

UNDERSTANDING ACCOUNTING PRACTICES ON CARD BASED BANKING OPERATIONS

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ABSTRACT: *The purpose of this study is to survey the accounting of the on-line banking cards operations, based on Romanian experience. Our paper belongs to the technical studies that analyse the concrete way to reflect the cards operations at the level of the banking societies from Romania. The paper contains a study cases part, which presents the concrete methods of accounting reflection based on banking cards operations. We try to underline the importance of a flexible banking accounting system, which should provide the users with the information needed.*

KEY WORDS: *cashless payments instruments, accounting banking settlements, flexible banking accounting system*

1. AIM AND RESEARCH METHODOLOGY

We choose the banking cards as the object of the study based our approach on the importance of the cards in banking field. The cards payments book the attention of the banking customers and of the various authorities, particular central banks. The importance of the cards' utilization in an economy is based on the main characteristic of the cards as a potential substitute for cash. Cards demand central banks to settle monetary policies concerning e-money and to establish the general legal framework of the cards' payment system and their evidence in banks, inclusive the accounting.

In many countries, payments by card represent the vast majority of cross-border retail transactions and are the most common means of effecting payments over the Internet. As for the card market in the euro area, ever since early 2008 card systems in euro were brought into line with SEPA Single Euro Payment Area framework for such payments, whereas the banks that joined SEPA and participate in national card schemes are expected to finalize this process by end-2010. Thus, any cardholder will be able to make payments and withdraw cash in euro across SEPA, in conditions similar to those on national markets.

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Since banking accounting must timely yield the necessary information to make management decisions the preparation of accounting structures should emphasize the economic and financial contents of information rather than keeping a traditional approach where the aim is limited to safeguarding assets and registering liabilities. We underline the need of flexibility in the banking accounting information systems, based on our considerations on the specific features of the banks by comparison with the non-banking entities.

The study is structured on chapters that present the theoretical background in the accounting banking cards operations and new trends in the banking accounting. Also, the paper contains a technical part, which presents the concrete methods of accounting reflection based on on-line banking cards operation. All these mentioned structures allow us to draw the conclusions in the final part of the paper.

In order to support the relevance of our scientific research we will describe the actual stage of knowledge in the area related to the subject proposed, based on concrete references to publications - quoted magazines, international conferences volumes, specialized books etc. - accompanied by the reference bibliography specification.

The direct documentation tasked to assure the information and the knowledge of the related theme were realized at the level of several banks and their accounting experiences in banking cards operations. The paper interprets the accounting of banking cards operations and attempts to identify and analyze the challenges of the banks in bookkeeping of cards operations.

The results based on data for Romanian banks reveal that the accounting of banks in the domain of the cards operations has been improve in the last years, according to the development of the on-line operations with cards. This paper provides specific current information and recommendations regarding the on-line operations with cards and their accounting, that is of interest to a wide audience for a banks, customers and analysts.

2. THEORETICAL BACKGROUND

Studies on accounting of banking cards operations are relatively limited; the specialized papers prefer the descriptive or much too technological approach of banking cards operations or infrastructures. The research papers describe the banking accounting in the context of the e-banking accounting systems (Lin et al., 2005), presented a prototype bank accounting system based on the e-bank framework. The successful implementation of this system will provide banks/customers an increased level of comfort allowing transaction processing to be continued in an accurate, complete and highly controlled environment.

General approaches of the banks' accounting dwell on the harmonization in the banking accounting field (Anagnostopoulos and Buckland, 2007), insisted on the potential behavioural implications of the new economic measurement attributes initiated by the International Accounting Standard Board (IASB) in their efforts to reflect more relevant, "true" underlying economic values as opposed to historical. The study captures perceptions and attitudes as to the future "behavioural" direction of

banks and provides a balanced argument between the rigours of historical cost accounting and fair value accounting.

Another general approach in the domain of the banking accounting refers to relationship between management accounting and organisational strategy, based on the study case of the recent deregulation of the banking industry (Hong Kong example) and the expansion of products that have been offered by banks during the last five years (O'Connor and Cheung, 2007).

Also, without talking in different ways, ignoring the problems of the accounting of the banking cards operations, the specialized literature in the banking cards' domain tends to focus on card frauds and electronic payments. In the '90 years, the cashless society has been described as the place where clumsy and expensive-to handle coins and notes are replaced by efficient an electronic payment initiated by various types of plastic cards is a tantalizing prospect for the twenty-first century (Worthington, 1995).

