



Corporate Governance and Fiscal Risk Assessment of State- Owned Enterprises in the Republic of Korea

**Integrated State-Owned Enterprise
Framework (iSOEF) Assessment**

Sang Hoon Shin, Sejeong Ha, Jangsoon Lee, and Eun Jung Sun

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Foreword

This study of the Republic of Korea's economic and social transformation from the angle of state-owned enterprise (SOE) reform presents an opportunity for other countries and international development practitioners to better understand the driving forces behind Korea's remarkable development trajectory. Korea has been transformed, moving from a poor aid-dependent country to a high-income donor country within one generation, thereby becoming a success model for many developing country partners. Well-performing SOEs and a very strong system for SOE corporate governance have played a critical role in Korea's transformation. As the international community's interest in Korea's development model increases, Korea's innovative approach to and extensive experience in SOE reforms will be of great interest to other countries embarking on SOE reforms.

SOEs, as major economic actors across many regions, contribute to economic growth and social development in many countries. A 2020 study by the International Monetary Fund found that over the last 10 years SOEs have doubled in importance among the world's largest corporations; at US\$ 45 trillion, their assets are now 50 percent of the total global gross domestic product (GDP). Because SOEs often play a vital role in delivering basic services such as water and energy, their performance is critical for citizens, businesses, and the broader development agenda. SOEs also operate in strategic sectors associated with national security and the development of public infrastructure. Beyond their significance in the economy, SOEs can be critical for a country's fiscal space, competitiveness, and governance. Due to their significant presence in high-emitting sectors such as energy and transport and their custody of important infrastructure, SOEs also have a key role to play for the climate change agenda.

Countries' SOE ownership can, however, have important fiscal implications. Established with a mandate to provide public goods and services, SOEs are not always able to recover their operational costs from beneficiaries and may face financial performance challenges. As a result, governments may be required to subsidize the provision of certain public goods and services by providing SOEs with financial support. In many regions, government financial support of SOEs has risen to a substantial share of the public expenditure—and did so especially during the COVID-19 pandemic when SOEs were at the forefront of the government response—thereby limiting fiscal space. SOEs may also generate contingent liabilities, which can pose important fiscal risks for government budgets or dampen national and international

competitiveness.

Recognizing the continued importance of SOEs while also considering the challenges of limited fiscal space, the Korean government via the Korea Institute of Public Finance (KIPF) and the World Bank Group developed this report as part of the World Bank Group's global engagement on SOEs. The report shares Korea's experience in establishing an advanced corporate governance framework and systematic debt and fiscal risk management system for its SOEs. It analyzes the financial performance, fiscal costs and risks, and corporate governance of Korean SOEs by applying the World Bank Group's integrated State-Owned Enterprise Framework (iSOEF). Because of the diverse structures, levels of development, and institutional legacies of developing economies, no single approach or model can be expected to work for all countries. The report, however, details the experiences, lessons learned, and challenges that Korea has experienced in its SOEs reform process. This analysis is expected to provide useful implications for developing country partners in designing and implementing their SOE reform agendas, taking into account their own context and capacity.

In presenting this study, we would like to take this opportunity to express our gratitude to all those involved in this great undertaking. Their hard work and commitment made this report possible. We hope it will inspire a lively discussion and prove of practical help for other countries and SOE reform practitioners.

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1. Formerly named Governance Global Practice (GOV).

2. Formerly named Finance, Competitiveness, and Innovation (FCI).

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3. Formerly named Macroeconomics, Trade, and Investment (MTI).

Beyond the *World Bank Group integrated State-Owned Enterprise Framework (iSOEF)* (unpublished), the *OECD Guidelines on Corporate Governance for State-owned Enterprises* (2024) and the *World Bank Group Corporate Governance of State-Owned Enterprises: A Toolkit* (2014) are key sources drawn on throughout this report. Other research and guidance are referenced in the report.

Abbreviations

ACS	Act on Contracts to which the State is a party
AMPI	Act on the Management of Public Institutions
ALIO	All Public Information In-One
AT	Korea Agro-Fisheries and Food Trade Corporation
BAI	Board of Audit and Inspection
EX	Korea Expressway Corporation
GEPS	Government Employees Pension Service
FAMGAI	Framework Act on the Management of Government-Affiliated Institutions
FAMGII	Framework Act on the Management of Government-Invested Institutions
FMUP	Financial Management Umbrella Program
HF	Korea Housing Finance Corporation
HUG	Korea Housing and Urban Guarantee Corporation
IBK	Industrial Bank of Korea
iSOEF	integrated State-Owned Enterprise Framework
K-water	Korea Water Resources Corporation
KAMCO	Korea Asset Management Corporation
KARI	Korea Aerospace Research Institute
KCIPA	Korea Carbon Industry Promotion Agency
KDB	Korea Development Bank
KDHC	Korea District Heating Corporation
KDI	Korea Development Institute
KDIC	Korea Deposit Insurance Corporation
KEPCO	Korea Electric Power Corporation
KEXIM	The Export-Import Bank of Korea
KIC	Korea Investment Corporation
KIPF	Korea Institute of Public Finance
KIND	Korea Overseas Infrastructure & Urban Development Corporation
KINFA	Korea Inclusive Finance Agency
KNOC	Korea National Oil Corporation
KOBC	Korea Ocean Business Corporation
KOCOAL	Korea Coal Corporation
KODIT	Korea Credit Guarantee Fund
KOGAS	Korea Gas Corporation
KOMIR	Korea Mine Rehabilitation and Mineral Resources Corporation

KONEPS	Korean On-line E-Procurement System
KORAIL	Korea Railroad Corporation
KOREG	Korea Federation of Credit Guarantee Foundations
KORES	Korea Resources Corporation
KOSAF	Korea Student Aid Foundation
KOSME	Korea SMEs and Startups Agency
KOTEC	Korea Technology Finance Corporation
KOTRA	Korea Trade-Investment Promotion Agency
KR	Korea National Railway
KRA	Korea Racing Authority
KRC	Korea Rural Community Corporation
KSPO	Korea Sports Promotion Foundation
KSURE	Korea Trade Insurance Corporation
KTO	Korea Tourism Organization
KVIC	Korea Venture Investment Corp.
LH	Korea Land & Housing Corporation
LTIK	Literature Translation Institute of Korea
MOEF	Ministry of Economy and Finance
MLTFMP	Medium- and Long-term Financial Management Plan
MTEF	Medium Term Expenditure Framework
NHIS	National Health Insurance Service
NIA	National Information Society Agency
NPI	Nonclassified Public Institution
NPS	National Pension Service
OSC	Ownership Steering Committee
PE	Public Enterprise
PIs	Public Institutions
PPS	Public Procurement Service
QGI	Quasi-Governmental Institution
ROA	Return on assets
ROE	Return on equity
SAC	Seoul Art Center
SEMAS	Small Enterprise and Market Service
SOE	State-Owned Enterprise
TIPA	Korea Technology and Information Promotion Agency for SMEs

Currency Equivalents

December 31, 2017: Korean Won 1,067.38 = US\$1

December 31, 2021: Korean Won 1,190.50 = US\$1

December 31, 2022: Korean Won 1,267.30 = US\$1

December 31, 2023: Korean Won 1,295.06 = US\$1

Executive Summary

This report applies the World Bank Group's integrated State-Owned Enterprises Framework (iSOEF) to assess the Republic of Korea (South Korea)'s state-owned enterprise (SOE) sector and its current reform trends. Notably, South Korea is one of the first high-income countries to undergo such an evaluation, as the iSOEF has typically been applied in low- and middle-income countries. The assessment covers 350 public institutions⁴, including 36 public enterprises, 94 quasi-governmental institutions, and 220 non-classified public institutions, based on an analysis conducted in 2022. These entities play a pivotal role in South Korea's economy, particularly in infrastructure, energy, and housing, and the iSOEF evaluation offers critical insights into their fiscal management, corporate governance, and performance.

The significance of this evaluation is highlighted by the scale of these institutions' contributions to the economy and public sector employment, positioning South Korea as an important case study for how advanced economies can manage fiscal risks and governance challenges in the SOE sector while also providing valuable insights for other countries embarking on SOE reforms.

LANDSCAPE OF SOES IN SOUTH KOREA

South Korea's 350 public institutions collectively managed assets equal to 34% of GDP in 2021, with a combined budget of KRW 792 trillion (USD 625 billion) in 2022, and accounted for 37% of public sector employment. These institutions are crucial for driving public infrastructure projects and delivering essential services to the population.

South Korea's SOE sector has experienced steady growth, contributing to economic stability through investments in infrastructure and utilities management. However, the COVID-19 pandemic disrupted this upward trend, leading to significant declines in net

4. Public institutions (PIs) are defined under Korea's Act on the Management of Public Institutions (AMPI) as organizations established and operated through government investment, funding, or financial support to provide public services or fulfill governmental mandates. They are categorized into three groups: public enterprises (PEs), which engage in economic activities; quasi-governmental institutions (QGIs), which primarily implement government policies or manage public programs; and nonclassified public institutions (NPIs), smaller entities included under the AMPI due to their public mandate and government involvement. It reflects Korea's broader public sector landscape and ensures a more comprehensive analysis of governance, fiscal risks, and performance outcomes.

profits in key sectors such as energy, transportation, and housing. For instance, the Korea Electric Power Corporation (KEPCO) and Korea National Oil Corporation (KNOC) saw steep reductions in profitability due to declining energy demand and global supply chain disruptions. This disruption has underscored the need for a more refined fiscal strategy moving forward.

FISCAL COSTS AND RISKS OF SOES

The iSOEF assessment identified explicit and contingent fiscal risks associated with government transfers to SOEs, such as subsidies, contributions, and equity injections, which accounted for 2.67% of GDP in 2021. While these transfers support critical public services, they also place significant fiscal pressure on the government, particularly when SOEs fail to meet profitability targets.

To mitigate these risks, the South Korean government has implemented a Medium-Term Expenditure Framework (MTEF) and rigorous annual budget planning processes. These mechanisms effectively control fiscal exposure by linking SOE performance to budget allocations and limiting uncontrolled spending. Tools such as preliminary feasibility studies (PFS) and total project cost management (TPCM) have been instrumental in preventing overinvestment in large-scale infrastructure projects, saving the government KRW 11 trillion (\$9 billion) in unnecessary expenditures over the past decade.

Additionally, South Korea's fiscal consolidation plan focuses on reducing debt in 14 high-debt SOEs, targeting a debt reduction of KRW 24 trillion (\$18 billion) and an equity increase of KRW 10.1 trillion (\$8 billion) by 2026. Early results from this strategy have been positive, particularly in major entities like KEPCO, which has implemented cost-cutting measures and raised electricity rates to offset rising fuel costs.

CORPORATE GOVERNANCE AND ACCOUNTABILITY MECHANISMS

South Korea's corporate governance framework for public institutions is among the most sophisticated globally, guided by the 2007 Act on the Management of Public Institutions (AMPI). A centralized governance structure for SOEs, overseen by the Ministry of Economy and Finance (MOEF), strengthens the managerial independence of SOEs while reducing political interference.

Since 1984, South Korea has conducted comprehensive annual performance evaluations of SOEs, linking executive compensation to key performance indicators (KPIs). This system motivates SOEs to improve operational efficiency, as demonstrated by Korea Gas Corporation (KOGAS), which increased efficiency by 15% over the past five years through strict performance evaluations and cost-control measures.

Significant progress has been made in enhancing the independence and expertise of SOE boards. Many SOEs now include independent non-executive directors, which has improved decision-making and accountability. In addition, mandatory audit committees have been introduced to strengthen financial transparency and risk management practices.

Introduced in 2006, the All Public Information In-One (ALIO) system plays a central role in enhancing SOE transparency and accountability by providing real-time access to the financial statements, executive remuneration details, and operational performance data of all 350 public institutions. This system has contributed to reducing inefficiencies, as seen in the case of Korea National Railway (KR) which saved KRW 750 billion (\$600 million) by overhauling its procurement processes following an ALIO audit.

Reforms in public procurement, aimed at promoting competition, have generated significant cost savings. Since 2015, such practices have led to savings of KRW 3 trillion (\$2.4 billion) across infrastructure projects, ensuring that SOEs engage in fair competition and improve service delivery in line with international standards.

LESSONS LEARNED: POLICY IMPLICATIONS

- **Stakeholder Engagement:** South Korea's reform process has benefited from active stakeholder involvement, including civil society and the private sector, regulators, and SOE leadership. This broad engagement has fostered a culture of transparency and accountability across the sector.
- **Structured and Sequenced Reform:** The stepwise introduction of systems like ALIO and performance evaluation frameworks allowed SOEs to adapt gradually to new requirements, minimizing resistance and ensuring smoother transitions.
- **Consistency in Reform Objectives:** Regardless of changes in government leadership, South Korea has maintained a consistent focus on promoting autonomous and accountable SOE management practices. This consistency has ensured the sustainability of reform efforts over several decades.

FUTURE CHALLENGES

- **ESG Performance and Disclosure:** It would be important for South Korea's SOEs to further enhance their focus on Environmental, Social, and Governance (ESG) performance, particularly in the context of achieving carbon neutrality by 2050. This will require improved reporting practices, including climate reporting, and the integration of ESG factors into corporate strategies.
- **Board Effectiveness:** Expanding the role of independent non-executive directors on SOE boards would strengthen oversight and ensure sound decision-making. Further strengthening board capabilities, particularly in managing financial risks and long-term strategies, will be critical for the sector's future success.
- **Debt Management:** Despite the progress made, high debt levels in major SOEs remain a significant risk. It would be important for the government to continue to closely monitor and adjust its fiscal consolidation plan to ensure long-term financial sustainability.
- **Public-Private Partnerships (PPP):** Expanding collaboration with the private sector will be essential for innovation and operational efficiency. Enhanced public-private partnerships would allow SOEs to access cutting-edge technology and expertise from the private sector.

1 Introduction

INTRODUCTION

Since 1950s, the Korean government has steadfastly reformed its SOEs to improve the quality of their public service delivery. Recently, the government has placed a significant emphasis on establishing a fiscal risk management framework for SOEs to prevent their liabilities from posing a burden. Its efforts have been further strengthened by its experience with the COVID-19 pandemic. In addition, the government has sought to develop good corporate governance in its SOEs in terms of their legal framework, ownership arrangements, board of directors, performance monitoring, transparency, and public procurement. In light of Korea's innovative approach and extensive experience in SOEs reforms which are of great interest to other countries, the World Bank Group's integrated State-Owned Enterprise Framework (iSOEF) was applied in the Republic of Korea with the objective of analyzing recent reforms of state-owned enterprises (SOEs) and their outcomes, and extracting useful policy implications for other countries interested in strengthening their SOEs' performance and corporate governance.

This report focuses on the SOE reforms implemented by the Act on the Management of Public Institutions (AMPI), which was enacted in 2007 to enhance SOE accountability and transparency. It is based on an analysis of 350 public institutions in 2022: 36 public enterprises (PEs), 94 quasi-governmental institutions (QGIs), and 220 nonclassified public institutions (NPIs).⁵ Contingent liabilities of and subsidies for QGIs and NPIs may be a drag on the national budget, so fiscal impacts and the governance of them have been key policy areas for the Korean government. Consequently, even though many QGIs and NPIs would not be considered SOEs by international definitions, an analysis of all three types of institutions provides a more comprehensive and holistic perspective on Korean SOEs, and stands to produce a greater variety of policy implications that may be of use for other countries engaging in SOE reform. In this report, and in line with the way Korean authorities report on

5. This report analyzes SOEs that are centrally owned at the national level; it does not cover municipal SOEs.

their public entities, the 350 public institutions are referred to as SOEs.

Key lessons from Korea's experience could be applied to other countries based on their SOE reform priorities, national context, conditions, challenges, and approaches. Because of the diverse structures, levels of development, and institutional legacies of countries, no single approach or model can be applied to all. However, even countries in the early stages of SOE reform will likely be able to borrow some features of Korean SOE governance. By sharing the Korean experience, this study aims to help countries in the process of developing their own strategies for a long-term approach to state ownership that maximizes benefits to citizens, oversight functions, and effective management of the fiscal risks of their SOE portfolios.

To do so, the report applies the World Bank Group's iSOEF framework to assess the current status of Korea's SOE sector and current reform trends. The assessment covers the overall landscape of the SOE sector in Korea and provides an analysis based on two iSOEF modules that capture key aspects of the SOE sector: Module - Fiscal Impacts, which assesses the main fiscal costs and risks arising from the SOE sector in Korea, and Module - Corporate Governance and Accountability Mechanisms, which assesses six dimensions of corporate governance for stable and effective management of the SOE sector in Korea. Other iSOEF modules, such as "SOEs effects on markets", "Distributional Impact", or specific issues, could be carried out in the future, depending on the Korean government's interest and data availability.

DATA AVAILABILITY

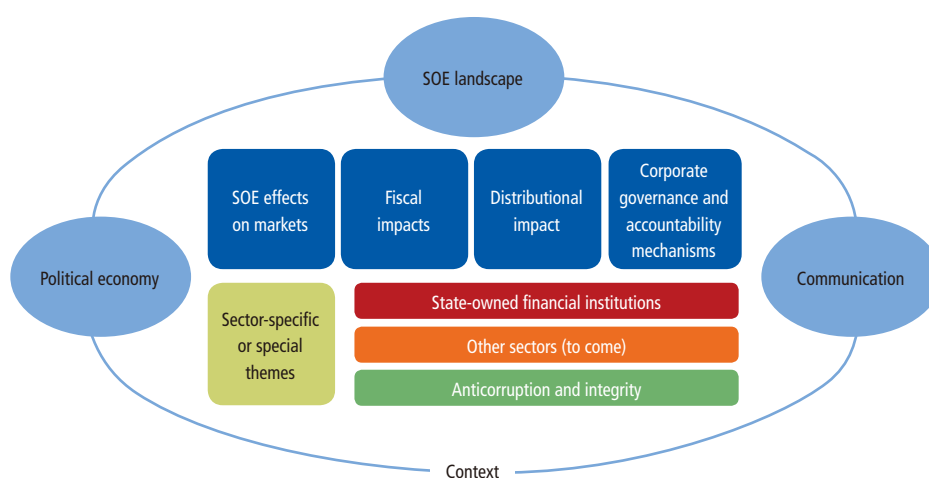
Reliable financial data and nonfinancial information on Korean SOEs are available on the All Public Information In-One (ALIO) system. Established and operated by the Ministry of Economy and Finance (MOEF), the ALIO system provides annual financial statements and nonfinancial management information at the individual entity level for the latest five years. The statements are standardized and contain detailed data from the balance sheet, income statement, cash flow statement, and statement of changes in equity. The system also provides nonfinancial information, such as on employment and service delivery performance. ALIO categorizes 350 SOEs (public institutions) into nine sectors: (1) social overhead capital (transport, housing and real estate, and water supply); (2) energy; (3) employment, health, and welfare; (4) industrial promotion and information and communication; (5) agriculture, forestry, fisheries, and environment; (6) research and education; (7) culture, arts, diplomacy, and legal services; (8) financial; and (9) other. In addition, the available data on 512,143 private companies were analyzed to compare the financial performance of the nine SOE sectors with that of the private companies in each sector. The data for analyzing return on assets (ROA) and return on equity (ROE) were obtained from the Bank of Korea's Financial Statement Analysis for 2020. The Bank of Korea has published this document each year since 1960 to provide research on and analysis of the operational and financial performance of Korean private companies, all classified by industry and by firm size.

METHODOLOGY AND STRUCTURE OF THIS REPORT

This report follows the modular structure of the iSOEF and its respective guidance notes (World Bank 2019, unpublished). The description of the overall landscape of the SOE sector in chapter 2 is followed by an analysis based on the two selected iSOEF modules, Fiscal Impact, described in chapter 3, and Corporate Governance and Accountability Mechanisms, discussed in chapter 4. Chapter 5 is devoted to the policy implications arising from the analysis.

FIGURE 1.1

Integrated State-Owned Enterprise Framework (iSOEF)



Source: Original figure for this publication.

Note: SOE = state-owned enterprise.

REFERENCE

World Bank. 2019 (unpublished). *Draft Integrated State-Owned Enterprise Framework (iSOEF)*. Washington, DC: World Bank.

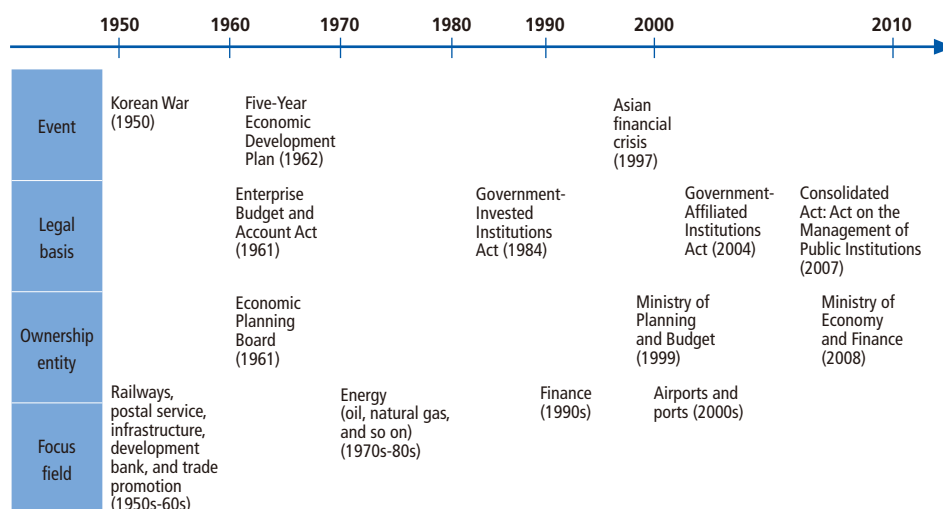
2 The State-Owned Enterprise Landscape

EVOLUTION OF THE STATE-OWNED ENTERPRISE SECTOR

The role of state-owned enterprises (SOEs) has been expanding in the Republic of Korea over the last seven decades. SOEs founded in the 1950s and 1960s were mostly developers of infrastructure to build the basic infrastructure direly needed in the early years of economic development, such as power grids, housing, industrial complexes, railways, and expressways. In addition, development banks (such as Korea Development Bank and Industrial Bank of Korea) were established to support industrial development, and the trade promotion agency (Korea Trade Promotion Corporation) was founded to promote international trade. These SOEs supported the government's policy aimed at economic growth driven by technologies and exports in line with its first Five-year Economic Development Plan (1962). SOEs to secure resource and energy sources (such as oil and natural gas) were established in the 1970s and the 1980s, followed by various financial SOEs in the 1990s, and SOEs managing international passenger and cargo transportation in the 2000s. Enactment of the Framework Act on the Management of Government-Invested Institutions (FAMGII) in 1984 provided the foundation for establishing the “self-controlling and responsible” management practices of SOEs. The Asian financial crisis of 1997 then sparked formulation of the privatization policy as part of public sector reforms. As of 2022, Korea had 350 SOEs across nine sectors, including social overhead capital (SOC), energy, and industrial promotion and informatization. In recent years, SOEs have expanded into areas in which government intervention is required to address market failures, such as the steep growth of welfare demands; epidemics and pandemics; climate change; and environmental, social, and governance (ESG). Figure 2.1 describes the history of Korea's SOE oversight arrangements.

FIGURE 2.1

History of Korea's oversight arrangements for state-owned enterprises



Source: Ra 2022, as modified by authors.

Note: The name of “Enterprise Budget and Account Act” was changed to “Government Enterprise Budget Act” in 2010

The turning point in the SOE management system was the enactment of the FAMGII in 1984. The most important aspect of this act was the introduction of management performance evaluations and customer satisfaction surveys for government-invested institutions—an early attempt at shifting from prior control to follow-up performance management. Within the “responsible management” framework, SOEs are guaranteed management autonomy. However, they are evaluated for their performance and held accountable for their outcomes. This reform greatly reduced the control of and interference by the line ministries in the personnel affairs, organization, budget formation, and budget execution of government-invested institutions such as the Korea Electric Power Corporation (KEPCO), and Korea Expressway Corporation (EX), and Korea Water Resources Corporation (K-water).

In the 1980s and 1990s, the Korean government set about privatizing some of its SOEs. The Privatization Committee set up in 1987 was charged with the full or partial sales of 30 SOEs. The Act on the Improvement of the Managerial Structure and Privatization of Public Enterprises was enacted in 1997, and after the Asian financial crisis the government began to institute aggressive SOE reforms led by the Ministry of Economy and Finance (MOEF), including privatization. The reform resulted in the privatization of eight public enterprises (PEs), including Korea Heavy Industries and the Pohang Iron and Steel Company, and the liquidation of 67 subsidiaries. The downsizing of SOEs through privatization and the sale of government-owned stakes reduced the number of SOE employees from 295,000 in 1997 to 188,000 in 2002.⁶

6. However, public resistance to selling state shares to private parties has grown, and so in Korea privatization is currently no longer considered a feasible policy option.

In 2004, the government enacted the Framework Act on the Management of Government-Affiliated Institutions (FAMGAI)⁷ to include public institutions that receive contributions or subsidies from the government in the government management scope. The act introduced management evaluation, public recruitment of SOE heads, and customer satisfaction surveys for subsidiary institutions. However, the reform was marred by disagreements among the line ministries and stakeholders, and so it failed to resolve completely SOE issues such as lax management and budgetary waste.

In 2007, the Korean government enacted the Act on the Management of Public Institutions (AMPI) to solve these issues, unify the management system for government-invested and government-affiliated institutions, and overhaul SOE management in general. The AMPI framework greatly enhanced the autonomous and responsible management of SOEs and attempted to spread the customer- and performance-oriented culture across the entire SOE sector. Specifically, the act reinforced the customer satisfaction survey system, adopted the customer charter, and expanded the scope of SOEs subject to management evaluation. The AMPI also built a centralized ownership model, led by the MOEF. The model assigned the role of business supervision to the line ministries and the role of management supervision to the MOEF.

Between 2008 and 2012, the government reformed SOEs under the SOE advancement policies six times. In particular, it was proposed that the policies incorporate four principles: (1) transition to “small government and large market”; (2) increase benefits for the people; (3) minimize social costs; and (4) implement advancement measures tailored to each institution in a transparent manner. Based on these four principles, since then, the government has implemented various SOEs reform policies. The reforms have included the merger of 36 institutions, the dismantling of five institutions, and the liquidation of 85 subsidiaries through privatization, sale of government-owned stakes, merger, functional adjustment, downsizing, and liquidation.⁸ In addition, the wages of the heads of PEs and quasi-governmental institutions (QGIs) were lowered and the scope of the disclosure for SOE labor unions expanded.

Between 2013 and 2017, the government focused on reducing debts owed by SOEs and addressing lax management practices. Debt reduction took the form of

7. According to the FAMGAI, “government-affiliated institution” refers to an institution or organization that receives contributions or subsidies from the government, or to an institution or organization that is directly entrusted with work or granted exclusive business rights by the government pursuant to a law (such as the National Information Society Agency (NIA), Korea Credit Guarantee Fund (KODIT), or Korean SMEs and Startups Agency (KOSME)).

8. The Korean government merged research and development (R&D) and information technology (IT) institutions to reduce their number from 36 to 16. It also merged various support functions for small and medium enterprises (SMEs) through functional restructuring and reduced the number of social insurance service providers to four.

stricter liability management of 12 SOEs, including the Korea Land and Housing Corporation (LH) and KEPCO, which had been leading the liability growth of SOEs. The government managed to lower the debt-to-equity ratio (hereinafter “debt ratio”) of SOEs from 220 percent in 2012 to 157 percent in 2017 and continued to maintain the ratio at about 150 percent. This debt reduction was implemented by having SOEs preemptively sell their assets, adjust businesses, and improve management efficiency, with the government later injecting financial resources and providing policy support (such as a public service price increases). To manage future liabilities, the government also strengthened preliminary feasibility studies and adopted follow-up evaluations and a separate accounting system,⁹ halted excessive bond issuance, and improved employee welfare programs at 20 SOEs with high welfare costs per employee.

From 2017 to 2022, the government demanded that SOEs increase their contribution to society in addition to their economic efficiency. It proposed 13 social values to be prioritized, including human rights, safety, environment, welfare, social integration, employment, and regional economy. In particular, the government integrated a “social value implementation” indicator in the SOE management evaluation into the existing corporate social responsibility–related indicators. It also significantly increased the indicator’s percentage in the overall score and emphasized its social contribution, including job creation and safety and environmental enhancement. The government also promoted the conversion of nonregular workers to regular workers. Over the period, the number of deaths from safety accidents in SOEs declined from an average of 47 fatalities per year in 2017 to 35 in 2021.

In May 2022, the government announced that “providing high-quality services to the public through SOE innovation” would be one of the 100 national agendas. The top three tasks for SOE innovation were: (1) improving productivity in the public sector; (2) restructuring the management system of SOEs; and (3) enhancing cooperation between public and private institutions. Regarding productivity, the government is implementing an intensive management system for 14 highly indebted SOEs and pursuing efficiency measures in five areas—functions, organization and personnel, budget, assets, and welfare benefits. The 14 highly indebted SOEs plan to reduce their debt by KRW 24 trillion (US\$18 billion) and increase their capital by KRW 10.1 trillion (US\$7.6 billion) from 2022 to 2026 through measures such as asset sales, business adjustments, management efficiency improvements, revenue expansion, and capital increase. The efficiency measures in the five areas include reorganizing the functions of SOEs centered on their core functions, streamlining oversized organizations and personnel, reducing personnel and operating expenses, disposing of unnecessary or nonperforming assets, and improving excessive welfare benefits. To restructure the management system of SOEs, the government has expanded the autonomy of

9. *Accounting separation* is defined as preparation of financial statements for each business unit (that is, with separate assets, liabilities, profits, and expenses). It is based on financial sources and projects and preparing a comprehensive balance sheet after removing internal transactions between separate accounts and unrealized losses and profits.

SOEs by revising the designation criteria for PEs and QGIs.¹⁰ PEs and QGIs have been given greater autonomy in financial operations, including significantly expanding the proportion of financial performance in management evaluations, while strengthening their responsibilities. Other policies include establishing an audit committee in all PEs that do not have them, disclosing and evaluating the activities of non-executive directors, and enhancing the transparency of ESG activities. Finally, to enhance cooperation between the private and SOE sectors, the government aims to increase the private sector's access to SOE-held data, technology, patents, and other resources, establish a cooperation system, and create a regulatory improvement system. It is expected that such changes will support private sector- and business-led economic growth backed by SOEs.

KOREA'S SOE PORTFOLIO

In Korea, SOEs are generally referred to as public institutions designated by the Minister of Economy and Finance through its Ownership Steering Committee (OSC) and satisfying requirements under Article 4 (1) of the AMPI.¹¹ In short, public

10. In December 2022, the MOEF revised the designation criteria for PEs and QGIs. The previous criteria of “more than 50 employees and revenue of more than KRW 3 billion, and assets of more than KRW 1 billion” were changed to “more than 300 employees and revenue of more than KRW 20 billion, and assets of more than KRW 3 billion.” The revised criteria were applied as of January 2023, and 43 PEs and QGIs were reclassified as nonclassified institutions to increase their autonomy and accountability. According to the new criteria, in 2023 the MOEF designated 347 SOEs—32 PEs, 55 QGIs, and 260 nonclassified public institutions (NPIs)—through deliberation by the Ownership Steering Committee.

