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FINANCIAL INCLUSION: WHAT AND HOW? EVIDENCE FROM AZERBAIJANI ECONOMY

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FINANCIAL INCLUSION: WHAT AND HOW? EVIDENCE FROM AZERBAIJANI ECONOMY

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Acronyms

| | |
|------------|---|
| ACCIS | The Association of Consumer Credit Information Suppliers |
| ATM | Automated teller machine |
| EBRD | The European Bank for Reconstruction and Development |
| FAS | Financial Access Survey |
| G20 | 20 major economies of the world |
| GPFI | Global Partnership for Financial Inclusion |
| IMF | The International Monetary Fund |
| LTV | The Loan-to-Value ratio |
| MSME | Micro, small and medium-sized enterprises |
| NPL | Non-performing loan |
| OECD | The Organization for Economic Cooperation and Development |
| OECD NFLIS | OECD National Financial Literacy Improvement Strategy |
| POS | Points of sale |
| SME | Small and medium-sized enterprises |
| WB | The World Bank |
| WB ES | World Bank Enterprise Surveys |
| WB FCS | World Bank Financial Capability Survey |
| WB GPSS | World Bank Global Payment Systems Survey |
| WB GFCPS | World Bank Global Financial Consumer Protection Survey |

Executive summary

The main goal of the research is to study what financial inclusion is and analyse its current status in the Azerbaijani economy. To that end, the monography analyses infrastructural elements to be shaped to make financial resources and services available, and the potential to deepen financial inclusion, researches international practice with respect to elements of financial infrastructure affecting stronger financial inclusion and includes case studies. The study also analyses the status of financial inclusion in the Republic of Azerbaijan as part of measuring financial inclusion and issues proposals on the actions to be taken.

Key words: *access to finance, financial inclusion*

JEL classification: *K20, G21, G30*

Introduction

The economy is impossible to be imagined apart the financial system. The financial system is irreplaceable in maintaining economy's effective and dynamic growth – it is like a bridge between the subjects that accumulate resources, on the one hand, and those intending to obtain the resources, on the other hand. Historically, this 'bridge' initially existed in the form of banks, which simply receive deposits from depositors to further lend them to other subjects. However, global economic growth itself resulted in the evolution of the backbone and the implementation form of the said 'bridge'. Currently, access to the pool of available financial resources is ensured not only by means of banks, but also through diverse channels, like microfinancing organizations, mobile operators, payment systems, and postal communication. Nevertheless, it is not always easy for economic agents to gain access to this 'pool'. Consequently, the key drivers of economic growth – SMEs are significantly deprived of sustainable development. In today's context, access to available financial resources and services, its form, methods, use and the quality of provided resources and services are being analyzed under the definition of financial inclusion.

Financial inclusion: backbone, elements and measuring mechanisms

Although different books provide various definitions of financial inclusion, we consider that, if summarized, financial inclusion may be defined as follows:

- *Financial inclusion may be defined as ongoing access of the population to financial services and resources that meet their low cost, various and concrete needs, are covered by normative – legal frames and provided by traditional financial institutions to maintain socio-economic development and mechanisms to use them.*

Deeper financial inclusion is a priority for developed and developing countries alike. 3 parameters are considered to make the process fully comprehensive:

- Access to financial services and resources – depends on the current situation of the market, its regulation frames and the technological environment.

- Usage of financial services and resources – includes information on consumer potential to use financial services (e.g., possibility to pay via POS terminals, availability of bank service units in rural areas), and how regular and frequent the usage is.

- Quality of financial services and resources – identifies to what extend financial services and products meet consumer demand. Moreover, the range of provided products and services, the level of consumers' financial literacy that allow them to benefit from those services, as well as consumer finance protection during the overall process are part of the indicated statement.

Realization of financial inclusion targets directly depends on sound, resilient and effective financial infrastructure in the first instance. Financial infrastructure both ensures effective, safe and easy access of economic agents to financial resources and services, and cost effective and low risk services by financial service providers. 3 elements of the financial infrastructure have a significant effect on discharge of the above functions:

- i. The secured transactions mechanism;
- ii. The credit reporting system;
- iii. Payment systems.

Certain books include availability of unified systems that allow identification of persons to the ranks of infrastructural elements contributing to financial inclusion. A related detailed analysis was conducted within this research. To note, there is a unified electronic database of ID cards in place in Azerbaijan.

The secured transactions mechanism

Credit institutions require collateral from borrowers to prevent information asymmetry and minimize credit risks likely to occur in future. The survey by World Bank experts in 100 countries across the world suggests that, collateral was

required in 75% of credit requests.¹ In some instances business subjects refused to apply for a bank loan due to insufficiency or lack of collateral, while in most cases banks denied to grant loans because of the said reasons. The following chart displays the situation across regions:

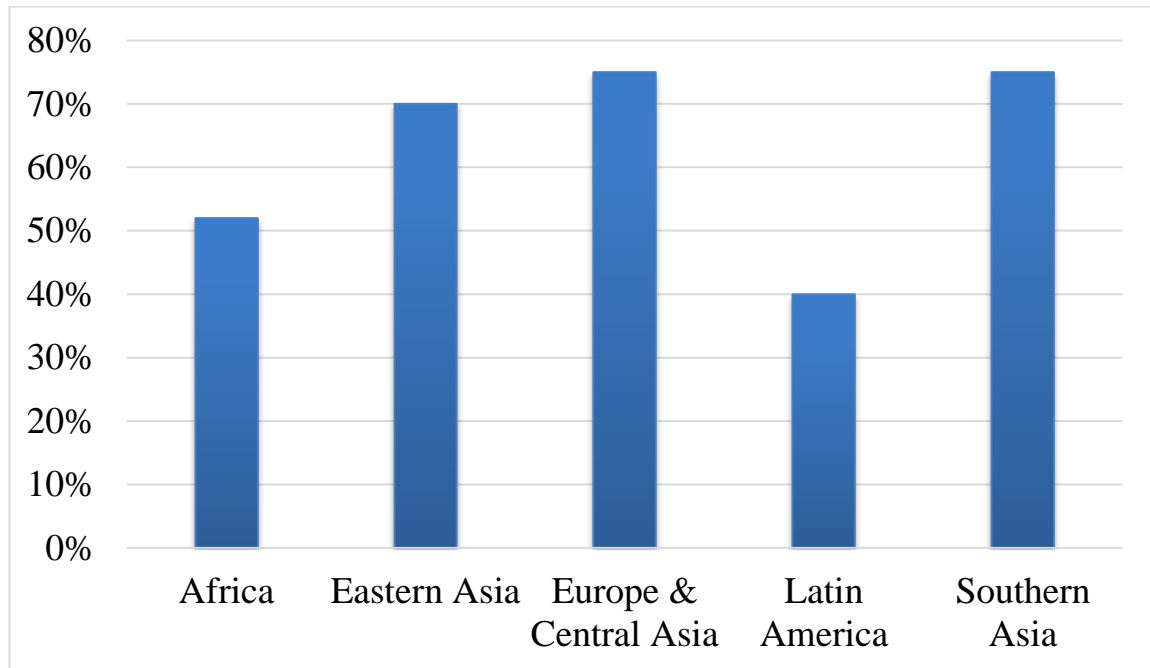


Chart 1. Indicators of denial to issue loans due to insufficient collateral across regions².

1 Inessa Love, Sole Martínez Pería and Sandeep Singh. “Collateral Registries for Movable Assets: Does their Introduction Spur Firms’ Access to Finance?” January, 2013

2 Safavian, Mehnaz; Fleisig, Heywood; Steinbuks, Jevgenijs. 2006. Unlocking Dead Capital. Viewpoint: Public Policy for the Private Sector; Note No. 307.

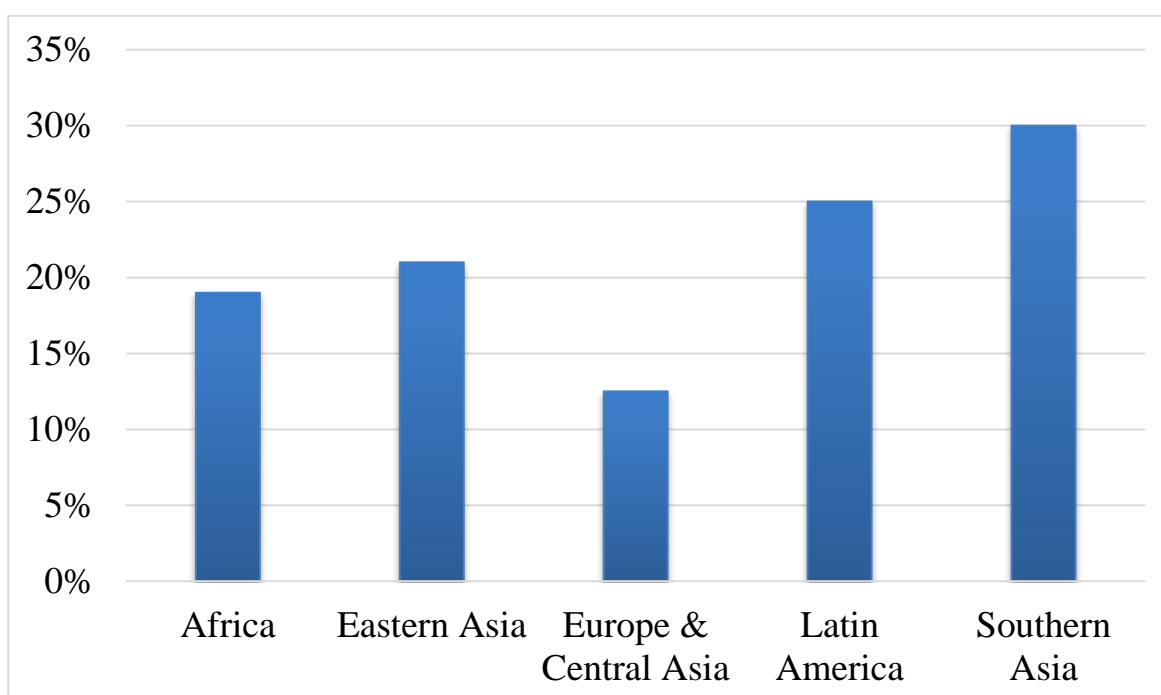


Chart 2. Indicators of refusal by business subjects to apply for loans due to high collateral requirements across regions³.