Others authors focuses on factors influencing satisfaction with Automated Teller Machines (ATMs). Their analysis has shown clear divisions between four different attitudinal types of ATM consumer (disaffected youth, pro-technology, technophobic and cost conscious), only one of which (pro-technology) appears fully satisfied with ATM services. Banks need to use different methods to address the concerns of the other segments (Davies et al., 1996).

The transformation from traditional, "brick and mortar" banking to electronic banking (e-banking) has been momentous (Power, 2000; Weitzman, 2000). Similarly, Chou and Chou (2000) identified five basic services associated with online banking: view account balances and transaction histories; paying bills; transferring funds between accounts; requesting credit card advances and ordering checks.

Prepaid cards (sometimes referred to as stored value cards) are considered as an alternative means of exchange, rapidly supplanting traveller checks, money orders, and even currency (Linn, 2008). The paper recognizes the potential for money launderers to exploit prepaid card products.

The technical solution, networks and security have recently been the dominant themes in the development of payment systems. For example, TARGET is considered the main instrument in serving the monetary policy needs of the Eurosystem and in promoting the integration of the euro money market (Driga and Nita, 2008). Matthews M. analyze the behavior of the banks' customers to view all their online banking accounts. It is examining the progress of account aggregation, the means by which consumers can view all their online banking accounts on the same PC screen (Matthews, 2006).

A study realized by Lassar explore the relationships between banking consumer innovativeness, self-efficacy on the Internet, Internet attitudes and online banking adoption, while controlling for personal characteristics (Lassar et al., 2005). The study examines the adoption of e-banking and how personal innovation attitudes, internet-related self-efficacy, type of web use, and demographic characteristics affect adoption.

Others authors examine reinstated or re-aged credit card accounts are likely to default again. Their findings have some important implications for lenders, consumers,

and investors in credit card securities. Lenders managing post default payment performance of re-aged credit card accounts must anticipate additional defaults and corresponding losses when gauging the potential success and failure of the program. Lenders can use the results of mentioned study to encourage account specific re-aging programs since a large portion of the accounts do cure and in turn, can avoid charge-off, providing significant savings to the lender. Additionally, the lenders should rely on public information in managing re-aged accounts as opposed to private information (Agarwal et al., 2008).

Recent studies used peer group analysis to find anomalous transactions, in the context of plastic card fraud detection. They have demonstrated there are plastic card transaction accounts that evolve sufficiently closely to enable fraudulent behaviour to be detected. Using real world data consisting of high transaction volume accounts, they showed three months of transaction history was adequate to produce peer groups that could usefully track a target for at least one further month. They have also shown that they can screen accounts to determine which are more likely to be amenable to peer groups analysis (Weston et al., 2008).

In a study made by Whitrow card fraud is considered, however, a notoriously fast-changing phenomenon, which responds to market conditions as well as to the measures taken by financial institutions against it. They consider the problem of identifying whether a credit or debit card account has been compromised by fraud. That is, we are interested in whether the account has been subject to fraudulent activity.

There are two main levels on which we may approach this question: transaction level and account level. The most important conclusion to draw from this work is that the aggregation period has a major impact upon the performance of classifiers for fraud detection. The lesson for practitioners is that they should pay at least as much attention and care to selecting appropriate aggregation periods as they do to selecting the best modelling techniques (and fine tuning their parameters) (Whitrow et al., 2009).

At the national level, the majority of the references to the accounting of the banking cards operations belong to some authors, that emphasize the main stroke of the banking accounting – the banking accounting follows and reflects the money flows between entities account holders, through payment documents (Cristea, 2007: 88), (Mureşan et al., 2002: 23), (Zaharciuc, 2000: 128).

The mentioned papers present theoretical descriptions of the accounting of the banking cards operations and a few case studies on cards operations at the ATMs, without analyse the accounting of the cards used at EFTPOS or on-line, based on payment through Internet. In the beginning of the new banking accounting system, in 1998, the fundamental approach in the field (Temeş and Mureşan, 1998) do not make mention about the accounting of the banking cards operations. The reason of this behaviour was very simply - the regulations on accounting in banks from that period do not stipulate any account regarding to the cards operations (Chart of accounts for the banking societies, Order of Ministry of Public Finance and of NBR no. 1418/344, 1997).