11. According to Article 4 (Public Institutions) of AMPI (see Korea Law Translation Center, https://elaw.klri.re.kr/kor_service/lawView.do?hseq=54572&lang=ENG):

(1) The Minister of Economy and Finance may designate any of the following institutions, which are a legal entity, organization, or institution (hereinafter referred to as “institution”) other than the State or a local government, as a public institution:

1. An institution directly established pursuant to other Act with an investment by the Government;
2. An institution for which the amount of the Government contributions (in cases of an institution to whom some affairs of the Government are directly commissioned, or a monopoly is granted, pursuant to statutes, the revenue earned from its commissioned affairs or monopoly shall be included; hereinafter the same shall apply) exceeds one-half of the amount of its total revenue;
3. An institution which the Government holds at least 50/100 of the outstanding shares of, or secures *de facto* control over decision-making on policies through the exercise, etc. of the power to appoint executive officers with at least 30/100 of such outstanding shares;
4. An institution which the Government together with an institution falling under any of subparagraphs 1 through 3 hold at least 50/100 of the outstanding shares of, or secure *de facto* control over decision-making on policies through the exercise etc. of the power to appoint executive officers with at least 30 percent of such outstanding shares;
5. An institution in which a single institution, or two or more institutions, falling under any of subparagraphs 1 through 4, hold at least 50/100 of the outstanding shares of, or secure *de facto* control over decision-making on policies through the exercise, etc. of the power to appoint executive officers with at least 30/100 of such outstanding shares;
6. An institution established by an institution falling under any of subparagraphs 1 through 4 with an investment by the State or the establishing institution.

institutions are established and operated with investment, funding, or financial support from the central government. In 2022, the MOEF designated 350 public entities, satisfying requirements under Article 4(1) of the AMPI, as public institutions (SOEs): 36 PEs, 94 QGIs, and 220 nonclassified public institutions (NPIs). They are classified based on their workforce, total revenue, assets, and percentage of self-generating revenue (table 2.1). Institutions with 50 or more employee positions and in which self-generated revenue makes up 50 percent or more of the total revenue are classified as PEs. Those with 50 or more employee positions and self-generated revenue of less than 50 percent are classified as QGIs. Other public institutions are classified as NPIs.¹² The relationship between SOEs as defined by the Organisation for Economic Co-operation and Development (OECD) guidelines and defined as SOEs in this report is depicted in box 2.1.

This report analyzes all 350 public institutions using the iSOEF methodology in order to provide a more holistic view of Korea's SOEs. Because the core managerial policies of the AMPI are common to PEs and QGIs and are also applicable to NPIs with the necessary changes, analyzing all institutions will mean the emergence of more comprehensive and useful policy implications for other countries. Second, because the contingent liabilities of and subsidies for QGIs and NPIs can pose a significant burden upon the government, the fiscal impacts and governance of them have been key policy areas for the Korean government.

TABLE 2.1

Classification of Korean public institutions (state-owned enterprises), 2022

Public enterprises (PEs) (36)	Quasi-governmental institutions (QGIs) (94)	Nonclassified public institutions (NPIs) (220)
• Total revenue ≥ KRW 3 billion (US\$2.4 million) • Asset size ≥ KRW 1 billion (US\$0.8 million) • Self-generating revenue ≥ 50%	• Total revenue ≥ KRW 3 billion • Asset size ≥ KRW 1 billion • Self-generating revenue < 50%	All public institutions, excluding PEs and QGIs. Examples: Korea Development Bank (KDB), Industrial Bank of Korea (IBK), national university hospitals, research and development institutes
Employees ≥ 50 persons	Employees ≥ 50 persons	
Market-type PE (15) • Self-generating revenue ≥ 85% • Asset size ≥ KRW 2 trillion (US\$1.6 billion)	Fund management-type QGI (13)	
Quasi-market-type PE (21) • Self-generating revenue: 50%–85%	Commissioned service-type QGI (81)	

Source: AMPI; authors' compilation.

12. PEs with assets of KRW 2 trillion (US\$1.6 billion) or more in which the percentage of self-generated revenues is 85 percent or higher are classified as market-type PEs. Examples are KEPCO and the Korea Gas Corporation (KOGAS). The other PEs are categorized as quasi-market-type PEs. Examples are Korea Land and Housing Corporation and Korea Water Resources Corporation (K-water). QGIs are further divided into fund management-type QGIs responsible for managing national funds, such as the National Health Insurance Service (NHIS) and the Korea Deposit Insurance Corporation (KDIC), and commissioned service-type QGIs such as the Korea Trade-Investment Promotion Agency (KOTRA) and the Korea National Park Service.

BOX 2.1

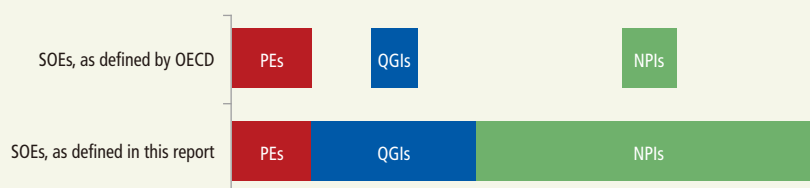
State-owned enterprises as defined by the Organization for Economic Co-operation and Development (OECD) and as defined in this report

According to the OECD (2015, 2024), a state-owned enterprise (SOE) is any corporate entity recognized by national law as an enterprise and in which the central level of government exercises ownership and control. These entities include joint stock companies, limited liability companies, and partnerships limited by shares. In addition, statutory corporations, whose legal personality is established through specific legislation, should be considered SOEs if they engage in economic activities either exclusively or together with the pursuit of public policy objectives. This definition includes three shared elements of an SOE: (1) it is controlled by the government; (2) it is a legally separate entity from its owners; and (3) it engages predominantly in market production and commercial activities (IMF 2020; OECD 2017).

Based on this definition, the OECD (2017) found that there were 56 SOEs in Korea: eight majority state-owned (≥ 50 percent) listed enterprises and 48 majority state-owned nonlisted enterprises. Comparing SOEs as defined in the OECD guidelines and the three types of public institutions in Korea in this report, all public enterprises (PEs) and some of quasi-governmental institutions (QGIs) and nonclassified public institutions (NPIs) can be regarded as SOEs as defined by the OECD. For example, some QGIs, such as the Korea Asset Management Corporation and Korea Tourism Organization, and some NPIs, such as three state-owned financial institutions and PE's affiliated companies, are SOEs as defined by OECD because they engage in both commercial activities and public policy objectives under state control. However, according to the Act on the Management of Public Institutions (AMPI), they are not classified as PEs because they generate less than 50 percent of total revenue, or they are small in terms of employees, revenue, and assets, or they require a high level of autonomy. Figure B2.1.1 depicts the relationship between SOEs according to the OECD definition and SOEs as defined in this report. Different from SOEs defined by the OECD, SOEs defined in this report include public institutions which are not purely commercial in QGIs and NPIs.

FIGURE B2.1.1

Comparison of OECD and report definitions of state-owned enterprise (SOE)



Source: AMPI; authors' compilation.

Note: NPIs = nonclassified public institutions; OECD = Organisation for Economic Co-operation and Development; PEs = public enterprises; QGIs = quasi-governmental institutions.

Besides distinguishing between three types of SOEs (PEs, QGIs, and NPIs) in its portfolio of 350 entities, the Korean authorities also distinguish between institutions with diverse characteristics. For example, 39 of the 350 SOEs are required to establish a five-year medium- and long-term financial management plan (MLTFMP); the deficits of 62 are covered by the government; and 18 act as state-owned financial institutions (table 2.2)—for an assessment of their fiscal costs and risks, see chapter 3. As of 2012,

PEs and QGIs with (i) KRW 2 trillion (US\$ 1.47 billion)¹³ or more in assets and (ii) whose losses are statutorily covered by the government or their capital is declared as impaired (39 SOEs in 2022) were required to develop MLTFMPs for intensive liability management.¹⁴ In addition, of these 39 SOEs, the general government debt¹⁵ announced by the government according to the IMF Public Sector Debt Statistics (PSDS)¹⁶ standards covers 14 nonprofit ones. The public sector debt,¹⁷ which is slightly larger in scope, includes 23 nonfinancial SOEs other than the 14 nonprofit institutions covered by the general government debt. On the other hand, the 62 SOEs benefiting from deficit covering (the government covers the difference between the SOE's total expenditure and its self-generated revenue through contributions or subsidies) are classified as deficit-covered institutions. Eighteen SOEs whose primary role is providing loan, guarantee, insurance, investment, and other financial services are classified as state-owned financial institutions.

TABLE 2.2

Profile of Korea's state-owned enterprises (SOEs), 2022

Type of SOE	SOEs	MLTFMP institutions		Deficit-covered SOEs	State-owned financial institutions
		SOEs	SOEs holding general government debt	SOEs holding public sector debt	
Public enterprise	36	22	n.a.	21	1
- Market type	15	15	n.a.	15	n.a.
- Quasi-market type	21	7	n.a.	6	1

13. At May 2024 exchange rates.

14. According to Article 39-2 of the AMPI, MLTFMPs are five-year rolling plans for managing future debt reduction. Each relevant institution has established 10 MLTFMPs, which have greatly contributed to systematically managing and reducing its debts and debt ratio.

15. In 2021, Korea's general government debt was composed of the debt holdings of central and local governments and of 342 nonprofit SOEs such as the National Health Insurance Service (NHIS) and the Korea SMEs and Startups Agency (KOSME). Such a value is used to compare the government debt of countries. In addition, of the 342 nonprofit SOEs 14 are required to establish MLTFMPs. In 2021, Korea's general government debt stood at KRW 1,066 trillion (US\$895 billion), or 51.5 percent of its gross domestic product (MOEF 2022).

16. The PSDS was established in 2011 by nine international organizations, including the World Bank, International Monetary Fund (IMF), and OECD, to produce comprehensive and reliable liability information for the management of solvency and liquidity issues (IMF 2011). Each year, the Korean government announces and manages general government debt and public sector debt based on the criteria.

17. In 2021, the public sector debt consisted of the general government debt and the debt holdings of 158 nonfinancial SOEs, which included 37 institutions subject to the MLTFMP requirement such as KEPCO and KOGAS. Currently, eight countries manage their public sector debt: Australia, Canada, Costa Rica, Japan, Korea, Mexico, Portugal, and the United Kingdom. In 2021, the public sector debt of Korea was KRW 1,427 trillion (US\$1,199 billion), or 68.9 percent of its gross domestic product (MOEF 2022).

TABLE 2.2 *continued*

Type of SOE	SOEs	MLTFMP institutions			Deficit-covered SOEs	State-owned financial institutions
		SOEs	SOEs holding general government debt	SOEs holding public sector debt		
Quasi-governmental institution	94	17	14	(14) + 2	28	9
- Fund management type	13	10	8	1	1	7
- Commissioned service type	81	7	6	1	27	2
Nonclassified public institution	220	n.a.	n.a.	n.a.	33	8
Total	350	39	14	(14) + 23	62	18

Source: authors' compilation.

Note: MLTFMP = medium- and long-term financial management plan; n.a. = not applicable.

The SOE sector takes up a large percentage of Korea's national economy in budget, assets, and employment, and it played a significant role in overcoming the COVID-19 pandemic. In 2022, the budgets of all SOEs stood at KRW 792 trillion (US\$625 billion), which was 1.3 times larger than the 2022 central government budget and 38 percent of the country's gross domestic product (GDP) in 2021. This represents a 12.3 percent growth from the pre-pandemic total expenditure in 2019, and is in large part due to expanded financial support for self-employed workers, microentrepreneurs, and small and medium enterprises and the higher investment in economic stimulation during the pandemic which significantly increased the expenditures of QGIs and NPIs. As shown in table 2.3, the total expenditure of QGIs and NPIs increased by 16.6 percent and 40.5 percent between 2019 and 2020, respectively. The steep increase in financial relief and investments to fight COVID-19 is highly likely to affect the financial performance of SOEs, along with the large-scale pre-pandemic investments, which are discussed in detail in the section on "Financial Performance."

TABLE 2.3

Expenditures of state-owned enterprises (SOEs) before and during COVID-19 pandemic

KRW, trillions

Type of SOE	Before COVID-19 pandemic			COVID-19 pandemic		
	2017	2018	2019	2020	2021	2022
Public enterprise	236.1	240.5	235.8	231.8	259.7	310.0
		1.9%	-2.0%	-1.7%	12.0%	19.4%
Quasi-governmental institution	275.1	272.6	293.1	341.7	363.3	352.5
		-0.9%	7.5%	16.6%	6.3%	-3.0%
Nonclassified public institution ^a	92.7	89.4	113.3	159.2	138.0	129.2
		-3.5%	26.7%	40.5%	-13.3%	-6.3%
Total	603.9	602.5	642.2	732.6	760.9	791.7
		-0.2%	6.6%	14.1%	3.9%	4.0%

Source: MOEF 2022; World Bank staff compilation.

Note: Table shows the year-to-year percentage change in total expenditure of the three categories of SOEs. The 2017-21 data are settlement data, and the 2022 data are budget data. To cope with the COVID-19 pandemic, the expenditure of QGIs increased, from KRW 293.1 trillion in 2019 to KRW 341.7 trillion in 2020 (by 16.6 percent), and that of NPIs also greatly increased, from KRW 113.3 trillion in 2019 to KRW 159.2 trillion in 2020 (by 40.5 percent).

a. Nonclassified public institutions include bank-type SOEs such as the Korea Development Bank, Export-Import Bank of Korea, and Industrial Bank of Korea.

As shown in table 2.4, PEs and QGIs accounted for most of SOE revenues in 2021 (38 percent and 54 percent, respectively). In addition, although the overall SOE sector reported a net profit of KRW 11 trillion (US\$9.2 billion) in 2021, PEs recorded a net loss of KRW 2 trillion (US\$1.7 billion) the same year. These results seem to have been affected by the significant decline in the demand for tourism and travel during the pandemic and higher oil and resource prices.

As of 2021, the total assets of the SOE sector accounted for 34 percent of Korea's total national assets and 47 percent of the country's GDP. PEs accounted for 68 percent of all SOE assets, whereas QGIs accounted for 26 percent. The SOEs in the energy sector held the largest assets, followed by the housing and transport sectors. The SOEs in the culture sector reported the lowest assets (figure 2.2).

In 2021, SOE liabilities stood at about 28 percent of GDP, with PEs making up 74 percent of the total. Some 96 percent of PEs' liabilities were in three sectors - energy, transport, and housing - suggesting the need to further analyze SOE liabilities in these three sectors. In particular, the debt ratio of PEs reached 194 percent in 2021, underlining the importance of financially sound management of highly indebted PEs so as to avoid them burdening government finances in the future.

The SOE sector employed 428,739 workers in 2021, with employment increasing annually by about 6.3 percent over the last five years. This employment figure represents 37 percent of all government employees in Korea and 1.5 percent of Korea's economically active population. As shown in figure 2.3, the employment, health, and welfare sector employ the largest number of workers (109,733), surpassing the social overhead capital (86,427) and energy sectors (83,382). By contrast, the culture sector employed the lowest number of workers (12,509).

TABLE 2.4

Revenue, net profit, assets, liabilities, and employment of state-owned enterprises (SOEs), 2021

Type of SOE	Revenue (KRW, trillions)	Net profit (KRW, trillions)	Assets (KRW, trillions)	Liabilities (debt ratio)	Employment
Public enterprise	147.39	-1.84	657.96	434.13 (193.95%)	163,868
Quasi-governmental institution	209.86	6.96	255.5	128.21 (100.73%)	123,560
Nonclassified public institution ^a	29.67	5.64	55.51	20.62 (59.07%)	141,311
Total	386.93	10.76	968.98	582.96 (151.02%)	428,739

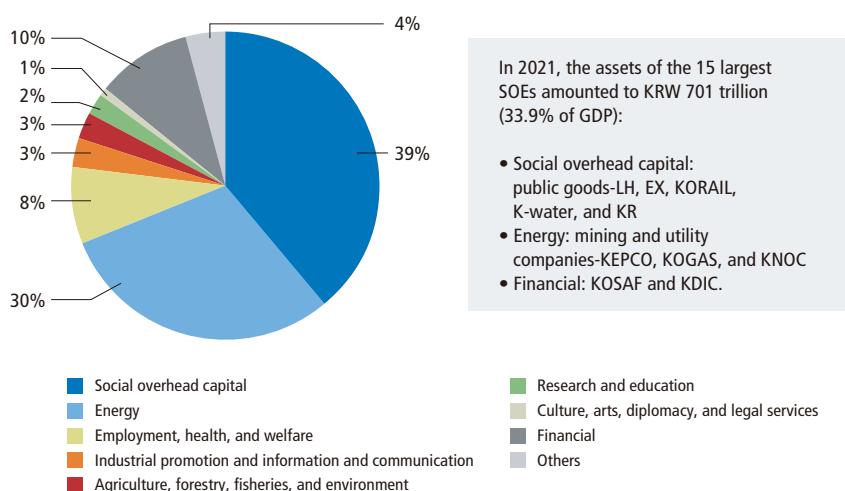
Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: Because the net losses and high debt ratios of PEs may burden government finance in the future, debt management policy needs to focus on highly indebted PEs.

a. Excludes bank-type state-owned financial institutions (Korea Development Bank, Export-Import Bank of Korea, and Industrial Bank of Korea). The liabilities and debt ratios of bank-type SOEs are not directly comparable with those of the other SOEs because their liabilities include customer deposits.

FIGURE 2.2

Distribution of assets of state-owned enterprises (SOEs) by sector, 2021

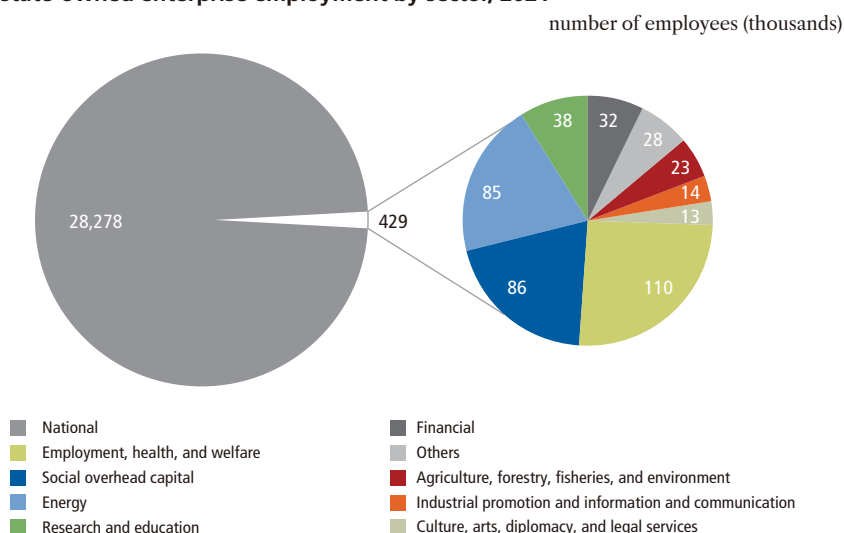


Source: authors' compilation.

Note: EX = Korea Expressway Corporation; GDP = gross domestic product; KDIC = Korea Deposit Insurance Corporation; KEPCO = Korea Electric Power Corporation; KNOC = Korea National Oil Corporation; KOGAS = Korea Gas Corporation; KORAIL = Korea Railroad Corporation; KOSAF = Korea Student Aid Foundation; KR = Korea National Railway; LH = Korea Land and Housing Corporation; SOC = social overhead capital.

FIGURE 2.3

Total and state-owned enterprise employment by sector, 2021



Source: authors' compilation.

Note: SOC = social overhead capital.

It is also important to analyze the 39 larger SOEs with KRW 2 trillion (US\$1.47 billion) or more in assets subject to the MLTFMP requirement. In 2021, these 39 SOEs accounted for 70 percent of revenue of the entire SOE sector, 51 percent of

TABLE 2.5

Top 15 revenue-earning state-owned enterprises (SOEs) subject to the medium- and long-term financial management plan requirement, 2021

Rank	SOE	Type	Sector	Revenue (KRW, trillions)	Assets (KRW, trillions)	Liabilities (KRW, trillions)	Debt ratio (%)	No. of employees	Taxes (KRW, billions)
1	Korea Electric Power Corporation (KEPCO) (consolidated)	PE	Energy	60.57	211.11	145.80	223.2	67,074	0.13
2	Korea Gas Corporation (KOGAS)	PE	Energy	27.52	43.67	34.55	378.9	6,559	0.02
3	Korea Land and Housing Corporation (LH)	PE	SOC	27.35	201.65	138.89	221.3	8,979	1,427.6
4	Korea Expressway Corporation (EX)	PE	SOC	10.54	73.40	33.28	83.0	9,094	3.1
5	Korea Sports Promotion Foundation (KSPO)	QGI	Other	6.30	5.76	1.31	29.5	1,642	0
6	Korea Railroad Corporation (KORAIL)	PE	SOC	5.76	25.16	18.66	287.3	42,949	3.63
7	Korea Rural Community Corporation (KRC)	QGI	Agriculture	4.39	12.91	10.74	494.9	6,708	32.16
8	Korea Student Aid Foundation (KOSAF)	QGI	Financial	4.33	11.23	10.35	^a	524	0.002
9	Korea Water Resources Corporation (K-water)	PE	SOC	4.01	23.44	13.55	137.0	6,508	12.9
10	Korea District Heating Corporation (KDHC)	PE	Energy	2.54	6.52	4.69	257.5	2,151	4.05
11	Korea Deposit Insurance Corporation (KDIC)	QGI	Financial	2.38	19.61	7.89	^b	828	0
12	Korea National Oil Corporation (KNOC)	PE	Energy	2.15	18.41	19.96	^c	1,448	0
13	Korea National Railway (KR)	QGI	SOC	1.69	19.03	20.57	^b	2,200	3.74
14	Korea Housing Finance Corporation (HF)	QGI	Financial	1.36	23.78	10.69	81.7	995	141.4
15	Korean Housing and Urban Guarantee Corporation (HUG)	QGI	Financial	0.88	8.37	1.76	26.6	1,018	102.4

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: Among the top 15 revenue-earning SOEs, six recorded a debt ratio of over 200 percent and one was in capital impairment in 2021. PE = public enterprise; QGI = quasi-governmental institution; SOC = social overhead capital.

a. This SOE provides policy loans, making it difficult to compare its debt ratio directly with that of other institutions.

b. This SOE is a noncapital special-purpose corporation (with zero capital stock), which makes it difficult to calculate its debt ratio.

c. Capital impairment.

net profits, 92 percent of assets, 88 percent of capital, 94 percent of liabilities, and 45 percent of employment.¹⁸ Table 2.5 lists the top 15 revenue-earning SOEs in 2021 (excluding the National Health Insurance Service, Government Employees Pension Service, and Teachers Pension, which manage social security funds¹⁹). Table 2.5 also includes seven institutions with a debt ratio of over 200 percent or capital impairment institutions. These institutions urgently need measures to ensure fiscal soundness (see the “Financial Performance” and “Service Delivery Performance” sections in this chapter).

In response to the COVID-19 pandemic, 18 state-owned financial institutions greatly increased their expenditures. The Korean government provided KRW 130.7 trillion (US\$109.8 billion) in fiscal support by means of seven emergency relief measures and subsequent supplementary budgets (four in 2020, two in 2021, and one in 2022). According to an International Monetary Fund (IMF) report released in October 2021, the government’s fiscal support stood at 6.4 percent of its GDP, or 16.5 percent of GDP when including financial support, which puts Korea at tenth among the Group of 20 (G20) countries (IMF 2021). The effort was directed mainly at financial support for microentrepreneurs, self-employed workers, and small and medium enterprises (SMEs) affected by the pandemic; protection of groups with low job security; livelihood support for low-income earners; stimulation of domestic consumption and economy; and support for quarantine efforts. Most of this support was drawn from the government budget and provided through the 18 state-owned financial institutions. Box 2.2 shows the trend of expenditures of these institutions from 2017 to 2022.

BOX 2.2

The response of 18 state-owned financial institutions to the COVID-19 pandemic

The total expenditure of the 18 institutions grew by 39.5 percent between 2019 and 2020, and the Small Enterprise and Market Service (SEMAS) recorded the most significant expenditure growth at 600 percent. Financial assistance under the government’s COVID-19 policies focused on increasing operational loans with lower interest rates, special guarantees for SMEs and microentrepreneurs, and other support for vulnerable sectors, most of which was provided through state-owned financial institutions. As shown in table B2.2.1, state-owned enterprises (SOEs) providing loans and guarantees to SMEs—Korea SMEs and Startups Agency (KOSME), Korea Credit Guarantee Fund (KODIT), Korea Technology Finance Corporation (KOTEC), and Korea Federation of Credit Guarantee Foundations (KOREG)—reported significantly higher expenditures in 2020 and 2021 than in 2019.

18. Revenue, KRW 270 trillion; net profits, KRW 5.5 trillion; assets, KRW 891 trillion; capital, KRW 340 trillion; liabilities, KRW 551 trillion; employment, 197,658.

19. Under the relevant laws, the social insurance premiums paid by citizens are included in the revenue of the social security funds, which makes it difficult to directly compare the revenue of these institutions with those of the other SOEs earning revenue through various projects. Thus social security funds were excluded from the top 15 SOEs.

TABLE B2.2.1

Expenditures of state-owned financial institutions before and after COVID-19 pandemic, 2017-22

KRW, trillions

SOE	Type	Before COVID-19 pandemic			COVID-19 pandemic		
		2017	2018	2019	2020	2021	2022
Korea House and Urban Guarantee Corporation (HUG)	PE	1.04	1.19	1.23	1.50	1.65	1.40
Korea Housing Finance Corporation (HF)		40.65	39.32	48.21	65.72	51.17	47.45
Korea Deposit Insurance Corporation (KDIC)		29.79	23.64	22.43	25.00	25.25	27.90
Korea SMEs and Startups Agency (KOSME)		9.90	8.95	8.66	11.49	11.39	9.66
Korea Technology Finance Corporation (KODIT)		9.11	8.93	8.51	11.18	11.27	13.81
Korea Trade Insurance Corporation (K-SURE)	QGI	2.92	3.19	3.07	3.84	4.11	4.42
Small Enterprise and Market Service (SEMAS)		0.34	0.35	0.50	3.51	16.75	3.04
Korea Technology Finance Corporation (KOTEC)		2.94	3.07	2.85	3.34	3.78	3.35
Korea Asset Management Corporation (KAMCO)		1.87	2.01	1.98	2.15	1.94	1.83
Korea Inclusive Finance Agency (KINFA)		0.91	0.99	1.23	1.20	1.39	1.33
Industrial Bank of Korea (IBK)		33.09	33.45	45.70	56.35	49.69	48.64
Korea Development Bank (KDB)		26.05	20.66	28.91	53.87	43.85	32.50
Export-Import Bank of Korea (KEXIM)		8.10	8.78	8.73	16.13	9.51	10.43
Korea Ocean Business Corporation (KOBC)		n.a.	0.58	1.97	1.41	1.66	2.08
Korea Federation of Credit Guarantee Foundations (KOREG)	NPI	0.44	0.33	0.36	0.79	0.60	0.72
Korea Investment Corporation (KIC)		0.36	0.36	0.42	0.45	0.54	0.46
Korea Overseas Infrastructure and Urban Development Corporation (KIND)		n.a.	0.06	0.06	0.25	0.12	0.19
Korea Venture Investment Corporation (KVIC)		0.02	0.02	0.03	0.03	0.04	0.04
Total		167.52	155.89	184.85	258.22	234.71	209.36

Source: NABO 2022; authors' compilation.

Note: n.a. = nonapplicable; NPI = nonclassified public institution; PE = public enterprise; QGI = quasi-governmental institution; SOE = state-owned enterprise.

The cumulative outstanding amount of policy finance, such as loans, guarantees, insurance, and investments, increased by 12.5 percent from 2019 to 2020—the highest growth rate over the last 10 years, and the data suggest that the financial support for the COVID-19 pandemic response continued to increase—11.8 percent from 2020 to 2021. The higher outstanding loan amounts in 2020 and 2021 stemmed from the stronger support for SMEs and microentrepreneurs affected by the pandemic. The outstanding amount of the guarantees also increased significantly in 2020 and 2021 compared with previous years, with KODIT increasing by 24.09 percent and 16.21 percent, KOTEC by 16.51 percent and 3.54 percent, and KOREG by 85.96 percent and 8.02 percent, respectively, demonstrating an expansion of support for SMEs and microentrepreneurs.^a The impact of the COVID-19 responses of these state-owned financial institutions on their financial performance is described in detail in the “Financial Performance” section (also see box 2.4 later in this chapter).

TABLE B2.2.2

Outstanding loans, guarantees, insurance, and investments by state-owned financial institutions, 2016-21

KRW, trillions (year-on-year increase rate, %)

Category	Before COVID-19 pandemic				COVID-19 pandemic	
	2016	2017	2018	2019	2020	2021
Loan	473.5	494.6 (4.5%)	515.8 (4.3%)	544.1 (5.5%)	611.6 (12.4%)	664.8 (8.7%)
Guarantee	560.3	578.3 (3.2%)	594.5 (2.8%)	628.7 (5.8%)	713.2 (13.4%)	816.7 (14.5%)
Insurance	89.0	87.2 (-2.0%)	75.3 (-13.7%)	77.9 (3.5%)	76.6 (-1.7%)	83.4 (8.9%)
Investment	53.8	52.9 (-1.8%)	56.8 (7.5%)	58.5 (3.0%)	71.3 (21.8%)	82.1 (15.2%)
Total	1,176.6	1213.0 (3.1%)	1242.5 (2.4%)	1309.3 (5.4%)	1472.7 (12.5%)	1647.0 (11.8%)

Source: NABO 2022.

a. KODIT, KOTEC, and KOREG can provide guarantees for small and medium enterprises and small businesses within the range of 20 times, 20 times, and 15 times of each institution's basic property and carryover profits, respectively, according to the Act of the KODIT, KOTEC, and KOREG.

PERFORMANCE OF THE SOE SECTOR

Financial Performance

This section analyzes the financial performance of Korean SOEs in terms of revenue, net profit, assets, liabilities, debt ratio, return on assets (ROA), and return on equity (ROE). Analysis of these major financial performance indicators of 350 SOEs from 2017 to 2021 reveals that the entire SOE sector increased its revenue, net profit, and assets, whereas the profitability of the energy, transport, culture (includes tourism and leisure) sectors, which were greatly affected by the COVID-19 pandemic, significantly deteriorated. In particular, 14 large-scale SOEs in the energy, transport, and housing sectors were found to be highly indebted because of the increase in

their debt ratio stemming from the ongoing expansion of investment or the expected future deterioration of business profitability due to the COVID-19 pandemic. The fiscal consolidation plan of these SOEs and its effectiveness are examined in chapter 3. This section also compares the financial performance of the SOE sector before and after the COVID-19 pandemic, and the ROAs and ROEs of SOEs are compared with those of the private companies in the sector in which SOEs operate.

From 2017 to 2021, the revenue of all SOEs steadily increased at a 6.7 percent average annual growth rate, whereas the revenue of PEs fell by 7.9 percent from 2019 to 2020 because of the impact of the COVID-19 pandemic. The increase in revenue is mainly attributed to the average annual revenue growth rate of QGIs (11.45 percent). During the COVID-19 pandemic response period in 2020 and 2021, the revenue growth rate of QGIs increased significantly, stemming from the substantial increase in the response of entrusted government businesses to the pandemic. It implies that an analysis of revenue should focus on PEs whose revenue declined because of the pandemic rather than QGIs. The same can be observed in the net profit analysis.

