and institutional constraints.

Before turning to each theme in detail, it is important to note that certain findings—particularly regulatory-induced risk aversion and borrower opaqueness and informality—operate on multiple levels. In some cases, they appear as consequences of institutional or regulatory pressures; in others, they function as structural conditions that perpetuate the same constraints. Such recursive patterns, where outcomes evolve into enduring contextual factors, are well recognised in both qualitative institutional research and macro-financial modeling (Groot & Veneris, 2022; Stanca, 2023).

### 5.1. Regulatory-induced risk aversion

Within this multi-level perspective, *regulatory-induced risk aversion* —

encompassing both *compliance burdens*, *supervisory pressure*, or *fear of sanctions* and *strict regulatory interpretation limiting risk appetite*— plays a central role in shaping Latvia's cautious lending environment. The findings reveal that post-ABLV compliance reforms have fostered a risk-averse banking culture in which internal policies prioritize regulatory defensibility over credit expansion. This aligns with CRT, which posits that lenders, faced with uncertainty and imperfect borrower information, may limit credit access not due to capital constraints but to concerns about adverse selection and reputational risk (Stiglitz & Weiss, 1981).

Similar regulatory effects have been observed in other European contexts. Siciliani (2020) discusses how post-crisis prudential reforms can inadvertently suppress lending by shifting institutional priorities from credit evaluation to regulatory compliance. Basaran and Bagheri (2020) highlight that when trust in regulatory governance is fragile, institutions often respond by overcompensating in risk-avoidance strategies, particularly in small or transitional economies. Adão et al. (2022) also show that perceived risk magnification under stricter regulatory regimes leads to measurable contraction in banks' loan portfolios.

The Latvian case confirms these broader patterns. Several participants in this study—across regulatory, commercial, and policy domains—described an environment where *compliance burdens*, *supervisory pressure*, or *fear of sanctions* override financial judgment. For example, one commercial banker explained that even when an SME passed all profitability and liquidity checks, the transaction was declined because a small portion of exports went to non-EU markets deemed higher risk, triggering extensive due diligence requirements. In other instances, the effects reached beyond formal lending activities. Families and small businesses reported hesitancy to transfer money even between known parties, as market speculation suggested that unexplained or poorly documented payments could be grounds for banks to freeze accounts. A consumer advocate described cases where clients avoided receiving legitimate payments from relatives abroad for fear of account blocks. Whether objectively warranted or not, these perceptions created a climate in which both institutional and individual actors acted with extreme caution.

Validation findings reinforced this interpretation. During member checking and focus group sessions, both regulators and bank executives acknowledged that fear of misinterpreting anti-money laundering rules discourages lending, even when borrowers meet formal criteria. The thematic consistency across institutional roles — combined with examples of constrained routine transactions — suggests that *regulatory-induced risk aversion* has become a deeply embedded feature of Latvia's banking ecosystem, influencing not only credit allocation but also everyday financial behavior, and directly linking to *structural barriers to lending* discussed in the next section.

## 5.2. Structural barriers to lending

Latvia's limited credit supply is also shaped by *structural barriers to lending* — including *market consolidation or dominance by few banks*, *lending gaps*, *product inflexibility*, *lack of SME engagement*, *risk-averse internal lending policies*, and *SME loan access barriers*. These interconnected factors reduce both the incentives and the capacity for commercial banks to expand lending. Participants consistently pointed to market concentration, the small size of the domestic economy, and the absence of specialized credit products—especially for SMEs—as persistent obstacles. While these constraints are not unique to Latvia, their interaction with *regulatory-induced risk aversion* appears to amplify the effects of credit rationing.

Credit rationing theory typically focuses on borrower risk and information asymmetry, but its institutional extensions emphasize how market structure conditions influence bank behavior (Beyhaghi et al., 2020). In Latvia, the high level of *market consolidation* and the retreat of niche lenders have reduced the appetite for credit expansion, particularly in segments that require local knowledge or tailored products. This

dynamic supports findings by Abdesslem et al. (2023), who show that high market concentration can lower bank risk-taking and credit availability, particularly in environments with strong regulatory oversight—conditions consistent with the mechanisms described by CRT.

