

ATM Network Market Structure and Its Effects on the Number of ATMs and on Cash in Circulation in Kosovo

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Abstract

New knowledge are important factor of economic and social development of a country. Technological progress is the result of research and development efforts at the national and global level and poses great influence in all spheres of life : lifestyle , habits in consumption and living standards in general. Developing a strong banking system is a image of each state. With the distinguished shortcomings and advantages of a place in the monetary system. As an independent Kosovo is strongly felt the need of creating its distinct identity and affirmation. Although at first ATM was not well expected and left a long time use, it is nevertheless one of the most valuable devices that could hold one. In early cardholders not charged a fee, but with this network expansion became necessary because customers now can use their cards abroad. ATMs are simple electronic devices that allow people to withdraw money and check their accounts without having to go to the bank. Using ATMs is indisputable significance for the development of the banking system of the Republic of Kosovo, even though we all know that Kosovo as a transition state has numerous and specific in terms of infrastructure , the issue of security , law infrastructure, political and more other .

Keywords: ATM, card, device, money, account

1. Introduction

Notification for ATM card (Smart Card), and a data transfer from the bank's ATM paved the way for the creation of an open market for ATM use.

Modern ATM customer to use a plastic card with a magnetic stripe that has encrypted customer account number and entering a numerical code called PIN (Personal Identification Number) which in some cases can change using the device.



Fig. 1. Plastic card with a magnetic chip

If the PIN number is entered incorrectly several times, ATM card lock can protect against misuse. Older cards use a feature type to use, modern ATMs and read and write data to the client card (smart card).

Although many are showing early successes of ATM, the corpses can spread is delayed due to the negligence of the banks that do not use due to the small capacity of credit card information. All this made for monetary institutions to delay these devices sill.

Through them can attract money, deposit, make payment of loan installments, to transfer money from one account to another or simply to check account balance. All this is done only using a plastic card to give banks and password. They can be placed in any location, so it will have to go where the bank has offices to make actions.

Other electronic service is called the electronic funds transfer (EFT). ETF using bank transfer amounts of money to another bank by sending an electronic message. In this case you transfer the money need not completed a check. Also the bank does not need to collect checks. Money can move without expecting much. Electronic transfers are made

instantly.

Through an electronic message to a computer instruction given to deduct a certain amount of money from a bank account and to add this amount to another account. The message is sent and the corresponding amount transferred. No movement, but transferred the money equally.

These developments are not widely present in Kosovo. Some banks have installed ATMs and plastic cards emitted. Few other banks offer Internet banking services. Distribution and use of electronic banking is still limited.

This development belongs to the future, perhaps not too distant. Electronic money can not fully replace traditional money.

2. Automatic teller machines ATM

The devices for cash withdrawal ATM - cash machine is a technique used for banking transactions like transferring money, their attraction as well as a range of other banking operations, which will be discussed below.



Fig .2. Cash machine ATM [12]

ATMs are banking automate and perform routine operations which are necessary for the users. They placed near major shops and markets, then near airports and in all places where thought would be frequented.

Withdrawal of money does not mean only from the bank where the client is a member.

By technology this procedure is done very quickly with the introduction of the ATM card and PIN code mark, from a central online verified the accuracy of the provided code and decided to allow the withdrawal of money from ATM.

Simplest ATM are the so-called cash-dispenser, who perform only release cash based on plastic cards. When the customer inserts the card into the terminal and after the identity of the client (PIN personal identification number), he can withdraw money up to a fixed limit. ATMs contemporary performing other operations as well, debit money into accounts, transactions and savings, transfer between these accounts, etc..

3. ATM link

Cash withdrawal machines (automated teller machines) are linked in the computer networks that allow depositors to have access in their accounts in almost every country.

At first the banks not charging a fee cardholders, but facilitate their work and use.

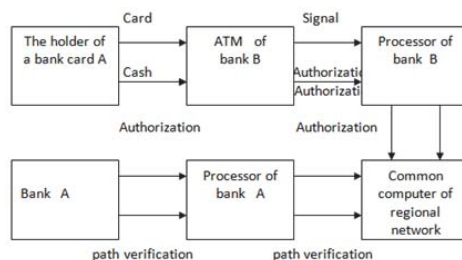


Fig. 3. Communication network client-ATM (scheme)

But it did not last long, as banks began to see profits by partnering with other banks. Initially not charging their cardholders for ATM to ATM use another line. Consequently operate ATM networks deployed several awards as the cost burden on financial institutions.

