



The COVID-19 crisis and state ownership in the economy: Issues and policy considerations

25 June 2020

The COVID-19 epidemic is disrupting business activity, causing demand to collapse and straining global supply chains. This is pushing many firms into financial distress and sparking government interventions to protect incomes, jobs and firms. In some cases, governments are taking equity stakes in troubled firms. Based on the OECD Product Market Regulation (PMR) indicators, this note considers the policy challenges raised by such interventions, with a special focus on the governance of state-owned enterprises and exit strategies from state ownership.



Key messages and policy considerations

- In response to the COVID-19 crisis, governments are rolling out a vast array of policy measures to support the business sector, including taking equity stakes in companies in financial distress.
- State ownership is already extensive in many OECD countries. The OECD Product Market Regulation (PMR) shows that most governments control firms that undertake commercial activities in a significant number of sectors, notably energy, rail transport, finance, and telecoms.
- Good governance of state-owned enterprises (SOEs) is essential for these firms to perform efficiently and compete fairly with private firms. Micro-level evidence from the air transport and automotive sectors in OECD countries shows that, on average, SOEs tend to have significantly lower returns on equity than private firms. However, in countries where SOEs are subject to the same market pressures as their competitors and are insulated from political interference, SOEs perform as well as private firms.
- The OECD PMR indicators provide insights into areas of the corporate governance of SOEs that would benefit from reforms. For example, in roughly a quarter of OECD countries there are SOEs with a legal status that may shield them from the (full) application of private company law. Similarly, in many OECD countries, accounting or legal separation between commercial and non-commercial activities could be imposed more extensively on SOEs that also fulfil public service obligations. This obligation would avoid the distortions caused by possible cross-subsidisation.
- Other key OECD principles of SOE governance, not covered in the PMR indicators, can also help governments in the context of the COVID-19 crisis. In particular, governments should take equity stakes only in firms whose financial distress is linked to the downturn, and which are likely to return to profitability once economic conditions improve. In addition, in order to contain costs to taxpayers and minimise moral hazard risks related to the expectations of future bailouts, governments should impose strict recovery plans on the firms benefiting from these interventions, set clear conditions for exit from state ownership, and rely on independent advisory to ensure sound valuations of investments and divestments.

Governments are considering taking equity stakes in distressed firms among the crisis-response tools

The COVID-19 pandemic and the related containment measures are putting companies around the world in financial difficulty. The size of the shock is unprecedented – the OECD estimates that the direct impact of the containment measures amounts to 20-30% of GDP (OECD, 2020_[1]). Sectors particularly affected by the containment measures include services, especially tourism and services requiring direct interaction with clients, construction and parts of manufacturing, such as motor vehicles. The immediate impact of these measures will have knock-on effects through backward and forward linkages in value chains, both domestic and across borders, and their magnitude will depend on the duration and extent of the confinement measures.

To prevent a systemic economic collapse and support the recovery, governments are rolling out a vast array of measures aiming at supporting ailing companies. Support measures include broad tax relief, wage subsidies, grants, preferential loans and loan guarantees ([COVID policy tracker](#)). In particular, governments are also taking equity stakes in distressed companies or may be considering whether to do so. Examples include airline carriers in Italy and the Nordic countries, or the French automotive industry.



The COVID-19 pandemic may, therefore, result in increased state ownership or control of enterprises. This may take place through various financial interventions, including equity buy-outs, debt-equity swaps, equity injections, the granting of state loans eventually converted into equity, and uncompensated expropriations. Such interventions tend to target companies whose failure could pose a strain on the economy, for example by increasing unemployment, interrupting essential transport connections, jeopardising the provision of crucial services or products, or obstructing access to finance. Government interventions may also be implemented to prevent adverse impacts on competition or, where the possibility of a foreign take-over arises, to address concerns about national security.¹

Increasing state ownership in times of crisis is often done as an emergency measure, leaving little time for a careful economic assessment. Countries that already enforce high standards of governance on their state-owned enterprises (SOEs) may be better prepared to anticipate and address the implications of such government intervention, while those that lack important safeguards may incur high costs. Lessons from past nationalisations, in particular from sectors such as air transport and the automotive industry, combined with evidence on the impact of good governance of SOEs, can provide guidance on how best to design these interventions and prepare in advance for exiting from them.

State ownership is already extensive

Globally, SOEs have been among the largest and fastest expanding multinational companies in the past two decades. However, precise cross-country evidence on the actual scope of SOEs is relatively scarce and depends on the definition of SOEs employed (Capobianco and Christiansen, 2011^[2]). Kowalski et al., 2013^[3] show that 10% of the 2000 largest globally-listed firms in 2011 were majority state-owned. A recent IMF assessment argues this share has doubled to 20% over the past decade and that assets of SOEs around the world are worth USD 45 trillion, equivalent to half of global GDP. Most of the increase in the global role of SOEs comes from emerging-market economies, whereas in advanced economies, the importance of SOEs has been relatively stable (IMF, 2020^[4]).

The OECD Product Market Regulation (PMR)² database collects information on state control (defined as when governments hold, either directly or indirectly through a publicly-controlled company, the largest single share of a firm's equity capital) across OECD countries and key industries, showing that governments control firms that operate commercial activities in a significant share of sectors (OECD, 2019^[5]). The latest vintage shows in which sectors SOEs are present in OECD countries (Figure 1).

