sciendo

MIFID II and EMIR impact on Romanian banking system performance

Miruna M. VASILCA
Bucharest University of Economic Studies, Bucharest, Romania
vasilcamirunam@gmail.com

George ANTON
Bucharest University of Economic Studies, Bucharest, Romania
antongeorge15@stud.ase.ro

Alexandra CHEPTIȘ
Bucharest University of Economic Studies, Bucharest, Romania
cheptisalexandra@gmail.com

Alin I. VID
University of Economic Studies, Bucharest, Romania
vidalin15@stud.ase.ro

Abstract. *MIFID II/MiFIR represents comprehensive financial market reforms in trading and settlement of financial instruments. The greatest impact of the new regulatory framework in the banking sector relates to pricing, trading, and reporting of banking products and classification of financial institutions. The new role of the financial market infrastructure provides more protection for bank customers and significantly increases market transparency. Banks are required to show their customers the best execution price on the relevant trading venues, transaction costs and market behavior. The regulation will be aligned with other financial market regulations of over-the-counter markets and market abuse protection to avoid regulatory overlap - European Market Infrastructure Regulation (EMIR). The new regulatory framework requires the banking sector to fully comply with the rules governing the banking system of the European Union. Banks must incur significant costs in order to restructure internal processes, acquire new technological support, and forego additional profits in competitive and transparent markets. This study analyses the impact of MiFID II/MiFIR and EMIR implementation on local banks' performance (credit institutions, Romanian legal persons). Using a unique dataset from banks that have been operating in Romania over the period 2004-2020, it is shown that the implementation of the new regulatory framework did not affect the net trading income ratio of the selected banks. Moreover, the average trading asset ratio in the post-financial crisis period increased in comparison with the average trading asset ratio in the pre-financial crisis period. Local banks that took advantage of the large economies of scale obtained due to branch banking did not reduce their investment banking activities and product offerings to customers in the period following the introduction of the regulatory framework. Most of the costs of implementing the new regulatory framework were borne only by the ultimate parents of the controlled Romanian subsidiaries. All subsidiary banks benefited equally from these economies of scale.*

Keywords: **MIFID II, MiFIR, EMIR, bank regulation, trading activities, financial market**

Introduction

The Global Financial Crisis has highlighted the need for a safer and more transparent market for over-the-counter derivatives (OTC). The European Council responded by adopting the Markets in Financial Instruments Directive (MiFID II)/Markets in Financial Instruments Regulation (MiFIR) and the European Market Infrastructure Regulation (EMIR). MiFID II (a complement to MiFID I)

DOI: 10.2478/picbe-2022-0069
© 2022 M. M. Vasilca; G. Anton; A. Cheptiș; A. I. Vid, published by Sciendo.
This work is licensed under the Creative Commons Attribution 4.0 License.

and MiFIR aim to create a safer, sounder, more transparent and more responsible European financial system by adequately regulating all market and trading structures. EMIR also aims to reduce counterparty risk and increase transparency, stability and regulatory oversight of the financial system in general and the OTC derivatives market in particular.

This research analyses the impact of MiFID II/MiFIR and EMIR on banks' performance. Banks have been used to complying with complex regulations for many years (Smith et al., 2013). Therefore, it would be interesting to see how banks handled compliance with the new regulations.

MiFID II/MiFIR and EMIR have several common themes (e.g. central clearing, reporting and risk management) that should not be considered in isolation, regardless of implementation deadlines. Derivatives market participants should fundamentally rethink their trading strategy, clearing process, reporting framework and risk management techniques. The time to migrate to integrated trading, clearing, risk management and reporting solutions has arrived.

Literature review

1. Regulations timeline

1.1 EU-Level implementation

The indicative dates of the implementation process of EMIR and MiFID II can be seen in Figure 1.

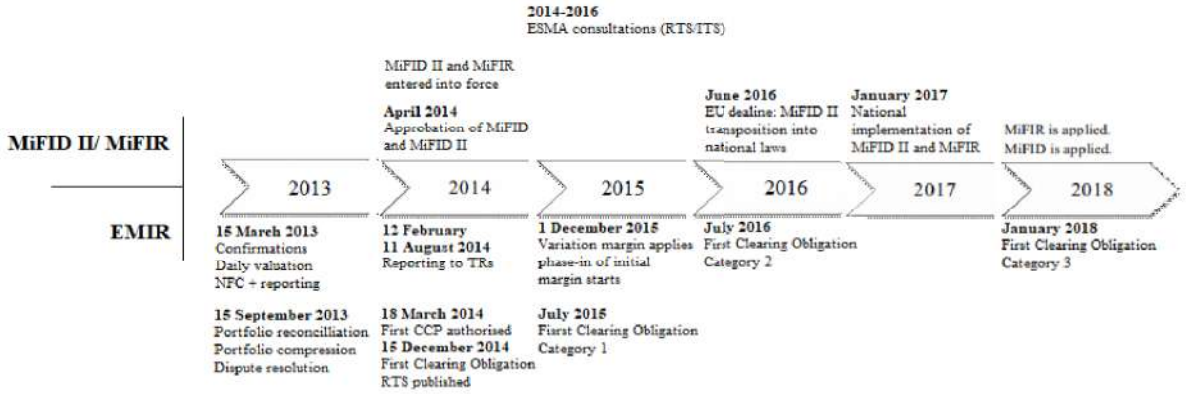


Figure 1. MiFID II/MiFIR and EMIR timeline

Source: European Securities and Markets Authority – ESMA (www.esma.europa.eu).

1.2. National level implementation

The indicative dates of the transposition of MiFID II/MiFIR and EMIR into Romania's national laws can be seen in Figure 2.

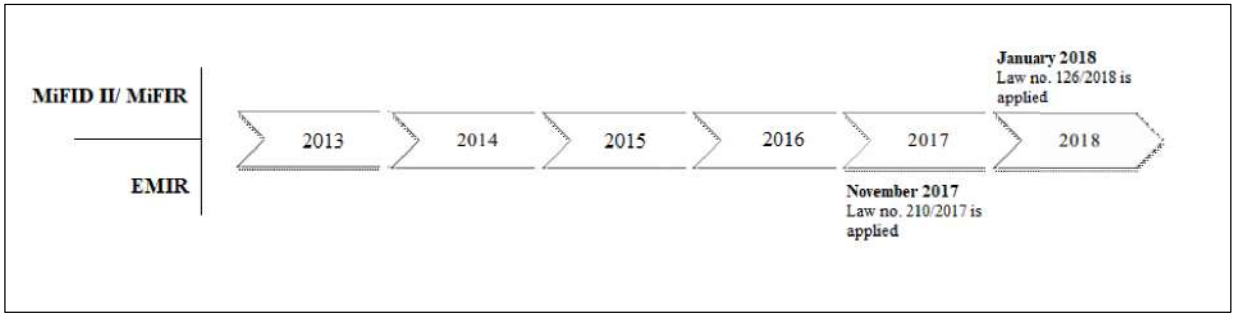


Figure 2. Transposition of MiFID II/MiFIR and EMIR into Romania's national laws

Source: National Bank of Romania (www.bnr.ro).

