INTERNATIONAL MONETARY FUND

Bulgaria: Fiscal Risks from State-Owned Enterprises

Anh Dinh Minh Nguyen

SIP/2024/022

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on May 10, 2024. This paper is also published separately as IMF Country Report No 24/164.

2024
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SELECTED ISSUES PAPER

 SIP/2024/022

IMF Selected Issues Paper
European Department

Bulgaria: Fiscal Risks from State-Owned Enterprises

Prepared by Anh Dinh Minh Nguyen

Authorized for distribution by Jean-François Dauphin
June 2024

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ABSTRACT: State-owned enterprises' (SOEs) economic and financial performance may have important fiscal implications. This study evaluates related fiscal risks in Bulgaria from both aggregate and firm-level perspectives. The low level of state-guaranteed debt of SOEs poses minimal fiscal risk. However, contingent liabilities could be a fiscal concern in the long term due to the low profitability of major SOEs and their inefficient resource allocation. Given their crucial role in the production network, their inefficiencies likely negatively impact the overall economy's productivity and competitiveness. Additionally, liquidity and solvency risks are evident in several key SOEs. These findings underscore the need for monitoring and improving SOEs' financial performance.

RECOMMENDED CITATION: Nguyen, Anh Dinh Minh (2024) Bulgaria: Fiscal Risks from State-Owned Enterprises, Washington DC: International Monetary Fund, Selected Issues Paper, SIP/2024/022

JEL Classification Numbers:	L32, L33, L38, H2
Keywords:	Bulgaria, State-Owned Enterprises, SOEs, Fiscal Risks, SOEs' financial performance
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SELECTED ISSUES PAPERS

Bulgaria: Fiscal Risks From State-Owned Enterprises

Bulgaria

Prepared by Anh Dinh Minh Nguyen[1]

[1] The author thanks Jean-François Dauphin, Jean-Jacques Hallaert, Iglika Vassileva, and Giacomo Magistretti for their useful comments and suggestions, and the staff of Bulgaria's Ministry of Finance, Public Enterprises and Control Agency, and National Bank of Bulgaria for useful discussions.

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BULGARIA

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May 10, 2024

Approved By
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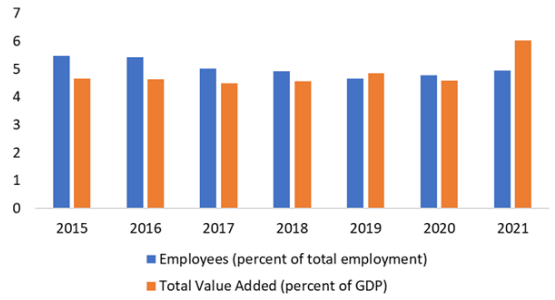
A. Introduction

1. State-owned enterprises play an important role in Bulgaria's economy. There are about 700 SOEs, i.e., firms in which the central government or sub-national government levels own a minimum stake of 50.1 percent.[2] They are especially important in network industries, such as energy and transportation. In total, SOEs' value added is about 5 percent of GDP, greater than in some other EU newer member states, including Hungary and Poland (Figures 1 and 2). SOEs account for about 4.1 percent of total employment (Figure 1).

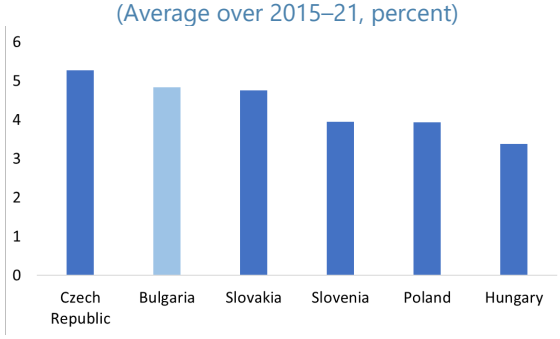
Figure 1. Shares of SOEs in the Economy



Sources: Eurostat, Orbis database, WEO database, and IMF staff calculations.

2. The financial soundness of SOEs may impact fiscal outcomes through different channels. Taxes, royalties, and dividends received from SOEs contribute to overall government revenue. Governments may face potentially substantial costs when SOEs struggle to service their debt, in case of explicit loan guarantees. In many cases, SOEs-related fiscal risks are implicit and can weigh on public finances even in the absence of a contractual obligation. For instance, the government may

Figure 2. Value Added to GDP Ratio
(Average over 2015–21, percent)



Sources: Eurostat, Orbis database, WEO database, and IMF staff calculations.

[1] Prepared by Anh Dinh Minh Nguyen (FAD). The author thanks Jean-François Dauphin, Jean-Jacques Hallaert, Iglika Vassileva, and Giacomo Magistretti for their useful comments and suggestions, and the staff of Bulgaria's Ministry of Finance, Public Enterprises and Control Agency, and National Bank of Bulgaria for useful discussions.

[2] The data is from the Orbis database.

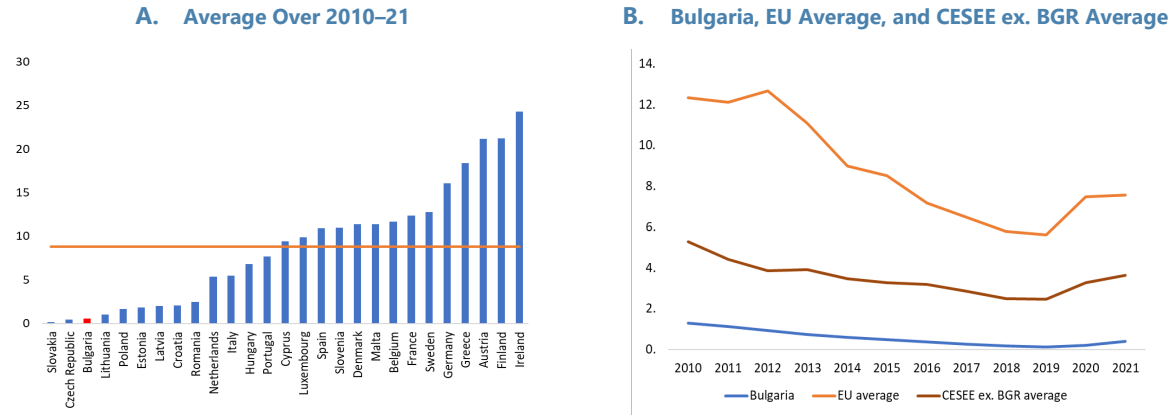
need to provide support, for example in the form of subsidy, transfers, or recapitalization, to ensure the continuity of operations of the SOEs and avoid that their arrears negatively impact to the whole economy (Baum and others, 2020).

3. The purpose of this paper is to shed light on the fiscal risks from Bulgaria's SOEs. First, it considers fiscal risks from SOEs from an aggregate perspective based on the state-guaranteed debt, contingent liabilities, and the budgetary impact of SOEs. Second, it uses firm-level data to assess the risks emanating from important SOEs in the energy and transportation sectors by assessing their financial performance (profitability, liquidity, and solvency) using the IMF's SOE Health Check Tool (IMF, 2021). The last section of the paper concludes and recommends policies.