In OECD countries, SOEs are mostly present in several upstream sectors, such as energy, rail transport, finance and telecoms (Table 1), often argued by governments to be of “strategic” importance to the economy. Most of these sectors are characterised by the presence of one or more network components that are natural monopoly and, hence, cannot be open to competition. Some also provide important public services, the provision of which may entail loss-making activities. These sectors have for a long time been dominated by state monopolies, though over the past several decades, progress in regulation and technology have allowed for a gradual opening-up to competition and privatisation. Instead, most manufacturing sectors, including the manufacturing of motor vehicles, their parts and accessories, have

¹ Various countries have introduced or modified foreign direct investment (FDI) screens to this purpose. For example on March 25, 2020, the EU Commission issued guidelines to coordinate the EU Member States' approach to FDI screening with the aim of protecting EU's critical assets and technologies from becoming controlled by foreign investors during the market disruption caused by the COVID-19 pandemic. https://trade.ec.europa.eu/doclib/docs/2020/march/tradoc_158676.pdf

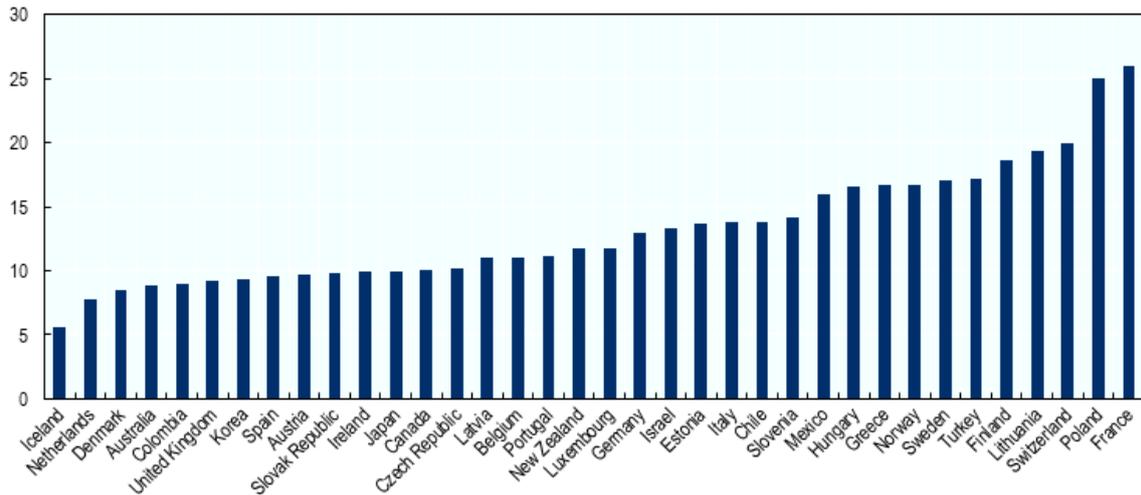
² For more information on these indicators: <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>



low incidence of state-controlled companies, with only 7 OECD governments not controlling firms in the sector. In passenger air travel, the state controls companies in only 10 OECD countries.

Figure 1. Presence of SOEs across OECD countries

Number of sectors with at least one state-controlled company



Note: The PMR database has information on whether the federal, national, regional or provincial government controls at least one firm in 30 key sectors of the economy for all OECD economies (excluding the United States). A firm is said to be controlled when governments hold, either directly or indirectly through a publicly-controlled company, the largest single share of a firm's equity capital. State-controlled firms include also government entities not organised as companies, but operating in commercial activities. For sector definitions, see Annex B. For more details on how federal states are treated please, refer to the PMR webpage: <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>

Source: OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>

Table 1. Presence of SOEs in selected sectors in OECD economies before the crisis

Key sectors in which OECD governments controlled at least one firm in 2018

Sector	Number of countries where state controls at least one firm
Energy (electricity and gas)	33 out of 35
Rail transport (passengers and freight)	32 out of 34
Financial service activities, excl. central banking, insurance and pension funds	28 out of 35
Telecoms (fixed and mobile)	20 out of 35
Air transport (international passengers)	10 out of 35
Manufacture of motor vehicles and their parts and accessories	7 out of 34

Note: The PMR database has information on whether the federal, national, regional or provincial government controls at least one firm in 30 key sectors of the economy for all OECD economies (excluding the United States). A firm is said to be controlled when governments hold, either directly or indirectly through a publicly-controlled company, the largest single share of a firm's equity capital. State-controlled firms include also government entities not organised as companies, but operating in commercial activities. For sector definitions, see Annex B.

Source: OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>



Corporate governance of SOEs matters for their performance

As a result of the COVID-19 linked interventions, state ownership is likely to increase. State ownership can be a source of distortions to competition and trade³ as well as of political interference in the running of these companies, especially in countries where state ownership is extensive. Such distortions can have negative economic consequences in the sectors concerned, such as lower levels of productivity and innovation, poorer quality of goods and services and higher prices. This poorer performance can have knock-on effects on downstream sectors and, hence, on the economy as a whole (Égert and Wanner, 2016^[6]; Bourlès et al., 2013^[7]). For this reason, the OECD has developed a set of guidelines (from here on, the 2015 OECD Guidelines) that specify the conditions that the corporate governance of SOEs should meet to ensure that they operate in a sound competitive and regulatory environment conducive to economic growth (OECD, 2015^[8]) (Box 1).

