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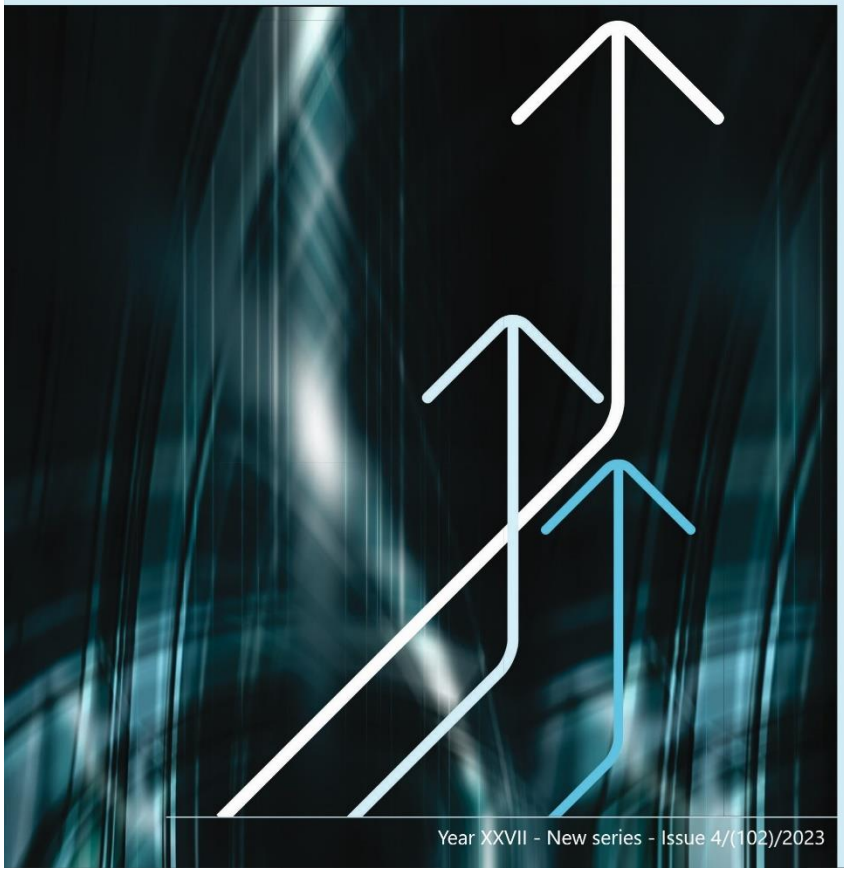

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"VICTOR SLĂVESCU" CENTRE FOR FINANCIAL
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FINANCIAL STUDIES

ROMANIAN ACADEMY
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Contents

ASSESSMENT OF FOREIGN CURRENCY RISK AND OTHER FACTORS THAT AFFECT CIVIL SOCIETY ORGANIZATIONS PERFORMANCE IN GEORGIA

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Abstract

Civil society organisations (CSO) play an important role in social value creation. With funds provided by donors, they implement a great variety of projects. The main purpose of the study was to identify the most important factors that directly or indirectly affected organisational performance over the past few years, reducing the spending capabilities of Georgian civil society organisations. A survey involving interviews was conducted with 24 CSOs that were implementing a total of 52 projects with the support of 15 different donors. To assess exchange rate risks that reduce spending capabilities, historic simulation and scenario analysis method was adopted. The results show that exchange rate volatility, inflation, and the COVID-19 pandemic were the most important factors that affected project performance. The effect of inflation was undoubtedly negative, exchange rate fluctuation was mostly negative, while the restrictions associated with the COVID-19 pandemic had some positive implications. Performance and risk factors that influence civil society organisations are poorly studied (in contrast with for-profit companies), and this fact makes the current study especially interesting and significant for CSO management, donor organisations and policymakers.

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JEL Classification: L31; F31; H81

1. Introduction

Civil society organisations (CSOs) play an important role in the creation of values for the whole society. The higher their performance, the higher the created value. Stakeholders, like donors, beneficiaries, society, regulators, and partners, want to match performance goals (Edwards and Hulme, 2013). Although the different civil society organisations focus on different issues, each of them has the same mission that involves creating social value (Moura et al., 2022). Because not-for-profit organisations have goals that go beyond financial returns, it is difficult to understand when an organisation is underperforming or overperforming (Epstein and Buhovac, 2009). Donors understand that the impact on society should be assessed in the long run, and financial reports sometimes do not show it (Cordery and Sinclair, 2013).

Several factors may influence the performance of civil society organisations. Examples of these factors are: budgeting - instrument used by donors that creates constraints for an organisation (McMillan, 2010); inflation - when prices are increasing, it is difficult for an organisation not to exceed the budgeted unit rates; employee turnover - in order to achieve success an organisation retain staff members who understand the mission of the organisation and are supportive of it (Carey and West, 2023); location - according to the survey, Georgian civil society organisations have more diversified donors in Tbilisi (capital of Georgia) than in regions (CRRC-Georgia, 2021), and global events like the COVID-19 pandemic which impacted economy and also reduced in-person activities (Carey and West, 2023).

The civil society sector is well-established in Georgia and plays an important role in the sustainable development of the country (USAID, 2023).

Current research strives to identify and study factors that affect CSO project performance in Georgia. The survey helped identify important factors in the Georgian context during recent years. Some of those factors were analysed in depth.

The biggest challenges that have influenced organisational performance since 2019 are increased exchange rate fluctuation,

increased inflation, and the COVID-19 pandemic. Long-term planning for civil society organisations was a challenge because of instability. In 2019, the depreciation of the local currency (Georgian lari, GEL) was high. In the second quarter of 2021, the local currency began to appreciate, and because of unpredictability, the exchange rate risk was considered high. Taking into consideration the high volatility of GEL against foreign currencies (Financial Stability Report, 2021) and the fact that most civil society organisations' financial stability depends on international funds (CRRC-Georgia, 2021), the results regarding the most important factors for the CSOs are not doubtful.

The involvement of foreign currencies in the budgeting/reporting process makes performance sensitive to exchange rate fluctuations. Considering foreign exchange rate volatility, it is very difficult for organisations to keep their expenses under budget. The exchange rate at the moments of project initiation, the closing of the grant agreement, reception of funds, spending, and reporting will almost certainly be different. Since different donors have different financial procedures and policies, the effect on performance may be different - negative, positive or negligible.

There is some lack of studies that focus on the exchange rate effect on civil society organisations or how the procedures of budgeting/spending/reporting of both a donor and a grantee may affect the organisation and project performance. Current research, alongside already mentioned factors, identified numerous common scenarios and analysed them to identify how project performance is affected.

2. Literature review

Organisational performance is the ability to achieve goals by using resources effectively (Daft, 2000). Measuring performance is important for any organisation, but it is very difficult to find one universal measure (Behn, 2003). Purposes for proper performance measurements are a better allocation of resources, improved planning and controlling mechanisms, and promotion of accountability (Kravchuk and Schack, 1996).

For business organisations, the most typical indicator of organisational performance is profitability (Doyle, 1994). It is much more difficult to measure the performance of not-for-profit organisations - by definition, their primary objective is not profit, as they provide value in other ways, so the achievements are not assessed by

economic measures (Ashford and Clarke, 1996). Not-for-profit organisations' activities can result in social or political outcomes and are often intangible, and it is not easy to measure the impact in monetary terms (Epstein and Buhovac, 2009). For some donors, the financial data is less important compared to the information about social aspects (Cordery and Sinclair, 2013).

Organisational performance can be measured in terms of input (efficiency) and output (effectiveness). Efficiency can be measured if a minimum number of inputs is used to take the output, while effectiveness can be measured if outputs contribute to the achievement of goals (Cordero, 1990). One framework used for the measurement of non-profit organisations is called 'value for money' and it is considered appropriate because the framework reflects the cost of providing a service as well as the benefits achieved by providing it (Ashford & Clarke, 1996). Effectiveness is about achieving the desired outcome and shows the relationship between its outputs and outcomes (Popa, 2017).

Economy answers the question if the appropriate quantity and quality of inputs were bought at the lowest cost possible and if the organisation can optimise its use of productive resources (Ashford and Clarke, 1996). For managers, understanding the factors that affect organisational performance has always been crucial (Atkinson, Waterhouse and Wells, 1997). It is challenging to find an appropriate balance between the three components because the value-for-money framework emphasises the importance of measuring all three 'E's rather than focusing on just one component. In order to avoid serious adverse effects on an organisation, it is essential to effectively achieve organisational objectives in an economical and efficient manner (Ashford and Clarke, 1996).

Budgeting is one of the critical instruments that can be used to measure performance (Okumu, 2014; Edwards & Hulme, 2013). The project's success is affected by the planning - the most important decisions regarding the objectives and goals are made at this stage (Takim and Akintoye, 2002). There is a positive relationship between a well-prepared budget and organisational performance (Stühlinger, 2022). For not-for-profit organisations, it is crucial to ensure that there are enough resources to fund planned activities (McMillan, 2010). When employees are involved in the budgeting process, they are motivated and accordingly, it affects their performance (Alam and Mia, 2006). Furthermore, being involved in the planning and decision-

making process helps employees to recognise their contribution, and as a result, they are more committed and loyal to the organisation and work more productively (Kotter and Heskett, 1992). Participating in the budgeting process allows employees to exchange job-relevant information, which in turn helps to coordinate project activities better (Hopwood, 1974).

Inflation is an important factor that can have a negative impact on performance. The reason is that when prices and, accordingly, costs are increasing, it is very difficult for not-for-profit organisations to simply respond as they have to follow a predetermined budget (Carey and West, 2023). Inflation in Georgia was two times higher (7%) in 2017, 2019-2020, and three times higher (10%) than the target level (3%) in 2022 (Financial Stability Report, 2022).

In Georgia, most of the budgets in CSOs are designed in foreign currencies like EUR and USD, according to donor requirements, but transactions within the country are made in GEL. As a result, fluctuation in exchange rates creates exchange rate risk. The highest exchange rate of the GEL/EUR in the last five years was observed during April and May of 2021 with the highest rate of 4.182. The lowest exchange rate was in October and November 2022 (2.676) (Financial Stability Report, 2021).

Hedging is the practice of taking action to reduce or eliminate a risk exposure. An organisation can use some derivative contracts for hedging. Common instruments, like futures and swaps, help to deliver and pay for an asset in the future with a predetermined exchange rate and are readily available since they are traded on exchanges. Another instrument is a forward contract. Because forwards are private agreements, the risk of the counterparty is high (Saunders and Cornett, 2007; Hull, 2017). Georgian lari futures and swaps are not available on exchanges. Commercial banks offer forward contracts at a certain cost.

Performance is highly impacted by the employee's commitment and motivation (Packard, 2010). Obviously, a motivated employee puts more effort into doing a task, and when goals are achieved, it gives one feeling of satisfaction that creates a positive working attitude in the workplace (Manzoor, 2011). Employee motivation, satisfaction, and commitment are strongly related to talent attraction and retention (Kontoghiorghes, 2016).

Employee turnover is another key point that can influence organisational performance. Because of limited budgets, civil society organisations cannot compete with for-profit organisations in recruiting

talented staff (Nodia, 2005). When an employee leaves, there are costs to the organisation which are not monetary - a new staff member needs time to gain specific job-related skills and experience to be as productive as the previous one (Price, 1989).

Many industries were negatively impacted during the COVID-19 pandemic - it reduced the stability and increased risk of most companies and generally negatively affected the performance of the organisations (Almustafa et al., 2023). Discussion about the COVID-19 pandemic effects should consider reduced in-person office activities during restriction periods (Carey and West, 2023).

The “Work from home” model has undoubtedly become one of the most widely used strategies during the COVID-19 pandemic. The effects of working from home on employee productivity and organisational performance depend on various characteristics such as the nature of the work and industry, the position of the employee, the experience, gender, and others. For example, teachers, who need direct communication with people are less productive with the work-from-home model, while researchers are more productive (Anakpo, Nqwayibana and Mishi, 2023). When employees work from home, they have limited opportunity to communicate with coworkers and exchange information or experience; also, it is associated with technological problems, inadequate infrastructure, increased stress, and less effective communication between an employee and a manager performance (Graves and Karabayeva, 2020). On the other hand, working from home is associated with a flexible work schedule and, according to some perspectives, can improve performance and productivity (Aropah, Sarma and Sumertajaya, 2020).

As of June 2023, there are over 1200 active civil society organisations in Georgia (https://csogeorgia.org/en). Georgian CSOs are typically small, employing eight people on average. A fifth of CSOs have either one permanent employee or none (CRRC-Georgia, 2021; Jikia et al., 2023).

Civil society organisations receive funds from national and international donors and government agencies and are allowed to raise money through fundraising (USAID, 2023). However, the majority of civil society organisations are financed and supported only by international donors. According to the survey of 249 active civil society organisations, more than half of the total revenue is received from international donors, and, on average, each CSO has only one donor (CRRC-Georgia, 2021). Since most of the civil society organisations

have no diversity of donors, their operational focus is donor-driven (USAID, 2023). Donors, from time to time, change their priorities according to their views. As a result, CSOs are forced to adjust their operational focus to donors' priorities, which negatively affects the organisational performance. Because of having no variety of donors, Georgian CSOs' financial vulnerability is high (Nodia, 2005).

Some of the largest international donors to the civil sector in Georgia are the European Union (EU), the United States Agency for International Development (USAID), the United Nations Development Programme (UNDP), the Swedish International Development Cooperation Agency (SIDA), Open Society Foundation (OSF), the German Federal Ministry for Economic Cooperation and Development (BMZ) according to Aid Information Management System (https://eaims.ge/project). The projects supported by these donors are mostly focused on democratic governance, human rights, sustainable development, and initiatives to promote environmental protection and support the development of civil society in Georgia (CRRC-Georgia, 2021).

3. Research methodology

A historic or back simulation approach was used to estimate the exchange rate risk exposure caused by budgeted-expensed-reported currency gaps. Exchange rates from 2018 to 2022 years (the last five years) used in the simulation were obtained from the Georgian National Bank (GNB). The data included information about the official exchange rates of the GEL, EUR, and USD (the official rate is based on spot exchange rates form the previous day's trading on the Bloomberg system).

During the data processing, daily, monthly, three-month, six-month, and annual positive and negative changes for each currency were calculated. Effect on currency amounts were assessed based on these changes. For simulation purposes, the 25th percentile of negative and 25th percentile of positive changes in exchange rate were used. Researchers avoided the use of extreme cases, like 99th or 95th percentiles, that are usually used in Value-at-risk calculations since such moves on the market are rare. When they happen and persist, donors are open to budget modification discussions. That is not the case when fluctuation is more or less ordinary. Information regarding processes involving currencies were collected from organisations.

Initially, in-depth interviews were conducted with representatives of three civil society organisations. These interviews helped to design the questionnaire, which included 23 open-ended questions regarding ongoing projects concerning project funding, donor requirements and currency procedures, factors that affected project implementation and actions that helped the organisation to maintain the desired level of performance. The 24 civil society organisations based in Georgia were surveyed. The survey was conducted between April 2023 and June 2023. The selection was non-random to make sure that projects funded by a variety of international donors with different reporting requirements, different budgeting currencies, and different conditions for tranches transferring were included in the sample. All surveyed organisations have many years of experience in managing projects funded by international donors and have experience with more than one funded project. The goals of the study and the purpose of the requested information were explained in detail to the representatives of all organisations. During the survey, there was active communication with organisations. After the collection of responses, clarifying follow-up communication was handled with several representatives.

The information from the survey was used to identify the factors that affected funds, activities, budget, and organisational performance as a whole and what influence may the different policies of reporting, budgeting, and installment transferring, and conversion have. Researchers identified several common scenarios or schemes of currency handling.

The response rate was 75%. To ensure high quality of collected data, unsatisfactory responses were excluded from processing. One organisation refused to name a donor, and two respondents did not provide reliable information.

Each participant was aware of the research objectives. The anonymity and confidentiality of participants were assured. Thus, organisations are not listed in the paper.

4. Results and analysis

During the survey, 52 filled questionnaires for different projects funded by 15 different donors were received from 24 civil society organisations. The study identified that the three biggest challenges that influenced the accuracy of the budget and the project performance

were the COVID-19 pandemic, inflation, and high exchange rate volatility.

Most of the respondents who participated in the survey started the budgeting process for the ongoing projects by the end of 2020 when the local currency was depreciated, and the average exchange rate of the GEL/EUR and GEL/USD was high compared to the rate at the moment of the survey. Because some projects involved in the study have a duration of three-four years, and because they were not able to modify already approved budgets, the fluctuation in exchange rate affected the performance of organisations. For illustration – according to one of the respondents, the EUR/GEL exchange rate when the first grant tranche was received was 4.166, and the most current rate was 2.737. Because the total amount of money received in local currency was far less than budgeted, they were forced to reduce costs. The effects of exchange rate fluctuation on available amounts and spending capabilities are analysed below in this paper in more detail.

The majority of the respondents stated that junior experts were hired instead of senior experts for saving purposes. The average difference between daily fees was 35%. Other solutions were reduction of the number of participants for each activity, hiring experts for less time, replacing lunch and dinner with coffee breaks, reducing printing costs and (in the case of one interviewee) reducing the component of sub-grants.

The number of participants was reduced by the vast majority of the respondents (85%). 75% have organised coffee breaks during the trainings and meetings instead of lunch. Most of the interviewees noted that in order to reduce costs, the publications are no longer printed, and only electronic versions were available, limiting access for beneficiaries in regions with limited internet. Considering cost reduction measures, it is highly likely that the performance of the projects was decreased.

Face-to-face meetings may involve catering, conference room rental, accommodation, and transportation costs; thus, for saving, the majority of meetings were conducted online. According to the questionnaire, more than 95% of the respondents say that online meetings negatively affected their performance because during in-person meetings participants are more productive, can communicate more effectively with each other, and are able to develop business relationships easier. On the other side, online meetings enable an

unlimited number of participants to attend. Meetings can be recorded without additional technical complications for later use.

Another saving source was conducting conferences or training in social spaces or on premises with poorer quality than planned. That also affected the performance, as the number of participants was less than planned. As the majority of respondents noted, the number of participants is always higher when a meeting is held in a comfortable environment.

The survey indicated that during 2021-2023 the motivation of employees decreased. Almost all salaries are contracted in foreign currencies, but the payments are made in GEL according to the official exchange rate of the National Bank of Georgia or according to the conversion rate of the commercial bank. In the second quarter of 2021, the local currency began to appreciate, and as a result, the amount of salary received in GEL decreased. The change in the net salary can be significant – e.g., in January 2021, the official exchange rate of GEL/EUR was 4.02, while the salary in May 2023 was based on a 2.74 rate (32% reduction). According to the responses, none of the donors considered and gave additional funds due to the change in exchange rates. Evidently, currency fluctuations affected employees' motivation, and, as might be expected, employee turnover increased.

Another reason for decreased motivation is caused by the COVID-19 pandemic and the "work from home" model. Based on the responses, employees could not communicate with co-workers as effectively as before. Also, if tasks were not well delegated originally, teleworking worsens the collaboration. Working from home was stressful as it was difficult to differentiate between personal and work life. Most respondents consider teleworking tiresome. Consequently, some organisations have decided to adopt a hybrid work schedule.

