

PAPER

National Wealth: Benchmark Indicator for the National Economy and Benchmark Indicator for the States of the World

Otilia Manta^{1,2} 

¹Romanian Academy, "Victor Slavescu" Center for Financial and Monetary Research, Bucharest, Romania

²Romanian Academy, Mountain Economy Center CE-MONT Vatra Dornei, Vatra Dornei, Romania

otilia.manta@rgic.ro**ABSTRACT**

One of the crucial factors that contribute to establishing well-being at the level of the world economies, as recognized by institutions such as the World Bank, is the management and distribution of the national wealth at both the national and global levels. Throughout history, each state has relied on the resources it possess and protects. In today's world, it is more important than ever to have knowledge of and inventory these resources, not only to support one's own economic sectors, but also to actively contribute to economies in need. The definition of national wealth is particularly significant in the context of ongoing discussions about limited resources at the global level. Moreover, it is crucial to highlight the defining elements of economic development at both the national and global levels. Such developments cannot be achieved without considering the unique characteristics of each state, including their strengths and weaknesses, particularly in terms of their resources. This paper aims to explore conceptual aspects and reference indicators for measuring national wealth. Doing so not only serves as an indicator of the sustainability of our economy but also provides a reference indicator for states worldwide.

KEYWORDS

national wealth, economic development, sustainability

1 INTRODUCTION

The system of indicators characterize the national wealth of a state varies depending on the methodological approach adopted by each institution involved at the national and global level. The World Bank, for instance, has developed its own system of national wealth indicators, based on the methodology devised by its experts. This system comprises three categories of components: produced (physical) capital, natural capital, and human and institutional capital. In accordance with the World Bank's methodology, intangible capital is determined as the residual value derived

Manta, O. (2023). National Wealth: Benchmark Indicator for the National Economy and Benchmark Indicator for the States of the World. *IETI Transactions on Data Analysis and Forecasting (iTDAF)*, 1(2), pp. 44–62. <https://doi.org/10.3991/itdaf.v1i2.38231>

Article submitted 2023-01-20. Resubmitted 2023-03-15. Final acceptance 2023-05-09. Final version published as submitted by the authors.

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from the total national wealth. Human capital encompasses the collective knowledge, skills and know-how possessed by a country's workforce [1]. Institutional capital, on the other hand, represents the level of trust that the citizens have in their country's institutions and political environment [3]. This trust contributes to increased labor productivity and, consequently, to the growth of national wealth. The World Bank recognizes six dimensions of good governance: freedom of opinion and accountability, including human rights, political and civil rights; political instability and violence, including the frequency of government changes, including threats of violence against the government and terrorism; the effectiveness of public administration, including the competence of civil servants and the quality of public services; and the degree of regulation of the economy, including the policies that bring barriers to the free market; the rule of law, including compliance with contracts.

The UN Statistics Division plays a significant role in handling indicators related to national wealth within the comprehensive framework of the System of National Accounts (SNA). The SNA serves as a conceptual framework that sets international statistical standards for characterizing market economies. It encompasses a cohesive collection of macroeconomic accounts, balance sheets, and tables, all of which are based on international accounting concepts, definitions, classifications, and rules.

According to calculations by the World Bank, Romania's total national wealth in the year 2000 amounted to 653,150,155,000 dollars, which is equivalent to 600,874,107,636 euros based on the average annual exchange rate of the BNR from that year (1.0870 dollars/euro). Of this total, 56% represented intangible capital, 29% represented manufactured capital, and 15% represented natural wealth. The net wealth of the population reached a historical maximum at the end of 2020, as reported by the Financial Stability Report, published by the National Bank of Romania. It stood 2,400 billion lei, with real estate assets accounting for the largest share.

In Romania, the research focus on national wealth has shifted from the realm of production to the realm of its circulation, driven by the economic changes accompanying the transition to a market economy. A system of indicators has been established to assess national wealth, although complete data necessary for its comprehensive application are not always really accessible.

These indicators aim to evaluate both the level of wealth components and the efficiency of their use in the wealth creation process.

In my opinion, it is valuable to have a distinct system of indicators for national wealth, comprising four categories of components: produced (realized) capital, natural capital, human and institutional capital, and informational, scientific capital, including academic resources. Financial indicators have been defined and interpreted [11] using clearly established formulas that accurately reflect the current state of the national economy at a specific point in time. These indicators are based on identified and interpreted data. Several of these indicators, which are presented below, are considered important for the statistical definition of national wealth.

2 RESEARCH METHODOLOGY

The methodology employed in this study utilizes data sourced from the accounting balance sheets of companies operating within the Romanian economy. Primary and derived economic indicators are calculated based on specific formulas. Moreover, the research methodology draws upon the existing empirical studies in the databases of research institutes affiliated with the Romanian Academy. The analysis of

documents follows an analytical and descriptive approach, supplemented by the application of economic formulas to determine reference indicators. National wealth draws upon resources from both the real economy and the rural areas, as well as the population [4]. In our paper, our objective is to emphasize certain indicators calculated at the level of the real economy and the population. In future research we also intend to further explore the resources of the state, enabling us to define the national wealth indicator at the national level [2].

From the perspective of commercial companies in Romania's real economy, we used the activity code classification outlined in the Order no. 601/26 November 2002 by the President of the National Institute of Statistics. This classification, known as the Classification of Activities in the National Economy (CAEN), was published in the Official Gazette no. 908 on December 13, 2002. Subsequent updates, starting from 2008, were tailored to ensure data comparability for the period spanning 2007–2017. The branches of Romania's real economy were classified into groups that included: Agriculture, forestry and fishing; Extractive industry; Manufacturing industry; Production and supply of electricity and thermal energy, gas, hot water and air conditioning; Water distribution, sanitation, waste management, decontamination activities; Constructions; Wholesale and retail trade, repair of motor vehicles and motorcycles; Transport and storage; Hotels and restaurants; Information and telecommunications; Real estate transactions; Professional, scientific and technical activities; Administrative service activities and support service activities; Education; Health and social care; Performing, cultural and recreational activities and Other activities of the national economy. Also, for the purpose of grouping companies based on development regions, the regions of Romania were considered.