Attaching a particular attention to one aspect experts identified that 78% of capital reserves of business subjects of developing countries was in movable assets – vehicles, equipment, debtor claims, while 22% in real estate⁴. OECD countries and developing markets differ on the appropriate indicator. The following table displays the LTV in OECD countries and developing markets:

| LTV ratios | | | |
|---------------------------|-------------|-----------------------------|-----------------------------------|
| Type of collateral | OECD | Developing economies | |
| | | <i>Simple</i> | <i>Complex</i> |
| Real estate | up to 90% | up to 80% | cities: 60-80% regions: 30-60% |
| Movable assets, including | | | |
| Vehicles | up to 100% | 70-100% | 60-85% |
| Equipment | up to 80% | up to 80% | 60-80% |

³ Safavian, Mehnaz; Fleisig, Heywood; Steinbuks, Jevgenijs. 2006. Unlocking Dead Capital. Viewpoint: Public Policy for the Private Sector; Note No. 307.

⁴ Alvarez de la Campa, 2011

| LTV ratios | | | |
|--------------------|-----------|----------------------|-------------------------------|
| Type of collateral | OECD | Developing economies | |
| | | <i>Simple</i> | <i>Complex</i> |
| | | | <i>(secondary collateral)</i> |
| Claims | up to 80% | up to 50% | Secondary collateral |
| Reserves | up to 50% | Secondary collateral | Secondary collateral |

Table 1. LTV ratios by types of collateral⁵.

The ‘simple’ category in the above table includes modern, while ‘complex’ includes the non-reformed secured transactions system.

It should be noted that not all creditors seem eager to accept movable assets as collateral. Hence, the basic premise is to have an accurately elaborated normative – legal frame in place for relevant transactions. Movable property in circulation becomes ‘dead capital’ without a regulatory basis⁶. We will present situations-based calculations of the said capital within the following chapters of the study.

A secured transaction is defined as the transaction where a borrower (pledger) delivers a creditor (pledgee) the right to dispose of a movable property to meet a liability and assigns other rights. The main implementation mechanism of secured transactions is registers that establish rights over movable property.

According to World Bank experts⁷, a register of movable property should meet the following parameters to be effective:

1. A warning based system – no movable assets related document should be delivered, and no verification maintained with respect to legalness of registered operations;

⁵ Source: IFC

⁶ Fleisig, 2006

⁷ <http://www.ifc.org/wps/wcm/connect/fbef87804c2ab1dda285eaf12db12449/Registry+survey+report.pdf?MOD=AJPERES>

2. *Electronic database* – no hardcopy archive should be available;
3. *A real time registration, editing, updating and search system* – no obstacles should be available to ensure 24/7 maintenance of the operations in question;
4. *A system allowing to index and search a debtor and property* – data providers and users should be capable to search property owner's identification number on the register, his/her name, as well as property's registration number;
5. *A centralized registry* – information on all movable properties should be maintained in a unified central registry irrespective their form and type;
6. *Acceptance of all assets for registration* – no exceptions should be allowed on movable assets registered under the legislation;
7. *Reasonable fees for registration and inquiries* – When setting fees for the use of the register the key goal should be to set fees enough to cover operational expenses, rather than making profit;
8. *Registration for a collateralized creditor or his/her legal representative* – registration in the register should be compulsory for a collateralized creditor or his/her legal representative;
9. *Responsibilities* – the register operator shall be kept responsible only for engineering problems arising during the register operation or in cases of system unavailability;
10. *Limited judgement* – Except for lack of critical information, the register operator should not be kept responsible for acceptance and rejection of appeals, as well as accuracy of information.

For a number of researchers identification of the role of the movable property register in broader access to financial resources has become a subject of investigation, for instance, the analysis conducted by Professor of Hawaii University Inessa Love, the World Bank experts Maria Soledad Martinez Peria and Sandeep Singh in 2013. The survey conducted in enterprises across 73 countries suggested that, the movable property register mechanisms increased enterprises' access to bank loans by 8%. They also identified that registers were mostly

effective for small enterprises. Hence, since small, as well as newly launched economic agents have fewer fixed assets compared to their competitors – larger enterprises, the optimum way out for them is to pledge movable property as collateral.

Case study

China

Efforts realized on the basis of the IMF project in the Peoples Republic of China (China) may be exemplified as a success story of the secured transactions mechanism. Prior to 2007 – the commencement of the project – access of SMEs to finance was very limited. Chinese banks were not interested in issuing unsecured loans for SMEs or allocated resources only under pledged real estate, in which case Chinese entrepreneurs had total \$2 trillion worth of ‘dead capital’ – movable property at hand.

The situation changed dramatically when the Law on Property took effect in 2007. The Law both includes the main principles of the modern secured transactions mechanism and allows encumbrance of moveable property. As a result of the reform:

- ✓ *the size of commercial loans issued under pledged movable property jumped by 21% in 2008-2010 compared to previous periods;*

- ✓ *the share of SME lending in the commercial loans portfolio increased to 60% in 2010 (44% rise compared to 2006);*

- ✓ *the size of factoring operations increased to €67.3 billion in 2009 from €2.6 billion in 2003;*

- ✓ *according to results of the first half of 2011 the size of financing against receivables reached \$3.58 trillion, (the share of SMEs 30% or \$1.09 trillion).*

The credit reporting system

The credit reporting system is of key elements of any country's financial infrastructure. These systems both trigger healthy competition in the lending market and allocation of available financial resources across economic sectors and play a significant role in coverage of economic agents with financial services and higher financial inclusion. They supply lenders with critical information in credit decision-making and weigh in on high quality of the lending portfolio and decrease loans' operational cost.

Credit reporting systems are considered to be an institutional response to the asymmetric information, one of the most burning sectoral challenges. They minimize risks likely to occur due to incomplete or inaccurate data on borrower's creditability when he/she applies to a credit institution for a loan, and ensure completeness of the 'data chain'. As an information agent in the sector the credit reporting prevents moral hazard. Moral hazard is a situation when one party with more information (borrower) imposes the other one (creditor), who has less information, to a risk due to delivery of incomplete or distorted information, knowing that the creditor may incur financial losses. The credit reporting system supports creditor's sound decision-making by means of exchange of credit data eventually allowing the latter to incur less cost.

As an element of the credit reporting system credit bureaus fuel financial discipline contributing to minimization of credit risks in the long run and promoting borrowers's responsible lending due to width of information sources and supplied services, whereas credit registries contribute to effective banking supervision being under the management and ownership of the state.

Case study

Kredi Kayıt Bürosu (KKB)

Turkey's first and the only private credit bureau, KKB (The Credit Registration Bureau) was founded by 9 banks in 1995. Since the day of

establishment KKB has expanded the spectrum of supplied services to minimize risks likely to be faced by member organizations in the course of their activities and develop products allowing boost their effectiveness. Currently, KKB has total 180 members, including 52 banks, 62 factoring, 8 insurance, and 15 investment companies, 26 leasing entities and 14 consumer lending companies.

One of the productive services launched by KKB was LKS (Limit Kontrol Sistemi – the Limited Control System). According to the banking legislation of Turkey (the Law on bank cards and credit cards) total limit of cards of a customer, who uses a credit card for the first time, to be obtained from all credit institutions, may not exceed his/her income on the first year by 2, while income on the second year by 4 times. LKS, commissioned in 2006, is a real time platform that collects and processes information on persons' loans and other bank cards, and enables to set a unified credit card limit per borrower – it has allowed to meet the above claim. Inquiries on LKS numbered 140 million according to results of 2016.

MİDES (Müşteri İtirazlarının Değerlendirilmesi Sistemi – the Customer Appeals Assessment System) is an example of another product. MİDES is the system that allows to argue and eliminate claims of data subjects, who plead that the information collected on them is inaccurate, in an online regime. It takes MİDES 2 hours to argue and eliminate the shortcome, it is the fastest system among peers to investigate and respond to consumer objections.

We consider the TARDES system, introduced by KKB in 2013, needs to be particularly emphasized. TARDES (Tarım Kredileri Değerlendirme Sistemi – the Agricultural Credit Rating System) in harmony with its name is a database and platform that allows to evaluate agricultural loans. Being a joint fruit of the EBRD, the Frankfurt School of Finance and Management and KKB, TARDES virtually provides its users with a number of useful methods and data in the course of financing of agri-sector, the high risky sector with complicated underwriting, out of which the following needs a particular emphasis:

✓ various products related to single consumer can be assessed simultaneously;

✓ a unique credit limit can be offered given trade and other activities of a borrower within and beyond the agri-sector, and his/her creditability;

✓ limits are in place on allocation of funds to a borrower exceeding his/her throughput and needs;

✓ loans can be issued for a borrower within pre-defined timeframes depending on manufactured products.

TARDES influenced the increase in the size of loans allocated to agriculture. If to compare the size of financial resources allocated by banks to agriculture before the system was commissioned (2013) with the results of the first quarter of 2017 we can see that funding jumped by 155%.

The following chart displays the size of loans allocated by Turkish banks to agriculture from 2011 to the first quarter of 2017:

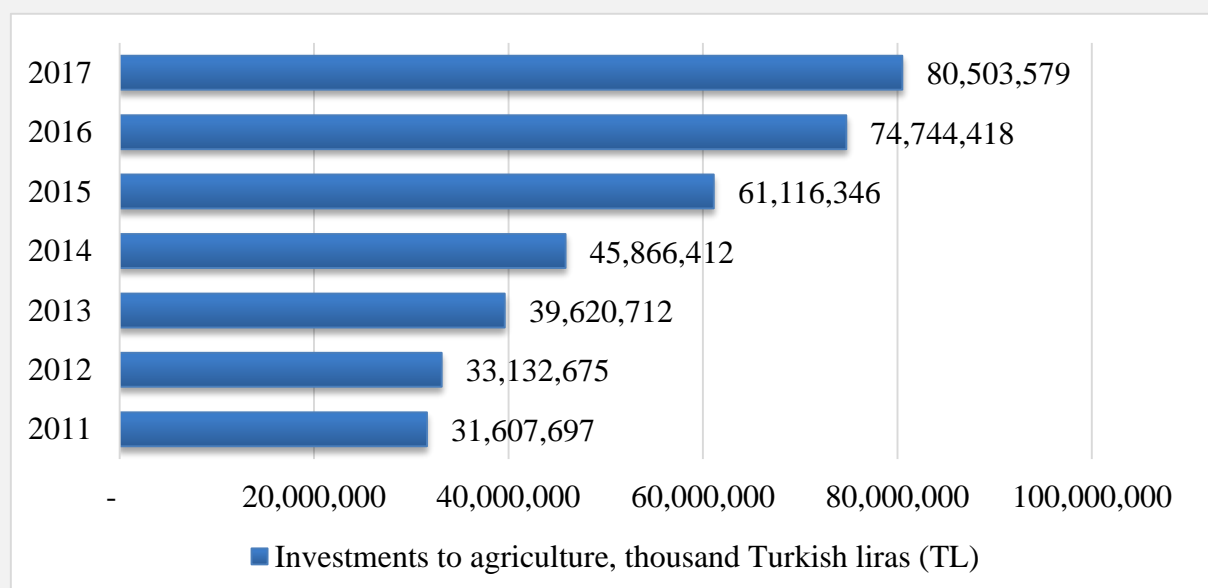


Chart 3. Agricultural financing in Turkey.