2. Overview of the regulation

Table 1. Overview of MiFID II/MiFIR and EMIR

	MiFID II/MiFIR	EMIR
Scope	● Extends MiFID I to a wider range of market participants, e.g. commodity companies; ● Covers trading in financial instruments (equity and non-equity instruments).	European homologous to U.S. Dodd-Frank
Instruments covered	● Transferable securities; ● Money-market instruments; ● Units in collective investment undertakings; ● Options, futures, swaps, forward rate agreements and any other derivative contracts much as mentioned at points (4), (5), (6), (7) and (10) of Annex 1 Section C of MiFID II; ● Credit derivatives[1]; ● Financial contracts for differences; ● Emission allowances consisting of any units recognized for compliance with the requirements of Emissions Trading Scheme.	OTC derivatives and exchange-traded derivatives
Objective	Creating a safer, sounder and more transparent European financial system through proper regulation of all market and trading structures.	Increasing transparency, stability and regulatory oversight of the financial system in general and the OTC derivatives market in particular.
Components	● Clearing requirements; ● Transparency and reporting requirements for equity and non-equity instruments; ● Risk management requirements for automated trading; ● Shifting of trading to regulated trading venues; ● Investor protection.	● Clearing of all standardized derivatives through a CCP; ● Reporting all derivative contracts to a trade repository (TR). ; ● Operational risk management techniques for non-standardized derivatives; ● New requirements for central clearing counterparties (CCPs) and TR.
Subjects to Regulation	Investment firms, market operators, third-country firms providing investment services or performing investment activities (please see Annex I of MiFID II) through the establishment of a branch in the Union, regulated markets and data reporting service providers	Financial counterparties[2] and non-financial counterparties[3]

Source: European Securities and Markets Authority – ESMA (www.esma.europa.eu).

[1] Total return swaps, credit default swaps, credit default swap options, collateralized debt obligations and credit spread forwards.

[2] In accordance with article 2 (8) of EMIR, "an investment firm authorized in accordance with Directive 2004/39/EC, a credit institution authorized in accordance with Directive 2006/48/EC, an insurance undertaking authorized in accordance with Directive 73/239/EEC, an assurance undertaking authorized in accordance with Directive 2002/83/EC, a reinsurance undertaking authorized in accordance with Directive 2005/68/EC, a UCITS and, where relevant, its management company, authorized in accordance with Directive 2009/65/EC, an institution for occupational retirement provision within the meaning of Article 6 (a) of Directive 2003/41/EC and an alternative investment fund managed by AIFMs authorized or registered in accordance with Directive 2011/61/EU";

[3] In accordance with article 2 (8) of EMIR, "an undertaking established in the Union other than the entities referred to in points (1) and (8)".

3. MIFID II/MIFIR and EMIR common subjects

Recognizing common themes and dependencies between regulations when implementing EMIR and MIFID II (see Table 1) allows banks and other subjects to these regulations to comply efficiently and cost-effectively by avoiding duplication of effort.When being subject to multiple regulations, you must consider their combined impact to realize the full impact of the regulations.

Table 2. Common themes across MiFID II/MiFIR and EMIR

Theme	MiFID II	EMIR
Transparency obligations	✓	✓
Reporting obligations	✓	✓
Trading obligations	✓	
Risk management obligations	✓	✓

Source: European Securities and Markets Authority – ESMA (www.esma.europa.eu).

4. What is the regulation about?

4.1. Transparency and reporting requirements

EMIR and MiFID II both aim to increase transparency in the derivatives market by introducing various new reporting requirements for trading venues and investment firms. According to EMIR, all players active in the derivatives market must report transaction details for all derivatives contracts (OTC and exchange-traded contracts, whether centrally cleared or not). Both sides of a derivative transaction must be reported separately to the relevant trade repository (TR). The reported transaction details are available to ESMA and the relevant authorities (e.g., national competent authorities and central banks) to identify and monitor potential problems and concentration risks. Figure 2 provides an overview of who is required to report, what data must be reported, how and when the data must be reported.

Table 3. Summary reporting obligation EMIR

Who is required to report	What data must be reported	How the data must be reported	When the data must be reported
MiFID investment firms, market operators, third-country firms providing investment services or performing investment activities through the establishment of a branch in the Union, trading venues and systematic internalisers trading derivatives	● Data[4] regarding the counterparty, common data of the executed contract (e.g., contract type, collateral, position) and financial instrument specific data (e.g., type, sub-asset class, price, maturity). ● New, modified and reconciliated contracts.	● Standard software solutions specifically designed to meet the requirements of transaction-based regulatory reporting; ● Transaction details are delivered electronically.	● At the end of the day following the contract's execution, modification or reconciliation. ● Beginning on January 1 onwards, all derivatives contracts must be reported.
Trade Repository			

Source: European Securities and Markets Authority – ESMA (www.esma.europa.eu).