During the same period, the net profit of all SOEs consistently remained positive, but PEs showed a net loss after 2020 and the size of loss increased in 2021. These losses can be attributed to the significant decrease in travel and tourism demand arising from COVID-19, resulting in net losses in the transport and culture sectors, as well as the impact of net losses in the energy sector PEs attributable to changes in the business environment, such as disruptions in the global supply chain and higher prices for raw materials (table 2.6).

TABLE 2.6

Net losses of public enterprises in the transport, culture, and energy sectors, 2020 and 2021

KRW, trillions

	Korea Railroad Corporation (KORAIL)	Incheon International Airport Corporation (IIAC)	Korea Airports Corporation (KAC)	Kangwon Land (KL)	Korea Electric Power Corporation (KEPCO)
2020	1.34	0.42	0.15	0.28	^a
2021	1.16	0.75	0.23	0.01	5.23

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

a. The net profit of KEPCO was significantly affected by oil prices. It recorded a net profit owing to the low oil price in 2020 (US\$42 per barrel of crude oil, Dubai price) compared with the price in 2021 (US\$69).

Between 2017 and 2021, the assets of all SOEs increased steadily at an average annual rate of 4.68 percent (table 2.7), including during the COVID-19 response period (2020 and 2021). This increase is attributed to various factors, including: (1) the increase in land acquisition for rental housing and land development for vulnerable populations and stable living conditions; (2) the increase in investment assets for ongoing power plant construction; and (3) the increase in government support for state-owned financial institutions for SMEs. Table 2.8 shows that, except for the culture sector, all sectors increased assets in 2021 compared with 2019.

TABLE 2.7

Revenue, net profit, assets, and liabilities by type of state-owned enterprise (SOE), 2017-21

	KRW, trillions						
	2017	2018	2019	2020	2021	Five-year CAGR (%)	% of 2021 GDP
Public enterprises							
Revenue	143.93	144.74	144.93	133.45	147.39	0.60	n.a.
Net profit	4.25	1.97	1.29	-0.70	-1.84	n.a.	n.a.
Assets	570.60	580.90	601.81	617.26	657.96	6.70	31.76
Liabilities (debt ratio, %)	364.38 (176.70)	371.54 (177.46)	388.49 (182.12)	398.20 (181.78)	434.13 (193.95)	4.48 (2.36)	20.96
Quasi-governmental institutions							
Revenue	136.01	145.40	160.92	178.60	209.86	11.45	n.a.
Net profit	2.81	-1.30	-0.53	3.22	6.96	25.45	n.a.
Assets	205.48	208.01	216.76	234.35	255.50	5.6	12.33
Liabilities (debt ratio, %)	117.75 (134.22)	117.83 (130.67)	121.92 (128.55)	125.36 (115.02)	128.21 (100.73)	2.15 (-6.92)	6.19
All SOEs							
Revenue	298.46	309.69	326.64	337.61	386.93	6.70	n.a.
Net profit	7.18	0.61	0.77	5.17	10.76	10.65	n.a.
Assets	806.94	824.83	857.47	897.59	968.98	4.68	46.77
Liabilities (debt ratio, %)	493.21 (157.21)	501.10 (154.80)	524.66 (157.64)	541.19 (151.85)	582.96 (151.02)	4.27 (-1.0)	28.14

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: CAGR = compound annual growth rate; GDP = gross domestic product; n.a. = not applicable.

TABLE 2.8

Financial performance of state-owned enterprise (SOE) sector before (2019) and during (2021) the COVID-19 pandemic

		KRW, trillions							
Sector		Revenue		Net profit		Assets		Liabilities (debt ratio, %)	
		2019	2021	2019	2021	2019	2021	2019	2021
SOC	Transport	21.81	20.82	1.17	-2.01	136.89	149.41	73.62 (116.37)	84.02 (128.49)
	Housing and real estate	21.24	28.17	2.27	4.20	177.5	202.77	126.97 (251.28)	139.24 (219.16)
	Water supply	2.99	4.03	0.13	0.34	22.27	23.45	13.92 (166.89)	13.55 (136.86)
Energy		92.73	96.02	-2.98	-4.35	270.88	289.73	193.20 (248.73)	216.80 (300.72)
Employment, health, and welfare		120.60	146.47	-3.55	4.81	64.24	76.32	20.06 (45.41)	20.26 (36.14)
Industrial promotion and information and communication		8.96	29.52	0.05	0.08	25.25	32.73	18.5 (273.98)	24.12 (280.09)

TABLE 2.8 *continued*

Sector	Revenue		Net profit		Assets		Liabilities (debt ratio, %)	
	2019	2021	2019	2021	2019	2021	2019	2021
Agriculture, forestry, fisheries, and environment	14.77	15.40	0.03	3.89	21.42	33.46	14.11 (192.94)	20.0 (148.61)
Research and education	16.29	19.87	0.06	0.05	17.41	19.56	5.09 (41.35)	5.97 (43.95)
Culture, arts, diplomacy, and legal services	4.33	3.57	0.41	-0.11	7.68	6.7	1.78 (30.25)	1.55 (30.05)
Financial	11.48	11.67	3.14	3.83	83.77	101.39	47.68 (132.16)	47.73 (88.96)
Other	10.89	10.74	0.04	0.06	28.82	32.70	9.59 (49.83)	9.54 (41.18)
All SOEs	326.64	386.93	0.77	10.76	857.47	968.98	524.66 (157.64)	582.96 (151.02)

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

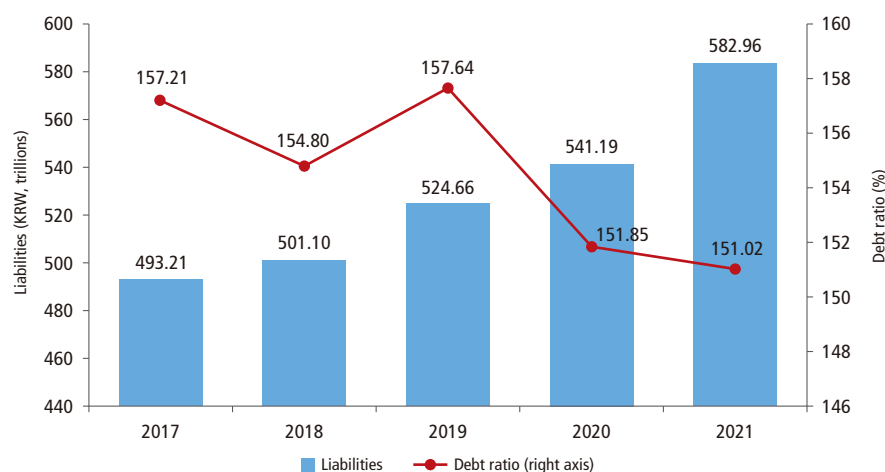
Note: In 2021, the revenue and net profit of the transport and culture sectors were sharply lower than before the COVID-19 pandemic (2019) stemming from the significant decrease in the demand for travel and tourism. The net profit of the energy sector was affected by high prices of raw materials such as oil and natural gas. The high debt ratios in the transport, housing, and energy sectors show that debt management policies should focus on these sectors. SOC = social overhead capital.

As shown in figure 2.4, the total liabilities of all SOEs steadily increased by an average of 4.27 percent a year from 2017 to 2021, whereas the debt ratio fell from 157 percent to 151 percent.²⁰ The debt size steadily decreased after the Plan for Normalizing SOEs in 2013, which focused on profitability and efficiency, but the debt has been increasing since 2018, when the emphasis shifted to the public interest rather than the profitability and efficiency of SOEs. PEs accounted for 74 percent of the total liabilities of all SOEs in 2021, and their debt ratio was much higher than the average for all SOEs, 194 percent, thereby highlighting the need to examine closely the reasons for the debt increase of PEs. For example, looking at each sector before and after the COVID-19 pandemic (tables 2.8 and 2.9) reveals that the debt size and ratio increased in the transport and energy sectors. As for the housing sector, the debt amount increased while the debt ratio fell, but the ratio remained at a high level, over 200 percent.

20. The financial liabilities (debts) of SOEs mainly consist of corporate bonds (for SOEs with the authority to issue bonds), borrowings from private banks or state-owned financial institutions (such as the Korea Development Bank and Export-Import Bank of Korea), and financial leases. Korean SOEs, especially 39 large SOEs, have been trying to optimize their capital structure to stabilize financial performance in response to changes in major macroeconomic indicators such as growth rates, interest rates, foreign exchange rates, and oil prices. These efforts are reflected each year in their MLTFMPs. As described in this report, the Korean government regularly manages the debt of 39 large SOEs in their MLTFMPs, including strict fiscal consolidation plans to reduce debt.

FIGURE 2.4

Total state-owned enterprise liabilities and debt ratio by year, 2017-21



Source: authors' compilation.

A more detailed look at the energy, transport, and housing sectors follows.²¹ According to table 2.9, the debt size and ratio have steadily increased for the energy sector over the last five years. Those increases are attributed to factors such as the higher cost of raw materials, investments in renewable energy due to changes in the energy mix, higher energy prices, and the ongoing investment in power plant facilities. In contrast, the housing sector has seen its debt ratio fall since 2017 because of the recent boom in the real estate market, resulting in a net profit. However, the debt ratio is still relatively high.²² It stems from the consistent large-scale investment in

21. In Korea, financing of public service obligations (PSOs) and public policy objectives (PPOs) depends on the characteristics of each project and whether SOEs are approved to issue bonds. For example, the PPO of the National Railway Corporation is to build and maintain railway lines. If after construction a railroad will become a government asset, the government will support construction costs. However, in the case of Incheon International Airport terminal 3, it is highly likely that IIA Corporation will finance construction costs because the terminal building and land will become its own assets. PPOs such as expressways, public housing, and dam construction may be similar cases. As a typical example of a PSO, the Korean government has compensated KORAIL for the loss of railway operations in remote areas. Therefore, PSOs and PPOs of large SOEs are financed not only through corporate bonds, private banks, and state-owned financial institutions, but also through government finances such as equity injections, contributions, and subsidies. Private companies may also finance a project if the project is eligible for a public private partnership (PPP).

22. Oil price trends (Dubai price, US\$ per barrel of crude oil): (2017) 53, (2018) 70, (2019) 64, (2020) 42, (2021) 69. New and renewable energy investments from KEPCO subsidiaries (KRW, trillions): (2017) 0.3, (2018) 0.4, (2019) 0.5, (2020) 0.5, (2021) 0.5. Raw material price trends (coal, US\$/ton): (2017) 75.97, (2018) 78.25, (2019) 65.65, (2020) 53.26, (2021) 113.04. Facility investments from KEPCO subsidiaries (KRW, trillions): (2017) 3.0, (2018) 3.4, (2019) 4.2, (2020) 3.1. LH liabilities (debt-to-equity ratio): (2017) KRW 131 trillion (306.3 percent), (2018) KRW 128 trillion (282.9 percent), (2019) KRW 127 trillion (254.2 percent), (2020) KRW 130 trillion (233.6 percent), (2021) KRW 139 trillion (221.3 percent).

public housing and land development for vulnerable groups to establish stable living conditions. As for the transport sector, the debt size has steadily increased from the ongoing investments in infrastructure such as roads, railways, and airports. Recently, the sector has significantly been affected by the COVID-19 pandemic, leading to a decline in revenue and accumulated losses, which has had a significant impact on the increase in debt and the debt ratio (more details can be found in appendix B for all sectors).

TABLE 2.9**Liabilities and debt ratio of state-owned enterprises (SOEs) by sector, 2017-21**

KRW, trillions

SOE sector		Liabilities (debt ratio, %)					5-year CAGR (%)
		2017	2018	2019	2020	2021	
SOC	Transport	70.46 (122.40)	71.29 (116.25)	73.62 (116.37)	78.61 (121.04)	84.02 (128.49)	4.50 (1.22)
	Housing and real estate	131.17 (302.28)	128.34 (279.37)	126.97 (251.28)	130.09 (231.23)	139.24 (219.16)	1.50 (-7.72)
	Water supply	13.64 (188.35)	14.01 (179.81)	13.92 (166.89)	13.84 (152.49)	13.55 (136.86)	-0.17 (-7.67)
	Energy	168.29 (197.69)	177.10 (218.54)	193.20 (248.73)	194.94 (255.89)	216.80 (300.72)	6.54 (11.06)

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: SOC = social overhead capital.

More specific and comprehensive analysis of the net profit, ROA, operating profit margin, debt ratio, and other financial indicators of the 39 MLTFMPs that account for 94 percent of SOE debt reveals that the financial structures of 14 public enterprises in the energy, housing, and transport sectors are generally weak, as described in box 2.3. The 14 PEs include those that have experienced a deterioration in business profitability or have a generally weak financial structure. In June 2022, the MOEF designated them as “highly indebted SOEs” and announced a special financial management plan to reduce their debt by KRW 24 trillion (US\$18 billion) and secure KRW 10.1 trillion (US\$7.6 billion)²³ by 2026 in an equity increase through the sale of redundant assets, business restructuring, improving management efficiency, revenue expansion, and equity injection. The details of this plan and its fiscal effects are analyzed in detail in chapter 3.

23. At August 31, 2022, exchange rates (the date of announcement of the 2022-26 MLTFMPs).

BOX 2.3

The 14 highly indebted state-owned enterprises (SOEs) subject to the medium- and long-term financial management plan (MLTFMP) requirement

From 2019 to 2021, the Korea Electric Power Corporation (KEPCO) and its six power generation affiliates increased their debt ratio as fuel and purchased power costs increased significantly due to the high oil prices and changes in energy mix, resulting in a large operating loss. Meanwhile, the debt ratio of these SOEs continues to rise due to the increase in borrowings for the construction of new and alternative power plants and the expansion of investment in new and renewable energy.

Korea District Heating Corporation (KDHC) experienced significant fluctuations in net income caused by changes in the business environment, such as rising raw material prices, and deteriorating profitability in the future is a possibility.

The Korea Gas Corporation (KOGAS), Korea National Oil Corporation (KNOC), Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR), and Korea Coal Corporation (KOCOAL) accumulated net losses due to asset impairment from overseas investments and low-profit business structures.

The net loss of the Korea Railroad Corporation (KORAIL) increased by KRW 1 trillion from 2019 to 2021 due to a fall in sales arising from COVID-19, and its debt ratio rose due to continual business losses except for high-speed rail.

Although the Korea Land and Housing Corporation (LH) realized a net profit from the booming real estate market, there have been concerns about increasing financial risks stemming from its large-scale projects and possible increases in financial costs when interest rates rise.

TABLE B2.3.1

Profile of the 14 highly indebted subject to the MLTFMP requirement

SOE	KRW, trillions							
	Net profit		ROA (%)		Operating profit margin		Debt ratio (%)	
	2019	2021	2019	2021	2019	2021	2019	2021
KEPCO ^a (consolidated)	-2.26	-5.23	-1.18	-2.52	-2.16	-9.67	186.83	223.23
KDHC	-0.03	0.02	-0.44	0.34	1.78	1.56	285.29	257.47
LH	2.24	4.16	1.28	2.15	13.55	20.66	254.20	221.30
KNOC	-0.15	-0.05	-0.84	-0.26	19.50	20.77	3,415.48	^b
KOMIR	-0.51	0.02	-9.08	0.52	-72.98	-12.77	^b	^b
KOGAS	0.06	0.96	0.15	2.42	5.34	4.50	382.56	378.87
KOCOAL	-0.12	-0.12	-14.57	-13.12	-144.27	-200.01	^b	^b
KORAIL	-0.05	-1.16	-0.21	-4.58	-1.69	-15.41	257.94	287.32

Source: MOEF; All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: KDHC = Korea District Heating Corporation; KEPCO = Korea Electric Power Corporation; KNOC = Korea National Oil Corporation; KOCOAL = Korea Coal Corporation; KOGAS = Korea Gas Corporation; KOMIR = Korea Mine Rehabilitation and Mineral Resources Corporation; KORAIL = Korea Railroad Corporation; LH = Korea Land and Housing Corporation; ROA = return on assets; SOE = state-owned enterprise.

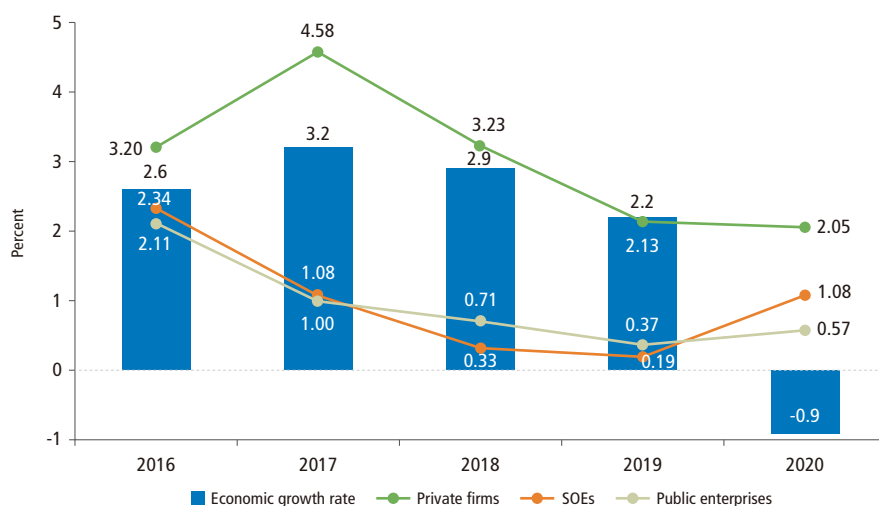
a. The analysis period of this report ends in 2021, so the report does not present detailed analysis of 2022 and beyond. However, in 2022, KEPCO (consolidated) subsequently posted a net loss of KRW 24.4 trillion (US\$19.3 billion) as global energy prices increased.

b. Debt ratio calculation is meaningless due to equity impairment.

From 2016 to 2020, the ROA of all SOEs and the 36 PEs remained positive at 0.19–2.34 percent and the ROE at 0.48–6.25 percent.²⁴ By SOE type, between 2016 and 2019 the ROA and ROE of PEs was similar to or slightly higher than that of all SOEs. The higher profitability of PEs is attributable to their greater exposure to competition and the market.²⁵ In addition, the ROA and ROE of all SOEs and PEs declined between 2016 and 2019, stemming perhaps from a shift in policy in 2017 that emphasized the public interest function of SOEs over their profitability. On the other hand, the profitability of SOEs between 2016 and 2020 was generally lower than that of private sector counterparts (see figures 2.5 and 2.6).

FIGURE 2.5

Return on assets of all state-owned enterprises (SOEs), public enterprises, and private firms, 2016–20 (%)



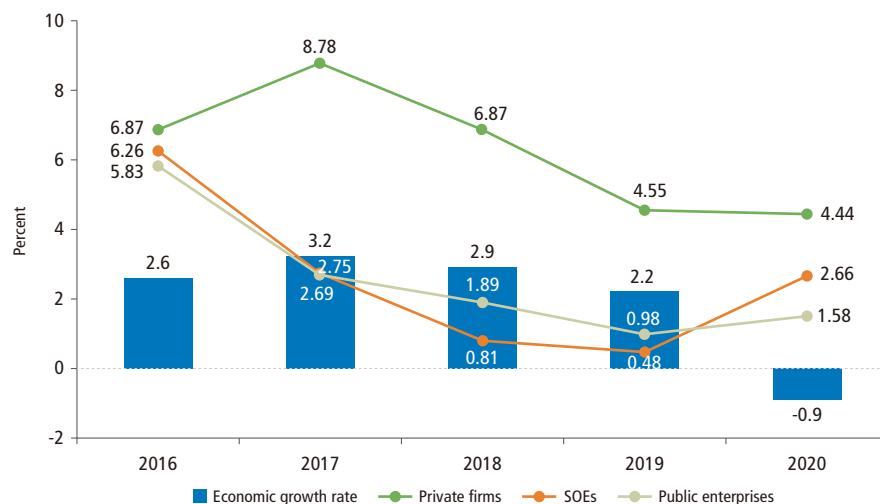
Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

24. The report analyzed the SOE data from 2016 to 2020 because of an availability issue with private sector data.

25. The SOE sector's ROA and ROE soared in 2020 because of the unprecedented net profit growth at NHIS (a QGI) and KOBC (an NPI). NHIS's insurance premium revenue increased in 2020 after the service raised the national health insurance premium rate from 6.46 percent to 6.67 percent and the long-term care insurance premium rate by 8.51–10.25 percent. KOBC's profit growth is attributable to the steep price increase of the stocks it was holding in 2020 (in particular, the HMM stocks), resulting in an increase in the gains on the valuation of convertible bonds and bonds with a warrant.

FIGURE 2.6

Return on equity of all state-owned enterprises (SOEs), public enterprises, and private firms, 2016-20 (%)



Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

The energy and employment/welfare sectors recorded negative profits in 2018 and 2019, and in 2020, during the COVID-19 pandemic, profits in the transport and culture sectors turned negative due to the sharp drop of tourism and travel demands (table 2.10). The profitability of both SOEs and private firms in the energy sector declined in 2018 and 2019 when international oil prices rose. As for the employment, health, and welfare sector, it seems to have been greatly affected by measures to enhance the public orientation of social security and welfare programs, including the wider coverage of national health insurance and the adoption of a government program for older citizens suffering from dementia. In addition, in 2020 a sharp decline in demand for travel and tourism/leisure had a significant impact on the profitability of SOEs and the private sector.

TABLE 2.10

Profitability of state-owned enterprises (SOEs) and private firms by sector, 2016-20

Sector		ROA (%)									
		2016		2017		2018		2019		2020	
		Private firms	SOEs	Private firms	SOEs	Private firms	SOEs	Private firms	SOEs	Private firms	SOEs
SOC	Transport	1.35	1.03	2.81	0.65	2.47	1.17	2.21	0.87	1.57	-1.43
	Housing	1.95	1.40	2.86	1.64	1.73	1.22	1.15	1.29	1.60	1.84
	Water	-0.65	-0.59	0.87	0.90	1.26	1.13	0.63	0.59	1.51	1.41
Energy		2.43	2.96	0.50	0.15	-0.24	-0.37	-0.33	-0.90	0.33	0.80
Employment		2.65	4.40	2.92	0.55	4.26	-6.10	7.13	-5.55	4.45	2.23
Industrial promotion		4.20	0.23	5.54	-0.13	4.81	0.30	2.79	0.19	2.85	0.38
Agriculture		3.98	2.67	5.91	1.54	4.13	-0.37	2.78	0.16	3.50	9.03
Research		5.12	0.52	4.78	0.62	2.97	0.60	4.01	0.46	3.44	0.99
Culture		1.21	7.23	0.70	6.89	1.36	4.77	0.81	5.54	-1.20	-5.21

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

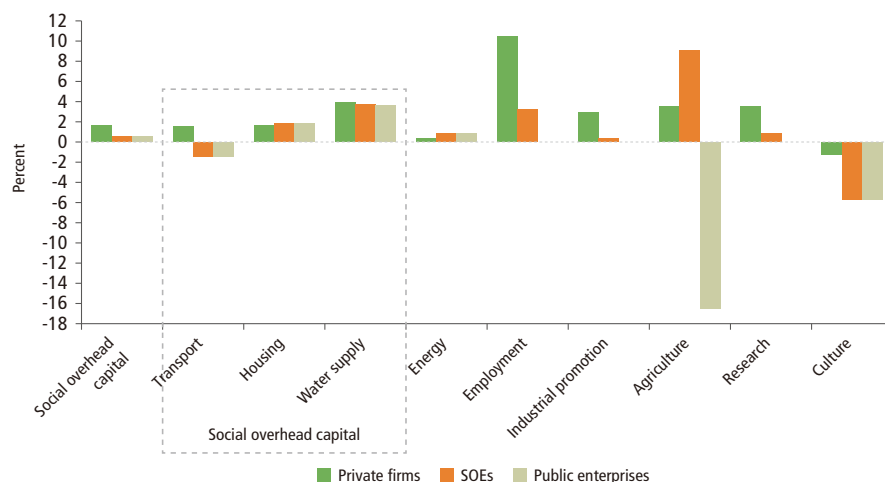
Note: The cells show that the impact of COVID-19 on the profitability of the transport, energy, and culture SOE sectors, as well as that of the policy direction toward social welfare on the employment sector. ROA = return on assets; SOC = social overhead capital.

A closer look reveals that the ROAs and ROEs of all SOEs, PEs, and private companies were significantly affected by COVID-19 (figures 2.7 and 2.8). The transportation and culture sectors recorded negative ROAs and ROEs for all SOEs and PEs. As for private companies, although the culture sector also showed negative ROAs and ROEs, as did SOEs, the transportation sector reported positive ROAs and ROEs, unlike SOEs. This finding suggests that the private transport sector, which includes delivery services, was less affected by COVID-19, unlike public sector entities such as the Incheon International Airport Corporation (IIAC), Korea Airports Corporation (KAC), and Korea Railroad Corporation (KORAIL), which experienced large net losses due to the significant decline in customers arising from COVID-19. Meanwhile, public enterprises in the agriculture sector experienced significantly large negative ROAs and ROEs, which is likely due to the inclusion of the Korea Racing Association (KRA).²⁶ In addition, as explained in box 2.2, the Korean government greatly increased its fiscal support for 18 state-owned financial institutions in 2020 and 2021 as part of the government's efforts to deal with the COVID-19 pandemic. Because deterioration in the performance of these 18 institutions could place a great burden on the central government, in-depth monitoring was necessary. Box 2.4 shows the detailed analysis of financial performance of the 18 state-owned financial institutions tasked with addressing the COVID-19 pandemic.

26. The net income of KRA (Korea Racing Authority) dropped from +KRW 0.22 trillion in 2017 to -KRW 0.44 trillion in 2020.

FIGURE 2.7

Return on assets of all private firms, state-owned enterprises (SOEs), and public enterprises by sector, 2020 (%)

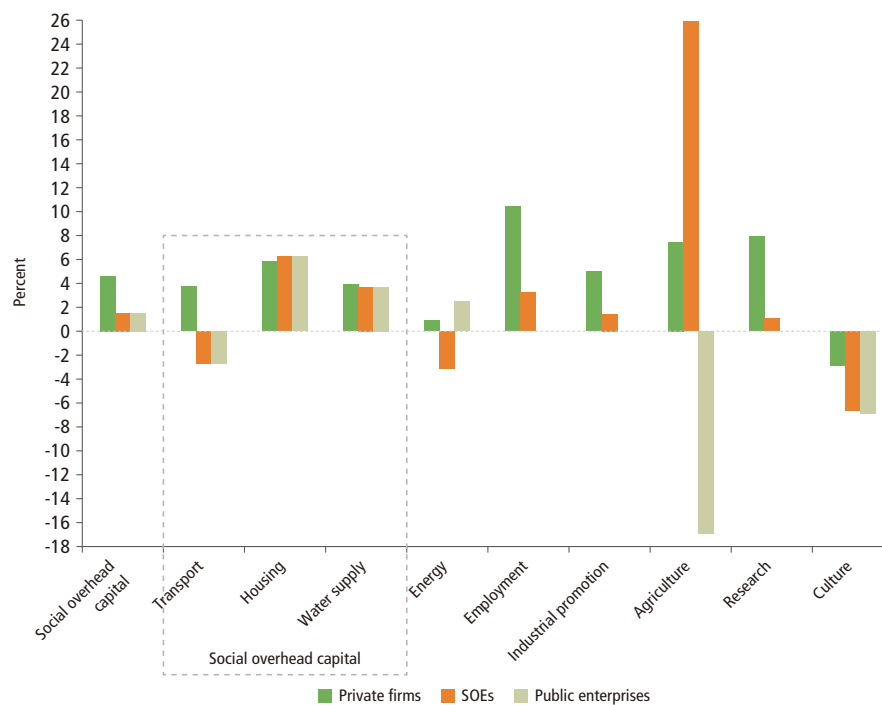


Source: authors' compilation.

Note: No public enterprise is in the employment, industrial promotion, and research sector.

FIGURE 2.8

Return on equity of all private firms, state-owned enterprises (SOEs), and public enterprises by sector, 2020 (%)



Source: authors' compilation.

BOX 2.4

In-depth analysis of the financial performance of 18 state-owned financial institutions

As shown in the table B2.4.1, thanks to the fiscal support from the government, the guarantee, insurance, and investment service providers among the 18 state-owned financial institutions did not experience a significant deterioration of their financial performance during the pandemic (such as net profit, return on assets, or debt ratio). However, some loan providers—Korea SMEs and Startups Agency (KOSME) and the Small Enterprise and Market Service (SEMAS)—suffered an increase in their debt ratios, which suggested the need for intensive efforts to consolidate their finances.

The liabilities and debt ratio of KOSME may be overestimated compared with those of other state-owned enterprises (SOEs) because it issues bonds with funding from its loan provision business. SEMAS also needs close monitoring of its financial position, even though its paid equity is very small compared with its liabilities, and so a direct comparison with the other SOEs is not feasible.

Because the 18 state-owned financial institutions are still providing services to address the COVID-19 pandemic, an analysis of the financial performance of these institutions is needed when they complete the majority of their pandemic-related services.

TABLE B2.4.1

Financial performance of 18 state-owned financial institutions tasked with addressing the COVID-19 pandemic

Institution type	Institution	Expenditure (KRW, trillions)			Net profit (KRW, trillions)		ROA (%)		Debt ratio (%)	
		2021	(Growth rate, %)		2019	2021	2019	2021	2019	2021
Guarantees/insurance	HF	48.21	51.17	(6.14)	0.55	0.61	3.28	2.78	61.74	81.71
	KDIC	22.43	25.25	(12.57)	1.94	2.29	10.44	11.94	350.60	67.34
	KODIT	8.51	11.27	(32.43)	a	a	n.a.	n.a.	46.59	42.77
	HUG	1.23	1.65	(34.15)	0.38	0.36	5.19	4.48	32.62	26.62
	K-SURE	3.07	4.11	(33.88)	a	a	n.a.	n.a.	109.06	75.51
	KOTEC	2.85	3.78	(32.63)	a	a	n.a.	n.a.	76.32	45.50
	KOBC	1.97	1.66	(-15.74)	-0.17	4.19	-4.73	35.09	90.43	63.56
	KINFA	1.23	1.39	(13.01)	0.20	0.30	7.55	8.72	858.64	419.13
	KOREG	0.36	0.60	(66.67)	-0.06	-0.01	-4.64	-0.60	106.85	101.25
Loans	IBK	45.70	49.69	(8.73)	1.61	2.43	0.53	0.64		
	KDB	28.91	43.85	(51.68)	0.28	1.32	0.11	0.41	n.a.	
	KEXIM	8.73	9.51	(8.93)	0.44	0.48	0.47	0.48		
	KOSME	8.66	11.39	(31.52)	a	a	n.a.	n.a.	596.00	479.00
	SEMAS	0.50	16.75	(3,250)	-0.0001	-0.002	-0.28	-6.67	1,257	b
Investments	KAMCO	1.98	1.94	(-2.02)	0.07	0.06	1.49	0.82	158.36	172.93
	KIC	0.42	0.54	(28.57)	0.06	0.17	20.02	34.55	22.09	27.06
	KIND	0.06	0.12	(100.00)	0.002	0.003	1.14	0.63	4.23	44.08
	KVIC	0.03	0.04	(33.33)	0.005	0.002	5.39	2.15	5.58	17.74

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: The shading indicates where institutions greatly increased their expenditures to cope with the COVID-19 pandemic. Among them, KOSME and SEMAS showed a higher level of debt ratio or capital impairment. HF = Korea Housing Finance Corporation; HUG = Korea Housing and Urban Guarantee Corporation; IBK = Industrial Bank of Korea; KAMCO = Korea Asset Management Corporation; KDB = Korea Development Bank; KDIC = Korea Deposit Insurance Corporation; KEXIM = Export-Import Bank of Korea; KIC = Korea Investment Corporation; KIND = Korea Overseas Infrastructure and Urban Development Corporation;

KINFA = Korea Inclusive Finance Agency; KOBC = Korea Ocean Business Corporation; KODIT = Korea Credit Guarantee Fund; KOREG = Korea Federation of Credit Guarantee Foundations; KOSME = Korea SMEs and Startups Agency; KOTEC = Korea Technology Finance Corporation; K-SURE = Korea Trade Insurance Corporation; KVIC = Korea Venture Investment Corporation; SEMAS = Small Enterprise and Market Service. n.a. = not applicable; ROA = return on assets; SOE = state-owned enterprises.

a. SOEs do not consider current net profit under corporate accounting standards. The liabilities and debt ratios of bank-type SOEs (IBK, KDB, and KEXIM) are not directly comparable with those of the other SOEs because their liabilities include deposits from their customers.