Payment systems

Payment system is the system for transfer of funds with officialized and standardized common mechanisms and rules on payment operations processing, clearing and/or conduction of settlements. Effective and efficient operation of

financial markets and the banking system in the country, reliable settlements among economic agents with an eventual highly effective monetary policy necessitate availability of stable and uninterrupted payment systems. Growth rate of the economy, high competition and mutual integration on the backdrop of developed financial markets rest upon the effective national payment system. Payment systems, an integral part of the financial infrastructure, has a considerable effect on overall economic activity in the country.

Case study

M-PESA

M-PESA, mobile payment and money transfer system, was commissioned by mobile operator – the Safaricom operating in Kenya, one of most dynamically growing countries in Africa. Initially programmed to repay micro loans over mobile phones, M-PESA was re-formatetd as a countrywide money transfer system later. Based upon a simple mechanism the system allows to withdraw cash and make money transfers using mobile phones. Any registered user places certain amount of funds in his/her mobile debit account in the first instance. If necessary to cash funds, a customer applies to the nearest Safaricom agent (such agents were numbering 100,744 in 2016). After the agent ascertains that there are funds available in person's account in the required amount he/she conducts the encashment. The similar scheme applies to money transfers over mobile phones.

In the early days of M-PESA users were numbering 19,671. But thereafter the company posted significant growth having increased the number of its users to 24 million across the country (50% of the country population). Indicators by periods are as follows:

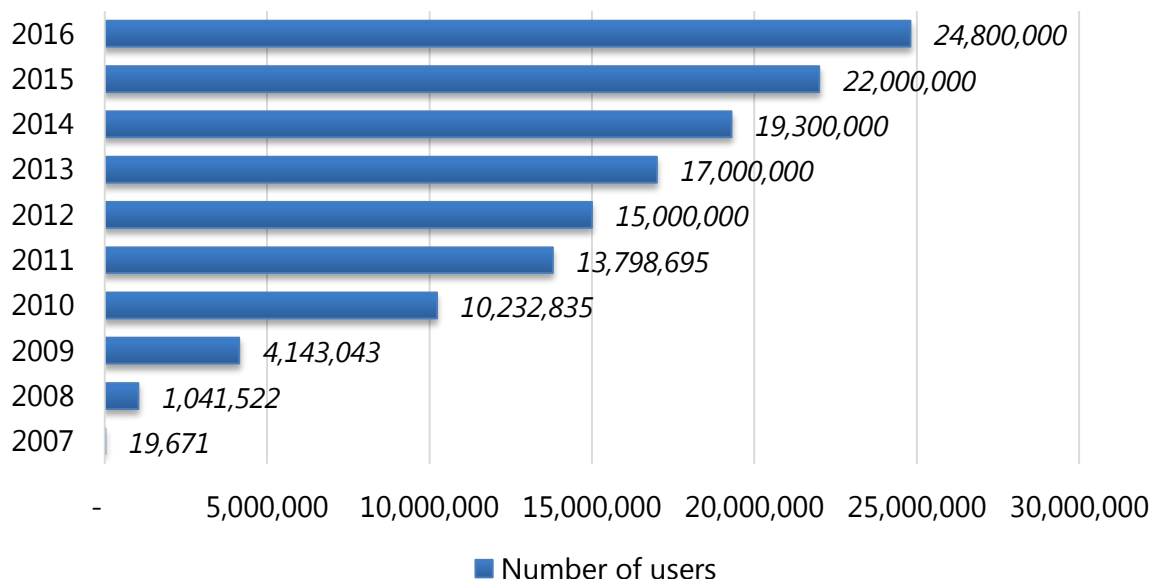


Chart 4. M-PESA system users.

Effective activities led to increase in company's income. According to results of 2016, income of M-PESA was 41.4 billion Kenyan shilling (~\$398 million⁸) (0.5% of GDP for the same period).

M-PESA broadened the spectrum of its services as it gained users' sympathy. The system offers not only money transfers, but also micro-credit and savings services. The product, named M-Shwari succeeded in broadening its user base as a small amount lending tool. According to the data of 2015, although the product has 5.8 million active customers, only 2% of the lending portfolio includes non-performing loans (NPLs)⁹. Average amount of issued loans was \$12¹⁰ (2013). Minimum amount to be obtained on this product is 50 (\$0.48), while maximum amount is 1 million (~\$9,623)¹¹ Kenyan shilling. What makes the product more advantageous over bank loans:

- ✓ *no application, questionnaire, or similar formatted documents required;*
- ✓ *no commissioning fees for transactions;*
- ✓ *no limits on cash withdrawals;*

⁸ On the basis of the official exchange rate as at 01 August 2017 (1 \$ = 103.9194 KSH)

⁹ https://www.safaricom.co.ke/images/Downloads/Resources_Downloads/annual_report_2015.pdf

¹⁰ <http://www.economist.com/news/finance-and-economics/21574520-safaricom-widens-its-banking-services-payments-savings-and-loans-it>

¹¹ On the basis of the official exchange rate as at 01 August 2017 (1 \$ = 103.9194 KSH)

✓ *no minimum operational balance norm applied;*
✓ *no duties in place for transfer of funds to M-PESA account from bank account¹² or vice versa.*

The US Massachusetts Technology Institute and the Georgetown University estimated that M-PESA saved 194,000 families (2% of total households) from sharp poverty rate¹³ in Kenya since 2008.

M-PESA is being introduced in Tansania, Afganistan and India.

Measuring financial inclusion

Financial inclusion faces a number of challenges in a globalizing world. According to the World Bank, the number of unbanked adults in a global scale currently is 2 billion¹⁴. Moreover, financial services on 59% of unbanked low income population of the world over 18 years old fail to meet their needs and ensure easy access to finance. The challenges also include: (i) location of financial service providers far from the areas the segment in question is dwelling; (ii) they do not have necessary documents; (iii) no confidence in financial service providers. In addition to the above, according to World Bank analyses, over 200 million micro, small and medium sized enterprises (MSME) have no access to critical financial resources to develop their businesses.

International organizations, and developed countries take considerable actions to eliminate the specified problems. For instance, the goal of the ‘Universal Financial Access (UFA) by 2020’ project initiated by the World Bank is that adults over 18 years old over the world have access to transaction accounts and own electronic facilities to store money, send and receive payments by 2020.

Every country economy has features inherent to its drivers, labor market, geographical location and other parameters. Naturally, financial inclusion also varies across economies. In this context, international organizations announce initiatives to elaborate framework to measure financial inclusion.

¹² “Safaricom” cooperates only with the Commercial Bank of Africa.

¹³ https://www.safaricom.co.ke/mpesa_timeline/timeline.html

¹⁴ <http://www.worldbank.org/en/topic/financialinclusion/overview>

G20 parameters. For instance, the Global Partnership for Financial Inclusion initiated in the summit of G20 held in Seoul, the capital of South Korea in 2010¹⁵. Eventually, G20 Basic Set – the key indicators to measure financial inclusion was set in the Las Cabos summit (Mexico) in 2012:

| № | Category | Indicators |
|----------|---|--|
| 1. | Formally banked adults ¹⁶ | % of adults with an account at a formal financial institution |
| | | Number of depositors per 1,000 adults or number of deposit accounts per 1,000 adults |
| 2. | Adults with credit at regulated institutions | % of adults with at least 1 (one) loan outstanding from a regulated financial institution |
| | | Number of borrowers per 1,000 adults or number of outstanding loans per 1,000 adults |
| 3. | Formally banked enterprises | % of SMEs with an account at a formal financial institution |
| | | Number of SMEs with deposit accounts/number of deposit accounts or number of SME depositors/number of depositors |
| 4. | Enterprises with outstanding loan or line of credit at regulated institutions | % of SMEs with outstanding loan or line of credit |
| | | Number of SMEs with outstanding loans/number of outstanding loans or number of outstanding loans to SMEs/number of outstanding loans |
| 5. | Points of service | Number of branches per 100,000 adults |

Table 2. Basic set of financial inclusion indicators (G20 Basic Set).

The following year the basic set of indicators in question was extended to total 24 indicators to improve, deepen and enlarge the scope of financial inclusion landscape at the Russian G20 Presidency. The extended set of indicators allows to

¹⁵ <http://www.gpfi.org/about-gpfi>

¹⁶ According to the World Bank methodology persons over 15 years old.

conduct comprehensive analysis of basic parameters of measuring financial inclusion – access to financial services and resources, their usage and quality of delivery, and emerging mobile financial services space along with traditional facilities:

| № | Category | Indicators | Source and coverage |
|----------|--|--|--------------------------------|
| 1. | Formally banked adults | % of adults with an account at a formal financial institution | Global Findex 148 countries |
| | | Number of depositors per 1,000 adults <i>or</i> number of deposit accounts per 1,000 adults | IMF FAS 187 countries |
| 2. | Adults with credit at regulated institutions | % of adults with at least 1 (one) loan outstanding from a regulated financial institution | Global Findex 148 countries |
| | | Number of borrowers per 1,000 adults <i>or</i> Number of outstanding loans per 1,000 adults | IMF FAS 187 countries |
| 3. | Adults with insurance | Number of insurance policy holders per 1,000 adults Segregated by life and non-life insurance | IMF FAS 187 countries |
| 4. | Cashless transactions | Number of retail cashless transactions per capita | WB GPSS 139 countries |
| 5. | Mobile transactional use | % of adults that use their mobile device to make a payment | Global Findex 148 countries |
| 6. | High frequency of account use ¹⁷ | % of adults with high frequency use of formal account | Global Findex 148 countries |
| 7. | Saving propensity | Saved at a financial institution in the past year | Global Findex 148 countries |
| 8. | Remittances | % of adults receiving domestic and | Gallup World |