OECD indicators of Corporate Governance of SOEs show there is scope for improvement

A snapshot of the level of compliance with some key features of the 2015 OECD Guidelines on the governance of SOEs is provided by one of the OECD PMR indicators. This indicator summarises information on: i) the level of SOEs' exposure to the same market discipline as their privately-owned competitors; and ii) the extent to which existing legal rules protect SOEs from political interference in their business decisions (

³ For more details on issues related to the relationship between state investment in firms and the level playing field for international competition see (OECD, 2019^[31]).



Figure 2).

This indicator measures the quality of SOE governance rules in these two areas. Two caveats should be noted. First, the information used to build the PMR indicators captures “de jure” policy settings and not whether these laws are actually enforced. Second, the indicator on the governance of SOEs covers a subset of the principles included in the 2015 OECD Guidelines, and hence even in countries with a good score in the PMR indicator, a detailed analysis may show further room for improvement. Moreover, admittedly, the impact from the governance of SOEs on overall economic performance is likely to be more moderate in countries where the presence of SOEs in the economy is more limited (Figure 1).

Box 1. The 2015 OECD Guidelines on Corporate Governance of State-Owned Enterprises

The 2015 OECD Guidelines on Corporate Governance of SOEs aim at creating the conditions for SOEs to function as efficiently as privately-owned enterprises – subjecting them to the same market discipline and insulating them from political pressure. These guidelines also aim to ensure that SOEs and privately-owned competitors operate on a level playing field.

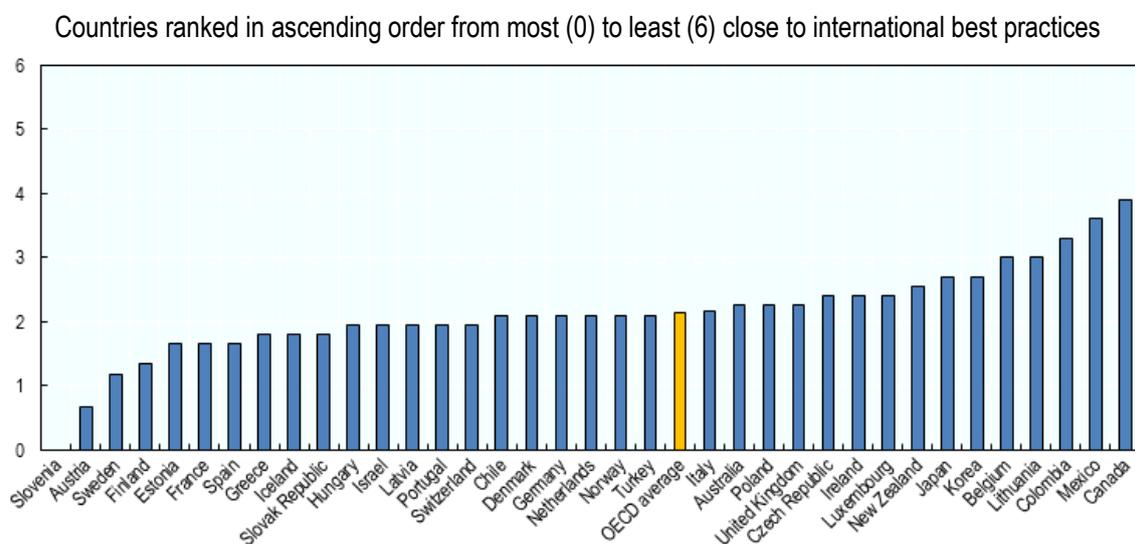
The OECD Guidelines start from the premise that the state should exercise the ownership of SOEs in the interest of the general public. Hence, the state should carefully evaluate and disclose the objectives that justify its ownership in these firms and review these objectives regularly: when these justifications are no longer satisfied it should divest its ownership, as soon as market conditions make this possible. Similarly, to protect the interest of the general public, SOEs should observe high standards of transparency and accountability. This implies that SOEs should be subject to the same high quality accounting, disclosure, compliance and auditing standards as listed companies. Where SOEs include non-state investors among their owners, the state and the enterprises should recognise the rights of all shareholders and ensure shareholders’ equitable treatment.

In addition, the boards of the SOEs should have the necessary authority, competencies and objectivity to carry out their functions of strategic guidance and monitoring of management, which implies that public authorities should not interfere with the management of these firms and should leave their boards and managers free to react to market signals and exploit business opportunities. Ensuring that the legal and regulatory framework that applies to SOEs prevents any advantage with respect to their privately owned competitors, would ensure a level playing field and fair competition in the marketplace. Hence, SOEs should not be exempted from the application of any law that applies to private firms, in particular company law, competition law and bankruptcy law. Further, they should not benefit from more favourable conditions than their private competitors, such as access to finance at preferential rates, inputs at lower prices, better public procurement conditions, more favourable access to technology, tax exemptions, or more advantageous tax regimes.

Last but not least, if SOEs are required to provide public services, or to fulfil public service obligations, alongside their commercial activities, there is an additional risk of market-distorting cross-subsidisation between these two sets of activities. Hence, good governance requires that SOEs are guaranteed adequate and transparent compensation for their public objectives and that they enforce a clear separation between commercial and non-commercial activities. This ensures that the funding received for achieving the public policy objectives is sufficient to cover the relevant costs, thus not undermining the viability of the commercial activities, and that this funding is not used to generate a cost advantage in those activities where the SOEs face competition.



Figure 2. The PMR indicator on the corporate governance of state-owned enterprises for OECD countries in 2018



Note: The Governance of SOEs measures to what extent OECD countries are aligned with key best practices, but does not represent a formal OECD position on each country's implementation of these Guidelines. The best practices have been derived from the OECD 2015 Guidelines on Corporate Governance of SOEs. Information refers to laws and regulation in force on 1 January 2018. For more information, refer to the PMR webpage. If the blue bar does not appear on the chart, it means that its value is 0.