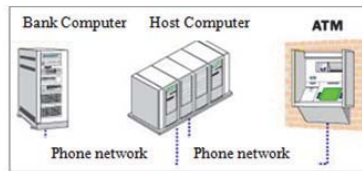


Fig. 4. Link ATM - bank

Most ATMs are connected to different nationally and internationally banks, enabling people to take their deposits from machines not belonging to the bank where they have bank accounts.

This is an important thing for people especially for those who travel, who have the opportunity to withdraw their money in places where his bank has no branches.



Fig. 5: ATMs network for more banks [8]

4. ATM Structure

Teller consists of a number of standards (rules) PC and treasury. Safety depends on its processor. ATM software based on operating systems like Windows XP, Windows 7, 8 and Linux .

They are usually associated with the transaction processor with modem via the telephone line or through the network.

Teller consists of the following equipment:

- CPU - processor to control the entry and completion of the transaction
- Reader of magnetic card or microchip (customer identification). Records information from the card and uses it to access the bank's card holders.
- Pin table (the same sequences of table calculator) for receiving the secret code and a secure communication
- Monitor used by the user for transactions and the steps one after another to perform the desired transaction
- The keypad allows card holders who wants to show what the transaction and the amount you wish to withdraw
- The data printer to secure users transaction report
- Magnifier enable users to listen the signals of buttons
- The housing in which are located all that was mentioned

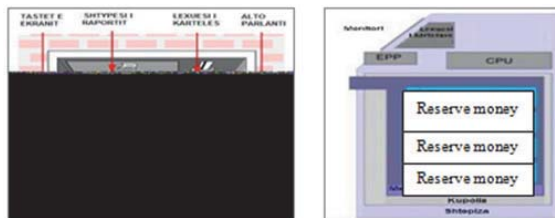


Fig. 6. ATM structure

5. Using ATMs in Kosovo

In Kosovo the use of ATMs has started to appear in 2000/01 and today has reached a fairly high degree of use. While at the beginning of the presentation has been smaller number of banks that have applied this system, today we can say that almost all banks operating in Kosovo have installed ATMs in their branches smaller even where no all subsidiaries.

Banks that offer these services are:

ProCredit Bank, Raiffeisen Bank, Banka Ekonomike, Banka e re e Kosoves
NLB, Banka për Biznes, BKT dhe TEB-bank.

During 2007, the Bank has also introduced Non-stop space for Banking Services. Non-stop space for Banking Services are implemented in most branches open and restored in 2007, where customers are able to use ATMs of Raiffeisen Bank and directly related to Raiffeisen Direct telephone service for questions 24hrs a day / 7 days a week.

ATM Network Pro Credit Bank was extended from 45 to 57 while the POS network has grown to 41%, from 645 in 2007 to 909 POS.

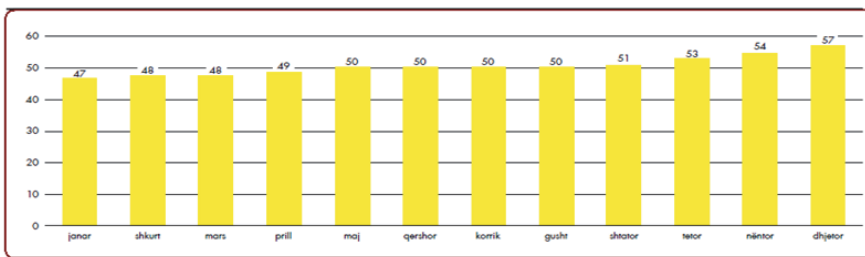


Fig. 7. Number of ATMs Pro Credit Bank Year 2007 [6]

Payment cards are paying the replacement of cash and are associated with the account for transactions. Submit your electronic purse cards. Most of you can withdraw money from ATM, POS-purchase terminals, buy via the internet, to book hotel accommodation or plane ticket. When using your card online, it is necessary for the website to be in Kosovo in the list of countries for custom and secure transaction is calculated as if the website requires CVV2 code transmission, which is located at the rear of card.