B. An Aggregate Perspective

4. The level of state-guaranteed debt of SOEs is small and does not pose a fiscal risk concern. The explicit state-guaranteed debt of SOEs was only 0.5 percent of GDP on average over 2010–21, far below the average of 9 percent in EU countries and 3.5 percent of GDP in other CESEE countries (Figures 3A and 3B). Since the COVID pandemic, the level of state guarantees has increased across Europe, reverting a decade-long downward trend, but only modestly in Bulgaria. Specifically, the EU's state guarantees of SOEs (as percent of GDP) increased by almost 2 percentage points during 2019–21, while the corresponding increase was only 0.3 percentage points in Bulgaria.

Figure 3. Total Stock of Government Guarantees
(Percent of GDP)



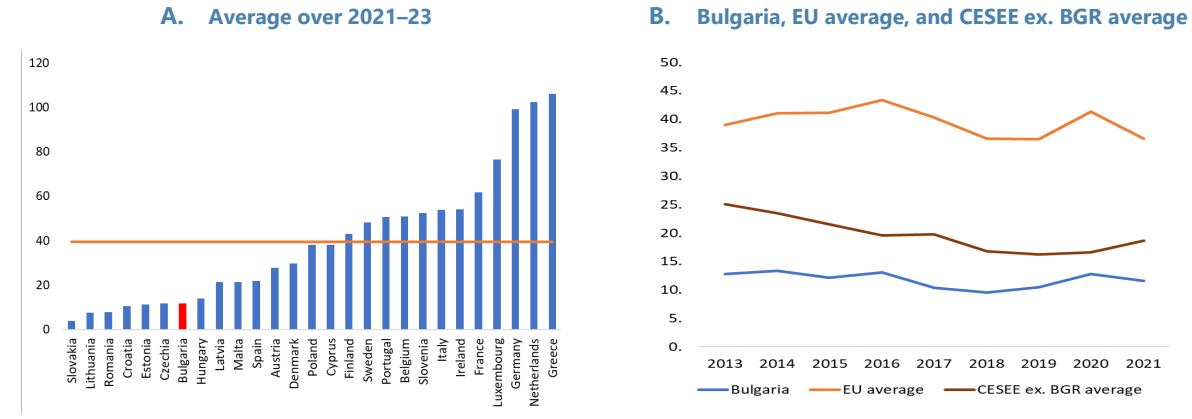
Sources: Eurostat and IMF staff calculations.
Note: The average measure is the simple average.

5. Aggregated information on guarantees issued by SOEs themselves is not available. While the size of these guarantees may be insignificant, the lack of information could be a concern as SOE's issuance of guarantees does not require the approval or monitoring of the Ministry of Finance (Olden and others, 2017). Collecting and publishing data on such guarantees is important to ensure proper monitoring of possible associated fiscal risks.

6. Contingent liabilities from SOEs, while being smaller than other EU counterparts, pose a potential risk for Bulgaria. The total amount of liabilities of government-controlled entities

classified outside general government was about 12 percent of GDP on average over 2013–21 (Figure 4A). This sizeable level of liabilities can be a source of concern, particularly when considering the SOEs' low profitability (as discussed below). From a historical perspective, the share of SOEs in the Bulgarian economy decreased significantly (Böwer and Paliova, 2016), lessening contingent liabilities over the years. The SOEs restructuring started in the 1990s when SOEs accumulated large losses and arrears and included large one-off recapitalizations enterprises that aimed to break the inter-enterprise chain of arrears leading to an accumulation of tax arrears.

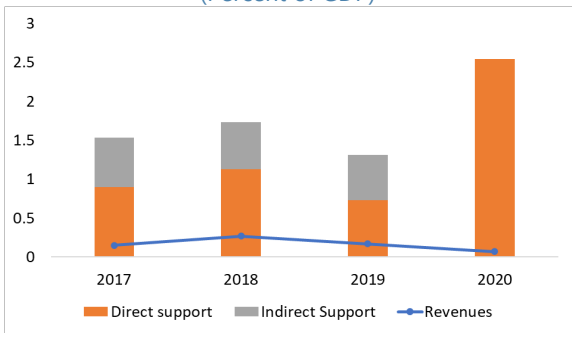
Figure 4. Contingent Liabilities of SOEs
(Percent of GDP)



Sources: Eurostat and IMF staff calculations.
Note: Contingent liabilities are total outstanding liabilities of government-controlled entities classified outside general government (% GDP). The average measure is the simple average.

7. Fiscal support to SOEs has been higher than their revenue contribution to the budget. Over 2017-19, the average government support to the SOEs was about 1.5 percent of GDP annually, including both direct fiscal support (subsidies, equity investments, and capital transfers) and indirect (deferred taxes and exempted dividends) (Figure 5). On the other hand, the annual contribution of SOEs to the budget was about 0.2 percent of GDP in 2017–19, indicating a net fiscal support of about 1.3 percent of GDP. In 2020, while the direct support increased significantly to about 2.5 percent of GDP to help SOEs cope with the negative impact of the COVID pandemic, the revenue contribution fell to less than 0.1 percent in 2020, leading to a deficit of about 2.5 percent of GDP. This highlights how unexpected shocks can significantly result in large fiscal costs originating from SOEs.

Figure 5. Revenues from Support to SOEs
(Percent of GDP)



Source: World Bank (2021).
Note: Direct support includes subsides, equity investments, and capital transfers. Indirect support includes deferred taxes and exempted dividends. Indirect support data is not available for 2020.

8. High dividend ratio supports the budget but can have negative impacts on SOEs' investment, productivity and profitability. The budget 2023 increased the dividend ratio to

100 percent from 50 percent, expected to boost budget revenues by 670 million leva (or 0.35 percent of GDP). The budget 2024 maintains a 100 percent dividend policy, which is also assumed in the 2025–26 medium-term budget framework. While a higher dividend payout ratio helps improve fiscal revenue temporarily, sustaining high dividend ratio would reduce incentives to improve productivity and profitability. It could also curtail SOEs' investment capacity, by limiting the amount of retained earnings available for investment. In the long run, this may prove a costly strategy not only for the SOEs themselves but also for the broader economy given the vital role of SOEs in the production network (IMF, 2020). Furthermore, dividend policy lacks predictability and appears to be guided by government budget needs. Empirical evidence suggests that such a policy uncertainty dampens firms' incentives for investment and, thus, have a sizable adverse effect on economic activity (Fernandez-Villaverde and others, 2015).

C. Firm-Level Analysis

9. This section complements the aggregate perspective with a firm-level analysis of fiscal risks by assessing the financial health of major SOEs in Bulgaria. Table 1 describes the main source of risks and the associated key financial indicators that can be used to assess the potential for those risks to arise. These indicators encompass three aspects—profitability, solvency, and liquidity—to identify risks across the entire portfolio of the key SOEs in recent years. Specifically, *profitability metrics* assess an SOE's efficiency in using its assets to generate returns for its shareholders. *Solvency metrics* evaluate an SOE's ability to withstand unexpected losses, repay its debt in the long term, and continue operating as a going concern. Finally, *liquidity metrics* analyze the ability of an SOE to pay off its current liabilities as they become due. This focus is not only on how much cash a business has but also on how easy it will be for the SOE to convert assets into cash. Table 1 describes the main sources of risk at SOE and key financial indicators that can be used for assessing the potential for those risks to arise.