Inflation was named as another source of the problem. More than half of the respondents noted that inflation had a negative impact on the quality of the project assets – because of high prices, organisations were not able to acquire equipment of planned quality. Lower quality increased the risk for the project - equipment could fail before the project's completion. Two respondents noted that despite having a long-term contract for office rent, because of the price increase, they were forced to move to an inferior location.

By contrast, the COVID-19 pandemic had a varied effect on the budget and performance. The pandemic-related restrictions saved the project money in several ways. Administrative costs for office supplies,

utilities, stationery, transportation, fuel, etc. were greatly reduced. In the case of activities, there were no travel, printing, catering, and conference room rental costs. All these expenses were replaced by the cost of software (e.g., Zoom, Teams). The opportunity to engage foreign experts in the activities was named as an important advantage of organising meetings online.

Studying currency handling patterns and scenarios helps to assess risks and shortcomings related to the exchange rates. As the survey showed, about 30% of expenses were always estimated in GEL. However, the budget was required to present foreign currency. For foreign currency equivalent approximations, some CSOs used the exchange rates of commercial banks, some used the official rates of NBG, and others the average rate of the month plus 5-7%. Some donors transfer tranches once or twice a year, and since expenses were calculated in local currency and an exchange rate fluctuation was high, the budgeted amount was different from the received amount after conversion and, in some cases was not enough to cover all planned expenses.

Donors have various policies regarding reporting. Some donors use the first-in-first-out method and ask grantees to prepare the financial reports in a way where expenses in GEL are expressed in foreign currency according to the commercial bank's conversion rate. Some donors calculate tranches according to the United Nations Operational exchange rate and require grantees to report all expenses at the same rate. In both cases, there is no difference between the transferred amount and expenses expressed in foreign currency, but GEL amounts differ.

For most donors, the exchange rate losses are non-eligible costs and are not compensated. Because grantees fully carry the exchange rate risk, most fixed expenses, such as salaries, office rent, and honoraria for experts, are contracted in foreign currency. According to their procedures or common practices, some grantees use the official exchange rate, and some use the commercial bank's conversion rate for GEL equivalent calculation on the payment day. Some donors have requirements regarding the conversion process. As an illustration, some donors require grantees not to convert money more than three times a month, while others require conversion of the whole amount as soon as they receive the tranche.

The survey showed that donors have different currency-related requirements regarding budgeting, reporting, and operations:

- budgeting and reporting may be in foreign currency or in local currency;
- tranches are received in Georgian lari or foreign currency;
- the amount in each tranche is designated for periods of different lengths;
- exchange rate used for diverse reporting.

Based on these differences, five scenarios were identified. Each scenario involves numerous donors with similar conditions and requirements.

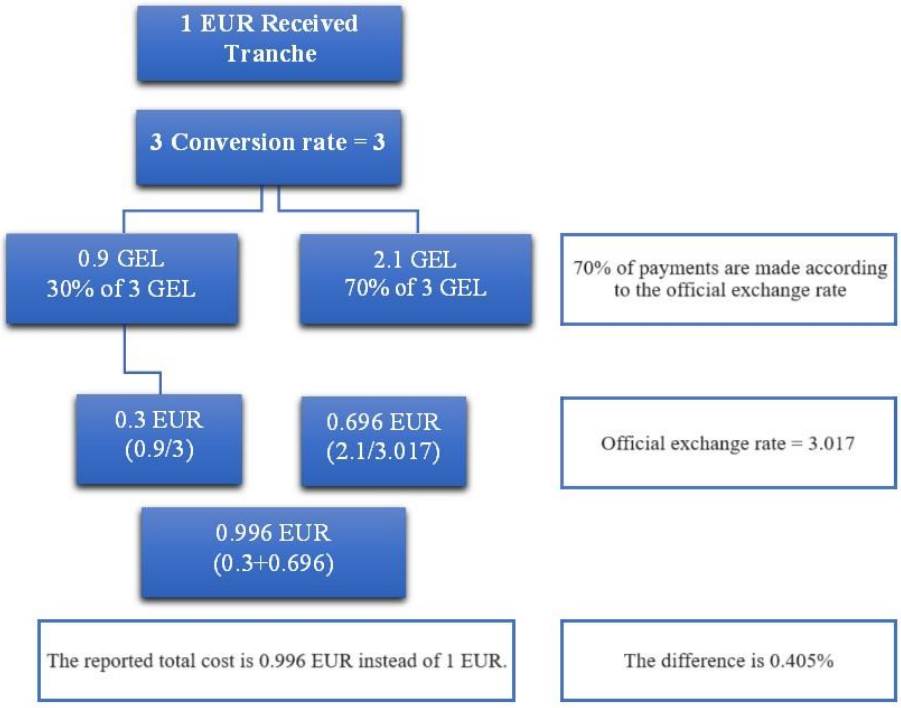
In the first scenario, beneficiaries make budget estimations in foreign currency, which means that most expenses are contracted in foreign currency. In the implementation stage, the organisation requests funds quarterly and receives the tranches in EUR. After receiving the amount, it is converted to GEL with the commercial bank's exchange rate and expended in GEL. The financial report for the donor is prepared in foreign currency, and the commercial bank's (actual) exchange rate is used - one that was used for conversion. As a result, there is no difference between the received amount and the total expenditure in foreign currency. The difference appears in expenses contracted in EUR and are paid according to the official exchange rate of NBG instead of the commercial bank's conversion rate. For example, at some moments, the exchange rate in commercial banks is 2.74 GEL/EUR, while when exchanging EUR for GEL, the official rate for that day is 2.799. According to the contract, the organisation has to pay for the lease, which is the equivalent of 1,000 EUR in GEL, using the official exchange rate. If a currency is converted with the commercial bank's conversion rate, the organisation will receive 2,740 GEL, but the beneficiary should transfer 2,799 GEL. In the financial report, where the actual rate is used, 2,799 GEL is accounted as 1,021.5 EUR (2,799/2.74), so the difference between the amounts received after conversion and reported is 21.5 EUR (1,021.5-1,000). Since the commercial rate is almost always lower than the official rate, the organisation will permanently overspend its budget. Donors in this setup allow beneficiaries to convert money whenever they need it, and the majority of the organisations prefer to convert money on the payment day in order not to have a significant difference between commercial and official exchange rates.

Process flow and numbers for this scenario are shown in Figure 1. If a grantee receives 1 EUR and converts it into the local currency with the commercial bank's exchange rate (3.00), the total amount in

local currency is 3 GEL. On average, 70% (2.1 GEL) of the payments are made based on the official exchange rate of NBG, and the commercial rate is used for the rest. Exact exchange rates in day-to-day operations used by the organisations are unrealistic to obtain. Therefore, to calculate the daily percentage difference, an assumption was made that the difference between the exchange rate of the commercial bank and the NBG is the same as the change between the daily exchange rates of the NBG, based on the fact that the official rate is "yesterday's" one.

Figure 1

Process flow and gain/loss estimation when commercial (conversion) and official (reporting) exchange rates are used (Scenario 1)



Source: Authors

According to the official exchange rate data, a negative 25th percentile change in daily rates equals -0.608%, and the positive equals 0.582%. Because the official exchange rate of the lari against

any foreign currency is always higher than the commercial bank's conversion rate, the following example is calculated only with the positive percentage change of exchange rates. Accordingly, in the case of a 0.582% daily change in rates, the exchange rate of NBG is 3.017 and 2.1 GEL equals 0.696 EUR. The reported cost is 0.696 + 0.3=0.996 EUR while all received (1 EUR) is spent. The difference for one EUR is 0.004 EUR or 0.405 % of the received amount.

The total grant amount under this scenario in studied organisations is 6.6 million EUR. Multiplying this amount by 0.405% means that the total difference may be as high as 26,762 EUR. If the period between conversion and payment is longer, the difference may increase. As the majority of the respondents noted, this difference is covered by the grantee from the overhead budget or from savings.

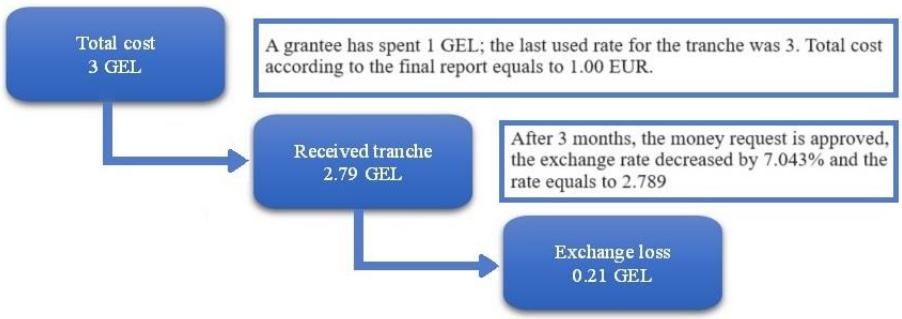
In the second scenario, the grantee plans expenses in foreign currency and receives the project tranches in foreign currency. Donor requests the grantee to convert the total amount of money as soon as they receive it. The financial report is prepared in local currency using actual commercial exchange rates. The grantee has no exchange losses because they make payments and report using the same conversion rate. The figures in the financial report are in foreign and local currencies which are correspondingly equal to the installment received from the donor and the total amount after conversion. In this scenario, changes in exchange rates still affect the performance of the project. When the GEL/EUR exchange rate decreases, the project pays lower salaries, reduces the number of participants, hires experts with less experience and for fewer hours, and conducts meetings online - all these "solutions" affect the quality of planned activities, motivation of employees, efficiency, and effectiveness of the project.

In the third scenario, tranches are distributed annually in GEL. The last payment is received by a grantee after completion of the project activities and submission of the final report. After a grantee completely spends the received amount, it continues to pay amounts from other sources until the project activities are complete. The final financial report is presented in foreign currency using the donor's last fixed exchange rate. The donor transfers the final installment (usually 5%-10% of the total project budget) using the updated rate (not the rate used for the previous tranche and reporting). In this case, a grantee fully carries the exchange rate risk. As mentioned by respondents, the time between sending the final report and receiving the last installment can take as much as three months. Figure 2 depicts this scenario. For

example, if a grantee has spent 3.00 GEL and the last rate used for expenditures is 3.00, the amount of money requested must be equal to 1.00 EUR. According to the simulation, the negative 25th percentile of the three-month change in the exchange rate of GEL/EUR equals -7.043%. After 3 months, when the donor makes a transfer, the exchange rate may be decreased by 7.043% to the rate of 2.789. In this case, the grantee receives 2.789X1.00=2.79 GEL. The grantee experiences an exchange loss of 0.21 GEL.

Figure 2

Process flow and gain/loss estimation when tranches are received months after spending occurred (Scenario 3-1)



Source: Authors

Using the same logic, the positive 25th percentile of a three-month change in the exchange rate of GEL against EUR equals 7.00%. When the exchange rate increases by 7% to 3.21, the beneficiary has the exchange gain because the donor transfers 3.21X1.00=3.21 GEL. According to the survey, the total project amount under this scenario is 726,747 EUR. Assuming 10% of the final tranche, grantees can have an exchange gain of 5,087 GEL or an exchange loss of 5,118 GEL.

In the fourth scenario, beneficiaries estimate all expenses in GEL, but budgets are in USD. Money requests are also submitted in USD. According to the survey, CSOs use the most recent exchange rate for foreign currency equivalent calculation. The donor transfers installments in GEL using the UN Operational Rate of Exchange. The rates are updated twice a month, and a difference between budgeted and received amounts in GEL is inevitable. For financial reports, the donor requires a beneficiary to use the same rate that was used for transfer. The official rates of the National Bank of Georgia represent the actual ongoing exchange rates, and the United Nations (UN)

(treasury.un.org) are close to each other on the first and 15th day of the month when UN rates are updated. However, because of the high exchange rate volatility, the difference can grow high. For example, the GEL/USD on the first of June 2023, according to the NBG, was 2.597; on the next day, the rate was 2.639, while the UN operational exchange rate on the same date for GEL was 2.588 and was not changed for the next two weeks. According to the survey, in this scenario, money requests are sent six months in advance. In this scenario, there is no difference between budgeted and reported figures in foreign currencies, but because of the high exchange rate volatility, there is always a difference between the budgeted and received amounts in GEL.

To give an example, let us assume that a grantee made a budget and the total income needed to cover the expenses was 3 GEL. The organisation calculated the USD equivalent using rate 3 and requested a 1.00 USD transfer. By simulation, the negative 25th percentile of a six-month change in the GEL/USD exchange rate equals -7.287%; thus, after 6 months, the new rate may be 2.781 and transferred 1.00 USD equals 2.781X1.00=2.781 GEL. The beneficiary has a deficit of 0.22 GEL - the received amount is not enough for planned activities.

Equally likely, the positive 25th percentile of the six-month change in the exchange rates equals 9.047%. When the exchange rate increases by 9.047%, the conversion rate on the payment day is 3.271, and the beneficiary receives 3.27 GEL. In this case, the grantee would have a surplus of 0.27 GEL. Based on the questionnaires, the total amount of money under this scenario is 1.3 million USD; thus, surveyed organisations may lose 95,965 GEL or gain 119,149 GEL.

According to the fifth scenario, budgeted expenses are divided into two parts. 70% is estimated in foreign currency, and 30 % is estimated in GEL. The request to the donor is submitted in USD, and the tranche is received either in GEL or USD. The report is submitted in USD, for which the rate at which the conversion was done (by the donor or grantee) is used, and therefore, there is no difference between the amounts received and the amounts reported. However, some gains and losses may still be associated with this scenario since there is, on average, a three-month gap between the request and receipt of the tranche.

Assume that the grantee needs 0.9 GEL and 0.7 USD to cover the planned expenses. The GEL/USD exchange rate is 3.00 and the

total requested amount is 0.7+0.9/3=1.00 USD. According to the simulation, the three-month change in the exchange rate equals -5.49%; thus, after three months, the exchange rate may become 2.835. The grantee receives 1 USD, which is now 2.835 GEL. The grantee spends the budgeted 0.7 USD or 1.99 GEL (0.7X2.835) and needs to be budgeted 0.9 GEL, but the available amount is only 0.85.

The positive three-month change in the exchange rate is 6.752%. Thus, the new exchange rate is 3.203, and the grantee receives the total amount of 3.203 GEL. Budgeted 0.70 USD equals 2.24 GEL (3.203 * 0.7), and the remaining amount is 0.96 GEL, which is higher than the needed 0.9 GEL. Calculating change for the total amount of the grants given in the survey (20.4 million USD) gives that the exchange gain maybe 0.41 million GEL (6.752% change for 30% of 20.4 million USD), and an exchange loss can total 0.34 million GEL (5.49% change for 30% of 20.4 million USD).

5. Conclusions

Inflation and exchange rate volatility negatively affect organisational performance. As for Covid-19, it allowed organisations to find cost-effective ways of implementing activities and offset the shortage of money that was caused by economic factors. On the other hand, because of the pandemic restrictions, organisations were forced to change the format of meetings and work schedules, which reduced face-to-face communication and interaction, caused a loss of opportunity to get immediate feedback from instructors and colleagues, and negatively affected the employee job satisfaction, motivation, and overall performance of the project.

Budget-saving solutions employed by organisations decreased the efficiency and effectiveness of projects. Hiring senior experts for shorter periods, substituting them with junior experts, or reducing the overall beneficiaries are good examples of such actions.

Uncertainty in the economy and exchange rate volatility remain major risks. Projects that budget, receive tranches, make expenses, and report in the same currency (local or foreign) bear less foreign exchange risk, while organisations that have plans, operations and reports in different currencies are more exposed to exchange rate volatility. In some cases, exposure can be substantial.

At first sight, exchange rate gains should allow organisations to increase performance, but considering that these scenarios are

accompanied by decreased payments (in the local currency) for personnel, the effect of the increase is diminished by employee demotivation.

Donors do not allow grantees to purchase exchange rate risk hedge instruments. The solution is to diversify the project portfolio and have as many different donors providing funds in different currencies as possible. Grantees that have one or a few projects bear all the risks associated with exchange rates. It may be assumed that if donors takes off this risk from CSO by funding many projects in different countries with different local currencies, risks will be reduced because of natural hedging - unequal and not semi-directional moves of exchange rates (gains and losses) will net each other over a more or less long period.

References

1. Alam, B. and Mia, L. (2006) 'Need for achievement, style of budgeting and managerial performance in a non-government organisation (NGO): evidence from an oriental culture', International Journal of Business Research, pp. 35-43-35–43.
2. Almustafa, H. et al. (2023) 'The impact of COVID-19 on firm risk and performance in MENA countries: Does national governance quality matter?', PloS one, 18(2), pp. e0281148–e0281148. Available at: https://doi.org/10.1371/journal.pone.0281148.
3. Anakpo, G., Nqwayibana, Z. and Mishi, S. (2023) 'The Impact of Work-from-Home on Employee Performance and Productivity: A Systematic Review', Sustainability, 15, pp. 4529–4529. Available at: https://doi.org/10.3390/su15054529.
4. Aropah, V.D., Sarma, M. and Sumertajaya, I.M. (2020) 'Factors Affecting Employee Performance during Work from Home', International Research Journal of Business Studies, 13, pp. 201-214-201–214.
5. Ashford, K. and Clarke, J. (1996) 'Grant monitoring by charities: The process of grant-making and evaluation', Voluntas: International Journal of Voluntary and Nonprofit Organisations, 7(3), pp. 279–299. Available at: https://doi.org/10.1007/BF02354119.
6. Atkinson, A.A., Waterhouse, J.H. and Wells, R.B. (1997) 'A Stakeholder Approach to Strategic Performance Measurement', MIT Sloan Management Review [Preprint].
7. Behn, R.D. (2003) 'Why Measure Performance? Different Purposes Require Different Measures', Public Administration Review, 63.
8. Carey, T. and West, A. (2023) 'Top Challenges Facing Not-For-Profit CFOs Today', THE CPA JOURNAL, 93, pp. 16–21.

