

# Considerations Regarding Applications of Financial Instruments in Accounting Systems

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## Abstract

*The purpose of this paper consists in the succinct presentation of a set of considerations of the author regarding the applicability of financial instruments in the accounting systems of entities. We must observe the impact of Information Technology applications on the implementation of financial instruments in the accounting of entities. Financial instruments offer options for financing the activities of entities, compared to the -classic- appeal to bank financing. We can appreciate that new opportunities are opening up in the modern accounting of entities for the formalization of the registration of financial instruments. The widespread applicability of new software products of Information Technology, easy access to high-speed Internet communication, data storage in the cloud - all are incentives of a new paradigm in entity accounting. We can appreciate the innovative character, opening up new possibilities for enhancing the digitized processing of information on financial instruments in the accounting computer systems.*

**Key words:** financial solutions, accounting, technologies

**J.E.L. classification:** M41, G32

## 1. Introduction

On the topic of regulation of the digital domain of financial instruments, there are views on growing concerns about the abuse of market power by major platforms, about the extent of their control over data, as well as about the harm caused not only to consumers, but also for society. Some of these platforms have become dominant and almost indispensable to consumers, who, not having many options, tend to use the same ones and show no desire to change. Such platforms are often compared to utilities, in the sense that users feel that they cannot do without them, readily accepting the terms of use. The question arises to what extent, through the application of competition policy, certain problems generated by digital platforms can be solved. There are views that, at some level, it might be more effective for such platforms to be regulated - to ensure open and non-discriminatory access for all businesses and to provide a level playing field - rather than attempting an ex-post approach to competition issues. ([www.bnr.ro](http://www.bnr.ro))

Another concern with dominant digital platforms is their neutrality. One way to ensure this may be to apply the doctrine of essential facilities in the case of dominant platforms, similar to the regulation of the telecommunications sector, where the enterprise that owns or operates the infrastructure and has its own telephone and/or mobile operator is obliged to provide access to other telecommunications operators, at a fair rate. The application of the essential facilities doctrine could help prevent abuse of dominant position by platforms operating similar infrastructures while allowing them to maintain their economies of scale. ([www.bnr.ro](http://www.bnr.ro))

There are views that the application of antitrust law alone would be inadequate to regulate the information industries. One reason is that competition enforcement is triggered by consumer price manipulation and other occasional abuses of market power, which are not the most problematic aspects. As a solution, the application of the principle of separation is suggested, by which to manage power in the information economy. According to this principle, those who develop information, those who own the network infrastructure used, and those who control access must be separated. The three pillars of implementing the principle would be sectoral regulation, antitrust enforcement and self-regulation based on corporate norms. ([www.bnr.ro](http://www.bnr.ro))

## 2. Theoretical background for the application of financial instruments in accounting systems

The European Union has adopted regulations that encourage innovative technology companies, generically called third party providers -TPPs - to enter the financial banking markets.

The European directives eliminate banks' monopoly over customers' banking data and fundamentally change the way payment operations are carried out and account information accessed, by opening up the payment services market to TPPs (Amazon or Google). The new EU Payments Directive was justified by the need to bring regulation in the field of electronic payments up to the current technological level. ([www.bnr.ro](http://www.bnr.ro))

The use of derivative financial instruments becomes an achievable goal for wide categories of entities, entities that turn to credit institutions for quasi-monetary resource needs. ([www.bnr.ro](http://www.bnr.ro))

Thus, banks will be obliged to grant TPPs access to customers' financial data (only with the customer's consent), including allowing them to execute customer-initiated transactions (only in the case of payment accounts available online), through APIs (application programming interfaces). The TPPs can subsequently develop applications for visualizing/analyzing the financial situation, payments, and other types of financial services addressed to bank customers, based on the data extracted from the banks' databases. Although it stipulates the need to open customer databases to Fintech companies, the European directives do not impose a specific approach (common API or individual solutions), leaving the freedom for local regulatory bodies to adopt the most appropriate approach for the market they regulate. ([www.bnr.ro](http://www.bnr.ro))

Currently, the process of data integration and communication of TPPs with banking institutions is hampered, as each bank is free to grant access to the database through its own interface. To access the services offered by banks, TPPs are forced to implement a different interface for each bank their clients work with. At the market level, this benefits banks with large market shares and disadvantages small banks. The imbalance comes from the fact that each collaboration between a financial services provider and a bank will translate into a specific implementation. ([www.bnr.ro](http://www.bnr.ro))

Developing, implementing and managing a large number of interfaces is inefficient for TPPs. Therefore, they will aim to connect with banks that have as many customers as possible. From the perspective of financial banking institutions, the option of individual APIs may seem the most accessible, with the costs for these implementations being borne by each individual banking institution. ([www.bnr.ro](http://www.bnr.ro))

## 3. Research methodology. Evolution of financial instruments used in accounting - empirical aspects of research

The research methodology used in this article consists of the empirical research of a data set available on the Internet and the construction of models of accounting records.