Table 1. Fiscal Risks and Financial Indicators

Fiscal Risk	Main Source of Risk at SOE level	Key Financial Indicators
Lower dividends and taxes	• Lower revenues • Higher costs	Deteriorating profitability indicators
Higher subsidies	• Higher cost of subsidized activities	Deteriorating profitability indicators
Equity injections	• Losses eroding equity • Unsustainably high debt levels • Write-off or impairment of assets	Deteriorating solvency indicators (debt to assets)
Increased borrowing needs	• Weak internal generation of cash (often due to poor profitability) • Poor working capital management (collection from debtors and payment of creditors) • Inadequate access to market financing to meet obligations as they fall due	Deteriorating liquidity or solvency (interest coverage) indicators
Materialization of contingent liabilities	• Weak internal generation of cash (often due to poor profitability) • Inadequate access to market financing to meet obligations as they fall due	Deteriorating liquidity or solvency (interest coverage) indicators

Source: IMF (2021).

10. Specifically, the analysis focuses on selected 15 large SOEs in two important sectors of the economy: energy and transportation. This list includes 8 SOEs in the energy sector and 7 in the transportation sector (Table 2, see also PECA, 2022). The total assets and liabilities of these 15 SOEs account for about 70 percent of the total liabilities and assets of all SOEs over 2015–21.[3] Twelve of considered SOEs are also in top 15 largest SOEs in terms of assets.[4] Therefore, evaluating the financial performance of these key SOEs in detail can further help identify sources of fiscal risks arising from the SOEs sector in Bulgaria.

Table 2. Selected SOEs for Analysis

Energy Sector	Transportation Sector
• National Electric Company (NEC)	• National Railway Infrastructure Company (NRIC)
• Kozloduy Nuclear Power Plan	• BDZ – Passenger Services, Ltd
• Bulgargaz	• Bulgarian Air Traffic Services Authority
• TPP Maritsa Iztok 2	• Transport Construction and Recovery, TSV
• Electricity System Operator	• BDZ – Cargo Services, Ltd
• Bulgarian Energy Holding	• Port Varna
• Mini Maritsa Iztok	• Bulgarian Port Infrastructure
• Bulgartransgaz	

11. SOEs are less profitable than private firms. Two measures of the firm profitability can be used (Figures 6a and 6b). First, the return on asset (ROA), measures the allocative efficiency of the company in managing its assets to produce profits. The average ROA across these SOEs over 2015–21 is low, varying between -1 percent and 2 percent. This is far below the average ROA of 10 percent from the private firms.[5] The gap was reduced in 2022 with an average ROA of 9 percent for SOEs compared to 11 percent of private firms, mainly driven by the high ROAs of National Electric Company, Kozloduy NPP, and TPP Maritsa Iztok 2 due to high energy price. The average ROA excluding these three SOEs was 2 percent, in line with historical path. In terms of median value, the gap remains stable at a 6-percentage point difference over the sample (in Figure 6a). Second, the return on equity (ROE) measures the ability of a firm to generate profits using its shareholders capital. SOEs' ROE was on average 20 percentage points lower than private firms' (Figure 6b). While the SOE sector is expected to be somewhat less profitable on average than the private sector because many SOEs carry specific functions to support the government's objectives, the gap in Bulgaria is particularly significant. The ROE gap is much larger than the 4 percentage-point gap documented in countries with better governance scores (IMF, 2020). This is consistent with the

[3] This is based on a sample of about 700 SOEs in Orbis database, excluding Bulgarian National Bank.

[4] These are: Bulgarian Energy Holding, National Electric Company, National Railway Infrastructure Company, Bulgartransgaz, Kozloduy Nuclear Power Plan, Electricity System Operator, TPP Maritsa Iztok 2, Mini Maritsa Iztok, Bulgarian Port Infrastructure, Bulgargaz, BDZ – Passenger Services, and Bulgarian Air Traffic Services Authority. The other three in top 15 largest SOEs are: Bulgarian Development Bank and two enterprises owned by Sofia municipality (Metropolitan Sofia and Toplofikacia Sofia).

[5] The sample of private firms in Bulgaria includes about 2800 firms whose operating revenues are greater than 20 million leva. This threshold is the minimum revenue in the selected SOEs for the purpose of comparison.

literature's findings that weak governance in government harms all firms but has an especially deleterious effect on SOEs, (IMF, 2020; Baum and others, 2019).[6]

12. Several SOEs have been continuously making losses. Over 2015–22, about 6 SOEs made losses on average, including TPP Maritsa Iztok 2, Transport Construction and Recovery, BDZ – Passenger Services, BDZ – Cargo Services, Bulgarian Port Infrastructure, and NRIC (Figures 6c and 6d). The rise in electricity prices boosted profits of some SOEs over 2021–22, particularly the National Electric Company. Excluding these two years, the National Electric Company is another loss-making SOE over the 2015–22 period.

Figure 6a. Return on Assets (ROA)
(Percent)

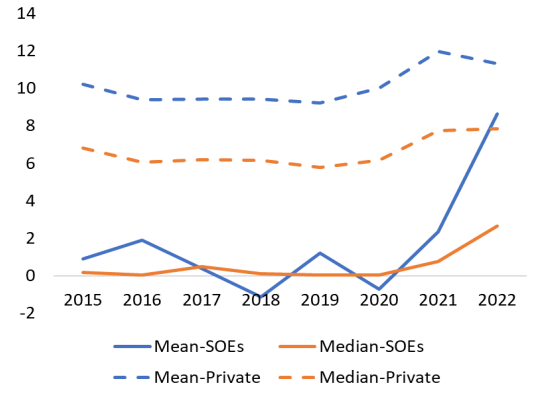


Figure 6b. Return on Equity (ROE)
(Percent)

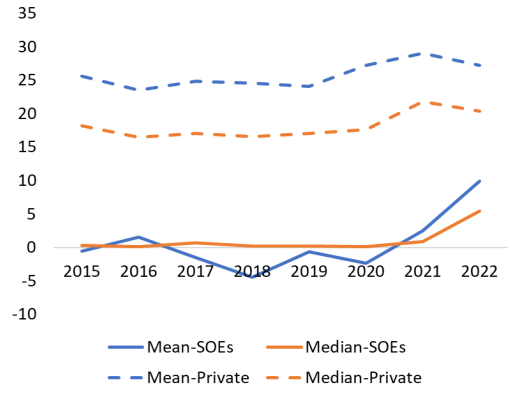


Figure 6c. Detailed SOEs' ROA
(Percent)