9. Cordero, R. (1990) 'The measurement of innovation performance in the firm: an overview.', Research Policy, 19, pp. 185–192.
10. Cordery, C. and Sinclair, R. (2013) 'Measuring performance in the third sector', Qualitative Research in Accounting & Management, 10, pp. 196-212-196–212.
11. CRRC-Georgia (2021). Civil Society Organisations in Georgia: Mapping Study.
12. Daft, R.L. (2000) Organisation Theory and Design. 7th ed. South-Western College Publishing.
13. Doyle, P. (1994) 'Setting business objectives and measuring performance', European Management Journal, 12, pp. 123–132.
14. Edwards, M. and Hulme, D. (eds) (2013) Non-Governmental Organisations - Performance and Accountability. Earthscan.
15. Epstein, M.J. and Buhovac, A.R. (2009) Performance Measurement of Not-For-Profit Organisations. The Society of Management Accountants of Canada.
16. Financial Stability Report (2021). National Bank of Georgia. Available at: https://nbg.gov.ge/en/publications/financial-stability-reports.
17. Financial Stability Report (2022). National Bank of Georgia. Available at: https://nbg.gov.ge/en/publications/financial-stability-reports.
18. Graves, L.M. and Karabayeva, A. (2020) 'Managing Virtual Workers—Strategies for Success', IEEE Engineering Management Review, 48, pp. 166-172-166–172. Available at: https://doi.org/10.1109/EMR.2020.2990386.
19. Hopwood, A.G. (1974) Accounting and Human Behaviour. Haymarket Publishing.
20. Hull, J.C. (2017) Options, Futures, and Other Derivatives. 10th ed. Pearson Education Limited.
21. Jikia, A., Gvritishvili, E. and Edisherashvili, I. (2023) CSO Meter 2022: Georgia Country Report.
22. Kontoghiorghes, C. (2016) 'Linking high-performance organisational culture and talent management: satisfaction/motivation and organisational commitment as mediators', The International Journal of Human Resource Management, 27, pp. 1833-1853.
23. Kotter, J.P. and Heskett, J.L. (1992) Corporate Culture and Performance. The Free Press.
24. Kravchuk, R.S. and Schack, R.W. (1996) 'Designing Effective Performance-Measurement Systems under the Government Performance and Results Act of 1993', Public Administration Review, pp. 348-358-348–358.
25. Manzoor, Q.-A. (2011) 'Impact of Employees Motivation on Organisational Effectiveness', Business Management and Strategy, 3(1). Available at: https://doi.org/10.5296/bms.v3i1.904.

26. McMillan, E.J. (2010) Not-for-Profit Budgeting and Financial Management. 4th ed. John Wiley & Sons, Inc. Available at: https://doi.org/10.1002/9781118386767.
27. Moura, L.F. et al. (2022) 'What Role Do Design Factors Play in Applying Performance Measurement Systems in Nonprofit Organisations?', Administrative Sciences, 12, pp. 43–43. Available at: https://doi.org/10.3390/admsci12020043.
28. Nodia, G. (2005) Civil Society Development in Georgia: Achievements and Challenges.
29. Okumu, M.J. (2014) The effect of exchange rate volatility on the budget variance of international refugee non-governmental organisations in Kenya. University Of Nairobi.
30. Packard, T. (2010) 'Staff Perceptions of Variables Affecting Performance in Human Service Organisations', Nonprofit and Voluntary Sector Quarterly, 39, pp. 971-990-971–990. Available at: https://doi.org/10.1177/0899764009342896.
31. Popa, F. (2017) 'Elements on the Efficiency and Effectiveness of the Public Sector', Ovidius University Annals, Economic Sciences Series, 17, pp. 313-319-313–319.
32. Price, J.L. (1989) 'The Impact of Turnover on the Organisation', Work and Occupations, 16, pp. 461-473-461–473. Available at: https://doi.org/10.1177/0730888489016004005.
33. Saunders, A. and Cornett, M.M. (2007) Financial Institutions Management: A Risk Management Approach. McGraw-Hill/Irwin.
34. Stühlinger, S. (2022) 'The Importance of Planning: How Financial Management Competencies Affect the Performance of Nonprofit Organisations', Public Administration Quarterly, pp. 211-237-211–237. Available at: https://doi.org/10.37808/paq.46.3.2.
35. Takim, R. and Akintoye, A. (2002) 'Performance Indicators for Successful Construction Project Performance', in. 18th Annual ARCOM Conference, Association of Researchers in Construction Management.
36. USAID (2023). 2021 Civil Society Organisation Sustainability Index. Available at: https://www.fhi360.org/resource/civil-society-organisation-sustainability-index-reports

Other Sources

- https://csogeorgia.org/en
- https://eaims.ge/Project
- https://nbg.gov.ge/en/monetary-policy/currency

FINANCIAL LITERACY AND ENTREPRENEURIAL TRAITS AS DETERMINANTS OF THE SMALL AND MEDUIM-SCALE ENTERPRISES' PROFITABILITY IN OGUN STATE

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Abstract

This study was carried out to investigate how financial literacy and entrepreneurial traits determine the profitability of SMEs in Ogun State, Nigeria. It is used a descriptive survey to obtain a structured description of the population and understand the impact of financial literacy and entrepreneurial traits on SME profitability in Ogun State. The sample consists of 1,005 SME entrepreneurs selected from 15 local government areas across the three senatorial districts of Ogun State. Five LGAs (three urban and two rural) were purposely selected from each of the three senatorial districts in Ogun State. Descriptive statistics and multiple regression analysis were used in analysing the data. Our findings reveal a low level of SME profitability. The study also found that financial literacy and entrepreneurial traits significantly contribute to SMEs' profitability in Ogun State. Based on the findings and conclusion, it was recommended, amongst others, that awareness should be created among SME entrepreneurs on the relevance of financial literacy and entrepreneurial skills through training programs in order to equip them with the financial literacy skills necessary for business operations.

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Keywords: financial knowledge, entrepreneurs, net profit margin, risk-taking, innovativeness

JEL Classification: M21; M40

1. Introduction

The sole aim of every business is to make profit. Therefore, in order to withstand competition from firms operating in the same industry, managers of small and medium enterprises (SMEs) must consciously gear all efforts towards achieving profitability. Profitability is one of the indices of business performance and a key element of financial reporting. The profitability of a business entity indicates the ability of the entity to generate earnings for a certain period at a rate of sales, assets and capital employed in the business. For a business to stand the test of time and remain in the market, it must be consistent in achieving a certain level of profitability over time. Every business venture is expected to continue existing for the foreseeable future without significantly curtailing its scale of operations. This is premised on profits being made and ploughed back into the business for expansion and growth. However, there are several factors that can hinder a firm from achieving the required level of profitability. These factors range from the size of the firm, management style, financial literacy of the business owner, entrepreneurial traits of the business owner, and economic downturn, to mention a few. Profitability is attained through various practices such as effective corporate governance, marketing strategies that create quality products, positioning products at the top of consumers' minds, building customer loyalty, research and development, and financial management and accounting practices that build advantage. As a major area and opportunity, financial management is the art and science of managing money through planning, organising, lending and controlling financial activities to achieve organisational goals. The profitability of SMEs has, throughout the nations, been of great concern to, among others, development economists, entrepreneurs, governments, venture capital firms, financial institutions and non-governmental organisations (Eniola & Entebang, 2014). According to IGI Global, profitability refers to an entity's ability to generate earnings compared to its expenses and other relevant costs incurred during a specific period. A profitability company is a picture that measures how well the company can generate profits

from operational processes that have been implemented to ensure the company's continuity in the future (Manoppo & Arie, 2016).

One of the main obstacles to the profitability of SMEs throughout the developing world is the lack of knowledge, skills, attitude and awareness to cope with and direct the finances of their organisations in a hardy, transparent and professional way. Business people make inappropriate, inadequate and ineffective financial decisions because of a lack of financial knowledge, and time to learn about personal financial management, but also because of the complexities in financial transactions and the wide variety of choices of financial products/services. Knowing the factors that determine profitability is critical to helping managers develop effective strategies that will lead to their firm's profitability.

According to Irikefe and Opusunju (2021), financial literacy is the capacity to comprehend how money functions. It requires expertise in the knowledge and application of traditional and fundamental financial concepts and principles, such as financial planning, compound interest, debt management, profitable savings strategies, and the value of money in general. Entrepreneurs must have and be able to use budget-making abilities to get out of financial jams, the ability to track and control expenditures, debt management skills, and effective planning for retirement (Irikefe & Opusunju, 2021). Based on the preceding, one can deduce that financial literacy has to do with how a person handles money to earn it, i.e. how money is invested to make “more money.” The study took cognisance of these concepts of financial literacy. It is an area that requires knowledge, skill, attitude and experience with goals to deal with the survival of the firm, profit maximisation, sales maximisation, capturing a particular market share, minimising staff turnovers and internal conflicts, and maximising wealth (Jacobs, 2001.).

Entrepreneurial traits are another factor that could influence the performance of a business, especially in the aspect of profitability. In this study, entrepreneurial traits is used interchangeably with personality traits. This is due to the role and importance of an entrepreneur in the management of a business, including SMEs. An entrepreneur is a person who plays the role of an industrialist and forms an organisation for commercial use. Hence, an entrepreneur is a change agent who creates demand and supply by forecasting the needs of society. The present situation of Nigeria, in terms of the struggle for business survival in the turbulent environment, calls for a

high need for entrepreneurs with diverse personality traits that will ensure sustainability. Pattanayak and Kakati (2021) stress that entrepreneurial traits are a set of stable patterns of behaviours through which an entrepreneur can be described and identified. Studies have identified and explained different traits that determine business performance or profitability. For instance, John et al. (2008) cited by Pattanayak and Kakati (2021), listed personality traits of the entrepreneur to include openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Similarly, Muhammed (2017) states that the personality traits of the entrepreneur include self-efficacy, risk-taking and locus of control, while Ivan, Milica and Dorde (2018) mentioned creativity, self-efficacy and innovativeness as some of the entrepreneurial traits needed for business survival.

Profitability is the aim of every business endeavour, and SMEs are established for profit-making. In recent times, however, a sizeable number of SMEs have been struggling, while some have gone into extinction as a result of their failure to break even. Most SMEs in Nigeria die within their first five years of existence; a smaller percentage goes into extinction between the sixth and tenth year, while only about five to ten percent survive, thrive and grow to maturity. The failure of SMEs has a significant effect on the Nigerian economy because SMEs are perceived to be the key to economic growth, poverty alleviation, and employment generation. Many factors have been identified as contributing to this premature death, among which are lack of requisite knowledge in financial matters, lack of financial literacy skills, poor leadership styles of the entrepreneur, and the traits possessed by the entrepreneur, amongst others. Moreover, SMEs seem to be generally characterised by limited capital. In addition, they usually lack the requirements to assess the various funding options open to business firms. However, in their efforts to expand and grow their businesses, SME owners engage in various credit options which further exposes them to financial risks. This is because most SMEs find it difficult to fulfil their financial obligations to their various creditors, thereby resorting to early liquidation in order to pay their debts with the business's assets. Furthermore, SMEs are weak and confront much competition from their larger counterparts. These usually put them in poor strategic positions because they lack the wherewithal to withstand such competition, like a qualified and skilled workforce, adequate professionalism, limited capital and other resources. These expose them to serious strategic risks which limit their chance of survival.

Unfortunately, most SMEs have been trapped in a vicious cycle of poor financial performance, which is measured by their profitability. The key to building great wealth is having great knowledge to act on and great wisdom to know which course of action is the best. Many researchers who have conducted financial literacy focused on personal finance and failed to relate it to business management. They look at bookkeeping literacy, ratio analysis banking services and their effects on personal and household finance. This study, therefore, seeks to find out how financial literacy and the entrepreneurial traits of the SME entrepreneur affect the profitability of SMEs in Ogun State.

The general objective of the study is to investigate how financial literacy and entrepreneurial traits determine the profitability of SMEs in Ogun State, Nigeria. The specific objectives of the study are as follows:

1. To determine the level of profitability of SMEs.
2. To determine SME entrepreneurs' financial literacy level.
3. To determine the nature of entrepreneurial traits possessed by SME entrepreneurs.
4. To determine the contribution of financial literacy to SMEs' profitability.
5. To determine the contribution of entrepreneurial traits to the profitability of SMEs.

2. Literature review

The risk theory of profit is propounded by F. B. Hawley in 1893. He believed that those who have the risk ability in dynamic production have a sound claim on the reward called profit. Risk in business may arise due to obsolescence of a product, sudden fall in prices, introduction of a better substitute by a competitor and risk due to fire, war, etc. Hawley considered risk-taking as an inevitable element of production, and those who take risks are more likely to earn larger profits. According to Hawley, profit is simply the price paid by society assuming business risk in excess of predetermined risk. Hawley categorised profits into two parts: the compensation for the actuarial loss suffered due to several classes of risks assumed by the entrepreneur and profit representing the inducement to bear the consequences due to the exposure of risk in the entrepreneurial adventures. The theory assumes that profits arise from factor ownership as long as the ownership involves risk. Hawley believes that an entrepreneur has to assume risk to earn more and more profit.

Profitability means the ability to make a profit from all the business activities of an organisation, company, firm, or enterprise. It shows how efficiently the management can make profit by using all the resources available in the market. Toshniwal (2016) posited that the excess of input factors expressed in monetary terms is called profit. Profitability is germane to the survival of any business entity and is of significant interest to the stakeholders (owners, government, employees, and their host communities). Many companies in Nigeria, especially the manufacturing sector, have not been achieving this expectation to owners, government, employees, and their host communities in recent times (Nwosu, 2014). However, the term 'Profitability' is not synonymous to the term 'Efficiency'. Profitability is an index of efficiency and is regarded as a measure of efficiency and a management guide to greater efficiency. Though profitability is an important yardstick for measuring efficiency, the extent of profitability cannot be taken as a final proof of efficiency. Sometimes satisfactory profits can mark inefficiency; conversely, a proper degree of efficiency can be accompanied by an absence of profit. The net profit figure simply reveals a satisfactory balance between the values receive and value given. The change in operational efficiency is merely one of the factors on which the profitability of an enterprise largely depends. Moreover, there are many other factors besides efficiency which affect profitability.

Sometimes, the terms 'Profit' and 'Profitability' are used interchangeably. But in reality, there is a difference between the two. Profit is an absolute term, whereas profitability is a relative concept. However, they are closely related and mutually interdependent, having distinct roles in business. Profit refers to the total income earned by the enterprise during the specified time, while profitability refers to the operating efficiency of the enterprise. It is the ability of the enterprise to make profit on sales. It is the ability of the enterprise to get a sufficient return on the capital and employees used in the business operation. As Weston and Brigham (1975) rightly note "to the financial management profit is the test of efficiency and a measure of control, to the owners a measure of the worth of their investment, to the creditors the margin of safety, to the government a measure of taxable capacity and a basis of legislative action and to the country profit is an index of economic progress, national income generated and the rise in the standard of living", while profitability is an outcome of profit. In other

words, no profit drives towards profitability. Firms having the same amount of profit may vary in terms of profitability.

There is no generally acceptable definition of SME. This is because there are no uniform criteria to measure them in terms of capital outlay, number of employees, sales turnover, fixed capital investment, available plant and machinery, market share, level of development and even nomenclature (Ogechukwu, 2011). These differences are from country to country, industry to industry, school to school and author to author (Fatai, 2011). According to the United Nations Environment Programme (UNEP) (2003), while some countries prefer to categorise small enterprises into three, micro, small and medium or very small, small and medium, some other countries adopt two categories of small and medium. As a result, authors from different countries have come up with different definitions of SMEs based on the classification used in their countries and the guidelines approved by their governments. In order to minimise the controversy likely to be generated by these disagreements in conceptual clarification, numerous authors have reduced the criteria to be considered for SME definition into two (Altman & Sabato, 2008; Henschel, 2009). These are theoretical and operational definitions. Henschel (2009) specifically points out that theoretical definitions of SME consider qualitative criteria such as autonomy, personal comprehensibility as well as the financial and personal engagement of at least the owner. The author further posits that operational definitions of SMEs look at quantitative criteria like annual turnover, number of employees and capital outlay. According to UNEP (2003), the European Union submits that Micro firms are those which employ less than 10 employees and with an annual turnover of about two million Euros, small firms employ less than 50 employees and with about 10 million Euros as their annual turnover while medium-sized firms employ less than 250 employees with an annual turnover of 43 million Euros. Henschel (2009) reports that an SME in the United Kingdom is a company that employs less than 250 workers, while in the United States of America, the figure is less than 500 employees. In South Africa, small businesses are categorised into four, namely, micro-enterprises, very small enterprises, small enterprises and medium enterprises (Smith & Watkins, 2012). The authors further put it that the differentiating factor between these categories is the number of employees. However, UNEP (2003) points out that advancements in

Information and Communication Technology (ICT) could make SME definitions that take a number of employees into account less relevant.

In Nigeria, a number of definitions of SMEs have been made available. Fatai (2011) opines that different authors, institutions, government agencies and policies have suggested different ways to define SMEs at various times over the years. These definitions seem to consider the various features of SMEs and the current economic situation of the country. Ogechukwu (2011) posits that different authors, scholars and schools have different ideas as to the differences in Capital outlay, number of employees, sales turnover, fixed capital investment, available plant and machinery, market share and the level of development, differences in these factors reflect in the available definitions of SMEs.

Okoli (2011) conducted an in-depth analysis of record keeping and its effect on the success of small businesses in Enugu State. 168 small enterprises made up the research sample. His research led to the finding that startups are more likely to embrace the system due to its simplicity (one entry). That most small-scale businesses fail as a result of poor record-keeping and that financial literacy and small-scale business performance are related. In conclusion, given the necessity of precisely measuring a research construct in the majority of fields. There haven't been a lot of studies that specifically address the issue of how financial literacy should be appropriately measured. The fact that none of these studies appear to have substantially impacted how financial literacy is measured is maybe even more significant.

In another study conducted by Shehu and Mahmood (2014) assess the Relationship Between Market Orientation (MO) and Business Performance of Nigerian SMEs: The Role of Organization Culture". The researchers make use of market orientation and organisational culture as the variables that influence or affect business performance. Based on the review, it was discovered that data used for the study was collected through questionnaires, whereby six hundred and forty questionnaires were administered to SME owners/ managers operating in Kano, the Northwest part of Nigeria, and five hundred and eleven questionnaires were returned which represent 79.8% response rate. Correlation analysis and regression were used to test the hypotheses under study. The finding from correlation analysis shows a positive relationship between market orientation, organisational culture, and business performance. At the same time, the regression result revealed that there is no significant relationship

between orientation and SME performance, whereas the mediation test was not supported.

Thaimuta and Moronge (2014) examine the Factors Affecting the Performance of Matatu Paratransit Venture in SMEs in Nairobi County, Kenya. Management skills, entrepreneurial skills, training, and government policies affect the performance of the matatu paratransit sector in Nairobi County, and the data used for the study was collected through a questionnaire. Multiple regression was used to analyse the data, and it was performed through SPSS software. Resource-based view theory, entrepreneurship theory, economic theory of entrepreneurship, and empowerment theory were used as supporting theories for the study. The finding states that management skills, entrepreneurial skills, training, and the role of government policies influence or affect the performance of the matatu paratransit sector in Nairobi County, Kenya.

3. Methodology

The research design for this study will be a descriptive survey. This design will be used because it allows for obtaining a numerical and structured description of the population and will give a clear understanding of financial literacy and entrepreneurial traits as they affect the profitability of SMEs in Ogun State, Nigeria.

The population for this study is 31,133 registered SMEs in all the 20 local government areas of Ogun State. This figure was obtained from the Small and Medium Scale Enterprises Development Agency of Nigeria (SMEDAN) 2021. The sample for this study will be 1,005 SME entrepreneurs selected from 15 local government areas across the three senatorial districts of Ogun State.

A purposive, systematic random sampling technique will be used to select the above sample size in a multi-stage procedure. Firstly, five local governmental areas (LGAs), three urban and two rural, were purposely selected from each of the three senatorial districts in Ogun State, making fifteen out of the twenty LGAs in the state. Therefore, nine urban and six rural LGAs were selected. The rationale behind the selection of more urban areas is that more SMEs are concentrated there, while the rural areas have fewer SMEs. Also, there are more registered SMEs in the urban areas than in the rural areas. The researcher went further to randomly select seventy-five SME entrepreneurs from each of the nine urban LGAs and fifty-five

from each rural LGA. The total of respondents from this selection is 1,005. The selection will be systematically made from a list of registered SME entrepreneurs made available by the Justice Development and Peace Commission (JDPC) in collaboration with GesellschaftfÜr Organisation, Planung und AusbildungmbH, GOPA, i.e. Society for Organisation, Planning and Training, a consulting firm in charge of training and developing SMEs in Ogun State.

