

# **BIG DATA IN ROMANIAN BANKING SECTOR: WHAT ARE THE CRITERIA ROMANIAN CONSUMERS CONSIDER WHEN CHOOSING BANKING PRODUCTS?**

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## **ABSTRACT**

*Over the past decade, Romanian Banking sector has known a substantial growth in terms of the variety of services and products that are meant to attract larger groups of consumers than before. Marketers and analysts developed different offers in order to satisfy consumers' demand for lower credit interest rates and associated risks, higher savings rate, online services or a longer time to repay a credit. In order to see how Romanian consumers choose their provider of financial products and services, we conducted a research among persons that either contracted credits or deposits, either have a current bank account. The results have showed that the large number of elements taken into account by Romanian consumers when it comes to engaging in a long term relationship with a bank can be classified in groups and analyzed with the help of Big Data Analytics.*

# Big Data in Romanian Banking Sector: What are the Criteria Romanian Consumers Consider When Choosing Banking Products?

*Based on their analysis appealing offers can be developed to attract and maintain customers and improve customer experience.*

**Keywords:** Banking Products, Consumer Buying Behavior, Big Data

**JEL:** M31, G21, P46

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## 1. INTRODUCTION

In a market economy, the banking system fulfills the function of attracting and concentrating people's savings and channeling them through an objective and impartial process of credit allocation to those efficient investments.

Unfortunately, the data presented in the latest Global Findex World Bank report, which is published every three years show that in Romania the number of people who own banking products is getting smaller and smaller. If three years ago, 61% of Romanians had a bank account, now only 58% own such a product. Moreover, Romania is one of the countries whose people receive their salary or allowance/retirement in cash. The small number of Romanians holding a bank account places us in the vicinity of Rwanda, Paraguay or Montenegro.

Consumers of financial and banking services are looking to satisfy two of their main needs in the relationship developed with the financial banking organizations: first one is concerning balancing consumption over time through deposits and loans (the main products on the banking market) and the second one consists of transferring money between different parties. In addition to these basic financial needs, most clients need advice on the purchase of the various products that banks make available to their clients. Most of the time, people become banks' clients by their own will, but there is also the possibility that they have bank accounts which were opened and agreed by the company they were working with, in order to receive the salary.

At consumer level, in the purchase decision process, all subconscious and conscious stored information generated during the time of interaction with all elements that make reference to the banking sector play a significant role. This information represents vast and varied data that in the end are concretized in the final consumer decision, making up for the *Big Data* terminology.

By analyzing consumer Big Data, marketers can have access to valuable insights in answering critical questions related to the market, producers/retailers, brands, products, prices, promotional and advertising techniques in the banking sector.

In the paper 'Marketing Financial Services', Ennew et al. (2000) consider that in order for a bank to survive on the market on which it operates, its employees must achieve the bank's goals by setting the needs and wishes of their targeted customers and delivering them the best products they need, in a more efficient way than their competitors.

## 2. ROMANIAN BANKING PRODUCTS

Developing new products and services is the most important action in order to gain competitive advantage in the financial banking field. In the book by Ehrlich (2004) it is mentioned that, the concept of novelty it's a relative one, because only 10% of the products launched by the banking financial institutions are really new. (Ehrlich, F.D., 2004, p. 63). The novelty of financial products may result from: "changes in technology (ATMs); changes in consumer requirements; (Edgett, 1993, pp. 33-35).

Banks, in addition to the products they make available to their clients, also offer different services that customers can benefit from. The products and services offered by the Romanian financial and banking institutions can be summarized as follows:

| Products:       | Services:                     |
|-----------------|-------------------------------|
| - Debit cards   | - Intra / interbank transfers |
| - Credit Cards  | - Intra / interbank payments  |
| - Personal Loan | - Cash collection             |
| - Mortgage Loan | - Receipts and cash payments  |
| - Term Deposits | - Exchange                    |

The trend that dominates the current banking financial environment on the Romanian market is to provide integrated financial products to help customers achieve maximum satisfaction by purchasing a single product. For example, obtaining a house purchase credit gives the client the opportunity to access several bank products such as life insurance or purchased property insurance. (Products that are otherwise required in Romania to obtain credit). In this way, the client benefits from several products offered by the same bank and the banking institution gains both from the relationship with that client and from the partnership relations he has with the insurance companies. In Ehrlich's, F.D. opinion (2004), the defining features of financial banking products can be synthesized as such:

- Bank products are characterized by multiple possibilities of personalization in relation to the type of client to whom they are addressed;
- Bank products have a pronounced degree of immateriality, because they are part of the service domain;
- The basic components of banking products are relatively standardized (from the necessity to comply with a set of legislative norms);
- The life cycle of banking products is very long;
- Bank products are strongly conditioned by the legal framework;
- The creation of new products and services represents the most important source of competitive advantages in the financial and banking field.