¹⁷ High frequency is defined as having taken money out of a personal account 3 or more times a month. It includes cash withdrawals, e-payments or purchases, or any other type of payment debit.

| № | Category | Indicators | Source and coverage |
|----------|---|---|----------------------------|
| | | international remittances | Poll |
| 9. | Formally banked enterprises | % of SMEs with an account at a formal financial institution | WB ES 119 countries |
| | | Number of SMEs with deposit accounts/number of deposit accounts <i>or</i> Number of SME depositors/number of depositors | IMF FAS 187 countries |
| 10. | Enterprises with outstanding loan or line of credit at regulated institutions | % of SMEs with outstanding loan or line of credit | WB ES 119 countries |
| | | Number of SMEs with outstanding loans/number of outstanding loans <i>or</i> Number of outstanding loans to SMEs/number of outstanding loans | IMF FAS 187 countries |
| 11. | Points of service | Number of branches per 100,000 adults | IMF FAS 187 countries |
| 12. | | Number of ATMs per 100,000 adults <i>or</i> number of ATMs per 1,000 sq.km | IMF FAS 187 countries |
| 13. | | Number of POS terminals per 100,000 inhabitants | WB GPSS 139 countries |
| 14. | E-money accounts | Number of e-money accounts for mobile payments | WB GPSS 139 countries |
| 15. | Interoperability of Points of service | Interoperability of ATMs ¹⁸ | WB GPSS 139 countries |
| | | Interoperability of POS terminals ¹⁹ | |
| 16. | Financial | Financial knowledge score ²⁰ | WB FCS |

¹⁸ Takes the value 1 if all ATM networks are interconnected and 0 if they are not interconnected.

¹⁹ Takes the value 1 if all POS terminals are interconnected and 0 if they are not interconnected.

| № | Category | Indicators | Source and coverage |
|----------|-------------------------|--|--|
| | knowledge | | OECD NFLIS 34 countries combined |
| 17. | Financial behavior | Emergency funding source ²¹ | Global Findex 148 countries |
| 18. | Disclosure requirements | Disclosure index combining existence of a variety of disclosure requirements ²² | WB GFCPS 102 countries |
| 19. | Dispute resolution | Index reflecting the existence of formal internal and external dispute resolution mechanisms ²³ | WB GFCPS 102 countries |
| 20. | Usage cost | Average cost to open a basic current account | WB GPSS 139 countries |
| 21. | | Average cost of maintaining a basic bank current account (annual fee) | |
| 22. | | Average cost of credit transfers | |
| 23. | Credit barriers | % of SMEs required to provide collateral on their last bank loan | WB ES OECD SME score table 139 countries |

²⁰ This score sums up correct responses to questions about 6 basic financial concepts: inflation, interest rates, compound interest, money illusion, risk diversification and main purpose of insurance.

²¹ This section is calculated based upon the following answers to the question: if you had an emergency that required \$10 or 1/25 of GDPPC urgently, where would you get the money?:

- a) borrow from friends/relative;
- b) work more;
- c) sell assets;
- d) savings;
- e) loan from savings club;
- f) loan from bank;
- g) would not be able to find it.

²² Relevant requirements are as follows:

- a) plain language (understandable, prohibition of hidden clauses);
- b) local language;
- c) prescribed standardized disclosure format;
- d) recourse rights and processes;
- e) total rate to be paid for a credit (basic costs + commission rates, fees, insurance, taxes)

²³ Internal mechanism indicator – law or regulation setting standards for complaints resolution and handling by financial institutions, including timeliness, accessibility and requirements to implement complaints handling procedures; External mechanism – supervisory agency, financial ombudsman or equivalent institution.

| № | Category | Indicators | Source and coverage |
|----------|-----------------|--|--|
| 24. | | Getting credit: Distance to frontier ²⁴ | Doing Business report 185 countries |

Table 3. G20 financial inclusion indicators.

Global Findex. Another initiative on the way to evolution of financial inclusion was the Global Financial Inclusion Indicators (Global Findex²⁵) by the World Bank in 2012. The Global Findex is an assessment mechanism shaped as part of researches conducted by the Researches Group of the World Bank to measure financial inclusion around the world²⁶. Having set the following indicators to measure usage of financial services and resources²⁷ the Global Findex interviewed over 150,000 adults across 140 economies for their measurement:

| Indicators |
|---|
| <i>Usage of bank accounts</i> |
| % of adults with a bank account |
| Purpose of accounts, <i>including</i> : |
| – <i>business</i> |
| – <i>tuition</i> |
| – <i>pay for utilities</i> |
| Frequency of transactions, <i>including</i> : |
| – <i>withdrawals</i> |
| – <i>deposits</i> |
| Mode of access, <i>including</i> : |
| – <i>ATM per 100,000 adults</i> |
| – <i>Branch per 100,000 adults</i> |
| – <i>POS terminals per 100,000 adults</i> |
| <i>Savings</i> |
| % of adults who saved within the past 12 months using a formal financial institution |
| % of adults who saved within the past 12 months using an informal savings club or a person outside the family |

²⁴ Measures the coverage of available information barriers in the credit market.

²⁵ We will use this terminology throughout the paper as it is internationally accepted.

²⁶ <http://documents.worldbank.org/curated/en/187761468179367706/pdf/WPS7255.pdf>

²⁷ <http://documents.worldbank.org/curated/en/801151468152092070/pdf>

| Indicators |
|--|
| % of adults who otherwise saved (e.g. in their home) within the past 12 months |
| <i>Borrowing</i> |
| % of adults who borrowed within the past 12 months from a formal financial institution |
| % of adults who borrowed within the past 12 months from informal sources (including family and friends) |
| % of adults with an outstanding loan to purchase home or an apartment |
| <i>Payments</i> |
| % of adults who used a formal account to receive funds, <i>including</i> : |
| – <i>government payments</i> |
| – <i>wages</i> |
| % of adults who used a mobile phone to maintain transactions within the past 12 months, <i>including</i> : |
| – <i>pay utility bills</i> |
| – <i>send money</i> |
| – <i>receive money</i> |
| % of adults who used a formal account to receive or send money to family members living elsewhere within the past 12 months: |
| – <i>senders</i> |
| – <i>receivers</i> |
| <i>Insurance</i> |
| % of adults who personally purchased private health insurance |
| % of adults who work in farming, forestry, or fishing and personally paid for agri-insurance |

Table 4. Global Findex indicators.

Global Findex parameters based assessment of our country is provided in Table 1 of the Annexes section.

IMF indicators. The IMF offered its approach to measure financial inclusion. The Fund has been assessing financial inclusion since 2004 through the global Financial Access Survey (FAS):

| Indicators |
|---|
| <i>Access to finance</i> |
| Number of branches of commercial banks per 1,000 sq.km |
| Number of branches of commercial banks per 100,000 adults |
| Number of ATMs per 1,000 sq.km |

| Indicators |
|---|
| Number of ATMs per 100,000 adults |
| <i>Usage of financial resources</i> |
| Number of borrowers of commercial banks per 1,000 adults |
| % of outstanding loans with commercial banks in GDP |
| Number of depositors of commercial banks per 1,000 adults |
| % of deposits with commercial banks in GDP |

Table 5. IMF's financial inclusion indicators.

IMF parameters based assessment of our country is provided in Table 2 of the Annexes section.

Financial inclusion in Azerbaijan: current situation and assessment

Current situation. Stronger financial inclusion is one of the most pressing challenges among factors stipulating economic growth of our country. Accordingly, deepening of financial inclusion was included to the Strategic Roadmap on Development of Financial Services approved by Decree of President of the Republic of Azerbaijan of 6 December 2016 as one of the priorities accompanied by in-depth information on works to be done, risks, and required investments.

Assessment. This section includes information on the current situation in the country on the financial infrastructure components enumerated at the beginning of the article. Moreover, we will rest upon the G20 indicators to assess the Azerbaijani economy in order to apply a unified approach to measuring financial inclusion and avoid surprising effects of information abundance.

The following table displays the status of financial inclusion in the Azerbaijani economy on the G20 Basic Set evaluation parameters:

| № | Category | Indicators | Status | | | | | |
|----------|------------------------|---|---------------|-------------|-------------|-------------|-------------|-------------|
| | | | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| 1. | Formally banked adults | % of adults with an account at a formal financial institution | 51 | 74 | 114 | 130 | 168 | 164 |

| № | Category | Indicators | Status | | | | | |
|----|--|---|--------|------|------|------|------|-------------------|
| | | | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| 2. | Adults with credit at regulated institution | # of borrowers per 1,000 adults | 167 | 214 | 269 | 315 | 342 | n/a ²⁸ |
| 3. | Formally banked enterprises | % of SMEs with an account at a formal financial institution | 3.38 | 2.87 | 2.25 | 1.83 | 1.47 | 1.05 |
| 4. | Enterprises with outstanding loan or a line of credit at a regulated institution | % of SMEs with outstanding loan or line of credit | 0.73 | 0.56 | 0.41 | 0.34 | 0.32 | n/a ²⁹ |
| 5. | Points of service | # of branches per 100,000 of adults | 9.4 | 9.1 | 9.6 | 10.2 | 10.1 | 7.6 |

Table 6. Financial inclusion in Azerbaijan based upon GPFi (G20 Basic Set) indicators³⁰.

Although the G20 Basic Set is surrounded with limited information frames, it can be considered a useful tool to observe the status of financial inclusion in the economy at first glance. Financial inclusion in our country is as follows on the pack of extended G20 indicators:

²⁸ Not available.

²⁹ Due to lack of methodology identifying SMEs in Azerbaijan, enterprises and individual entrepreneurs are taken as a whole. At the same time, due to lack of public data on outstanding loans, number of overall loans, including paid ones are taken into estimation.

³⁰ Estimations based upon the data of the Central Bank of the Republic of Azerbaijan.