The researcher exploited the avenue of the training organised for SME entrepreneurs by the Justice Development and Peace Commission (JDPC) in collaboration with GesellschaftfÜr Organisation, Planung und AusbildungmbH, GOPA in accessing the respondents. At different times of the training organised in Ijebu-Ode and Abeokuta, the researcher, with the help of two research assistants and staff of the trainer organisation, elicited information from the entrepreneurs who were already in the database and physically present at those trainings. Instruments were given and retrieved from the respondents after two days, i.e, the last training day.

4. Result and discussion

Table 1 provides a further description of data based on the gender and location of the SME entrepreneurs who participated in the study.

Table 1

Demographical Data of Respondents

Variable	Frequency	Percentage (%)
Location		
Urban	675	67.2
Rural	330	32.8
Total	**1005**	**100**
Gender		
Male	604	60.1
Female	401	39.9
Total	**1005**	**100**

Source: authors' contribution

It was revealed that 330 respondents, which constitute 32.8 per cent, were rural SME entrepreneurs, while 675, which constitute 67.2 per cent, were urban SME entrepreneurs. According to data displayed in Table 1, out of the 1005 SME, 604, which constitute 60.1 percent,

were male entrepreneurs, while 401, which constitute 39.9 percent, were female.

4.1. Answering the Research Questions and Discussion

Research Question One: What is the level of profitability of SMEs in Ogun State?

It is noticed that there is a low level of profitability of SMEs in Ogun State because the mean score of 13.096 is greater than the median of 13.000 (see Table 2).

Table 2

Descriptive Statistics of the Level of Profitability of SMEs in Ogun State

SMEs' Profitability	Statistics	Std. Error
Mean	13.096	0.047
Median	13.000	
Variance	2.240	
Std. Deviation	1.497	
Minimum	9.000	
Maximum	16.000	
Range	7.000	
Skewness	0.389	0.077
Kurtosis	0.024	0.154

Source: authors' contribution

This result shows that there is a low level of profitability among most of the SMEs entrepreneurs in Ogun State. This finding is in tandem with the report of Akanno, Emejuru and Khalid (2017), who reported that there is a low level of profitability among the majority of SMEs in South-East Nigeria, which is affected by the level of financial literacy. This is contrary to the finding of Olutunla and Obamuyi (2008) who found that high profitability, increased loans, and growth in size of SMEs remain important and significant factors that impact the success and size of business.

Research Question Two: What is the level of profitability of SMEs in Ogun State based on gender and location?

According to data in Tabel 3, it is noticed that both male and female SME entrepreneurs, as well as urban and rural entrepreneurs, recorded low levels of profitability in Ogun State their mean scores being greater than the median score (see Table 3). This result shows

that there is a low level of profitability among SME entrepreneurs in Ogun State irrespective of gender and location.

Table 3

Descriptive Statistics of the Level of Profitability of SMEs in Ogun State based on Gender and Location

SMEs' Profitability	Gender		Location	
	Male	Female	Urban	Rural
Mean	13.094	13.097	13.098	13.091
Median	13.000	13.000	13.000	13.00
Variance	2.241	2.243	2.246	2.235
Std Deviation	1.497	1.497	1.499	1.495
Minimum	9	16	9	16
Maximum	9	16	9	16
Range	7	7	7	7
Skewness	0.388	0.024	0.398	0.370
Kurtosis	0.391	0.009	0.008	0.040

Source: authors' contribution

Research Question Three: What is the level of financial literacy of SME entrepreneurs in Ogun State?

The results in Table 4 show that there is a high level of financial literacy among SMEs in Ogun State.

Table 4

Descriptive Statistics of the Level of Financial Literacy of SME Entrepreneurs in Ogun State

Financial Literacy	Statistics	Std. Error
Mean	46.862	0.126
Median	47.000	
Variance	15.940	
Std. Deviation	3.990	
Minimum	36.000	
Maximum	57.000	
Range	19.000	
Skewness	0.113	0.077
Kurtosis	0.428	0.154

Source: authors' contribution

Research Question Four: What is the level of financial literacy of SME entrepreneurs in Ogun State based on gender and location?

According to data displayed in Table 5, there is a high level of financial literacy among male and female SME entrepreneurs as well as among urban and rural entrepreneurs because the mean scores are less than the median score (47.000). This result shows a high level of financial literacy among the SME entrepreneurs in Ogun State irrespective of gender and location.

Table 5

Descriptive Statistics of the Level of Financial Literacy of SME Entrepreneurs in Ogun State based on Gender and Location

Financial Literacy	Gender		Location	
	Male	Female	Urban	Rural
Mean	46.854	46.873	46.865	46.854
Median	47.000	47.000	47.000	47.000
Variance	15.985	15.911	16.022	15.821
Std Deviation	3.998	3.988	4.003	3.977
Minimum	38	38	38	38
Maximum	57	57	57	57
Range	19	19	19	19
Skewness	0.111	0.118	0.122	0.094
Kurtosis	0.430a	0.445	0.416	0.478

Source: authors' contribution

Research Question Five: What is the nature of the entrepreneurial traits of SME entrepreneurs in Ogun State?

Data are displayed in Table 6, below.

Table 6

Descriptive Statistics of the nature of Entrepreneurial Traits of SME Entrepreneurs in Ogun State

Entrepreneurial Traits	Statistics	Std. Error
Mean	59.773	0.182
Median	60.000	
Variance	33.359	
Std. Deviation	5.770	
Minimum	45.000	
Maximum	69.000	
Range	24.00	
Skewness	0.618	0.077
Kurtosis	0.032	0.154

Source: authors' contribution

According to data displayed in Table 6, the mean (59.773) is less than the median (60.00), which means there is a high level of entrepreneurial traits among SME entrepreneurs in Ogun State. This finding aligns with the report of Muhammed (2017) that there is a high level of entrepreneurial traits (self-efficacy, risk-taking, and locus of control) among entrepreneurs that positively affect the profitability of their businesses.

Research Question Six: What is the nature of entrepreneurial traits of SME entrepreneurs in Ogun State based on gender and location?

The results are displayed in Table 7, below.

Table 7

Descriptive Statistics of the nature of Entrepreneurial Traits of SME Entrepreneurs in Ogun State based on Gender and Location

Entrepreneurial Traits	Gender		Location	
	Male	Female	Urban	Rural
Mean	59.748	59.811	59.789	59.739
Median	60.000	60.000	60.000	60.000
Variance	33.665	32.979	32.968	34.260
Std Deviation	5.802	5.742	5.741	5.853
Minimum	45	45	45	45
Maximum	69	69	69	69
Range	24	24	24	24
Skewness	0.620	0.616	0.614	0.626
Kurtosis	0.039	0.009	0.010	0.062

Source: authors' contribution

According to data results, there is a high level of entrepreneurial traits among male and female SME entrepreneurs as well as among urban and rural SME entrepreneurs the mean scores being less than the median score (60.000). This result shows that there is a high level of entrepreneurial traits among the SME entrepreneurs in Ogun State, irrespective of gender and location.

4.2. Test of Hypotheses and Discussion

Hypothesis One: There is no significant contribution of financial literacy to SMEs' profitability in Ogun State.

The results of the data analysis displayed in Table 8 show the contribution of financial literacy to SME profitability.

Table 8

Summary of Regression Analysis for the Contribution of Financial Literacy to SMEs' Profitability in Ogun State

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.205	0.042	0.041	1.465

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	94.645	1	94.645	44.067	0.000[b]
Residual	2154.185	1003	2.148		
Total	2248.830	1004			

a. Dependent Variable: **SME Profitability**

b. Predictors: (Constant), **Financial Literacy**

Source: authors' contribution

The predictor (financial literacy) accounted for 4.2% of the variance in SMEs' profitability. Since the computed significant value of 0.00 is less than the alpha significant of 0.05, the null hypothesis is hereby rejected. Therefore, it is revealed that there is a significant contribution of financial literacy to SME profitability in Ogun state. This finding signifies that financial literacy is a key factor that determines the level of SME profitability in Ogun in any economy because it reflects the level of entrepreneurial understanding of all issues connected to business finance. The knowledge, behaviour, and attitude of business owners towards finance issues go a long way in determining the performance of any business outfit, which includes profitability. This result is in tandem with the findings of (Shafinah & Vinod, 2020; and Mohammed, 2020) that there is a significant statistical correlation or relationship between financial literacy and SMEs' profitability. Similarly, Frimpong, Agyapong and Agyapong (2022) reported that financial literacy has a significant effect on the performance of SMEs, especially in the aspect of profitability. These reports and the current findings indicate that financial literacy is a significant key driver of business performance and should be developed as an inbuilt part of business activities (Effiong, 2021).

Hypothesis Two: There is no significant contribution of entrepreneurial traits to SME profitability in Ogun State.

The results of data analysis displayed in Table 9 show the contribution of entrepreneurial traits to SME profitability.

Table 9

Summary of Regression Analysis for the Contribution of Entrepreneurial Traits to SMEs' Profitability in Ogun State

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.212	0.045	0.044	1.463

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	101.172	1	101.172	47.249	0.000
Residual	2147.658	1003	2.141		
Total	2248.830	1004			

a. Dependent Variable: **SMEs' Profitability**

b. Predictors: (Constant), **Entrepreneurial Traits**

Source: authors' contribution

The result shows an F-value of 47.249 and a computed significant value of 0.00. Furthermore, the model summary shows that R = 0.212, R^2 = 0.045 adjusted R^2 = 0.044 and standard error of estimate 1.463. This result shows that the predictor (entrepreneurial traits) accounted for 4.5% of the variance in SMEs' profitability. Since the computed significant value of 0.00 is less than the alpha significant of 0.05, the null hypothesis is hereby rejected. Therefore, the result indicates that there is a significant contribution of entrepreneurial traits to SME profitability in Ogun state. This result is not far from the fact that an entrepreneur is an individual with foresight and ingenuity, eager to accept the uncertainty within the framework of the economic market and actively pursue the profit motive. Most entrepreneurs seem to possess the traits of vision and innovation, which make the creation of new things possible for market attraction. This result is consistent with Muhammed (2017) report, which found that entrepreneurial attributes (self-efficacy, risk-taking, and locus of control) all have a significant positive impact on the profitability of MSMEs and that having these traits makes MSMEs more profitable. The results concur with Pattanayak and Kakati's report from 2021, which found a substantial positive association between entrepreneurial qualities and the success of SMEs. The report of Kofi, Alexander and Frank (2020) that entrepreneurial traits (conscientiousness, extraversion, agreeableness and neuroticism) significantly influence business success from both financial and growth performance perspectives while openness to

experience is insignificant in terms of impact on business success is also in agreement with this finding.

5. Conclusion and recommendations

This study was conducted to examine the contribution of financial literacy and entrepreneurial traits to SMEs' profitability in Ogun State, Nigeria. It was concluded from the data analysis that the level of profitability of SMEs in Ogun State. This is due to the poor enabling environment for businesses, which resulted in high expenses for SMEs in Ogun State. Also, there is a high level of financial literacy and entrepreneurial traits among SME entrepreneurs in Ogun State. The findings also concluded that there is a relative and composite significant contribution of financial literacy and entrepreneurial traits to SMEs' profitability in Ogun State. Also, it was concluded that gender and location significantly moderate the contribution of financial literacy and entrepreneurial traits to SMEs' profitability in Ogun State.

This article was able to investigate the combined or composite contribution of financial literacy and entrepreneurial traits on the profitability of SMEs. This was identified as a gap before many authors investigated the relative contributions of the two variables, financial literacy and entrepreneurial traits, on performance.

Based on the findings and conclusion, the following recommendations were presented:

1. Awareness should be created for SME entrepreneurs on the relevance of financial literacy and entrepreneurial skills through training programs in order to equip them with financial literacy skills necessary for business operations.

2. Existing and prospective entrepreneurs should endeavour to develop and focus more on traits like risk propensity, innovativeness and self-confidence as they are found to be necessary for the effective running of a business enterprise.

3. Since businesses can get greater access to the market through technology, stakeholders should incorporate ICT as one of the components of financial literacy and provide training on how it can be used to promote financial literacy in Business.

4. Through the Ministry of Commerce, state governments, in collaboration with non-governmental Organizations (NGOs), should provide capacity building for SME entrepreneurs to enhance and

appreciate their inborn personality traits for higher business profitability.

References

1. Akanno, S.N., Emejuru, N.J., Khalid, A. (2017). A Profitability-Focused Assessment of Financial Literacy Level of Southeastern Nigeria SMEs. *International Journal of Business & Law Research 5*(2), 12-20.
2. Altman, E.I., Sabato, G. (2008). Modelling Credit Risk for SMEs: Evidence from the U.S. Market. *Abacus Journal of Accounting, Finance and Business Studies*.43 (3), 332-357
3. Effiong, G.W. (2021). Significance of Financial Literacy on Business Performance in Nigeria. *International Digital Organization for Scientific Research Journal of Computer And Applied Sciences, 6*(1), 33-39
4. Eniola, A.A., Entebang, H. (2014). SME firms performance in Nigeria: Competitive advantage and its impact. *International Journal of Research Studies in Management, 3*(2), 75-86. http://dx.doi.org/10.5861/ijrsm.2014.854
5. Fatai, A. (2011). Small and Medium Scale Enterprises in Nigeria: the problems and prospects, Lagos State University, Nigeria, Department of Political science.
6. Frimpong, S.E., Agyapong, G., Agyapong, D. (2022). Financial literacy, access to digital finance and performance of SMEs: Evidence From Central region of Ghana. *Cogent Economics & Finance, 10* (1), 1-21. https://doi.org/10.1080/23322039.2022.2121356
7. Henschel, T. (2009). Risk management practices of SMEs: Evaluating and implementing effective risk management system. Berlin: Enrich Schmit Verlag GMBH&Co, 43, 14-16
8. Irikefe, P.O., Opusunju, M.I. (2021). Effect of financial literacy on the growth of micro, small and medium enterprises (MSMES). *International Journal of Research Publications*, *90*(1), 384-392. doi:.10.47119/IJRP1009011220212541
9. Ivan, J., Milica, A., Djordje, N. (2018). Entrepreneurial personality traits and SMEs profitability in transition economy. *Serbian journal of management*
10. Jacobs, A. (2001). *Financial Management IV (FMA 401-V): Study guide 1* (3rd ed.). Pretoria: Technikon S.A.
11. Kofi, N.G., Alexander, O., Frank, A. (2020). Effects of Entrepreneurial Trait On The Success Of Small And Medium Scale Enterprises: The Ghanaian Perspective. *International Journal Of Scientific & Technology Research, 9*(3), 7177-7187

12. Manoppo, H., Arie, F. (2016). "Effect of Capital Structure, Firm size and Profitability on Firm value". *EMB Journal*, 4(2).
13. Mohammed, N.A. (2020). Impact of financial literacy on profitability of small scale enterprises in Nigeria. *African Journal of Accounting and Financial Research, 3*(1), 44-52. www.abjournals.org
14. Muhammed, Y. (2017). The Effect of Entrepreneurial Characteristics on the Profitability of Micro, Small and Medium Scale Enterprises in Kaduna State. *International Journal of Entrepreneurial Development, Education and Science Research,* 4(2), 139-148
15. Nwosu, H.E. (2014). Materials, management, and firm's profitability. *The International Journal of Business and Management,* 2(7), 80-93.
16. Ogechukwu, A.D. (2011). The role of small scale industry in national development in Nigeria. *Universal Journal of Management and Social Sciences* 1(1), 23-42.
17. Okoli, B.E. (2011). Evaluation of the accounting systems used by small scale enterprises in Nigeria: The case of Enugu-South East Nigeria. *Asian journal of business management,* 3, 235-240
18. Olutunla, G.T., Obamuyi, T.M. (2008). An empirical analysis of factors associated with the profitability of Small and medium - enterprises in Nigeria. *African Journal of Business Management, 2*(10), 195-200. http://www.academicjournals.org/AJBM ISSN 1993-8233
19. Pattanayak, S. Kakati, M. (2021)**.** An empirical study on entrepreneurial traits and their impact on enterprise success. *Vilakshan–XIMB Journal of Management, 10*(11), 1-15. DOI 10.1108/XJM-09-2021-0249
20. Shafinah, R., Vinod, R.B (2020). Financial literacy: The impact on the profitability of the SMES in Kuching. *International Journal of Business and Society, 21*(3)*,* 1172-1191.
21. Shehu, A.M., Mahmood, R. (2014). The Relationship between Market Orientation and Business Performance of Nigerian SMEs: The Role of Organizational Culture. *International Journal of Business and Social Science. Vol. 5, No. 9(1); August 2014.*
22. Smith, Y., Watkins, J.A. (2012). A literature review of small and medium enterprises (SME) risk management practices in South Africa. *Africa Journal of Business Management*, 6, 6324-6330.
23. Thaimuta, J. M., Moronge, M. (2014). Factors Affecting the Performance of Matatu Paratransit Venture in Small and Medium Enterprises in Nairobi County. *International Journal of Current Business and Social Sciences,* 1(2), 1-17.
24. Toshniwal, R. (2016). Concept of Profit and Profitability of commercial banks in India. 3rd International Conference on Recent Innovations in Science, Technology, Management and environment.

25. UNEP (2003). Annual Evaluation Report. Retrieved from the Library of Congress. www.loc.gov/item/IcwaN0010018/
26. Weston, J.F., Brigham, E.F. (1975). Managerial Finance. 5th Edition, London: The Dryden Press.

INVESTIGATING THE INFLUENCE OF THE SHADOW ECONOMY ON NON-PERFORMING LOANS IN EUROPEAN ECONOMIES: A PANEL GMM ANALYSIS

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Abstract

In this paper, we use panel data containing all EU27 countries from the 2010 to 2022 period to investigate the impact exhibited by the shadow economy on the level of NPLs. Based on a Panel GMM approach we reveal a negative connection, indicating that Countries with larger informal sectors often exhibit lower reported NPLs, possibly due to less stringent oversight. Additionally, economic growth correlates negatively with NPLs, while rising unemployment is associated with increased NPL levels. However, factors like inflation, political stability, and government debt did not show significant correlations with NPLs in our analysis. The topic holds significant relevance for both macro-stability policymakers and commercial banks aiming to understand how changes in fiscal and budgetary conditions impact the quality of credit portfolios.