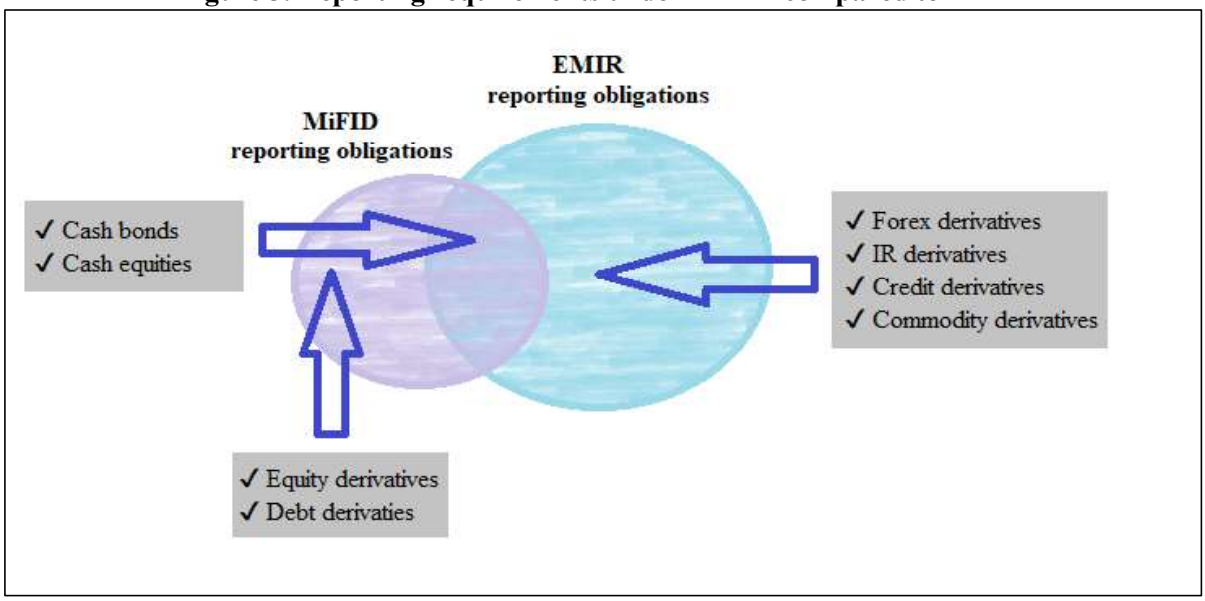
[4] Please see "Data reporting templates" issued by ESMA by accessing the following link: https://www.esma.europa.eu/sites/default/files/library/esma70-145 1395_data_templates_trs.xlsx;

ESMA has confirmed and published the list of authorised Trade Repositories in the European Union. At the moment, the registered TR are[5]:

- Krajowy Depozyt Papierów Wartosciowych S.A. (KDPW);
- Regis-TR;
- UnaVista TRADEcho B.V. (The Netherlands);
- DTCC Data Repository (Ireland) Plc.

On the other hand, the reporting requirements under MiFID II compared to EMIR are less extensive due to differences in the asset classes subject to reporting and the content of trade reports (C. Chance, 2012).

Figure 3. Reporting requirements under MiFID compared to EMIR



Source: European Securities and Markets Authority – ESMA (www.esma.europa.eu).

Although there are differences regarding the scope, there is overlap between the EMIR reporting requirement and MiFID II transaction reporting (Conforto, 2011). The objectives of the reporting requirements under EMIR - to improve transparency in derivatives markets and to protect against market abuse (European Commission, 2012) - are consistent with the rationale for transaction reporting under MiFID II (Tieben et al., 2011).

4.2. Clearing financial contracts through a central counterparty (CCP)

The latest financial crisis accelerated the transition from bilateral clearing to central clearing, the most significant restructuring of the financial services industry since the advent of electronic trading (Futures & Options World, 2012; European Commission, 2012). Its purpose is to prevent the collapse of one market participant from causing the collapse of other market participants, also known as counterparty default risk. To mitigate this risk, EMIR requires FC and NFC above the clearing threshold (see Table 4) to clear all standardized OTC derivative contracts through a central counterparty (CCP) and to post collateral for these transactions with the respective CCP, either directly or through its clearing member (European Commission, 2010).

[5] Please see the updated list of registered TR published by ESMA in accordance with Article 59 (3) of EMIR by accessing the following link: https://www.esma.europa.eu/document/list-registered-trade-repositories.

Table 4. Value of the clearing thresholds by class of OTC derivative contracts[6]

Over the counter derivative contract type	Value of the clearing thresholds (in gross notional value)
Credit derivative contracts	EUR 1 billion
Equity derivative contracts	
Commodity derivative contracts and others	EUR 3 billion
Foreign exchange derivative contracts	
Interest rate derivative contracts	

Source: European Securities and Markets Authority – ESMA (www.esma.europa.eu).

The CCP centralizes risks, thereby reducing overall risk for the financial sector and counterparty risk for trading parties. To ensure its safety, a CCP has imposed on itself a default waterfall that specifies the order in which clearing member defaults are covered, thus ensuring the continuation of the CCP in the event of a clearing member default.

MiFID II also addresses the issue of central clearing by introducing the obligation to clear through a CCP the derivatives contracts subject to clearing in accordance with EMIR, that are concluded on a regulated market (European Commission, 2014).

4.3. Risk management techniques

OTC derivative contracts that are not subject to the central clearing obligation and that do not benefit from an exemption may be cleared bilaterally. To ensure that these contracts have similar risk mitigation, EMIR requires financial counterparties and non-financial counterparties to have appropriate procedures and arrangements in place to measure, track and mitigate counterparty and operational risk for their contracts that are not cleared by a CCP. Therefore, they must have robust, resilient and auditable processes in order to apply the new risk management techniques. In addition, for derivative contracts that are not cleared through a CCP, FC must establish collateral mechanisms. They must also maintain a certain amount of capital to manage counterparty risk that is not covered by an adequate exchange of collateral.

MiFID II also includes risk management requirements but focuses solely on automated trading systems (algorithmic and high-frequency trading). According to MiFID II, firms that engage in algorithmic trading are required to implement effective systems and processes for risk control (e.g. trading thresholds) in their trading infrastructure (European Commission, 2014).

4.4. Protection of investors and consumers

To protect consumers and ensure an efficient price formation process in Europe, EMIR prohibits conduct that undermines the integrity of the market. This includes not allowing people to trade on inside information (e.g., inside trading) and to engage in, or attempt to engage in market manipulation and abuse.

One of the building blocks of MiFID II also relates to protection, but for investors in complex products, such as derivatives. Retail investors receive the highest level of protection, as they are expected to have the least knowledge of financial instruments. When providing investment advice to clients, investment firms are required to obtain all relevant information about the client's needs, knowledge and experience, financial situation and investment objectives (appropriateness

[6] The list of clearing thresholds is set by regulatory technical standards and will be reviewed on a regular basis following public consultation.
Please see the updated list of clearing threshold published by ESMA by accessing the following link: https://www.esma.europa.eu/policy-activities/post-trading/clearing-thresholds

test) in order to execute client orders on terms most favorable to the client (best execution regime) (European Commission, 2014; European Commission, 2017; Gillet R. et. al., 2017).

5. The impact of MIFID II/MIFIR and EMIR on banks

The complex requirements of the regulations have changed and will change investment banks, commercial banks and other players subject to MiFID II and EMIR in many different ways. The challenges that had the biggest impact and, accordingly, resulted in the highest expected cost of compliance will be discussed below.