Source: OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>

Performance of SOEs and their governance are related

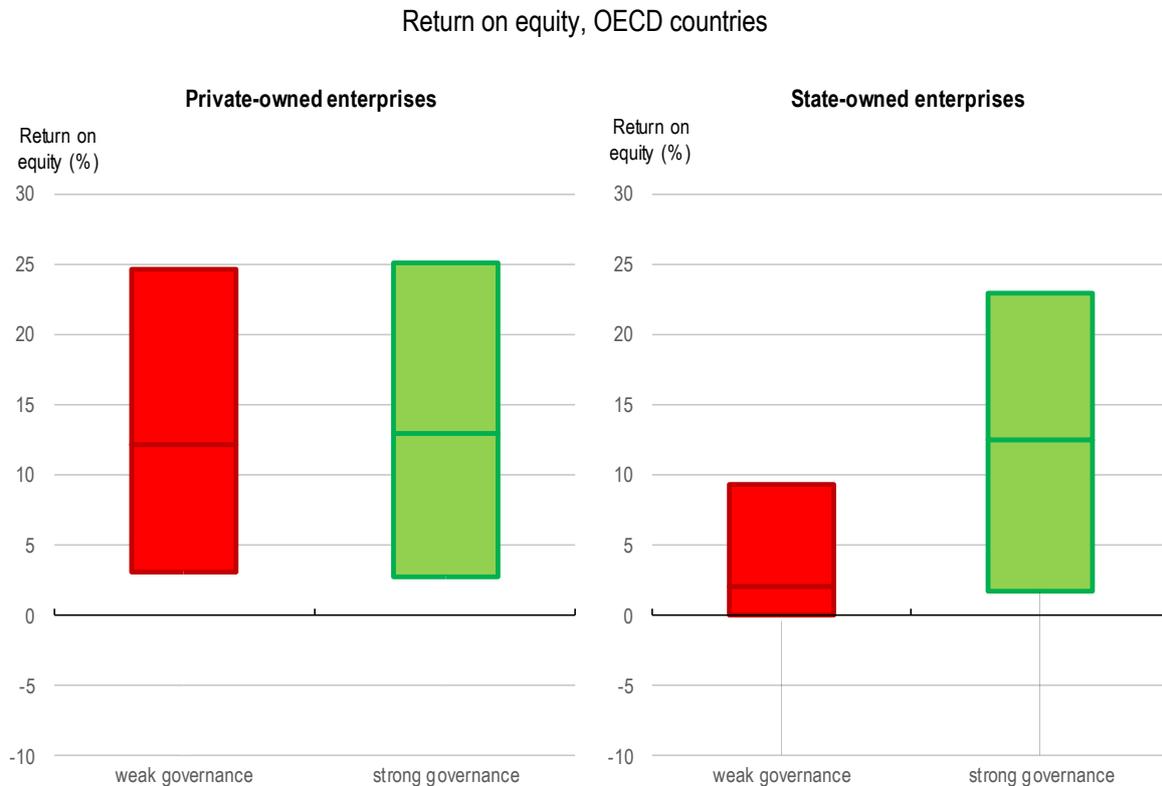
A simple exercise can be used to look at the performance of SOEs versus privately-owned firms, based on firm-level data for the airline and motor vehicle manufacturing sectors. There are several good reasons to focus on these two sectors. First, they are among those most adversely affected by the COVID-19 lockdown measures (OECD, 2020^[1]). Second, governments often tend to argue that these sectors are of considerable economic importance – as evidenced in the context of past and more recent, COVID-19 related nationalisation discussions.

The comparison of past firm performance in these two sectors suggests that SOEs tend to have significantly lower returns on equity (Annex Table A.1).⁴ However, in countries where the governance of SOEs is strong, as measured by the OECD PMR indicators, SOEs do not seem to perform worse than private firms (Figure 3). This correlation echoes the finding in (Baum et al., 2019^[9]), who show that SOEs perform as well as privately owned enterprises in countries where corruption is perceived to be low (Kaufmann et al., 2010^[10]).

⁴ Recent OECD work on the semiconductor value chain has also found government-invested firms to perform relatively worse than their private counterparts (OECD, 2019^[31]).



Figure 3. Firm-level insights on the performance of SOEs relative to other firms: air transport and manufacturing of motor vehicles ⁵



Note: The bars show the ranges between the 25th and 75th percentiles (lower and upper limits respectively) of the distribution and the median (the middle line). The results are limited to a sample of firms in the air transport sector (NACE code 5110) and the motor vehicle manufacturing sector (NACE code 2910). See Annex A. for details. The sample includes OECD economies except the United States due to the lack of a PMR indicator on Governance of SOEs. The governance of SOEs is measured using the relevant PMR low-level indicator (2018). The countries with strong SOE governance (in green) are those with an indicator value above the median value for OECD countries in the sample and those below the median are deemed to have weak SOE governance (in red).

Source: Based on ORBIS (2018) and OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>

This illustrative exercise identifies a correlation between ownership, governance and performance. It also covers two sectors over a limited time period and does not distinguish the reason for state ownership. There may be particular reasons why SOEs performance seems to be generally weaker than that of private companies. For example, as firms are often nationalised because of severe financial distress, they may be expected to continue to perform poorly for a while, regardless of how well they are managed. SOEs may also be tasked with pursuing public policy objectives, such as providing services that may be considered of economic and or social relevance, but which are not profitable. Airlines, for instance, may be required to provide flights which governments consider necessary, either to ensure connections with remote or poorer areas of their countries or to support tourism and other economic activities in specific locations. Obligations of this kind do not contribute to the profitability of the enterprise and may even increase its costs.