(<https://www.cbar.az/pages/publications-researches/statistic-bulletin/>)

| № | Category | Indicators | 2016 |
|--|---|--|--------------------|
| <i>Usage of financial services and resources</i> | | | |
| 1. | Formally banked adults | % of adults with an account at a formal financial institution | 164 |
| | | # of depositors per 1,000 adults <i>or</i> # of deposit accounts per 1,000 adults | 50.36 |
| 2. | Adults with credit at regulated institution | % of adults with at least 1 (one) loan outstanding from a regulated financial institution | 33.7 ³¹ |
| | | # of borrowers per 1,000 adults <i>or</i> # of outstanding loans per 1,000 adults | 342 ³² |
| 3. | Adults with insurance | # of insurance policy holders per 1,000 adults (segregated by life and non-life insurance) | n/a |
| 4. | Cashless transactions | # of retail cashless transactions per capita | 0.16 |
| 5. | Mobile transactional use | % of adults that use their mobile device to make a payment | n/a |
| 6. | High frequency of account use | % of adults with high frequency use of formal account | 1.7 ³³ |
| 7. | Saving propensity | Saved at a financial institution in the past year | 5.03 |
| 8. | Remittances | % of adults receiving domestic and international remittances | 0.5 ³⁴ |
| 9. | Banked enterprises | % of SMEs with an account at a formal financial institution | 1.05 |
| | | # of SME deposit accounts/# of deposit accounts <i>or</i> | n/a |

³¹ Estimations based upon indicators of 2015, since indicators of 2016 were not disclosed.

³² Estimations based upon indicators of 2015, since indicators of 2016 were not disclosed.

³³ It is the indicator of the World Bank for 2014, since there is no internal public source on the relevant parameter.

³⁴ The share of the population whose main income source in 2015 was remittances from abroad (source: <http://www.azstat.org/MESearch/details>)

| | | | |
|---|---|---|------------------------|
| | | # of SME depositors/# of depositors | |
| 10. | Enterprises with outstanding loan or line of credit at regulated institutions | % of SMEs with outstanding loan or line of credit | 0.32 ³⁵ |
| | | # of SMEs with outstanding loans/ # of outstanding loans <i>or</i> # of outstanding loans to SMEs/ # of outstanding loans | 0.32 ³⁶ |
| | | | |
| Access to financial services and resources | | | |
| 11. | Points of service | # of branches per 100,000 adults | 7.6 |
| 12. | | # of ATMs per 100,000 adults <i>or</i> | 36.2 |
| | | # of ATMs per 1,000 sq.km | 28.3 |
| 13. | | # of POS terminals per 100,000 inhabitants | 955 |
| 14. | E-money accounts | # of e-money accounts for mobile payments | 5 ³⁷ |
| 15. | Interoperability of Points of service | Interoperability of ATMs | 1 |
| | | Interoperability of POS terminals | 1 |
| Quality of financial services and resources | | | |
| 16. | Financial knowledge ³⁸ | Financial knowledge score | 498 ³⁹ |
| 17. | Financial behavior | Emergency funding source ⁴⁰ | i. 44.2% ⁴¹ |

³⁵ Estimations based upon indicators of 2015.

³⁶ Estimations based upon indicators of 2015.

³⁷ Authors identified through their researches, since no official statistic data are available (“kassam.az”, “Portmanat”, “Expresspay”, “E-pul”, “EasyPay”)

³⁸ Authors conducted a survey among 120 respondents of different age groups and activities to calculate indicators 16 and 17. The respondents included persons with higher and secondary education.

³⁹ Indicates the number of correct answers to total 720 questions (120 respondents x 6 questions). According to the relevant indicator, 69.2% of respondents answered correctly to simple financial questions about inflation, interest rates, compound interest rates, money illusion, risk diversification and the main goal of insurance.

⁴⁰ Under the G20 methodology, emergency funding means 10\$ or 1/25 GDPPC. According to indicators of 2015, GDPPC was \$5558.7 in Azerbaijan, 1/25 of which makes 222.3. At the time of survey 1\$=1.7022 AZN: 222.3*1.7022≈380. Accordingly, the emergency funding in the survey was AZN 380.

⁴¹ Here: i) from friends/relative; ii) work more; iii) sell assets; iv) savings; v) loan from savings club; vi) bank loan; vii) would not be able to find any source.

| | | | |
|-----|------------------------------|--|--|
| | | | ii. 16.7% iii. 1.7% iv. 22.5% v. 0% vi. 10.8% vii. 4.2% |
| 18. | Disclosure requirements | Disclosure index combining existence of a variety of disclosure requirements | 4 of 5 requirements ⁴² |
| 19. | Dispute resolution | Index reflecting the existence of formal internal and external dispute resolution mechanisms | both internal and external |
| 20. | Usage expenses ⁴³ | Average cost to open a basic current account | 5 AZN |
| 21. | | Average cost of maintaining a basic bank current account (annual fee) | 24 AZN |
| 22. | | Average cost of credit transfers | 92 AZN |
| 23. | Credit barriers | % of SMEs required to provide collateral on their last bank loan | 85.5 ⁴⁴ |
| 24. | | Getting credit: Distance to frontier | 67.87 |

Table 7. Financial inclusion in Azerbaijan on extended G20 indicators.

It should be noted with regret that we failed to estimate some of G20 indicators to clearly see where financial inclusion is in the Azerbaijani economy due to lack of public data.

The indicator, that requires greater attention in the mode of access to financial services and resources, is the number of ATMs per 100,000 adults. To compare, the average indicator on Europe and Central Asia, as well as over the world on the indicator in question is as follows⁴⁵:

⁴² The only un-met requirement is the plain language requirement (understandable, prohibition of hidden clauses).

⁴³ Authors used information on tariff rates related to relevant indicators of 27 banks to identify cost of use (there are 31 active banks in the country; 4 of them have not placed relevant data on their websites). Only national currency denominated internal transactions and tariffs were considered on all indicators.

⁴⁴ Source: World Bank, European Bank for Reconstruction and Development. Azerbaijan Enterprise Survey (ES) 2013, Ref. AZE_2013_ES_v01_M. The indicator relates to 2013.

⁴⁵ Source: <http://data.worldbank.org/indicator/FB.ATM.TOTL.P5?end=2015&locations=Z7&start=2011>

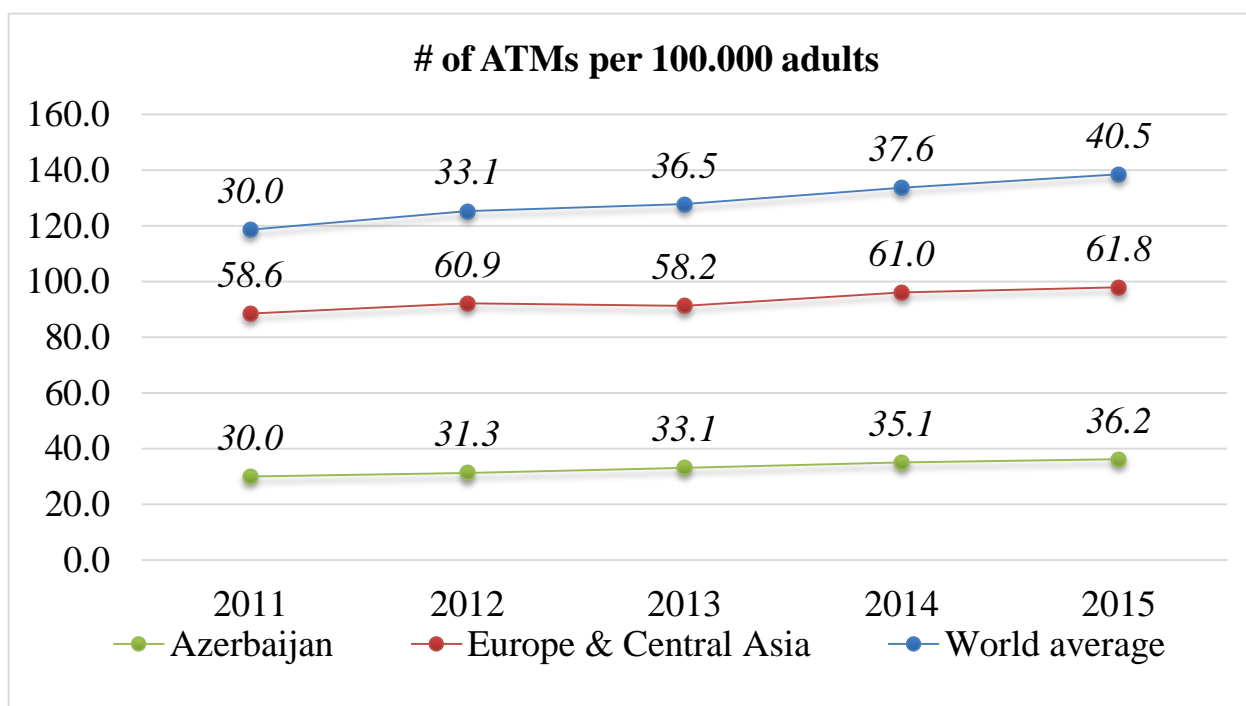


Chart 5. Number of ATMs per 100,000 adults.

As we see from Chart 5 while our country is close to the world average on the relevant indicator, it considerably falls behind Europe and Central Asia.

Proposals to strengthen financial inclusion in Azerbaijan

Evidence from the secured transactions mechanism

Introduction of the Law on Encumbrance of Movable Property is an example of efforts under way to shape a secured transactions infrastructure, which was signed into law by President of the Republic of Azerbaijan on 24 May 2017⁴⁶. The Law regulates the legal regime of movable property encumbrance in connection with enforcement of obligations, rules for exercising the rights of holders of encumbrances on movable property, issues related to imposition of arrest on movable property, maintenance and use of the state register of encumbrance of movable property.

We consider that improvement of the secured transactions infrastructure in our country will be critical in easy access of SMEs and agri-businesses to financial services and resources and their effective use. Hence, we researched and issued

⁴⁶ <http://president.az/articles/23862>

proposals on the secured transactions infrastructure that may contribute to boosting financial inclusion in this section of the study.

Mobile phones should not be ignored as an effective form of movable property. The population of Azerbaijan has reached the level comparable with developed countries in use of mobile communication services. Estimations display that⁴⁷ mobile cellular subscription index per 100 adults in Azerbaijan was 111.28, while registered mobile phone numbers reached 10,697,300⁴⁸ in 2015. It should be highlighted that all mobile phones in Azerbaijan are state registered mandatorily whose owners can be identified during registration. At that, it may be safely said that the population own an item to be pledged as collateral. We may pay attention to the analysis by the author of the paper as follow-up. The research conducted by authors detected that according to the Electronic Government Bulletin by the Ministry of Transport Communication and High Technologies 670,611 mobile devices were registered in Azerbaijan in 2016. In the similar period monthly price per a mobile phone averaged AZN 240.54⁴⁹ in the country. Simple mathematic estimations can determine that average value of mobile phones registered and in circulation in 2016 amounted to AZN 161,308,769. This figure allows to calculate some portion of 'dead capital' to be involved to the circulation as movable property.