5.1. Requirements regarding trading activity

The new regulatory requirements related to financial instruments trading, such as the shift of all organized trading to trading venues, led to an increased need for data and multisystem connectivity with the market. As a result, firms needed to establish connections to trading venues, CCPs, Approved Publication Arrangement (APA), Approved Reporting Mechanism (ARM) and TR. Therefore, they had to assess whether their existing infrastructure could cope with the new trading requirements. If not, the existing systems had to be adapted, which required additional investments in IT.

It is expected that all of the above impacts of the trading requirements will increase infrastructure costs, leading to higher trading costs. The additional costs are likely to be passed on to customers.

5.2. Requirements regarding clearing activity

Parties subject to the clearing obligation (all FCs and NFCs above the clearing threshold) must decide whether to clear directly as a participant in a CCP or indirectly as a participant in a clearing member. In both cases, membership fees apply. For cleared OTC derivative contracts, firms require high margins and collateral. Together with membership fees, this increases trading costs.

Higher margin and collateral requirements may force firms to revise their product, market, and trading strategies (e.g., in pricing products, master and netting agreements). Since margin payments to the CCP must be in the form of high-quality collateral (e.g., cash), firms must optimize their cash management processes for an increase in margin payments. The capital used as collateral cannot be invested elsewhere.

The clearing obligation also has effects on the firm's systems. The firm's IT infrastructure must handle clearing. If it cannot, investment in the systems would be required, which would further increase the cost of trading.

5.3. Requirements regarding reporting activity

EMIR and MiFID II implementation is leading to a significant increase in the reporting burden for firms subject to these regulations as the amount of data to be reported under each of the regulations increases. Processes and systems need to be structurally changed to accommodate the additional reporting and transparency requirements, for both market participants and competent authorities.

To submit all the required information in electronic form as quickly as possible, firms must implement effective systems and procedures. Improved trading platforms and reporting systems that enable real-time processing are needed. Firms should seek to integrate the new data management and record-keeping requirements into their existing IT reporting system. If integration is not possible, new systems will be purchased. In addition, for efficient record keeping, the firm

must implement a system that integrates financial product information with ante and post-trade disclosures.

If the firm has a sophisticated IT infrastructure/systems, it can carry out the reporting activity by itself. However, if the firm's business strategy is to reduce operational costs, it may outsource data reporting activities, especially if the firm would otherwise need to make massive investments in internal processes and systems. Additional staff might be required, especially when trading large volumes of OTC derivatives.

5.4. Requirements regarding risk management

Mandatory clearing aims to reduce counterparty credit risk. For non-cleared contracts, there will be additional risk mitigation measures and higher capital costs, as credit risk in bilateral trading depends on the creditworthiness of counterparties. This will force firms to rethink their current risk management techniques, processes and systems for all derivative products, including their hedging strategy. It also introduces several new operational risk management requirements, such as reconciliation of transactions, which must be implemented.

Firms will need to assess whether their existing risk management system can cope with the new requirements and upgrade their systems if necessary.

5.5. Requirements regarding investor protection

To improve investor protection, especially for inexperienced retail investors, a wider range of financial products is classified as "complex" under MiFID II. The compliance burden for these products is increasing and their trading and investment advice strategies need to be revised to continue to meet clients' needs.

6. Regulatory impact on Romanian banking system performance

The analysis of the impact of MiFID II on banks' performance, direct costs and lost income opportunities must be carried out together with the EMIR Regulation.

The existing literature on the regulatory impact on banking firms' performance states that the Global Financial Crisis, the volatility of financial markets, the new regulatory capital requirements and the new regulation of market financial infrastructures have had an impact on changing the business model of banks (Ercegovac et.al., 2016).

According to Ercegovac et.al. (2016), due to over-banking in the European banking system, most banks reduced their interbank assets and the share of trading assets in total banking assets, which affected the loss of fee income from trading activities and financial services to customers. By comparing some parameters of the market activities of systemically important banks in the European Union between the pre-financial crisis period (2004-2008) and the post-financial crisis period (2009-2020), Roberto Ercegovac et.al. (2019) concluded that the share of trading revenues in total bank revenues and the share of trading assets in total bank assets decreased sharply.

The issue addressed in this paper examines the impact of MiFID II and EMIR implementation on Romanian banking system performance. Therefore, for each of the selected credit institutions, Romanian legal persons, we will analyze the evolution, between the pre-financial crisis period (2004-2008) and the post-financial crisis period (2009-2020) of two indicators: *(i) the ratio of trading income to total net profit for the year*[7] and *(ii) the ratio of trading*

[7] net trading income/net profit for the year;

assets to total bank assets[8] (please see Appendix). Based on the geographical presence (credit institutions, Romanian legal entities, and branches in Romania of third-country credit institutions), data availability (balance sheet and consolidated financial statements published) and size of the securities/derivatives portfolio, the following banks were selected for this research:

- Banca Comercială Română (BCR);
- BRD - Groupe Société Générale;
- Raiffeisen Bank;
- UniCredit Bank;
- Banca Transilvania.

The information on the "ultimate accounting consolidating parent" of the legal entities subject to this study can be seen in Table 5.

Table 5. Information on 'ultimate accounting consolidating parent' of the legal entities subject to this study

Entities controlled by the ultimate parent (lei code)	Ultimate Parent (lei code)
BCR - Banca Comerciala Romana SA (549300ORLU6LN5YD8X90)	Erste Group Bank AG (PQOH26KWDF7CG10L6792)
BRD - Groupe Societe Generale SA (5493008QRHH0XCLJ4238)	Societe Generale (O2RNE8IBXP4R0TD8PU41)
Raiffeisen Bank SA (549300RFKNCOX56F8591)	Raiffeisen Bank International AG (9ZHRYM6F437SQJ6OUG95)
Unicredit Bank S.A. (5493003BDYD5VPGUQS04)	Unicredit, Societa' Per Azioni (549300TRUWO2CD2G5692)
-	Banca Transilvania SA (549300RG3H390KEL8896)

Source: Global Legal Entity Identifier Foundation (GLEIF).[9]

The company's impact is assessed by analyzing the evolution of the bank's balance sheet specific indicators (net trading income/net profit for the year, securities available for sale/total assets) – please see Appendix (Table A., Table B. and Table C.). This will give insights into how intense the impact is for each financial institution. It will also help to identify opportunities and challenges that arise from the new regulations. These are discussed at the end of this section.