⁵ Significance tests are based on a two-sample Kolmogorov-Smirnov test for equality of distribution functions. See Annex A for details on sample, data cleaning, and significance and robustness tests.



Policy considerations for improving SOE governance

The 2015 OECD Guidelines on corporate governance of SOEs provide concrete and detailed recommendations on the best practices countries should adopt to ensure that SOEs operate in a sound competitive and regulatory environment conducive to economic growth. The OECD PMR indicators shed light on the level of compliance with some of the principles included in the OECD Guidelines and identify some key areas where OECD countries could improve their SOE governance. Crucially, de facto enforcement of corporate governance rules should be considered as important as improving the laws themselves.⁶

The PMR indicator on the governance of SOEs assesses to what extent SOEs that undertake commercial activities benefit from any legal or financial advantages over their privately-owned competitors. Overall OECD countries tend to ensure such competitive neutrality, though there is still some scope for better aligning with OECD best practices in this area (Table 2). For example, there are still countries where some SOEs operating in competitive markets benefit from a legal status that may shield them from the (full) application of private company law. Similarly, in most OECD countries accounting or legal separation between commercial and non-commercial activities could be imposed more extensively on all SOEs that have to fulfil public service obligations to avoid any distortions caused by possible cross-subsidies.

Table 2. Potential areas for improvement in the governance of SOEs: Exposure to market discipline

Best practice principle of corporate governance for SOEs that undertake commercial activities as incorporated in the PMR indicators	Countries with potential for improvement
All SOEs should be incorporated in a legal form recognised by national company law.	Australia, Belgium, Chile, Czech Republic, Denmark, Estonia, France, Greece, Hungary, Iceland, Ireland, Israel, Korea, Lithuania, Mexico, New Zealand, Norway, Slovak Republic, Spain, Sweden, United Kingdom
All SOEs should be subject to the application of all the laws and regulations that apply to privately owned firms operating in the same markets.	Belgium, Canada, Estonia, France, Greece, Italy, Mexico, Poland, Switzerland
SOEs should not have access to finance at conditions that are better than those available to privately owned firms.	Belgium, Canada, Chile, Iceland, Japan, Korea, Mexico, Switzerland
SOEs should not benefit from any other favourable treatment that is not available to private firms, such as direct financial subsidies, debt write offs, exemptions from certain taxes, or reception of in-kind benefits.	Australia, Belgium, Canada, Japan, Lithuania, Netherlands, New Zealand, Slovak Republic, Switzerland
All SOEs that perform one or more non-competitive activities ⁷ alongside commercial activities should be required to separate these two sets of activities. This should as a minimum imply ensuring full accounting separation.	Australia, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Switzerland, Turkey, United Kingdom

Note: The presented results are based on responses to the OECD PMR questionnaire (2018) and do not represent a formal OECD position on each country's implementation of the OECD 2015 Guidelines on Corporate Governance of SOEs. Best practices are equivalent to the answers that gives the best score in the computation of the PMR indicator. These in turn have been derived from the OECD 2015 Guidelines on Corporate Governance of SOEs. The potential for improvement refers to the assessment of existing de jure rules performed as part of the PMR exercise and the extent of improvement required varies across countries.

Source: OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>.

⁶ For example in Slovenia, which ranks very favourably in terms of the PMR indicator on the governance of SOEs, SOEs have a high share of politically affiliated supervisory board members (OECD, 2017_[32]).

⁷ In this context non-competitive activity means pursuing a public policy objective, such as a public service obligation.



Another principle of the 2015 OECD Guidelines, which is reflected in the PMR indicator, is that the public authorities should not be involved in the direct management of SOEs and should not interfere with their business decisions. The experience of Alitalia, the Italian air carrier, provides a well-documented example of successive interventions and the challenges associated with maintaining an arm-length relationship between the state owner and company management contributing to the company's problems throughout the 1990s and 2000s (EC, 1997^[11]; EC, 2001^[12]) (Beria and Scholz, 2010^[13]) (Beria, Niemeier and Fröhlich, 2013^[14]).

Indeed, many OECD countries could better ensure that the appropriate legal conditions are in place to shield SOEs from undue political influence (Table 3). For example, in many countries public authorities, rather than the board of the firm, select the Chief Executive Officer (CEO)⁸. In many countries, there are still sectors in which there is no separation between sector regulators and the bodies that exercise ownership rights in SOEs.

Table 3. Potential areas for improvement in the governance of SOEs: Political interference

Best practice principle of corporate governance for SOEs that undertake commercial activities as incorporated in the PMR indicators	Countries with potential for improvement
The ownership rights in SOEs should not be exercised by the line ministries in charge of the sectors in which the SOEs operate.	Australia, Austria, Canada, Colombia, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, New Zealand, Poland, Portugal, Slovak Republic, Switzerland, United Kingdom
The public body who exercises the ownership rights in these SOEs should be different from the public body or bodies that regulate the sector in which these firms operate.	Australia, Belgium, Canada, Czech Republic, Denmark, Germany, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Norway, Poland, Switzerland, United Kingdom
The Chief Executive Officer (CEO) should be appointed by the board of the SOE.	Belgium, Canada, France, Greece, Hungary, Israel, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Portugal, Slovak Republic, Spain, Turkey, United Kingdom

Note: The presented results are based on responses to the OECD PMR questionnaire (2018) and do not represent a formal OECD position on each country's implementation of the OECD 2015 Guidelines on Corporate Governance of SOEs. Best practices are equivalent to the answers that gives the best score in the computation of the PMR indicator. These in turn have been derived from the OECD 2015 Guidelines on Corporate Governance of SOEs. The potential for improvement refers to the assessment of existing de jure rules performed as part of the PMR exercise and the extent of improvement required varies across countries.

