

THE IMPACT OF THE ENERGY CRISIS ON FINANCIAL REPORTING AND ORGANIZATIONAL PERFORMANCE: A COMPARATIVE CASE STUDY ON OMV PETROM AND ROMGAZ (2021-2023)

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Abstract

This research analyses how the extreme volatility of the energy market and post-pandemic legislative interventions have reconfigured the financial statements of the main players in the oil and gas sector in Romania. Using a methodology based on the comparative case study, the article examines the key performance indicators (Turnover, Net Profit, CAPEX and Current Liabilities) extracted from the audited reports of OMV Petrom and Romgaz in the period 2021-2023. The results indicate a significant accounting paradox. Although 2022 marked record revenues under the influence of the *profit windfall* effect, financial sustainability was put under pressure by the introduction of ad-hoc tax mechanisms, such as the solidarity contribution (GEO 186/2022). The study highlights an alarming increase in short-term debt and a critical dependence of the net result on fiscal policy decisions. The conclusions of the research underline the need to evolve the accounting function from a simple retrospective reporting to a proactive regulatory risk management tool. The paper provides strategic recommendations on liquidity management and the importance of fiscal predictability for maintaining investment appetite in energy transition projects.

Keywords: *financial accounting, energy crisis, windfall profit, GEO 186/2022, organizational resilience, extractive sector.*

1. LITERATURE REVIEW

The energy crisis has a complex and multidimensional impact on financial reporting and organizational performance, especially in a global economic context marked by increasing pressures for sustainability and transparency.

Firstly, the energy crisis translates into increased energy costs, which negatively affects the profitability and productivity of companies, especially in energy-intensive industries. Studies show that in a context of energy shortages, firms experience significant declines in return on

capital and assets (ROE, ROA), as well as a decrease in operational productivity, with the impact being more pronounced in developing economies (Xu et al., 2022). This situation requires companies to reassess their financial models, with a direct impact on financial reporting, which must reflect rising costs, changes in cash flows and risks associated with energy shortages.

Secondly, as the energy crisis amplifies environmental and social risks. Companies are becoming increasingly pressured to integrate non-financial reporting, especially ESG (Environmental, Social, Governance) indicators, into their reporting and management strategies. The transparency of ESG performance becomes an essential communication vehicle for stakeholders, helping to increase financial transparency and the credibility of companies. It has been observed that a high level of non-financial disclosures correlated with sustainable performance often leads to superior financial performance, by increasing investor confidence and optimizing corporate governance (Oncioiu et al., 2020; Carreira et al., 2025). At the same time, in the energy sector, strong corporate governance and diversity on the board of directors have proven to increase the level of sustainable performance reporting, which is fundamental for energy and environmental risk management (Hussien et al., 2025).

Importantly, sustainability reporting is not just a compliance exercise, it can generate real competitive advantages. Studies show that firms with quality ESG reporting benefit from a better reputation, improved operational performance and an increased ability to adapt to the pressures

of the energy crisis. For example, European energy companies that report transparently and use various sustainability assessment methods tend to perform better in terms of economic measures and stakeholder engagement (Zrnic et al., 2024). It supports the idea that the rapid and complete integration of non-financial indicators into reporting can help companies better navigate the uncertainty generated by the energy crisis.

From a technological point of view, the energy crisis is driving the adoption of digital and artificial intelligence solutions for the preparation and improvement of the accuracy of financial and non-financial reports. AI can increase the speed and accuracy of reporting, help detect fraud, and continuously monitor energy and ESG-related risks, thus contributing to increased transparency and better governance (Awad et al., 2025; Miglionico, 2022).

However, the sustainable reporting process in the context of the energy crisis also faces significant challenges, such as still uneven reporting standards, difficulties in collecting data on energy and environmental impacts, and the risk that disclosures will be perceived as mere compliance measures and not as genuine sustainability commitments (Abu-Allan, 2025; Dingwerth and Eichinger, 2010). These barriers can limit the potential of reporting in order to

generate real value for organizational performance.

In conclusion, the energy crisis requires a profound transformation of financial reporting and organizational management models, through a broader integration of ESG indicators, the use of advanced technologies and the recognition of sustainability as an essential performance factor. This leads to increased transparency, better risk management, and an increased ability of organizations to sustain financial performance in conditions of increased volatility and uncertainty generated by the energy crisis (Xu et al., 2022; Hussien et al., 2025; Oncioiu et al., 2020; Fometescu et al., 2024; Zrnic et al., 2024).

Comparative case study on financial performance and the impact of tax policies on OMV Petrom and Romgaz companies (2021–2023).

Within the methodological approach, the empirical analysis uses the financial indicators presented in Table 1.1. which summarizes the evolution of turnover, net profit, corporate income tax expenses, solidarity contribution and current debts for the two analysed companies, the data being taken from the annual reports published on the platform of the Bucharest Stock Exchange (BVB).