For the analysis, inactive commercial companies (i.e., those that did not report any turnover in 2015) and companies that are not considered part of the real economy (such as insurance and leasing companies, financial and financial intermediation companies, banking companies, etc.) were excluded.

The Primary indicators that characterize the activity of active commercial companies are determined as an average per unit (per active commercial company) and their content is defined by the methodological rules for preparing and reporting financial statements at the end of the fiscal year. These rules are annually developed by the Ministry of Public Finance. These indicators were grouped into:

- a)** indicators that characterize the economic-financial potential (fixed assets, material stocks, cash availability, current assets, total assets and number of employees);
- b)** indicators characterizing the use of the economic-financial potential (depreciation of tangible assets, personnel expenses, operating expenses, financial expenses, and total expenses) [20];
- c)** indicators characterizing the economic-financial results (turnover, operating income, total income, operating profit/loss, total profit/loss, net profit/loss, and total liabilities) [20].

Performance indicators of active commercial companies are determined as an average unit (economic agent) and are based on the primary indicators defined by the methodological rules for drawing up and reporting financial statements for the closing of the fiscal year, elaborated annually by the Ministry of Public Finance. These indicators were determined based on the calculation formulas outlined in Table 1.

Table 1. The economic performance indicators that characterize the activity of commercial companies, determined on the basis of the closing financial statements of the fiscal year on December 31

No. Code.	Name Road Sign	Calculation Formula	Basic Indicators
1	Work productivity (in financial terms)	$wf = \frac{That}{Ns}$	Ca = Turnover Ns = Number of employees
2	Average labor cost	$Cm = \frac{Csa}{Ns}$	Csa = staff expenses Ns = Number of employees
3	Endowment of work (in financial terms)	$I = \frac{M}{Ns} * 100$	Mf = Total immobilized assets Ns = Number of employees
4	Rate of return on income	$Rv = \frac{Pbt}{Vt} * 100$	Pbt = gross profit Vt = total revenues
5	Rate of return on consumed resources	$Rc = \frac{Pb}{What} * 100$	Pbe = gross operating profit What = operating expenses
6	Net operating margin rate	$Rmn = \frac{Pb}{Ca} * 100$	Pbe = Gross operating profit Ca = Turnover
7	General solvency	$Sg = \frac{Needle}{AD} * 100$ $Sg = \frac{Ac}{Dc} * 100$	Ac = Current assets Dc = Current liabilities
8	Immediate solvency	$And = \frac{Ac - St}{Dt} * 100$	Ac = Current assets St = Stocks Dt = Total debts
9	Global solvency	$Sgl = \frac{At}{Dt} * 100$	At = Total assets Dt = Total debts
10	Self-financing rate of assets	$Ra = \frac{Pr}{At} * 100$	Cpr = Equity At = Total assets
11	General debt ratio	$Ri = \frac{Dt}{Cpr} * 100$	Dt = Total debts Cpr = Equity
12	Financial debt ratio	$Rdf = \frac{Dml}{Cpr} * 100$	Dml = Term debts medium and long Cpr = Equity
13	Own working capital ratio (equity financing)	$Rf = \frac{Cpr}{Mf} * 100$	Cpr = Equity Mf = Fixed assets
14	Immediate liquidity rate	$Rli = \frac{Disp}{Dc} * 100$	Disp = Availabilities Dc = Current liabilities
15	Financial stability	$St = \frac{Cpr}{Dml} * 100$	Cpr = Equity Dml = Term debts medium and long
16	Debt repayment period	$Prd = \frac{Dt}{Ca} * 100$	Dt = Total debts Ca = Turnover

Note: In general, for calculating the evolution of the primary and performance indicators, the method of indices with a fixed base in 2007 was used.

3 RESULTS AND DISCUSSION

In nominal terms, total assets in the real economy increased by 95.25% in 2017 compared to 2007. This indicator serves as a comprehensive measure for assessing the activity potential at the microeconomic level, The observed results are a result of a combination of positive and negative influences on the structure of this indicator. Specifically, Table 2 illustrates the average distribution of total assets in the real economy across different branches during the period 2007–2017.

Table 2. Dynamics of average total assets in the period 2007–2017 for commercial companies grouped by branches of the national economy

No. Crt.	Branches the National Economy	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Agriculture, forestry and fishing	160.92	158.77	180.04	172.96	207.93	184.64	203.41	209.09	235.14	243.75
2	Extractive industry	117.98	116.14	133.47	138.48	153.38	160.89	171.96	46.85	170.04	174.62
3	Manufacturing industry	127.94	124.68	144.38	164.67	171.52	171.35	177.53	182.85	186.14	195.79
4	Production and supply of electricity and thermal energy, gas, hot water and air conditioning	209.52	140.10	129.02	129.67	127.60	105.15	91.45	95.88	103.60	103.89
5	Water distribution, sanitation, waste management, decontamination activities	219.38	241.97	271.53	253.82	240.08	252.97	286.78	327.36	320.56	323.32
6	Construction	125.08	125.64	153.27	173.39	221.65	207.97	150.92	207.77	199.04	198.14
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	139.92	125.96	143.23	157.14	162.07	160.14	162.91	174.63	180.16	196.35
8	Transport and storage	115.54	119.19	103.74	99.95	97.27	88.85	95.75	94.75	93.23	93.79
9	Hotels and restaurants	138.15	120.85	130.07	137.18	131.9	131.94	135.91	136.85	141.61	149.04
10	Information and telecommunications	49.90	47.27	53.87	59.61	168.72	50.56	54.90	54.53	160.94	166.92
11	Real estate transactions, rentals and service activities provided mainly to companies	172.22	210.24	277.22	210.99	159.65	158.3	200.83	155.82	161.46	164.32
12	Professional, scientific and technical activities	129.78	129.55	163.27	182.95	196.53	204.68	218.61	214.41	200.71	916.49
13	Administrative service activities and support service activities	74.55	5.53	6.31	26.93	11.36	19.54	19.64	19.72	15.02	13.42
14	Education	120.24	118.49	165.48	218.07	182.33	128.99	155.72	131.73	101.78	121.79
15	Health and social assistance	150.79	159.34	187.5	207.33	246.11	243.9	250.12	270.83	258.35	260.52
16	Performances, culture and recreational activities	284.21	226.73	269.55	281.51	111.18	259.83	229.96	272.96	90.70	84.78
17	Other activities of the national economy	111.40	106.70	110.39	119.68	144.29	120.14	117.27	107.70	144.40	145.26
Total		133.42	121.26	140.42	149.56	148.92	149.40	152.22	150.34	153.48	179.47

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in the real economy of Romania).