Financial instruments currently register an extension in the accounting of credit institutions.

Banking regulations in the European area have increased operational costs (including compliance costs, capital requirements, etc.), making banks less competitive, especially compared to banks in other jurisdictions. Increased regulatory and compliance costs have put downward pressure on earnings, and as a result, banks have achieved cost reductions mainly through general restructuring. The resulting disadvantages varied, but were generally more significant for smaller firms than for larger ones. Additional compliance costs derive from risk monitoring practices required by law. ([www.bnr.ro](http://www.bnr.ro))

The principle of proportionality, which looks at a bank's size, risks, business model and complexity, must be taken into account in this regard. Without disturbing the level playing field, the implementation of regulations must avoid imposing overly complex rules or creating a disproportionate administrative burden. ([www.bnr.ro](http://www.bnr.ro))

Following the financial crisis of recent years, the introduction of regulatory and supervisory norms has become imperative. To ensure their correct and effective implementation, employees must be trained and possibly retrained on these new rules, and highly specialized personnel in the legal and information technology departments are needed. These necessary additional costs can be significant for some institutions. ([www.bnr.ro](http://www.bnr.ro))

#### 4. Findings. Survey on the evolution of the use of financial instruments in the accounting of national entities

Interested users in the banking industry have found that business models have changed rapidly in recent years. The Payment Services Directives have opened up the sector even to third parties (FinTech, BigTech) and unregulated banking (non-banking financial institutions). This has caused an evolution in banking service models, particularly in the payments industry, with an increased presence of fintech. According to the common instructions of the users of the bank financial statements, the information technology departments take over technical and operational duties, with the potential for further reduction in the number of employees. The universal banking model has offset the impact of the financial crisis in some member states. Regulation made high-risk banking unattractive, which affected banks' competitiveness. There has been a massive downsizing of bank branches, not only due to regulatory requirements, but also due to digitalisation, consolidation, mergers and acquisitions and increased costs. ([www.bnr.ro](http://www.bnr.ro))

The profitability problems and disadvantages caused by regulations that European banks have faced compared to those under other legislations have led to a renewed strategic approach and structural changes, including to the banking model. ([www.bnr.ro](http://www.bnr.ro))

While banking business models must be considered in the development of new regulations, these models must be adopted where appropriate. ([www.bnr.ro](http://www.bnr.ro))

Users of European bank financial statements in the banking industry indicate that the playing field is unfair, due to competition from non-banking financial institutions, FinTech companies and BigTech companies, which are not subject to the same regulations as traditional banks. These companies do not face the same regulatory/compliance costs as traditional European banks. For employers who provide high-quality, well-paid jobs within a European social model, as well as for the employees who carry out these activities, it is essential that European banks remain globally competitive. Users of bank financial statements wish to be reminded that the European banking sector has an additional competitor in its immediate vicinity, with the potential to exacerbate already existing adverse effects. ([www.bnr.ro](http://www.bnr.ro))

Banking regulations have helped spur a rise in FinTech companies and accelerated the digitization of the banking industry, for example through verification tools, automation, information sharing and data protection, among others. This will define the new professional universe, in addition to legislation. ([www.bnr.ro](http://www.bnr.ro))

Users of bank financial statements point out that increased cost pressure should not be the main driver of introducing a more agile working style and division of duties. Changes in the professional universe of the future are also stimulated by other factors, such as digitization, new technologies and globalization. Digitization can be accelerated by regulation, but it is a separate trigger. ([www.bnr.ro](http://www.bnr.ro))

As digital technology reaches higher levels of maturity, users of bank financial statements recognize that digitization is useful for increasing productivity. ([www.bnr.ro](http://www.bnr.ro))

#### 5. A case study of the accounting records for financial instruments

Table no. 1 Table of transactions related to the case study for financial instruments