Several participants noted that banks' operational logic is shaped by economies of scale: the low profit potential of serving rural SMEs or non-standard borrowers makes conservative lending policies more likely. As one policymaker remarked, "If the return is low and the costs are high, why take on the extra risk?" This conservatism extends to product design. For example, multiple interviewees observed that no major bank in Latvia currently offers long-term fixed interest rate loans, despite clear client demand. Bank executives explained that such products are unnecessary from their perspective because there is no market norm for managing this form of interest rate risk. Consumer advocates, however, linked the absence of such offers to coordinated lobbying by the banking sector, arguing that the lack of choice leaves customers without options to hedge against future rate increases.

These findings align with Ferreira (2023), who emphasizes that in less competitive EU banking systems, low profitability and high fixed costs of credit assessment contribute to structurally limited lending capacity. Moreover, comparative studies on Baltic banking (Rupeika-Apoga et al., 2020) confirm that *market consolidation or dominance by few banks* is more pronounced in Latvia than in neighboring Estonia or Lithuania, further narrowing the diversity of lending models in the market.

Validation findings supported this interpretation. The expert group participants emphasized that Latvia's market cannot sustain a high number of full-service lenders. However, several also pointed to the potential of niche banks—an insight echoed by experts in Sweden and Lithuania, where smaller local banks have successfully filled gaps in underserved segments and regions where universal banks show limited interest. This suggests that *structural barriers to lending* are not immutable but can be addressed through targeted institutional design and policy measures, particularly those that also *reduce borrower opacity and informality*—the next theme in our analysis.

## 5.3. Borrower opacity and informality

Beyond institutional and market factors, credit constraints in Latvia are strongly shaped by *borrower opacity and informality* — particularly *informal business practices*, *cash flows*, *unregistered income* and *poor financial literacy*, *weak documentation*, *transparency gaps*. One consumer advocate (C6) described a rural carpenter whose business was profitable but almost entirely cash-based; despite clear local demand for his products, the absence of formal records meant his loan application never progressed past the initial screening.

This informality is far from an exception. It remains common for everyday services to operate almost exclusively in cash. Participants mentioned that even a hairdresser in central Riga, in business for more than a decade, tells customers there is a "technical problem" with card payments — a problem that has persisted for years. Similar practices are widespread among handymen and small car repair shops, where cash transactions are the norm. These arrangements keep operations outside formal reporting channels, but they also block borrowers from presenting verifiable income or transparent business accounts when applying for credit. In some cases, this reluctance to formalize transactions was reinforced by *regulatory-induced risk aversion*, as speculation in the market suggested that unexplained or poorly documented bank transfers — even between family members — could lead to account freezes. Some households and small businesses therefore preferred cash dealings to avoid perceived compliance scrutiny, deepening the very opacity that constrains their access to formal credit.

These observations align closely with the central mechanism of CRT: when lenders cannot adequately assess borrower quality due to informational asymmetries, they may withhold credit or impose excessive collateral requirements (Dell'Ariccia & Marquez, 2004). In Latvia, the

shadow economy and fragmented legal structures among small businesses create precisely this form of opacity. Many enterprises operate across multiple legal entities, masking their real cash flow and debt obligations. As a result, even potentially viable borrowers are classified as high-risk due to lack of transparency.

This pattern is well documented in the literature. (Schneider, 2022) notes that countries with persistent informal sectors suffer from chronic credit underdevelopment, as formal financial institutions cannot rely on official records to price risk. Similar findings by Pužule (2024) suggest that the size and resilience of Latvia's shadow economy remain a key constraint on formal credit expansion, even when liquidity is available. Additionally Rupeika-Apoga and Solovjova (2017) show that Latvian SMEs often lack the governance and planning capacity required for formal lending engagement. Our findings extend these perspectives by highlighting how *borrower opaqueness and informality* interacts with both *regulatory-induced risk aversion* and *structural barriers to lending*, creating a layered exclusion effect in which weak documentation triggers downgrades in already conservative credit models, while the absence of local lending capacity removes potential workarounds.

Validation findings reinforced this theme. During member checking and expert discussions, participants consistently cited borrower informality as one of the most intractable barriers to credit access. Consumer advocates highlighted cases where individuals or small business owners met the economic need for a loan but could not document income in a form banks could accept. At the same time, commercial bankers emphasized the reputational and regulatory risk of making exceptions in such cases. Bankers stressed that exceptions could invite regulatory criticism, particularly under post-ABLV compliance norms, further embedding these constraints into lending practice. This convergence of borrower-side limitations and institutional risk aversion underscores the systemic nature of *borrower opaqueness and informality* in Latvia's credit ecosystem, setting the stage for considering the potential role of state-backed interventions.