It is noteworthy that within the branch Production and supply of electricity and thermal energy, gas, hot water and air conditioning, commercial companies exhibit the highest average total assets (over 116.73 million lei). However, there is a noticeable

trend of reduced growth pace in recent years, with the average total assets in 2017 being only 3.89% higher compared to 2007. In contrast, the branches “Professional, scientific and technical activities” and “Water distribution, sanitation, waste management, decontamination activities” have significantly lower levels of average total assets compared to the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch. Nevertheless, these two branches have experienced the highest growth rates. By the end of the year 2017, the average total assets in these branches were over 9.16 times and 3.23 times higher respectively, compared to the end of 2007. The presented situation can be explained by the technological processes involved in certain branches of the real economy, such as the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” sector, which requires large unit investments. Additionally, other exogenous factors, including the sales and labor market, have influenced the structure of average total assets.

From a territorial point of view, there exists a known asymmetry in the distribution of economic activity across regions. On average, companies in the Bucharest-Ilfov development region exhibit the highest total assets, while the South-West development region records comparatively smaller levels. The most significant dynamics were observed in the Bucharest-Ilfov and South development region, with average total assets increasing by over 75.20% and 76.84% respectively, during the period 2007–2017. In contrast, the North-East region experienced the smallest increases, with a growth rate of +51.16% over the same period (please see the Table 3).

Table 3. Dynamics of average total assets in the period 2007–2017 for commercial companies grouped by development regions

No. Crt.	Region Development	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	NORTH-WEST	132.30	135.15	122.94	153.53	154.02	145.52	149.60	167.50	160.07	162.43
2	NORTH-EAST	127.02	127.34	116.69	137.92	142.38	133.27	138.21	155.58	145.94	151.16
3	SOUTH-WEST	143.75	147.86	118.04	133.28	141.22	162.27	158.73	173.36	161.40	163.44
4	SOUTH-EAST	132.01	131.40	108.12	125.89	133.54	149.07	159.93	193.49	173.80	170.53
5	SOUTH	136.12	125.91	118.71	146.38	153.83	148.38	156.38	180.89	173.42	176.84
6	CENTER	133.17	127.86	110.62	130.29	137.98	142.00	152.67	190.20	154.6	159.32
7	WEST	135.81	118.91	109.44	135.37	146.46	144.27	146.79	162.00	157.25	162.18
8	BUCHAREST-ILFOV	137.39	115.30	151.98	149.92	143.75	142.99	142.89	129.84	139.84	175.20
	Total	133.42	121.26	140.42	149.56	148.92	149.40	152.22	150.34	153.48	179.47

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania’s real economy).

The level of concentration of potential activity in the real economy, as indicated by the value of average total assets, is significant¹ and can lead to significant economic, cultural, and social issues in the long run. While total assets are an “accounting” result, it is crucial to analyze them within the context of balance sheet structure.

¹ In the Bucharest-Ilfov development region, the average total assets value exceeds the national average by more than 2.69 times. However, in the South-West development region, this indicator represents 36.93% compared to the national average (year 2016). The significant disparity of 13.68 times between the two regions highlights the degree of concentration of the activity potential within their respective territorial profiles.

In the period 2007–2017, several elements made significant contribution to the fixed assets including fixed assets, current assets, material stocks, and cash availability.

3.1 Cash availability

Cash availability represents a crucial element of financial potential at the microeconomic level and reflects the level of alignment with the supply and sales market, as well as the significance attributed to various source of financing.² In the period 2007–2017, there were significant increases in the average cash availability (by the end of 2017, on average, cash availability was 95.20% higher than the value recorded on December 31, 2007). To summarize, Table 4 displays the evolution of average cash availabilities for companies in the real economy, categorized by branch, during the period 2007–2017.

Table 4. The dynamics of average cash availability in the period 2007–2017 for commercial companies grouped by branches of the national economy

No. Crt.	Branches the National Economy	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Agriculture, forestry and fishing	105.78	110.68	143.97	169.37	184.20	190.40	233.41	242.41	313.75	362.98
2	Extractive industry	60.16	52.18	62.98	34.94	22.16	20.95	25.53	34.93	92.61	165.48
3	Manufacturing industry	121.04	117.45	143.58	151.10	153.90	158.46	172.98	211.05	209.30	207.60
4	Production and supply of electricity and thermal energy, gas, hot water and air conditioning	367.03	203.81	156.32	122.69	130.48	122.05	128.13	161.43	193.97	191.39
5	Water distribution, sanitation, waste management, decontamination activities	373.03	522.26	542.04	468.43	379.70	404.46	470.02	449.17	548.85	601.67
6	Construction	91.91	90.75	112.60	126.88	116.46	123.98	143.64	211.27	169.69	173.37
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	115.98	98.40	109.03	124.47	122.68	129.08	143.65	195.00	202.07	219.85
8	Transport and storage	104.01	89.21	89.05	94.86	82.83	85.99	120.18	148.22	162.55	167.65
9	Hotels and restaurants	111.01	86.81	81.17	92.29	73.92	96.91	113.36	149.96	153.95	197.32
10	Information and telecommunications	58.08	49.43	56.04	68.06	148.94	75.10	99.01	128.67	184.40	205.82
11	Real estate transactions, rentals and service activities provided mainly to companies	119.83	101.11	99.47	100.92	73.37	78.16	107.92	104.60	113.46	139.58
12	Professional, scientific and technical activities	119.50	111.20	128.49	137.55	138.84	149.60	191.54	194.60	169.21	186.43
13	Administrative service activities and support service activities	96.14	56.63	55.58	92.91	82.03	79.35	90.80	111.26	92.91	103.91
14	Education	103.95	94.99	141.24	130.55	114.45	132.74	147.83	179.12	158.65	171.97
15	Health and social assistance	121.86	128.73	135.11	150.75	174.35	182.68	199.08	302.95	221.48	269.22
16	Performances, culture and recreational activities	192.86	167.73	205.63	200.85	147.23	193.06	177.47	252.39	149.67	136.36
17	Other activities of the national economy	106.29	95.29	106.07	122.86	181.49	134.32	150.25	172.01	244.62	267.11
	Total	120.60	105.97	119.49	126.22	120.63	128.50	147.82	185.24	183.01	195.20

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania's real economy).