The banking field was not enough developed in such a way as to be required a distinct method to reflect the cards operations in the banks' accounting. Subsequent,

the development the banking activities in Romania implied the establishment of the distinct accounts to reflect the current account of a banking card. It was configured an analytical account of the account 2511 "Current accounts" to reflect the operations of the card holder (Chart of accounts for the credit institutions, Order of Ministry of Public Finance and of NBR no. 1282/4, 2002).

3. NEW TRENDS IN THE BANKING ACCOUNTING

Accounting did not appear to play any role in the recent bank failures (example, in the United States during 2008 and the beginning of 2009, which are possible to be the results of growing probable credit losses and concerns about assets quality). There are suspicions that reveal the accounting manipulations employed by banks to engage in speculative activities and hide risks.

Nevertheless accounting remains an artificial construct designed to ensure some measure of uniformity in financial reporting of the banks and in this way, it offers confidence for the investors and for all the users of the financial statements. The accounting of the banks is important and it protects the users of the financial reporting and supports their future decision regarding the bank.

Fortunately, there are specific rules in banks' accounting, derived from the particular statute of the banks in an economy; banks can be recognized as the public interest entities. Once established the situation of banking cards operations, we approach the importance that accounting has at the level of Romanian banking societies.

All the banks and the national banking supervisor - National Bank of Romania - have an interest in the quality of banking accounting, including the accounting of banking cards operations. The interest of National Bank of Romania in the development of an accounting reporting system of quality at the level of the bank societies is resulting also from the obliged settled to the bank to make starting with the financial situations on the year 2006, the financial situations according with the International Financial Reporting Standards IFRS. Those situations were necessary for the information of different categories of users others then the State institutions (Order of Ministry of Public Finance no. 907, 2005). This regulation refers to the credit institutions that are required to apply IFRS, without mentioning about the preparation of the financial statements compliant with EU Directives.

In 2006, a new Order presents the statutory obligation to prepare financial statements compliant with the EU Directives for all the companies in addition to the preparation of the IFRS financial statements (Order of Ministry of Public Finance no. 1121, 2006). In Romania, the banks apply International Financial Reporting Standards IFRS when making the consolidated annual financial situations. In the relation with the State institutions the banks prepare the annual financial situations according with the EU Directives. Banks may prepare the annual financial statements according to IFRS for their own information needs or for the need of the others users, excepting the State institutions.

The actual stage of development in the Romanian banking system reveals a banking system that needs to follow a complex transformation process for the premises

of the Basel II Agreement's and EU Directives' efficient application to be guaranteed. The first element that had to be configured was the specific national legislation.

The National Romanian Bank is given an important part in this standardizing measure. The harmonization of the national legislation in the field with the European one means transposition into the National Bank of Romania regulations of the guidelines issued by European System of Central Banks. The last main issued settlement regarding the accounting in the banking field is Regulation No. 13/2008 of National Bank of Romania regarding the conformity of the accounting regulations with EU Directives for the credit institutions, non-bank financial institutions and Deposit Guarantee Fund in the Banking System – Romania. This is significant settlement in the banking accounting area, compulsory regulation for banks since the beginning of 2009 year.

So, for the moment, in Romania, the banking societies prepare their financial statements according to the EU Directives and the IFRS are used only for the preparation of the consolidated annual financial statements. Also, the banks are free to adopt the IFRS for their own information needs (or for the others users' needs, excepting the financial institution which represent the State). Recent events in the banking filed suggest that reporting under IFRS will be allowed or required for the public entities around the globe within the next few years.

The banks' choose (or compulsory way) to adopt IFRS will generate a predominate effort to conversion the actual national settlements according to EU Directives. The national accounting regulations differ in key ways comparatively with IFRS, including their fundamental premise. The national regulations are more the rules-based settlements, whereas IFRS are more principles-based. IFRS will affect the banks' financial statements and IFRS is expected to have effects at levels of the IT infrastructure system, including accounting. And, not in the last time, the resource needs may be significant.

4. THE ACCOUNTING OF THE VIRTUAL CARD DISCOUNTS FOR PAYING THE SHOPPING ON THE INTERNET

We present the concrete methods of reflection in the accounting field of the banking cards operations. In this sense, in the bank accounting field, we analyze concrete methods of reflection based on on-line banking cards operations.