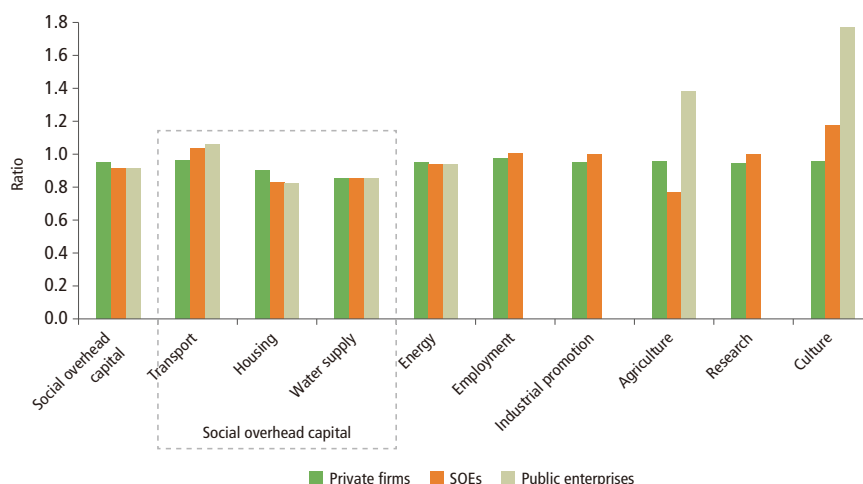
b. Capital impairment.

Operational Performance

The operational performance of SOEs is generally measured by operational efficiency—that is, operating expenses to operating revenue. As of 2020, operational efficiency was similar across all SOEs, PEs, and private firms, except for those in the transport, agriculture, and culture sectors (figure 2.9). All SOEs and PEs in those three sectors, which were significantly affected by the COVID-19 pandemic, exhibited lower operational performance than private firms in 2020. For example, as shown in figure 2.9 in the culture sector PEs' operating expenses are about 1.8 times higher than their operating revenue, whereas private firms' operating expenses are less than their operating revenue.

FIGURE 2.9

Operational efficiency of all private firms, state-owned enterprises (SOEs), and public enterprises by sector, 2020



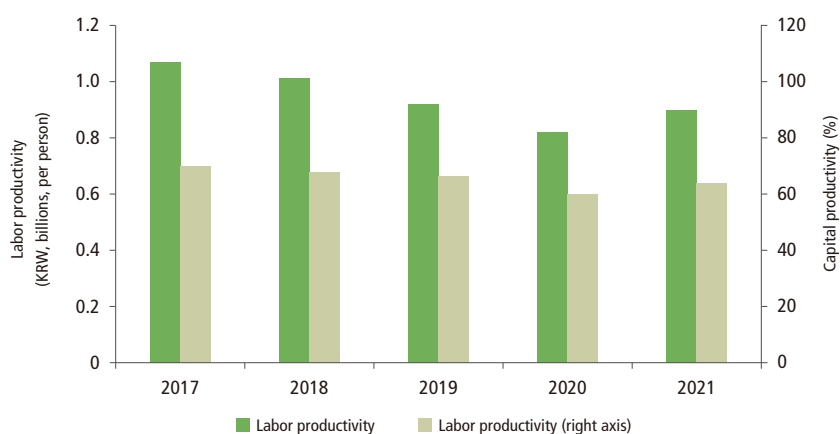
Source: authors' compilation.

Note: No public enterprises are in the employment, industrial promotion, and research sectors.

The operational performance of an organization can also be measured by its labor productivity and capital productivity. The labor productivity of PEs tended to decrease after 2017, but increased in 2021. Capital productivity did not show significant

changes every year (figure 2.10).²⁷ To increase the productivity and efficiency of SOEs and improve customer service satisfaction, the MOEF issued New Government SOEs Innovation Guidelines on July 29, 2022. The guidelines called for: (1) focusing on core functions by reducing noncore functions outside of unique purposes; (2) trimming excessively large numbers of organizational personnel through adjustments to dispatched personnel and reductions in high-ranking officials; (3) improving labor productivity and fairness by reducing labor costs and general expenses and reforming the job performance–based compensation system; (4) disposing of unnecessary and nonessential assets and settling stakes in poorly performing joint venture companies; and (5) examining and adjusting welfare benefits based on external audits and related regulations. The innovation guidelines did not include plans to privatize SOEs, nor did they engage in artificial structural adjustments. In addition, the innovation guidelines were to be implemented in a bottom-up approach that allows for independent innovation plans tailored to the characteristics of the institutions rather than a top-down approach led by the government.

FIGURE 2.10
Productivity trends of public enterprises, 2017-21



Source: authors' compilation.

27. As for labor and capital productivity, between 2017 and 2021 only PEs were analyzed because of the limited data available for private firms, and the government-entrusted revenue of QGIs and NPIs and the revenue of PEs cannot be treated equally.

Service Delivery Performance

This section discusses the quality of services primarily provided by Korean SOEs. For decades, Korea has accumulated a significant stock of investments in transportation infrastructure, such as roads, railways, and airports, resulting in a significant improvement in service quality.²⁸ Investments in railways exceeded those on roads to alleviate traffic congestion around major cities and increase environmentally friendly investments. Investment in housing welfare for low-income people has also continually expanded, and the nationwide power grid has been digitized and mobilized to upgrade service quality. At the same time, all SOEs are proactively responding to recent issues such as climate change, the COVID-19 pandemic, and the utilization of artificial intelligence (AI) technology, thereby improving the quality of services provided to the public.²⁹

Under the plan of the National Highway Network (7,783 kilometers, 2021-30), the Korea Expressway Corporation (EX) is undertaking expressway construction projects to protect highway users and to innovate national services below. Examples of projects are enhancement of traffic safety management systems, expansion of section speed control, and provision of emergency evacuation guidance services—all aimed at achieving the goal of being in the top five of OECD members in terms of traffic accident fatalities by 2028. As a result, traffic accident fatalities have decreased (annual average of -7.7 percent) over the last 10 years. In addition, efforts are being made to introduce smart tolling services, such as expanding the multilane high-pass system and developing artificial intelligence (AI) systems for license plate recognition, and to innovate rest areas, such as developing various food options that reflect the local character, offering discounts on local attractions for rest area customers, and expanding the electric vehicle charging infrastructure.

In the railway sector, the Korea Railroad Corporation (KORAIL) is introducing new services desired by customers, in addition to expanding its network, and is

28. International comparisons of road and railway networks typically use the International Road Federation Road Statistics and the International Union of Railways Railway Statistics, but because of inconsistencies arising from whether the network is viewed per land area or per land coefficient considering population, a specific ranking is not provided. However, according to a report by the Ministry of Land, Infrastructure and Transport, road length and traffic volumes have steadily increased over the last 10 years, and the transportation network was expanded significantly during that time (MOLIT 2022).

29. The MOEF has been conducting customer satisfaction surveys since 1999 to improve the quality of public services, and it continually strives to improve the fairness and effectiveness of the surveys through institutional reforms. In particular, to ensure the discriminative power of the survey following the ongoing upward standardization of the survey results, the Public-Service Satisfaction Index model was revamped beginning with the 2015 survey. In addition, to prevent collusion between the survey company and SOEs, since the 2020 survey an independent agency has been responsible for the contracting process. As of 2021, 245 institutions, representing 70 percent of all SOEs, have been surveyed, and the results are reflected in management performance evaluations.

constantly improving station and train facilities to enhance customer convenience. It is expanding user-centered digital services, such as the introduction of simple payment for tickets, QR code validation, and online chat counseling services. KORAIL has also introduced an automatic refund system for train delays and compensation for equipment failures. It has also improved onboard facilities such as installing closed-circuit television (CCTV) in rooms and corridors and improving the speed of public Wi-Fi. Upon arrival at a station, a passenger can immediately access luggage delivery and car rental services as well as mobile transfer information. KORAIL also operates an online application service for wheelchair-bound customers and provides sign language services for the deaf.

In the airport sector, Incheon International Airport is introducing advanced technologies to its infrastructure and innovating non-face-to-face services (box 2.5). It provides a safe and convenient entry and exit process and has introduced and operates the world's first AI-based voice recognition and video guidance signage and beverage delivery robots in the duty-free zone. As a result, it has achieved the highest rating in the world's first Airport Council International customer experience accreditation. In addition, the Korea Airports Corporation has become the world's first "ALL-IN-ONE" airport operator by combining the management of all airports in Korea under its umbrella. It also has achieved the highest aviation safety for all aircraft within Korean airspace by providing high-quality communications between aircraft and controllers.

BOX 2.5

Incheon International Airport Corporation

Incheon International Airport was invited into the Airports Council International (ACI) Hall of Fame for the first time after winning Airport Service Quality awards for 12 consecutive years. Since 2019, Incheon has participated in the ACI Customer Experience Accreditation to become a First Mover rather than a Fast Follower, and it became the first airport in the world to obtain the highest level in the accreditation.

Move before the trouble. Incheon is utilizing CX enhancement programs to proactively identify potential issues before customers express them and to discover fundamental CX improvement measures. At CX Touchpoint Program, participants are transformed into virtual passenger personas and experience the customer journey firsthand. The objective is to uncover substantial enhancement opportunities by recognizing the pain points of customer experience with the design-thinking methodology. MOT Before-Service is a program that provides tailored solutions and coaching by analyzing each service touchpoints in advance. As opposed to after-sales service, it focuses on proactively detecting and systematically managing negative customer experience elements before the customer expresses dissatisfaction.

Participate and cooperate. Through the Service Improvement Committee, CX on-site consultative body, and passenger committee, Incheon has set up the systems that facilitate communication and collaboration among its 80,000 or so airport staff members. Incheon airport has established its own goal for processing time: 45 minutes for departure, 40 minutes for arrival.

In the public housing sector, various types of rental housing are being supplied to promote housing stability and welfare for non-homeowners. To move into rental housing, certain income and asset requirements must be met, and applicants have had to obtain and submit 6-10 types of documents such as resident registration, national pension enrollment certificate, and health insurance qualification confirmation from separate agencies. To alleviate this inconvenience, LH improved the process so that as of 2022, by agreeing to the use of public data, potential renters can submit documents without having to obtain them from each agency. The plan was to apply this to all rental housing as of 2023 to enhance the housing benefits for non-homeowners.

In the power sector, KEPCO is pursuing customer service innovation for the public benefit through the mobile and digital transformation of the nationwide strategic network. KEPCO has expanded its mobile services to enable customers to handle complaints easily and conveniently through the 'KEPCO ON' mobile app. It has also introduced various simple authentication systems and improved the overall user environment by operating a chatbot. KEPCO is digitizing complaint forms using digital devices and promoting the implementation of a non-face-to-face digital desk system through the introduction of a video consultation system. In addition, KEPCO is fully digitizing the entire electricity usage cycle, including electricity usage applications, contract management, and electronic billing of electricity usage to improve customer convenience and work efficiency.

In the area of climate change and the environment, the MOEF has established detailed indicators, such as eco-friendliness and carbon neutrality, for use in evaluating management performance in promoting the efforts of SOEs to respond to climate change.³⁰ By means of this process, Korean SOEs are pursuing greenhouse gas reduction and energy savings, purchasing eco-friendly products, and introducing methods to respond to climate change in their major business operations. For example, LH is expanding the construction of eco-friendly facilities, installing LED lights in all the public housing units it supplies and solar power facilities on the roofs of long-term rental housing. LH is also transforming aging existing buildings into green buildings that improve energy performance by more than 20 percent. Meanwhile, K-water has established four strategies for addressing climate change: (1) implementing carbon-zero water management, (2) expanding water energy, (3) activating green hydrogen, and (4) creating carbon absorption sources to reduce 7.8 million tons of greenhouse gases by 2050. K-water is also establishing an energy-saving water production

30. Korea joined the Climate Change Convention in 1994. In 1998, after adoption of the Kyoto Protocol in 1997, a governmentwide response organization was formed in the Prime Minister's Office, and a comprehensive plan for climate change was compiled and announced every two years. Since that time, SOEs have introduced methods responding to climate change, and a "public sector greenhouse gas and energy target management system" has been implemented since 2011. In addition, although there are no aggregate data on Korean SOEs investments in climate change challenges, in 2023 the Korean government allotted KRW 13.3 trillion (approximately US\$10.3 billion) to coping with climate change responses.

system, creating carbon absorption sources such as riparian forests, producing green hydrogen using small-scale hydroelectric power, and developing floating solar power systems (box 2.6).

SOEs also played a role in preventing the spread of COVID-19 during the pandemic. In the early stages of the outbreak, all SOEs implemented flexible working arrangements, such as remote work and minimized personnel movements and gatherings through video conferencing. Infrastructure and systems to support such working arrangements were also quickly introduced. The National Health Insurance Service contributed to the establishment of an infectious disease monitoring system by linking COVID-19–related data and building a database. The National Information Society Agency (NIA) provided assistance in app service development related to the supply of masks to minimize confusion in mask purchases and maximize the initial effect of preventive measures. National university hospitals played a core role in treating severe COVID-19 patients, while EX and KORAIL supported the movement of medical personnel. In addition, many SOEs were actively engaged in social contribution activities, such as donating masks and daily necessities to low-income households, supporting purchases and loans for small businesses, and purchasing agricultural products from affected farms.

Finally, SOEs are increasingly utilizing advanced technologies, such as AI and the Internet of Things (IoT) in major projects. For example, KEPCO and its five power generation subsidiaries are pursuing an Intelligent Digital Power Plant (IDPP) project, which operates and inspects power plants through big data analysis using AI technology—all aimed at minimizing power generation costs by preventing malfunctions and improving asset management efficiency. EX is promoting the construction of advanced highways using technologies such as big data, AI, IoT, and vehicle communication. In particular, it has introduced an intelligent traffic system to provide real-time information on surrounding traffic conditions, risks, and other information through communication with vehicles in motion, road infrastructure, and other vehicles. The Incheon International Airport Corporation (IIAC) is preparing to introduce a smart integrated control platform, which utilizes advanced technology to proactively respond to situations such as aircraft leaving the sight of air-traffic controllers or collisions with ground-moving objects due to night or fog.

BOX 2.6

Climate change–related disclosure and environmental, social, and governance (ESG) management of K-water

In 2021, the Korean government submitted its 2030 Nationally Determined Contributions (NDCs) to the Secretariat of the United Nations Framework Convention on Climate Change. The NDCs set out targets across seven sectors. To support the government's efforts, K-water has established and is currently implementing the Carbon Neutrality Roadmap. The core strategy driving the roadmap is the development of new and renewable energy to reduce greenhouse gas (GHG) emissions. The strategy promotes Korea's NDCs for the power generation sector. K-water is committed to reducing GHG emissions by 6.3 million tons of carbon dioxide equivalent (MtCO₂eq) by 2030.

Environmental. K-water's strategy to develop and expand the use of renewable energy focuses on the enterprise's floating photovoltaic project, which combines several ESG elements. The Korean territory is narrow and mountainous. Building photovoltaic facilities on land would mean cutting down trees or even removing parts of mountains, which must be avoided. K-water has addressed this issue by building photovoltaic plants on the surface of dam reservoirs.

Governance. Despite the benefit of producing green energy with minimal environmental damage, the photovoltaic project experienced setbacks early on. Local residents opposed the project, raising concerns about the possible pollution of water sources and the destruction of the aquatic ecosystem, and were later joined by the wider local community and civil society organizations. K-water responded by empathizing with them and engaging the services of a third-party organization to verify the possibility of water pollution and ecological damage, allowing them to obtain data to respond to local concerns. By communicating openly with the locals, the SOE was able to win back community trust, and reach an agreement to move forward with the project.

Social. K-water also developed a new business model that allows local residents to invest in the floating photovoltaic plant project and combining key elements of ESG management. Under the model, the enterprise shared the plant's profits with locals, thereby boosting their income and the local economy. The plant replaced the usual square photovoltaic panels with plum-blossom-shaped ones to boost the plant's value as tourist attraction.

K-water has also implemented strategies to reduce carbon emissions from water supply systems. For example, pipe network management powered by artificial intelligence has reduced leakage and indirect GHG emissions from power consumption during the water collection/distribution process. In another example of K-water's carbon reduction strategies, the corporation placed carbon sinks across newly developed cities and local rivers. In addition, K-water discloses its GHG emissions performance on the All Public Information In-One (ALIO) website (www.alio.go.kr), and its ESG management activities have greatly contributed to meeting the SOE's reduction targets.

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3 iSOEF Module: Assessment of the Fiscal Costs and Risks from the SOE Sector

FISCAL COSTS OF SOES

This chapter analyzes the fiscal costs and financial performance of state-owned enterprises (SOEs) in the Republic of Korea by quantifying transactions between the central government and SOEs. Revenue transmitted from SOEs to the central government budget includes taxes, dividends, and profit shares of SOEs. SOE revenue received from the central government consists of direct transfers from the state and indirect budget state support, and is reported in the ALIO system.

Direct transfers take the form of subsidies, contributions, charges, transferred revenue, and equity injections. Indirect budget support includes the revenue from commissioned services, exclusive revenue,³¹ deferred taxes, tax credits or tax arrears, nonpayment of dividends, and any other kind of preferential treatment.

According to the available data, SOEs have had a negative direct net impact on the central government's budget over the last five years, but the impact has been stable and under manageable ratios.³² The pre-pandemic net impact stood in 2019 at about 3.5 percent of the gross domestic product (GDP), which went up to 4.7 percent in 2021, driven by the efforts to address the COVID-19 pandemic. The revenue in the central government budget from SOEs stood at 0.2-0.29 percent of GDP, while direct transfers and indirect support were 3.8-5.5 percent of GDP between 2017 and 2021.

31. Exclusive revenue refers to the revenue SOEs can obtain as a result of a monopolistic position regulated by government laws.

32. The average rate of the annual increase in the budget of the central government in the Medium-Term Expenditure Framework (MTEF) of the Korean government can be a reference for assessing the net impact. Between 2017 and 2021, the rate was 5.8 percent of the gross domestic product (GDP), so the negative impact of 3.5-4.7 percent of GDP can be a manageable level within the central government's budget in Korea. Among countries, few reliable data are available on the net flows between the central government budget and SOEs. According to the integrated State-Owned Enterprise Framework (iSOEF) assessment report, Croatia reported a small positive direct net impact—an average of 0.33 percent of GDP over 2017-19—and Bulgaria reported a negative direct net impact—an average of -1.34 percent of GDP over the same period.

TABLE 3.1

Direct net impact of state-owned enterprises (SOEs) on the central government budget, 2017-2021

KRW, trillions (% of GDP)

		Pre-COVID-19 pandemic			COVID-19 pandemic	
		2017	2018	2019	2020	2021
Budget revenue from SOEs (A)	Total taxes	3.81 (0.21)	2.19 (0.12)	2.80 (0.15)	2.59 (0.13)	3.34 (0.16)
	Dividends	1.56 (0.08)	1.81 (0.10)	1.44 (0.07)	1.4 (0.07)	1.44 (0.07)
Direct transfers to SOEs (B)	Total subsidies	10.98 (0.60)	11.65 (0.61)	13.10 (0.68)	16.23 (0.84)	18.02 (0.87)
	Charges	2.13 (0.12)	2.11 (0.11)	2.05 (0.11)	2.04 (0.11)	2.06 (0.10)
	Transferred revenue	28.17 (1.53)	29.26 (1.54)	30.90 (1.61)	34.32 (1.77)	38.46 (1.86)
	Contributions	22.02 (1.20)	20.08 (1.06)	21.16 (1.10)	29.12 (1.50)	28.86 (1.39)
	Equity injections	3.56 (0.19)	3.64 (0.19)	5.78 (0.30)	9.38 (0.48)	8.51 (0.41)
Indirect support of SOEs (C)	Commissioned service revenue	2.26 (0.12)	2.54 (0.13)	3.02 (0.16)	3.84 (0.20)	4.12 (0.20)
	Other revenue	0.38 (0.02)	0.30 (0.02)	0.28 (0.01)	0.33 (0.02)	0.51 (0.02)
Net impact of SOEs (D)	(A) – (B) – (C)	-64.12 (3.49)	-65.58 (3.46)	-72.06 (3.74)	-91.28 (4.70)	-95.76 (4.62)

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: Other revenue from SOEs consists of contributions, subsidies, investments, transfer revenue, and interest/incidental revenue from commissioned services. GDP = gross domestic product.

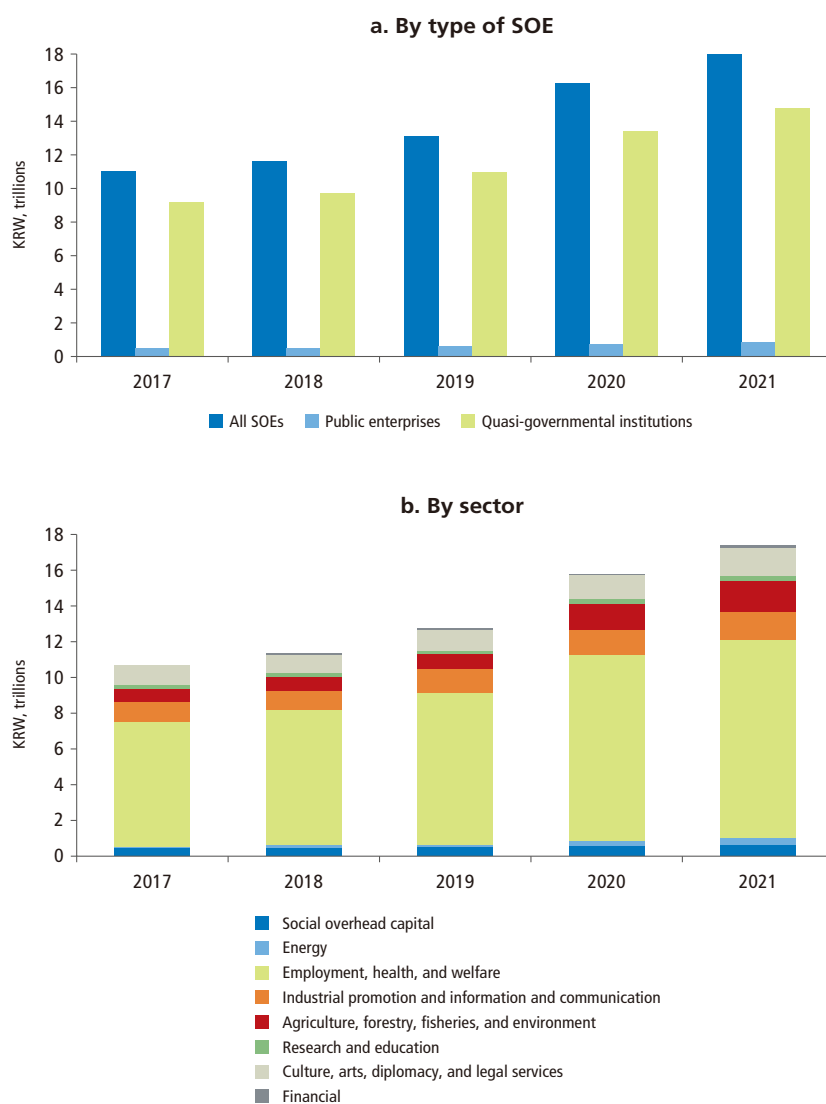
Since 2020, the direct net impact of SOEs on the central government budget has been greatly affected by their response to the COVID-19 pandemic. Taxes and dividends from public enterprises in the transportation, tourism, and leisure sectors fell because of the net losses incurred during the pandemic, and direct and indirect government support increased. The government increased subsidies to protect vulnerable groups such as small business owners, and it increased contributions to the public guarantee institutions for small and medium enterprises (SMEs) to secure their employment stability. Equity injections were also increased for the construction of high-speed highways, and government contributions to railway construction rose.

Subsidies for all SOEs have been increasing every year—from KRW 10.98 trillion (US\$10.28 billion) in 2017 to KRW 18.02 trillion (US\$15.14 billion) in 2021. Subsidies for quasi-governmental institutions (QGIs) account for 82 percent of total subsidies, reflecting the nature of the institutions that execute government projects on a commission basis or manage public funds. In addition, the growth rate of subsidies after COVID-19 (23.8 percent from 2019 to 2020) is higher than the growth rate before COVID-19 (12.5 percent from 2018 to 2019). A comparison of government subsidies by sector reveals that the majority of subsidies to SOEs fall in the employment, health, and welfare sector, followed by the industrial promotion and information and communication sector, and then the culture and arts sector. Subsidies of the agriculture, forestry, fisheries, and environment sector increased in 2020 and 2021. Among the institutions, subsidies increased for the National Health Insurance Service (NHIS)—employment, health and welfare; Korea Trade-Investment Promotion Agency (KOTRA) and Small Enterprise and Market Service (SEMAS)—industrial

promotion; Korea Tourism Organization (KTO)—culture; and Korea Agro-Fisheries and Food Trade Corporation (AT)—agriculture, indicating that the government’s support for SOEs in response to COVID-19 has expanded, including protection of vulnerable populations, health insurance, export support (SMEs), tourism, and agriculture and fisheries.

FIGURE 3.1

Subsidies by type and sector of state-owned enterprises (SOEs), 2017–21



Source: authors' compilation.

Note: SOC = social overhead capital.

Government support for SOEs has been provided following the investment direction of each sector in the central government's Medium-Term Expenditure Framework. As shown in table 3.2, budget expansion was indicated in the MTEF for the employment, health, and welfare sector; environment sector; and the industrial promotion and information and communication sector. Although the 12 sectors in the MTEF do not completely overlap with the nine sectors of SOEs, increased investment areas in the MTEF are similar to those in SOE sectors. For example, the industry and energy sector in the MTEF covers the industrial promotion and information and communication sector of SOEs.

TABLE 3.2

Financial resource distribution across 12 sectors of the Medium-Term Expenditure Framework (MTEF), 2021 and 2022

Sector	2021 (KRW, trillions) (A)	2022 (KRW, trillions) (B)	(B) – (A)	(B) – (A)/ A*100 (%)
Total expenditure	558.0	607.7	49.7	8.9
Employment, health, and welfare	199.7	217.7	18.0	9.0
Education	71.2	84.2	13.0	18.3
Culture, sports, and tourism	8.5	9.1	0.6	7.1
Environment	10.6	11.9	1.3	12.3
Research and development	27.4	29.8	2.4	8.8
Industry and energy	28.6	31.3	2.7	9.4
SOC	26.5	28.0	1.5	5.7
Agriculture, forestry, and food	22.7	23.7	1.0	4.4
National defence	52.8	54.6	1.8	3.4
Foreign affairs and unification	5.7	6.0	0.3	5.3
Public order and safety	22.3	22.3	0.0	0.0
General—local administration	84.7	98.1	13.4	15.8

Source: 2021-25 and 2022-26 Medium-Term Expenditure Framework: NABO 2022; authors' compilation.

Note: Total expenditure is based on the main budget. SOC = social overhead capital.

As of July 31, 2021, the government equity injection for 34 SOEs amounted to KRW 156 trillion (US\$135 billion)—KRW 75 trillion (US\$65 billion) from the general account and KRW 81 trillion (US\$70 billion) from special accounts and funds (table 3.3). The government equity injection for 20 public enterprises (PEs) was KRW 116 trillion (US\$101 billion), accounting for 74 percent of the total equity injection. KRW 4 trillion (US\$3.5 billion) was invested in six QGIs, and KRW 36 trillion (US\$31 billion) was invested in eight nonclassified public institutions (NPIs). Of the PEs, the Korean Land and Housing Corporation (LH) is the largest recipient of government equity injections; the Korea Rural Community Corporation (KRC) is the largest recipient among QGIs; and the Korea Development Bank (KDB) is the largest recipient among NPIs (see appendix C). Of the direct transfers from the government to SOEs, equity injections require continual management because they are national assets such

as investment securities and are a source of government revenue through future dividends and equity sales. Therefore, the government must ensure that it supports what SOEs need based on their operational performance and project outcomes.

TABLE 3.3

Government investments in state-owned enterprises (SOEs), as of July 31, 2023

Type and no. of SOEs	Paid capital (KRW, trillions) (A)	Government share					
		General account		Special account		Total (KRW, trillion) (B)	Equity ratio (%) (B)/(A)
		Amount (KRW, trillions)	Share (%)	Amount (KRW, trillions)	Share (%)		
Private enterprises (20)	131.46	38.10	29.0	77.67	59.1	115.77	88.1
Quasi-government institutions (6)	5.30	4.16	78.5	0.11	2.2	4.26	80.5
Nonclassified public institutions (8)	43.69	32.70	74.8	3.61	8.3	36.31	83.1
Total SOEs (34)	180.45	74.95	41.5	81.39	45.1	156.34	86.6

Source: MOEF 2022; authors' compilation.

In 2022, the Korean government received KRW 2.45 trillion (US\$1.93 billion) in dividends (profit payments to the budget) from 19 government-invested institutions (18 SOEs) that generated net profits in 2021 (see appendix D). From 2018 to 2022, the dividend payout ratio (dividend divided by net profit) increased by 5.40 percentage points, to an average of 40.38 percent (table 3.4) – broadly in line with the government's December 2014 announcement of a policy to improve the dividend policy for government-invested institutions, which includes a medium-term plan to gradually raise the dividend payout ratio to 40 percent by 2020 in 3 percentage point increments per year. In early 2022, the government announced it would maintain the 2020 dividend payout ratio target of 40 percent until 2026 after consulting with SOEs and the relevant line ministries to consider the government's financial conditions and the financial soundness of the dividend-issuing institutions. It also took into account the concern that the institutions might face financial difficulties due to the rapid pace of the dividend payout ratio target increases in the past.

TABLE 3.4

Profit payments from state-owned enterprises (SOEs) to government budget, 2018-22

Category	KRW, trillions					
	2018 (A)	2019	2020	2021	2022 (B)	(B) – (A)
General account	0.86	0.67	0.61	0.92	1.68	0.82
Special account	0.94	0.77	0.80	0.52	0.77	-0.17
Total	1.81	1.44	1.40	1.44	2.45	0.64
(Dividend ratio, %)	(34.98)	(32.48)	(32.58)	(36.92)	(40.38)	(5.40)

Source: authors' compilation.

On the other hand, as its spending increases in response to low birth rates and an aging population, it will be important for the government to consider policies to expand government dividends, one of the government's major sources of revenue. For example, these could include reviewing and improving the level of and criteria for dividends from government funding agencies by comparing them with those of private companies in the same industry and overseas SOEs. Improved profitability management would also be important for major government-invested institutions, including financial institutions, social overhead capital (SOC) institutions, and energy corporations, whose financial performance accounts for a significant portion of government dividends (see appendix D). The government needs to continuously monitor whether the financial management plans established by SOC and energy sector PEs to improve financial soundness and profitability are being executed effectively.