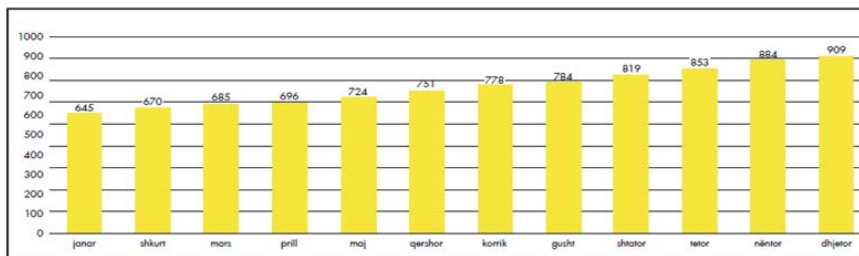


Fig. 8. POS (points of sale) 2007 [6]

Free cards are not used, so before you choose the card, check bank fee for card issuance, annual memberships for its use, provisions for Renewal card lost / stolen or PIN, as well as provisions for withdrawal money from the ATM machine.

Unlike debit cards which allow you pay with your money, credit cards require greater attention by the user. They represent a kind of short-term lending and you can charge as much as consumer loans.

You should be careful in relation to credit limit by your bank approves. Check with the bank employee that way increase the limit, because some banks automatically increase the approved limit (only with written notice, without prior consultation with the client).

Table 1. Number of ATMs use in Kosovo 2007- 2009 [5]

Banks/Years	2007	2008	2009
Pro Credit Bank	57	90	140
Raiffaesien Bank	62	100	130
Banka Ekonomike	48	70	100
NLB Prishtina	54	80	105
BpB	35	65	85
TEB	20	55	65
BKT	38	60	70
Total	314	520	695

With time increased the use of electronic payment instruments of banking clients. Central Bank data show that increasing the number of cards is associated with increased number of ATMs and POS electronic. In late 2009 the banking system was in operation 695 ATMs, with an increase of 25.2% compared with end-2008. Year 2008 there was an approximately 40% increase, an increase that included the entire territory of Kosovo, a large increase in comparison with 2007.

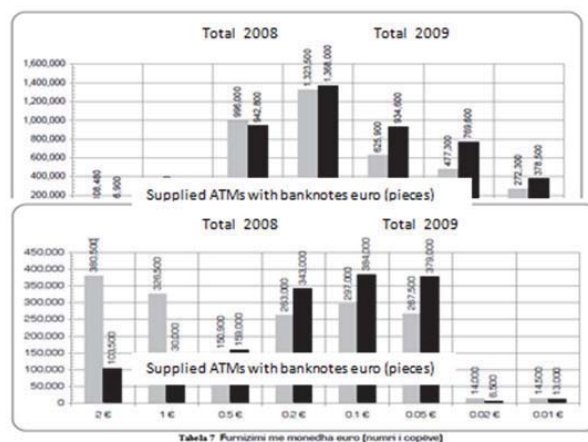
Table 2. Total number of electronic sales 2007- jun 2010 [5]

	2007	2008	2009	Jun 2010
Total number of electronic sales	4387	4458	4544	4680

The total number of electronic POS June 2010 reached 4,680, an increase of 2.9% compared with december 2009. Constantly growing in the years followed as seen in the preliminary tabulation, comparing 2009 with 2008, with a 1.9% increase, while in 2008 to 2007 with 1.6% growth, which means that banks continuously opened electronic point of sale.

6. Supply of ATM with euro coins and banknotes (currency)

Kosovo uses the euro currency. Cash coming from Europe. The Bank is responsible for one of supplying sufficient provided with banknotes and coins.



As shown in the upper figures in 2009, banks in Kosovo supplied ATMs with 4,540,000 banknotes euro amounting to 246,330,500 euro and 1,518,000 euro coins amounting to euro 542,710. Measured by value, cash equipped in 2009 increased approximately 5% compared with 2008. Structure cash supply by denominations changed significantly.

While the supply of low denomination banknotes (banknotes 5, 10, and 20 euros) increased significantly. The supply with 50 banknote euro increased slightly, while the supply of high denomination banknotes (100, 200 and 500 €)

undergo a slight decrease.

Then, the supply of coins small denomination (1 and 2 euro coins - cents) coins and highest denomination (1 and 2 euro coins) decreased, while the supply of other denominations coins increased.

In 2009 banks processed more than 7.3 million euro banknotes and more than 2.8 million coins that were used by bank customers to Kosovo and user guests from other banks. Expressed in value, these uses for each ATM or average amounted to approximately 14532.37 euro for every ATM in Kosovo (695 total).

7. Conclusion

Through the paper given a general overview of ATM as well as their use in Kosovo banks. Although Kosovo providing services through ATMs has started late, but the statistics data for some banks Kosovo's seen the number of ATMs, point of sales, banknotes and other electronic services is constantly growing and modernizing.

This trend is continuing on the banks models developed European countries.

Technology in general and in particular technology information has facilitated human performance in all these matters.

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