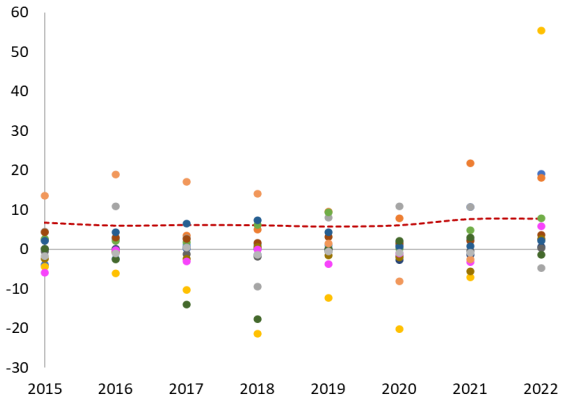
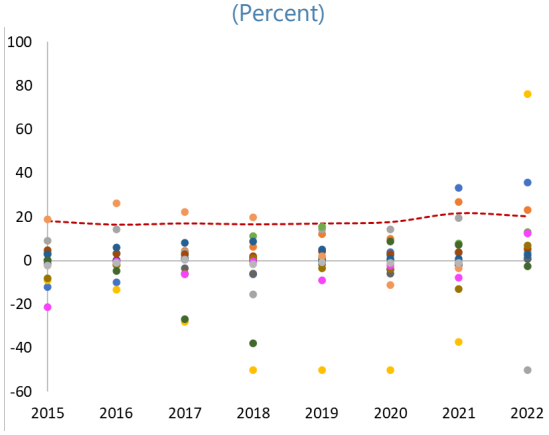
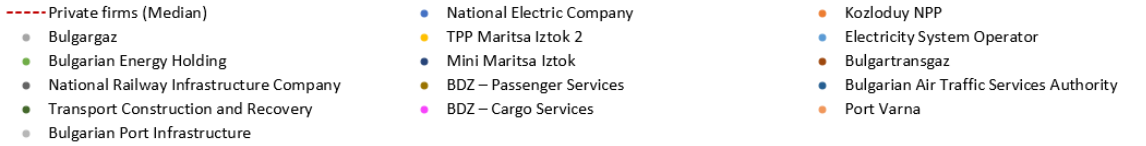


Figure 6d. Detailed SOEs' ROE
(Percent)





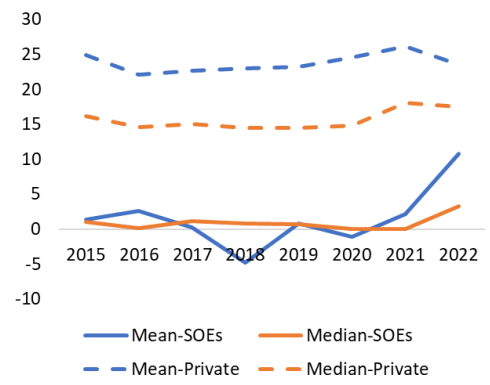
Sources: Orbis database and IMF staff calculations.

Note: SOEs sample includes 15 considered SOEs. The sample of private firms in Bulgaria includes about 2800 firms whose operating revenues are greater than 20 million leva. This threshold is the minimum revenue in the selected SOEs for the purpose of comparison. In Figure 7 and 9 for presentation purpose, if the value of SOE's ROE is smaller than -50%, it is set at the cutoff value of -50%. This applies to Bulgargaz in 2022, TPP Maritsa Iztok 2 between 2018-20. The data is not available for Port Varna and Bulgarian Port Infrastructure in 2022.

[6] Using weighted average or extending the analysis to about 700 SOEs with data available in the Orbis database leads to similar findings.

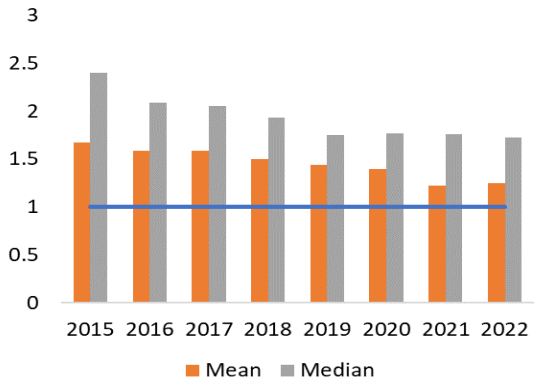
13. Lower profitability in SOEs is associated with lower allocative efficiency of resources. The efficiency of capital of SOEs is usually captured by the return on capital employed (ROCE), which is the operating profit or loss before tax as a share of capital employed. This indicates the efficiency by which the sum of shareholders' equity and debt are used to generate profits. By this measure, the efficiency of SOEs lags the private sector (Figure 7). Similarly, SOEs also perform worse in labor resource allocation. The average cost of employees is higher in SOEs than in private firms, although the gap is getting smaller (Figure 8).[7] Additionally, the cost of SOEs' employees is more than 20 percent of operating revenues, which is double the corresponding value in private firms (Figure 9). Considering the vital role of the SOE sector in the production network, low profitability and inefficiency could impair competitiveness and productivity across the economy.

Figure 7. Return on Capital Employed
(Percent)



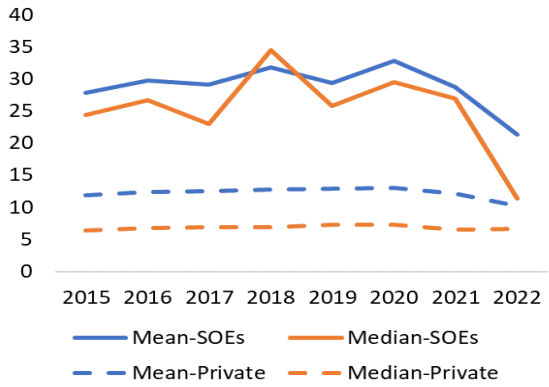
Sources: Orbis database and IMF staff calculations.

Figure 8. Average Cost of Employee: SOEs/Private Firms Ratio



Sources: Orbis database and IMF staff calculations.

Figure 9. Cost of Employees-to-Operating Revenues
(Percent)



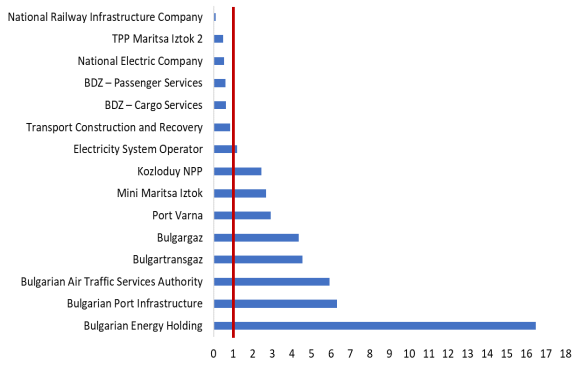
Sources: Orbis database and IMF staff calculations.

14. Notably, some SOEs faced short-term challenges in meeting their liabilities. The current ratio assesses an SOE's ability to meet its current liabilities from its current assets. On average over 2015–22, about six of considered SOEs had a current ratio of less than 1, indicating that the entity did not have sufficient liquid assets to meet the amounts due to creditors in the short run (i.e., 12 months) (Figure 10). These are National Railway Infrastructure Company, TPP Maritsa Iztok 2, National Electric Company, BDZ – Passenger Services, BDZ – Cargo Services, and Transport Construction and Recovery. Consequently, this led to an accumulation of debt arrears to their

[7] If the payroll in the private sector was underreported systematically (and largely), this could happen too. However, this possibly occurs at small-size firms where it is difficult to monitor and audit. Our sample of private firms includes about 2800 firms whose operating revenues are greater than 20 million leva, for which the issue of underreporting is less likely.