It is also necessary to consider deficit-covered institutions, which can burden government finances (table 3.5). Deficit-covered institutions are those in which expenses exceed self-generated revenue. In this case, the excess amount is covered by direct government aid through contributions or subsidies. The MOEF designated 67 institutions as deficit-covered in its Detailed Guidelines for Budget Planning and Fund Management Plan for 2022. That total included 62 institutions subject to the AMPI. Of the 38 SOEs that received contributions from the government, 20 were QGIs (commissioned service type), and 17 were NPIs. Furthermore, among the institutions receiving subsidies from the government, eight were QGIs, and 16 were NPIs.

TABLE 3.5

Designation of deficit-covered institutions by type of state-owned enterprise (SOE), 2021

Category of government aid	Type of SOE				Total
	Quasi-market-type PE	Fund management-type QGI	Commissioned service-type QGI	NPI	
Contributions	1	0	20	17	38
Subsidies	0	1	7	16	24
Total	1	1	27	33	62

Source: Ministry of Economy and Finance; authors' compilation.

Note: NPI = nonclassified public institution; PE = public enterprise; QGI = quasi-governmental institution.

In 2022, the self-generated revenue of deficit-covered SOEs accounted for 39.7 percent of their total revenue (table 3.6). As for institutions receiving government contributions, the ratio of self-generated revenue ranged from a minimum of 2.82 percent (Korea Technology and Information Promotion Agency for SMEs) to a maximum of 94.70 percent (Korea National Railway). By contrast, for subsidized institutions, the average ratio of self-generated revenue ranged from a minimum of 0.78 percent (Literature Translation Institute of Korea) to a maximum of 70.05 percent (Seoul Art Center), which shows that the percentage of SOEs receiving

government contributions was higher on average. To prevent government support for deficit-covered SOEs from expanding into fiscal risks, the government should carefully monitor the size of self-generated revenue, avoid underestimating or omitting it, and strictly review budgets to avoid pursuing projects with insufficient validity. Meanwhile, the National Assembly is making efforts to reduce the burden on government finances by rigorously examining the budgets of these institutions.

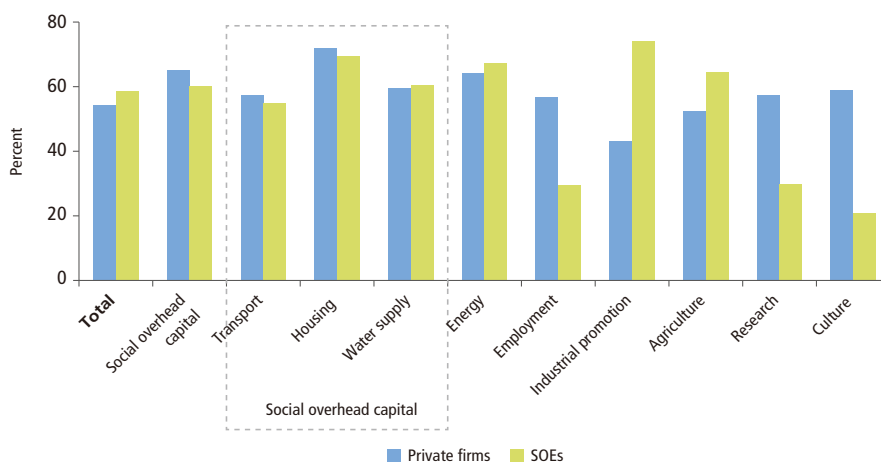
TABLE 3.6
Self-generated revenue of deficit-covered SOEs, 2022

Category of government aid	Contributions and subsidies for deficit-covered SOEs (KRW, trillions)	Self-generated revenue (KRW, trillions) (A)	Total revenue (KRW, trillions) (B)	Average % of self-generated revenue (A)/(B)	% of self-generated revenue	
					Min	Max
Contributions	2.12	1.62	3.74	43.3	2.82	94.70
Subsidies	0.8	0.3	1.1	27.3	0.78	70.05
Total	2.92	1.92	4.84	39.7	0.78	94.70

Source: NABO 2022; authors' compilation.

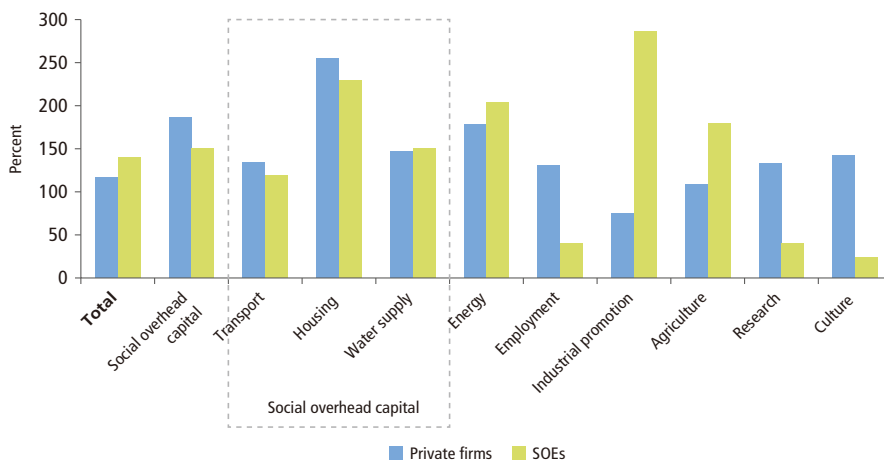
Financial leverage is not higher for most SOEs than for private firms, and the level of debt riskiness in most sectors, and except for the industrial promotion and agriculture sectors, is lower than or similar to that of private sector companies. High ratios of debt-to-assets and debt-to-equity can lead to the debt riskiness of SOEs, and those ratios of SOEs are higher than those of private companies in the industrial promotion and agriculture sectors (figures 3.2 and 3.3). The industrial promotion sector recorded high debt-to-assets as well as debt-to-equity ratios because of the higher bond issuance for broader loan provisions for self-employed workers and small enterprises. In the agriculture sector, the debt-to-assets and debt-to-equity ratios exceeded that of private firms due to the growth of borrowings for loan provisions to farmers.

FIGURE 3.2

Debt-to-assets ratio of private firms and state-owned enterprises (SOEs), 2020

Source: authors' compilation.

FIGURE 3.3

Debt-to-equity ratio of private firms and state-owned enterprises (SOEs), 2020

Source: authors' compilation.

FISCAL RISKS FROM SOES

Fiscal risks are factors that may cause fiscal outcomes to deviate from expectations or forecasts (World Bank 2019). According to the World Bank (2019), fiscal risks emanating from SOEs can be organized into the following broad categories:

- *Explicit liabilities* are those for which the state has contractual obligations. These can be further divided into:
 - (i) direct (e.g., subsidies); and
 - (ii) contingent, which depend on the occurrence of an event, such as, for example,

an SOE defaulting on a loan guaranteed by the state.

- *Implicit liabilities* are those for which there is a moral or political obligation for the government to respond, even in the absence of a contractual obligation, to meet public expectations. Such implicit liabilities can also be divided into:
 - (i) direct (e.g., the government assuming the cost of social security payments for SOE staff); or
 - (ii) contingent (e.g., bankruptcy, expenses related to the sale/privatization of an SOE, etc.).

The main explicit and direct risks are related to direct transfers from the government to SOEs, such as subsidies, contributions, and equity injections, which amounted to 2.67 percent of the 2021 GDP (table 3.7).³³ Fiscal risks emanating from budget transfers are relatively small because they are effectively managed by the MTEF and annual budgeting process of the government, and direct transfers to SOEs are matched by taxes and dividends from SOEs. As noted earlier, the 62 deficit-covered SOEs strictly manage the amount of the subsidies or contributions paid by the government according to the budgetary guidelines, and the final amount is confirmed only after receiving the approval of the National Assembly.

TABLE 3.7

A framework for mapping the fiscal risks related to state-owned enterprises (SOEs), 2021

KRW, trillions (% of GDP)

State liabilities	Direct	Contingent
Explicit obligations (direct government liability under law or contract)	• Subsidies, 18.02 (0.87%) • Contributions, 28.86 (1.39%) - 62 deficit-covered SOEs: including contributed/subsidized, 2.94 (0.14%) • Equity injections, 8.51 (0.41%)	• State guarantee debts, 11.0 (0.5%) - Korea Student Aid Foundation Bond, 10.2; Industrial Bank Industrial Stabilization Fund Bond, 0.8 • Public credit guarantees, 312.1 (15.1%) - These have been responded to within the scope of the estimated liabilities of eight SOEs (KOTEC, KODIT, and so forth), 5.2 (0.25%)
Implicit obligations (moral obligation to meet public expectation or political pressure)	n.a.	• Financial support for SOEs in response to capital impairment and continuous net losses: 17.28 (0.86%) - KOCOAL, KOMIR

Source: NABO 2022, authors' compilation.

Note: The Korea Land and Housing Corporation (LH) was not included because the government covers the losses from only part of LH's projects, which makes it difficult to calculate the amount of the obligations. n.a. = not applicable; GDP = gross domestic product; KOCOAL = Korea Coal Corporation; KODIT = Korea Credit Guarantee Fund; KOMIR = Korea Mine Rehabilitation and Mineral Resources Corporation; KOTEC = Korea Technology Finance Corporation.

33. As the explicit and direct fiscal risk, Croatia's SOEs recorded 3.1 percent of GDP; the Kyrgyz Republic's energy sector SOEs, 1.7 percent of GDP; and Tajikistan's SOEs, 6 percent of GDP.

Explicit and contingent liabilities stood at 15.6 percent of GDP as of 2021, made up of state guaranteed debts and public credit guarantees. According to the State Guaranteed Debt Management Plan, state guaranteed debts include bonds held by the Korea Student Aid Foundation (KOSAF) and the Industrial Stabilization Fund from 2022 to 2026 (table 3.8). The guaranteed amount for Industrial Stabilization Fund bonds is expected to increase due to uncertainties from the COVID-19 pandemic resulting in the state guaranteed debt balance increasing by 0.8 percent of GDP from 2022 to 2023. However, the bonds are temporarily managed until 2025, and the size of the guaranteed debt balance is expected to decrease after 2023 through continual bond repayments. The State Guaranteed Debt Management Plan is submitted to the National Assembly for control, and KOSAF also prepares a medium- and long-term financial management plan (MLTFMP) for government and National Assembly control.

TABLE 3.8
State guaranteed debt projection, 2022-26

Type of state guarantee	KRW, trillions (% of GDP)				
	2022	2023	2024	2025	2026
Korea student aid foundation bonds	9.8 (0.5)	9.8 (0.4)	9.8 (0.4)	10.5 (0.4)	11.0 (0.4)
Industrial stabilization fund bonds	0.7 (0.03)	9.3 (0.4)	9.0 (0.4)	—	—
Total	10.5 (0.5)	19.1 (0.8)	18.8 (0.8)	10.5 (0.4)	11.0 (0.4)

Source: authors' compilation.

Note: — = not available; GDP = gross domestic product.

The balance of public credit guarantees is being managed by eight institutions, including the Korea Technology Finance Corporation (KOTEC), Korea Credit Guarantee Fund (KODIT), Export-Import Bank of Korea (KEXIM), Korea Trade Insurance Corporation (KSURE), and Korea Housing Finance Corporation (HF). As of the end of 2021, the balance amounted to 15.6 percent of GDP, but actual incidents within these institutions are being handled within an estimated liability balance of 0.25 percent of GDP for the eight institutions. Nevertheless, strong regulations are being enforced because the law explicitly requires the government to compensate for losses exceeding retained earnings.

The regulations have two layers: ex ante regulation and an ex post insolvency mechanism (table 3.9). Ex ante regulations include two measures: (1) setting a ceiling on the government's guarantee size to ensure that SOEs receiving guarantee support also assume some risks; and (2) requiring beneficiaries of accidental debt issuances to bear guarantee fees. Ex post regulations include five measures: (1) writing off accidental debt after a certain period and limiting the operation period for accidental debt to five years; (2) controlling an SOE's budget after an accidental debt has been realized; (3) maintaining contingency reserves and supplementary budgets; (4)

managing bonds issued by SOEs through MLTFMPs;³⁴ and (5) reviewing accidental debt amounts, including guarantee balances through the ALIO and SOE audit reports. Sound corporate governance and frameworks to ensure that SOEs' accidental debts do not burden the national finances are also commonly applied to ex ante and ex post regulations.

TABLE 3.9

Regulations followed by public credit guarantee provider

Ex ante regulation	Ex post insolvency mechanism
• Guarantee cap: up to 20 times the underlying assets (KODIT and KOTEC) or within the annual trade insurance cap (K-SURE) • Guarantee fee to be paid by beneficiaries	• Contingent liability management period: not to exceed five years (Statute of limitation period for commercial claims: five years) • Budget control after realization of contingent liabilities (asset sell-off, restructuring, and so forth) • Additional commitment of reserve and supplementary budget • Government/National Assembly supervision of SOE-issued bonds (MLTFMP) • ALIO and SOE audit reports: disclose outstanding guarantee amounts

(Common) Improving corporate governance and framework

Source: authors' compilation.

Note: ALIO = All Public Information In-One; KODIT = Korea Credit Guarantee Fund; KOTEC = Korea Technology Finance Corporation; K-SURE = Korea Trade Insurance Corporation; MLTFMP = medium- and long-term financial management plan; SOE = state-owned enterprise.

Implicit and contingent liabilities amounted to 0.86 percent of GDP as of 2021, including the debt of five institutions³⁵ that have provisions in the law allowing for protection in case they incur losses. Although other institutions do not pose major problems, the Korea Coal Corporation (KOCOAL) and Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR) have shown net losses and capital impairment and thus have been designated “highly indebted institutions.” They are being intensively managed to reduce the risk of a government financial burden by strengthening their fiscal soundness over the next five years. KOCOAL plans to reduce its debt by KRW 700 billion over the next five years through business restructuring, asset sales, and improved management efficiency. KOMIR is expected to reduce its debt from KRW 7.1 trillion in 2022 to KRW 5.2 trillion in 2026 through asset sales and normalization of overseas investment projects and is expected to be out of capital

34. SOEs monitor potential financial risks by utilizing stability indicators (financial debt ratio, debt ratio, current debt ratio, current debt/total debt ratio, dependence on borrowing, current ratio) and profitability indicators (ROA, ROE, interest coverage ratio, net profit margin on sales, operating profit margin) of these institutions.

35. Korea Trade-Investment Promotion Agency (KOTRA), Korea Coal Corporation (KOCOAL), Korea Housing and Urban Guarantee Corporation (HUG), Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR), and Korea Ocean Business (KOBIC).

impairment in 2026.

In addition to the regulations for public credit guarantee providers, the Korean government established various strategic debt management systems for SOEs (table 5.1). Among them, this chapter describes in detail two tools: (1) the preliminary feasibility study (box 3.1) for large-scale SOE projects and (2) total project cost management (box 3.2) for managing the project cost on a life cycle basis.

BOX 3.1

Preliminary feasibility studies (PFS) of projects by public enterprises and quasi-government institutions

Before January 2011, state-owned enterprises (SOEs)—public enterprises and quasi-governmental Institutions—were allowed to conduct their own feasibility studies for new investment projects and capital contribution projects valued at KRW 50 billion or more and compile the budgets for such projects if deemed feasible. However, the Korean government found that the results of SOEs' own feasibility studies were not objective or reliable. In response to continued concerns during 2009-10 about the financial soundness of SOEs, the budget authority (currently the Ministry of Economy and Finance) announced measures to strengthen feasibility studies for projects pursued by SOEs at its 2010 financial strategy meeting. In January 2011, the notion of a PFS by a third-party institution was introduced for SOE projects pursuant to Article 50 of the Act on the Management of Public Institutions (AMPI) and the Budget Guidelines for public enterprises (PEs) and quasi-governmental institutions (QGIs). In 2016, the government legally mandated PFS for SOE projects by adding new provisions to the AMPI.

Pursuant to Article 40(3) of the AMPI and Article 25(3) of the Enforcement Decree of the AMPI, completion of an PFS for SOE projects applies to new SOE investment and capital contribution projects with total costs of KRW 200 billion (US\$145.87 million^a) or more and for which government financial support and an SOE's investment amounts to KRW 100 billion (US\$72.93 million) or more. Total project cost refers to the sum of all costs and expenses for the implementation of a project, whether it is borne by the state, local governments, SOEs, or private players. If a project has no definite endpoint, the sum of the project costs for the first five years is taken into consideration. Projects subject to a PFS are selected by the Ministry of Economy and Finance (MOEF) after deliberation by the SOE Project PFS Advisory Committee, which also advises the MOEF on requirements for a PFS exemption, changes in evaluation methods, the designation of institutions to conduct a PFS, and other matters for efficient PFS operation and development.

A PFS for a SOE project is intended to determine the feasibility of the projects and facilitate reasonable decision-making on the right timing of project implementation and the right scale of the project by reviewing the project plans and analyzing the considerations for project implementation. A PFS involves a preliminary review of a project plan's legal and policy fitness and evaluations, focusing on "public interest" and "profitability." The publicness evaluations use the same analytical framework as a PFS for government-financed projects to evaluate economic and policy feasibility. The profitability evaluations involve financial feasibility and stability evaluations. Finally, a comprehensive evaluation (Analytic Hierarchy Process, AHP) is conducted, and, if needed, policy recommendations are made. From 2011 to the end of December 2022, final reports were published for 228 projects, and 175 of them (76.8 percent) were found to be feasible.

a. US\$ equivalents are provided as a general reference using current 2024 exchange rates.

BOX 3.2

Total project cost management (TPCM) of projects by public enterprises and quasi-government institutions

The total project cost management for projects pursued by state-owned enterprises (SOEs) is intended to improve the efficiency of the budget execution of SOEs by ensuring reasonable adjustments and management of the total costs of major projects drawn up by the heads of SOEs under Article 5 of the Act on the Management of Public Institutions (AMPI) based on the provisions in Article 40(3) of AMPI and Article 25(4) of its Enforcement Decree. TPCM involves stage-specific project cost management, including a preliminary feasibility study (PFS), feasibility studies, basic planning, basic and working designs, procurement and contracting, and construction.

The Ministry of Economy and Finance (MOEF) established the TPCM Guidelines for public enterprises (PEs) and quasi-governmental institutions (QGIs) in 2020 by applying the TPCM for government projects established in 1994. The total costs of a project are the sum of all costs and expenses incurred in the project under Article 40 of the AMPI, including the value of resources and land already possessed and contributions by the state, local governments, other SOEs, and private players. A construction project's total costs are the sum of all costs and expenses incurred: construction costs, compensation costs, and auxiliary expenses. A digitalization project's total costs are the sum of all costs and expenses for system development, including equipment purchase and rental costs and software development costs. An overseas project's total costs are the sum of all costs and expenses to implement the project overseas, including the construction investment, capital investment, and contribution to other corporations. A resource project's total cost is the sum of all costs and expenses for resource exploration or development, including predrilling exploration costs, drilling costs, project development costs, and miscellaneous costs.

Projects planned by the heads of SOEs under Article 40 of the AMPI and that have undergone a PFS (including those exempted from PFS under Article 40(3) of the AMPI) or a reassessment study of feasibility (RSF) under Article 31 of the same act are subject to the TPCM. To avoid wasting budget funds, the TPCM Guidelines for PEs and QGIs provide that projects that meet certain criteria should be subject to an RSF and a reassessment of demand forecast (RDF). Examples of project types subject to RSF are: (1) a project for which a PFS has never been conducted because its total project cost or state funding and SOE contribution did not reach the level subject to a PFS, but the total project cost has increased to that level during implementation; (2) a project that has been implemented without undergoing a PFS (although it falls within the projects subject to a PFS) because the project cost was reflected in the budget; and (3) a project for which the total project cost, excluding compensation for land required for the implementation of the project and inflation, has increased by 30 percent or more over the initial total project costs, excluding the compensation for land.

In principle, PFS techniques are applicable, *mutatis mutandis*, to the RSF, considering the feasibility of the project based on a “publicness” and “profitability” analysis. The overall assessment uses Analytic Hierarchy Process (AHP) techniques to produce measurable results, and policy recommendations may be made to highlight risk factors for the project and policy considerations. Following establishment of the TPCM Guidelines for PEs and QGIs (2020), seven RSFs had been conducted as of the end of December 2022, and all were assessed to be feasible.

FORECASTING THE MEDIUM- AND LONG-TERM FISCAL IMPACTS OF SOES

As the increase in SOE debt has brought the burden on national finances, the government has recognized the importance of managing the SOEs' debt well, especially in cases in which the government explicitly recognized that it had legal requirements to pay such debt. Monitoring the financial risk situation of the SOEs required preparation of MLTFMPs in the case of large SOEs, and especially 14 highly indebted SOEs. As noted in chapter 2, the 39 SOEs subject to the MLTFMP requirement also affect the general government debt and public sector debt. Therefore, this section: (1) analyzes the five-year debt reduction efforts of the 14 highly indebted SOEs and the five-year fiscal consolidation of the 39 SOEs subject to the MLTFMP requirement and compares them with the degree of debt reduction when financial consolidation efforts are not made; (2) analyzes the changes in SOE interest costs and interest coverage ratios stemming from changes in interest rates in the MLTFMPs for the 14 highly indebted SOEs; and (3) examines how the fiscal consolidation plans of SOEs have a positive impact on general government debt and public sector debt.

On August 31, 2022, the Korean government announced completion of the 2022-26 MLTFMPs for the 39 SOEs.³⁶ The government plans to proactively respond to and manage SOEs' debts to prevent them from becoming a burden on the national economy and to concentrate on managing them by fiscal risk. For the 14 SOEs with fiscal risks, the government will pursue strict debt reduction of KRW 24.0 trillion (US\$17.9 billion) and a capital increase of KRW 10.1 trillion (US\$7.5 billion) through fiscal consolidation, such as asset sales over the next five years (table 3.10). The main debt reductions include taking the following steps: (1) selling, for example, noncore assets unrelated to an institution's unique functions or overseas business shares with low strategic value; (2) making business adjustments considering an investment's priority, withdrawing investments in noncore businesses; (3) pursuing cost savings through efficient facility operations, reductions in interest costs arising from business adjustments, and reductions in contributions; (4) expanding revenue by improving

36. When the Korean government and 39 SOEs develop fiscal consolidation plans, the prospects for macroeconomic indicators such as growth rate, oil price, interest rates, and foreign exchange rate should be consistent with those in the economic policy directions and Medium-Term Expenditure Framework (MTEF) of the Korean government. In addition, sector-specific prospects such as energy sales and housing sales should reflect the medium- and long-run supply plans suggested by professional research organizations in each sector. The 39 SOEs reflect these macroeconomic indicators, as well as specific sector prospects when it comes to developing five-year fiscal consolidation plans. Furthermore, because broader economic conditions can vary every year and may have a large impact on fiscal consolidation plans, the Korean government has updated the five-year fiscal consolidation plans and fiscal risks of SOEs every year by reflecting the changes in the economic situation as well as the factors just mentioned.

the service supply price system (KEPCO)³⁷ and expanding the railway transportation capacity (KORAIL); and (5) issuing new equity securities revaluing fixed assets, among other things. The main discussions revolving around the SOEs in the energy, housing, and transport sectors are described in table 3.10.

TABLE 3.10

Measures making up the fiscal consolidation plans of 14 highly indebted state-owned enterprises, 2022-26

KRW, trillions

Measure	Debt reduction (% of total)	Description
Asset sell-off	4.28 (12.6%)	- Energy sector: sell off nonessential assets, including investment shares, real estate, overseas coal power generation businesses, and coal businesses - Housing sector: sell off tangible assets, including equities, office buildings, and company housing
Business adjustment	13.04 (38.3%)	- Energy sector: collect a return on investments by improving the profitability of overseas resource development projects; reduce or cancel investments in specific projects with lower feasibility - Housing sector: adjust housing purchase projects and rental projects considering the housing purchase conditions
Management efficiency	5.38 (15.8%)	- Energy sector: reduce power purchase costs through reasonable institutional improvement of the power market; improve management efficiency by enhancing supply cost management; enhance cost management based on the responsible management of the budget of each organization - Housing sector: reduce costs, including labor costs, welfare costs, and operational costs - Transport sector: reduce consumable costs and adjust project expenses
Revenue growth	1.27 (3.7%)	- Energy sector: improve operational systems and expand profits by adjusting service fees to realistic levels - Transport sector: increase profits by building an efficient transportation system
Capital increase	10.1 (29.6%)	Energy sector: increase capital by land reappraisal and reversal of impairment losses; issue new capital securities; propel a paid-in capital increase
Total	34.06 (100%)	

Source: MOEF 2022; authors' compilation.

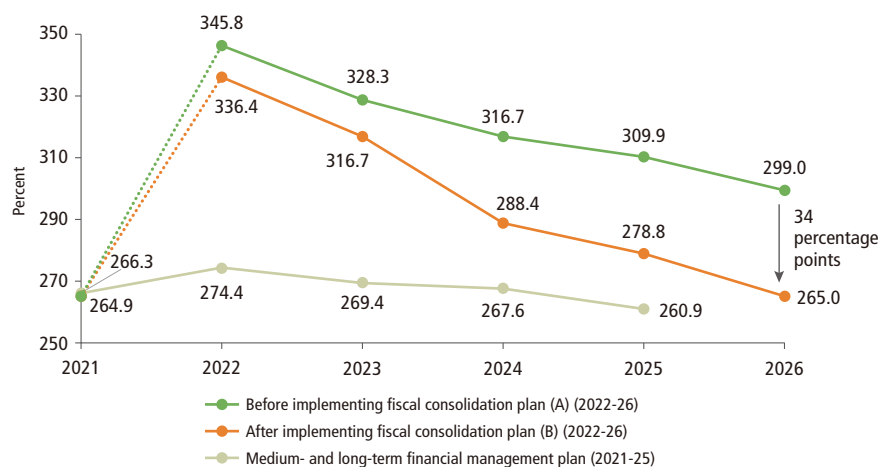
37. This measure involves changing the current two-part fee system into a cost-based tariff system. The current system is designed to calculate electricity charges by combining the basic fee (based on equipment capacity) and the electricity usage fee (based on electricity consumption). The cost-based tariff system calculates a fuel cost adjustment fee by periodically reflecting the price fluctuation of imported fuels such as coal, natural gas, and petroleum in the tariffs. It offers the benefit of alleviating the burden of temporary adjustments and encourages rational energy consumption by providing consumers with information on fee changes in advance.

Fourteen highly indebted SOEs were projected to record higher liabilities and debt ratios than the previous year due to factors such as a net loss in 2022, but the debt amount and debt ratio were expected to fall after 2023. The debt size was expected to increase significantly (15.8 percent),³⁸ from KRW 372.1 trillion (US\$312.6 billion) in 2021 to KRW 430.9 trillion (US\$340 billion) in 2022, mainly due to higher fuel costs. However, the debt increases from 2022 to 2026 are expected to be minimized through fiscal consolidation. The debt ratio was expected to rise to 345.8 percent in 2022 before implementation of the fiscal consolidation plans, but it may fall by 11–34 percentage points each year through capital expansion, revenue expansion, and so forth, decreasing to 265.0 percent by 2026.

Despite the deteriorating business environment, the debt ratio is expected to fall by an additional 34.0 percentage points (B) compared with the pre-fiscal consolidation plan forecast (A) shown in figure 3.4, minimizing the increase in the debt ratio through fiscal consolidation.³⁹ To encourage SOEs to continue to improve their fiscal soundness, the Korean government periodically monitors the performance of fiscal consolidation plans and assesses the actual degree of improvements through annual management performance evaluations.

FIGURE 3.4

Debt ratios of 14 highly indebted state-owned enterprises, 2021–26



Source: MOEF 2022.

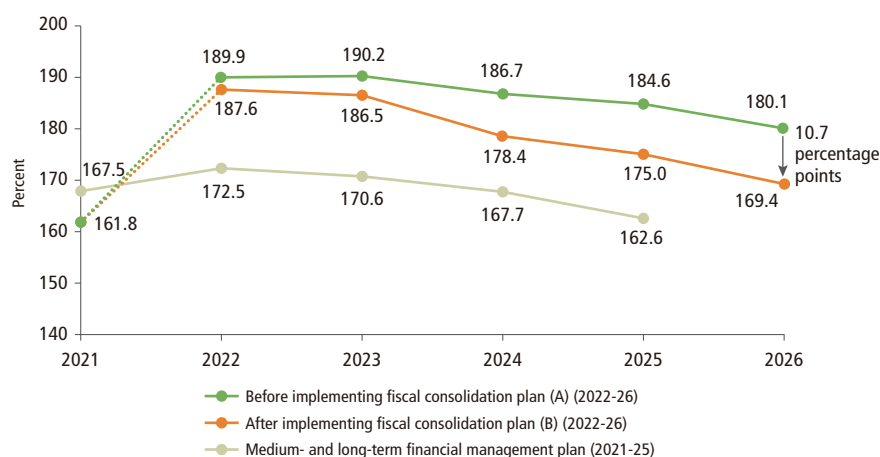
38. KEPCO, KRW 23.5 trillion; KOGAS, KRW 11.3 trillion; KDHC, KRW 1.0 trillion.

39. The MOEF submitted the 2023–27 MLTFMP for 35 SOEs to the National Assembly based on the AMPI. According to that report, assets and liabilities would increase over the years to 2027. The debt ratio was forecast to rise from 203.4 percent in 2022 to 214.3 percent in 2023, improving at the level of 188.8 percent in 2027 due to the stabilization of energy prices and fiscal consolidation plans. To cope with the increase in debt level, the Korean government added KRW 8.1 trillion to the fiscal consolidation plans for the 2023–27 MLTFMP, reaching KRW 42.8 trillion in fiscal consolidation plans by 2027.

The debt sizes and debt ratios of 39 SOEs are expected to continue to decrease through the implementation of fiscal soundness measures (figure 3.5). The debt ratio will likely decrease even more after the implementation of fiscal consolidation plans (B) than before (A), and it is predicted that the debt ratio will fall an additional 10.7 percentage points by 2026 via the implementation of fiscal consolidation plans.⁴⁰ Although the liabilities and debt ratio are expected to increase from 2021 to 2025, efforts will be made to minimize the increase through fiscal consolidation plans. The increase in liabilities stems from new policies such as energy conversion, support for low-income finance, and higher business costs due to rising fuel prices. The increase in the debt ratio mainly stems from an increase in liquidation debt for low-interest financing by HF and an increase in borrowing debt for bond purchases, as well as a decrease in the equity due to an increase in net losses at KEPCO and KDHC.

FIGURE 3.5

Debt ratio projections of 39 institutions subject to the medium- and long-term financial management plan requirement (MLTFMP), 2021-26



Source: MOEF 2022.

In terms of sector, excluding energy, the debt size is expected to increase from 2022 to 2026. However, the debt ratio is expected to decrease in the SOC and energy sectors and increase in the financial and other sectors, highlighting the concentrated efforts of fiscal consolidation in the energy sector. The SOC liabilities are expected to increase due to factors such as the public housing supply, but the debt ratio is expected to fall by 4.6 percentage points from 2022 to 2026. The debt size of the energy sector is predicted to decrease because of KOGAS's collection of outstanding

40. The relevant key macroeconomic indicators are oil price (US\$/barrel): US\$100 (2022), US\$93 (2023), US\$87 (2024), US\$86 (2025), US\$86 (2026); exchange rate (KRW/US\$): US\$1,212 (2022-26); and economic growth rate (percent): 2.6 percent (2022), 2.5 percent (2023), 2.4 percent (2024-26).

receivables. Furthermore, the debt ratio is expected to decrease by 9.8 percentage points from 2022 to 2026 through the sale of noncore assets, such as KEPCO and power generation companies' equity stakes, real estate, overseas coal-fired power generation, and the service fees produced by improved business practices. The financial sector is expected to see an increase in debt size in 2026 due to the expansion of HF's policy mortgages, and the debt ratio is also expected to increase by 5.3 percentage points from 2022 to 2026.