Source: OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>.

The United States' Troubled Assets and Relief Programme (TARP) is an example of a programme promoting financial stability and economic growth as state ownership rationale (Box 2). The arm's-length approach to state ownership was implemented by not exercising voting rights on day-to-day business matters (in any case limited for preferred stocks) and not instructing the appointed board members on how to vote.

⁸ A chief executive officer is the highest-ranking person in an enterprise, who is ultimately responsible for all major managerial decisions.



Box 2. State equity injections in the United States' automotive sector under the Troubled Assets and Relief Programme

The Troubled Assets and Relief Programme (TARP) was enacted in October 2008 in response to the unravelling Global Financial Crisis. The legislation enabled the US Treasury to promote stability in financial markets and economic growth through the purchase and guarantee of troubled assets. TARP support involved four broad categories of interventions: capital purchases and other support for financial institutions under the Capital Purchase Programme, financial assistance to car makers under the Auto Industry Financing Program (AIFP), investment partnerships designed to increase liquidity in securitisation markets, and mortgage programmes, notably the bail-out of the Government Sponsored Enterprises and Federal Housing Administration mortgage guarantees.

The US automakers were already facing long-term falling market shares, which were compounded by a massive drop in demand caused by the Great Financial Crisis and large fixed costs (Goolsbee and Krueger, 2015^[15]). During the AIFP, which took place between 2008 and 2014, the Treasury used some USD 80 billion of the total TARP capacity of USD 700 billion to provide loans and purchase warrants and preferred stocks in General Motors (GM), Chrysler and their ailing financial subsidiaries. The government bought 60.8% of GM and 8% of Chrysler in warrants and preferred stocks.

The AIFP bailout of GM and Chrysler imposed strenuous conditions for restructuring on the companies in exchange for government support. Shareholders and unsecured bond holders took heavy losses. Yet, some liabilities, such as the consumer warranties, were guaranteed in full, to prevent a reduction in demand. Both companies also managed to reduce their labour costs, notably through cuts to retirees' health benefits and to wage and pension benefits for newly hired workers. Restrictions on executive compensation were also applied, as in other TARP sub-programmes. Even so, favourable external factors, such as the drop in oil prices and the rapid rebound of consumer demand for cars, were probably the most important ingredient of the swift turnaround of the companies (Goolsbee and Krueger, 2015^[15]). Following the bankruptcy reorganisation, both GM and Chrysler - owned first partly and then fully by Fiat - repaid most of their TARP loans. The Treasury fully divested its stock holdings.

Under TARP as a whole, some USD 439 billion of the USD 700 billion capacity had been disbursed and most of the assistance was eventually repaid. While the headline payments to banks and the Government Sponsored Enterprises were recovered, the financial sector bailout (American International Group - AIG), the automotive sector loans, and the mortgage grant programs resulted in an ex post aggregate loss.

According to the TARP legislation, the Congressional Budget Office (CBO) must provide annual reports on the cost of the programme. The last report from March 2020 estimates net realised accounting costs at USD 30 billion, near the low end of the range of possible outcomes anticipated at the program's outset. However, there is considerable discussion on the most correct way to measure the direct costs of such interventions (Lucas, 2019^[16]).



OECD Guidelines can help guide effective state ownership

The PMR indicator on SOE corporate governance focuses on a subset of the key principles set out in the 2015 OECD Guidelines (Box 1) (OECD, 2015^[8]). Other principles, while not included in the indicator, can also play an important role in informing policy decisions in response to the COVID-19 crisis. In particular, they highlight good practices in communication of objectives pursued through taking equity in firms, transparent exit strategies and subjecting SOEs to the same high quality accounting, disclosure, compliance and auditing standards as publicly listed companies.

Reduce the risk of moral hazard through appropriate targeting and strict conditionality

In the context of an economic crisis, equity injections may be justified on the ground that firms are facing financial difficulties that cannot be easily addressed through recourse to capital markets. Interventions should, therefore, target firms whose financial distress is related to the crisis, and which are likely to return to profitability once economic conditions improve.⁹ On the other hand, saving ailing firms interferes with effective market selection mechanisms and creates long-term economic distortions that can outweigh short-term benefits to the economy. One way to avoid this outcome is to require target firms to agree on detailed plans on how to restore viability. Such plans need also to decide the distribution of losses among shareholders and the various stakeholders, such as creditors, management and employees.

By requesting these plans, governments can contain the associated moral hazard problems and avoid creating incentives for companies to take riskier decisions in the future and expect the government to intervene in case of failure. For example, under the TARP automotive sector bailout in the United States, government equity injections were combined with bankruptcy proceedings and existing shareholders lost their investment (Goolsbee and Krueger, 2015^[15]). Secured creditors in Chrysler saw their debt severely restructured. Most of the unsecured creditors in both GM and Chrysler lost their claims altogether, with the exception of United Auto Workers pension plans, which were partly paid off. Employment was significantly reduced and top management was replaced.