Pledging movable property as collateral will trigger the development of agri-sector too. Currently, credit institutions are not so eager to fund agriculture. Let us have a look at the dynamics of investments to agriculture⁵⁰:

⁴⁷ <http://data.worldbank.org/indicator/IT.CEL.SETS.P2?locations=AZ&view=chart>

⁴⁸ <http://www.stat.gov.az/source/communication/>

⁴⁹ Source: The State Statistics Committee of the Republic of Azerbaijan

⁵⁰ Source: <https://www.cbar.az/>

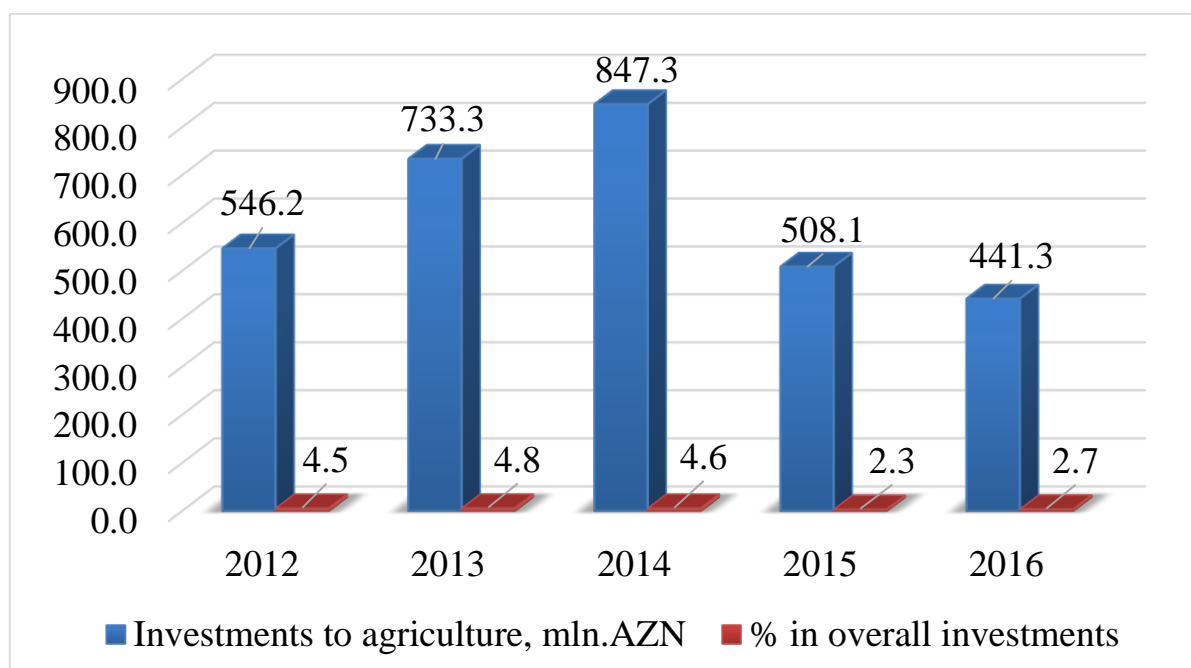


Chart 6. Investments to agriculture in Azerbaijan.

Agricultural lending requires dedicated practical and theoretical knowledge. The number of loan officers in credit institutions involved in agri-lending either dramatically fall behind those in other sectors, or they are nowhere in evidence. Also credit institutions avoid to allocate funds to agriculture without collateral. Currently, credit institutions take real estate, in some instances agricultural machinery from farmers as collateral. Wider scope of encumbrance of movable property will help farmers dramatically. Hence, farmers will be able to pledge cattle and small ruminants they own as collateral. It requires efforts by the state to launch a register allowing to identify available cattle in state farms. Relevant practical measures are already under way in Azerbaijan. A decree on improvement of agri-management and acceleration of institutional reforms was signed on 16 April 2016⁵¹. The decree tasked the Ministry of Agriculture of the Republic of Azerbaijan to launch a system for identification and registration of livestock in an effort to create a reliable database on the current situation in cattle breeding.

We investigated the market to identify relevant ‘dead capital’. The number of available livestock widely used in the country agriculture, as well as their prices

⁵¹ <http://president.az/articles/11447>

are indicated in the below table according to statistic data of 2016⁵². Considering that prices for livestock in the domestic market are volatile due to a number of factors (seasonal, climate etc.), to simplify calculations, the price for each type of livestock is indicated with its imported customs price for 2016:

| № | Livestock | # | Price | |
|---------------|-----------|------------------|---------------------|----------------------|
| | | | Import price, \$ | Final amount, \$ |
| 1. | Sheep | 8,025,600 | 43.2 | 346,705,920 |
| 2. | Cow | 1,187,600 | 3,008.4 | 3,572,775,840 |
| 3. | Goat | 651,500 | 120.1 | 78,245,150 |
| 4. | Buffalo | 115,400 | 652.5 | 75,298,500 |
| Total: | | 9,980,100 | - | 4,073,025,410 |

Table 8. Livestock statistics and their market prices in Azerbaijan in 2016.

Realization of planned actions will result in higher agri-financing meanwhile expanding the spectrum of financial services for agricultural subjects. Agri-lending will be accompanied with a number of risks, necessitating active introduction and development of agri-insurance to minimize them.

Evidence from development of the credit reporting system

As previously noted, as a financial infrastructure element credit reporting systems are critical in deepening financial inclusion. In this context, we should differentiate contrasts between public credit registries and credit bureaus, as well as their roles in the development of credit reporting. In practice, being under state control credit registries are subordinated to financial markets supervisory authorities. Having limited coverage credit registries supply consumers with narrow-spectrum services (mostly only credit reports). Available data in credit registries are usually used to identify tendencies and risks in the sector and take actions to mitigate the latter within offsite supervision.

Credit bureaus differ from credit registries dramatically due to wider coverage and services ‘basket’. They are able to collect information not only from

⁵² Widely used means over 100,000 heads of livestock.

credit institutions, the participant of the sector, but also from retail trade outlets and utilities, mobile operators, leasing companies, even customs and law-enforcement agencies. At that, borrower discipline can be evaluated in-depth on meeting his/her obligations. The following table illustrates credit bureaus' alternative data sources on the basis of findings of ACCIS 2015 Survey (ACCIS represents 44 credit reference agencies across 28 European countries)⁵³:

| Data suppliers | # of countries |
|---|-----------------------|
| Leasing companies | 17 |
| Retail trade outlets selling on hire purchase | 14 |
| Credit unions | 11 |
| Debt collectors | 11 |
| Courts | 10 |
| Telecommunication companies | 6 |
| Television suppliers (cable/satellite TV) | 6 |
| Internet providers | 6 |
| Utility service providers | 5 |
| Home rental companies | 3 |
| Tax authorities | 3 |
| Police | 2 |

Table 9. Alternate data suppliers of credit brueaus in Europe.

Overall, the key goal of both credit reporting components is to obtain information on borrowers' creditability, promote borrower discipline and borrowing reputation, and minimize credit risks in the sector. In general, as an example, the above components can be measured through the share of NPLs in gross loans. In this context, we will strive to determine the link between availability of both credit reporting components and the share of NPLs in the economy. To that end, in the first instance, let us determine the correlation between the credit bureaus coverage and credit registries and the share of NPLs in the economy on recent 5 years based upon the Doing Business report as exemplified by the Azerbaijani economy:

⁵³

http://www.accis.eu/fileadmin/filestore/position_papers/REPORT_ACCIS_2015_SURVEY_OF_MEMBERS_FIN_AL_30112015_compressed.pdf

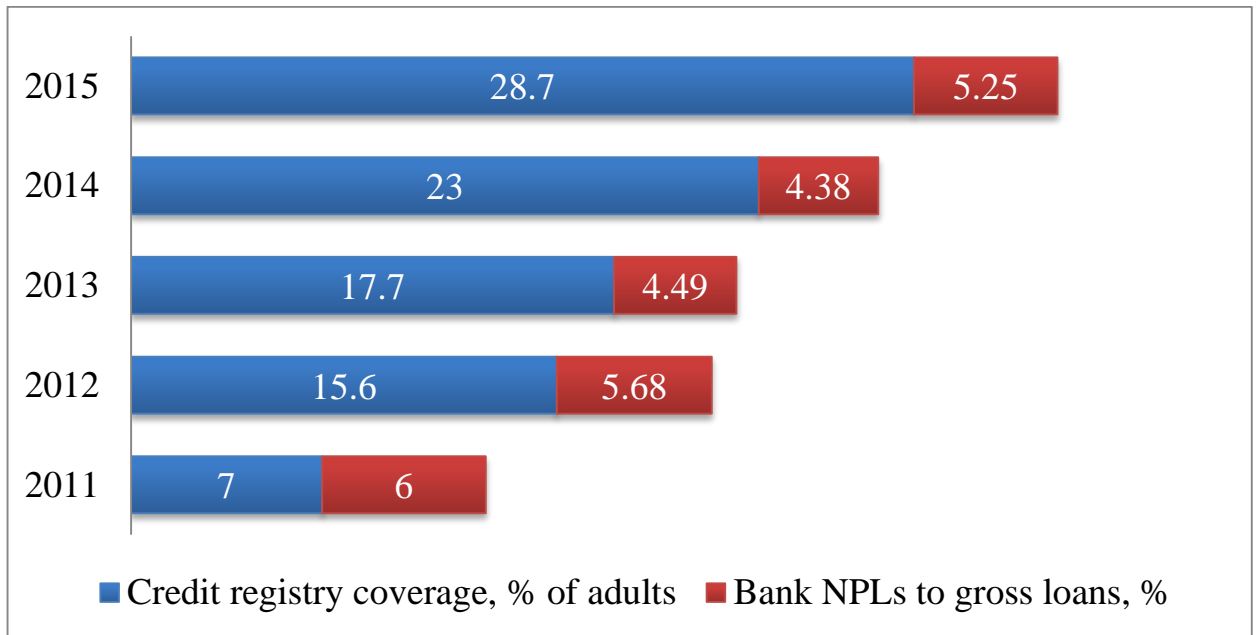


Chart 7. Credit registry coverage and NPLs to gross loans⁵⁴ in Azerbaijan.

Let us define the link between the credit registry in the Azerbaijani economy and % of NPLs in the economy on the relevant indicators:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2]} \sqrt{[n \sum y^2 - (\sum y)^2]}} \dots \dots \dots (1)$$

Here,

- r – correlation;
- x – credit registry coverage;
- y – non-performing loans;
- n – number of periods (here – 5 years).