Transactions	Textual description of the transactions
January 1, 2023	The entity Sprint33 contracted on 01.01.2023 a loan of 2,000,000 monetary units (mu), guaranteed by a term deposit with capitalized interest, issued by the banking entity MoneY99 (Nicolae, 2010).
01.01.2023	The term deposit is established
01.01.2023	Transfer the 1st installment of 500,000 mu from the credit
01.04.2023	Transfer the 2st installment of 500,000 mu from the credit
01.07.2023	Transfer the 3st installment of 500,000 mu from the credit
01.10.2023	Transfer the 4st installment of 500,000 mu from the credit
31.12.2023	Capitalized interest in the amount of 120,000 mu related to the term deposit is recorded
31.12.2023	The calculated interest related to the loan in the amount of 240,000 mu is recorded
31.12.2024	Capitalized interest in the amount of 100,000 mu related to the term deposit is recorded

31.12.2024	The calculated interest related to the loan in the amount of 250,000 mu is recorded
31.12.2025	The capitalized interest in the amount of 110,000 mu relating to the term deposit is recorded
31.12.2025	The calculated interest related to the loan in the amount of 260,000 mu is recorded
31.12.2026	The capitalized interest in the amount of 130,000 mu related to the term deposit is recorded
31.12.2026	The calculated interest related to the loan in the amount of 290,000 mu is recorded
01.01.2027	The loan owed is repaid
01.01.2027	The term deposit is liquidated

Note:

**Debit = D**

**Credit = C**

Source: Case study data proposed by the author

### Accounting data

(Accounting records made by the author)

The following operations take place in the Debtor's accounting:

*Table no. 2 Registration of the establishment of the term deposit used as a guarantee*

Account - D	Account - C	Amount
<i>Financial instruments – Term deposit in guarantee</i>	<i>Available in electronic currency</i>	2,000,000

Source: Calculations and records made by the author

*Table no. 3 Installment 1 of the loan is transferred*

Account - D	Account - C	Amount
<i>Available in electronic currency</i>	<i>Financial instruments – Loan secured by term deposit</i>	500,000

Source: Calculations and records made by the author

*Table no. 4 Installment 2 of the loan is transferred*

Account - D	Account - C	Amount
<i>Available in electronic currency</i>	<i>Financial instruments – Loan secured by term deposit</i>	500,000

Source: Calculations and records made by the author

*Table no. 5 Installment 3 of the loan is transferred*

Account - D	Account - C	Amount
<i>Available in electronic currency</i>	<i>Financial instruments – Loan secured by term deposit</i>	500,000

Source: Calculations and records made by the author

*Table no. 6 Installment 4 of the loan is transferred*

Account - D	Account - C	Amount
<i>Available in electronic currency</i>	<i>Financial instruments – Loan secured by term deposit</i>	500,000

Source: Calculations and records made by the author

*Table no. 7 Capitalized interest in the amount of 120,000 mu related to the term deposit is recorded*

Account - D	Account - C	Amount
<i>Financial instruments – Term deposit in guarantee</i>	<i>Financial gains related to financial instruments - time deposit</i>	120,000

Source: Calculations and records made by the author

Table no. 8 The calculated interest related to the loan in the amount of 240,000 mu is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial expenses related to financial instruments - Credit guaranteed by term deposit	Available in electronic currency	240,000

Source: Calculations and records made by the author

Table no. 9 Capitalized interest in the amount of 100,000 mu relating to the term deposit is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Term deposit in guarantee	Financial gains related to financial instruments - time deposit	100,000

Source: Calculations and records made by the author

Table no. 10 The calculated interest related to the loan in the amount of 250,000 mu is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial expenses related to financial instruments - Credit guaranteed by term deposit	Available in electronic currency	250,000

Source: Calculations and records made by the author

Table no. 11 Capitalized interest in the amount of 110,000 mu relating to the term deposit is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Term deposit in guarantee	Financial gains related to financial instruments - time deposit	110,000

Source: Calculations and records made by the author

Table no. 12 The calculated interest related to the loan in the amount of 260,000 mu is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial expenses related to financial instruments - Credit guaranteed by term deposit	Available in electronic currency	260,000

Source: Calculations and records made by the author

Table no. 13 Capitalized interest in the amount of 130,000 mu relating to the term deposit is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Term deposit in guarantee	Financial gains related to financial instruments - time deposit	130,000