Provide a rationale for state ownership from the onset to facilitate future exit

Transparency about the reasons for the state taking equity in a company is equally important, because it implies that when the conditions that justify state ownership cease to exist, the need for state ownership should be reconsidered.¹⁰ Often the argument that a firm is of “strategic importance” to the economy is used to justify the intervention. However, this concept is not well defined (Ding and Dafoe, 2020^[26]). Hence governments should clarify what is “strategic” about the company that makes it worth saving with public money. In addition, unless the state has a clear public policy rationale for keeping control of the firm, the stake in the firm should be relinquished as soon as market conditions permit.¹¹

⁹ The EU commission, which has temporarily enabled recapitalisation aid to undertakings facing financial difficulties due to the COVID-19 outbreak, has stressed that such aid can be “highly distortive for competition between undertakings”. Hence, it has stated that it should only be granted “if no other appropriate solution is available and must be limited to enabling the viability of the company”. See [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0513\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0513(01)&from=EN) .

¹⁰ Transparency is also important in ensuring the legitimacy of and public acceptance of support to certain sectors or firms in the crisis. See *Government Support and the COVID-19 pandemic*, OECD Policy Brief, OECD 2020, available at: https://read.oecd-ilibrary.org/view/?ref=128_128572-w5qyf5699d&title=Government-support-and-the-COVID-19-pandemic.

¹¹ The temporary framework introduced by the EU commission to enable recapitalisation aid also requires beneficiaries of these interventions are required to develop an exit strategy within a precise timeframe. See [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0513\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020XC0513(01)&from=EN)



For this reason, some countries regularly review government's ownership rationales. In Germany, for example, the Ministry of Finance submits to Parliament a bi-annual report on the reduction of government holdings (OECD, 2015^[17]). In Norway, the government regularly updates Parliament on the objectives of state ownership and has conducted privatisation “readiness reviews” for all SOEs (OECD, 2019^[18]). If such an automatic regime is not in place, an effective way to ensure a timely exit strategy is to envisage from the start a review of the intervention.

Minimise the cost of such interventions for the taxpayer by accurately planning exit

A carefully designed exit strategy can also help to minimise the cost of the intervention for the taxpayer (OECD, 2020^[19]). For example, the TARP legislation required the government to maximise returns on the sales of equities, but left some leeway, as it did not specify the price, process or timing (Box 2). The Treasury's publicly stated goal was to exit TARP investments “as quickly as possible”, while maximising returns, promoting financial stability and minimising market disruption. For example, the exit from the automotive sector consisted in restarting the public trading of General Motors' stock through an initial public offering and a debt repayment, combined with a negotiated buy-back of the Treasury's stake in Chrysler. In addition, the TARP support often took the form of convertible debt, providing recipients with a grace period to resolve problems, while giving the taxpayers a share in the upside associated with a successful restructuring.

Use independent advice to ensure sound valuations of investments and divestments

When designing the exit strategy, the role of independent advice is also critical. Independent advisors can help ensure that the best value can be obtained from the sale (OECD, 2019^[18]). Appropriate valuation also serves to measure post-privatisation outcomes. An independent commission, or steering group, qualified to approve the valuation can help ensure objectivity.¹²

A clear and well-structured separation of responsibilities is also key more generally. For example, the TARP programme was overseen by several agencies and Congressional bodies, established by multiple legislative acts and with largely overlapping responsibilities. This led to inefficient duplications and excessive reporting requirements on TARP staff and resulted in different and often incompatible recommendations (Massad and Kashkari, 2019^[20]).

¹² For example, in the case of TARP, third party advisors used by the Treasury to provide industry expertise, to evaluate restructuring strategies for the car companies and to execute divestment strategies were not allowed to serve as underwriters or agents for the sales of securities (Massad and Kashkari, 2019^[20]). However, this is not always the case in practice. For example, the 2008 privatisation of Alitalia to CAI suffered from precisely such a conflict of interests: BancaIntesa, the privatisation adviser, was allowed to choose CAI as the best buyer of Alitalia, even though it held a significant share in CAI at the time.



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Annex A. Details on Figure 3

The analysis underlying Figure 3 focuses on exploring the relationship between financial performance and SOE governance for the airline passenger transport sector (labelled “Airlines” below) and motor vehicle manufacturing (“Automotive”), NACE codes 5110 and 2910, respectively. There are several good reasons to focus on these two sectors. First, they are among those most adversely affected by the COVID-19 lockdown measures. Second, governments often tend to argue that these sectors are of considerable economic importance – as evidenced in the context of past and more recent COVID-19 nationalisation discussions. In addition, both are relatively well covered in the ORBIS database, from which firm-level data ownership data and financial performance is obtained.

This ORBIS data has been cleaned and transformed as follows:

1. The analysis focuses on firms that are domestically owned and therefore drops any instances where the shareholder and the subsidiary are from different jurisdiction. The ultimate owner of a firm is defined as the shareholder with 25% or greater stake in the firm. SOEs are thus those firms for which government entities are the ultimate owners.
2. Following (Kalemli-Ozcan et al., 2015^[21]), the financial data is cleaned by keeping unconsolidated accounts for most countries and dropping observations for which there are negative values on employment or wage bill, tangible fixed assets, gross output and materials.
3. Outliers are removed for returns on equity (ROE) exceeding 80th percentile (50% return) and lower than the bottom 15th percentile (-20% return).