Table 6. Selected bank performance indicators changes

Bank	Net trading income ratio	Trading assets ratio
BCR	0.55946	0.03768
BRD	0.20190	0.15594
Raiffeisen Bank	-0.09701	0.04010
UniCredit Bank	0.22578	0.12598
Banca Transilvania	-0.31658	0.21919

Source: Authors' own research results.

Strong regulatory constraints and significant compliance costs overlay transactional risk and proprietary trading by credit institutions, encouraging a customer-oriented organizational culture.

[8] securities available for sale/total assets;

[9] https://search.gleif.org/#/search/

The significance of the difference in *(i) net trading income ratio*[10] and (*ii) trading asset ratio*[11] in the post-financial crisis period within the new regulatory framework can be determined using a difference in sample means hypothesis test with a level of significance of 5% (α=0.05). Since the sample size is small, we will use t-statistics.

7. Testing the significance of the difference in net trading income ratio and trading asset ratio

7.1. Testing the significance of the difference in net trading income ratio

The null hypothesis (H0) is that there is no difference in the net trading revenue ratio or that the average net trading income ratio decreased in the post-financial crisis period. The alternative (research) hypothesis (H1) is that the average net trading income ratio increased in the post-financial crisis period under the new regulatory framework:

H_0: μ_1[12] - μ_2[13] ≤ 0;

H_1: $\mu_1 - \mu_2 > 0$.

The test results are shown in the following table.

Table 7. Results of testing for the significance of the difference in net trading income ratio

Parameters	Post-financial crisis period	Pre-financial crisis period
Mean	0.7181	0.6034
Variance	0.1007	0.0919
Observations	5	5
t-Stat	0.5844	
P(T<=t) one-tail	0.2875	
t-Critical one-tail	1.8595	
P(T<=t) two-tail	0.5751	
t Critical two-tail	2.3060	

Source: Authors' own research results.

The conclusion is made by comparing the test statistic (which is a summary of the information observed in the sample) to the decision rule.

We would expect to see a difference between the sample means as extreme as 0.1147 28.76% of the time under the null hypothesis. Since the two-tailed p-value (28.76%) is greater than the significance level of 5%, we do not have sufficient evidence to reject the null hypothesis. Therefore, we can conclude that there is no difference in the net trading revenue ratio or that the average net trading income ratio decreased in the post-financial crisis period.

7.2. Testing the significance of the difference in trading asset ratio

The null hypothesis (H0) is that there is no difference in the average trading asset ratio or that the average trading asset ratio decreased in the post-financial crisis period. The alternative (research) hypothesis (H1) is that the average trading asset ratio increased in the post-financial crisis period under the new regulatory framework:

[10] Ratio of net trading income to total net profit.

[11] Ratio of trading securities and other financial assets available for sale to total bank assets;

[12] Post-financial crisis period average net trading income ratio (mean 2009-2020);

[13] Pre-financial crisis period average net trading income ratio (mean 2004-2008).

H0: μ_3[14] - μ_4[15] ≤ 0;
H1: $\mu_3 - \mu_4 > 0$.
The test results are shown in the following table.

Table 8. Results of testing for the significance of the difference in trading asset ratio

Parameters	Post-financial crisis period	Pre-financial crisis period
Mean	0.1388	0.0230
Variance	0.0067	0.0003
Observations	5	5
t Stat	3.0934	
P(T<=t) one-tail	0.0182	
t Critical one-tail	2.1318	
P(T<=t) two-tail	0.0365	
t Critical two-tail	2.7764	

Source: Authors' own research results.

We would expect to see a difference between the sample means as extreme as 0.1158 1.64% of the time under the null hypothesis.

Since 1.64% is less than the significance level of 5.00%, you have sufficient evidence to reject the null hypothesis. Therefore, we can conclude that the increase in average trading asset ratio in the post-financial crisis period (mean 2009-2020) under the new regulatory framework is significant.

Conclusion

MiFID/MiFIR and EMIR are part of the most important regulatory changes within the European Union regulatory agenda. The new regulatory framework has significant implications for banks and other financial institutions in terms of their business strategy, operational business model, and protection of customer information. MiFID/MiFIR regulation focuses on investor protection, reducing over-the-counter transactions and controlling market speculation, while EMIR aims to reduce counterparty risk and increase transparency, stability and regulatory oversight of the financial system in general and the OTC derivatives market in particular. The process of complying with the regulatory framework is particularly challenging for banking firms whose core business is not investment banking activities. The cost of implementation and changes in the organizational structure have had and will have an impact on correcting the business model in the areas of front-office/middle-office activity and the use of professional back-office tools.

The increase in transparency of financial markets, the introduction of trading limits and best execution reporting to clients have already been proven to reduce the trading margins of competitors in the financial market, which will ultimately determine the reduction of trading activities and trading revenue (Roberto Ercegovac et. al., 2019).

In the case of credit institutions operating in Romania, we can observe that the implementation of the new regulatory framework did not affect the net trading income ratio of the

[14] Post-financial crisis period average trading asset ratio (mean 2009-2020);

[15] Pre-financial crisis period average trading asset ratio (mean 2004-2008).

selected banks; furthermore, the average trading asset ratio in the post-financial crisis period increased in comparison with the average trading asset ratio in the pre-financial crisis period.

MiFID and EMIR implementation have essentially been seen as an IT and compliance exercise for financial services firms. As a result, much of the analysis surrounding MiFID and EMIR compliance and the development of business strategies for the new regulatory landscape has focused on building the supporting IT infrastructure and upgrading systems.

Four of the five local credit institutions subject to this study are bank subsidiaries of the EU's largest financial services providers. Therefore, we cite banking economies of scope[16] as an argument for the profitability of the Romanian bank branches.

Economies of scope are often mentioned in the context of a company's global expansion. Establishing a global presence automatically increases the scale of a bank's operations. This gives the bank greater productive capacity. Indeed, the larger scale can be converted into economies of scale[17] that creates a competitive advantage.

In banking, there are several benefits of economies of scale, such as reduced operating costs per conducted activity (by utilizing a centralized IT system, trading platform, reporting system) and bundling of global purchasing to concentrate purchasing power over suppliers (central banks, eligible counterparty or professional clients), leading to volume discounts and lower transaction costs.

Bank branching increases the centralization of operational and compliance activities. Taking as much of these activities as possible out of the branch, not only reduces the need for branch staff and new, updated IT systems, but typically increases productivity and quality.

Banks with branches appear to have slightly higher costs than banks without branches (Casey and Lannoo, 2006). Most of the costs of implementing the new regulatory framework were borne only by the ultimate parents of the controlled Romanian subsidiaries. All subsidiary banks benefited equally from these economies of scale.