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Keywords: credit portfolio quality, inflation, political stability, informal economy, difference GMM

JEL Classification: G21; O17

1. Introduction

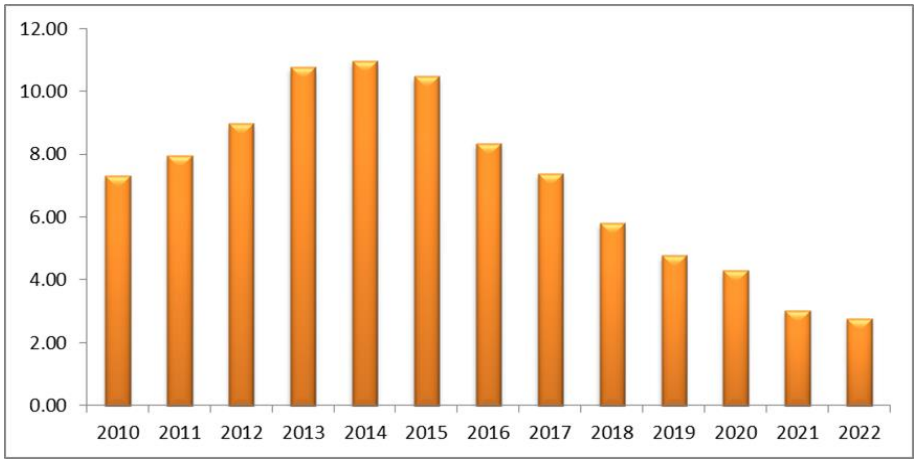
Non-performing loans (NPLs) are a key indicator for the financial industry since they are loans that borrowers have not been able to return within an allotted period. On the other hand, repeated occurrences of these unpaid debts can put pressure on financial institutions, which may reduce their ability to lend money and undermine investor trust. The origins of non-performing loans are complex and frequently linked to economic downturns, unclear credit conditions, or inadequate due diligence on the part of lending institutions. Furthermore, a higher-than-average percentage of non-performing loans highlights systemic weaknesses in the financial sector. Therefore, a thorough analysis of the fundamental causes and variables influencing NPLs is important.

The NPLs evolution in Europe has changed significantly in recent years, and this has had a significant impact on the financial scene, showing a steady decrease from 7.32% in 2010 to a significantly lower 2.78% by the end of 2022 (see Figure 1). Not only does this indicate a significant increase in the quality of loans, but it also highlights improved asset quality for banks that operate in the Eurozone.

In light of the global financial crisis that emerged at the beginning of this time, this pattern is particularly notable. The global economy saw turbulent times in the years that followed 2008, and the Eurozone was no different. NPLs experienced notable increases during this crisis in numerous European nations, primarily driven by the severe economic upheavals that rendered many loans uncollectible.

Figure 1

The evolution of NPLs in the European Union (%)



Source: author representation based on The Global Economy data

Thus, the drop in NPLs starting in 2010 can be seen as evidence of the financial sector's adaptability and strength inside the Eurozone. It represents a time of recovery and stabilization during which financial institutions likely implemented strict risk management procedures and carefully planned steps to address the shortcomings shown by the crisis. In addition, the following ten years were not without difficulties, with the global pandemic in 2020 presenting previously unseen risks to financial stability. However, the response mechanisms used during the pandemic were more organized and proactive than those used in the wake of the financial crisis. Rapid action was taken by governments throughout the Eurozone to enact a wide range of policies, such as substantial fiscal stimulus packages, short-term payment moratoriums, and targeted assistance for faltering companies. These interventions played a pivotal role in safeguarding the financial well-being of individuals and businesses alike, thereby mitigating the adverse impact on loan repayment capacities and subsequently reducing the incidence of defaults.

In light of these developments, understanding the intricate dynamics between the shadow economy and NPLs becomes crucial. As the Eurozone navigates the complexities of post-crisis recovery and pandemic-induced challenges, a nuanced exploration of this

relationship can offer invaluable insights for policymakers, regulators, and financial institutions.

This paper seeks to delve into this pressing issue, employing a Panel Generalized Method of Moments (GMM) analysis on a panel of EU27 countries during the 2010-2022 period. The negative correlation between the shadow economy and NPLs suggests that in countries with larger informal sectors, there's likely reduced oversight, leading to less rigorous NPL reporting. Furthermore, banks in these economies may adopt conservative lending practices, resulting in fewer NPLs.

The paper progresses as follows: Section 2 details the research design, Section 3 offers the literature review, Section 4 presents the results, and Section 5 concludes.

2. Literature review

Recently, an expanding body of research has delved into the factors influencing NPLs, employing various samples and econometric methods. These investigations highlight two primary categories of variables affecting the NPL rate: factors related to banks and broader macroeconomic conditions.

Several papers, including Salas and Saurina (2002), Louzis et al. (2012), Alhassan et al. (2014), and Reddy (2015), have posited that larger banks, with their enhanced capabilities for thorough loan screening, are better positioned to mitigate loan losses compared to their smaller counterparts. However, a contrasting viewpoint emerges from studies like Stern and Feldman (2004), who contend that the "too big to fail" status of larger banks incentivizes riskier lending behaviours, absolving them from the repercussions of their lending decisions. Foos et al. (2010) further advance that banks relaxing credit standards to meet loan growth targets may witness heightened NPLs. This aligns with the notion that less profitable banks, possibly due to suboptimal management as theorized by Berger and DeYoung (1997) and Louzis et al. (2012), might exhibit elevated NPL rates. Along the same line of argument, Ghosh (2015) notes that highly profitable banks tend to avoid high-risk ventures, implying a negative correlation between profitability and NPLs. Additionally, García-Marco and Robles-Fernández (2008) underscore the relationship between past profitability and future NPL rates, indicating that banks with a history of underperformance might curtail lending activities following elevated NPL levels. Beyond these factors, studies have also explored variables

like bank capitalization (Klein, 2013; Ghosh, 2015; Louzis et al., 2012; Macit, 2012; Makri et al., 2014), credit growth (Foos et al., 2010; Boudriga et al., 2010; Naili and Lahrichi, 2022), and ownership structure (Dong et al., 2014; Louzis et al., 2012; Naili and Lahrichi, 2022) as potential influencers of NPL trends, although findings remain inconclusive.

In addition, several studies highlight the impact of macroeconomic conditions on NPLs. During economic upturns, individuals and firms typically have the means to meet their financial obligations, resulting in lower NPLs (Louzis et al., 2012; Makri et al., 2014; Beck et al., 2015; and others). Conversely, economic downturns elevate the risk of loan defaults, leading to increased NPLs. This relationship is further emphasized by the consensus that rising unemployment rates correlate with higher NPL rates (Salas and Saurina, 2002; Ghosh, 2015; Dimitrios et al., 2016; Pop et al., 2018). Beyond growth and unemployment, other macroeconomic factors like inflation and government spending have been examined for their NPL implications. While some studies, such as Rinaldi and Sanchis-Arellano (2006) and Klein (2013), have shown that inflation reduces debt value, easing debt servicing and lowering NPLs, others, like Gulati et al. (2019), argue that real inflation strains borrowers' repayment capacities, deteriorating loan portfolios. Additionally, a decline in public finances, often marked by increased public debt and subsequent fiscal adjustments, can impact both individual and corporate repayment capacities. Empirical findings by Dimitrios et al. (2016), Louzis et al. (2012), Makri et al. (2014), and Naili and Lahrichi (2022) affirm the influence of public finance indicators, such as public debt and government expenditures, on NPL dynamics.

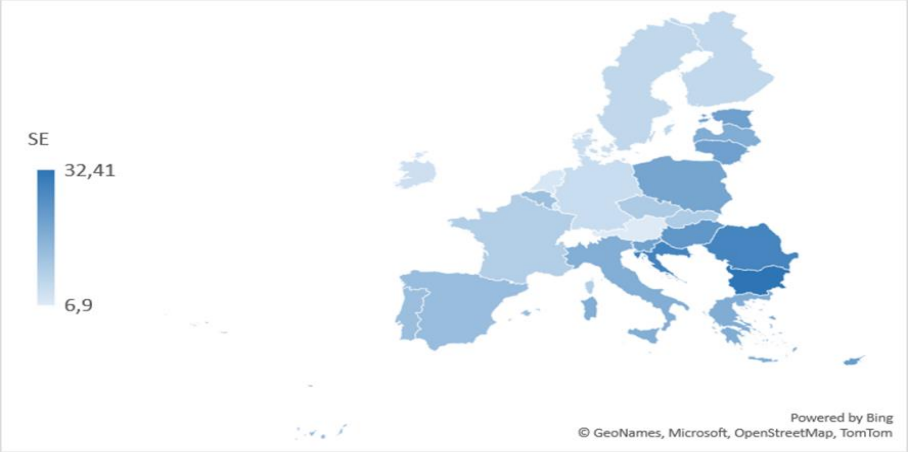
Despite the extensive research on various determinants influencing NPLs, notably macroeconomic factors like economic growth, unemployment, inflation, and public finance indicators, there remains a notable gap in the literature concerning the relationship between the shadow economy and NPL levels. While numerous studies have delved into the intricacies of NPL dynamics under different economic and financial conditions, the potential impact and interplay of the shadow economy on NPL rates have not been thoroughly explored.

3. Data description

We use a balanced panel comprising all EU27 countries during 2010 to 2022 period. The dependent variable is the level of NPLs. As control variables we use macroeconomic variables such as Economic Growth (EG), Inflation (INF), Unemployment (UNM), Political Stability (PSI), and Government Debt (GD) but also aggregate bank-related factors such as Bank assets (BA), Bank concentration (BCON), and Bank interest revenue (BIR), Credit-to-Deposits (CDR), Return on Assets (ROA). The key explanatory variable is the level of the shadow economy (SE) which is presented in Figure 2 across EU27.

Figure 2

Shadow economy in 2022 (%)



Source: author representation based on The Global Economy data

As we can see, high-income EU countries tend to exhibit relatively lower levels of shadow economies. These nations have well-established formal economies, characterized by robust regulatory frameworks, strong institutions, and high levels of tax compliance. In contrast, lower-income EU countries, such as Bulgaria, Romania, and Greece, frequently experience a more significant shadow economy. These nations often face economic challenges, including higher unemployment rates and lower average income levels, which can drive individuals and businesses towards informal economic activities. A detailed description of the variables used in the regression is presented in Table 1.

Table 1

Data description

Variables	Definition	Source
NPLs	Bank nonperforming loans to total gross loans are the value of nonperforming loans divided by the total value of the loan portfolio (including nonperforming loans before the deduction of specific loan-loss provisions).	The Global Economy
EG	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	The Global Economy
INF	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.	The Global Economy
UNM	Unemployment refers to the share of the labor force that is without work but available for and seeking employment.	The Global Economy
PSI	The index of Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.	The Global Economy
GD	Debt is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans. It is the gross amount of government liabilities reduced by the amount of equity and financial derivatives held by the government.	The Global Economy
BA	Total assets held by deposit money banks as a share of GDP. Assets include claims on domestic real nonfinancial sector which includes central, state and local governments, nonfinancial public enterprises and private sector.	The Global Economy

Variables	Definition	Source
BCON	The ratio between the sum of assets held by the top three banks and their total level in the banking system	The Global Economy
BIR	Accounting value of bank's net interest revenue as a share of its average interest-bearing (total earning) assets.	The Global Economy
CDR	The financial resources provided to the private sector by domestic money banks as a share of total deposits.	The Global Economy
ROA	Commercial banks' pre-tax income to yearly averaged total assets.	The Global Economy
SE	The shadow economy as percent of total annual GDP. Detailed methodology of the estimations can be obtained from the following International Monetary Fund working paper by Leandro Medina and Friedrich Schneider (2018): Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?	The Global Economy

Usually, panel data consists of observations over multiple time periods for multiple cross-sectional units (e.g., individuals, firms, countries). Unlike individual time series, panel data can account for both cross-sectional and time-series variations, providing more information and potentially improving the reliability of the results. Non-stationary data can lead to spurious regression, where variables that are not truly related appear to be so. Spurious regression can produce misleading results and interpretations. For this reason, we run the test proposed by Levin-Lin-Chu and report the results in Table 2.

Table 2

Levin-Lin-Chu test

Variable	Test	P-value	Variable	Test	P-value
NPLs	-1.9702	0.0244	BA	-3.4994	0.0002
EG	-2.5151	0.0059	BCON	-4.1218	0.0000
INF	-7.9027	0.0000	BIR	-3.8365	0.0001
UNM	-6.5673	0.0000	CDR	-5.9928	0.0000
PSI	-2.9593	0.0015	ROA	-6.1768	0.0000
GD	-3.5871	0.0002	SE	-3.8588	0.0001

As we can observe from our analysis, each of the variables that are part of the baseline specification demonstrates stationarity at the 5% significance level. This means that the data properties of these variables remain consistent over time within a certain confidence interval. Consequently, we can confidently state that there is no concern regarding the occurrence of a spurious regression, where unrelated variables might mistakenly appear to have a relationship.

4. Results

4.1. Causality analysis

Before estimating the regressions, we must take into account the endogeneity issues. Endogeneity can occur if there's a bidirectional causal relationship between NPLs and the shadow economy. For example, a high level of NPLs might incentivize more economic activities to shift into the shadow economy, or conversely, a large shadow economy could increase the risk of NPLs. In such cases, it's challenging to disentangle the cause-and-effect relationship. Also, if the shadow economy is measured with errors, it can introduce endogeneity. Measurement errors in the explanatory variable can lead to biased coefficient estimates and make it appear as though the shadow economy is correlated with NPLs due to the errors, rather than the true causal relationship. For this reason, we run a series of causality tests, which are reported in Table 3.

Table 3

Causality analysis

Test	Lags	Null hypothesis	Test value	Prob.
Dumitrescu-Hurlin Test	1	NPLs do not homogeneously cause SE	1.5049	0.7211
Dumitrescu-Hurlin Test	1	SE does not homogeneously cause NPLs	4.6688	0.0000
Dumitrescu-Hurlin Test	2	NPLs do not homogeneously cause SE	5.6530	0.0000
Dumitrescu-Hurlin Test	2	SE does not homogeneously cause NPLs	3,1294	0.0000
Granger causality test	1	NPLs do not Granger cause SE	1.5499	0.2141
Dumitrescu-Hurlin Test	1	SE does not Granger cause NPLs	1.0032	0.3173

Test	Lags	Null hypothesis	Test value	Prob.
Dumitrescu-Hurlin Test	2	NPLs do not Granger cause SE	1.1553	0.3165
Dumitrescu-Hurlin Test	2	SE does not Granger cause NPLs	3.8700	0.0220

The null hypothesis concerning the lack of causal linkage from the shadow economy (SE) to non-performing loans (NPLs) is rejected by three of the four trial tests. This observation implies a noteworthy and influential causal relationship, wherein the level of SE exerts a substantive impact on the level of NPLs. Moreover, our analysis also indicates a potential causal relationship from non-performing loans (NPLs) to the shadow economy (SE). These findings underscore the complexity of causality dynamics, pointing out the persistence of the reverse causality hypothesis within the context of our study.

4.2. Difference GMM

Over the past twenty years, there has been a notable surge in research using panel data within the realms of economics and finance. A significant challenge faced by researchers employing traditional panel data methods stems from potential endogeneity issues, which can arise from factors like overlooked variables, inaccuracies in measurements, and mutual causality. The methodologies introduced by Arellano and Bond (1991) and subsequently by Arellano and Bover (1995) in collaboration with Blundell and Bond (1998) have gained considerable traction. Their appeal lies in their adeptness at addressing prevalent scenarios such as: i) independent variables that aren't strictly exogenous, implying their association with prior and potentially ongoing errors; ii) consistent individual effects; or iii) variance and temporal dependencies within individuals, but not necessarily across the entire panel.

In Table 4 we report the estimation results. To avoid altering the results due to multicollinearity reasons, we include the bank-related factors separately in regressions. We can see that the coefficient associated with SE is statistically significant at a 1% level in all the specifications. Thus, in countries characterised by expansive shadow or informal economic sectors, there's a propensity for both individuals and enterprises to gravitate towards informal credit markets over conventional banking systems. These informal credit avenues frequently offer more adaptable terms and might not maintain as stringent records of non-performing loans. Furthermore, such countries

often exhibit diminished regulatory scrutiny and oversight concerning banking and loan operations. Consequently, the reported levels of NPLs may appear reduced, either due to banks exercising greater clemency in loan classifications or a potential laxity in diligence. Moreover, the prevalence of a substantial shadow economy can induce heightened risk aversion among banks and financial entities. This caution often steers them towards more cautious and secure lending strategies, thereby potentially diminishing the rates of NPL occurrences.

Table 4

Estimation results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
NPL (-1)	0.6101***	0.6618***	0.5240***	0.6293***	0.6350***
EG	-0.2508***	-0.2021***	-0.1112***	-0.2436***	-0.2058***
INF	0.2209**	0.1451*	0.0258	0.3051***	0.1201
UNM	1.2007***	0.9498***	0.9961***	1.3639***	0.9583***
PSI	-1.6655	-2.5646*	-0.7408	-1.6368	-2.6104
GD	-0.0143*	-0.0150*	0.0054	-0.0523***	-0.0108
BA	-0.0461***				
BCON		0.0227			
BIR			0.3511***		
CDR				-0.0531***	
ROA					0.0006
SE	-0.2631***	-0.1214*	-0.4112***	-0.2721***	-0.1462**
Wald Chi2	3433.36	3405.57	4049.56	3140.01	3435.13
Obs.	351	351	351	351	351

, **, * denote statistical significance at 10%, 5% and 1% level, respectively.*

As expected, we report a negative coefficient, which is statistically significant at a 10% level between the level of the NPLs and economic growth. Thus, as the economy expands, businesses tend to experience better sales, increased profits, and improved cash flows. This enables them to meet their financial obligations more effectively, reducing the likelihood of loan defaults. In addition, we report positive coefficients associated with the unemployment rate, which suggest that when unemployment rates rise, a significant portion of the population faces a loss of income or reduced earnings. This financial strain can make it challenging for individuals to meet their loan obligations, increasing the likelihood of defaults and contributing to higher NPLs. These results are well established in the literature focusing on the determinants of NPLs (Ghosh, 2015; Karadima and Louri, 2020). Furthermore, we fail to report statistically significant

results relating inflation, political stability or government debt to the level of NPLs.

5. Conclusions

Our thorough examination of the EU27 countries covering the years 2010–2022 reveals some important insights into the factors that contribute to non-performing loans (NPLs). A noteworthy discovery indicates a strong causative connection between NPLs and the extent of the shadow economy (SE). This association implies that countries with more significant informal or shadow economies have borrowers who are more likely to turn to informal loan markets, which may lessen the need for strict NPL reporting. This issue is further amplified in these countries by the lack of regulatory monitoring. Furthermore, it appears that the shadow economy is influenced in return since data suggests that non-performing loans (NPLs) have an impact on the shadow economy as well. This highlights the complex dynamics of bidirectional causality.

After further analysing the factors, our findings are consistent with the large body of literature already available on non-performing loans. Economic growth is shown to be a positive force and to be negatively correlated with non-performing loans. A growing economy helps companies become more financially stable, which makes it easier for them to repay loans. On the other hand, the correlation that exists between increasing rates of unemployment and higher non-performing loans highlights the financial burden that people bear when they lose their jobs. It's interesting to note that in our analysis, variables like government debt, inflation, and political stability—all contentious topics in previous research—did not show statistically significant connections with NPL levels, pointing to complex dynamics unique to each individual nation.