Table 1.1. Relevant financial indicators for the analysis of windfall profits and taxation in the energy sector: OMV Petrom and Romgaz (2021–2023)

Company	Indicator (from the Annual Reports)	2021	2022	2023
OMV PETROM (SNP)	<i>Net Turnover</i>	26.011	61.344	38.808
	<i>Profit Net</i>	2.864	10.304	4.030
	<i>Corporate Income Tax Expense</i>	581	1.956	1.152
	<i>Solidarity Contribution (Special Tax)*</i>	0	1.485	2.731
	<i>Current Liabilities (short-term)</i>	6.848	16.485	10.024
ROMGAZ (SNG)	<i>Net Turnover</i>	5.852	13.359	9.002
	<i>Profit Net</i>	1.897	2.544	2.812
	<i>Corporate Income Tax Expense</i>	338	534	557
	<i>Current Liabilities (short-term)</i>	1.156	3.242	2.454

Source: own processing based on BVB data

*Note: At OMV, the solidarity contribution is often presented separately from the standard corporate income tax, being a crucial element of impact for 2022-2023.

** Amounts expressed in millions of RON

The interpretation regarding taxation and investment orientation was compared with the official annual reports of OMV Petrom and Romgaz (table 1.1), as well as GEO no. 186/2022. In the case of OMV Petrom, there is an important accounting nuance: the amount of 1,485 mln. RON for 2022 was recognized as an accountant in 2023, after the entry into force of Law no. 119/2023 approving GEO 186/2022; Therefore, it can be treated analytically as a burden related to the 2022 financial year, but not as an accounting expense recorded in the 2022 annual report.

In the literature, windfall profit essentially refers to a profit surplus determined mainly by exogenous price shocks, institutional changes or market advantages that are not directly correlated with a proportional increase in operational efficiency. Conceptually, it must be distinguished from the profit resulting from managerial or technological improvements. Verbruggen (2008) shows that the term is often used imprecisely, but remains useful to describe windfall gains generated by external circumstances, and the literature on European energy markets shows that such surpluses frequently occur in contexts of price and regulatory shocks.

Applying this key to the two companies, the data suggest that 2022 was, for both companies, the typical year of exceptional profit induced by the energy context, but with different intensities. At OMV Petrom, turnover increases from 26,011 mln. RON in 2021 to 61,344 mln. RON in 2022, and net profit rises from 2,864 mln. RON to 10,304 mil. RON. The net margin resulting from the series provided increases from about 11.0% in 2021 to 16.8% in 2022, then drops to about 10.4% in 2023. This trajectory is compatible with a windfall episode: the profit expansion in 2022 is much faster than in the adjacent years, and the reverse in 2023 indicates the lessening of the exceptional character of the favorable shock.

At Romgaz, the picture is more nuanced. Turnover rises from 5,852 mln. RON in 2021 to

13,359 mln. RON in 2022, but the net profit advances more moderately, from 1,897 mln. RON to 2,544 mil. RON. The net margin decreases from around 32.4% in 2021 to 19.0% in 2022, to return to around 31.2% in 2023. This means that while the price shock boosted revenues, the gross windfall profit was partially absorbed by domestic capping/regulated price regulations and the gas sector-specific overtaxation. Even Romgaz's 2023 Annual Report explicitly mentions that GEO no. 27/2022 significantly influenced revenues and that the reduction of expenses with the windfall tax on gas was a major determinant of profitability in 2023.

Therefore, the windfall effect appears more visibly at OMV Petrom in 2022 in the form of an explosion in profit associated with the external market context, while at Romgaz it is more strongly filtered by the public intervention framework, so that the increase in revenues does not turn into a proportional increase in the net margin. This is an analytical inference from financial series, not an exhaustive causal proof; For strict validation, an econometric breakdown of profit into price, volume, taxation and regulatory components would be necessary.

State intervention (GEO 186/2022 and overtaxation)

From a normative point of view, GEO no. 186/2022 introduces the solidarity contribution for the fiscal years 2022 and 2023, at a rate of 60% applied to the part of the profit that exceeds by more than 20% the average taxable profits in the period 2018–2021. The normative act also expressly establishes that this contribution is non-deductible when calculating the tax result.

However, the accounting and economic effect of state intervention differs between the two companies.

In the case of OMV Petrom, the official reporting shows that in 2023 the company recognized a solidarity contribution on refined crude oil of 2,729 mln. RON, of which 1,485 mln. RON related to the quantities processed in 2022 and 1,244 mln. RON for 2023. The 2023 annual report explicitly emphasizes that this contribution was presented separately from corporate income tax and that, in the Romanian form applied to the company, the basis was the amount of crude oil processed, not

the profit surplus. From this perspective, for OMV Petrom, the state's intervention was not only a mechanism for capturing the exceptional rent, but also a factor of abrupt compression of the accounting result reported in 2023. The profit before tax, before the solidarity contribution, was 7,817 mln. RON, and after this contribution it dropped to 5,088 mln. RON.