TABLE 3.11

Debt size and debt ratio projections of 39 state-owned enterprises (SOEs) subject to the medium- and long-term financial management plan (MLTFMP) requirement by sector

KRW, trillions

Sector (no. of SOEs)	2021 (performance)	2022 (A)	2023	2024	2025	2026 (B)	(B) – (A)
SOC (10)	236.5 (172.9%)	254 (173.6%)	266.2 (171.7%)	282.6 (173.2%)	298.1 (174.3%)	306.0 (169.0%)	52.0 (-4.6 pp)
Energy (12)	214.5 (301.3%)	261.1 (503.5%)	259.3 (466.5%)	253.7 (386.2%)	252.7 (366.9%)	251.3 (351.1%)	-9.8 (-152.4 pp)
Financial (13)	86.7 (70.9%)	103.9 (80.8%)	123.5 (91.8%)	124.6 (89.7%)	124.8 (87.1%)	129.4 (86.1%)	25.5 (5.3 pp)
Other (4)	12.9 (128.3%)	13.8 (131.6%)	15.3 (136.9%)	16.2 (136.6%)	16.8 (134.8%)	17.9 (136.4%)	4.1 (4.8 pp)
Total (39)	550.6 (161.8%)	632.8 (187.6%)	664.3 (186.5%)	677.1 (178.4%)	692.4 (175.0%)	704.6 (169.4%)	71.8 (-18.2 pp)

Source: MOEF 2022.

Note: MLTFMP = medium- and long-term financial management plan; pp = percentage point; SOC = social overhead capital.

Meanwhile, the interest cost burden and coverage ratio of the 14 highly indebted SOEs in response to MLTFMP interest rate fluctuations should be closely monitored. If the debt size of the 14 highly indebted SOEs increases due to large investments and continual lower profitability, there is a risk that the increases may lead to additional government investment or support for loss preservation. Therefore, in addition to debt size and debt ratio, ongoing monitoring of debt and interest repayment is required as addressed in the rest of this chapter.

The interest coverage ratio is an indicator that determines a company's performance compared with actual cash outflows by dividing operating profit by interest cost. If the interest coverage ratio is less than 1, the operating profit cannot withstand interest cost levels. The operating profit of the 39 SOEs under a MLTFMP is expected to increase by KRW 33 trillion from 2022 to 2026, and the interest cost is expected to increase by KRW 2.6 trillion over the same period. Accordingly, the calculated interest coverage ratio is expected to improve to an average level of 2.1 between 2023 and 2026, as shown in table 3.12, despite a decline to -2.05 in 2022 due to operating losses.

TABLE 3.12

Interest coverage ratio of institutions subject to the medium- and long-term financial management plan requirement (MLTFMP), 2022-26

KRW, trillions

Category	2021 (performance)	2022	2023	2024	2025	2026
Operating profit (A)	8.7	-14.9	20.7	19.0	18.1	18.1
Interest cost (B)	6.0	7.3	8.5	9.0	9.3	9.9
Interest coverage ratio, (A)/(B)	1.44	-2.05	2.44	2.10	1.95	1.82

Source: MOEF 2022.

Among the sectors represented by the 14 highly indebted SOEs, the energy sector had the highest number of SOEs (8) with an interest coverage ratio of less than 1 as of 2022 (table 3.13). However, the number of SOEs with an interest coverage ratio of 1 or more was expected to increase from 2023 on, and only three energy sector SOEs are expected to have an interest coverage ratio of less than 1 in 2026. In addition, interest coverage ratios were predicted based on interest rate growth of 0.5 and 1.0 percentage points.⁴¹ As interest rates increase, the interest expense will also increase, thereby possibly increasing the SOEs with interest coverage ratio of less than 1 by about one.

TABLE 3.13

Number of indebted institutions by sector with an interest coverage ratio under 1, 2022-26

Sector	Assumption	2022	2023	2024	2025	2026
Energy (12)	Based on previous interest rate	8	5	3	4	3
	Based on +0.5 pp interest rate	9	6	4	4	3
	Based on +1.0 pp interest rate	9	6	5	4	4
Transport (1)	Based on previous interest rate	1	1	1	1	0
	Based on +0.5 pp interest rate	1	1	1	1	0
	Based on +1.0 pp interest rate	1	1	1	1	0
Housing (1)	Based on previous interest rate	0	0	0	0	0
	Based on +0.5 pp interest rate	0	0	0	0	0
	Based on +1.0 pp interest rate	0	0	0	0	0

Source: NABO 2022; authors' compilation.

Note: pp = percentage point.

41. During the development of the 2021-25 MLTFMP, a simple method was used to calculate the interest expenses for each assumption by adding 0.5 percentage points and 1.0 percentage point to the interest rates applied by each SOE and dividing each interest expense by the fixed operating profit. However, this method does not fully reflect the possibility of changes in interest expenses because of factors such as debt repayment for each institution. If the fiscal risk is reduced through debt repayment and other measures according to the fiscal consolidation plan, it is expected that the number of SOEs with an interest coverage ratio of less than 1 will decline.

Examination of the positive effects (based on debt percentages of GDP) of the fiscal consolidation plans of 39 large SOEs subject to the MLTFMP requirement on the general government debt and public sector debt managed by the Korean government (table 3.14) suggests that, assuming other conditions remain the same, the efforts of SOEs subject to the MLTFMP requirement are expected to have a positive effect, reducing the percentage of general government debt of GDP by 0.11 percentage points and the public sector debt by 0.72 percentage points as of 2026. This finding highlights the significant impact of the fiscal consolidation plans of SOEs on the level of debt managed by the Korean government, particularly the general government debt.

TABLE 3.14

Positive effects of fiscal consolidation plans of state-owned enterprises (SOEs)

Category	2021	2022 (A)	2023	2024	2025	2026 (B)	(B) – (A)
Debt ratio (%) and debt amount of 39 SOEs subject to MLTFMP (KRW, trillions)	161.8%	187.6%	186.5%	178.4%	175.0%	169.4%	-18.2 pp
	550.6	632.8	664.3	677.1	692.4	704.6	71.8
General government debt (% of GDP): G	51.5%	54.1%	54.4%	55.2%	56.1%	56.9%	2.8 pp
Impact of 14 SOEs on G	—	+0.06 pp	-0.05 pp	-0.18 pp	-0.11 pp	-0.11 pp	n.a.
Public sector debt (% of GDP): P	68.9%	a	a	a	a	a	n.a.
Impact of 37 SOEs on P	—	+1.98 pp	0.61 pp	-0.69 pp	-0.46 pp	-0.72 pp	n.a.

Source: MOEF 2022; authors' compilation.

Note: General government debt is equal to the debt holdings of the central and local governments and 14 nonprofit SOEs. Public sector debt is equal to the general government debt and the debt holdings of 23 nonfinancial SOEs. GDP = gross domestic product; MLTFMP = medium- and long-term financial management plan; n.a. = not applicable; pp = percentage point.

a. The 2022-26 public sector debt ratio of GDP is not known.

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4 iSOEF Module: Corporate Governance and Accountability Mechanisms

INTRODUCTION

Good corporate governance is the foundation of the stable, effective management of the state-owned enterprise (SOE) sector (World Bank Group 2014). Compared with private sector companies, SOEs face distinct governance challenges that directly affect their performance. These challenges may include multiple principals, competing goals and objectives, excessive protection from competition, undue political interference, and low levels of transparency and accountability. Facing such challenges and considering their strategic role in providing key infrastructure and public services, it is critical that SOEs follow good corporate governance practices.

Relying on the integrated State-Owned Enterprise Framework (iSOEF) methodology, this chapter assesses six dimensions of corporate governance of Korean SOEs. As stated in the draft iSOEF report (World Bank Group 2019), these dimensions are a legal and regulatory framework; the ownership and oversight function; performance monitoring; boards of directors and executive management; transparency and disclosure; and public procurement and SOEs. An analysis of these dimensions follows.

LEGAL AND REGULATORY FRAMEWORK

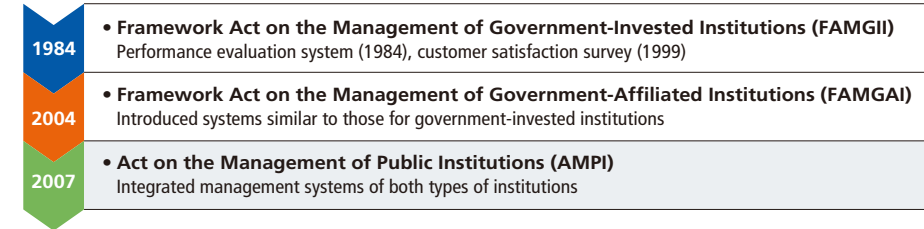
The laws and regulations for SOEs in the Republic of Korea are precise and straightforward. The legal and regulatory framework includes specific legislation on the establishment of individual SOEs; the Act on the Management of Public Institutions (AMPI), which is “umbrella” legislation preferentially applied to the management of all SOEs; and supplementary legislation that applies to many SOEs.

As of 2022, all 350 SOEs in Korea could be divided into establishment types according to the establishment laws and the method used to raise funds for their establishment. According to the establishment laws, of the 350 SOEs, 293 (83.7 percent) are statutory institutions established by an individual establishment act; 30 (8.6 percent) were established under the Civil Act; and 27 (7.7 percent) were established by the Commercial Act. Individual acts of establishment of SOEs mainly regulate the

core businesses of SOEs. They do not include any special treatment of SOEs contrary to the principles in the Commercial Act, which is applied to private sector companies. According to the method used to raise funds for establishment, of the 350 SOEs, 64 were established using capital from the central and local governments, other SOEs, and the private sectors. Of these 64 SOEs, 46 are stock companies. Of the 46 stock companies, eight are listed on the Korea Stock Exchange.⁴²

In the management and oversight system of SOEs in Korea, enactment of the Framework Act on the Management of Government-Invested Institutions⁴³ (FAMGII) in 1984 was a turning point. Before 1984, SOEs were controlled by line ministries. FAMGII replaced the existing government control system with a post-performance management system, and introduced a management performance evaluation (1984) and a customer satisfaction survey (1999). In 1999, the Korean government abolished the Government Board of Director System, strengthening the principle of self-controlling and responsible management. In 2004, the government introduced governance and management systems for government-affiliated institutions⁴⁴ similar to those for government-invested institutions by newly enacting the Framework Act on the Management of Government-Affiliated Institutions (FAMGAI). And then in 2007, the government introduced the Act on the Management of Public Institutions to enhance the autonomy and transparency of Korean SOEs more systematically by merging FAMGII and FAMGAI.

FIGURE 4.1
Evolution of the main laws for managing Korean state-owned enterprises (SOEs)



Source: authors' compilation.

The AMPI is the main legal framework for the corporate governance of SOEs because it includes rules and regulations for the internal and external corporate governance structure. Since 2005, the AMPI has referred to guidelines of the

42. As of 2022, the eight listed SOEs were the Industrial Bank of Korea, Korea Electric Power Corporation (KEPCO), KEPCO E&C, KEPCO KPS Co., Korea Gas Corporation, Korea District Heating Corporation, Gangwon Land, and Grand Korea Leisure Co. KEPCO is listed on both the Korea Stock Exchange and the New York Stock Exchange. The remaining seven SOEs were listed only on the Korea Stock Exchange.

43. Most are current public enterprises.

44. Most are current quasi-governmental institutions.

Organisation for Economic Co-operation and Development (OECD) for SOEs, and the corporate governance structure of Korean SOEs has been in compliance with them. The AMPI covers legal entities, organizations, and institutions owned or established by the government. It serves as umbrella legislation for all SOEs, taking precedence over all establishment acts unless an act mentions the specific legislation. The AMPI serves its basic purpose of establishing an accountable management system for SOEs, especially by ensuring their autonomy and responsibility.⁴⁵ Subjects covered by AMPI are definitions of SOEs, establishment of an Ownership Steering Committee (OSC), mandatory management disclosure, authority and independence of the board of directors, management performance evaluation rules, personnel and remuneration policy, and public procurement of SOEs.

In addition to the AMPI and statutory legislation, many SOEs are subject to supplementary legislation. Personnel management follows labor laws such as the Employment Insurance Act, Labor Standards Act, and Occupational Safety and Health Act. Procurement adheres to the Act on Contracts to which the State is a party (ACS) and the Government Procurement Act (GPA). SOEs are also regulated by the Monopoly Regulation and Fair Trade Act, Capital Markets and Financial Investment Act, and Commercial Act. This supplementary legislation is applicable to all corporate entities in Korea. Table 4.1 shows the legal and regulatory framework of Korean SOEs, including the number of SOEs covered by each law.

TABLE 4.1
Legal and regulatory framework for state-owned enterprises (SOEs) by type, 2022

Law	Laws and applied functions	Public enterprises (PEs)	Quasi-governmental institutions (QGIs)	Nonclassified public institutions (NPIs)	Total	Details
Establishment law	Individual law	23	88	182	293	Core businesses of SOEs. Do not include any special treatments.
	Civil Act	0	6	24	30	Twenty-nine are incorporated foundations. One is an incorporated association.
	Commercial Act	13	0	14	27	PE subsidiaries, small public institutions, and so on.
Subject to AMPI (management and oversight)	Board of directors	36	94	0	130	
	Performance evaluation	36	94	0	130	Applicable to NPIs, mutatis mutandis.
	Disclosed in the ALIO system	36	94	220	350	
	Procurement	36	94	0	130	Applicable to NPIs, mutatis mutandis.

45. According to Article 3 (Guarantee for Self-Controlling Operation) of the AMPI, “The Government shall ensure a self-controlling operation of public institutions in order to establish the accountable management system in public institutions.”

TABLE 4.1 *continued*

Law	Laws and applied functions	Public enterprises (PEs)	Quasi-governmental institutions (QGIs)	Nonclassified public institutions (NPIs)	Total	Details
	MLTFMP	22	17	0	39	Entities with over KRW 2 trillion in assets or capital impairment.
	Preliminary feasibility study	36	94	0	130	
	Customer satisfaction survey	25	92	135	252	Customers for main activity.
Supplementary laws	Examples: Commercial Act, Monopoly Regulation and Fair Trade Act, ACS, Labor Standards Act, Employment Insurance Act	36	94	220	350	SOEs are also subject to supplementary laws when legal requirements are met.

Source: authors' compilation.

Note: ACS = Act on Contracts to which the State is a party; ALIO = All Public Information In-One; AMPI = Act on the Management of Public Institutions; MLTFMP = medium- and long-term financial management plan.

OWNERSHIP AND OVERSIGHT FUNCTION

The Ministry of Economy and Finance (MOEF) heads Korea's centralized SOE ownership and oversight model (OECD 2021)—see figure 4.2. A centralized ownership model separates ownership functions from policy making and regulatory functions and minimizes the scope for political interference. The AMPI clearly regulates the roles and responsibilities of SOE stakeholders to minimize redundancy and overlap. The MOEF, as a shareholder of all SOEs, coordinates all SOE ownership functions such as meeting setting financial targets, dealing with operational and technical issues, and monitoring SOEs' performance. Line ministries generally provide industry policy-making and regulatory functions such as the electricity regulatory commission for SOEs within their purview, while the National Assembly, the Board of Audit and Inspection (BAI), and independent external auditors externally monitor the operations of SOEs.

The Ownership Steering Committee (OSC) is a decision-making body for the ownership function of Korean SOEs. The OSC is chaired by the MOEF and composed of vice ministers of line ministries and civil experts⁴⁶ from relevant fields, including law, economy, press, academia, and labor, who are knowledgeable about and have experience in the operation and business administration of SOEs as well as a good reputation for impartiality. Civil experts are commissioned by the president of Korea on the recommendation of the minister of the MOEF for three-year terms, and they may be consecutively appointed. Established in 2007, the OSC oversees and makes decisions about the creation of SOEs and recommendations for appointing

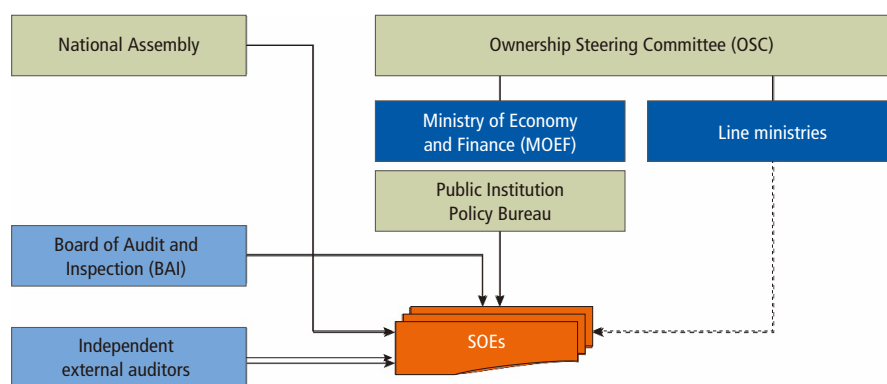
46. These experts have day jobs in their fields, so they work part-time and receive some allowances, as well as reimbursements for trips and other necessary expenses within the budget.

and dismissing executive officers. In addition, it outlines information disclosure requirements and sets managerial guidelines. The OSC's numerous subcommittees include the personnel and remuneration subcommittee, SOE innovation steering committee, and SOE management improvement steering committee.

Within the MOEF, the Public Institution Policy Bureau manages SOEs' operations, performance monitoring, and other corporate governance–related aspects. The bureau manages performance evaluations for public enterprises (PEs) and quasi-governmental institutions (QFIs). As a shareholder, the MOEF sets all the rules and guidelines of SOEs, including the process of performance management and the disclosure of performance information; controls SOEs' size and organizational structure; and reviews their budgets and remuneration policies. Specifically, Article 16 of the enforcement rules for the MOEF stipulates the role and function of the Public Institution Policy Bureau, such as the planning, coordination, and overall control of policies related to SOEs; matters concerning the AMPI; operation of the OSC; organization and operation of subcommittees and advisory groups; inspection of SOEs' innovation; and SOEs' labor-management cooperation.

FIGURE 4.2

Ownership and oversight structure of state-owned enterprises (SOEs)



Source: authors' compilation.

Line ministries generally undertake the industry policy-making and regulatory functions for the SOEs under their purview, while the MOEF oversees the management of SOEs. The line ministries also sign performance contracts with the chief executive officers (CEOs) of their respective SOEs, but the whole process of performance management (such as developing performance indicators and setting performance targets reflecting performance evaluation results) is coordinated by the MOEF. For smaller PEs and QGIs, the relevant line ministers directly appoint the SOE CEOs.

The National Assembly, the Board of Audit and Inspection (BAI), and independent external auditors are responsible for the external monitoring of SOEs. According to the rules of the BAI, each SOE is subject to an accounting audit conducted by

independent external auditors from an accounting firm.⁴⁷ The minister of the MOEF and the relevant line ministers submit to the BAI the statements on the settlement of accounts of the SOEs. Every SOE designated by the AMPI is also the subject of the National Assembly's audit of state affairs each year.

PERFORMANCE MONITORING

Since 1984, Korea has implemented a full-scale, systematic Management Performance Evaluation System for its SOEs. The evaluation system targets all PEs and QGIs in two areas: (1) organizational performance⁴⁸ and (2) auditors' performance. As for nonclassified public institutions (NPIs), the relevant line ministries monitor their performance, and the evaluation method follows a similar process to the performance evaluation of PEs and QGIs based on the NPIs' performance evaluation manual issued by the MOEF. The system is overseen by the MOEF as stipulated in AMPI Article 48 and is based on three pillars: (1) a Management Performance Evaluation Team, designated by the MOEF and in charge of developing performance indicators; (2) the signing of annual bilateral performance agreements between individual SOEs and the corresponding line ministry following the MOEF guideline;⁴⁹ and (3) the determination of performance evaluation grades under the auspices of the MOEF and the OSC.

The MOEF, as the main overseer of the management performance evaluation of SOEs, publishes an evaluation manual at the beginning of each year. The manual provides basic instructions for evaluating PEs and QGIs. It contains the target SOEs, evaluation timeline, performance indicators with weights and their targets, and measurement methods. The same performance indicators are used for the management area but differ according to the various main projects across target SOEs. The OSC is responsible for deliberating on and approving the MOEF's management evaluation criteria and methods, as well as dealing with the results of specific management evaluations and follow-up measures.⁵⁰

The Management Performance Evaluation Team, designated by the MOEF, develops performance indicators for evaluation and executes the actual process

47. All 350 SOEs have published financial statements on the ALIO system that have been subjected to audits by independent external auditors. According to Article 43 of the AMPI, public enterprises and QGIs are required to submit financial statements, including the auditor's opinion, when submitting their financial statements on settlement of accounts.

48. The CEO performance evaluation begun in 1999 has been merged with the organizational performance evaluation system since 2018.

49. Performance agreements use the performance indicators and performance targets of the Management Performance Evaluation Manual approved by the MOEF's Ownership Steering Committee.

50. The OSC created a management evaluation subcommittee in 2018, which has the specific task of deliberating on the common criteria applied to management evaluations and complaints.

of evaluating SOE's performance and SOE auditors' performance. The team has independent experts, including professors, certified public accountants, certified public labor attorneys, research fellows from government-funded research institutes, and other experts in related fields.⁵¹ Evaluation team members prepare field inspections based on document review, prepare interim reports and receive feedback from the institutions concerned, write final reports, and consult underperforming SOEs on ways to improve their performance. The OSC has the ultimate responsibility for approval of performance indicators and performance evaluation results. In 2022, the Management Performance Evaluation Team was composed of 109 experts and helped evaluate 130 SOEs—36 PEs and 94 QGIs.⁵²

SOEs are evaluated in terms of their management activities and main projects. The performance indicators and weights differ among institutions depending on the type of SOE, and they consist of quantitative and qualitative measures. The performance evaluation team conducts the evaluation based on the submitted documents and field inspections, and the team translates the resulting evaluation outputs into one of six grades: S (highest), A, B, C, D, and E (lowest). With the inauguration of the new administration in May 2023, the Management Performance Evaluation System was improved to better achieve a balanced evaluation of the efficiency and the publicness of SOEs, including the overall evaluation indicators. The improvement was reflected in SOEs' management performance evaluation manual for evaluating their 2022 performance (see table 4.2 and appendix E).

51. According to Article 28 of the Enforcement Decree of the AMPI, the minister of economy and finance, subject to consultation with the head of evaluation team, can organize and operate the Management Performance Evaluation Team to ensure the efficient evaluation of PEs and QGIs. The MOEF strives to recruit experts for the team from diverse fields, depending on their knowledge and experience as well as reputations for impartiality. The team is assembled every February for a one-year term. Team members have jobs in their fields, and so they work part-time and receive some allowances and reimbursements for trips and other necessary expenses within the budget.

52. Additional measures are undertaken for public enterprises in the areas of energy, transport, and tourism and leisure. It has been recommended that KEPCO and its subsidiaries that have suffered from net losses and recent financial deterioration, as well as 11 public enterprises that had a net loss in 2021, voluntarily return performance-based incentive payments to CEOs, executive directors, and auditors.

TABLE 4.2

Management Performance Evaluation System of state-owned enterprises (SOEs)

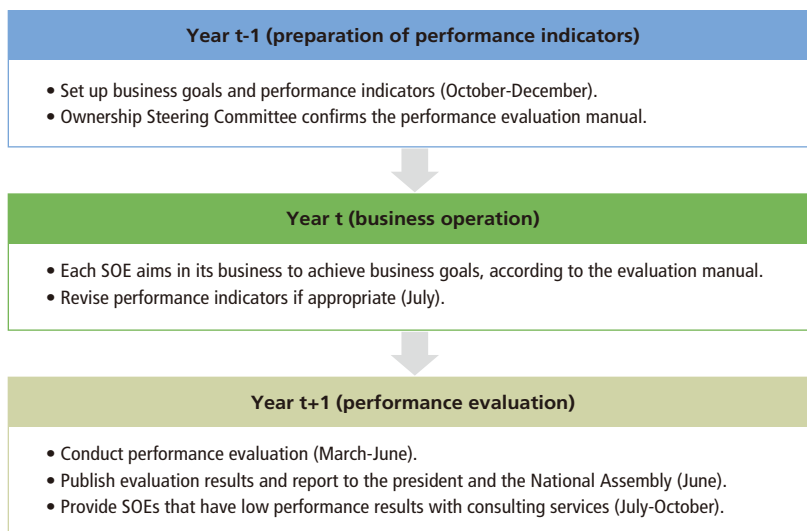
Tools	Management performance evaluation: • Evaluation of public enterprises (PEs) and quasi-governmental institutions (QGLs) • Evaluation of auditors' or audit committee's performance		
Objectives	• To facilitate the establishment of self-controlling and accountable management systems • To improve the quality of public services by enhancing the public value and the efficiency of SOEs and suggesting necessary improvements		
Targets	130 SOEs (2022)		
Time span	Annually (every fiscal year)		
Performance indicators	Management activities indicators are applied to all institutions, whereas main project indicators are specific to SOEs.	Weights	
		PEs	QGLs
	• Management activities: management strategy and leadership; corporate social responsibility; business process efficiency; organization and human resources management; financial management and performance; remuneration and welfare benefits management; innovation and communication activities	55	45/50
	• Main projects: aggregate evaluation of core business plan, resource allocation, and performance of major businesses • Additional points: efforts to implement SOE innovation plans and the outcomes thereof	45	55/50 5
Grades	S > A > B > C > D > E		
Reporting	Evaluation grades are released to the public.		

Source: authors' compilation.

Note: The weight of 45:55 is for commissioned service-type QGLs and 50:50 for fund management-type QGLs.

Auditors are also subject to a performance evaluation to improve the accountability and integrity of audit functions. They are evaluated only once during their term, and if they have served fewer than six months, they are exempted from the performance review. The evaluation of auditors has two parts: (1) auditor's competence (50 points) and (2) auditor's performance (50 points). Indicators of an auditor's competence include professionalism, ethics, and independence. Indicators associated with performance cover enhanced internal control, internal audit performance and follow-up management (based on the BAI's review), and integrity of the institution (based on the Anti-Corruption and Civil Rights Commission's integrity evaluation). The final evaluation scores are converted into six grades: S, A, B, C, D, and E. The evaluation results are used to decide whether auditors are to be retained.

The management performance evaluation of SOEs is held every three years (see figure 4.3).

FIGURE 4.3**Three-year cycle of management performance evaluation procedure for state-owned enterprises (SOEs)**

Source: World Bank staff compilation.

The MOEF determines the incentive payments for SOE employees, CEOs, executive directors, and auditors based on the grades received in PE and QGI evaluations and following the review of the OSC (see table 4.3). These grades are also used as a basis for decisions on the renewal of positions for CEOs, directors, and auditors. Low overall grades on the performance evaluation can have serious consequences, including the dismissal of a CEO and executive auditors. The MOEF minister issues a performance warning if an SOE receives a D grade. If an SOE is given an E or two consecutive D grades, the MOEF minister can suggest to the OSC the dismissal of the CEO, executive directors, and auditors. It is only the prerogative of the ownership function. In the evaluation of the 2021 performance, grades were distributed as follows: S, 1 SOE; A, 23 SOEs; B, 48 SOEs; C, 40 SOEs; D, 15 SOEs; E, 3 SOEs.

TABLE 4.3

Amount of incentive payments, public enterprises and quasi-governmental institutions

Classification	Position	percent of base salary		Evaluation grade		
		S	A	B	C	D/E
Public enterprises	Employees	250	200	150	100	0
	CEO	100	80	60	40	0
	Executive directors/executive auditors (or executive audit commissioner)	80	64	48	32	0
Quasi-governmental institutions	Employees	100	80	60	40	0
	CEO	60	48	36	24	0
	Executive directors/executive auditors (or executive audit commissioner)	60	48	36	24	0

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022.

Note: Table is showing the percentage of monthly salary (employees) and annual salary (CEOs, executive directors, and executive auditors or executive audit commissioner). CEO = chief executive officer.

BOARDS OF DIRECTORS AND EXECUTIVE MANAGEMENT

The AMPI clearly stipulates the composition, process for nomination and removal, and functions of SOE boards of directors to increase their autonomy, accountability, independence, diversity, and expertise, as suggested by international corporate governance standards. The AMPI calls for an SOE's board and management structure to be based on a one-tier system in which a single board of directors serves as both a management body and a supervisory body. The act also specifies procedures for board meetings, including attendance criteria. The Korean government has continued to reform the governance system to ensure the autonomy and expertise of the board of directors. For example, the chair of the board and the CEO are separate positions in large PEs, public officials are prohibited from appointment as SOE directors, and the gender equality target system in executive appointment has been adopted for SOE boards.

The board of directors is in charge of both the medium- and long-term strategic decisions and operational aspects of an SOE. They evaluate various management aspects that could affect performance, including management plans and objectives, risk management, production, pricing, remuneration policies, budget, investment, finance, internal and external audits, and financial and environmental, social, and governance (ESG) reporting. The CEO represents the SOE, has overall control over its business affairs, and is responsible for its management performance. Also, the CEO informs the board of audit and inspection outcomes, corrective measures, and collective agreements.

The AMPI classifies directors as executive (member of board of directors, employee) and nonexecutive (member of board of directors, not employee), and the ratio between the two categories differs, depending on an SOE's designated classification and asset size. An SOE board is generally composed of a maximum of

15 members, including the CEO, and there are, on average, 8-10 directors, of whom 6–8 are nonexecutive directors. For example, in PEs and large QGIs with over KRW 1 trillion in assets over half of the directors should be nonexecutive directors. In addition, AMPI Article 24(2) (2018) is aimed at achieving board diversity and gender balance, and the Guideline on Management of SOEs recommends that the proportion of female board members be at least 30 percent.⁵³

According to the Article 25 of the AMPI, the president of Korea appoints the CEO and executive auditors or executive audit commissioner of large PEs and QGIs, choosing them from among candidates recommended by the SOE's nomination committee and the line minister or the minister of economy and finance. For small PEs and QGIs, the CEO is appointed by the corresponding line minister, while the MOEF appoints auditors. Executive directors are appointed by the CEO, but if the executive director is an audit committee member, the appointment process for auditors is used. Nonexecutive directors in PEs are appointed by the minister of economy and finance, while nonexecutive directors in QGIs are appointed by the line minister. The appointer also has the final authority for dismissal, and that is only the prerogative of the ownership function.

Executive officers,⁵⁴ except for the executive and nonexecutive directors of small QGIs, are nominated by the SOE's nomination committee. The committee is composed of nonexecutive directors and other outside members appointed by the board of directors. Executive officers, employees of SOEs, and public officials may not be members of the nomination committee. The committee shall maintain a set of minutes, including all the matters discussed and resolved at each meeting, and make them available for inspection by the public (AMPI Article 29). According to AMPI Article 30, candidates with good knowledge, and the experience and competent ability needed to perform their duties can be nominated as directors. CEOs of PEs, nonexecutive directors of PEs, and auditors of PEs and QGIs are appointed through deliberation and approval by the OSC (see table 4.4).

53. The five-year plan of the Gender Equality Executive Appointment Target System was introduced in December 2018. As a result, the ratio of female executives was 22.1 percent as of the end of 2020, up 87 percent from 2017, and 26.4 percent for female managers, up 35 percent from 2017.