References

1. Alhassan, A. L., Kyereboah-Coleman A., Andoh, C. (2014). Asset
2. Quality in a Crisis Period: An Empirical Examination of Ghanaian Banks. Review of Development Finance, 4(1), 50–62.
3. Arellano, M., Bond, S., 1991. Some tests of specification for panel
4. data: Monte Carlo evidence and an application to employment equations. Reviw of Economic Studies 58, 277–297.
5. Arellano, M., Bover, O. (1995). Another look at the instrumental

6. variable estimation of error components models. Journal of Econometrics 68, 29–51.
7. Beck, R., Jakubik, P., Piloiu, A. (2015). Key determinants of non-
8. performing loans: New evidence from a global sample. Operations Research Review, 26(3), 525–550.
9. Berger, A., DeYoung, R. (1997). Problem loans and cost efficiency in
10. commercial banks. Journal of Banking & Finance, 21, 849–870.
11. Boudriga, A., Boulila Taktak, N., Jellouli, S. (2010). Bank specific,
12. Business and institutional environment determinants of banks nonperforming loans: Evidence from MENA countries. Economic Research Forum, Working Paper 547.
13. Dimitrios, A., Helen, L., Mike, T. (2016). Determinants of non-
14. performing loans: evidence from Euroarea countries. Finance Research Letters, 18, 116–119.
15. Dong, X., Li, C., Yoon, S.M. (2020). Asymmetric dependence
16. structures for regional stock markets: An unconditional quantile regression approach. North American Journal of Economics and Finance, 52, 101-111.
17. Foos, D., Norden, L., Weber, M. (2010). Loan Growth and Riskiness
18. of Banks. Journal of Banking & Finance, 34(12), 2929–40.
19. García-Marco, T., Roles-Fernandez, M. D. (2008). Risk-taking
20. behaviours and ownership in the banking industry: the Spanish evidence. Journal of Economics and Business, 60, 332e354.
21. Ghosh, A. (2015). Banking-industry specific and regional economic
22. determinants of non-performing loans: Evidence from US states. Journal of Financial Stability, 20, 93–104.
23. Gulati, R., Goswami, A., Kumar, S. (2019). What Drives Credit Risk in
24. the Indian Banking Industry? An Empirical Investigation. Economic Systems, 43(1), 42–62.
25. Klein, N. (2013). Non-performing Loans in CESEE: Determinants and
26. Impact on Macroeconomic Performance. International Monetary Fund Working Paper 13/72.
27. Louzis, D., Vouldis, A., Metaxas, V. (2012). Macroeconomic and
28. bank-specific determinants on non-performing loans in Greece: a comparative study of mortgage, business and consumer loan portfolios. Journal of Banking & Finance, 36, 1012–1027.
29. Macit, F. (2012). What determines the non-performing loans ratio:
30. evidence from Turkish commercial banks. Central Economic Analysis Journal of Economics, 13, 33–39.
31. Makri, V., Tsagkanos, A., Bellas, A. (2014). Determinants of non-
32. performing loans: the case of eurozone. Panoeconomicus, 2, 193–206.
33. Naili, M., Lahrichi, Y. (2022). Banks' non-performing loans,

34. systematic determinants and specific factors: Recent evidence from the MENA region. Heliyon, 8(2), e08960.
35. Reddy, K. S. (2015). Non-performing loans in emerging economies –
36. Case study of India. Asian Journal of Finance & Accounting, 7(1), 183–206.
37. Rinaldi, L., Sanchis-Arellano, A. (2006). Household Debt
38. Sustainability: What Explains Household Non-Performing Loans? An Empirical Analysis. European Central Bank Working Paper.
39. Salas, V., Saurina, J. (2002). Credit risk in two institutional regimes:
40. Spanish commercial and savings banks. Journal of Financial Services Research, 22, 203–224.
41. Stern, G., Feldman, R. (2004). Too Big to Fail: The Hazards of Bank
42. Bailouts. The Brookings Institution, Washington, DC.

ABOUT HOUSEHOLDS' WEALTH AND THE EFFECTS OF SOME TAX MEASURES THAT MAY AFFECT IT

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Abstract

The aim of the paper is to analyse the effects of some fiscal measures taken in the current economic context in Romania on the wealth of households. Specifically, we consider additional property taxation, 70% taxation of income without a justified source, and a correlation between a one-unit increase in property taxation, the increase in tax revenue, and the extent to which this increase affects the Gini coefficient (inequality). The methodology used is descriptive and empirical, referring to bibliographic references from specialised literature and statistical data of various national and international fiscal entities. Through regression, we demonstrated a correlation between the Gini coefficient and tax revenue increases by raising property tax revenues by 1 percentage point.

Keywords: properties, population, tax income, tax regulations, financial and non-financial assets

JEL Classification: D31; G51; H24

1. Introduction

Romania's current economic context is mainly characterised by uncertainty and lack of predictability; recently, the authorities announced a series of tax measures aimed at reducing the budget deficit and increasing state budget revenues (the budget deficit for the first ten months of 2023 reached 3.97% of GDP, compared to the deficit of 3.34% of GDP related to the first ten months of 2022).

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In this paper, wealth refers to *non-financial assets* (real estate/property) and financial assets. According to the Financial Stability Report of the National Bank of Romania (NBR, 2023), real estate assets include only real estate, which, in turn, is divided into residential real estate (residential and non-residential buildings), and commercial real estate (buildings, retail buildings, industrial buildings/spaces). Therefore, the wealth we refer to is represented by *real estate* (which, from a tax perspective, is subject to property taxation), and *financial assets* (cash, deposits, including income from work, and wages, subject to income taxation).

In the following, we present some fiscal measures that influence the wealth of households, respectively their properties (the application of a 1% tax for residential properties that cumulatively exceed 500.000 euros, the change in VAT for the purchase of a house in 2024, respectively of 5-9-19 %) and we tried to demonstrate, by regression, a correlation between the 1 pp increase in tax revenues due to the 1 pp increase in property taxation and the GINI coefficient (inequality). The conclusion was that the Gini coefficient also increases by 1 pp, so inequality slightly deepens.

Other aspects to which we have referred are the taxation of illicit assets by 70%, and, indeed, significant revenues can be collected from the State Budget because in the tax havens, the households owned substantial assets; only in Switzerland, they totalled, in 2022, 2,1% of GDP (according to data of Atlas Offshore World, a platform of the EU Tax Observatory).

2. An analysis of the non-financial assets of households in Romania and some fiscal measures with economic effects

We discuss the non-financial assets of households in Romania, namely their houses/dwellings, in 2022, data provided by the National Institute of Statistics (NIS), as well as the Financial Stability Report of the NBR (NBR 2022), and Eurostat data (the degree of property ownership in Romania).

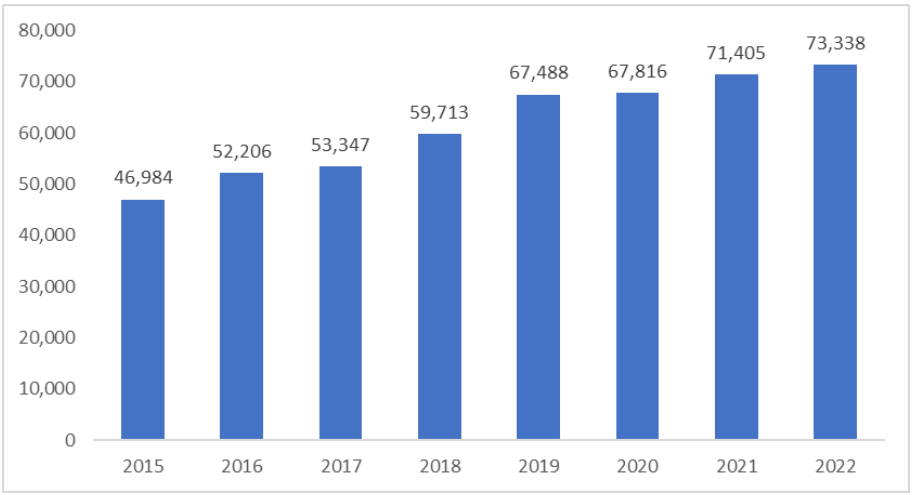
According to the Eurostat data, Romania has the highest degree of ownership among European Union (EU) countries (over 95%), and 76% of the net wealth of Romanians is represented by personal property or other real estate assets (NBR, 2022). If we refer to the number of owners in the EU countries, in 2021, 70% of the population lived in a household with its own home, while the remaining

30% were in rented accommodation. The highest shares of ownership were observed in Romania (95% of the population lived in a household where they owned their own house), Slovakia (92%, 2020 data), Hungary (92%) and Croatia (91%). Ownership is more common in all Member States except Germany. In Germany, just over 50% of the population is a tenant. Austria (46%) and Denmark (41%) followed.

Regarding Romania's housing industry, the number of completed homes between 2015 and 2022 shows an upward trend. The highest number of homes was completed in 2019, with a 13% increase compared to 2018. In 2022, the number of completed homes increased by 1.56 times compared to 2015. Also, if we refer to the periods before 2015, the stages of the real estate market were characterised by moderate growth between 2000 and 2005, a real estate boom until 2008, and a crisis from 2009 to 2014. Afterwards, there was moderate growth in this market, between 2015 and 2019, followed by a series of events: the pandemic crisis, in 2020, the Post Pandemic year (2021), the outbreak of War in Ukraine (2022), and the War on the border, and Inflation and very high-interest rates, in 2023 (Marcu, 2023a).

Figure 1

Number of finished dwellings in Romania during the current year, in the period 2015-2022



Source: NIS (2023)

If we consider the access of the population to the purchase of a home, according to a recent study published by Deloitte (Deloitte, 2022), the real estate market in Romania is among the most accessible at the European level, with an average of 6.3 gross salaries needed to purchase a residential property with an area of 70 sqm. According to the Financial Stability Report of NBR (NBR, 2022), the number of years it takes to purchase a home is 7.5 years in Bucharest, 7.6 years in Timișoara, 9.5 years in Constanța, 9.8 years in Brașov, and 10.8 years in Cluj-Napoca.

2.1. The application of a 1% tax for residential properties that cumulatively exceed 500.000 euros

There are opinions according to which this measure cannot be applied, there being ambiguities about the taking over of taxable values, the way they are established, or the very definition of the value, respectively the taxable value or the market value (Economedia, 2023); if the taxable value is taken into account, it must be taken into account that the land and the building have different taxable values; if the market value is taken into account, there are currently no transaction databases and an appropriate methodology.

We mention that, in 2021, the total receipts from property taxation in Romania represented 0,6% of GDP, while the EU average is 2,2% of GDP (European Commission, 2023) which denotes the fact that the current property taxation system in Romania, based on areas, is inefficient, generates revenues below potential, while the determination of the taxable value is inequitable and complex (IMF, 2022).

Therefore, it is necessary to reform the property tax system to substantially increase revenues at the local level. Among the potential solutions is property value taxation based on market transactions, so that the tax burden is shifted from people with low incomes and property to those with high incomes and property. However, this method has the disadvantage that it requires implementation over a longer period, as Romania currently adopts property taxation based on real estate valuation, based on area.

2.2. Modification of VAT for the purchase of a house in 2024

We refer to the measure according to which the purchase of a property will have VAT of 5-9-19%, depending on certain conditions. Therefore, if the property is purchased by the end of 2023, with the signing of the sales contract and the delivery of the apartment/house

by December 31, a 5% VAT can be paid if no other purchase has been made that fell within the ceiling of 450.000 – 600.000 lei. The property is finished, according to the law (Marcu, 2023b).

A VAT of 9% will be paid if certain conditions are met, namely, in addition to surface restrictions, the home must be completely finished, according to article 266 of the law, and, at the same time, if he has not purchased another property with 5% VAT, which exceeds the budget of 450.000 lei, for any pre-contracted property starting from January 1, 2024, which falls within the surface and finishing conditions of the law mentioned above. The persons who signed the pre-contract between January 1 and December 31, 2023, are targeted, and the final signing takes place in 2024.

Starting from January 2022, the Register of Natural Persons who purchased homes with a reduced VAT rate of 5%, which falls within the ceiling of 450.000 – 700.000 lei, was established. The register was taken over in 2023 when the threshold was changed to 600.000 lei, and from January 1, 2024, it will be updated according to law 296/2023.

A 19% VAT is paid on the purchase of a real estate property if, in the previous years, a property was purchased with 5% VAT, which exceeded the threshold of 450.000 lei or if the property is larger than 120 usable square meters or if the property is not finished according to the law.

2.3. Correlation of Property Tax Increase vs. Gini Coefficient. Regression model

We want to investigate whether increasing tax revenues by increasing property taxation by one unit will decrease inequality (the GINI coefficient). We have the following data for Romania, data extracted from Eurostat: total tax revenues (% GDP) at the level of Romania in the period 2013-2022, revenues from the taxation of land and buildings (% GDP), as well as revenues from other current taxes (% GDP), as well as the Gini coefficient, for the period 2013-2022 (these incomes are part of the wealth structure).

We, therefore, want to see how tax revenues are influenced by the increase of one unit in the taxation of buildings, respectively, other current taxes, and whether this increase in tax revenues influences the reduction of inequality, respectively, the Gini coefficient. We use the regression method.

Table 1

Fiscal revenues, revenues from building taxation, other current taxes, in the period 2013-2022, % GDP

year	GINI	Tax revenues	Building taxes	Other taxes
2013	34,6	27,4	0,4	0,4
2014	35,0	27,5	0,6	0,4
2015	37,4	28,0	0,5	0,4
2016	34,7	27,0	0,5	0,4
2017	33,1	25,9	0,3	0,4
2018	35,1	26,5	0,3	0,3
2019	34,8	26,6	0,3	0,3
2020	33,8	26,8	0,3	0,3
2021	34,3	27,1	0,3	0,3
2022	32,0	27,4	0,3	0,3

Source: Eurostat

A) The influence of building and land taxation revenues on total tax revenues and the Gini coefficient

According to regression results displayed in Table 2 (in the Appendix), the following equation was obtained:

$$Tax\ revenues = 25.79 + 3.22 * Building\_taxes$$

The coefficient on building taxes is statistically significant at the 90% confidence level. With *a 1 pp increase in building taxes*, tax revenues increase by *3.22 pp*.

As for the correlation with the Gini coefficient, the regression is displayed in Table 3 in the Appendix. The results obtained show that *at a 1 pp increase in tax revenues*, *the Gini index increases by 1.06 pp*; that is, from tax revenues of 27,4%, if they increase to 28,4%, then the Gini index increases from 32 to 33, so inequality increases.

B) The influence of a unit change in other current taxes

The results regarding the influence of one unit change of other taxes on tax revenues are displayed in Table 4 (in the Appendix),

The conclusion is that even the increase of other current taxes does not impact inequality because the p-value is below 10% (9,6). Therefore, the increase in tax revenues by 1 pp, as a result of the

increase in property taxation, negatively affects inequality in the sense that it increases directly proportionally, also by 1 pp.

This situation was expected because an unfair tax system prevails in Romania; there are multiple tax exemptions/facilities, incomes are not taxed progressively, and tax compliance is not encouraged.

3. Taxation of unjustified wealth

Starting with July 1, 2024, income from unidentified sources will be subject to a new tax regime. The recent changes in the tax legislation bring an increase in the tax applied to these incomes from 16% to 70%, but there may be other risks following tax controls on individuals.

According to the Fiscal Procedure Code, revenues whose source has not been identified are determined by the fiscal bodies in accordance with the provisions of the normative act (Mihai, 2023). These investigations will take place as part of the verification of the personal fiscal situation, respectively information from various sources - the taxpayer, the transaction partners, various authorities, and state institutions.

In order to avoid the application of a 70% over-taxation, the taxpayer should clearly identify his sources of income, keep a record of the income obtained, archive the supporting documents, and, to the extent that the transactions have a relatively high degree of complexity, have up-to-date tax knowledge or seek specialised assistance in this regard.

Therefore, to avoid having one's income classified as "income from unidentified sources", a natural person should ensure transparency in their operations and conduct them in compliance with legal provisions. Also, it should have a record of the operations carried out, document each operation, properly archive the supporting documents, and declare and pay the due tax obligations on time.

Currently, the standard tax rate for natural persons is 10%, and for certain categories of income, the rates are lower: dividends - 8%, sales of real estate from personal patrimony, transactions with shares - 1% or 3%.

Base on the data provided by the National Agency of Fiscal Administration (NAFA), during the first half of 2023, 318 notifications were issued to high-net-worth individuals as part of the Notification

Program aimed at enhancing their tax compliance. Out of these notifications, 71 were sent by mail without confirmation of receipt, while 247 were sent through the virtual private space (NAFA, 2023a).

In November 2022, the "Development of tools to increase tax compliance" project was completed (financed by the COM Technical Assistance Instrument), within which the "Strategy for increasing voluntary compliance in the field of personal income tax in Romania 2023-2025" was developed. The objectives of the strategy are to reduce the fiscal gap, increase the degree of compliance with the declaration, increase the level of trust of taxpayers in NAFA, and increase the declared income.

To establish the context necessary for the implementation of the objectives, 3 pilot projects were developed regarding the incomes made by individual taxpayers from the transfer of the use of goods, from meditations/educational activities and other forms of education, respectively, from the provision of beautification/maintenance activities.

Table 5

Monitoring the income of individuals with large assets

	2021	2022	Increase (+) / decrease (-) in 2022 compared to 2021
Number of personal tax checks and tax inspections	180	201	+21
The amount of income declared as a result of the notifications sent to taxpayers from the PFAM group (million lei)	70,9	442,8	+371,9
The number of natural persons who are at risk of non-compliance when declaring taxable income, identified by the PFRF segment	241	440	+199

Source: NAFAb (2023)

As shown in Table 5, the number of checks of people with high income was 180 in 2021 and 201 in the following year (only 21 more checks); people who present a risk of non-compliance when declaring income increased by 199, compared to 2021 (in 2022, 440 people). We highlight these figures, given that the number of millionaires in Romania with assets exceeding 30 million dollars was 1.828 in 2021,

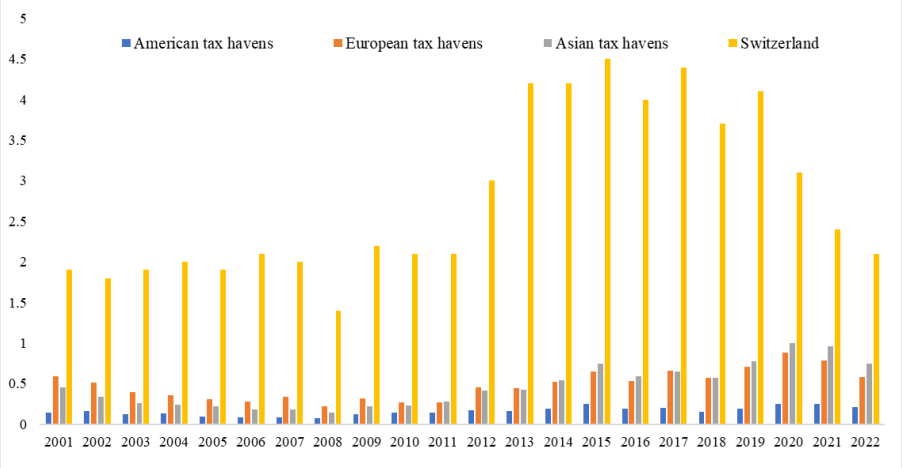
and the number of people with assets greater than 1 million dollars was 38.000 in 2022 (UBS, 2023).