² In the balance sheet, this element is reflected as stock at the end of the period, and is considered as a potential component of the company's activity.

It should be noted that in the branch “Production and supply of electricity and thermal energy, gas, hot water and air conditioning,” commercial companies, on average, exhibit the highest cash availability (over 9.20 million lei at the end of 2017), accompanied by significant growth rates (in 2017, the average cash availability was 91.39% higher compared to 2007).

In the “Other activities of the national economy” branch, companies have the lowest average cash availability level (39.18 thousand lei on December 31, 2017), while the “Water distribution, sanitation, waste management, decontamination activities” branch shows the highest growth rates are recorded (the average monetary availability on December 31, 2017 was approximately 6.02 times higher than at the end of 2007).

The average level of cash availability varies significantly across different branches due specific factors such as the technical endowment, the complexity of the technological processes, supply and sales conditions, as well as the financing policies adopted by each economic agent [16].

From a territorial perspective, at the end of the period, cash availability, on average, exceeded twice the value recorded in the base year across all development regions. However, a clear asymmetry exists, with companies in the Bucharest-Ilfov development region displaying higher values of cash availability, while the lowest values are recorded in the South-West development region (the ratio between these values was 5.89 times as of December 31, 2017).

The most significant increases were registered in the South development region, where companies, on average, experienced a growth of approximately 2.29 times in cash availability between 2007 and 2017. Similarly, the Bucharest-Ilfov development region witnessed a substantial increase of 74.62% in cash availability compared to the base year (please see the Table 5).

Table 5. Dynamics of average cash availability in the period 2007–2017 for commercial companies grouped by development regions

No. Crt.	Region Development	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	NORTH-WEST	113.66	111.79	112.65	137.17	136.46	143.98	164.87	221.51	200.00	207.65
2	NORTH-EAST	105.86	90.14	106.05	119.94	118.87	121.32	150.48	200.95	188.14	218.72
3	SOUTH-WEST	121.02	101.86	108.49	122.01	120.09	136.02	160.36	225.60	205.53	215.18
4	SOUTH-EAST	114.30	103.42	112.79	127.20	134.39	139.36	166.36	209.34	203.96	219.77
5	SOUTH	125.61	112.62	113.86	131.79	127.82	140.11	165.57	209.64	206.13	228.91
6	CENTER	106.36	102.59	104.06	119.59	125.25	134.29	163.41	241.57	183.48	198.88
7	WEST	110.00	95.89	99.65	117.15	126.60	129.75	150.51	195.34	201.07	204.77
8	BUCHAREST-ILFOV	128.42	105.71	124.79	122.40	111.21	118.08	132.26	158.82	163.71	174.62
Total		120.60	105.97	119.49	126.22	120.63	128.50	147.82	185.24	183.01	195.20

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania’s real economy).

From an accounting perspective, the cash available at the end of the period is considered part of current assets, which is a potential element that will be further analyzed.

3.2 Staff number

Employed personnel represent a crucial element of the activity potential at the microeconomic level [15]. In the accounting balance, the human resources are

presented in terms of both the number of personnel and the expenses related to salary payment and debts to the consolidated state budget. During the period 2007–2017, there was a decrease in the average number of employees, amounting to a total decline of 16.64% as of December 31, 2017, compared to December 31, 2007. Table 6 presents the average number of staff for companies in the real economy, categorized by branch, for the period 2007–2017.

Table 6. Dynamics of the average number of staff employed in the period 2007–2017 for commercial companies grouped by branches of the national economy

No. Crt.	Branches the National Economy	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Agriculture, forestry, and fishing	108.28	174.05	107.31	89.63	93.05	83.52	82.19	80.80	84.66	80.14
2	Extractive industry	81.17	69.05	63.18	58.45	52.33	47.39	45.05	28.52	38.97	38.75
3	Manufacturing industry	101.31	96.36	88.02	98.43	97.50	93.55	93.95	95.09	93.83	92.87
4	Production and supply of electricity and thermal energy, gas, hot water, and air conditioning	134.17	83.01	65.64	57.16	46.00	39.13	35.45	35.95	36.69	35.75
5	Water distribution, sanitation, waste management, decontamination activities	169.27	144.60	140.75	135.43	126.59	121.22	121.34	120.89	124.13	125.17
6	Construction	102.29	95.83	100.94	90.49	84.94	76.00	75.44	72.38	68.61	62.78
7	Wholesale and retail trade, repair of motor vehicles, and motorcycles	120.49	127.01	103.53	101.67	112.02	98.72	99.87	102.61	101.91	101.46
8	Transport and storage	96.41	104.40	95.88	89.78	95.39	95.28	78.86	76.70	74.49	71.66
9	Hotels and restaurants	99.05	84.21	72.47	81.32	79.66	77.36	76.58	78.18	84.68	84.08
10	Information and telecommunications	101.13	132.41	128.49	115.20	123.36	79.30	79.24	79.73	129.34	129.57
11	Real estate transactions, rentals and service activities provided mainly to companies	121.92	110.28	207.65	103.93	100.98	99.34	93.56	91.70	89.37	84.32
12	Professional, scientific and technical activities	82.71	90.70	75.84	75.34	59.11	60.26	58.48	57.86	55.79	53.37
13	Administrative service activities and support service activities	392.33	306.62	370.95	319.75	254.14	313.28	305.66	297.94	246.95	234.79
14	Education	90.47	159.68	87.61	89.23	86.46	81.38	75.05	73.58	63.87	58.91
15	Health and social assistance	117.95	149.85	121.59	129.62	132.79	136.89	132.82	134.42	125.74	115.90
16	Performances, culture and recreational activities	137.02	145.89	116.38	120.13	114.52	126.62	119.48	119.55	90.23	74.88
17	Other activities of the national economy	102.62	102.85	95.40	102.32	87.37	92.96	86.89	81.74	73.17	70.02
Total		110.75	107.19	96.53	96.60	95.17	88.62	88.90	88.75	86.30	83.36

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania's real economy).