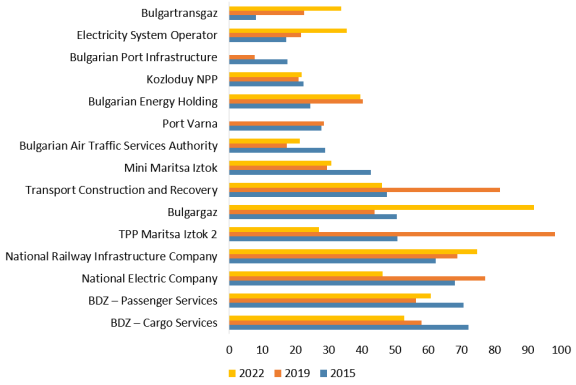
suppliers, which were then paid by a (bridge) loan and/or by state aid.[8] Additionally, arrears can cause a contagious liquidity risk between SOEs that could also affect those with a high current ratio. For instance, despite a high current ratio, Bulgargaz faced a liquidity crisis in mid-2022 due to the low collection of receivables and debt arrears from the Sofia district heating company (as shown by high debt/credit turnover time in Table 5 and 6). Furthermore, arrears to suppliers may contribute to the rise of nonperforming loans of the banking system (Böwer and Paliova, 2016).

Figure 10. Current Ratio
(Average 2015–22)



Sources: Orbis database and IMF staff calculations.

Figure 11. Debt to Assets
(Percent)



Sources: Orbis database and IMF staff calculations.

15. Several major SOEs have a high debt-to-asset ratio, thus posing a concern on solvency risks. SOEs with higher levels of liabilities compared to assets are in a riskier position because they have less financial flexibility. An SOE whose debts exceed its assets—that is, where the indicator is greater than 100 percent, and has negative equity—is technically insolvent. Two important features are salient (Figure 11). First, the debt-to-assets ratio has increased over time in several SOEs including Bulgartransgaz, National Railway Infrastructure Structure, Bulgaria Energy Holding, and Electricity System Operator. Second, the debt-to-assets dynamics can change abruptly: in the case of Bulgargaz, it rose from about 45 percent in 2019 to above 90 percent in 2022. Combining high debt with low profitability raises a concern about the ability to service debt and, therefore, fiscal risks.

16. The IMF's State-Owned Enterprise Health Check Tool (IMF, 2021) is applied to provide a comprehensive assessment of the fiscal risks at the firm level. The tool presents the risks associated with metrics of profitability, liquidity, and solvency. Twelve indicators are associated with the metrics (Table 3).

[8] For example, in 2016, Bulgarian energy holding issued bond to re-finance and bridge loan, borrowed for repayment of the arrears of National Electric Company.

Table 3. Financial Indicators in Three Metrics: Liquidity, Solvency, and Profitability

Ratios	Description
Liquidity	
Current Ratio	Measures an SOE's ability to meet short-term liabilities (those falling due within 12 months) from liquidating short-term assets. A high ratio indicates that the company is better able to withstand shocks and still meet its current liabilities
Quick Ratio	A stricter form of current ratio, this measures an SOE's ability to meet short-term liabilities with only the most liquid short-term assets. A high ratio indicates that the company is better able to withstand shocks and still meet its current liabilities
Debtor Turnover Days	Measures the speed with which a company is paid by its customers. A high ratio could indicate that the SOE is taking a long time to collect amounts owed by its customers and may face increasing liquidity challenges.
Creditor Turnover Days	Measures the speed with which an SOE pays its suppliers. A high ratio indicates that the SOE pays its suppliers more slowly and may indicate the build up of arrears or worsening financial condition.
Solvency	
Debt to Assets	Measures the proportion of a company's financing that comes from liabilities. This ratio helps to assess whether the company is solvent and the size of the debt burden on the entity. Debt financing is more cost-effective and therefore most companies maintain some level of leverage, but a high ratio indicates greater reliance on debt financing and has less financial flexibility.
Debt to Equity	Measures the proportion of a company's financing that comes from liabilities relative to equity. This ratio helps to assess whether the company is solvent and the size of the debt burden on the entity. Debt financing is more cost-effective and therefore most companies maintain some level of leverage, but a high ratio indicates greater reliance on debt financing and has less financial flexibility.
Debt to EBITDA	Indicates the ability of a firm to service any debt it holds. The indicator indicates, at the current rate of cash generation, the number of years it would take for the company to generate sufficient cash to pay off all its debt. A higher indicator indicates a more indebted company, where there is a higher risk that it may not be able to service its debt.
Interest Coverage	Indicates whether an SOE is generating sufficient operating profits to cover financing costs and still remain profitable. A high ratio indicates that the entity has more capacity to absorb shocks and still cover its financing costs.
Cash Interest Coverage	Indicates whether an SOE is generating sufficient cash to cover its financing costs. A high ratio indicates that the entity has more capacity to absorb shocks and still cover its financing costs.
Profitability	
Return on Assets	Measures the allocative efficiency of the company in managing its assets to produce profits. A high ratio indicates that larger profits are being generated per unit of asset
Return on Equity	Measures the ability of a firm to generate profits using the capital its shareholders have invested in the company. A higher ratio indicates that the company is generating higher returns for each unit of equity
Cost Recovery	Measures ability to generate adequate revenue to cover operating expenses. A ratio < 1 indicates entity is unable to cover its operating expenses and is not sustainable without supplementary funding. A higher ratio indicates a company better able to withstand shocks and remain profitable and sustainable

Source: IMF (2021).

17. The tool uses thresholds to define five categories of risks for each indicator. The risk level of entities increases from low risk (Category 1) to high risk (Category 5) (Table 4). These thresholds are applied to all SOEs throughout the tool to guarantee a consistent comparison between these companies, even though the level of risk may vary by industry. Most of these thresholds are common benchmarks (Halstead and others, 2021), with two exceptions. First, for the ROE, SOEs are classified in the lowest risk category where their ROE exceeds the median return of private firms, which is about 18 percent on average over 2015–22.[9] The low-to-moderate risk rating (Category 2) is for SOEs that generate at least a return of 5 percent - the average of (i) the return of the first quartile of private ROEs (about 7.2 percent) and (ii) the effective rate on government debt (2.9 percent) over 2015–21. Consequently, loss-making SOEs are included in the two highest-risk categories. Second, for the ROA, the thresholds for Categories 1 and 2 are the median and the first quartile of private ROA. Using the risk thresholds derived from the ROE-related thresholds and balance sheet leverage results in similar values.

[9] As mentioned above, the sample of private firms in Bulgaria includes about 2800 firms whose operating revenues are greater than 20 mil leva. This cut-off threshold is the minimum revenue in the group of selected 15 SOEs for the purpose of comparison.