In the case of Romgaz, the solidarity contribution works closer to the classic logic of taxing excess profits. The 2023 annual report indicates an expenditure with the solidarity contribution of 1,687.37 mln. RON in 2023, compared to 1,002.79 mln. RON in 2022. At the same time, the company shows that profitability in 2023 was supported by the sharp reduction in the windfall tax on gas revenues: 889.80 mln. RON in 2023, compared to 4,903.85 mln. RON in 2022. In other words, two fiscal forces acted simultaneously on Romgaz: the solidarity contribution, which increased, and the reduction of the overtaxation of gas revenues, which eased the total pressure. The net result of these two movements is that the net profit in 2023 increased moderately, despite the decrease in turnover.

Analytically, the state's intervention had an effect of redistributing the extraordinary rent, but also an effect of reshaping the accounting reporting. At OMV Petrom, the impact appears as a visible amputation of the accounting profit reported in 2023; at Romgaz, the impact is rather one of recomposing the structure of the tax burden, in which the reduction of other sectoral taxes partially compensates for the increase in the solidarity contribution. Recent literature shows that such windfall taxes tend to produce negative market reactions and amplify the uncertainty perceived by investors, although the effects on the economic feasibility of projects are not necessarily destructive in all cases (Allee et al., 2024).

Investments (CAPEX) – Green vs. Defensive Strategy

From an investment policy perspective, the opposition to “green versus defensive strategy” should be treated with caution. In methodological terms, a green strategy implies not only transition statements, but an effective and observable allocation of capital to low-emission assets, clean

energy infrastructure, electrification or decarbonization technologies (Ivanovski & Marinucci, 2021). A defensive strategy, on the other hand, aims to preserve liquidity, maintain core assets, secure production and postpone risky expansion.

For OMV Petrom, the evidence points to a controlled transition strategy, rather than a purely defensive one. Capital expenditure reached 4,704 mln. RON in 2023, by 32% over 2022. Investments went mainly to Exploration and Production (2,584 mln. RON), including Neptun Deep, but also to Refining and Marketing (1,955 mln. RON), where the annual report explicitly mentions projects at Petrobrazi, the expansion of the charging network for electric vehicles and the modernization of stations. In addition, the company's 2030 strategy foresees around €3.7 billion for low and zero carbon projects, representing around 35% of the cumulative CAPEX by 2030, and the company says it has already developed a project portfolio for over 1 GW of installed renewable capacity by 2030.

Therefore, at OMV Petrom it cannot be claimed that the exceptional profits were fully “withdrawn on the defensive.” It is more appropriate to state that the firm has combined investments in traditional strategic assets, especially upstream and refining, with clear signals of green repositioning. However, in 2023, most of the CAPEX still remains anchored in conventional assets, therefore, the rigorous formulation is that we have an incremental green transition, financed by flows still predominantly fossil, not a radical conversion of the business model.

At Romgaz, the investment profile in 2023 is closer to a prudent strategy, with defensive and operational security dominances, even if the strategic discourse includes decarbonization targets. The annual report shows investments of 1,106.16 mln. RON at company level and 1,214.15 mln. RON at group level, with a focus on exploration and production, modernization of existing assets, infrastructure and completion of the Iernut plant. At the strategic level, Romgaz declares the objective of producing and trading hydrocarbons and electricity, including from renewable sources, aims for net zero by 2050 and has even created an organizational structure

dedicated to renewable projects and hydrogen opportunities. However, the investment materialization observable in 2023 remains mainly focused on conventional assets and the Iernut gas plant.

Consequently, for Romgaz, the most rigorous characterization is that of a defensive strategy with incipient elements of green transition. There is strategic intent, organizational architecture, and transition language, but there is still no strong enough pivot of CAPEX to green portfolios in 2023 that the company can be described as committed to a robust green strategy.

2. CONCLUSIONS AND RECOMMENDATIONS

The research carried out on the most important players in the Romanian energy sector (OMV Petrom and Romgaz) highlights the fact that periods of crisis generate a significant distortion between operational performance and net income. Although 2022 brought record revenues under the effect of the *windfall profit*, accounting mechanisms had to absorb unprecedented fiscal shocks.

The data show that the state's intervention through GEO 186/2022 has transformed net profit into a variable dependent on political will, not just economic efficiency. The case of OMV Petrom in 2023 is eloquent: although the turnover decreased by almost 37%, the tax burden remained disproportionately high.

The massive increase in short-term debt in 2022 (a tripling for both companies) indicates that huge profits "on paper" do not immediately translate into available liquidity, but are often locked into receivables or working capital financing needs.

The accounting of these companies ceased to be a simple compliance exercise, becoming a strategic tool for navigating the "storm" of regulations. The ability to report under IFRS in a volatile legislative environment has allowed investors to maintain confidence, despite the uncertainty related to solidarity fees.

Based on the case study, the following recommendations are proposed:

- the adoption of financial *stress-testing* models that include not only changes in the price of

goods, but also scenarios of a sudden "fiscal shock."

- the use of windfall profits for CAPEX investments in renewable energy (portfolio diversification), the only sustainable way to reduce exposure to future fossil fuel crises.
- the need for increased fiscal predictability. The introduction of taxes such as the solidarity contribution at the end of the financial year affects the strategic planning capacity of companies, and can inhibit major long-term investments.

Limitations of the research: *the study was limited to consolidated public data and could not analyse the specific impact on each business segment.*

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