The communication of the financial banking institutions with their clients consists in a specific combination of advertising tools, personal sales, sales promotion and public relations. It can be said advertising is a form of non-personal promotion of a service or product and includes printed matter (flyers, brochures), radio or television advertising, large banners which can be seen by a large audience, all in order to convince people for the idea of security, brand, trust.

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In banking field, personal sale is the most effective promotional tool, due to direct customer contact, and that helps to understand and create the buyer's preferences and convictions and finally to stimulate them to buy the specific bank product. According to Popescu, I.C. (2003), sales force requires a long training effort and needs to be further refined. A skilled salesperson can keep the client's interest awake in order to establish a long-term, beneficial relationship for the company, and that person may promote the bank products through an oral presentation or in a conversation. So, sales promotion has the role of capturing the buyer's attention, providing him the information needed to purchase the promoted product / service, relying on short-term incentives.

Public relations help to create a favorable image of the company communicating permanently with public institutions, economic agents, including individuals interested in the products of the enterprise. The activities included in the promotional mix of a financial-banking institution are designed to compete for a set of communication goals such as building a picture that is most conducive to the organization and creating its reputation, differentiating the bank from its competitors, customer interest in the products and services offered by the bank. Mass media, such as the press or television, are used by banks in a very high proportion, around 80%, to promote products to individuals, especially through advertising.

"The image of a bank can be considered as the most important capital of a financial-banking institution and creating a long-term relationship between a bank and its clients can be considered as the major goal of promoting the image of the institution" (Danila, 2004, p. 55).

### 3. BIG DATA IN THE PURCHASE DECISION OF BANKING PRODUCTS

Consumers are constantly generating large and varied amounts of data as technology is developing at a faster pace than ever. The Internet revolution along with all the online technologies has been transforming the way consumers make purchase decisions. "Big Data is where the data volume, acquisition velocity, or data representation limits the ability to perform effective analysis using traditional relational approaches or requires the use of significant horizontal scaling for efficient processing" (Cooper and Mell, 2012).

As Hofacker, Malthouse and Sultan (2016) note: "Big Data have the potential to further our understanding of each stage in the consumer decision-making process. While the field has traditionally moved forward using a priori theory followed by experimentation, it now seems that the nature of the feedback loop between theory and results may shift under the weight of Big Data".

When it comes to implementing a bank's strategy, Big Data Analytics technologies play a significant role through the insights that can offer for improving service provision and for building a unique customer experience. Moreover, with the help of Big Data, analysts in the banking sector can recognise in real time users' behavior on the e-banking portal, registering each taken action. By merging the new collected data with historical insights, the view over consumers' needs could gain another meaning (Lehrer et al., 2018).