Table 4. Risk Thresholds

Profitability	Low risk	Low-Moderate risk	Moderate risk	Moderate - High risk	High risk
Return on assets	greater than	7%	2%	0%	-5%
Return on equity	greater than	18%	5%	0%	-10%
Cost recovery	greater than	1.5	1.3	1.0	0.8
Liquidity					
Current ratio	greater than	2.0	1.5	1.3	1.0
Quick ratio	greater than	1.2	1.0	0.8	0.7
Debtor turnover days	less than	30.0	40.0	50.0	75.0
Creditor turnover days	less than	30.0	60.0	90.0	120.0
Solvency					
Debt to assets	less than	30%	50%	80%	100%
Debt to equity	less than	50%	100%	150%	200%
Debt to EBITDA	less than	1.5	2.0	3.0	5.0
Interest coverage	greater than	2.0	1.5	1.2	1.0
Cash interest coverage	greater than	3.0	2.0	1.5	1.0
Debt coverage	greater than	0.8	0.6	0.4	0.3

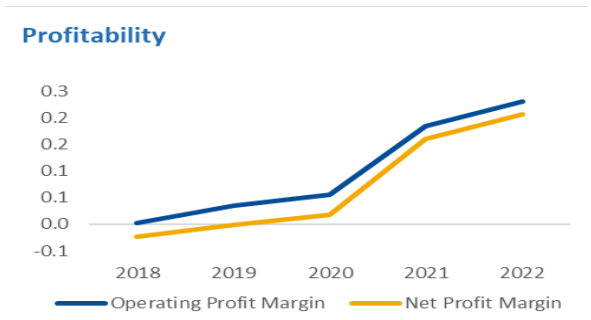
Sources: IMF (2021) and IMF staff calculations.
Note: The threshold set for Category 2 (low-to-moderate risk) means that any indicator with a lower/higher value (depending on the indicator) will be classified as Category 1 (low risk). Indicators lying between Category 2 and Category 3 thresholds, Category 3 and Category 4 thresholds, and Category 4 and Category 5 thresholds will be classified as Category 2 (low-to-moderate risk), Category 3 (moderate risk), and Category 4 (moderate to high risk), respectively. Indicators beyond the Category 5 threshold will be classified as Category 5 (high risk).

18. In the pre-COVID period, about 30 percent of considered SOEs had risk rating above moderate. Sustained low profitability was a concern in six or seven SOEs over the three selected years (Table 5). Meanwhile, about half of SOEs were considered as at high liquidity risks with limited ability to meet their current liabilities (based on current and quick ratios). Solvency risk was also a concern to most SOEs, particularly in terms of the ability to service any debt it holds, as measured by the ratio of debt to earnings before interest, tax, depreciation, and amortization (EBITDA). A higher indicator denotes a more indebted company, indicating a higher risk that it may not be able to service its debt. Several SOEs also face the risk of not generating sufficient operating profits to be able to cover their financing costs (as captured by low interest cover) or a higher share of financing comes from liabilities relative to equity (i.e., debt-to-equity ratio). In the pre-COVID period, the overall risk rating identifies about five SOEs with moderate to high fiscal risk, naming National Electric Company (NEK), TPP Maritsa Iztok 2, National Railway Infrastructure Company (NRIC), BDZ – Cargo Services, and Transport Construction and Recovery (TSV).

19. SOEs' financial performance improved noticeably in 2022. The COVID-shock did worsen the profitability of SOEs, but the effect was mitigated by fiscal measures (Table 6). Overall, the SOEs with risk ranking from moderate-to-high level for at least one year in 2020–21 are mainly the same as pre-COVID. However, in 2022, the financial performance of almost all SOEs improved significantly, resulting in a favorable overall ranking of moderate or low-to-moderate risks thanks to an

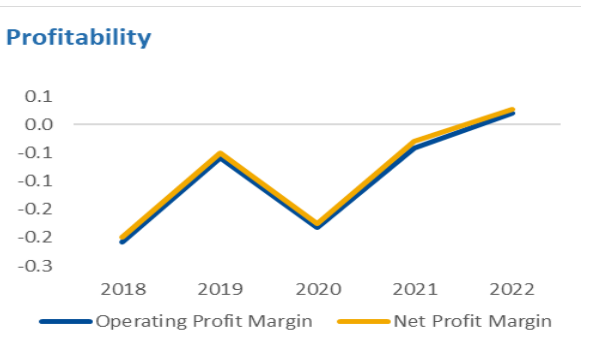
improvement in profitability. The higher energy price helped improve the position of the loss-making SOEs in the energy sector (Figure 12). For the SOEs in the transportation sector, the improved profitability suggests that they could pass the cost to the customers (Figure 13). In contrast, Bulgargaz was the only SOE with moderate-to-high risk ranking due to deterioration of profitability, caused by the impairment of inventories and accrued losses from trade receivables (Figure 14). This highlights the importance of having buffers in case of unexpected shocks.

Figure 12. National Electrical Company



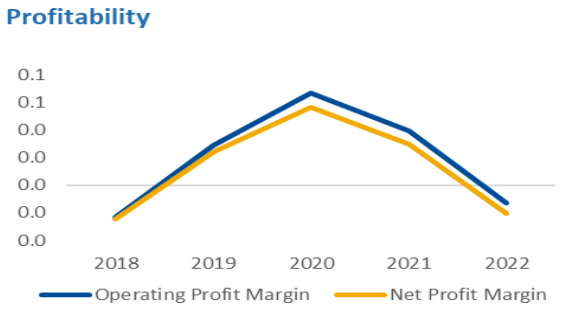
Sources: Orbis database and IMF staff calculations.

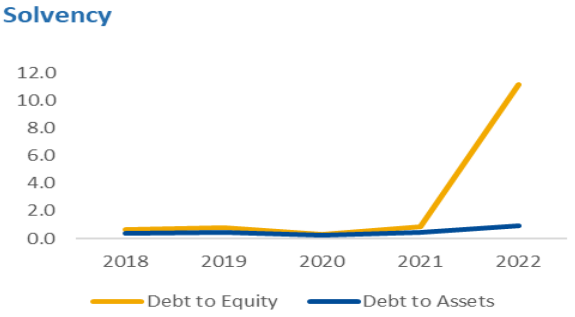
Figure 13. National Railway Infrastructure Company



Sources: Orbis database and IMF staff calculations.

Figure 14. Bulgargaz





Sources: Orbis database and IMF staff calculations.