In addition, the cost benefits arising from economies of scale may also increase as European banking systems gradually move towards a universal homogeneous banking model.

References

Banca Comerciala Romana S.A. (2005). Situaţii financiare 2005, 31 decembrie 2005, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2006). Situaţii financiare 2006, 31 decembrie 2006, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2008). Situaţii financiare consolidate 2008, 31 decembrie 2008, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2010). Situaţii financiare consolidate 2010, 31 decembrie 2010, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2012). Situaţii financiare consolidate şi individuale 2012 IFRS, 31 decembrie 2012, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2014). Situaţii financiare consolidate şi individuale 2014 IFRS, 31 decembrie 2014, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2016). Situaţii financiare consolidate şi individuale 2016 IFRS, 31 decembrie 2016, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

[16] Engaging in a wider range of business activities to reuse resources such as

[17] Selling larger volumes of assets to reduce transaction costs

Banca Comerciala Romana S.A. (2018). Situatii financiare consolidate si individuale 2018 IFRS, 31 decembrie 2018, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare;

Banca Comerciala Romana S.A. (2020). Situatii Financiare Consolidate si Individuale (Grupul si Banca) intocmite in conformitate cu Standardele Internationale de Raportare Financiara adoptate de Uniunea Europeana, 31 decembrie 2020, available at: https://www.bcr.ro/ro/investitori/rapoarte-financiare

Banca Transilvania S.A. (2005). Raport anual 2005, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2005;

Banca Transilvania S.A. (2006). Raport anual 2006, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2006;

Banca Transilvania S.A. (2008). Situatii financiare pentru exercitiul financiar incheiat la 31 decembrie 2008 intocmite in conformitate cu Ordinul Guvernatorului Bancii Nationale a Romaniei nr.5/2005 cu modificarile si completarile ulterioare, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2008;

Banca Transilvania S.A. (2010). Situatii Financiare Consolidate 31 decembrie 2010, intocmite in conformitate cu Standardele Internationale de Raportare Financiara adoptate de Uniunea Europeana, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2010;

Banca Transilvania S.A. (2012). Situatii Financiare Consolidate 31 decembrie 2012, intocmite in conformitate cu Standardele Internationale de Raportare Financiara adoptate de Uniunea Europeana, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2012;

Banca Transilvania S.A. (2014). Contul de profit si pierdere si situatia altor elemente ale rezultatului global, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2014;

Banca Transilvania S.A. (2016). Situatia individuala si consolidata a pozitiei financiare la 31 decembrie 2015, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2016;

Banca Transilvania S.A. (2018). Situaţii financiare consolidate şi individuale pregătite în conformitate cu Standardele Internaţionale de Raportare Financiară adoptate de Uniunea Europeană pentru exerciţiul financiar încheiat la 31 decembrie 2018, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2018;

Banca Transilvania S.A. (2020). Situaţii financiare consolidate şi individuale pregătite în conformitate cu Standardele Internaţionale de Raportare Financiară adoptate de Uniunea Europeană pentru exerciţiul financiar încheiat la 31 decembrie 2020, available at: https://www.bancatransilvania.ro/relatii-investitori/rezultate-financiare?an=2020;

BRD – Groupe Société Générale S.A. (2005). Situatiile financiare consolidate conform IFRS 2005, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2006). Raport CNVM la 30 septembrie 2006, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2008). Situaţiile financiare anuale consolidate aprobate de AGA din 29.04.2009, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2010). Situatiile financiare anuale individuale si consolidate la 31.12.2010, intocmite conform Standardelor Internationale de Raportare Financiara, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare

BRD – Groupe Société Générale S.A. (2012). Situatiile financiare anuale individuale si consolidate la 31.12.2012, intocmite conform Standardelor Internationale de Raportare Financiara, aprobate de AGA din 18.04.2013, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2014). Situatiile financiare anuale individuale si consolidate la 31.12.2014, intocmite conform Standardelor Internationale de Raportare Financiara, aprobate de AGA din 9.04.2015, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2016). Situatiile financiare anuale individuale si consolidate la 31.12.2016, intocmite conform Standardelor Internationale de Raportare Financiara, adoptate de Uniunea Europeana, aprobate de AGA din 20.04.2017, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2018). Situatiile financiare anuale individuale si consolidate la 31.12.2017, intocmite conform Standardelor Internationale de Raportare Financiara, adoptate de Uniunea Europeana, aprobate de AGA din 18.04.2019, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

BRD – Groupe Société Générale S.A. (2020). Situațiile financiare anuale individuale și consolidate la 31.12.2020, întocmite conform Standardelor Internaționale de Raportare Financiara, adoptate de Uniunea Europeană, aprobate de AGA din 22.04.2021, available at: https://www.brd.ro/despre-brd/investitori-si-actionari/comunicare-financiara/rezultate-financiare;

Capgemini (2016). MiFID II: Demystifying the Challenge, Capital Markets, available at: www.capgemini.com;

Casey J and Karel Lannoo (2006). The MiFID revolution, *Cambridge University Press;*

Clifford C. (2012). EU Implementation Handbook Workshop, EU Handbook; Conforto, G. (2011). What are the implications of the proposed EU Financial Reforms for electricity trading markets and players? A case study. *Executive Summary of a MSc Dissertation*, University of Dundee;

European Commission (2010). Proposal for a Regulation of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories, Brussels;

European Commission. (2012). Regulation on Over-the-Counter Derivatives and Market infrastructures – Frequently Asked Questions, Brussels;

European Commission. (2012). Regulation on Over-the-Counter Derivatives and Market infrastructures – Frequently Asked Questions, Brussels;

European Commission. (2012). Regulation (EU) 648/2012 of the European Parliament and of the Council, July, 2012;

European Commission. (2013). Regulation (EU) 575/2013 of the European Parliament and of the Council, June, 2013;

European Commission (2013). Commission Delegated Regulation (EU) No 149/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament

and of the Council with regard to regulatory technical standards on indirect clearing arrangements, the clearing obligation, the public register, access to a trading venue, non-financial counterparties, and risk mitigation techniques for OTC derivatives contracts not cleared by a CCP Text with EEA relevance;

European Commission (2014). Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 Text with EEA relevance;

European Commission. (2014). Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance;

European Commission. (2017). Regulation (EU) 2017/590 of the European Parliament and of the Council, July, 2014;

European Commission. (2017). Commission Delegated Regulation (EU) 2017/575 of 8 June 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards concerning the data to be published by execution venues on the quality of execution of transaction.