It should be mentioned that in the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch, commercial companies, on average, have the highest number of employees (approximately 63 employees as on December 31, 2017). However, there has been a downward trend in the average employee level

compared to the reference year 2007, with a decrease of 64.25% in the average number of employees in 2017 compared to 2007. In the branches such as “Real estate transactions, rentals and service activities provided mainly to companies,” “Professional, scientific and technical activities,” “Education,” and “Other activities of the national economy,” companies have, on average, the smallest number of employees (approximately 3 employees), which represents less than 5% of the workforce in the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch. Notably, the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch has experienced significant reductions in the average number of employees. As on December 31, 2017, the branch had 68,045 employees, reflecting a decline of 122,291 individuals compared to the figures recorded in 2007.

In 2017, in 12 out of the 17 branches of the real economy, the average number of employees at the firm level was lower than in 2007, with a decrease ranging up to 64.25% in the case of the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch. This reduction can be attributed, in most cases, to the decline in activity levels in 2017 compared to 2007, resulting from the evolving supply-demand ratio or increased labor productivity.

From a territorial perspective, a clear asymmetry exists, with companies in the Bucharest-Ilfov development region having the largest number of staff (around 15 people in 2017). Additionally, it is observed that in 2017 all companies in the analyzed development regions had a lower average number of employed staff compared to 2007, with a decline of up to 31.79% in the West region (please see the Table 7).

Table 7. Dynamics of the average number of staff employed during 2007–2017 for commercial companies grouped by development regions

No. Crt.	Region Development	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	NORTH-WEST	107.76	106.44	86.60	97.76	93.66	89.46	87.95	91.35	86.93	82.81
2	NORTH-EAST	104.57	113.00	84.51	89.00	116.96	84.28	84.41	87.75	82.90	78.95
3	SOUTH-WEST	109.21	102.13	76.09	78.51	72.58	75.99	73.56	77.30	73.00	68.91
4	SOUTH-EAST	103.53	115.57	90.16	84.58	84.22	81.78	84.45	84.85	79.65	75.42
5	SOUTH	107.71	120.72	80.96	93.84	97.77	98.23	85.31	86.57	84.63	80.58
6	CENTER	116.55	129.18	76.62	84.08	91.87	83.37	81.52	85.35	80.57	77.13
7	WEST	111.39	100.74	81.14	93.06	85.12	73.07	71.30	73.76	70.97	68.21
8	BUCHAREST-ILFOV	116.25	96.44	117.98	105.72	96.25	98.17	95.55	91.51	91.13	89.86
Total		110.75	107.19	96.53	96.60	95.17	88.62	88.90	88.75	86.30	83.36

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania’s real economy).

The change in the average number of personnel during the analyzed period was closely correlated with the dynamics of the result indicators, particularly the turnover, which ultimately influenced the specific dynamics of average labor productivity per unit.

3.3 The number of commercial companies

The number of active commercial companies in the real economy experienced a moderate increase of only 8.79% during the period 2007–2017. Between 2008 and

2015, the number of active firms in the real economy was significantly lower than the base year, with only 417,983 firms in 2008 compared to 473,206 active firms in 2007. Table 8 provides an overview of companies in the real economy distributed by branches during the analyzed period.

Table 8. Dynamics of the number of commercial companies in the period 2007–2017 for commercial companies grouped by branches of the national economy

No. Crt.	Branches the National Economy	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Agriculture, forestry and fishing	94.15	99.81	106.38	113.91	105.97	122.95	125.30	133.31	122.10	129.38
2	Extractive industry	109.30	120.12	116.51	121.51	116.63	112.56	115.58	112.44	108.14	104.88
3	Manufacturing industry	87.88	84.61	80.35	79.73	78.92	79.27	78.85	80.33	81.01	83.24
4	Production and supply of electricity and thermal energy, gas, hot water and air conditioning	51.72	80.19	96.84	108.39	110.45	148.83	166.71	159.56	152.82	148.83
5	Water distribution, sanitation, waste management, decontamination activities	97.58	106.21	116.32	132.84	144.11	150.58	144.53	145.05	143.26	145.26
6	Construction	107.18	104.78	91.57	90.63	94.08	94.46	90.95	98.61	102.40	109.10
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	79.95	92.44	88.01	86.36	86.01	86.05	85.29	84.82	84.50	86.16
8	Transport and storage	102.19	97.69	95.50	99.66	103.95	109.39	116.57	123.80	132.53	144.83
9	Hotels and restaurants	97.42	112.33	111.87	112.30	103.17	116.29	116.40	120.60	109.69	113.32
10	Information and telecommunications	30.16	32.87	30.37	30.05	108.56	31.16	31.69	32.31	134.46	146.75
11	Real estate transactions, rentals and service activities provided mainly to companies	75.91	93.32	89.08	90.76	81.77	85.32	100.20	92.13	98.55	106.50
12	Professional, scientific and technical activities	83.75	95.63	88.58	89.29	93.82	92.87	94.72	97.31	106.96	114.01
13	Administrative service activities and support service activities	119.66	134.16	128.96	189.68	241.44	211.74	221.84	231.13	293.08	314.50
14	Education	110.51	126.20	124.63	136.46	148.44	161.97	175.61	197.51	231.62	274.05
15	Health and social assistance	93.29	107.45	108.02	112.26	115.46	123.13	130.29	140.13	170.58	196.84
16	Performances, culture and recreational activities	263.43	302.00	282.88	295.74	74.61	327.36	344.90	383.42	122.23	142.44
17	Other activities of the national economy	95.76	103.98	99.10	98.25	153.12	108.91	113.28	122.73	195.90	217.24
Total		88.33	96.46	91.66	92.69	94.00	95.51	96.67	99.33	103.15	108.79

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania's real economy).