Table 5: Pre-COVID Assessment

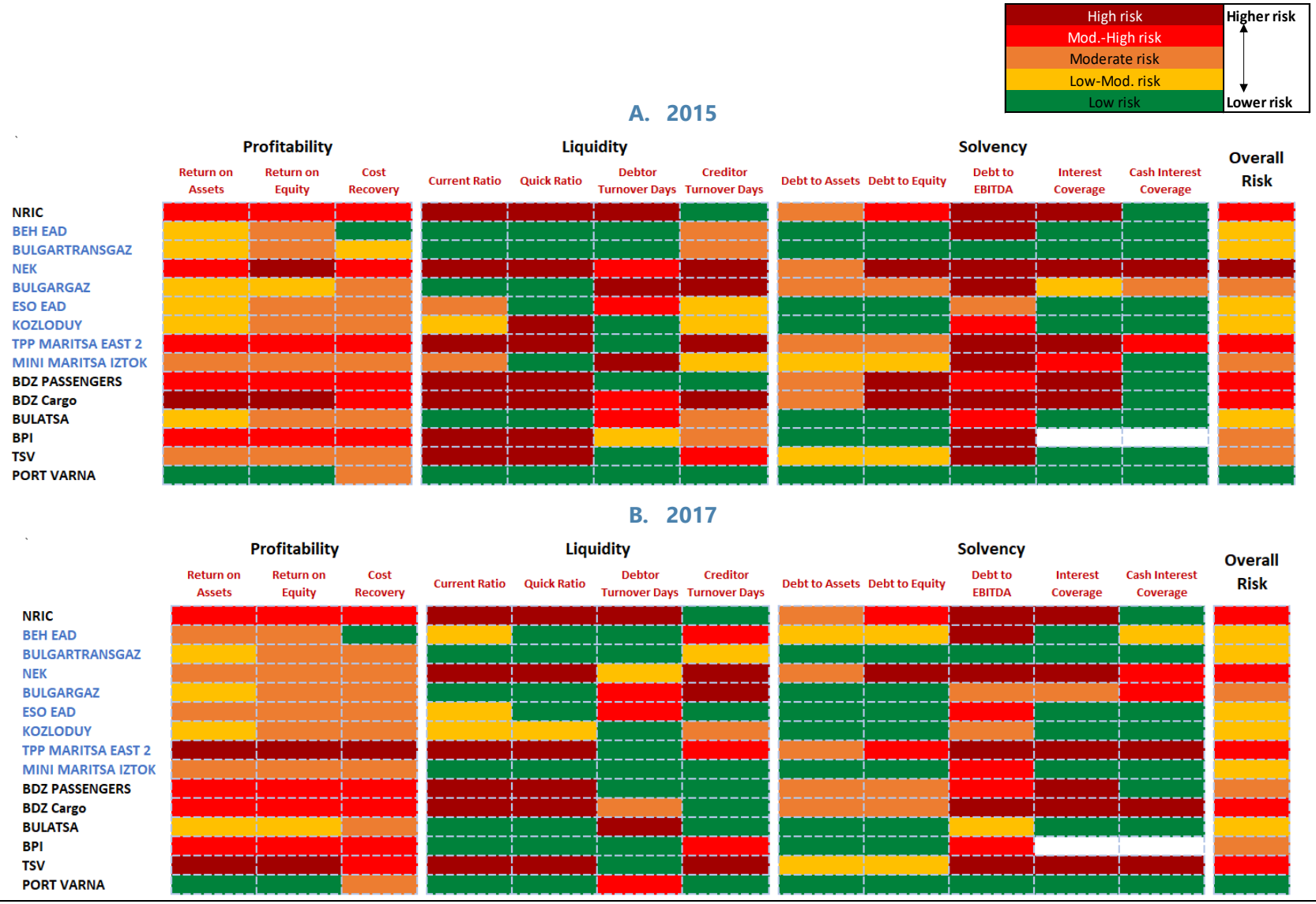
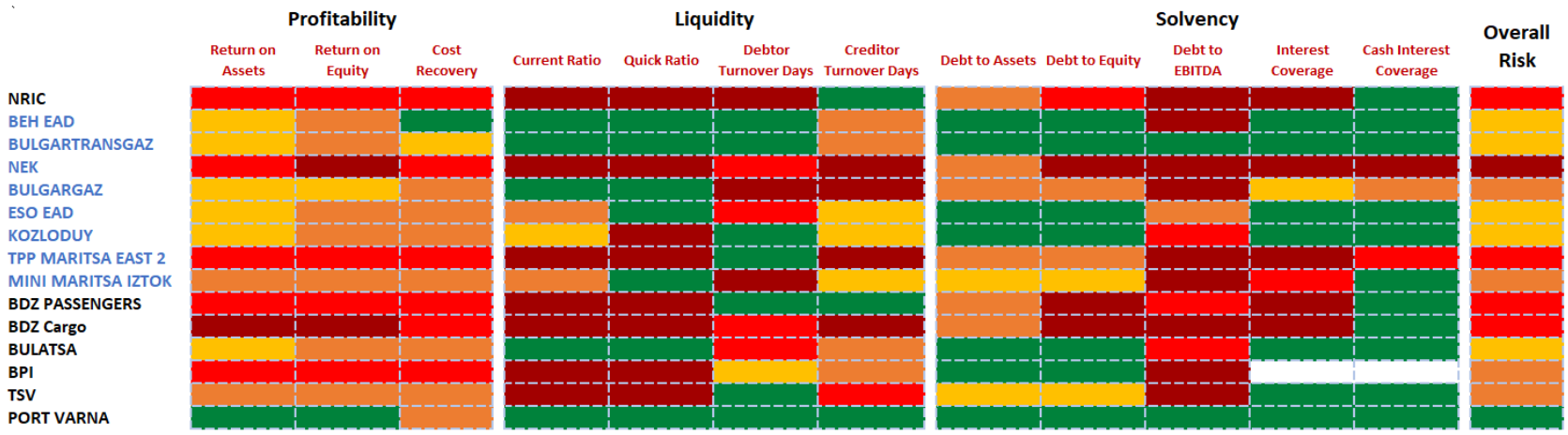


Table 5: Pre-COVID Assessment (Concluded)

C. 2019



Sources: Orbis database and IMF staff calculations.

Note: SOEs are ordered by size of liabilities from largest to smallest. SOEs in the energy sector are coloured in blue in the first column.