54. The executive officers are directors, including the CEO and auditors.

TABLE 4.4

Appointment process for directors, including CEO and auditors, of state-owned enterprises (SOEs)

Category		Public enterprises (PEs)	Quasi-governmental institutions (QGIs)
CEO	Large SOEs	Nomination committee → OSC → recommendation by line minister → president	Nomination committee → recommendation by line minister → president
	Small SOEs	Nomination committee → OSC → line minister	Nomination committee → line minister
Executive directors		CEO (audit committee member: president or MOEF minister)	
Nonexecutive directors		Nomination committee → OSC → MOEF minister	(Large QGIs: nomination committee) → line minister
Executive auditor(s)/ executive audit commissioner	Large institutions	Nomination committee → OSC → recommendation by MOEF minister → president	
	Small institutions	Nomination committee → OSC → MOEF minister	

Source: AMPI.

Note: "Large SOEs" refers to those with total revenue of more than KRW 100 billion and more than 500 employees. For fund management-type institutions, SOEs with assets of more than KRW 1 trillion and more than 500 employees are considered large. CEO = chief executive officer; MOEF = Ministry of Economy and Finance; OSC = Ownership Steering Committee.

The MOEF is revising Article 20 of the AMPI to stipulate that all public enterprises are required to establish an audit committee regardless of size of assets. Until now, market-type PEs and quasi-market-type PEs with over KRW 2 trillion in assets have been required to establish an audit committee on the SOE's board. According to Article 34 of the SOE Audit Operation Guideline of the MOEF, the audit committee should include three or more board members and be chaired by a nonexecutive director. More than two-thirds of the members should be nonexecutive directors, and the committee should include at least one financial or accounting expert. In addition, according to the Article 42(2) of the guideline, the audit committee members shall directly, with the support of the internal audit team, audit business affairs and accounting and report the results to the board of directors. The audit committee members can also report matters related to the independent external auditors.⁵⁵

The CEO is appointed for a three-year term, and executive and nonexecutive directors and auditors are appointed for a two-year term (AMPI Article 28)—table 4.5. The term of office can be extended by one year, depending on performance. In principle as well as in practice, CEO, executive directors, nonexecutive directors, and auditors of PEs and QGIs are not dismissed until the end of their term, even if the government changes. However, if the board of directors determines that the CEO has

55. According to Article 42(2) of the SOE Audit Operation Guideline of the MOEF, matters reported could include approval of the appointment, change, or dismissal of independent external auditors; receipt of external auditors' audit results and audit-related reports; and evaluation of external auditors' audit activities.

significantly fallen short in the performance of his or her duties, such as by violating the law or the articles of incorporation or neglecting his or her duties, the board of directors may, after a resolution by the board of directors, request the line minister to dismiss the CEO of a QGI or to recommend the dismissal of the CEO of a PE to the appointing authority (AMPI Article 22(1)).⁵⁶ In addition, the minister of economy and finance may, after deliberation and approval by the OSC, recommend the dismissal of the CEO and executive directors of a PE or a QGI to the appointing authority when their management performance is very poor—that is, the lowest grade, E (AMPI Article 48(8)). Moreover, the MOEF minister may, after deliberation and approval by the OSC, dismiss nonexecutive directors or auditors or recommend the dismissal of them to the appointing authority when their performance is very poor (AMPI Article 36 (2)).

TABLE 4.5

Term of office of executive officers of state-owned enterprises

Position	Term of office
Chief executive officer (CEO)	Initial tenure of three years + consecutive appointment decided yearly (after consideration of performance evaluation results)
Executive directors and nonexecutive directors/ auditors	Initial tenure of two years + consecutive appointment decided yearly (after consideration of performance evaluation results)

Source: authors' compilation.

Newly appointed board members are invited to participate in an orientation where they receive the relevant guiding documents. For example, the MOEF and the Korea Institute of Public Finance (KIPF) invite the newly appointed nonexecutive directors to a workshop to discuss their roles and duties. They also provide written guidelines on SOE management systems, related laws, and regulations. Individual SOEs provide their directors and auditors with mandatory induction, education, and training programs on leadership, integrity and anticorruption, and violence prevention. The MOEF also provides educational programs and training manuals for CEOs, nonexecutive directors, and auditors.

TRANSPARENCY AND DISCLOSURE

The All Public Information In-One (ALIO) system, a Korean internet-based public disclosure system, is at the forefront of the transparency and data collection of all

56. In addition, a nonexecutive director may, with the signatures of two or more nonexecutive directors, request an auditor or audit committee to audit a specific matter related to the operation of a PE or QGI. In this case, the auditor or audit committee must comply with the request unless there are special circumstances (AMPI Article 22(2)).

SOEs.⁵⁷ Launched in 2006, the ALIO system provides the public with key information on the management and financial performance of SOEs through its website (www.alio.go.kr), where users can search, download, and compare management information on SOEs. The system is based on interactive communication among the MOEF, line ministries, SOEs, the National Assembly, the BAI, and citizens. The number of website visitors exceeds 10 million each year, and 79 percent of the respondents were either *satisfied or highly satisfied* with the website in the 2021 user satisfaction survey. The Korean government plans to continue to improve the system by boosting the scale and effectiveness of related training programs, strengthening the capabilities of SOEs, and improving the quality of disclosed information through inspection and follow-up management of SOE management.

The MOEF and the OSC play a key role in the information disclosure process for SOEs. The MOEF, after deliberation and approval by the OSC, sets out guidelines, criteria, and a unified format for the types of information that should be disclosed and how SOEs should receive the information to be disclosed. SOEs then upload the data online as guided by the MOEF. Once the SOEs enter the required information by the deadline provided, the MOEF discloses the information to the public through ALIO in an integrated way (AMPI Article 12). According to the OECD (2021), the ALIO system can be considered functionally equivalent to an aggregate report.⁵⁸ The MOEF also processes the data into more accessible forms of statistical data. In 2015 the MOEF adopted an electronic disclosure system—Data Analysis, Retrieval, and Transfer System, DART—that resembles the Korea Stock Exchange. It provides faster and more secure reporting features in addition to an easier method to compare data. The DART system represents a drastic upgrade of Korea’s public disclosure system for SOEs.

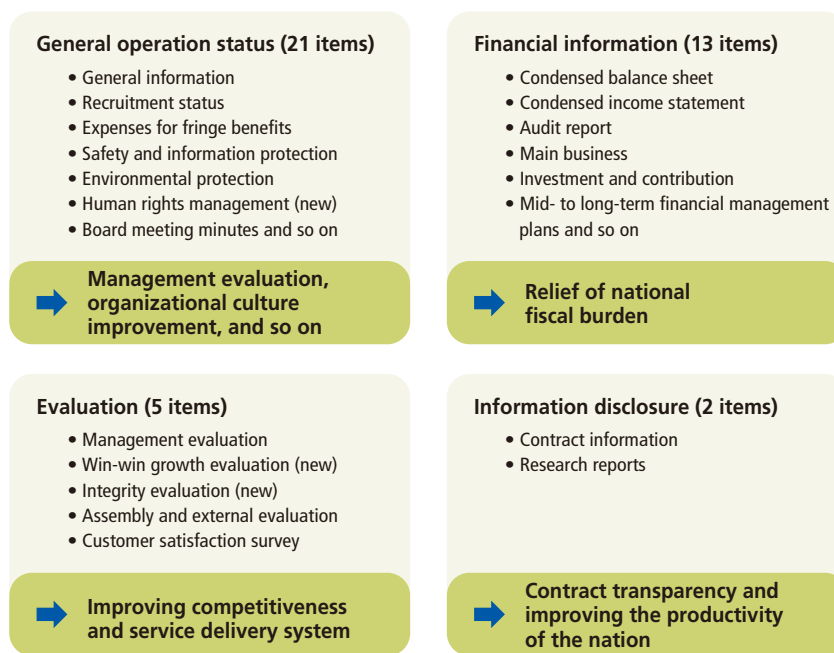
The OSC selects disclosure items each year, and 41 key information items in four categories were disclosed to the public in 2022: (1) General Operation Status, (2) Financial Information, (3) Evaluations, and (4) Information Disclosure (see figure 4.4). The 21 items in the General Operation Status category can be used to evaluate management performance and to improve the organizational culture. The 13 items in the Financial Information category contribute to upholding strong financial performance, thereby lowering the government’s financial burden from SOEs. The five Evaluations items are used to improve SOEs’ competitiveness and service delivery. And the two Information Disclosure category items ensure transparency in the contracting processes and improve productivity.

57. ALIO, All Public Information In-One, when spoken in Korean, sounds like a word meaning “to disclose.” The name was selected among the candidates submitted by the public and SOEs’ executives and employees. The ALIO system is summarized in World Bank (2022).

58. The concept of integrated disclosure is similar to that of aggregate reporting. Eight countries, including Korea, have reported that they have an online inventory that they consider functionally equivalent to an aggregate report: Australia, Brazil, Canada, Ireland, Korea, New Zealand, Slovenia, and Ukraine (OECD 2021).

FIGURE 4.4

Items selected by Ownership Steering Committee for integrated disclosure (41 items, 126 subitems), 2022



Source: Word Bank staff compilation.

The ESG factor has become an important issue in the social context, and ESG items were added recently to the list of disclosure items to address the climate crisis and social and corporate governance issues. In 2021, the list of disclosure items was expanded to include various social value–related information, such as social contribution activities, safety and environment, and work-life balance. Environmental subitems related to the climate response have been updated as well by adding five subitems—energy consumption, waste production, water usage, environmental violations, and low-emission vehicles—to the two existing subitems, the greenhouse gas (GHG) emission reduction report and the green products purchase report. SOEs are required to disclose their total energy consumption (see figure 4.5) at each business site for the last two years via the Environmental Information Disclosure System managed by the Ministry of Environment (MOE).⁵⁹

59. In keeping with this requirement, the integrated disclosure system requires its users to disclose environmental management information once a year. By linking the ALIO (MOEF) system and the Environmental Information Disclosure System (MOE), environmental information can be exchanged among related institutions and updated automatically every year, which leads to better efficiency and public service delivery for citizens. This interoperability for related systems within the ministries is a beneficial practice.

FIGURE 4.5

Energy consumption item in Environmental Information Disclosure System, Ministry of Environment

12. Environmental Protection > 12-2. Energy consumption (new)								
New subitems	Disclosure of the total energy consumption per business site (Unit: toe)							
	Category	Business site	Name	2016	2017	2018	2019	2020
	Total energy consumption per business site	Minor business site	(Ex) KEPCO					
		Minor business site 1	(Ex) KEPCO Gyeonggi office					
		Minor business site 2	(Ex) KEPCO Gangwon office, KEPCO Wonju branch					
								
	Total							
Description		• Cycle/target: annually (1Q)/public institutions disclosing environmental information • Definition of items: performance of each business site disclosed in the ENV-INFO system - It must be consistent with the ENV-INFO system's annual performance data.						

Source: Word Bank staff compilation.

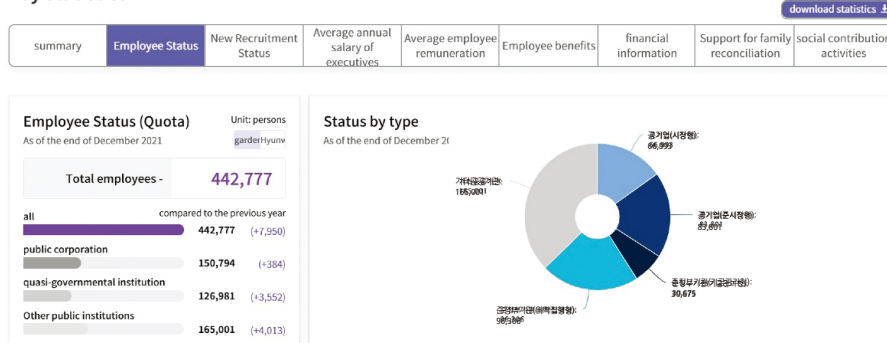
Note: KEPCO = Korea Electric Power Corporation; Q =quarter; toe = ton of oil equivalent.

In January 2022, the ALIO website was revamped to improve the graphs, statistics, and search features. The key statistics menu offers easily accessible graphs and figures that visualize the trends of main items by type and year. The main eight items are shown in figure 4.6: number of executives and employees, new recruitment status, average salary, average employee remuneration, employee benefits, financial information, support for work-family balance, and social contribution activities. The website also contains detailed statistics in all SOEs across 21 subitems (see appendix F) and a powerful search tool that allows users to choose a subitem and search the relevant information across all SOEs.

FIGURE 4.6

All Public Information In-One (ALIO) website: key statistics, eight main items

key statistics



Source: ALIO.

In 2013, the MOEF adopted the disclosure inspection system to improve the transparency and reliability of the information on SOE management. The yearly inspections were raised to two in 2018 and three in 2021 to strengthen the follow-up management of the disclosed data. Furthermore, the government engages auditing and law firms for disclosure inspections to ensure the reliability of the disclosed information. The MOEF identifies nonconformities and imposes penalty points based on issues raised by the inspection results.⁶⁰ Inspection results are considered during the management performance evaluation, which also directly affects the performance-based incentives provided to employees. These inspections and other follow-up management measures drastically boosted SOEs' interest in accurately disclosing their information.

Most SOEs are required to follow the International Financial Reporting Standards (IFRS) in their transparency and disclosure practices (table 4.6). All PEs and QGIs have adopted the IFRS, whereas nonclassified public institutions, which are relatively small in size, may use the IFRS or the Korean Generally Accepted Accounting Principles. The accounting of PEs and QGIs is accrual-based to show their business performance and changes in assets and liabilities accurately. The detailed accounting criteria should conform to the Rules for Accounting Affairs of Public Enterprises and Quasi-Governmental Institutions.

The AMPI stipulates the audit requirements of SOEs in detail. At the end of each fiscal year, financial statements are audited using ISA (International Standards on Auditing) and the Act of the BAI by qualified independent external auditors.⁶¹ Audited financial statements are submitted to the MOEF (PEs) or line ministers (QGIs) by the end of February, and they should be reviewed by the end of March.⁶² According to the Article 43 of the AMPI, the MOEF and line ministers are required to submit SOEs' externally audited financial statements and other relevant documents to the BAI by May 10. The chair of the BAI reviews the documents and submits an audit report to

60. Nonconformities include violations of disclosure requirements, disclosures of false or erroneous management information, and arbitrary modifications of previously disclosed information. If an SOE receives more than 20 penalty points in a year, it is issued a warning. If the total penalty points exceed 40 points, or an SOE receives more than 20 penalty points for two years in a row, the SOE is designated as a noncompliant institution (Integrated Public Disclosure Guideline of MOEF, Articles 10 and 13).

61. Auditors are required to comply with the "public audit standards" established by the BAI. The standards reflect the recommendations of the International Standards on Auditing and the Act of the BAI. Auditors are required to maintain independence while performing accounting audits, and they are prohibited from engaging in either of the following, which could impede independence: (1) the audit plan and audit implementation process due to personal connections such as blood ties or economic interests with the target organization, and (2) the decision-making process of the target organization or the work subject to audit within two years prior to the end of the fiscal year immediately preceding the fiscal year subject to audit.

62. NPIs are also subjected to an external audit as required by line ministries, although they are not legally required to do so.

the MOEF minister by the end of July. The MOEF then presents the audited financial statements, the audit report by the BAI, and other relevant documents at the cabinet meeting and finally submits them to the National Assembly in August.

The internal auditor or audit committee of the SOEs comprehensively manages the internal audit.⁶³ They may be executive or nonexecutive directors. The audit team within an SOE supports the work of the internal auditor or audit committee, which typically is responsible for inspecting internal irregularities and promoting integrity and transparency as a part of the organizational culture based on the “SOE Audit Operation Guideline” of the MOEF (Article 42). The internal auditor or audit committee reports violations of laws, articles of incorporation, and regulations by directors to the board of directors, requests directors to report management activities, reports the results of annual financial statements, and handles matters related to independent external auditors.

TABLE 4.6

Transparency and disclosure practices of state-owned enterprises (SOEs)

Accounting standard	- Public enterprises and quasi-governmental institutions: IFRS - Nonclassified public institutions: IFRS and Generally Accepted Accounting Principles
Transmission of financial reports	- Public enterprises: report to the minister of economy and finance - Quasi-governmental institutions and nonclassified public institutions: line ministers
Aggregated reports	None^a
Disclosure	Standardized items of information disclosed on the ALIO website
Information system	ALIO disclosure system.
Internal audit	Audit committee or auditor(s) within each SOE
External audit	Line ministries, National Assembly, the BAI (Supreme Audit Institution), independent external auditor (private)

Source: Word Bank staff compilation.

Note: ALIO = All Public Information In-One; BAI = Board of Audit and Inspection; IFRS = International Financial Reporting Standards.

a. However, the integrated ALIO disclosure system can be considered functionally equivalent (OECD 2021).

The Korean government has also tried to eradicate corruption and improve the integrity of Korean SOEs. In 2001, the Act on the Prevention of Corruption was enacted to prevent corruption and effectively regulate corruption, including protecting SOE whistleblowers. As a follow-up measure, the Code of Conduct for Public Officials was established by presidential decree in 2003, specifying 15 detailed behavior

63. Unlike the independent external auditing, the internal auditing of SOEs is divided into two systems: (1) the Audit system (composed of executive or nonexecutive auditor(s)) reflecting the characteristics of the institution), and (2) the Audit Committee system (which includes three or more board members). The Audit Committee is operated as a separate subcommittee of the board of directors (SOE Audit Operation Guideline of the MOEF, Article 1).

guidelines to prohibit receipt of unjust enrichment and create a healthy public office atmosphere. The Improper Solicitation and Graft Act has been implemented since 2016 to ensure that public officials perform their duties fairly by prohibiting improper solicitation directly from public officials or through third parties. The Act on the Prevention of Conflict of Interest related to Duties of Public Officials was established in 2021 to prohibit public officials from pursuing private interests in relation to the performance of their duties. Finally, the Integrity and Ethics Compliance Program Guideline for State-Owned Enterprises was implemented in 2022 to mitigate the high risk of corruption that occurs in the bidding, contracting, and implementation process of large-scale public procurement, public development projects, and infrastructure construction projects, especially those carried out by public enterprises. As a result of these efforts, Korea's ranking on the Corruption Perception Index by Country published by Transparency International rose from 2016, when the Improper Solicitation and Graft Act was implemented, to 2022.⁶⁴

PUBLIC PROCUREMENT AND SOES

Public procurement is also a crucial component of the SOE institutional framework and is especially related to SOE financial accountability and transparency. Korea's public procurement legal framework has been continually improved around the Act on Contracts to which the State is a party enacted by the MOEF in 1995. The legal framework consists of the ACS, the Local Government Contract Act, the AMPI and the Ordinance of the MOEF for the contracts of SOEs, the Government Procurement Act (GPA), and the Electronic Procurement Utilization and Promotion Act. The ACS stipulates that a fair contract is made without setting special agreements or conditions that unfairly limit the interests of the contracting parties using the state's status. Based on the ACS, the Local Government Contract Act was enacted in 2006, and the contract rules for SOEs were enacted in 2008.

In Korea, SOEs and their subsidiaries comply with the AMPI, the Ordinance of the MOEF, and the ACS. For example, "SOEs' contracts shall be concluded by agreement of parties to the contract on equal footing, and the parties shall perform the terms and conditions of the contract in good" (Article 5, Ordinance of the MOEF). Article 44 of the AMPI says that any PE or QGI intending to purchase competing products from small and medium enterprises (SMEs) can commission the administrator of the Public Procurement Service (PPS) to undertake the purchase. NPIs are required to perform procurement projects fairly and efficiently as well. Nearly all SOEs in Korea are acting as procurers in the public procurement market, not suppliers. Under the current laws and regulations related to public procurement, SOEs do not receive any

64. Korea ranked 31st out of 180 countries in the 2022 Corruption Perceptions Index (CPI), according to country survey results announced by Transparency International. Korea ranked 51st in 2017, 45th in 2018, 39th in 2019, 33rd in 2020, and 32nd in 2021.

special favors.

The Ordinance of the MOEF does, however, stipulate that the application of public procurement rules can be differentiated by the nature of SOE businesses. According to Article 2, “the head of a PE or QGI shall establish standards and procedures for contracts with different contents from those specified in the rules under the approval of the MOEF if it is deemed necessary in the light of the natures of the business, fairness and transparency of the contract, or other unavoidable reasons.” Furthermore, in cases where the standards for a contract apply to open competitive bidding, such as multisupplier product contracts, MOEF approval may be replaced by reporting to the MOEF within seven days after establishing the standards.

The Korea On-line E-Procurement System (KONEPS),⁶⁵ one of the world’s most advanced and centralized electronic procurement systems, was established in 2002 by the PPS.⁶⁶ KONEPS is a comprehensive e-government platform that covers the entire online procurement process, including procurement requests from public buyers, publication of tender notices, communication with suppliers, collection of e-bid submissions, bid opening and contract award, inspection, and e-payment. It processes nearly two-thirds of all public procurement in Korea, and responsibility for the system is undertaken in an integrated, strategic manner, driving continual improvements for public procurement. SOEs’ bidding information is announced through KONEPS, and any SOE can participate in bidding with a single registration.

Public procurement contracts totaled KRW 184.2 trillion (US\$154.7 billion) in 2021, and public procurement contracts by SOEs amounted to KRW 61.7 trillion (US\$51.8 billion), accounting for 33.5 percent of the total contract performance. Public procurement by SOEs has continually increased from KRW 40.7 trillion in 2015 (table 4.7). The percentage of SME products in SOE procurement has grown from 54.3 percent in 2015, and the products continue to make up most SOE public procurement. In addition, the percentage of green products in SOE public procurement stands at 2.3-2.7 percent, which the SOEs plan to increase to address climate change.

65. In 2021, 63,798 government, public, and local institutions and 502,710 procurement companies used KONEPS. Since its launch in 2002, KONEPS has improved work efficiency, fairness, and transparency and reduced procurement costs. The PPS will push for a “next-generation KONEPS project” by 2023, focusing on (1) improving its orientation for users, (2) introducing the latest intelligent information technology, such as artificial intelligence, big data, and blockchain, and (3) unifying electronic procurement channels.

66. Established in 1949, PPS took on its current role as the central procurement agency of Korea in 1961. Its various responsibilities are related to the purchase and management of the resources needed for public administration, all of which focus on the transparent and effective delivery of services, while also contributing to savings through consolidation and centralization.

TABLE 4.7

Public procurement contracts for state-owned enterprises (SOEs), 2015–21

Type	2015	2016	2017	2018	2019	2020	2021
Total, public procurement (KRW, trillions)	110.4	117.8	137.2	141.3	159.9	175.7	184.2
• State, local government, education administration agency	65.4	73.6	86.7	88.5	99.5	108.2	116.6
• SOEs (A)	40.7	39.6	44.1	47.2	54.8	61.9	61.7
• Other (local public enterprises)	4.3	4.6	6.3	5.6	5.6	5.5	5.9
Procured products							
• Small and medium enterprises (SMEs) (B)	22.1	22.0	25.2	26.8	30.5	35.2	34.7
• Green products (C)	1.09	1.21	1.21	1.28	1.36	1.40	1.51
Percentage of SME products, (B)/(A)	54.3	55.6	57.1	56.8	55.7	56.9	56.2
Percentage of green products, (C)/(A)	2.7	3.1	2.7	2.7	2.5	2.3	2.4

Sources: Korea On-line E-Procurement System (KONEPS) and Public Green Product Integrated Information System compiled by the Public Procurement Service.

SOEs can create new markets and foster SMEs as first buyers. Despite their innovative technological capabilities, many SMEs face difficulties securing sales channels due to low market share. SOEs can play a vital role in helping these SMEs create new ones by serving as a mediator. Because the procurement share of SOEs for SME products is significant at an average of about 50 percent, the facilitation of public procurement by SOEs can significantly contribute to the discovery and development of excellent SMEs.

Two systems implemented by the MOEF are good examples: the SOE Technology Market and the Government Innovation Product. The SOE Technology Market is a platform that enables SOEs to purchase technology and products from SMEs to support their growth. When the technology and products of SMEs pass the review and certification of the expert committee selected by each SOE, they are registered on the technology market.⁶⁷ Each SOE can conveniently purchase registered technology and products without any restrictions, such as delivery performance.⁶⁸ The Government Innovation Product is a system that designates products with recognized public and innovative performance as “innovative products” and grants various exceptions in public procurement (such as a negotiated contract, exemption from purchasing responsibility, and an innovation purchase target system). These two systems are connected, and so 75 products registered on the technology market in 2022 were

67. Since the opening of the SOC sector technology market in June 2019, two technology markets have been added: energy in October 2020 and information and communication technology (ICT) in December 2021. Currently, 29 SOEs participate in the SOC sector, 17 in the energy sector and 13 in the ICT sector.

68. The purchase of products from small and medium enterprises by SOEs through technology markets has increased steadily: KRW 251 billion in 2020, KRW 542 billion in 2021, and KRW 832 billion in 2022 (expected).

designated innovative products. SOEs also purchase products from start-ups, female-owned companies, and companies associated with many disabled employees through public procurement.

The ACS restricts the eligibility of bidders of fraudulent companies and the review and mediation procedures for objections to the National Contract Dispute Resolution Committee. If the head of an SOE determines that fair competition or appropriate contract execution is clearly undermined, the bidder's eligibility may be restricted for up to two years, and that fact must be immediately reported to other agencies (ACS Article 27). Meanwhile, any competing party, bidder, or economic entity that suffers a disadvantage in the public procurement process may file an objection with the SOE head, who must review and inform the objector of the results within 15 days of receiving the objection (ACS Article 28 (3)). If there is a dissent to the outcome, an application for review may be submitted to the National Contract Dispute Resolution Committee within 20 days (ACS Article 28(4)). This process aligns with the OECD principles on public procurement, requiring the government to ensure that potential suppliers have adequate and timely access to procurement decisions and to promptly resolve these complaints.

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5 Policy Implications, Lessons, and Challenges

INTRODUCTION

This chapter begins by summarizing important points from the Korea's experience that countries engaging in reform of their SOEs. It then reviews lessons learned from the Korean government's SOE reform efforts effectively over several decades, and concludes by describing the future challenges faced by Korean SOEs. A closer look at the ownership functions, management performance evaluation, board of directors, transparency and disclosure, and financial risk management systems of Korean SOEs reveals useful policy implications as countries design and implement their own SOEs reform agendas according to their specific contexts and capabilities.

OWNERSHIP FUNCTION

A centralized ownership model can help clearly identify and establish the exercise of state ownership for all relevant parties—including SOE shareholders, boards of directors, auditors, and other stakeholders. In the Republic of Korea, the government established a centralized SOE ownership model headed by the Ministry of Economy and Finance (MOEF) and with a clear legal and regulatory framework for SOE oversight. These efforts led to the separation of ownership functions from policymaking and regulatory functions, minimizing the scope for political interference and enabling the oversight of Korean SOEs on a whole-of-government basis. Using the structure set forth in the Act on the Management of Public Institutions (AMPI), the Korean government has sought to prevent overlapping roles among the various stakeholders by clearly defining the roles and responsibilities of the relevant agencies, including the MOEF, line ministries, the National Assembly, the Board of Audit and Inspection (BAI), and independent external auditors. The AMPI clearly stipulates the MOEF's role in overseeing SOEs, including financial target management, operational and technical issues, and performance monitoring, while line ministries provide industry policy-making and regulatory functions for the SOEs under their purview. Moreover, the National Assembly, the BAI, and independent external auditors in Korea monitor externally SOEs' operations. In addition to the AMPI, statutory regulations for Korean

SOEs, such as individual laws, the Civil Act, and the Commercial Act, define the main businesses of each SOE and identify large SOEs pursuing public policy objectives.

PERFORMANCE MONITORING

The Management Performance Evaluation System is an essential and effective way to ensure accountability through management supervision of SOEs. The role of SOEs in producing and supplying universal services essential to the national economy is increasing, but because they are granted an exclusive or stable status by law, there is always the possibility of budget waste and indiscriminate management due to lack of responsibility. To increase the autonomy and efficiency of SOE management, it is necessary to reduce excessive government intervention and switch to a management method centered on ex post evaluation. Since 1984, the Korean government has conducted systematic management performance evaluations focusing on post-evaluation of SOEs. The government developed key performance indicators with targets, and linked SOE performance evaluation results to management incentives and compensation to improve the quality of public services of SOEs, especially by strengthening the responsibility of their executive directors. Through these efforts, Korean SOEs could promote the responsibility of stakeholders in SOEs and increase the efficiency and autonomy by providing incentives or penalties according to the evaluation results.

BOARD OF DIRECTORS

Because the board of directors of SOEs is responsible for long-term strategic decision-making and operational aspects and carries ultimate responsibility for SOE performance, securing independence and expertise is an important SOE corporate governance objective. The Korean government sought to enhance the “independence and expertise” of SOEs by establishing regulations related to the role of boards of directors, director qualifications, transparent appointment and dismissal procedures, training programs, and board evaluation. The AMPI clearly stipulates the composition, nomination and dismissal procedures, and board functions of SOE boards, as suggested by international corporate governance standards. For example, the AMPI describes the minimum criteria for board nominations, the nomination committee for executive officers, the gender equality executive appointment target system, nonexecutive directors’ functions, and the mandatory audit committee for all public enterprises. In addition, the chief executive officer (CEO) and executive auditors of public enterprises (PEs) and quasi-governmental institutions (QGIs) are not dismissed until they complete their legal term unless there are exceptional circumstances such as violation of the law or serious negligence of work. These efforts led to a transparent system for selecting SOE boards, preventing nonexperts from being appointed by political decisions, evaluating their management performance, and providing appropriate training programs such as formal induction orientation

programs and ongoing learning opportunities.

TRANSPARENCY AND DISCLOSURE

To ensure that the state exercises its powers in accordance with the public's best interest, it is essential for SOEs to publish regular aggregate financial and nonfinancial information with independent external audits and internal audits, and comply with the use of comprehensive standardized accounting standards such as the International Financial Reporting Standards (IFRS). The Korean government's integrated digitized public disclosure system—All Public Information In-One (ALIO)—for the financial and nonfinancial information of SOEs requires SOEs to maintain financial accounts in accordance with the IFRS. It has strengthened independent external and internal audit procedures to enhance the transparency and accountability of SOE boards and management. Since 2006, the government has transparently disclosed information submitted by all SOEs in a designated format through the ALIO system, which is functionally equivalent to an aggregate report. Meanwhile, the DART (data analysis, retrieval, and transfer) electronic disclosure system introduced in 2015 has made the financial reporting of SOEs faster and safer. Through ALIO, citizens can view at any time the key management information of SOEs, such as budgets, personnel, performance evaluation results, and audit reports, and compare the information of all SOEs. SOEs' financial statements are audited using the International Standards on Auditing. The internal auditor or audit committee of each SOE manages the internal audit. Overall, Korean SOEs have been able to dramatically increase accountability and transparency by implementing various public disclosure policies.