It should be mentioned that in the “Wholesale and retail trade, repair of motor vehicles and motorcycles” sector, there were the highest number of commercial companies (163804 companies in 2017), with a decreasing trend in the number of companies compared to the reference year 2007. Specifically, the number of companies decreased by 13.84% in 2017 compared to 2007. In the “Manufacturing industry” sector, the number of commercial companies also decreased during the analyzed period, showing a decline of 13.84% compared to 2007. On the other hand, in the

“Education” sector the number of commercial companies experienced most significant increase, with a growth of over 2.74 times in 2017 compared to 2007.

From a territorial perspective, the Bucharest-Ilfov development region has the highest number of companies, reaching 126,165 in 2017. Conversely, the South-West region had the lowest number of companies in the same year, with only 35092 entities, representing approximately 27.81% of the total number of commercial companies in the Bucharest-Ilfov region. This discrepancy can be attributed to the method of registering the official address for a company. Many companies, typically of medium size, opt to register their headquarters in Bucharest to facilitate a more convenient relationship with the Financial Administration.

Table 9. Dynamics of the number of commercial companies in the period 2007–2017 for commercial companies grouped by development regions

No. Crt.	Region Development	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	NORTH-WEST	90.28	95.73	90.38	91.13	92.54	94.75	97.46	101.19	106.65	113.73
2	NORTH-EAST	92.26	94.69	90.69	90.53	90.23	91.71	91.94	95.13	99.19	106.08
3	SOUTH-WEST	83.61	98.68	94.22	94.77	96.19	96.98	97.85	100.68	103.20	108.20
4	SOUTH-EAST	89.81	96.40	92.24	92.27	92.77	93.68	93.96	95.63	98.02	101.98
5	SOUTH	90.96	97.78	94.29	94.36	95.20	96.52	96.81	98.97	102.52	108.83
6	CENTER	87.89	93.76	89.70	89.32	89.88	90.62	90.73	92.99	96.17	101.53
7	WEST	86.94	95.43	89.90	89.85	90.97	91.68	92.54	94.73	97.39	102.24
8	BUCHAREST-ILFOV	85.35	98.41	92.37	96.56	99.72	102.17	104.52	107.38	112.16	117.55
Total		88.33	96.46	91.66	92.69	94.00	95.51	96.67	99.33	103.15	108.79

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania's real economy).

Due to the adverse impact of the economic-financial crisis, the number of commercial companies in all development regions experienced a decline below the 2007 level for a certain period of time, with some regions even witnessing a decrease up to 6.39% (such as South-West region in 2008). However, the duration of this period varied across different regions. In the case of the Bucharest-Ilfov region, the number of companies remained lower than the 2007 level only between 2008 and 2013. On the other hand, it took approximately nine years for four other regions (North-East, South-East, Center and West) to recover and reach a level higher than that of 2007 (please see the Table 9).

In conclusion, the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” sector exhibits the highest economic potential among commercial companies. From a territorial perspective, this activity is primarily concentrated in Bucharest-Ilfov development region, while the South-West regions shows the lowest values in terms of potential value.

The evolution of the economic potential must also be correlated with the utilization of resources. To further examine this, the analysis of commercial balance sheets includes the assessment of several indicators: depreciation of tangible assets, personnel expenses, operating expenses, and total expenses.

3.4 Economic—financial results in the real economy

The utilization of economic, financial, informational, and human potential has resulted in a series of economic-financial outcomes. Among these, we have identified several significant indicators, namely: turnover, operating income, total income, operating profit/loss, total profit/loss, and debts [14].

a. Turnover. The turnover figure is one of the crucial results of a company's operations, and it plays a vital role in economic analysis. In the real economy, there were significant increases in average turnover per unit between 2007 and 2017. As of December 31, 2017, the average turnover per unit had witnessed a significant rise of 67.53% compared to December 31, 2007. To illustrate the evolution of the average turnover per company in the period 2007–2017 for companies in the real economy, the data is presented in Table 10, which provides a break down by activity branches.

Table 10. Dynamics of the average turnover in the period 2007–2017 for commercial companies grouped by branches of the national economy

No. Crt.	Branches the National Economy	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Agriculture, forestry and fishing	141.41	134.83	140.84	180.99	210.51	180.74	194.65	178.64	204.16	212.65
2	Extractive industry	124.72	89.15	104.18	109.28	121.76	121.48	118.30	49.04	91.63	111.74
3	Manufacturing industry	136.72	116.77	141.37	175.33	183.85	190.04	201.65	209.66	214.01	236.86
4	Production and supply of electricity and thermal energy, gas, hot water and air conditioning	239.73	152.01	127.41	129.39	122.84	92.55	79.22	93.23	93.05	95.91
5	Water distribution, sanitation, waste management, decontamination activities	139.04	103.92	129.34	139.62	127.65	109.81	104.45	94.48	94.55	110.68
6	Construction	123.13	100.66	108.23	121.90	121.39	106.08	102.36	118.60	103.12	101.03
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	147.21	114.43	129.72	153.31	160.45	157.87	164.65	178.32	193.48	207.86
8	Transport and storage	115.95	104.02	120.06	128.58	130.23	131.82	137.90	139.73	138.60	142.67
9	Hotels and restaurants	163.15	120.36	126.77	138.37	119.80	148.45	161.26	188.16	183.54	200.81
10	Information and telecommunications	65.03	51.96	60.07	65.30	150.78	57.24	66.38	71.66	166.11	172.42
11	Real estate transactions, rentals and service activities provided mainly to companies	147.38	305.37	334.59	144.58	116.70	113.66	143.43	119.86	122.31	128.77
12	Professional, scientific and technical activities	124.85	105.84	115.86	130.71	137.14	128.75	130.88	136.35	127.99	132.33
13	Administrative service activities and support service activities	164.21	134.08	162.07	184.67	215.37	199.80	204.10	215.62	236.19	254.89
14	Education	124.42	90.06	98.71	116.00	109.71	108.50	106.78	119.27	104.44	103.95
15	Health and social assistance	150.39	150.52	178.08	198.44	226.63	241.08	264.28	286.07	275.28	297.60
16	Performances, culture and recreational activities	217.75	180.24	198.66	209.39	155.23	196.10	189.37	209.89	123.28	117.72
17	Other activities of the national economy	119.23	100.09	104.23	120.60	155.83	110.42	114.95	125.16	203.69	197.64
Total		138.60	113.52	129.38	147.34	150.52	147.82	151.73	157.44	159.40	167.53

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania's real economy).