Table 6. Post-COVID Assessment

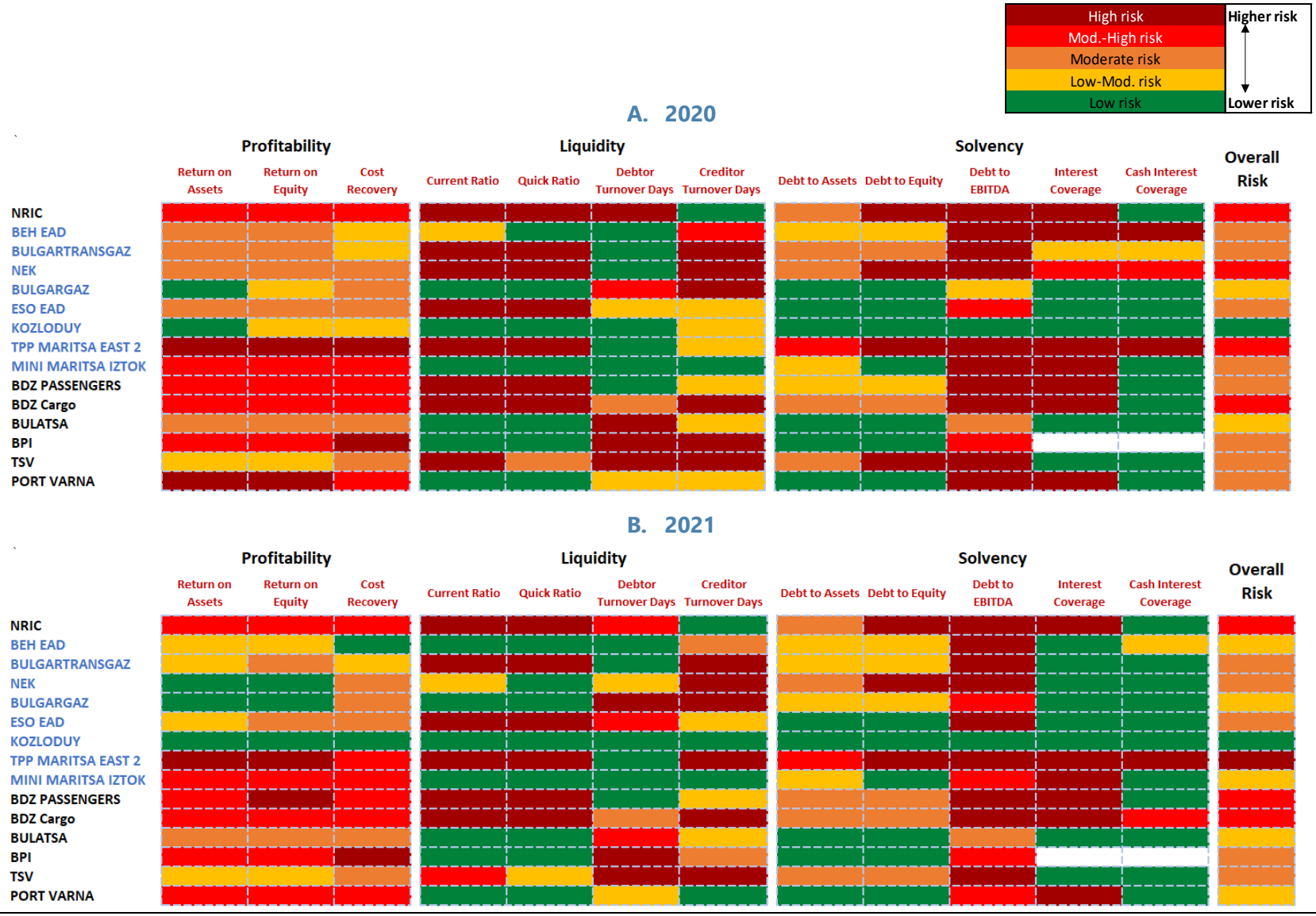
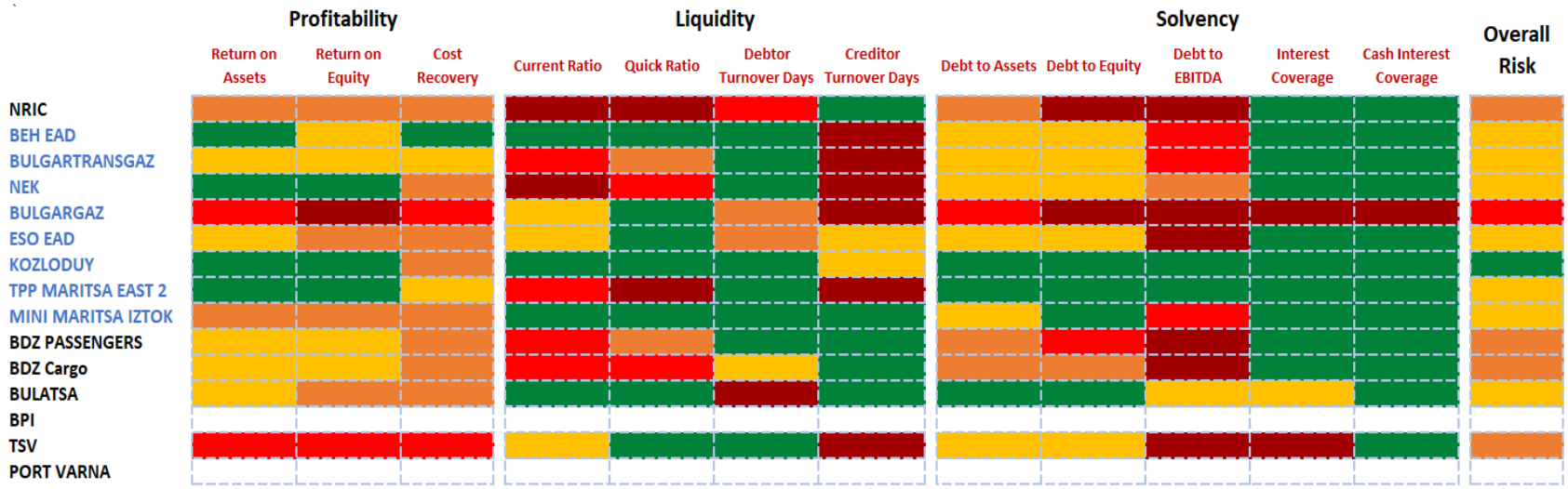


Table 6. Post-COVID Assessment (Concluded)

C. 2022



Sources: Orbis database and IMF staff calculations.

Note: SOEs are ordered by size of liabilities from largest to smallest. SOEs in the energy sector are coloured in blue in the first column. For 2022, data is not available for Port Varna and Bulgarian Port Infrastructure (BPI).

D. Conclusion and Recommendations

20. Findings from both aggregate and firm-level based analyses indicate potential SOE-related factors that can contribute to fiscal risks. Despite a low state-guaranteed debt, concerns arising from the negative net budgetary flows from SOEs coupled with a contingent liability of 12 percent of GDP could lead to long-term fiscal challenges. A detailed firm-level analysis indicates that the profitability of major SOEs is far below that of private firms, partially due to resource allocation inefficiencies. In addition, several SOEs are consistently incurring heavy losses and have difficulties in managing short-term debts, signaling liquidity risks. Some key SOEs also have high liabilities relative to their assets, therefore raising a concern on their long-term solvency.

21. These issues call for the following policy recommendations:

- **It is important to closely monitor the financial performance of SOEs and identify mitigation measures accordingly.** This includes: establishing a (digital) unified database, publicly available and frequently updated, on the financial performance of SOEs,[10] making the budgetary flows between SOEs and the government more transparent, and collecting and publishing information on guarantees issued by SOEs themselves.

- **It will be crucial to implement reforms to improve SOEs' financial performance.** SOE reforms, especially reforms of SOE governance—management, oversight, and transparency—can have a positive effect on SOEs' financial performance, increasing worker productivity and lowering costs, particularly in the electricity sector (IMF, 2022). In addition to increasing SOEs' net fiscal contribution, such reforms can thus help boost the overall economic competitiveness and productivity, given the crucial role of SOEs in the production network of the economy.

- **Dividend policies should strike a balance between government interests for fiscal revenue and SOEs' financial sustainability and productivity.** Although the government has a valid claim on SOEs' profits, it is equally important to consider the enterprises' need to retain earnings. Their reinvestment is important to achieve a solid capital structure and make long-term investments to spur innovation and productivity. Additionally, dividend policy should be set in a predictable manner to reduce uncertainty and increase firms' incentives to invest.

[10] The annual report published by Public Enterprises and Control Agency is a first welcoming step in this direction.

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