Futures & Options World. (2012). OTC clearing II: Who should decide what has to be be cleared?, available at http://www.fow.com/Article/3015699/OTC-clearing-II-Who-should-decide-what-has-to-bebe-cleared.html?edit=true;

Futures & Options World. (2012). OTC clearing III: How many CCPs will there be and how can they compete? available at: http://www.fow.com/Article/3019860/OTC-clearing-III-How-many-CCPs-will-there-be-andhow-can-they-compete.html;

Gillet, R., Ligot, S., & Firouzi, H. O., (2017). The challenges and implications of the Markets in Financial Instruments Directive (MiFID) and of its revision (MiFID II, MiFIR) on the efficiency of financial markets. *Financial Regulation in the EU*;

Pöttker, K. (2013). What does it really mean? The impact of EMIR, REMIT and MiFID II on banks and energy companies, University of Twente, Amsterdam;

Raiffeisen Bank (2005). Raport anual 2005 – Situații financiare consolidate conform IFRS/IAS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale

Raiffeisen Bank (2006). Raport anual 2006 – Situații financiare consolidate conform IFRS/IAS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale

Raiffeisen Bank (2008). Raport anual 2008 – Situații financiare consolidate conform IFRS/IAS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale;

Raiffeisen Bank (2010). Raport anual 2010 – Situații financiare consolidate conform IFRS/IAS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale;

Raiffeisen Bank (2012). Raport anual 2012 – Situații financiare consolidate conform IFRS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale;

Raiffeisen Bank (2014). Raport anual 2014 – Situații financiare consolidate conform IFRS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale;

Raiffeisen Bank (2016). Raport anual 2016 – Situații financiare consolidate conform IFRS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale

Raiffeisen Bank (2018). Raport anual 2018 – Situații financiare consolidate conform IFRS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale;

Raiffeisen Bank (2020). Raport anual 2020 – Situații financiare consolidate conform IFRS, available at: https://www.raiffeisen.ro/despre-noi/guvernanta-corporativa/rapoarte-anuale;

Roberto Ercegovac et.al. (2019). Banking system compliance with MiFID II Regulation, *Journal of Accounting and Management 2019*, vol. 9; no. 1; page 41 – 5;
Unicredit Bank (2006). Rezultate financiare 2006, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare;
Unicredit Bank (2008). Rezultate financiare - 31 decembrie 2008, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare;
Unicredit Bank (2010). UCT RAPORT ANNUAL 2010, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#raportanual;
Unicredit Bank (2012). Situatii financiare 2012, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare
Unicredit Bank (2014). Situatii financiare consolidate IFRS 31 dec 2014, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare;
Unicredit Bank (2016). Situatii financiare consolidate IFRS 31 dec 2016, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare;
Unicredit Bank (2018). Raport anual 31.12.2018 in conformitate cu Regulamentul 5/2018, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare;
Unicredit Bank (2020). Situatii financiare consolidate si individuale pentru exercitiul financiar incheiat la 31 decembrie 2020, available at: https://www.unicredit.ro/ro/institutional/banca/rapoarte-financiare.html#rezultatefinanciare;
Smith, D., Griffith, T., & Rennison, P. (2013). EMIR, REMIT, MiFID and more - Getting ready quickly while planning for the future, Trayport.

Other sources:
www.esma.europa.eu;
www.gleif.org;
www.bnr.ro;
www.eur-lex.europa.eu.

Appendix

Table A. Evolution of selected financial indicators on the bank's performance, over the 2004-2020 period