#### 5.4. The role of the state in facilitating lending

While *structural barriers to lending* and *borrower opaqueness and informality* dominate the short-term lending landscape, the findings also point to the importance of state intervention—particularly through development finance mechanisms—as a way to counteract structural credit rationing. Participants strongly opposed the creation of a new state-owned commercial bank, citing high costs, regulatory overlap, and the risk of attracting low-quality borrowers. However, there was broad support for *Altum*, Latvia's existing development finance institution, which offers credit guarantees and targeted programs for underserved groups.

This distinction aligns with theoretical extensions of credit rationing theory that acknowledge the role of state guarantees in reducing the perceived risk associated with opaque or higher-risk borrowers (Włodarczyk et al., 2018). When the private sector cannot efficiently assess borrower quality—due to information gaps or high transaction costs—public interventions like partial guarantees can reduce the lender's exposure and stimulate credit supply without distorting market discipline. Similar findings are reported by Abu et al. (2025), who demonstrate that government-backed financial mechanisms, particularly when integrated with fintech tools, significantly improve SME access to credit, firm survival, and performance. Their results underscore the importance of hybrid public-private approaches, especially in credit-constrained environments.

The role of *Altum* was frequently praised by participants for enabling lending in segments otherwise neglected by commercial banks, including small businesses in rural areas, startups without collateral, and first-time borrowers. This pattern reflects broader EU practices, where national development institutions act as complements — not competitors — to private banks. For example, institutions like Germany's KfW or France's Caisse des Dépôts operate on similar principles, channeling

public funds through risk-sharing schemes rather than competing directly in retail banking (European Commission, 2020).

Validation insights further reinforced this view. During the focus group session and expert consultations, there was a shared perception that *Altum's* programs were among the few credit instruments seen as both inclusive and operationally feasible under Latvia's current regulatory constraints. Several participants suggested that rather than create new institutions, the state should expand *Altum's* capacity, geographic outreach, and product range. This reflects a pragmatic consensus: while the state cannot eliminate credit rationing, it can play a constructive role in mitigating it through well-targeted support mechanisms that directly address the combined effects of *structural barriers to lending* and *borrower opaqueness and informality*.

#### 5.5. Fintech integration challenges

The emergence of fintech integration challenges — including *fintech licensing or scale-up challenges* and *regulation, trust, or monetization issues in fintech* — was widely discussed by participants as a potential disruptor to Latvia's credit market. While fintech firms offer accessible interfaces, streamlined onboarding, and faster decision-making, most experts expressed skepticism about their capacity to significantly expand lending under existing regulatory constraints. Participants noted that these firms remain subject to the same compliance and risk assessment frameworks as traditional banks, meaning that innovation has so far been concentrated in user-facing processes rather than in the underlying credit models.

From the perspective of CRT, fintech holds the potential to reduce certain frictions—particularly transaction costs and some aspects of information asymmetry—through data-driven underwriting and digital footprints. Yet the findings suggest that in Latvia's context, these benefits are not fully realized. Regulatory interpretation, particularly around anti-money laundering and onboarding procedures, remains a key bottleneck. As noted by several participants, fintechs often struggle not because of technological limitations, but because trust and verification barriers remain unchanged. One example repeatedly cited was the difficulty for a fintech startup to open a corporate account with a Latvian bank — a process described by several founders as “virtually impossible.” Despite public statements from government and regulators about supporting innovation, in practice many Latvian fintech companies choose to open accounts in jurisdictions such as Cyprus, Malta, or neighboring Lithuania, where onboarding is perceived as more transparent and innovation-friendly.

This is consistent with findings by Bouteraa et al. (2024), who argue that fintechs in the EU face similar risk and compliance obligations, which constrain their ability to scale or offer truly differentiated credit services. Moreover, studies on open banking and PSD2 (Khan et al., 2025) suggest that fintech effectiveness depends not only on access to data but also on regulatory willingness to interpret rules in a way that supports innovation. In Latvia, where post-crisis regulation has favored control over experimentation, this interpretive flexibility appears limited.