The unprecedented development of the Internet in the last years determined the emergence of numerous websites of the companies that offer products and services, organize on-line auctions, provides information pages for money etc. Paying ways for the goods and services contracted on-line by Romanians are connected directly with the virtual cards designed for the Internet payments, whereas for now, Romanians have limited access to other paying systems.

As a rule, in order to effectuate a purchase on the Internet on the basis of a virtual card, at first a natural or legal person must be in the possession of a classic card (generally a debit card), which also has associated a virtual card.

The person who wants to buy a virtual card from a banking unit will ask the bank for a real card, associated to the virtual one. He will pay the bank in cash, on the

basis of a cashing order, a minimum sum for opening the card account and the fee for issuing the classic card. The banking unit will register the cash deposit of a minimum sum in the client's card account and cashing an issuing fee of the classic card. In a few days, the client will be the holder of a classic card and, if the client asks it, the banking unit will also give him the associated virtual card, designed for shopping on the Internet. An important aspect is that each of the two cards has its own account: the account of the physical card and the account of the associated virtual card.

When possessing the real card and the afferent PIN, in order to shop from the Internet, the client will firstly feed the card physical (generally through a transfer from the current account opened at the bank) on the basis of the order given by the account manager. The banking unit will register the transfer of the funds from the current account in the real classic card account. After the real card account is fed, the client will carry on the feeding of the associated virtual card through any ATM of the bank.

The feeding procedure of the virtual card implies: the introduction of the physical card into the ATM, pressing its PIN, choosing option to transfer the virtual card. After these operations are performed in the account of the virtual card, which the bank initially delivered it with zero balance, there will be a balance transferred by the client from its classical card. The banking unit will register the sums transfer from the classic card account into the virtual card account: 2511.C "Current accounts", analytic available in the client's card account = 2511.V "Current accounts", analytic available in the virtual card account of the client.

Once the card was fed, the client will then resort to accessing a virtual shop from a computer connected to the Internet. In order to make an order in the accessed virtual shop there are more steps to be done. First, with a view to make an on-line order, the desired product is selected by pushing a button like buy/add into the basket etc., which is placed in the right side of every product, thus sending the selected product into a virtual shopping basket. With a view to complete the order, the client must be previously authorized.

The authorization consists in introducing the e-mail address and the password. After the authorization, a button will be accessed to complete the order, and then an order page will be opened, from which will be selected an option to continue. Then another page will open from which will be selected the way in which the chosen product should be delivered (courier, post-office etc.), the city where the package will be received and the paying modality.

Second, the chosen paying modality is the one done with the help of the virtual card. Now, the client will be connected to the on-line ISP (Internet Suppliers Payment), to which is connected the web dealer who will ask the necessary information in order to process the payment: the mark of the respective virtual card (MasterCard, VISA etc.), the name of the owner: client, expiration date, the code of the virtual basket.

Once this information is obtained, the ISP e-commerce platform will transmit it to the card agency they are working with, together with the sum to be paid, the transaction fee (% from the shopping value), and the dealer's account number. All the transmitted information are encrypted and sent by the paying processor through a secured communication line to Interchange Network Processor (INP), afferent to the virtual card's mark.

The INP communicates with the dealer's bank on a secured line; in its turn, the dealer's bank makes contact with the bank of the buying client, with a view to check if the necessary funds are available. If the answer is affirmative the transaction is completed and the dealer's bank sends a resulted code, like a verification number, to ISP. ISP forwards this code to the soft that intercedes the shopping (shopping card software), who process the data and then announces the client that the transaction is successfully completed. After the payment is done, the buyer presses the "place the order" button. After this final command, the Internet buying procedure is over, and the client waits to receive the package containing the product he ordered.

The counter value of the goods and services bought on-line, either in RON Romanian currency or foreign currency, is discounted from the RON account attached to the virtual card. For the foreign currency payments, based on the international discounting day, the bank of the paying client will participate in buying foreign currency by auction, discounting the operation at the bank's auction rate of exchange, from the holder's card account.

If the payment is effectuated in RON, the banking unit of the buying client will register the transfer of the sum owed to a banking unit of another bank / to another banking company in the country. If the owed sum is ought to the dealer who has an account opened at another banking unit of the same bank: 2511.V "Current accounts", analytic available in the virtual card account of the client = 314 "Inter-banking discounts", analytic another banking unit of the same bank.