	Indicator	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
BCR	Net trading income	3,565	3,524	4,468	3,547	3,143	3,084	3,608	4,413	5,143	4,224	3,111	4,238	2,568	2,559	2,630	2,225	1,518,100
	Net profit for the year	8,141	5,933	12,023	6,681	10,456	9,189	(27,999	5,912	(12,296)	709	4,650	8,717	20,356	9,334	7,687	6,557	6,356,730
	Securities available for sale	87,849	62,117	54,011	1,047	54,784	65,043	80,259	51,859	51,747	59,462	48,923	34,676	16,291	16,447	16,666	36,698	1,292,960
	Total assets	819,866	749,384	715,303	709,312	675,186	623,600	616,246	667,288	732,876	767,457	735,934	694,028	690,806	633,588	474,357	342,296	252,032,870
	Net trading income ratio	0.4379	0.5940	0.3716	0.5309	0.3006	0.3356	(0.1289	0.7464	(0.4183)	5.9577	0.6690	0.4862	0.1262	0.2742	0.3421	0.3393	0.2388
	Trading assets ratio	0.1072	0.0829	0.0755	0.0015	0.0811	0.1043	0.1302	0.0777	0.0706	0.0775	0.0665	0.0500	0.0236	0.0260	0.0351	0.1072	0.0051
BRD	Net trading income	2,897	3,139	3,292	3,034	4,185	3,295	2,699	3,692	3,075	2,950	5,462	7,575	4,953	3,348	2,141	1,666	10,907,108
	Net profit for the year	9,629	14,992	15,647	14,146	7,635	4,672	679	(3,842)	(2,906)	4,985	6,040	9,413	13,535	9,169	7,036	4,924	35,967,888
	Securities available for sale	183,438	142,021	143,120	6,377	128,131	104,271	88,993	72,540	50,840	51,908	39,536	21,920	9,360	1,940	630	417	550,394
	Total assets	635,577	577,705	557,210	549,274	518,815	501,786	461,067	479,914	488,906	498,791	474,942	463,940	492,396	389,658	286,791	196,500	1,172,454,949
	Net trading income ratio	0.3009	0.2094	0.2104	0.2145	0.5482	0.7053	3.9770	(0.9608)	(1.0582)	0.5917	0.9043	0.8047	0.3660	0.3651	0.3042	0.3383	0.3032
	Trading assets ratio	0.2886	0.2458	0.2569	0.0116	0.2470	0.2078	0.1930	0.1512	0.1040	0.1041	0.0832	0.0472	0.0190	0.0050	0.0022	0.0021	0.0005
Raiffeisen Bank	Net trading income	3,334	3,328	3,580	3,113	3,085	2,934	2,807	2,555	2,293	2,071	1,479	3,165	4,098	2,008	1,599	1,292	5,913,220
	Net profit for the year	6,366	8,347	8,938	5,089	4,493	4,264	5,125	4,831	3,965	4,277	3,839	2,901	6,410	3,196	1,839	1,878	10,839,390
	Securities available for sale	36,118	28,630	35,114	30,127	23,877	26,311	2,220	2,201	5,125	2,808	4,418	1,037	476	1,151	134	485	5,063,830
	Total assets	520,532	438,567	407,945	368,064	334,606	314,865	287,888	265,374	240,223	242,748	221,937	203,179	193,691	164,729	139,318	111,353	820,791,480
	Net trading income ratio	0.5238	0.3987	0.4006	0.6116	0.6867	0.6879	0.5478	0.5289	0.5783	0.4842	0.3852	1.0911	0.6392	0.6282	0.8695	0.6880	0.5455
	Trading assets ratio	0.0694	0.0653	0.0861	0.0819	0.0714	0.0836	0.0077	0.0083	0.0213	0.0116	0.0199	0.0051	0.0025	0.0070	0.0010	0.0044	0.0062
UniCredit Bank	Net trading income	3,052	3,603	3,049	2,117	2,454	2,582	2,539	2,897	2,498	2,953	1,964	3,595	6,565	2,625	842	752	724,680
	Net profit for the year	5,039	6,376	5,351	4,059	3,094	2,695	1,438	944	1,774	1,351	1,712	3,287	3,583	2,625	1,134	1,043	1,045,201
	Securities available for sale	30,204	86,146	73,306	60,021	63,715	63,621	59,485	54,027	39,458	33,800	38,401	29,130	6,350	8,540	1,588	1,325	1,280,000
	Total assets	519,685	515,266	483,370	434,992	376,057	345,678	323,655	285,175	250,534	223,482	204,223	204,348	174,510	128,283	88,191	78,495	80,050,031
	Net trading income ratio	0.6056	0.5652	0.5698	0.5215	0.7934	0.9581	1.7661	3.0690	1.4080	2.1864	1.1470	1.0939	1.8323	1.0002	0.7424	0.7212	0.6933
	Trading assets ratio	0.0581	0.1672	0.1517	0.1380	0.1694	0.1840	0.1838	0.1895	0.1575	0.1512	0.1880	0.1426	0.0364	0.0666	0.0180	0.0169	0.0160
Banca Transilvania	Net trading income	3,451	4,106	2,522	2,783	1,974	1,799	1,268	1,288	1,312	848	1,272	1,432	695	1,217	860	1,173	759,500
	Net profit for the year	14,241	18,479	12,607	12,425	12,770	24,480	4,481	3,749	3,204	1,319	975	1,367	3,600	3,094	1,086	1,073	604,959
	Securities available for sale	308,772	236,583	213,747	158,213	149,938	122,114	108,529	89,365	65,297	59,679	39,461	26,445	8,727	5,809	1,335	2,953	2,243,360
	Total assets	1,074,924	917,223	778,968	598,050	519,442	475,791	356,453	289,835	268,771	215,891	257,452	196,130	171,487	140,835	83,306	50,767	265,679,600
	Net trading income ratio	0.2423	0.2222	0.2000	0.2240	0.1546	0.0735	0.2830	0.3436	0.4093	0.6433	1.3043	1.0474	0.1931	0.3934	0.7924	1.0934	1.2555
	Trading assets ratio	0.2872	0.2579	0.2744	0.2645	0.2887	0.2567	0.3045	0.3083	0.2429	0.2764	0.1533	0.1348	0.0509	0.0412	0.0160	0.0582	0.0084

Source: Authors' own research results.

DOI: 10.2478/picbe-2022-0069
© 2022 M. M. Vasilca; G. Anton; A. Cheptiş; A. I. Vid, published by Sciendo.
This work is licensed under the Creative Commons Attribution 4.0 License.

Table B. Evolution of financial indicators on the bank's performance, over the 2009-2020 period

Post-financial crisis of 2007-2008														
	Indicator	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**Mean**
BCR	Net trading income ratio	0.44	0.59	0.37	0.53	0.30	0.34	-0.13	0.75	-0.42	5.96	0.67	0.49	0.82
	Trading assets ratio	0.11	0.08	0.08	0.00	0.08	0.10	0.13	0.08	0.07	0.08	0.07	0.05	0.08
BRD	Net trading income ratio	0.30	0.21	0.21	0.21	0.55	0.71	3.98	-0.96	-1.06	0.59	0.90	0.81	0.54
	Trading assets ratio	0.29	0.25	0.26	0.01	0.25	0.21	0.19	0.15	0.10	0.10	0.08	0.05	0.16
Raiffeisen Bank	Net trading income ratio	0.52	0.40	0.40	0.61	0.69	0.69	0.55	0.53	0.58	0.48	0.39	1.09	0.58
	Trading assets ratio	0.07	0.07	0.09	0.08	0.07	0.08	0.01	0.01	0.02	0.01	0.02	0.01	0.04
UniCredit Bank	Net trading income ratio	0.61	0.57	0.57	0.52	0.79	0.96	1.77	3.07	1.41	2.19	1.15	1.09	1.22
	Trading assets ratio	0.06	0.17	0.15	0.14	0.17	0.18	0.18	0.19	0.16	0.15	0.19	0.14	0.16
Banca Transilvania	Net trading income ratio	0.24	0.22	0.20	0.22	0.16	0.07	0.28	0.34	0.41	0.64	1.30	1.05	0.43
	Trading assets ratio	0.29	0.26	0.27	0.27	0.29	0.26	0.30	0.31	0.24	0.28	0.15	0.14	0.25

Source: Authors' own research results.

Table C. Evolution of financial indicators on the bank's performance, over the 2004-2008 period

Pre-financial crisis of 2007-2008							
	Indicator	2008	2007	2006	2005	2004	Mean
BCR	Net trading income ratio	0.13	0.27	0.34	0.34	0.24	0.26
	Trading assets ratio	0.02	0.03	0.04	0.11	0.01	0.04
BRD	Net trading income ratio	0.37	0.37	0.30	0.34	0.30	0.34
	Trading assets ratio	0.02	0.01	0.00	0.00	0.00	0.01
Raiffeisen Bank	Net trading income ratio	0.64	0.63	0.87	0.69	0.55	0.67
	Trading assets ratio	0.00	0.01	0.00	0.00	0.01	0.00
UniCredit Bank	Net trading income ratio	1.83	1.00	0.74	0.72	0.69	1.00
	Trading assets ratio	0.04	0.07	0.02	0.02	0.02	0.03
Banca Transilvania	Net trading income ratio	0.19	0.39	0.79	1.09	1.26	0.75
	Trading assets ratio	0.05	0.04	0.02	0.06	0.01	0.04

Source: Authors' own research results.