Validation feedback confirmed the limited practical impact of fintech in Latvia. While experts acknowledged fintech's indirect role in pressuring established banks to accelerate digital modernization — linking this to *banking sector transformation* — they were nearly unanimous in stating that these firms had not yet reshaped credit access in any meaningful way. Monetization was a recurring concern: even fintechs with growing user bases often lacked sustainable business models that would allow them to assume significant credit risk. In this environment, fintech may serve more as a catalyst for process reform within incumbent institutions than as a standalone solution to credit rationing, particularly when *structural barriers to lending* and *borrower opaqueness and informality* remain unresolved.

### 5.6. Banking sector transformation

Participants emphasized that Latvia's banking sector is undergoing structural change driven by *internet/mobile banking*, *digital transformation*, *ESG*, *green finance*, *sustainability expectations*, and broader geopolitical and demographic pressures. While these developments do not immediately alter current lending behavior, they signal an evolving institutional environment that may reshape how credit is assessed, delivered, and regulated in the medium to long term.

One major driver is digitalization. Participants noted growing customer demand for mobile-first services, along with declining use of physical branches. This transformation aligns with broader European trends, where banks are reconfiguring service models to prioritize cost efficiency and responsiveness through digital platforms (McCaul, 2023). Although *internet/mobile banking*, *digital transformation* does not directly resolve issues of credit rationing, it can reduce transaction costs and improve access, particularly for underserved populations—provided regulatory systems evolve to accommodate these innovations.

Another important transformation is the integration of *ESG*, *green finance*, *sustainability expectations* into lending strategies. The European Union's green finance agenda, including ESG disclosure regulations and targeted investment incentives, is increasingly shaping credit allocation decisions. As noted by regulators and bank representatives, this shift is no longer optional. It introduces new dimensions of creditworthiness—environmental and social impact—that will require adjustments in risk modeling and bank strategy. Several participants linked this transition to broader geopolitical changes, noting that EU sustainability requirements sometimes coincided with cross-border disruptions, prompting banks to accelerate investment in both green products and digital delivery channels. Recent literature confirms this shift: Pantielieieva et al. (2022) argue that ESG integration is changing the structure of financial intermediation in Europe, creating both compliance challenges and strategic opportunities.

Finally, demographic changes were highlighted by several participants, particularly the implications of Latvia's shrinking and aging population. These trends suggest a future market characterized by slower growth, increased savings, and more risk-averse household behavior—conditions that will likely influence both credit demand and product design. As discussed in earlier themes, this compounds existing pressures on bank profitability and may further limit incentive to serve marginal borrower segments unless new institutional models emerge.

Validation discussions reinforced that while digitalization, sustainability imperatives, and demographic shifts are not yet the primary drivers of credit rationing, they are reshaping the strategic landscape in which lending decisions occur. These transformations also interact with earlier themes: digital tools can only expand access if *structural barriers to lending* are reduced; green finance initiatives may stall if *borrower opacity and informality* prevents firms from meeting ESG disclosure requirements; and demographic pressures may amplify *regulatory-induced risk aversion* by making profitable lending opportunities rarer. Together, they underscore the importance of viewing credit rationing as part of a broader institutional shift that will redefine risk, access, and inclusion over time.

## 6. Conclusion

This study examined the reasons behind Latvia's persistently low loan issuance (RQ1) and the structural and technological trends shaping its banking sector (RQ2). The findings reveal that credit rationing in Latvia is driven by a combination of regulatory conservatism, high market concentration, and borrower opacity—factors that interact to limit formal credit access despite excess liquidity. These constraints reflect key principles of credit rationing theory, particularly the role of information asymmetry and institutional risk aversion in shaping lending decisions.

While regulatory reforms have strengthened sector stability, they

have also unintentionally discouraged moderate-risk lending. Fintech innovation and digital banking remain underutilized due to regulatory barriers, and the most effective mechanism currently supporting access to credit in underserved segments is the state-owned development finance institution, Altum. Addressing these structural issues calls for a proportional approach to regulatory oversight, allowing smaller or niche banks to expand lending without facing the same compliance burden as systemically important institutions. Strengthening Altum's capacity—particularly in financing micro-enterprises and SMEs outside major urban centers—could improve credit availability, especially if supported by enhanced coordination between Altum and commercial banks. Targeted financial literacy programs, developed jointly with industry associations, would help improve borrower transparency and credit readiness, especially in partially informal business sectors. In addition, establishing a regulatory sandbox or pilot framework could enable controlled experimentation with innovative credit products, while improvements in data transparency, alternative credit scoring, and shared borrower registries would help reduce the informational disadvantages that drive risk-averse lending behavior.