If the owed sum is ought to the dealer who has an account opened at a banking unit of another bank, the owed sum will be inter-banking registered: 2511.V "Current accounts", analytic available in the virtual card account of the client = 1621 "Other owed sums", analytic to the on-line dealer's bank. The banking unit of the payer will reflect the transfer of the sum owed to the dealer's bank: 1621 "Other owed sums", analytic to the on-line dealer's bank = 111 "BNR Current account".

If the payment is done in foreign currency, the banking unit of the paying client will register the conversion of the foreign currency sum to be paid, after the auction of the sum from the virtual card account of the client: 2511.V "Current accounts", analytic available in the virtual card account of the client = 3722 "The counter value of the exchange position" (The sum owed to the on-line dealer RON). In the same time, is registered the obligation towards the bank from abroad: 3721 "Exchanging position" = 1621 "Other owed sums", analytic to the on-line dealer (The sum owed to the on-line dealer in foreign currency).

The payment of the obligation towards the foreign bank is registered through correspondent accounts: 1621 "Other owed sums", analytic to the on-line dealer = 121 "Account correspondent to banks – nostro" (The sum owed to the on-line dealer in foreign currency). The banking unit of the payer will hold from the current account or from the reserve account into classic or virtual card account of the payer client the commission afferent to the payment effectuated by the on-line dealer: 2511/C/V "Current accounts", analytic available in the current account of classic / virtual card of the client = 7085 "Incomes regarding the payment modalities".

5. DISCUSSION AND CONCLUSIONS

Our detailed study identifies the specific rules in banks' Romanian accounting, including in the book-keeping of the banking cards transactions. For the information to be reliable, the banking accounting has to base on generally implemented principles, norms and technical procedures. The role of the National Bank of Romania in this building is major. Its rules include specifications regarding to accounting practice. The banking cards operations do not make exception from this approach. We identify the disparities between the banks in the accounting of the banking cards operations, but only in the analytical ways to reflect the transactions. The concrete methods of reflection in the accounting field of the banking cards operations at the ATMs, EFTPOS and on-line allow us to say that the Romanian banks apply the compulsory accounting standards, established by National Bank of Romania.

Nowadays, the development of the cashless payment system is obvious and the cards play a prominent part in the future viability of the cashless society. We presented the major reference points of the actual status of the national card payment market. We underlined the challenges regarding the frauds with cards and the means to eliminate or reduce them (example 3-D Secure Standards). Also, we described the implications for Romania of the SEPA Card Framework (Single Euro Payments Area). SEPA meant to ensure an adequate level of efficiency and competition on the national card markets, capable of fostering important economies of scale and secure high competitiveness to the European economy.

Considering that the cards are an issue of great interest for banks and customers alike, we recognize the importance of a flexible banking accounting system, which should provide the users with the information needed. The real study of the accounting registrations of the banking cards operations gives us the possibility to sustain the importance of the analytical banking accounts. To reflect the cards transactions, banks have to open an analytical accounts on the basis of synthetic account (as in accordance with the Chart of Accounts for the credit institutions, issued by the National Bank of Romania).

Every bank shall decide the structure and parameters of analytical accounts individually, depending on general criteria and own needs. Regarding banks transparency and disclosure of accounting information banks abide by the national banking legislation and their settlements regarding the accounting of the banking cards operations. We remark the current trend and the compulsory requirements for Romanian banks to comply with the national legislation in the banking field.

The banks may use an analytical account to reflect the banking transactions by cards - an analytical account for the current account of the banking client, called 2511 "Current accounts". At the first examination, there is not anything uncommon in this approach, but if we analyse the substance of the "Current account", we will discover that it reflect all clients' transactions realized by the opened current account - payments, cashing, receipts, funds transfers between the accounts etc. So, in the banking accounting is very difficult to identify the real matter of this account, without an adequate way to symbolize and evidence the current account of the banking customer.

Banks have to settle the proper automatically accounting methods to establish the analytical account of a current account, their symbols and meanings. Banking accounting system is almost fully automatized and technology allows identification of all the transaction and their substance. There is essential just to make an algorithm to fix the details of a current account in order to reflect the operations with banking cards.

We point out the limits of our research of the accounting of the banking cards operations (at ATMs, EFTPOS and on-line), studied only conformable to the national regulations according to the European Union Directives. Also, we suggest future directions of studying, based on the accounting approach of this theme according to IFRS International Financial Reporting Standards.

The questions that remain are if IFRS offers an opportunity to use principle-based accounting and what are the differences in comparison with the actual voluminous accounting banking rules.

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