FISCAL RISK MANAGEMENT

A strategic fiscal risk management framework enables SOE ownership institutions to identify the risks to the government budget arising from SOEs, assess the size and probability of risks, identify any policy or other measures to mitigate risks, and bring transparency to the entire budgeting process. The Korean government developed an SOE fiscal risk management framework to clearly identify the major risks to the budget emanating from SOEs and mitigate these risks. Since 2012, the government has been implementing a medium- and long-term fiscal risk management plan for large SOEs to prevent any burden on the central government arising from SOE debt. In particular, it established an intensive fiscal consolidation plan for 14 highly indebted SOEs to manage their fiscal risks more strictly during the COVID-19 pandemic. This framework takes into consideration both direct and contingent liabilities, as well as explicit and implicit obligations. In addition, the government developed a “preliminary feasibility study” pursued by independent third-party institutions—Korea Development Institute (KDI) and Korea Institute of Public Finance (KIPF)—to evaluate the comprehensive feasibility of new large-scale SOE projects. Prior consultation for new funding or investment by SOEs and total project

cost management for the life cycle of SOE projects are also good examples of fiscal risk management policy (table 5.1). By means of these strategic policies and the lessons learned from its SOE reforms (box 5.1), the Korean government has sought to achieve a sustainable financial status for SOEs since the pandemic.

TABLE 5.1

Policies for debt management of state-owned enterprises. 2022

Policy (starting year)	Targets	No. of SOEs	Related contents	Stage at which policy mainly applied		
				Planning	Implemen- tation	Result
Medium- and long-term financial management plan (MLTFMP) (2012)	SOEs with over KRW 2 trillion in assets, capital impairment, or compensation for losses	39	• SOE to establish financial management plan for the next five years • MOEF to oversee and assess • National Assembly to oversee (https://www.kipf.re.kr/viewer/default/doc.html?fn=FILE_000000021222Sx3_0&rs=viewer/result/edcData/)			
Intensive debt management ^a (May 2022)	Highly indebted SOEs	14	• SOE to establish intensive debt reduction plan for the next five years • MOEF to oversee and assess			
Management performance evaluation (PEs, 1984; QGIs, 2004)	36 public enterprises (PEs) 94 quasi-governmental institutions (QGIs)	130	• Increasing the weight of the financial performance management index from 10 to 20 points • Add new financial consolidation plan, https://www.kipf.re.kr/soeeng/Edu/Contents/Edu_Content5/edcData/S05/list.do (July 2021)			
ALIO (public disclosure) (2006)	All SOEs (350)	350	• Disclose MLTFMP • Disclose financial information, https://english.moef.go.kr/pm/OtherPublicationsList.do			
Preliminary feasibility study (PFS) (2011; government projects, 1999)	A new project with total budget of at least KRW 200 billion, of which at least KRW100 billion is subsidized by the state and SOEs (PEs and QGIs)—see box 3.1	130	• Korea Development Institute and Korea Institute of Public Finance to evaluate comprehensive feasibility focusing on publicness and profitability (feasible if Analytic Hierarchy Process is equal or greater than 0.5), https://www.kdi.re.kr/kdi_eng/kdicenter/pie_overview_role_of_pimac.pdf			
Prior consultation ^a (2016)	New funding or investment of SOEs (PEs and QGIs)	130	• SOE to request prior consultation • MOEF and line ministry to review and reply and then assess the status			
Total project cost management (TPCM) (2020)	A project with PFS of PEs and QGIs (box 3.2) ^b	130	• Manage the project cost at each stage • Reexamine feasibility when the cost increase is more than 30 percent			
Budget management guidelines ^a (PEs: 1984; QGIs: 2004)	PEs and QGIs with matters concerning budget and fund management	130	• Provide basic directions for budget compilation and execution for key items, such as labor cost, benefit, expenses, and so on			
Separate accounting system ^a (2013)	SOEs subject to MLTFMP	39	• Disclose financial statements separately for each business unit with separate assets, liabilities, profits, and expenses			

Source: authors' compilation.

a. To see this policy, visit https://www.kipf.re.kr/soeeng/Edu/Contents/Edu_Content5/edcData/S05/list.do.

b. Applied to government projects in 1994.

BOX 5.1

Lessons learned from Korea's reforms of its state-owned enterprises (SOEs) and the challenges it still faces

Lessons learned from Korea's state-owned enterprise (SOE) reform

- *Encourage diverse stakeholders to participate in the reform process.* One of the most important lessons from Korea's long SOE reform process is how to generate internal dynamics such as the participation and support of diverse stakeholders of SOEs (Acemoglu 2008). In Korea, strong political will, the economic incentive systems of ownership entities, and policy makers' continued efforts to increase the level of stakeholder acceptance can serve as driving forces for active participation in the reform process. For example, a workshop for SOE CEOs chaired by the president of Korea is held almost every year to report the progress of each SOE's reform agenda and share SOE benchmarking performance. The ongoing efforts of these stakeholders have effectively established a reform system and improved the performance of Korean SOEs.
- *Consider unexpected dysfunctional consequences and the feasible policies to overcome them.* Any reform agenda in the public sector can bring both intended and unintended dysfunctional consequences (Shin 2013). They may arise from extreme resistance by various stakeholders to the intrinsic limitations of the public sector (that is, the difficulty in measuring and evaluating performance objectively and accurately). Korean policy makers have focused on addressing unexpected dysfunctional consequences when it comes to introducing a new reform agenda for SOEs.
- *Take a step-by-step approach.* When the Korean government introduced its performance evaluation system, it met great resistance from the public sector. To spread the performance culture of SOEs effectively, the Korean government gradually expanded the subjects of performance evaluation; continually educated SOEs on the need for performance evaluation; and incorporated similar evaluations into the management performance evaluation. Also, various opinions from SOEs about performance evaluation indicators were actively sought, considered, and implemented on an ongoing basis. The Korean government also gradually expanded the scope of transparency when developing the All Public Information In-One (ALIO) system. In addition to resolving information asymmetry inside and outside SOEs at the initial stage of the information technology system, the government has disclosed various areas of interest such as compliance, ethical management, anticorruption activities, and recent environmental, social, and governance (ESG) activities.
- *Maintain consistent reform objectives despite regime changes.* The Korean government adopted the "autonomous and responsible" management principle based on a modernized performance evaluation system. The focus and methods of SOEs reform often changed as administrations changed. However, the administrations shared and maintained the common objectives of strengthening the performance monitoring system and improving corporate governance.

Challenges

- *Establishing and leading environmental, social, and governance (ESG) management.* Ongoing efforts to strengthen ESG management–related performance evaluation and disclosure are essential to coordinate conflicts of interest and discussions among various social groups. In particular, SOEs need to take a leading role in environmental protection and climate change in relation to the government's mitigation and adaptation strategies. The Ministry of Economy and Finance (MOEF) expanded the environmental disclosure items in 2021, increased the weight of the climate change response performance indicator in 2022, and revamped the ALIO system to emphasize ESG management disclosure in 2023. The Korean government plans to further strengthen ESG management–related matters for SOEs in the future.

- *Strengthening the role of the board of directors of SOEs.* Enhancing the autonomy and expertise of the board of directors by strengthening board functions related to future strategy and policy making, accountability provision, monitoring, and management supervision is essential to strengthen the capabilities of SOEs. In particular, it is necessary to enhance the authority and responsibility of the board chair and nonexecutive directors. Although the MOEF added the record of nonexecutive directors' activities as one of the 2023 ALIO items, it would be important for the government to further enhance the responsibility and verification of the board of directors, such as by elaborating on the objection procedure to the boards of directors of SOEs prior to announcing the evaluation results.
- *Achieving a sustainable financial status.* Because the rising debt of the 14 highly indebted SOEs can ultimately put a strain on national finances, effectively managing the debt of these SOEs is essential to maintaining a sustainable financial status in the future. Looking ahead, it will be important for the Korean government to strictly and regularly monitor the performance of the fiscal consolidation plans of these SOEs. In addition, the 18 state-owned financial institutions that provided financial services to vulnerable groups during the COVID-19 pandemic also should conduct a thorough analysis of their financial performance and potential financial risks since completing most of their pandemic-related services.
- *Promoting partnerships with the private sector.* SOEs can play a significant role in developing new growth engines for the Korean economy. It would be important for the Korean government to further develop a regulatory improvement system to enhance cooperation between the private sector and SOEs by disclosing data, technology, patents, and other resources held by SOEs to the private sector. Private sector and business-led economic growth may be possible based on SOEs.

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APPENDIX A

Changes in Performance Indicators and Weights for Public Enterprises in 2022

In May 2022, with the inauguration of a new government, the Ministry of Economy and Finance (MOEF) improved the performance evaluation indicators overall to balance the efficiency and publicness of state-owned enterprises (SOEs). The content was reflected in the revised 2022 SOE Management Evaluation Manual (tables A.1, A.2, A.3). The key improvements for SOEs included strengthening financial performance evaluation and increasing the weight of financial performance management items from 10 points to 20 points. For institutions with a large debt size and critical debt management, the weights of stability indicators such as debt ratio and the interest coverage ratio were set high. In particular, an indicator was established for the 14 highly indebted SOEs to check the appropriateness and implementation efforts of fiscal consolidation plans. Another improvement was changing the name of the item “Social value realization” to “Social responsibility,” and changing the score from 25 points to 15 points. A separate indicator, “Environmentally friendly and carbon neutral,” was established, and the score was increased from 1 point to 1.5 points. Yet another improvement—a follow-up measure to the “New Government SOE Innovation Guidelines” (July 29, 2022)—was establishing a bonus (five points) to evaluate the efforts and performance of the innovation plan for SOEs.

TABLE A.1

Changes in the 2022 Management Evaluation Manual for state-owned enterprises (SOEs)

Table A.1.1 2022 manual—original					Table A.1.2 2022 manual—revised				
Category	Evaluation indicator	Assigned points			Category	Evaluation indicator	Assigned points		
		Total	Nonquantitative	Quantitative			Total	Nonquantitative	Quantitative
Management activities (55 points)	1. Management strategies and leadership	9.5	8	1.5	Management activities (55 points)	1. Management strategies	9	8	1
	• Strategy planning and innovation	7	7	n.a.		• Leadership	2	2	n.a.
	• Public communication	2.5	1	1.5		• Strategy planning and management innovation	5	5	n.a.
						• Public communication	2	1	1
	2. Social value realization	25	14	11		2. Social responsibility	15	8.5	6.5
	• Job creation	6	4	2		• Jobs and equal opportunities	5	3	2
	• Equal opportunities and social integration	4	3	1		• Safety and disaster management	2	1	1
	• Safety and environment	5	1	4		• Environmentally friendly and carbon neutral	1.5	1	0.5
	• Coexistence, cooperation, and local development	5	2	3		• Coexistence, cooperation, and local development	4	2	2
	• Ethical management	5	4	1		• Ethical management	2.5	1.5	1
	3. Work efficiency	5	n.a.	5		3. Financial performance management	20	3	17
						• Efficiency management	6	n.a.	6
						• Financial budget management	3	3	n.a.
						• Financial budget performance	11	n.a.	11
	4. Organization, personnel, and financial management	7	4	3		4. Organization and HR management	4	4	n.a.
	• Organization and human resource (HR) management in general	2	2	n.a.		• Organization and HR management	2	2	n.a.
	• Financial budget management and performance	5	2	3		• Management-labor relations	2	2	n.a.
	5. Remuneration and welfare	8.5	3.5	5		5. Remuneration and welfare management	7	4	3
	• Remuneration and welfare	3.5	1.5	2		• Remuneration and welfare	4	4	n.a.
	• Total labor cost management	3	n.a.	3		• Total labor cost management	3	n.a.	3
	• Management-labor relations	2	2	n.a.		Subtotal	55	27.5	27.5
Main projects (45 points)	Subtotal	55	29.5	25.5	Main projects (45 points)	Comprehensive evaluation of key project plans, activities, and performance	45	21	24
						Subtotal	45	21	24
Total		100	50.5	49.5	Total		100	48.5	51.5
(Additional points) COVID-19 response efforts and performance		3	3		(Additional points) Innovation plan implementation efforts and performance		5	5	

Source: authors' compilation.

Note: n.a. = not applicable.

TABLE A.2

Example: Korea Electric Power Corporation (KEPCO), main projects and evaluation indicators (45 points)

Main project	Evaluation indicator	Points	Total
Electricity supply and demand service	Management of load factor (global level)	4	8
	Efforts to manage power supply cost	1	
	Appropriateness of performance management	3	
Transmission and substation service	Efforts to improve transmission and substation system reliability	3	9
	Efforts to digitize transmission and substation facilities	2	
	Appropriateness of performance management	4	
Distribution service	Management of transmission and distribution loss factor (global level)	3	17
	Grid connections/efforts for power plant interconnection	4	
	Safety management in the power sector	3	
	Appropriateness of performance management	7	
Future growth service	Growth rate of overseas business	3	7
	Outcomes of research and development (R&D)	1	
	Appropriateness of performance management	3	
Appropriateness of evaluation indicator composition and challenge of the goal		4	4

Source: authors' compilation.

TABLE A.3

Example: Korea Water Resources Corporation (K-water), main projects and evaluation indicators (45 points)

Main project	Evaluation indicator	Points	Total
Water-sharing service	Efforts to prevent water supply disruptions	4	20
	Improving drinking water quality and safety	4	
	Improving water flow rate	4	
	Appropriateness of performance management	8	
Water safety service	Efforts at water quality management	2	14
	Operation and management of water resources facilities	3	
	Drought forecast and warning	3	
	Appropriateness of performance management	6	
Water convergence service	Productivity and soundness of waterfront city	2	7
	Efforts to promote water industry	1	
	Growth of renewable energy (clean energy)	1	
	Appropriateness of performance management	3	
Appropriateness of evaluation indicator composition and challenge of the goal		4	4

Source: authors' compilation.

APPENDIX B

Liabilities and Debt Ratios of State-Owned Enterprises (SOEs) by Sector, 2017-21

KRW, trillions (%)

SOE sector		Liabilities					Five-year CAGR
		2017	2018	2019	2020	2021	
SOC	Transport	70.46 (122.40)	71.29 (116.25)	73.62 (116.37)	78.61 (121.04)	84.02 (128.49)	4.50 (1.22)
	Housing and real estate	131.17 (302.28)	128.34 (279.37)	126.97 (251.28)	130.09 (231.23)	139.24 (219.16)	1.50 (-7.72)
	Water supply	13.64 (188.35)	14.01 (179.81)	13.92 (166.89)	13.84 (152.49)	13.55 (136.86)	-0.17 (-7.67)
SOC total		215.33 (198.94)	213.75 (183.89)	214.64 (173.99)	222.69 (169.22)	236.99 (168.99)	2.43 (-4.0)
Energy		168.29 (197.69)	177.1 (218.54)	193.2 (248.73)	194.94 (255.89)	216.8 (300.72)	6.54 (11.06)
Employment, health, and welfare		14.64 (29.77)	18.47 (40.76)	20.06 (45.41)	20.67 (42.78)	20.26 (36.14)	8.46 (4.97)
Industrial promotion and information and communication		17.21 (280.54)	17.70 (269.87)	18.50 (273.98)	21.56 (287.87)	24.12 (280.09)	8.81 (-0.04)
Agriculture, forestry, fisheries, and environment		11.41 (228.26)	11.70 (159.41)	14.11 (192.94)	17.12 (180.93)	20.00 (148.61)	15.06 (-10.17)
Research and education		4.80 (41.49)	4.85 (40.30)	5.09 (41.35)	5.55 (42.91)	5.97 (43.95)	5.60 (1.45)
Culture, arts, diplomacy, and legal services		1.59 (28.38)	1.55 (27.13)	1.78 (30.25)	1.40 (26.56)	1.55 (30.05)	-0.63 (1.44)
Financial		50.44 (191.73)	45.77 (142.59)	47.68 (132.16)	47.41 (106.59)	47.73 (88.96)	-1.37 (-17.47)
Other		9.5 (57.43)	10.23 (58.82)	9.59 (49.83)	9.84 (47.70)	9.54 (41.18)	0.11 (-7.98)
All SOEs		493.21 (157.21)	501.10 (154.80)	524.66 (157.64)	541.19 (151.85)	582.96 (151.02)	4.27 (-1.0)

Source: All Public Information In-One (ALIO), www.alio.go.kr, 2022; authors' compilation.

Note: CAGR = compound annual growth rate; SOC = social overhead capital.

APPENDIX C

Government Investments in State-Owned Enterprises (SOEs)

KRW, hundred millions

KRW, hundred millions

SOE	Paid capital (A)	Government shares				Total (B)	Share ratio (%) (B)/(A)
		General account		Special account			
		Amount	Share (%)	Amount	Share (%)		
Public enterprises (20)	1,314,632	380,968	29.0	776,700	59.1	1,157,668	88.1
Korea Land and Housing Corporation (LH)	393,913	124,004	31.5	225,199	57.2	349,203	88.6
Korea Expressway Corporation (EX)	382,992	0	0	335,716	87.7	335,716	87.7
Korea Railroad Corporation (KORAIL)	107,427	92,364	86.0	15,063	14.0	107,427	100.0
Korea National Oil Corporation (KNOC)	106,087	223	0.2	105,864	99.8	106,087	100.0
Korea Water Resources Corporation (K-water)	97,174	90,894	93.5	197	0.2	91,090	93.7
Incheon International Airport Corporation (IIAC)	36,178	0	0	36,178	100.0	36,178	100.0
Busan Port Authority (BPA)	32,975	28,790	87.3	0	0	28,790	87.3
Korea Airport Corporation (KAC)	23,578	11,153	47.3	11,388	48.3	22,541	95.6
Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR)	20,000	1,416	7.1	18,557	92.8	19,973	99.9
Korea Housing and Urban Guarantee Corporation (HUG)	32,653	0	0	18,124	68.3	18,124	68.3
Incheon Port Authority (IPA)	20,677	12,305	59.5	4,375	21.2	16,680	80.7
Yeosu Gwangyang Port Authority (YGPA)	15,523	5,986	38.6	566	32.6	11,053	71.2
Korea Electric Power Corporation (KEPCO)	32,098	5,842	18.2	0	0	5,842	18.2
Ulsan Port Authority (UPA)	4,405	3,843	87.2	3	0.1	3,846	87.3
Korea Broadcast Advertising Corporation (KOBACO)	3,000	3,000	100.0	0	0	3,000	100.0
Korea Gas Corporation (KOGAS)	4,616	1,038	22.5	169	3.7	1,207	26.2

SOE	Paid capital (A)	Government shares				Total (B)	Share ratio (%) (B)/(A)
		General account		Special account			
		Amount	Share (%)	Amount	Share (%)		
Korea Coal Corporation (KOCOAL)	601	0	0	601	100	601	100.0
Korea District Heating Corporation (KDHC)	579	0	0	200	34.5	200	34.5
Korea Minting and Security Printing Corporation (KOMSCO)	66	66	100.0	0	0	66	100.0
Korea Real Estate Board (REB)	90	44	49.4	0	0	44	49.4
Quasi-governmental institutions (6)	52,951	41,578	78.5	1,066	2.2	42,644	80.5
Korea Rural Community Corporation (KRC)	14,658	14,658	100.0	0	0	14,658	100.0
Korea Housing Finance Corporation (HF)	20,616	13,100	63.5	1,066	5.2	14,166	68.7
Korea Asset Management Corporation (KAMCO)	16,119	12,407	77.0	0	0	12,407	77.0
Korea Agro-Fisheries and Food Trade Corporation (AT)	683	683	100.0	0	0	683	100.0
Korea Trade-Investment Promotion Agency (KOTRA)	550	550	100.0	0	0	550	100.0
Korea Tourism Organization (KTO)	324	179	55.2	0	0	179	55.2
Nonclassified public institutions (8)	436,881	326,936	74.8	36,119	8.3	363,055	83.1
Korea Development Bank (KDB)	218,866	199,445	91.1	19,421	8.9	218,866	100.0
Export-Import Bank of Korea (KEXIM)	127,483	86,378	67.8	1,250	1.0	87,628	68.7
Industrial Bank of Korea (IBK)	42,114	23,722	59.5	0	0	23,722	59.5
Korea Ocean Business Corporation (KOBIC)	29,493	12,342	41.8	3,458	11.7	15,800	53.6
Saemangeum Development Corporation (SC)	13,970	3,000	21.5	10,970	78.5	13,970	100.0
Korea Overseas Infrastructure and Urban Development Corporation (KIND)	3,936	2,050	52.1	0	0	2,050	52.1
Korea Investment Corporation (KIC)	1,000	0	0	1,000	100	1,000	100.0
88 Country Club	20	0	0	20	100	20	100.0
SOE total (34)	1,804,464	749,482	41.5	813,885	45.1	1,563,367	86.6

Source: NABO 2022.

Note: Government investment totals are as of July 31, 2021.

REFERENCE

NABO (National Assembly Budget Office). 2022. *Public Institutions of the Republic of Korea 2022*. Seoul: NABO.

APPENDIX D

Government Dividends, 2021 and 2022

KRW, hundred millions

SOE	2021			2022		
	General	Special	Total	General	Special	Total
Korea Land and Housing Corporation (LH)	2,275	3,570	5,845	2,597	4,844	7,441
Korea Development Bank (KDB)	1,925	172	2,096	7,592	739	8,331
Industrial Bank of Korea (IBK)	2,208	0	2,208	3,701	0	3,701
Korea Asset Management Corporation (KAMCO)	142	0	142	159	0	159
Busan Port Authority (BPA)	238	0	238	183	0	183
Korean Broadcasting System (KBS)	33	0	33	32	0	32
Korea Rural Community Corporation (KRC)	9	0	9	130	0	130
Ulsan Port Authority (UPA)	77	0.1	77	119	0.1	119
Korea Real Estate Board (REB)	10	0	10	16	0	16
Korea Trade-Investment Promotion Agency (KOTRA)	25	0	25	15	0	15
Korea Agro-Fisheries and Food Trade Corporation (AT)	2	0	2	4	0	4
Korea Ocean Business Corporation (KOBIC)	0	0	0	0	0	0
Korea Water Resources Corporation (K-water)	0	0	0	0	0	0
Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR)	0	0	0	0	0	0
Yeosu Gwangyang Port Authority (YGPA)	0	0	0	0	0	0
Seoul Shinmun	0	0	0	0	0	0
Korea Overseas Infrastructure and Urban Development Corporation (KIND)	0	0	0	0	0	0
Korea Minting and Security Printing Corporation (KOMSCO)	0	0	0	0	0	0
Korea Educational Broadcasting System (EBS)	3	4	8	0	0	0

SOE	2021			2022		
	General	Special	Total	General	Special	Total
Korea Broadcast Advertising Corporation (KOBACO)	0	0	0	0	0	0
Saemangeum Development Corporation (SC)	0	0	0	0	0	0
Korea Tourism Organization (KTO)	0	0	0	0	0	0
Incheon Port Authority (IPA)	157	56	213	0	0	0
Korea National Oil Corporation (KNOC)	0	0	0	0	0	0
Korea Airport Corporation (KAC)	0	0	0	0	0	0
Korea Railroad Corporation (KORAIL)	0	0	0	0	0	0
Korea Electric Power Corporation (KEPCO)	1,421	0	1,421	0	0	0
Korea Housing and Urban Guarantee Corporation (HUG)	0	616	616	0	621	621
Korea Investment Corporation (KIC)	0	580	580	0	1,176	1,176
Korea Expressway Corporation (EX)	1	118	120	0	134	134
Daehan Oil Pipeline Corporation (DOPCO)	0	10	10	0	23	23
Korea District Heating Corporation (KDHC)	0	39	39	0	32	32
Airport Railroad Co., Ltd. (AREX)	0	0	0	0	0	0
88 Country Club	0	0.2	0.2	0	0	0
Korea Coal Corporation (KOCOAL)	0	0	0	0	0	0
Incheon International Airport Corporation (IIAC)	0	0	0	0	0	0
Total	9,194	5,203	14,396	16,826	7,715	24,541

Source: NABO 2022.

Note: Five of the 39 institutions are not SOEs (AREX, DOPCO, EBS, KBS, Seoul Shinmun). SOE = state-owned enterprise.

REFERENCE

NABO (National Assembly Budget Office). 2022. *Public Institutions of the Republic of Korea 2022*. Seoul: NABO.

APPENDIX E

Recent Changes in the Management Performance Evaluation System

According to the Act on the Management of Public Institutions (AMPI), the objective of performance evaluation reform is to enhance the autonomy and accountability of state-owned enterprises (SOEs) in response to the new realities of society and public service quality. The Korean government is focusing on reducing lax management, improving financial sustainability, lowering the government's fiscal burden, and strengthening environmental, social, and governance (ESG) management, which has gained in prominence in recent years. Table E.1 describes the policy priorities of administrations since 2008.

TABLE E.1
Policy priorities and reforms of Management Performance Evaluation System by Korean government administration, 2008-22

Year	Policy priorities	Nature of reform
2008		Promoting comprehensive system improvement, reorganizing evaluation indicators, and strengthening management performance
2009	- Small government and big market - Citizens' benefits	Expanding proportion of metric indicators, simplifying evaluation indicators, and reflecting results of management efficiency
2010	- Minimizing social costs - Tailored planning and transparent execution	Reclassifying evaluation types, expanding proportion of quantitative evaluation, and refining of evaluation methods
2011–12		- Introducing and expanding global competitiveness indicators - Strengthening social contributions, focusing on job creation - Strengthening debt management indicators
2013		Evaluating medium- and long-term financial management plans and strengthening energy-related safety management projects
2014	- Debt reduction - Elimination of lax management - Functional adjustment	- Conducting debt management and eliminating lax management - Emphasizing chief executive officer (CEO) management performance agreement system
2016		Improving the suitability of management evaluation system, reflecting customized evaluation indicators

Year	Policy priorities	Nature of reform
2017		• Strengthening social responsibility, fair competitive conditions, and management of coordinating function
2018	• Social values • Publicness and fairness	• Strengthening social value indicators • Balancing efficiency and publicness
2021		• Establishing a regular and professional evaluation management system
2022	• Management efficiency • Fiscal soundness • Autonomy and responsibility • Support innovation and growth of the private sector	• Evaluating efficiency and profitability in a more balanced manner in pursuit of public and social objectives and operational process • Enforcing strict management of the 14 highly indebted institutions • Improving core business indicators • Alleviating the burden of evaluation by reducing similar and overlapping indicators • Setting the performance of innovation efforts as a key indicator and linking it to performance-based bonuses

Source: authors' compilation.

APPENDIX F

Detailed Statistics of 21 Subitems in the All Public Information In-One (ALIO) System

Figure F.1 is an example of the detailed search results for the total purchase records (A), green product⁶⁹ purchase records (B), and their ratio (B/A) of 36 public enterprises in Korea since 2017. Figure F.2 shows examples of three public enterprises. For example, the Kangwon Land Co. Ltd. purchased KRW 1,715 million and KRW 1,163 million in green products in 2019 and 2020, respectively. Those purchases amounted to 84 percent and 86 percent of Kangwon Land's total purchases in 2019 and 2020, respectively.

FIGURE F.1

Example: Subitems, All Public Information In-One (ALIO)

The screenshot displays the ALIO search interface. At the top, there are tabs for 'single statistic', 'composite statistics', and 'Search'. Below these, the 'Institution selection' section allows users to select a total of 36 detailed items, with options for 'public corporation (market t)', 'Public enterprise (quasi-mar)', 'Quasi-governmental instituti', 'Quasi-governmental agency', and 'Other public institutions'. The 'Choice of lead agency' section lists various agencies like 'National Police Agency', 'Ministry of Employment and', 'Fair Trade Commission', and 'Ministry of Science and ICT'. The 'Selection of disclosure items' section allows users to select a total of 3 detailed items, with options for 'Disclosure items', 'public tax items', and 'Green Product Purchase Performance'. The 'Green Product Purchase Performance' section is expanded, showing sub-items like 'total purchase amount', 'Green product purchase amount', and 'ratio'. The 'Search' button is located at the top right, and a note indicates 'Search is possible only data lookup'.

Source: All Public Information In-One (ALIO), www.alio.go.kr; authors' compilation.

69. Green product refers to a product with better environmental performance compared than other products for the same purpose (including devices, materials, and services that affect the environment), according to the Article 17(1) of the Environmental Technology and Environmental Industry Support Act, or the Article 33 of the Act on the Promotion of Saving and Recycling of Resources, or the Article 17 of the Enforcement Decree of the Industrial Technology Innovation Promotion Act.

FIGURE F.2

Example: Kangwon Land Co., Ltd., Korea Racing Association, and Korea Broadcast Advertising Promotion Corporation purchases, 2017–21, All Public Information In-One (ALIO)

single statistic composite statistics Search Search result 1 X

[To search again, please click the 'Search' tab.]

EXCEL Download

NO	Institution name	organ type	Item	2017	2018	2019	2020	2021	2022	unit	Transition
One	Kangwon Land Co., Ltd.	public corporation (market type)	Green product purchase record > Green product purchase record > Total purchase amount	0	0	2025	1,343	720	-	one million won	
2	Kangwon Land Co., Ltd.	public corporation (market type)	Green product purchase record > Green product purchase record > Green product purchase amount	0	0	1,715	1,163	324	-	one million won	
3	Kangwon Land Co., Ltd.	public corporation (market type)	Green product purchase performance > Green product purchase performance > Ratio	0	0	84	86	-396	-	%	
58	Korea Racing Association	Public enterprise (quasi-market type)	Green product purchase record > Green product purchase record > Total purchase amount	0	0	5,909	1,541	2,408	-	one million won	
59	Korea Racing Association	Public enterprise (quasi-market type)	Green product purchase record > Green product purchase amount	0	0	5,319	1,369	801	-	one million won	
60	Korea Racing Association	Public enterprise (quasi-market type)	Green product purchase performance > Green product purchase performance > Ratio	0	0	90	88	-1,607	-	%	
61	Korea Broadcast Advertising Promotion Corporation	Public enterprise (quasi-market type)	Green product purchase record > Green product purchase record > Total purchase amount	0	0	90	155	40	-	one million won	
62	Korea Broadcast Advertising Promotion Corporation	Public enterprise (quasi-market type)	Green product purchase record > Green product purchase record > Green product purchase amount	0	0	72	151	20	-	one million won	
63	Korea Broadcast Advertising Promotion Corporation	Public enterprise (quasi-market type)	Green product purchase performance > Green product purchase performance > Ratio	0	0	80	97	-20	-	%	

Source: All Public Information In-One (ALIO), www.alio.go.kr; authors' compilation.

State-owned enterprises (SOEs) contribute to the economic growth and social development of many countries. Indeed, they play a vital role in delivering basic services such as water, public infrastructure, and energy, and so their performance is a critical concern for citizens, businesses, and the broader development agenda alike. However, because SOEs are not always able to recover their operational costs from beneficiaries, governments often must provide them with financial support, as they did during the COVID-19 pandemic. SOEs may also generate contingent liabilities, which can pose important fiscal risks for government budgets or threaten national competitiveness.

Recognizing the continued importance of the SOEs as well as the challenges of limited fiscal space, the Korea Institute of Public Finance (KIPF) joined with the World Bank to produce *Corporate Governance and Fiscal Risk Assessment of State-Owned Enterprises in the Republic of Korea: Integrated State-Owned Enterprise Framework (iSOEF) Assessment*. This report shares Korea's experience in establishing advanced corporate governance and strategic fiscal risk management system for Korean SOEs.

The report opens by describing the landscape of Korean SOEs, including their financial, operational, and service delivery performance. An analysis follows of the fiscal costs and risks posed by the SOE sector, as well as a forecast of the medium- and long-term fiscal impacts of the strict fiscal consolidation plans now in place for 14 highly indebted SOEs. The report then moves to a description of the corporate governance and accountability mechanisms of Korean SOEs according to six dimensions: legal and regulatory framework, ownership function, performance monitoring, board of directors, transparency and disclosure, and public procurement. It concludes by highlighting the experiences, lessons learned, and challenges arising from Korea's SOE reform process. Although no single approach or model can be expected to work for all developing economies in view of their diverse structures, levels of development, and institutional legacies, this report is expected to prove useful to countries reforming their SOEs.