Next, we will discuss the offshore wealth owned by Romanians and, more precisely, how much of Romanian wealth is in tax havens. The data correspond to the period 2001-2022, expressed as a share of GDP, and the predominant tax havens are those in America, Asia, Europe, including Switzerland. We also analyse how many offshore real estate properties are owned in each of the six cities in the respective tax havens (and for which there are statistical data). We use data and methodology developed by Alstadsæter, Johannesen, and Zucman (2018) for offshore financial wealth, respectively by Alstadsæter et al. (2022) for offshore real estate wealth. This data series measures the amount of offshore financial wealth (stocks, bonds, mutual fund shares and related bank deposits) held abroad by households. The chart below breaks this wealth down by the location of the tax haven where it is held.

We note that the main destination of Romanians' offshore assets is Switzerland, with the highest values in the period after the financial crisis, between 2013 and 2019 (except for 2018), respectively 4-4,4% of GDP. Afterwards, the level is reduced by approx. 2 pp, reaching approx. 2% of GDP in 2021-2022.

Figure 2

Offshore financial wealth held by Romanian households in tax havens (in % GDP)

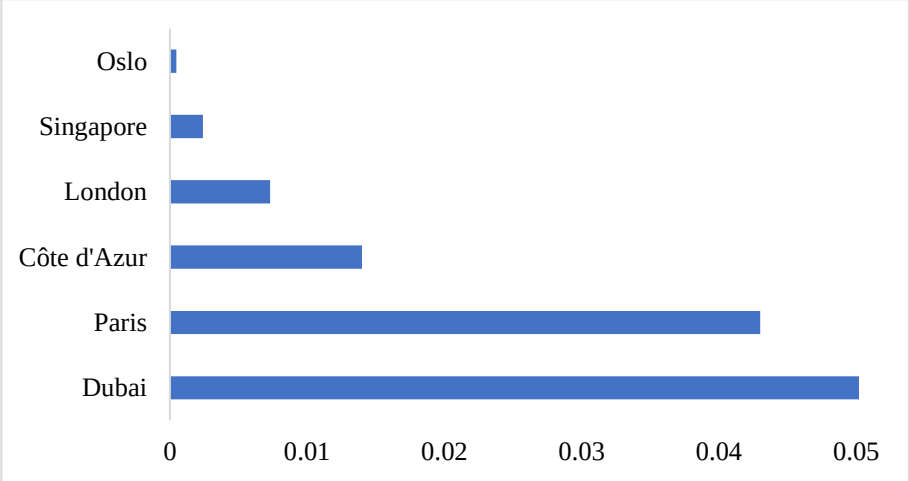


Source: processing data extracted from https://atlas-offshore.world/country/ROU.

The figure below (Figure 3) shows how much offshore real estate is owned in each of the six cities and areas covered by the accessible data. Offshore real estate is real estate that is either ultimately owned by an investor in another country or is owned by residents through complex offshore structures that can "implicate" the identity of the beneficial owner. Aggregate values are reported in billions of USD. Values are also scaled by GDP as a share of GDP. Values are shown as a percentage of the total offshore real estate in the city as a share of total real estate.

Figure 3

Offshore real estate products owned as a share of the country's GDP in cities from tax haven, 2022 (%)



Source: processing data extracted from https://atlas-offshore.world/country/ROU.

We note that offshore real estate products are more prevalent in Dubai and Paris, accounting for 0.051% and 0.043% of GDP, respectively.

Therefore, we consider that the taxation of unjustified incomes can bring a substantial amount to the country's State Budget, given that wealth exceeding 2% of GDP has been identified in tax havens, only in Switzerland.

4. Conclusions

In this study, some fiscal measures that influence household wealth are presented, respectively their properties - the application of a 1% tax for residential properties that cumulatively exceed 500,000 euros, the change in VAT for the purchase of a home in 2024, respectively 5-9-19%. In this sense, it was aimed to demonstrate, through regression, a correlation between the 1 pp increase in tax revenues due to the 1 pp increase in property taxation and the GINI coefficient (inequality). The conclusion was that the Gini coefficient also increases by 1 pp, so inequality slightly deepens.

Other aspects to which we have referred are the taxation of illicit assets by 70%, and, indeed, significant revenues can be collected from the State Budget because, in the tax havens, the households owned substantial assets; only in Switzerland, they totalled, in 2022, 2,1% of GDP.

In Romania, there is no wealth or inheritance tax. The practised form of wealth taxation is property taxation, in the form of tax on buildings, means of transport and other personal property, land and the transfer of property. Property transfer tax in Romania is specifically regulated as income tax. Property taxes in Romania fall within the scope of local taxes, being a relevant source for them. For land, the tax rate and base are set by the central authorities, while the tax exemptions that apply are set by both the central and local authorities.

We believe that, at present, the imposition of a wealth tax is not an achievable objective, an argument in this sense being, from our perspective, the exact definition of wealth and its assessment. In the paper, wealth denotes the financial and non-financial assets of natural and legal persons; an impediment would be the knowledge, with certainty/monitoring/control by the tax authorities, of the assets of individuals, and this can be achieved through their voluntary tax compliance. So, taxpayers must declare their assets on their own responsibility, thus ensuring total transparency, which, in Romania, is not very feasible, given the high level of tax evasion and the underground economy's share of approximately 29% of GDP (for the year 2022). Also, a special burden falls on the tax authorities to control wealth, so monitoring and collection efforts must be improved.

It must be taken into account that in Romania, the natural persons belonging to the middle class predominate, and wealth means only their own home. Therefore, instead of wealth taxation, actions

should be started to target, on the one hand, the property, but also other taxes with the property, respectively those with the transfer of properties, inheritance/gifts, being well-known that these are not taxed except in certain circumstances (remember, according to the latest data, the newest millionaires appeared precisely because of inheritances, and in our country, they are taxed with only 1% of the transferable value).

In order to monitor large assets, NAFA will need to conduct more checks. According to the Performance Report for 2022 (NAFA, 2023b), there were only 201 checks on individuals with assets over $30 million in 2021, although 1828 people with assets exceeding that amount (NAFA, 2023b).

Therefore, some solutions for increasing revenues by taxing wealth (property) are:

- the design of sectoral economic policies should be complemented by efforts to improve education and address demographic changes, which can have a positive impact on the components of national wealth (Georgescu et al., 2023).
- the action of the local competent authorities regarding the inclusion in the national wealth of land and buildings (after completion of the cadastre), as well as natural resources (based on their identification and evaluation according to European practice).
- digitisation of public institutions, especially the Ministry of Finance, NAFA and their integration within a system of protection of national wealth against its erosion due to losses caused by subjective factors;
- the legislation and application of the progressive tax on the global incomes and assets of citizens, which will create the possibility of increasing the transparency of individual wealth and the significant reduction of economic and social disparities (IMF, 2022);
- strengthening the discipline of payments in the economy and drastically reducing tax evasion are likely to increase the performance of the real economy, increase state revenues, reduce the budget deficit, slow down the increase in public debt and prevent the erosion of financial assets, increasing their volume and, implicitly, the national wealth of the country (World Bank, 2023).

References

1. Alstadsæter, A., Johannesen, N., Zucman, G. (2018). Who owns the wealth in tax havens? Macro evidence and implications for global inequality. *Journal of Public Economics*, Vol. 162, pp. 89-100.
2. Alstadsæter, A., Collin, M., Mishra, K., Økland, A., Planterose, B., & Zucman, G. (2022). Towards a Global Real Estate Atlas: Offshore Real Estate in Selected Areas and Cities.
3. Georgescu, F., Gherghina, G., Cozmâncă, B.-O., Neagu, F., Pintilia, L., Drăgușin, L. (2023). Avuția națională a României (The National Wealth of Romania), Bucharest: Publica Publishing.
4. Marcu, G. (2023a). The Residential Market in Romania in 2023 – A Mexican Confrontation. Available at: https://www.greenangels.ro/stiidelag/piata-rezidentiala-din-romania-in-2023-o-confruntare-mexicana. Data accessed: 1 December 2023.
5. Marcu, G. (2023b). How much VAT will you pay for housing in 2024: 9%, 19% or 5%?. Available at: https://www.greenangels.ro/imobiliare/cat-vei-plati-tva-pentru-locuinte-in-2024-9-19-sau-5 Data accessed: 1 December 2023.
6. Mihai, A.-L. (2023). Between taxation and confiscation: increasing the tax for unjustified incomes, Juridice.ro, 16 November, Available at: https://www.juridice.ro/714859/intre-impozitare-si-confiscare-majorarea-impozitului-pentru-veniturile-nejustificate.html
7. NAFA (2022). Strategia de creștere a conformării voluntare în domeniul impozitului pe veniturile persoanelor fizice în România 2023-2025 [Strategy for increasing voluntary compliance in the field of personal income tax in Romania 2023-2025]. Issued on 23 November 2023. Available at: https://static.anaf.ro/static/10/Anaf/Informatii_R/Strategia_PIT_2311 2022.pdf. Data accessed: 27 November 2023.
8. NAFA (2023a). Raport de activitate. Semestrul I 2023 [NAFA Activity Report. Semester I 2023]. Issued on 9 March 2023. Available at: https://static.anaf.ro/static/10/Anaf/Informatii_R/Raport_activitate_ANAF_semI2023.pdf Data accessed: 24 November 2023.
9. NAFA (2023b) Raport de performanta 2022 [NAFA Performance Report 2022]. Update on 25 September 2023. Available at: https://static.anaf.ro/static/10/Anaf/Informatii_R/Raport_performanta_2022_V6.pdf. Data accessed: 27 November 2023.
10. NBR (2022), Financial Stability Report, December 2022, Financial Stability Report, Year VII(XVII), No. 13 (23), New Series.
11. NBR (2023), Financial Stability Report, June 2023, Financial Stability Report, Year VIII(XVIII), No. 14 (24), New Series.
12. UBS (2023). Global Wealth Report 2023. Leading perspectives to navigate the future, Credit Suisse & UBS. Available at:

https://www.ubs.com/global/en/family-office-uhnw/reports/global-wealth-report-2023.html
13. Deloitte (2022). Deloitte Property Index – Overview of European Residential Markets, August. Available at: www2.deloitte.com/content/dam/Deloitte/bg/Documents/legal/Rael-estate-property-index-2022.pdf
14. European Commission (2023). Annual Report on Taxation 2023: Review of Taxation Policies in the European Union. *Directorate-General for Taxation and Customs Union*. Available at: https://taxation-customs.ec.europa.eu/system/files/2023-08/ART%20-%20Report%202023_Digital%20Version_1.pdf. Data accessed: 20 October 2023.
15. IMF (2022). Romania: Technical Assistance Report on Improving Revenues from the Recurrent Property Tax, IMF Country Report no. 22/198, June.
16. NIS (2023). Fondul de locuințe. Anul 2022 [Housing Fund. Year 2022]. Available at: https://insse.ro/cms/sites/default/files/field/publicatii/fondul_de_locuinte_2022.pdf. Data accessed: 25 October 2023.
17. World Bank (2023). Raport privind sistemul fiscal din România, inclusiv analiza comparativă și recomandări pentru reforma cadrului fiscal [Report on the tax system in Romania, including comparative analysis and recommendations for the reform of the tax framework]. Available at: https://mfinante.gov.ro/documents/35673/8180698/RaportprivindsistemulfiscaldinRomania_BM.pdf. Data accessed: 29 November 2023.

Web sources:

- Atlas of the Offshore World, https://atlas-offshore.world/
- Eurostat database, https://ec.europa.eu/eurostat/web/main/data/database
- Economedia, 2023, ANALIZĂ Mega-pachetul de creșteri de taxe și impozite. Impozit de 1% pentru proprietățile rezidențiale care, cumulat, depășesc 500.000 de euro – mai multe întrebări decât răspunsuri: Se poate aplica în practică? Ce efecte va avea?, Available at: https://economedia.ro/analiza-mega-pachetul-de-cresteri-de-taxe-si-impozite-impozit-de-1-pentru-proprietatile-rezidentiale-care-cumulat-depasesc-500-000-de-euro-mai-multe-intrebari-decat-raspunsuri-se-poate-apli.html. Data accessed: 3 October 2023.
- INSSE, TEMPO-Online, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

Appendix

Table 2

The influence of building and land taxation revenues on total tax revenues

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,61043349
R Square	0,37262904
Adjusted R Square	0,29420767
Standard Error	0,50375743
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1,205828	1,205828	4,751626	0,060879
Residual	8	2,030172	0,253772		
Total	9	3,236			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	25,7948276	0,584191	44,15479	0,00%	24,44768	27,14197	24,44768	27,14197
Building taxes	3,22413793	1,479083	2,179823	6,09%	-0,18663	6,634909	-0,18663	6,634909

Source: author's processing

Table 3

Correlation with the Gini coefficient

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,45125087
R Square	0,20362734
Adjusted R Square	0,10408076
Standard Error	1,33472305
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3,644115	3,644115	2,045548	0,190524
Residual	8	14,25189	1,781486		
Total	9	17,896			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*
Intercept	5,80673671	20,0525	0,289577	0,779503	-40,4344	52,04788	-40,4344
Tax revenues	1,06118665	0,741971	1,430227	0,190524	-0,6498	2,772175	-0,6498

Source: author's processing

RISKS INDUCED BY THE TREND AND LEVEL OF FOREIGN DEBT IN ROMANIA

Camelia MILEA, PhD*

Abstract

The article[1] presents some risks of external debt in Romania generated by its structure and characteristics. Given the rise in the share of short-term external debt, the associated risks increase, among which there is the augmentation in the volatility of the exchange rate of the national currency, the advance in the probability of a currency crisis and the vulnerability to interest rate fluctuations. The author calculates specific indicators from the economic literature in order to attain the paper's objectives, namely, to see what the situation of Romania's indebtedness is and if there is a vulnerability to an external debt crisis. In addition, other indicators are used to assess the debt characteristics of an economy. The values of the calculated indicators show that two shocks have been felt during the analysed period; the first is the economic-financial crisis triggered in 2008, and the other is the COVID-19 pandemic. The results show that Romania is vulnerable to the outburst of a foreign debt crisis, with a risk of having problems regarding debt repayment. The methodology used joins the empirical analysis of statistical data and their interpretation, with the identification of correlations.

Keywords: hazard, external indebtedness, vulnerability, crisis

JEL Classification: F31; F32; F34; G01

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[1] *The article is based on "Romania's external indebtedness in current and perspective conditions ", Milea C. (coord.), a research project of the "Victor Slăvescu" Centre for Financial and Monetary Research, elaborated in 2022.*

1. Introduction

Foreign debt allows the augmenting of internal savings, giving the debtor country the opportunity to finance a volume of investments larger than would be possible based only on internal resources.

External financing offers access to many debt instruments, which, theoretically, allows better management of the risk and cost of external borrowing. Thus, it can be, in some conditions, cheaper than internal financing.

The risks regarding the indebtedness of a country refer to ensuring the sustainability of the debt and depend mainly on the specific risks of each country but also on the perception of the market on the debtor state.

The paper aims to analyse the situation of Romania's indebtedness, in order to see if there is a risk of an external debt crisis. To this purpose, the paper is structured in three parts. First, the author presents some theoretical aspects of the risks generated by indebtedness, mainly about the types of risks and debt sustainability. The second part of the paper analyses the evolution of the share of short-term external debt and medium and long-term external debt in the total external debt, in Romania. Then, the indicators referred to by Reinhart and Rogoff (2009) are computed in order to see what the situation of Romania's external debt is, as well as the indicators used by Manasse and Roubini (2005) in order to assess the "safety" of the country from the point of view of indebtedness. We correlate the values of these indicators with the most important factors of vulnerability of the Romanian economy (especially, the deficit of the current account and the budgetary deficit). The last part of the paper is represented by the conclusions, where the author states that in Romania, the ability to pay back the external debt is negatively influenced particularly by the external and budgetary imbalances, but also by the faster increase of the external debt compared to GDP, the risks being mainly in terms of solvency of the external debt.

The methodology used joins the empirical analysis of statistical data and their interpretation, with the identification of correlations.

The period analysed is 2008-2022 to catch and highlight the effects of the economic and financial crisis from 2008 and of the COVID-19 crisis from 2020 on the Romanian foreign debt. The data used are from the National Bank of Romania and from the Ministry of Finance.

2. About indebtedness risks

In the economic literature, there are identified *three large types of risks regarding the external indebtedness* of an economy: the risk regarding the lack of solvency; the lack of liquidity and the exchange rate risk. *Debt insolvency risk* is quantified by a ratio of external debt to GDP higher than 49.7%, together with monetary or fiscal imbalances, and high external financing needs that signal a lack of liquidity as an element of debt unsustainability. *The risk of illiquidity* is identified by moderate debt levels, but with short-term debt exceeding 130% of reserves, together with political uncertainty and inflexible international capital markets. *Currency risk* appears in the context of low economic growth and relatively fixed exchange rates. The currency risk is specific to foreign debt, and it consists of the depreciation of the national currency compared to the foreign currencies in which the debt is contracted, with effects in the increase of the debt burden. Each type of risk differs in terms of the probability of inducing a crisis (Manasse, Roubini, 2005).

All three types of risks can come under the generic name of non-payment/default risk. Non-payment of the debt refers to the impossibility of paying the due installment on the date stipulated in the contract, with effects in the sense of debt renegotiation, a process that is long and expensive in practice. Ultimately, defaulting on debt can lead to a debt crisis.

Debt default risks are also influenced by how the factors that characterise each type of risk combine, given that in an economy the elements evolve dynamically and influence each other. Thus, a heavily indebted country (with a high ratio of debt to GDP) may have a low probability of default, while another with a moderate level of indebtedness may present a considerable risk of default. This situation may be due to the cumulated existence of a high share of short-term debt, political uncertainty and a relatively fixed exchange rate that make a liquidity crisis in the latter country more likely than a solvency crisis in the former, especially if the high degree of indebtedness is associated with monetary stability, a large current account surplus and sound public finances. Therefore, the value thresholds do not represent in themselves an absolute criterion for assessing the probability of default (Milea, 2021), but several criteria for evaluating the risk of default must be correlated.

Risks affect debt sustainability. Debt sustainability is a property that assumes that the evolution of the debt ensures the payment of the debt service in the medium, and possibly long term, without the need for significant changes in economic policies, without producing shocks, tensions on the internal market, without causing major fluctuations of some macroeconomic variables of the national economy. Sustainability allows for fluctuations in debt and is important to achieve the anticipated positive effect in the medium and long term (Milea, 2019a).

According to the IMF, *debt sustainability* requires the fulfilment of three conditions: solvency, liquidity and realistic adjustments (the level and evolutions forecasted of debt indicators must be based on realistic macroeconomic assumptions and projections regarding the primary balance adjustment.

In general, to describe *solvency*, there are used in analyses indicators of the debt stock compared to the repayment capacity (the ratio between external debt and exports or public revenues)[2], and in order to capture *liquidity problems*, there are used debt service rates and indicators of gross financing needs (short-term external debt and/or external debt service related to foreign exchange reserves or exports)[3].