## 4. RESEARCH ON CONSUMERS BUYING BEHAVIOR OF BANKING PRODUCTS

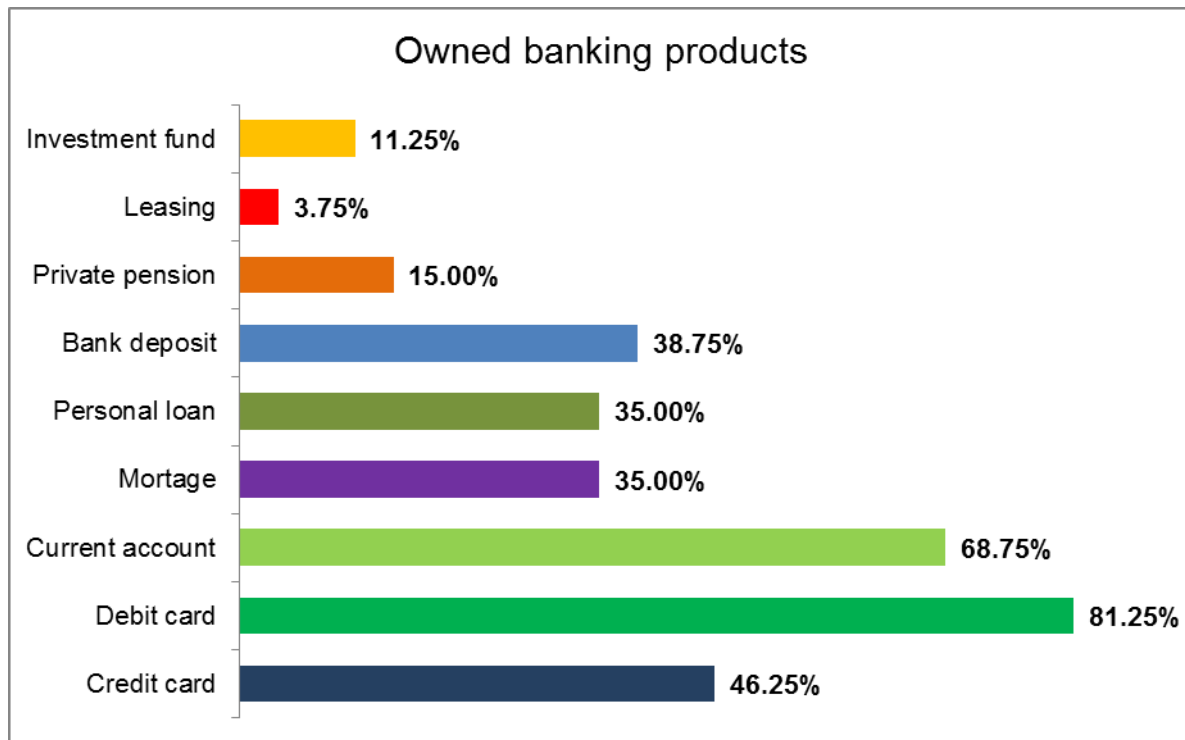
### METHODOLOGY

It was conducted a survey among 80 respondents, locals from Romania in order to identify what are the criteria Romanians consider when choosing a specific banking product, according to their financial needs. In the survey, the respondents were asked questions that helped in contouring their purchase behavior in the case of banking products. Another objective was to identify which are the risks associated to the buying process that could make them change their intention of purchase.

The criteria used in the selection phase were the work environments. Thus, persons that work in the banking system and have employee benefits were excluded from the research.

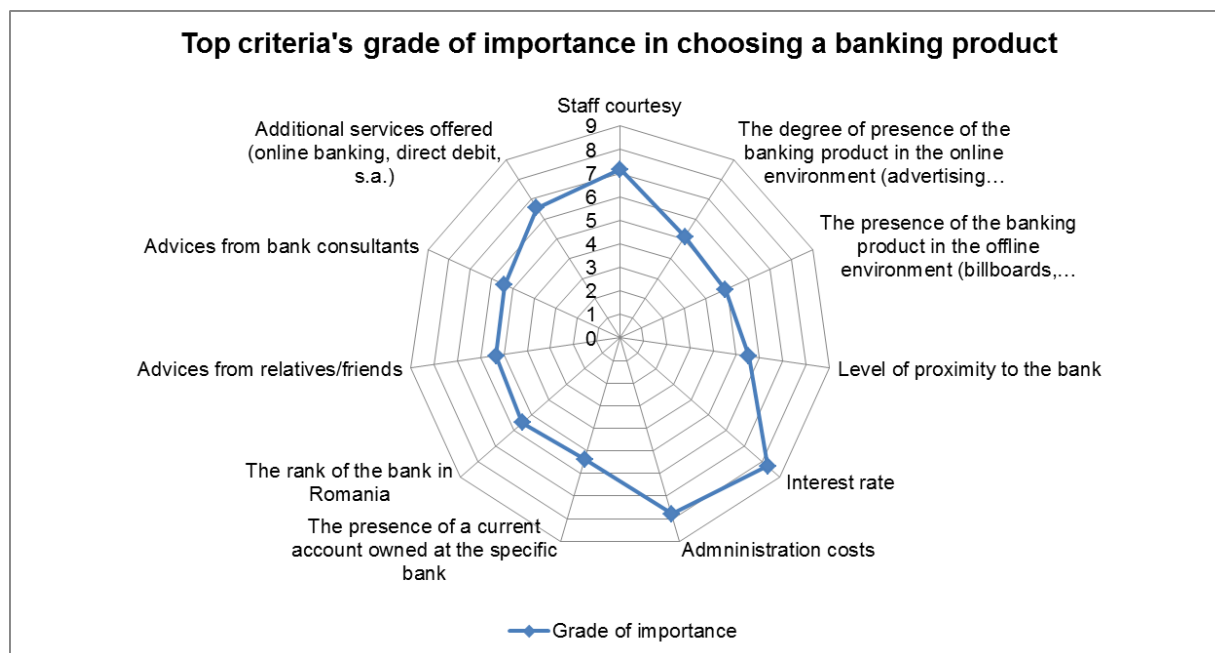
### Findings and Discussion

Among banking products, the *debit card* is the most owned one (in percent of 81), being followed by a *current account* (in percent of 69). 45% of respondents declared they have a *credit card*. The least owned banking products are *leasing* (3.75%) and *investment fund* (11.25%).



After analyzing the criteria considered by the respondents in choosing a banking product, we concluded that *interest rate* and *administration costs* are the top criteria in making the purchase of the specific banking product, followed by *staff courtesy* (7.16 degrees of importance on a 0-10 scale) and *additional services offered* (6.57 degrees). Moreover, the level of proximity to the bank is of higher importance (5.53 degrees of importance) than *the degree of presence of the banking product in the online environment (advertising spots, forum discussions, etc.)* (5.11 degrees of importance).

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### Concluding Remarks

Romanian banking sector is on an emerging trend when it comes to consumers' purchasing behavior. The most important two criteria when it comes to making the purchase choice for banking products are the *interest rate* and *administration costs*.

There is still a lack of information amongst residents in financial/banking areas, given by the fact that for a large group of people *staff courtesy* is more important than *the rank of the bank in Romania*, than *additional services offered (online banking, direct debit)* and *advices from financial consultants*.

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