In the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” sector, the average turnover per unit reaches its highest levels at the end of 2017. This is primarily due to the large size of the companies operating in this sector and the significant total value of the economic potential. Additionally, the strong demand for the products and services offered by this branch, contributes to the higher turnover figures. At the end of 2017, the average turnover per unit in this branch exceeded over 53.49 million lei. Notably this value is approximately 243.30 times higher than the average turnover per unit in the branch of “Education.” This disparity in turnover reflects the average company sizes of companies within different branches of the real economy. This discrepancy is particularly evident between the primary branches, such as “Extractive industry” and “Production and supply of electricity and thermal energy, gas, hot water and air conditioning,” compared to the other branches such as “Health and social assistance” or “Education.” It should also be noted that the turnover in the primary branches holds significant weight as a cost element for companies in other branches. Ultimately, it plays a crucial role in determines the overall performance of the entire real economy [13].

From a territorial perspective, a clear asymmetry is observed. Companies in the Bucharest-Ilfov development region exhibit the highest average turnovers, surpassing the national average by more than 2.72 times. Conversely, the South-West development region has the lowest average turnover, with the ratio between these two regions being 7.43 times as of December 31, 2017. Notably, the West development region experienced significant growth rates apart from the Bucharest-Ivov region. In the period from 2007–2017, the average turnover per company in the West development region increased by approximately 55.38% (please see the Table 11).

Table 11. Dynamics of the average turnover in the period 2007–2017 for commercial companies grouped by development regions

No. Crt.	Region Development	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	NORTH-WEST	136.22	117.32	102.22	128.47	135.63	117.61	127.73	146.32	142.36	150.62
2	NORTH-EAST	130.84	109.18	99.07	119.96	129.73	113.32	122.50	140.72	138.36	145.02
3	SOUTH-WEST	141.69	104.79	99.37	113.29	117.49	108.22	113.89	131.57	123.99	130.30
4	SOUTH-EAST	139.95	115.52	106.74	129.72	137.82	118.92	125.14	145.82	137.01	142.71
5	SOUTH	141.76	108.74	101.42	128.58	135.07	121.33	130.23	141.84	141.54	149.59
6	CENTER	136.85	107.22	101.18	120.17	126.28	117.54	129.36	161.22	143.64	152.96
7	WEST	137.33	101.25	100.62	127.07	138.01	112.39	121.54	141.89	145.42	155.38
8	BUCHAREST-ILFOV	143.24	113.97	145.92	156.16	154.21	158.24	157.56	154.73	160.04	168.68
Total		138.60	113.52	129.38	147.34	150.52	147.82	151.73	157.44	159.40	167.53

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania’s real economy).

b. Operating income. In addition to turnover, operating income is a fundamental indicators in the analysis of the economic activity of commercial companies [7].

In the real economy, significant increases in operating income were recorded during 2007–2017, aligning with the trend in turnover. On average, companies experienced a 64.86% increase in operating income as of December 31, 2017, compared to December 31, 2007. To provide a comprehensive overview, the evolution of average operating income for companies in the real economy, categorized by branch, is presented in Table 12.

Table 12. Dynamics of average operating income in the period 2007–2017 for commercial companies grouped by branches of the national economy

No. Crt.	Branches the National Economy	Dynamics (2007=100%)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Agriculture, forestry and fishing	141.32	130.70	135.65	173.99	202.03	172.90	183.32	174.56	198.16	208.79
2	Extractive industry	128.48	90.45	106.42	110.90	128.12	123.34	123.62	52.49	96.61	116.69
3	Manufacturing industry	134.36	112.57	136.78	170.17	177.52	182.17	194.52	202.00	205.66	227.25
4	Production and supply of electricity and thermal energy, gas, hot water and air conditioning	229.40	148.51	124.96	126.39	120.13	93.78	77.12	90.06	89.60	93.64
5	Water distribution, sanitation, waste management, decontamination activities	138.17	102.97	129.08	136.93	126.33	107.06	102.47	92.76	93.40	108.55
6	Construction	124.04	98.09	107.50	122.22	121.65	106.21	101.50	117.34	105.79	104.69
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	146.54	113.87	128.66	152.14	159.04	156.42	163.43	176.67	191.81	206.15
8	Transport and storage	115.35	103.68	121.89	132.14	132.33	132.35	136.36	143.52	140.15	143.40
9	Hotels and restaurants	157.25	115.53	121.79	132.52	115.80	141.26	154.10	179.57	177.20	192.63
10	Information and telecommunications	66.29	51.56	59.39	66.50	154.16	57.47	66.69	71.45	168.19	177.38
11	Real estate transactions, rentals and service activities provided mainly to companies	145.78	234.46	261.28	121.14	98.85	98.86	123.88	100.43	106.45	113.91
12	Professional, scientific and technical activities	124.65	105.08	115.52	127.03	136.03	128.45	130.26	136.98	127.62	133.26
13	Administrative service activities and support service activities	149.94	97.33	116.66	143.49	159.01	224.27	175.31	181.06	173.87	186.91
14	Education	124.56	91.29	102.08	123.58	119.08	115.21	110.03	135.82	104.34	103.92
15	Health and social assistance	149.14	149.37	177.09	197.39	226.06	240.37	262.88	287.19	276.15	295.91
16	Performances, culture and recreational activities	215.99	179.24	198.66	208.84	156.93	194.22	188.06	211.71	122.59	116.80
17	Other activities of the national economy	119.05	98.48	103.69	119.07	155.70	109.85	115.01	125.72	199.93	195.42
Total		137.58	111.26	127.22	145.15	148.15	146.11	149.19	155.02	156.63	164.86

Source: Calculated based on data provided by the Ministry of Public Finance (annual financial statements of active commercial companies in Romania's real economy).