Political instability and tight monetary conditions in international financial markets exacerbate liquidity problems.

Liquidity problems are sometimes difficult to distinguish from solvency problems (Milea, 2019b). The lack of liquidity can lead to insolvency by inducing tensions in the exchange rate or by increasing interest rates.

Regarding the connection between gross external debt and economic growth, in emerging countries, the research of Reinhart and Rogoff (2010) shows that the thresholds of total gross external debt (public and private, which is almost exclusively expressed in foreign currency) are considerably lower compared to those of the public debt (whose internal component is expressed mostly in the national currency). So, debt in foreign currency is much more dangerous compared to that in national currency, mainly due to the currency risk, but also to the risks determined by contagion, and by the risk aversion of investors.

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[2] *The solvency condition is met if they have a stable or decreasing value*.

[3] *Gross financing needs include deficit and debt amortisation or primary deficit and debt service (IMF).*

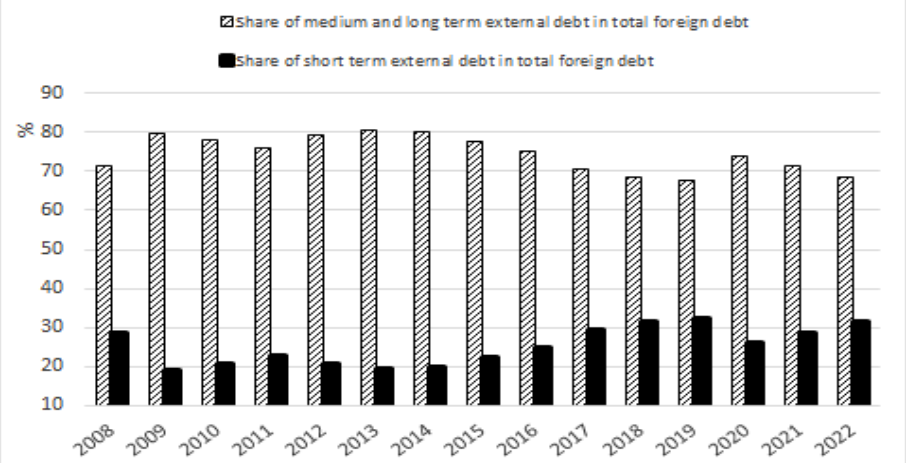
In conclusion, we can describe an "almost risk-free country" by several economic characteristics: a small ratio of external debt to the ability to pay (GDP or/and exports), low share of short-term debt in foreign exchange reserves, low value of external public debt in tax revenues, and an exchange rate of the national currency that is not excessively overvalued (Manasse P., Roubini N., 2005).

3. The foreign debt and the foreign debt crisis in Romania

From Figure 1, we can see that the economic-financial crisis of 2008 induced the decrease in the share of Romania's short-term external debt in the total external debt, compared to the previous years, between 2009 and 2015 being around 20%, as a result of the increase in the aversion to risk of creditors and investors. After the accrual from 2016-2019, the crisis caused by the occurrence of covid-19 has led to a further decrease of the indicator in 2020, on the background of the measures adopted by the authorities meant to reduce the activity, with the stated aim of limiting the spread of the virus, and implicitly of the aversion to risk of creditors and investors. But following the fast recovery of the economy, as early as 2021, the share of short-term external debt in the total external debt has increased in 2021 and 2022.

Figure 1

The evolution of the share of short-term external debt and medium and long-term external debt in the total external debt, in Romania, during 2006-2022 (%)



Source: author's calculations using NBR data

The level of the share of short-term external debt in the total external debt is associated with quite high risks because short-term debt must be paid in 1 year at the most. Among these risks, there are the rise in the volatility of the exchange rate of the national currency, the emphasis of the probability of a currency crisis and of the vulnerability to interest rate fluctuations.

In their analysis, Reinhart and Rogoff (2009) use two indicators that measure the vulnerability of the outburst of an external debt crisis, namely: foreign debt in GNP and foreign debt in exports. According to these economists, when the ratio of the external debt to GNP exceeds 30-35%, in an emerging market[4], the risk of debt service problems increases significantly.

Both indicators, together with the external debt to government revenues ratio measure the ability of an economy to pay its debts, i.e. its solvency.

We compute the indicators referred to by Reinhart and Rogoff (2009) to see what the situation of Romania's external debt is.

In order to calculate the Gross National Product (GNP), one starts from the level of GDP, the economic product made domestically in a country, and adds the income made abroad by the residents of that country, then subtracts the income taken out of that country by non-residents. GNP represents what actually belongs to a country from the economic activity measured at the national level by official statistics.

GNP can be higher or lower than GDP in absolute value and growth rate, depending on if the proportion of citizens living abroad from the country where this economic output is produced is higher or lower. However, the differences are not large, nor do they vary rapidly over time.

After aggregating the World Bank and IMF data, we find that Romania has a GNP/GDP ratio of 98.7%.

All indicators calculated in Figure 2 have had two moments of significant increase, showing that two shocks have been experienced during the analysed period. The first is the economic-financial crisis triggered in 2008, whose effects came to the surface between 2009 and 2012, and the other is the COVID-19 pandemic, which had a

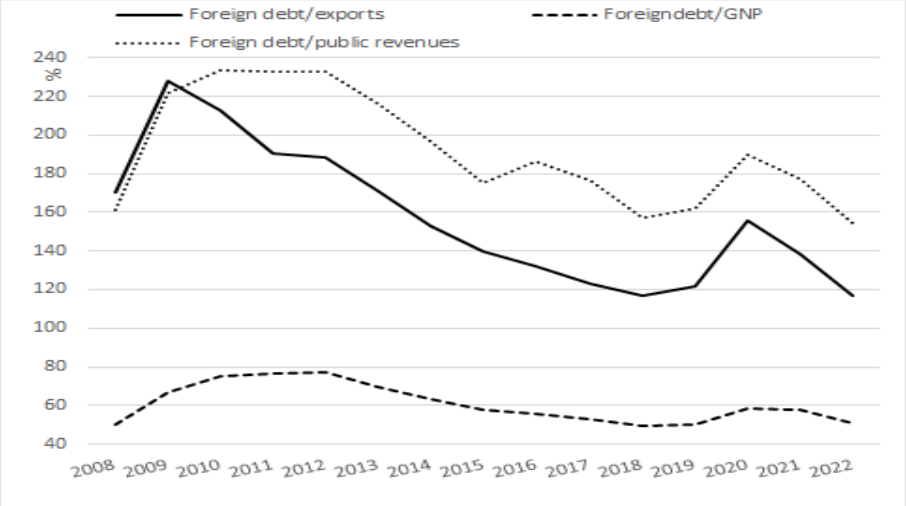
[4] *An emerging market is usually considered the economy of a country that is at a certain stage of development, has a regulated and efficient capital market, and the income of the population is increasing, but it is still below the average of the developed countries.*

significant impact in Romania, especially in 2020. However, in 2021 the indebtedness indicators of our country's economy have decreased.

According to Reinhart and Rogoff (2009), the values recorded by the indicators in Figure 2 show that our country is vulnerable to the emergence of an external debt crisis, as there is a risk of problems regarding debt repayment from the point of view of solvency.

Figure 2

The evolution of some debt indicators in Romania (%)



Source: author's calculations using data from NBR and the Ministry of Finance

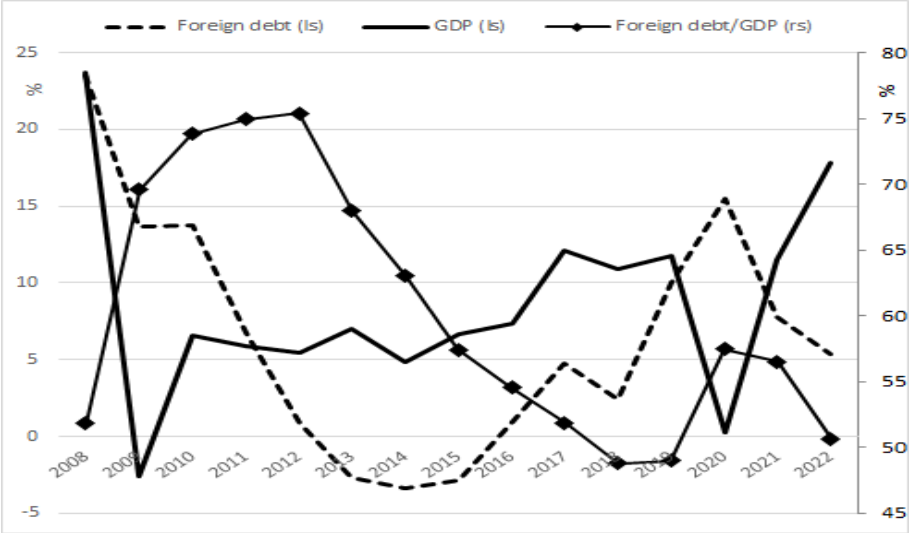
Debt burden is usually quantified using the ratio of external debt to GDP.

The analysis of Reinhart and Rogoff (2010) shows that there are two thresholds of external debt to GDP beyond which economic growth deteriorates. The first is 60% (the same as the criterion on the sustainability of public finances in the Maastricht Treaty) (above which economic growth falls by two percent), and the second is 90% (above which growth rates diminish by half).

Starting from the results of these economists' research and confronting them with the values recorded by the external debt in GDP in Romania, we find that, external debt exceeds the first threshold beyond which economic growth deteriorates, that of 60% in the period 2009-2014, as an effect of the external loans taken in the period 2004-2010 (see Figure 3).

Figure 3

The evolution of foreign debt and GDP in Romania (%)



Source: author's calculations using NBR data

NB. For foreign debt and GDP, the indicators show the annual growth rate

The ability to pay back the external debt of a country is also influenced by the external and budgetary imbalances, for any value of the debt, but also by the GDP growth rate, by the currency regime and by the deviation of the exchange rate from the equilibrium rate. Thus, the overvaluation of the national currency can cause external imbalance leading to the accumulation of debt. In addition, the overvaluation of the national currency can affect the volume of external debt in foreign currency (expressed in national currency), but also the budget if an important part of the debt is denominated in foreign currency, as the debt stock can increase significantly in real terms.

So, debt in foreign currency is more dangerous compared to that in national currency, mainly due to currency risk, but also to risks generated by investors' aversion to risk and by contagion.

According to Manasse and Roubini (2005), a relatively "safe" country from the point of view of indebtedness requires several economic premises: a level of total external debt in GDP below 49.7%; of short-term debt in reserves below 130%; of external public debt in

fiscal revenues below 214%; and an exchange rate that is not excessively overvalued (overvaluation under 48%).

In Table 1, we have calculated the indicators used by Manasse and Roubini (2005) in order to assess the sustainability of the external debt in Romania. Thus, the external debt in GDP exceeds the maximum allowed threshold in almost all the years of the analysed period, the volatility of the exchange rate is small, the short-term debt in reserves, as well as the medium and long-term external public debt in fiscal revenues are below the corresponding thresholds.

Table 1

Indicators of indebtedness in Romania (%)

Year /Indicator	Total foreign debt /GDP	Short term debt/reserves	Public foreign debt/ fiscal revenues	Volatility of real exchange rate leu/euro
2008	51,8	78,5	35,1	7,3
2009	69,6	55,1	58,3	17,5
2010	75,2	60,3	73,1	-1,1
2011	76	68,7	79,4	1,0
2012	76,6	67,0	92,8	7,6
2013	68	59,1	107,8	-1,5
2014	63	58,7	112,9	3,5
2015	57,4	64,0	99,4	1,7
2016	54,7	67,9	104,5	2,0
2017	51,8	86,1	107,9	-1,2
2018	48,4	95,1	112,6	-1,3
2019	48,5	107,7	118,9	2,8
2020	57,5	89,0	183,2	3,1
2021	56,5	96,5	153,6	-0,6
2022	50,3	97,0	121,5	1,8

Source: author's calculations using data from NBR and the Ministry of Finance

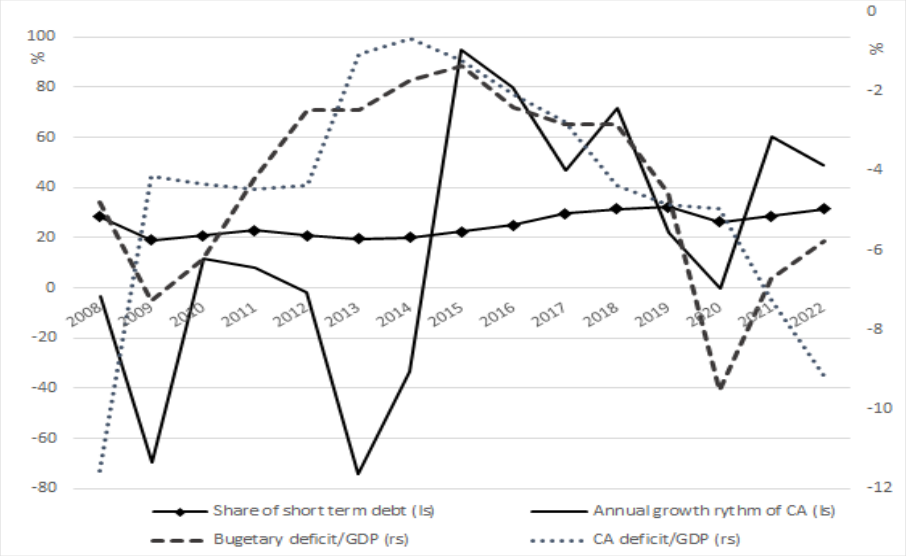
It can be said that the indebtedness situation in Romania is good from the point of view of liquidity, but it involves risks from the point of view of solvency (only the indicator of total external debt as a percentage of GDP is higher than the threshold from which - depending on the values of the other indicators - crises and external debt sustainability problems may occur). Short-term debt in international reserves is below the threshold due to the National Bank of Romania's measures to increase international reserves to values that give confidence to international creditors and investors.

Therefore, external debt risks in Romania are related to solvency, rather than liquidity.

We correlate the values of the indicators calculated according to the model of the economists Manasse and Roubini (2005) with other economic indicators that influence the sustainability of external debt. Thus, Romania has a large current account deficit that is on an almost continuously increasing trend; moderate share of short-term foreign debt in total foreign debt, with discontinuous trend of growth; periods marked by political uncertainty; exchange rate with managed floating; budget deficit with a worsening tendency in recent years (determined by expenses that cannot be diminished yet and by insufficiently collected revenues) (see Figure 4).

Figure 4

Indicators of foreign debt sustainability in Romania (%)



Source: author's calculations using NBR data

Romania has a chronic current account deficit, its values (absolute and relative - as a share of GDP) decrease only as a result of the occurrence of a crisis. For example, the share of the current account in GDP has suddenly diminished in 2009 to -4.2% as a result of the economic-financial crisis of 2008, in the previous period (2003-2008), this indicator constantly exceeding the threshold of -5% established at the international level, peaking with the value of -11.6%

in 2008. The covid-19 crisis not being a real economic crisis, but one induced by coercive measures with the aim of limiting the spread of a virus, did not have the effect of reducing the current account deficit of Romania. Thus, in the years following the forced restraint of the economic activity from 2020 (when there was a stagnation), the current account deficit increased significantly both in absolute value and as a share of GDP. The evolution of Romania's current account is determined by structural problems (imports greater than exports, a situation generated by the existence of a consumption not satisfied by domestic production, in an economy that develops by encouraging consumption).

The analysis of the above indicators regarding indebtedness shows that in 2022 we cannot talk about an external debt crisis in Romania, but there are some risk factors, especially regarding the solvency of the external debt. Among them are the evolution and the level of external and budgetary deficits, as well as the higher increase in external debt compared to GDP, which shows that the external debt taken is not used entirely for productive, profit-generating purposes, and it does not concur to economic growth.

As a result, in the absence of recovery measures, these internal economic imbalances may increase and problems of lack of liquidity or solvency of the external debt may arise, taking into account its rapid upward trend in recent years, which shows the fact that the Romanian economy needs foreign exchange infusion in order to work, and the sudden give up to external capitals is practically impossible.

4. Conclusions

From the analysis we notice that the evolution of short-term external debt in Romania is negatively influenced by the emergence of a crisis, thus it decreases or stagnates when a crisis breaks out, as a result of the increase in the risk aversion of investors.

The debt indicators calculated for Romania show a relatively good situation from the point of view of liquidity, and the existence of risks regarding the repayment of debts, from the point of view of solvency. When we correlate the analysed debt indicators with the economic indicators that show the vulnerabilities of the Romanian economy, we find the existence of additional risks in terms of the emergence of a foreign debt crisis in our country.

In Romania, the ability to pay back the external debt is negatively influenced especially by the external and budgetary imbalances, as well as by the faster increase of the external debt compared to GDP. The current account balance to GDP ratio, budget deficit to GDP ratio, and external debt to GDP ratio are key indicators that show the possibility of the external debt crisis in Romania.

The analysis shows that in 2022 there is no external debt crisis in Romania, but there are risks mainly in terms of the solvency of the external debt, especially if the external and budgetary imbalances increase, and if the fast growth trend of the external debt from the recent years continues.

Therefore, external debt risks in Romania are related to solvency, rather than liquidity.

References

1. NBR (2006-2023), Annual Reports, 2005-2022, National Bank of Romania, Bucharest.
2. NBR (2008-2023), Monthly Bulletins: December 2007, December 2008, December 2009, December 2010, December 2012, January 2013, January 2014, January 2015, December 2015, December 2016, December 2017, December 2018, January 2020, December 2020, December 2021, December 2022, September 2023, National Bank of Romania, Bucharest.
3. NBR (2018-2022), Balance of payments and the international investments position of Romania, Annual Reports 2017-2021, National Bank of Romania, Bucharest.
4. Manasse, P., Roubini, N. (2005), "Rules of Thumb" for Sovereign Debt Crises, IMF Working Paper WP/05/42.
5. Milea C. (2019a), Sustenabilitatea datoriei. Concepte şi definiţii, vol. II of the International Conference on Theoretical and Applied Economic Practices „Economic Growth in Conditions of Globalization: welfare and social inclusion", The 14th Edition, Chişinău: INCE.
6. Milea C. (2019b), The Assessment of the Public Debt Sustainability, Journal of Financial and Monetary Economics, vol. 7/2019, pp. 111-121, http://icfm.ro/jfme.icfm.ro/JFME%202019.pdf
7. Milea C. (2021), Reflections on the consequences and risks of an economy's indebtedness, Financial Studies, Vol. 25, Issue 2, pp. 50-63. http://fs.icfm.ro/Paper04.FS2.2021.pdf, http://icfm.ro/fs.icfm.ro/index.html
8. Ministry of Finance (2009-2022), Raport privind bugetul general consolidat în anii 2009-2022, available at

https://mfinante.gov.ro/domenii/bugetul-de-stat/informatii-executie-bugetara
9. Reinhart, C., Rogoff, K., (2009), This Time is Different: Eight Centuries of Financial Folly. Princeton University Press.
10. Reinhart, C., Rogoff, K., (2010), Growth in a Time of Debt, American Economic Review: Papers & Proceedings 100, http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.2.573.

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