Based upon the indicators from Chart 7 we calculated that $r = -0.6$. It gives ground to articulate that expansion of the credit registry coverage causes drops in the share of NPLs in the economy.

Similar estimations are possible on the countries that have credit bureaus, rather than credit registries in their economies. Let us exemplify the Kazakhstan and Georgian economies:

⁵⁴ Source: the Doing Business report and the World Bank

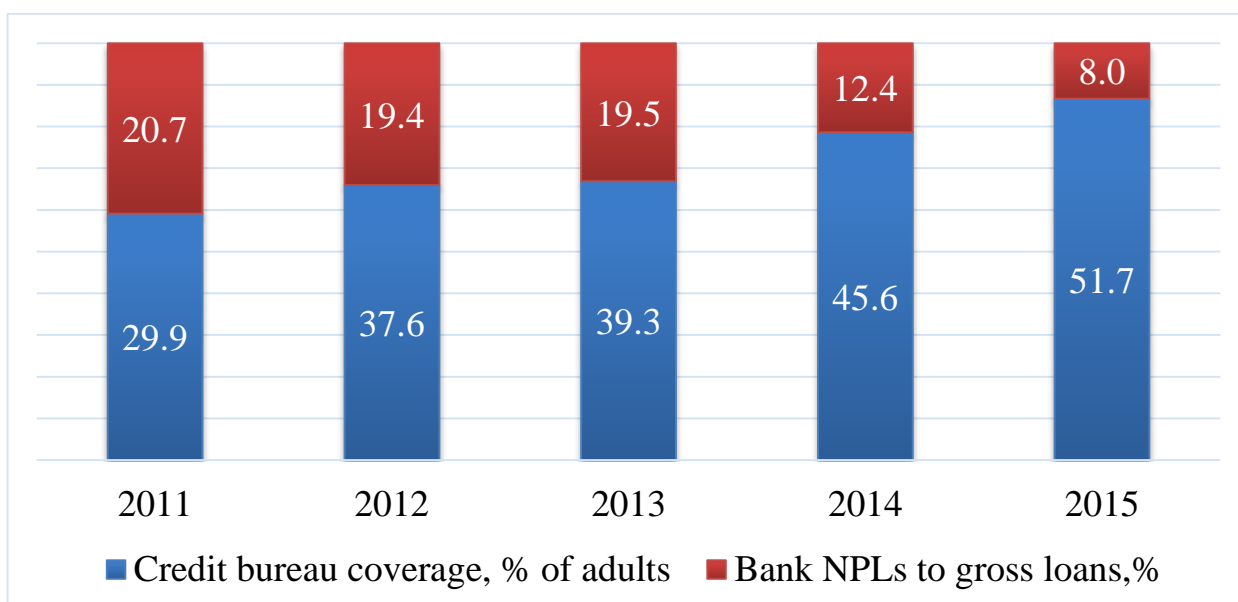


Chart 8. Credit bureau coverage and NPLs to gross loans in Kazakhstan⁵⁵.

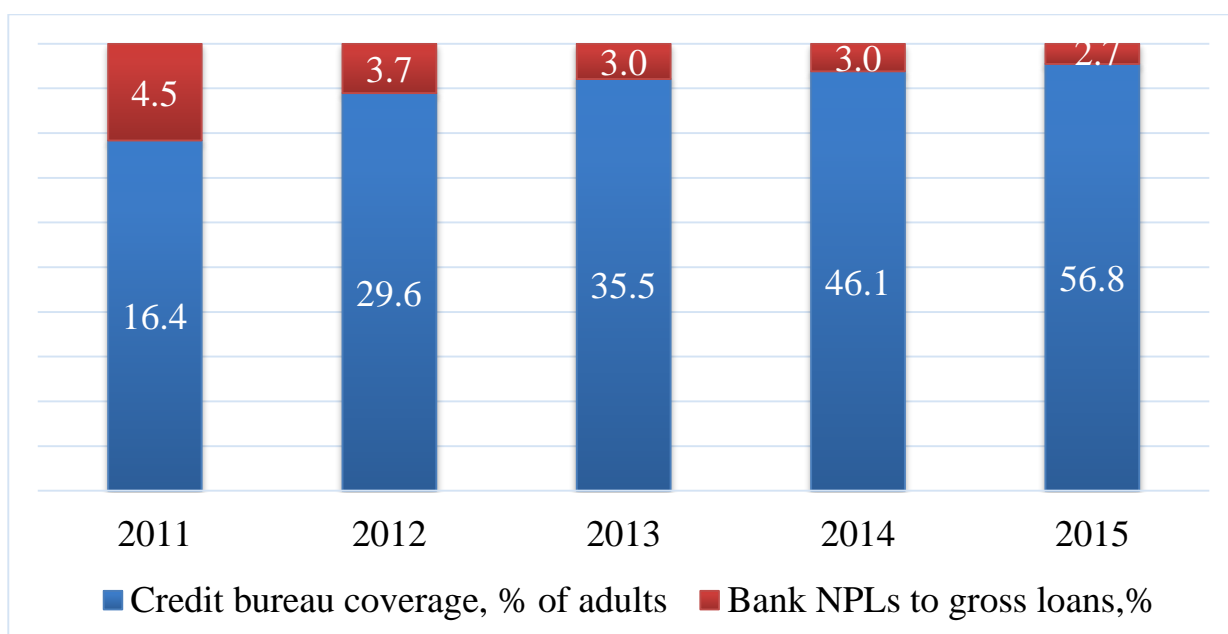


Chart 9. Credit bureau coverage and NPLs to gross loans in Georgia⁵⁶.

Estimations on the Kazakhstan and Georgian economies (Charts 8 and 9) by means of equation (1) revealed that relevant correlation was $r=-0.9$ (absolute negative correlation), i.e. the wider credit bureau coverage, the less is the share of NPLs in the economy. To note, relevant correlation is not always negative since the spectrum of services by credit bureaus and data suppliers vary across countries. For instance, in estimations on the Russian Federation $r=0.5$, which means that

⁵⁵ Source: the Doing Business report and the World Bank

⁵⁶ Source: the Doing Business report and the World Bank

availability of credit bureaus contradicts to the theses about their benefits to the economy. We consider that the reason why this indicator is positive in particular countries needs to be investigated.

The credit reporting system in Azerbaijan has witnessed considerable reforms for development over the past period. The Law on Credit Bureaus took effect on 7 December 2016, determining the normative – legal frame for credit bureaus in the country. One thing that calls for special attention in the Law is the provision on one-off and unchargeable transfer of the data currently available in the credit registry to the first licensed credit bureau. We consider that this fact will be favorable for the investors interested in formation of a credit bureau infrastructure in the country. Hence, data – crucial raw material for effective credit reporting will be obtained without any hindrances and excess cost allowing any startup company to instantly ‘dive’ to the market and operate actively. Moreover, our understanding is that credit bureau operators should focus on leasing. Unfortunately, no any official statistics is available on leasing activities in Azerbaijan. However, independent experts estimated that the size of leasing deals across the country amounted to AZN 200 million in 2014 (0.5% of GDP for the same period). To compare, the indicator in question ranges between 2 – 6% in developed countries⁵⁷.

Evidence from development of payment systems

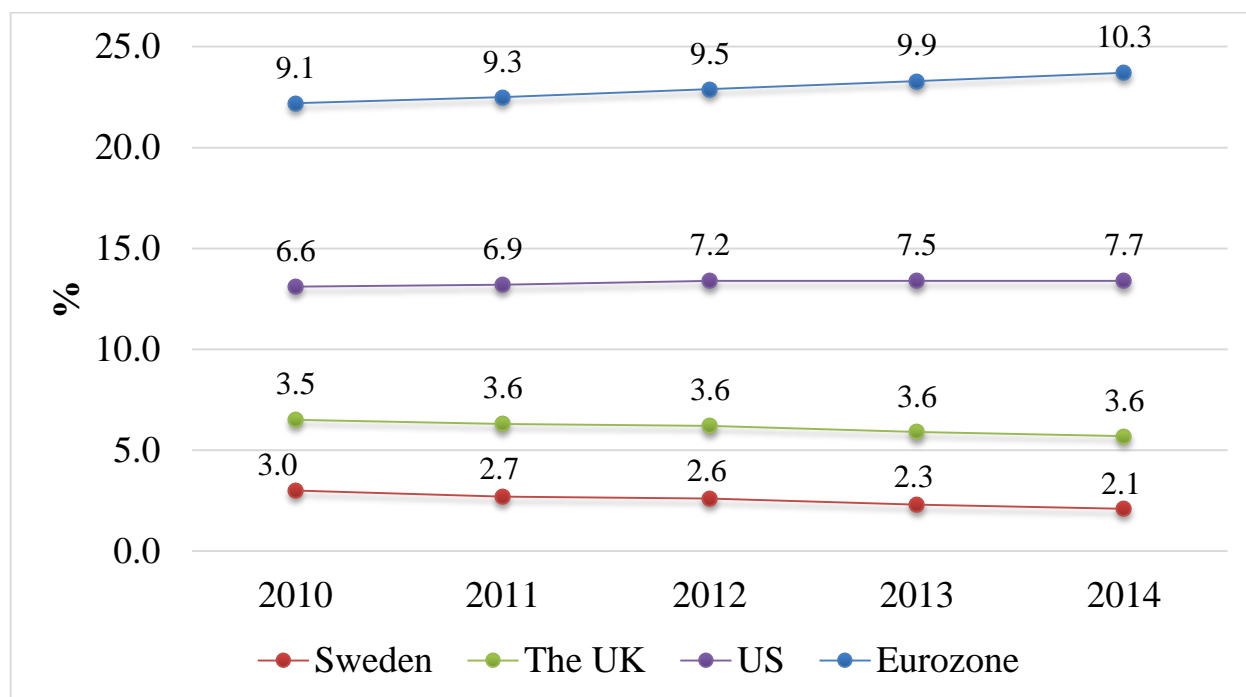
Ongoing development of payment systems in Azerbaijan has always been on the agenda as a priority issue. The government took a number of significant relevant institutional actions, adopted state programs, and outlined future targets of payment systems in nationwide strategic development targets (the ‘Azerbaijan 2020: The Vision of the Future’ concept, Strategic Roadmap on Development of Financial Services in the Republic of Azerbaijan, Strategic Roadmap on Development of Telecommunication and Information Technologies in the Republic of Azerbaijan). Moreover, the key challenge for the relevant area is the

⁵⁷ Source: Ministry of Economy of the Republic of Azerbaijan.

expansion of cashless operations. According to 2016 statistics⁵⁸, AZN 1,29 billion (~\$757 million⁵⁹) worth of operations were conducted with 5,3 million payment cards in circulation in Azerbaijan, out of which 78% (AZN 1,01 billion) account for cash withdrawals from ATMs, while 6% (AZN 78 million) cash withdrawals from POS-terminals.