The study also indicates that tackling the shadow economy is crucial to improving borrower transparency and stimulating sustainable demand for credit. By reducing informational asymmetries, banks could better assess creditworthiness and extend financing to viable borrowers. Alongside this, policies and incentives that encourage business investment and reliance on external financing could contribute to stronger economic growth. Maintaining financial stability while streamlining compliance processes would encourage banks to lend more actively, and supporting innovation in the fintech sector could diversify funding sources and enhance competition in Latvia's banking market.

This study is based on qualitative insights from 29 expert participants. While efforts were made to ensure diversity, the perspectives primarily reflect institutional actors. The decision not to record interviews, based on participant preferences, may have limited access to verbatim data. Future research could incorporate borrower perspectives or quantitative loan data to triangulate these insights. Comparative studies involving other small EU banking systems may also help identify transferable policy models.

### CRedit authorship contribution statement

**Ramona Rupeika-Apoga:** Writing – review & editing, Writing – original draft, Methodology, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Janis Priede:** Writing – original draft, Methodology, Data curation, Conceptualization. **Gundars Berzins:** Methodology, Funding acquisition, Conceptualization. **Elmars Kehris:** Funding acquisition, Data curation, Conceptualization.

### Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used Grammarly in order to improve language. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Ramona Rupeika-Apoga reports financial support was provided by

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## Appendix A. Study “Transformation of the banking sector and its impact on sector competition in Latvia”

### Survey of experts—structured interview

During the expert interview, we would like to assess competition in the Latvian banking sector and its impact on market participants. We will also discuss the opportunities and necessity of developing competition and its potential implications for market participants in the future. The survey results will be presented only in generalized form and will not refer to experts' answers.

The survey will take ~1 h per industry expert

1. What were the main factors determining the development of banking services (and lending) in the last decade in Latvia (in different areas: technology, regulation, and economy)?
2. What will be the main factors determining the development of banking services (and lending) in the next decade in Latvia (in different areas: technology, regulation, and economy)?
3. What are the main factors behind the decline in the number of banks in Latvia?
4. Does the intensity of competition in the banking sector in Latvia determine the volume of lending to households and businesses?
5. Will the entry of a new foreign bank into the banking sector in Latvia boost lending to households and businesses?
6. Will the establishment of a new state bank in Latvia solve:
  - a) What is the problem with opening a single account?
  - b) What is the problem with access to credit for households in Riga and its surroundings?
  - c) What is the problem with households outside Riga having access to credit?
  - d) What is the problem with access to credit for businesses in Riga and its surroundings?
  - e) Credit availability problem for enterprises outside Riga and its surroundings?
7. Will the state involvement in the credit sector through ALTUM in Latvia solve the following:
  - a) What is the problem with access to credit for households in Riga and its surroundings?
  - b) What is the problem with households outside Riga having access to credit?
  - c) What is the problem with access to credit for businesses in Riga and its surroundings?
  - d) Credit availability problem for enterprises outside Riga and its surroundings?
8. How do you assess the activities of fintech/neobanks (Revolut, N26, etc.) in the common European market, and what impact does it have on the Latvian banking sector?