In the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch, commercial companies, owing to their substantial size, total economic potential, and the specific demand-supply dynamics of the company, registered the highest levels of operating income. On average, these companies achieved an operating income of approximately 57.35 million lei. Notably, this value is more than 20.40 times higher than the average operating income recorded in 2017 for the entire real economy.

From a territorial perspective, commercial companies in the Bucharest-Ilfov development region demonstrated the highest operating revenues, surpassing the average for the total real economy by approximately 2.70 times in 2017. Conversely, companies in the Southwest development region exhibit the lowest levels of

operation revenue with the ratio between these two values being 7.18 times as of December 31, 2017. Apart from the Bucharest-Ilfov regionsignificant dynamics were registered for companies in the West development region. In the period 2007–2017, the average operating income per unit in this region experienced an increase of approximately 51.89%. At the level of the real economy, during the period 2007–2017, there was an overall increase in average operating profit due to the interplay between average operating expenses and average operating income. On December 31, 2017, companies recorded, on average, a 56.03% increase in profit compared to December 31, 2007. On average, these operating losses in 2017, were approximately 79.20% higher compared to 2007.

In summary, the table provides an overview of the evolution of average losses for companies in the real economy, categorized by branch. Notably, within the “Production and supply of electricity and thermal energy, gas, hot water and air conditioning” branch, commercial companies recorded the highest average operating losses. As of December 31, 2017, these losses amounted to over 2.69 million lei. Furthermore, there is an evident growth trend in 2017 compared to 2007, with an average operating loss being more than 2.97 times higher than in 2007.

In the “Education” branch, among others, the average operating losses per company are among the lowest (12.65 thousand lei), and in recent years the level of this indicator has had an obvious tendency to reduce the pace (in 2017 the level of this indicator represented only +19.46% compared to the level of 2007).

4 CONCLUSIONS

In the current period, companies of all sizes, across various industries and sales market, are increasingly experiencing the negative impacts of the global economic-financial crisis. As a result, they are making significant efforts into ensuring the sustainability of their businesses. It is important to note that these crises have a direct impact on the national assets of the states. The evolution of the economic environment has highlighted the necessity of promoting companies’ strategies and objectives [17]. These steps are crucial for ensuring sustainability, especially in the face of increasingly competitive conditions. To achieve this, it is essential to have access to adequate information on the domestic and international economic-financial situation. Additionally, it requires considering and conducting comparative analysis using different techniques and exploring possible scenarios [2]. In the current economic and social context, which is characterized by excessively complex and dynamics, companies face significant challenges that directly impact their operations. One of the most pressing issues, they encounter is the exogenous financing of their businesses [5]. Based on the research undertaken, the findings and proposals are summarized below:

- a) Each type of financial environment delimits the space targeted by the company’s financial management, determining its objectives, issues, and means of action [18].
- b) Capitals aim to “orient” their financing policies towards the most cost-effective sources of capital. State intervention through the insurance of state guarantees, can provide companies with access to cheaper capital and thereby contributing to maximizing the market value of the company and satisfying the interests of all stakeholders involved in the activity.

- c) At the government level, when making decisions regarding the financing of companies through state financial instruments such as guarantees and loans [8], it is crucial for companies to establish rigorous criteria. These criteria serve as guidelines for selecting and combining these resources effectively [9]. One of the primary criteria considered in the decision-making process is the cost of financing [6]. In the case of Romanian companies, even in times of economic crisis, exogenous financing through bank loans remains the primary solution to meet their financing requirements for both current activity and internal development projects.
- d) To enhance the financing activity of companies through banking products, several measures are proposed. These measures aim to streamline the lending process and improve overall efficiency. Some of these measures include: eliminating the formal nature of preliminary discussions and advising company representatives on the specifics of lending activity, including for the correct preparation and completeness of the necessary documentation; reducing the time for verification and analysis of the documents requested by the bank, and in the event of non-acceptance of the credit request, and to present the reasons and indicators that led to this decision, respectively the digitization of these verification/evaluation services.

The health and economic crisis unleashed in 2020 will continue to dominate decisions at the governmental level, with the aim of limiting losses in real economy sectors. At the same time, long-term thinking is needed, which takes into account the structural deficiencies of our economy and society, and that the budget is oriented towards supporting priority sectors, and which allows, among others:

- corrected funding sized according to national wealth, which becomes a problem at the level of every sector of activity, and which falls within the broad issue of national security—human capital being no less important than physical infrastructure [10], and
- public investments in strategic sectors: roads and railways, restoration of the irrigation system, land development, agribusiness development, public support for areas of strategic interest (in other words, industrial policies, as developed at EU level and in other EU states) [12].

It is worth noting that the statistical data for the real economy should be updated. This represents a major limitation of our study, and it is also a commitment of our research team to continue research in the direction of national wealth sizing.

Therefore, correlating national wealth with government programs and decisions to support the business environment is one of the key priorities in the next period. This is especially crucial as new sustainable models are being developed through financial instruments to consolidate the business environment. These models align with the priorities outlined in the Programs of the European Commission [19], the UN Agenda 2030, the European Green Agreement 2050, and the Global Green Agreement 2050.

5 ACKNOWLEDGMENT

Special thanks to the iTDAF team for the help we received during the review and publication process.

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7 AUTHOR

Otilia Manta, Professor PhD in economics, Scientific Researcher in Romanian Academy, Vice-President of IRIEM; Member of Editorial Team IETI Transactions on Data Analysis and Forecasting (iTDAF); Distinguished Fellow of IETI (E-mail: otilia.manta@icfm.ro).