Another statistic indicator worth attention is the ratio of M0 aggregate (cash outside banks) to GDP. As of end-2016 M0 aggregate amounted to AZN 6,376.9⁶⁰ million in Azerbaijan (10.5% of GDP (AZN 60,393.6 mln⁶¹) for the same period). It should be emphasized that the banking sector of the country loses AZN 350,729,500⁶² worth of funds from the relevant amount of cash being outside the banking circulation (about 0.06% of GDP).

This indicator varies across regions – 8.5% in the Russian Federation, 3% in Kazakhstan, and 5% in Turkey. In general, this indicator was as in the following chart over leading economic zones of the world from 2010 to 2014:



⁵⁸ https://www.cbar.az/assets/3599/Bulleten-2017_mart.pdf

⁵⁹ On the basis of the official exchange rate as at 01 August 2017 (1 \$ = 1.7009 AZN)

⁶⁰ https://www.cbar.az/assets/4267/STATISTIK_BULLETEN_2016_DEKABR.pdf

⁶¹ Source: The State Statistics Committee of the Republic of Azerbaijan

⁶² M0 money aggregate (6,376.9) x 5.55% (interest spread between average interest rates of deposits and average interest rates of loans as of early 2017 (12.05-6.50=5.55%))

Chart 10. Cash to GDP percentage across advanced economies⁶³.

Sweden leads the race in cashless settlements with high penetration of plastic cards to the market, modern payment infrastructure, and other cashless settlements related initiatives (Chart 10). This indicator is expected to hit 0.5% by 2020⁶⁴.

Azerbaijan stepped forward in elevating cashless circulation with the adoption of the Law on Cashless Settlements of the Republic of Azerbaijan in 2016. The Law requires cashless payment of taxes, customs duties and collections, administrative fines and penalties specified in the legislation, financial sanctions and interests, debts on lease operations and issue of loans, along with payment of tuition fees and payments to travel agents in a cashless order mandatorily. The Law stimulates the development of the banking system, yet some challenges are being faced in its enforcement from a practical standpoint. The cash payment culture of so many years is unlikely to be radically replaced with a cashless society without pain. Currently, most payments, from payments for smallest consumer needs of the population to most large-value transactions, are made in cash. Although we can mention only sale and purchase of houses as exceptions (seller places funds to the notary's account with later transfer of the amount to buyer's bank account after the contract is approved) in the context of large-value transactions, even so the process is finalized with encashment in most cases. We consider that, active application of POS terminals in trade outlets may contribute to cashless circulation. Naturally, the process includes installation of POS terminals and overall improvement of acquiring infrastructure alike. According to indicators of 2016, POS terminals were numbering 71,806 in the country: 98.8% of which was installed in retail trade outlets, caterings and other service entities. The same period statistics shows that average monthly number of transactions per POS-terminal was 16.2 (AZN

⁶³ Source: <https://www.worldpaymentsreport.com/>

⁶⁴ <https://www.theguardian.com/business/2016/jun/04/sweden-cashless-society-cards-phone-apps-leading-europe>

1,922.1)⁶⁵. In simple terms, only 16 out of 100 customers of one shop made cashless payment last year.

In the first instance it is critical to overcome mental barriers, as stated above, to attract cash outside banks to circulation, and motivate cashless payments, which requires active literacy events. Any cashless payment user always worries about safety and security, data confidentiality and other parameters. Also anonymity, and lack of any commissioning fees still make cash payments attractive for users.

On the other hand, the number of issued plastic cards needs to be increased. In this context, we should take into account that banks generate fee and commission income from transactions customers make through plastic cards they issue. As the issue of cards and other associated processes require expenses (in most cases banks order cards from outsider processing centers), banks set fees on card sales, and establish limit on funds to be debited to the card account. We consider that, it is advisable for card issuers to hold various promo actions and campaigns to stimulate card payments. Also, accrual of certain premium interest on the outstanding amount in the card account by banks may stimulate card holders to keep their funds cashless. For instance, the Russian Tinkoff bank sets 0% for up to 3,000 rouble cash withdrawals on debit cards, offers up to 30% cash-back in rouble and accrues 7% per annum premium to the balance on the account⁶⁶. With the Turkish Garanti bank's Bonus program cardholders earn bonuses for transactions they make throughout the world⁶⁷.

Conclusion

Financial inclusion is a set of processes that includes access to, usage of and quality requirements on financial resources and services. High financial inclusion directly depends on the country's sustainable financial infrastructure – the secured transactions mechanism, credit data sharing systems, and payment systems are critical in expansion of the financial infrastructure, and easy access of SMEs and other economic agents to finance. The secured transactions mechanism manifests

⁶⁵ Source: The Central Bank of the Republic of Azerbaijan

⁶⁶ <https://www.tinkoff.ru/cards/debit-cards/>

⁶⁷ <https://www.garanti.com.tr/>

itself mainly in availability of a normative – legal frame allowing the encumbrance of movable property and its application in the moveable property register as a mechanism of enforcement. The analyses proved that in the institutional business environment that enabled encumbrance of movable property enterprises had higher access to bank loans. A legislative environment is already in place in our country. Our understanding is that encumbrance of movable property may considerably contribute to agriculture finance, since ‘dead capital’ accounts for a huge share in the above sector.

Credit data sharing, in other words credit reporting systems, are essential in maintaining borrowing reputation, boosting borrowers’ financial discipline and indirectly in minimizing credit risks in the sector. Credit reporting systems include two forms – public credit registries and private credit bureaus. Our research on selected economies identified that ‘data abundance’ – the fruit of wider coverage of credit registries and bureaus, i.e. diverse data delivery by various data suppliers – is disproportionate to the share of NPLs in gross loans in the sector.

One of the most vital challenges faced by the payments infrastructure in the contemporary world is to decrease the share of cash payments in total payment transactions. The issue is pertinent both for developed and developing economies and reformative actions are being taken to solve it. First and foremost, consumers’s thinking should change to boost the cashless society. Cash and its use has always been attractive for a consumer on certain parameters, e.g. confidentiality and no commission fees. Increasing dynamics of cash in the hands of consumers leaves its mark on the economy. Thus, cash in circulation outside the banking system both deprives banks of income and slows down their development to some extent. Plastic card issuers (banks and other companies) need to launch incentive campaigns and reduce tariffs to stimulate a cashless society.

Annexes

Table 1. Global Findex indicators based financial inclusion in Azerbaijan.

| Indicators | Years | |
|---|-------|-------|
| | 2011 | 2014 |
| Use of bank accounts | | |
| % of adults with a bank account | 14,9 | 29,2 |
| Purpose of accounts, <i>including</i> : | | |
| – <i>business</i> | 4,0 | 4,0 |
| – <i>tuition</i> | 0,6 | 0,6 |
| – <i>pay for utilities</i> | 1,6 | 1,6 |
| Frequency of transactions, <i>including</i> : | | |
| – <i>withdrawals</i> | n/a | 87,9 |
| – <i>deposits</i> | n/a | 84,7 |
| Mode of access, <i>including</i> : | | |
| – <i>ATM per 100,000 adults</i> | 29,7 | 31,1 |
| – <i>Branch per 100,000 adults</i> | 9,9 | 9,6 |
| – <i>POS terminals per 100,000 adults</i> | n/a | 112,1 |
| Savings | | |
| % of adults who saved within the past 12 months using a formal financial institution | 1,6 | 5,3 |
| % of adults who saved within the past 12 months using an informal savings club or a person outside the family | 0,6 | 1,6 |
| % of adults who otherwise saved (e.g. in their home) within the past 12 months | n/a | 39,5 |
| Borrowing | | |
| % of adults who borrowed within the past 12 months from a formal financial institution | 17,7 | 18,9 |
| % of adults who borrowed within the past 12 months from informal sources (including family and friends) | 26,9 | 33,3 |
| % of adults with an outstanding loan to purchase home or an apartment | 0,3 | 0,3 |
| Payments | | |
| % of adults who used a formal account to receive funds, <i>including</i> : | | |
| – <i>government payments</i> | 12,6 | 12,6 |
| – <i>wages</i> | 2,5 | 2,5 |

| Indicators | Years | |
|--|-------|------|
| | 2011 | 2014 |
| % of adults who used a mobile phone to maintain transactions within the past 12 months, <i>including</i> : | | |
| – <i>pay utility bills</i> | 0,1 | 0,1 |
| – <i>send money</i> | 0,1 | 0,1 |
| – <i>receive money</i> | 0 | 0 |
| % of adults who used a formal account to receive or send money to family members living elsewhere within the past 12 months: | | |
| – <i>senders</i> | 0,2 | 0,2 |
| – <i>receivers</i> | 0,6 | 0,6 |
| <i>Insurance</i> | | |
| % of adults who personally purchased private health insurance | 1,1 | 1,1 |
| % of adults who work in farming, forestry, or fishing and personally paid for agri-insurance | n/a | n/a |

Table 2. IMF indicators based financial inclusion in Azerbaijan.

| Indicators | Years | | |
|---|--------------|-------------|-------------|
| | 2013 | 2014 | 2015 |
| <i>Access to finance</i> | | | |
| Number of branches of commercial banks per 1,000 sq.km | 8.99 | 9.64 | 9.59 |
| Number of branches of commercial banks per 100,000 adults | 10.13 | 10.72 | 10.52 |
| Number of ATMs per 1,000 sq.km | 29.30 | 31.55 | 32.59 |
| Number of ATMs per 100,000 adults | 33.01 | 35.08 | 35.75 |
| <i>Use of finance</i> | | | |
| Number of borrowers of commercial banks per 1,000 adults | 235.71 | 288.20 | n/a |
| % of outstanding loans with commercial banks in GDP | 25.98 | 30.55 | 38.94 |
| Number of depositors of commercial banks per 1,000 adults | 1,226.5 | 1,881.2 | 2,153.5 |
| % of deposits with commercial banks in GDP | 15.97 | 18.91 | 31.41 |

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