## Appendix B. Participant profiles

ID Code	Sector	Role	Years of Experience	Education	Description
R1	Regulator	Senior Policy Advisor	20+	Graduate-level education in economics	Senior advisor at Latvia's central bank responsible for regulatory compliance
R2	Regulator	Bank Supervision Officer	15+	Graduate-level education in finance	Supervisor overseeing bank risk and compliance
R3	Regulator	Financial Analyst	10+	Graduate-level education in law	Analyst focused on regulatory implementation and EU coordination
B1	Commercial Bank	CEO	20+	Graduate-level education in finance	CEO of a universal bank with foreign capital operating in Latvia
B2	Commercial Bank	Chair, Supervisory Board	25+	Doctoral-level education in management	Chair overseeing governance and long-term strategy at a universal bank
B3	Commercial Bank	Chief Economist	15+	Doctoral-level education in economics	Economist responsible for market forecasts and lending analytics
B4	Commercial Bank	Head of Retail Lending	12+	Graduate-level education in business	Manager leading personal loan strategy and credit approval processes
B5	Commercial Bank	Risk Officer	18+	Graduate-level education in risk management	Leads credit risk evaluation and capital adequacy planning
B6	Commercial Bank	Board Member	20+	Graduate-level education in finance	Board-level executive at a locally owned bank
B7	Commercial Bank	CEO	22+	Doctoral-level education in banking	CEO of a regional commercial bank with local ownership
B8	Public Development Bank	Strategic Development Director	16+	Graduate-level education in business	Director at a state-owned development finance institution
G1	Government	Policy Officer, Ministry of Finance	14+	Graduate-level education in public policy	Official in charge of economic strategy and banking regulation

(continued on next page)

(continued)

ID Code	Sector	Role	Years of Experience	Education	Description
G2	Government	Senior Advisor, Ministry of Economics	17+	Graduate-level education in economics	The advisor focused on SME financing and capital access initiatives
I1	Finance Association	Head of Policy	15+	Graduate-level education in law	Represents banking industry interests in national policy discussions
L1	Legal Sector	Attorney & Banking Law Specialist	20+	Doctoral-level education in law	Expert in litigation, constitutional, and financial law in Latvia
C1	Consumer Advocacy	Legal Advisor	18+	Graduate-level education in law	Focuses on resolving consumer-bank disputes
C2	Consumer Advocacy	Policy Advocate	12+	Graduate-level education in political science	Advocates for fair lending and access to credit
C3	Consumer Advocacy	Financial Educator	10+	Higher education in finance	Conducts workshops on household budgeting and loans
C4	Consumer Advocacy	Complaint Officer	14+	Graduate-level education in social work	Handles financial consumer complaints and inquiries
C5	Consumer Advocacy	Outreach Coordinator	11+	Higher education in communications	Coordinates regional programs on credit literacy
C6	Consumer Advocacy	Legal Analyst	13+	Graduate-level education in business law	Analyzes contractual practices in loan agreements
C7	Consumer Advocacy	Debt Advisor	16+	Higher education in accounting	Advises low-income clients on managing household debt
C8	Consumer Advocacy	Operations Manager	19+	Graduate-level education in business	Leads internal operations for consumer protection programs
C9	Consumer Advocacy	Consumer Ombudsperson	20+	Graduate-level education in human rights	Handles escalated loan-related complaints
C10	Consumer Advocacy	Advocacy Officer	9+	Higher education in economics	Supports credit access policy reform
C11	Consumer Advocacy	Financial Access Analyst	12+	Graduate-level education in sociology	Researches underserved populations in the credit market
A1	Academia	Professor of Banking	25+	Doctoral-level education in law	University professor specializing in financial sector governance
A2	Academia	Associate Professor	18+	Doctoral-level education in economics	Focuses on bank behavior and regulatory compliance
A3	Academia	Lecturer	10+	Graduate-level education in finance	Teaches financial institutions and risk management at a university

Appendix C. Codebook

Code	Description	Theme
R1	Compliance burdens, supervisory pressure, or fear of sanctions	Regulatory-Induced Risk Aversion
R2	Strict regulatory interpretation limiting risk appetite	Regulatory-Induced Risk Aversion
L1	Market consolidation or dominance by few banks	Structural Barriers to Lending
L2	Lending gaps, product inflexibility, lack of SME engagement	Structural Barriers to Lending
L3	Risk-averse internal lending policies	Structural Barriers to Lending
L4	SME loan access barriers	Structural Barriers to Lending
I1	Informal business practices, cash flows, unregistered income	Borrower Opacity and Informality
I2	Poor financial literacy, weak documentation, transparency gaps	Borrower Opacity and Informality
S1	Altum, state-backed lending, or state bank proposals	The Role of the State in Facilitating Lending
F1	Fintech licensing or scale-up challenges	Fintech Integration Challenges
F2	Regulation, trust, or monetization issues in fintech	Fintech Integration Challenges
B1	Internet/mobile banking, digital transformation	Banking Sector Transformation
B2	ESG, green finance, sustainability expectations	Banking Sector Transformation

Data availability

Data are available from authors upon reasonable request.

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