Source: Calculations and records made by the author

Table no. 14 The calculated interest related to the loan in the amount of 290,000 mu is recorded

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial expenses related to financial instruments - Credit guaranteed by term deposit	Available in electronic currency	290,000

Source: Calculations and records made by the author

Table no. 15 The loan owed is repaid

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Loan secured by term deposit	Available in electronic currency	2,000,000

Source: Calculations and records made by the author

Table no. 16 The term deposit is liquidated

<b>Account - C</b>	<b>Account - D</b>	<b>Amount</b>
Available in electronic currency	Financial instruments – Term deposit in guarantee	2,460,000

Source: Calculations and records made by the author

The following operations take place in the Creditor's accounting:

*Table no. 17 Recording the receipt of the term deposit used as collateral*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Available in electronic currency	Financial instruments – Term deposit in guarantee	2,000,000

Source: Calculations and records made by the author

*Table no. 18 Installment 1 is deducted from the loan*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Loan secured by term deposit	Available in electronic currency	500,000

Source: Calculations and records made by the author

*Table no. 19 Installment 2 is deducted from the loan*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Loan secured by term deposit	Available in electronic currency	500,000

Source: Calculations and records made by the author

*Table no. 20 Installment 3 is deducted from the loan*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Loan secured by term deposit	Available in electronic currency	500,000

Source: Calculations and records made by the author

*Table no. 21 Installment 4 is deducted from the loan*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial instruments – Loan secured by term deposit	Available in electronic currency	500,000

Source: Calculations and records made by the author

*Table no. 22 The subsidized interest in the amount of 120,000 mu relating to the term deposit is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial expenses related to financial instruments - Credit guaranteed by term deposit	Financial instruments – Term deposit in guarantee	120,000

Source: Calculations and records made by the author

*Table no. 23 The interest collected related to the loan in the amount of 240,000 mu is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Available in electronic currency	Financial gains related to financial instruments - time deposit	240,000

Source: Calculations and records made by the author

*Table no. 24 The subsidized interest in the amount of 100,000 mu relating to the term deposit is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Financial expenses related to financial instruments - Credit guaranteed by term deposit	Financial instruments – Term deposit in guarantee	100,000

Source: Calculations and records made by the author

*Table no. 25 The interest collected related to the loan in the amount of 250,000 mu is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
Available in electronic currency	Financial gains related to financial instruments - time deposit	250,000

Source: Calculations and records made by the author

*Table no. 26 The subsidized interest in the amount of 110,000 mu relating to the term deposit is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
<i>Financial expenses related to financial instruments - Credit guaranteed by term deposit</i>	<i>Financial instruments – Term deposit in guarantee</i>	110,000

*Source:* Calculations and records made by the author

*Table no. 27 The interest collected related to the loan in the amount of 260,000 mu is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
<i>Available in electronic currency</i>	<i>Financial gains related to financial instruments - time deposit</i>	260,000

*Source:* Calculations and records made by the author

*Table no. 28 The subsidized interest in the amount of 130,000 mu related to the term deposit is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
<i>Financial expenses related to financial instruments - Credit guaranteed by term deposit</i>	<i>Financial instruments – Term deposit in guarantee</i>	130,000

*Source:* Calculations and records made by the author

*Table no. 29 The interest collected related to the loan in the amount of 290,000 mu is recorded*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
<i>Available in electronic currency</i>	<i>Financial gains related to financial instruments - time deposit</i>	290,000

*Source:* Calculations and records made by the author

*Table no. 30 The credit granted is collected*

<b>Account - D</b>	<b>Account - C</b>	<b>Amount</b>
<i>Available in electronic currency</i>	<i>Financial instruments – Loan secured by term deposit</i>	2,000,000

*Source:* Calculations and records made by the author

*Table no. 31 The term deposit is liquidated*

<b>Account - C</b>	<b>Account - D</b>	<b>Amount</b>
<i>Financial instruments – Term deposit in guarantee</i>	<i>Available in electronic currency</i>	2,460,000

*Source:* Calculations and records made by the author

## 6. Conclusions

In my opinion, the applicability of financial instruments in the accounting system of entities will register a multiple expansion in the future. The possibilities generated by the use of information technology systems require a flexible approach to financing options through various financial instruments. Thus, entities will have the opportunity to access additional financing options for exploitation and investment activities. In this way, conditions are created for attracting monetary resources quickly, with sustainable costs.

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