The sample contains 3 505 observations over the period 2010-2017. For each year, there are about 430 firms on average with a 4% occurrence of state-owned enterprises. It covers all OECD countries except the United States, as the PMR indicator on SOE governance is not available for this country.¹³

Data on the quality of the governance of SOEs is derived from the OECD Product Market Regulation database and is collected at the country level reflecting 2018 policies.

The distributions of ROE for SOEs and privately-owned enterprises (POEs) are compared using the Kolmogorov-Smirnov equality of distribution test. For the full sample, the difference in returns is significant between the two types, indicating that POEs have significantly higher ROEs than SOE. The test is then conducted on the sample of SOEs only conditional on whether they fall in a weak governance or strong governance environment as determined in the OECD PMR 2018 indicators. The test does not claim to identify a causal relationship.

The sample was modified along several dimensions to test the robustness of these results (Annex Table A.1). To assess whether the results are driven by the type of financial accounts that were retained, all unconsolidated accounts were removed and only the consolidated accounts kept. The data still finds that POEs outperform SOEs, but the result for the performance of SOEs conditioned on the quality of their governance is no longer significant. One explanation is that when considering consolidated accounts only, the sample shrinks to one third of the full sample, thus including much less SOEs.

¹³ At the time of publication, the PMR data collection for the United States was still ongoing.



Similar equality of distribution tests were carried out by limiting the sample to air transport sector only and by reducing the time interval so as to obtain a more balanced sample. In both cases, the two results hold.

Another robustness check tested whether the size of firms matters. Dropping firms that are in the bottom 25th percentile of the distribution, the result holds for both POEs outperforming SOEs and on good governance delivering higher ROEs among SOEs is maintained. Another robustness test focused on a reduced sample of countries; keeping only those that have the same incidence of SOEs and POEs. Again, the results do not change.

Finally, an alternative indicator of performance was used on the full sample. Profit margin measures the amount of profit accruing to a firm from the sale of products and services, and it provides an indication of efficiency, since it captures the amount of surplus generated per unit of the product or service sold. Profit margins are higher for POEs but not significant different for SOEs conditional on the quality of governance.

Table A.1. Robustness checks for differences in financial performance

	Details	SOE vs POE (difference significant yes or no)	SOE (weak) vs. SOE (strong) (difference significant yes or no)
Full sample	Airlines + Automotive	yes*	yes**
Financial accounts	Consolidated only	yes**	no
Sector selection	Airlines only	yes*	yes*
Year selection (more balanced panel)	2012-15	yes*	yes**
Large firms	More than 65 employees	yes**	yes**
Presence of SOEs and POEs	Countries with both SOE and POE presence only	yes*	yes**
Alternative measures of performance	Profit margin	yes	no

Note: Based on results from the Kolmogorov–Smirnov equality-of-distributions test. Significance levels: * 10%, **5%, *** 1%. The sample for motor vehicle sector and consolidated accounts is very small, which might affect the significance of the results. Small firms are those for which the size of their work force is in the bottom 25th percentile of the sample. Profit margin is calculated as operating profit (loss) over sales.

Source: ORBIS 2018 database and OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>.



Annex B. Sectors covered in the PMR

Table B.1. List of sectors as covered in the 2018 Product Market Regulation questionnaire

PMR indicator Scope of SOEs – presented in Figure 1

Sectors included in the PMR questionnaire	Relevant codes from the United Nation International Standard Industrial Classification of all economic activities (ISIC)
Manufacture of tobacco products	Included in ISIC Rev. 4.0 12
Manufacture of refined petroleum products	Included in ISIC Rev. 4.0 192
Manufacture of basic metals	Included in ISIC Rev. 4.0 24
Manufacture of fabricated metal products, machinery and equipment	Included in ISIC Rev. 4.0 25 AND 28
Building and repairing of ships and boats	Included in ISIC Rev. 4.0 301
Manufacture of railway and tramway locomotives and rolling stock	Included in ISIC Rev. 4.0 302
Manufacture of aircraft and spacecraft	Included in ISIC Rev. 4.0 303
Construction	Included in ISIC Rev. 4.0 41, 42, AND 43
Wholesale trade, incl. of motor vehicles	Included in ISIC Rev 4.0 46 and part of 45
Accommodation, food and beverage service activities	Included in ISIC Rev. 4.0 55 and 56
Other urban, suburban and interurban passenger transport	Included in ISIC Rev. 4.0 4921, 4922
Financial service activities, except central banking, insurance and pension funds	Included in ISIC Rev. 4.0 6419, 642, 643, 649, 661, part of 663
Motion picture distribution and projection	Included in ISIC Rev. 4.0 59
Manufacture of pharmaceuticals, medicinal chemical and botanical products	Included in ISIC Rev. 4.0 21
Manufacture of chemicals and chemical products	Included in ISIC Rev. 4.0 20
Manufacture of computer, electronic and optical products	Included in ISIC Rev. 4.0 26
Manufacture of motor vehicles, their parts and accessories	Included in ISIC Rev. 4.0 29
Gambling and betting activities	Included in ISIC Rev. 4.0 92
Rail transport	Included in ISIC rev 4.0 491, and 5221
Air transport	Included in ISIC rev 4.0 511, 512, and 5223
Water transport	Included in ISIC rev 4.0 5011, 5012, 5021, 5022 and 5222
Road transport	Included in ISIC rev 4.0 4923, 4922 and 5221
Telecommunications	Included in ISIC rev 4.0 61
Electricity	Included in ISIC rev 4.0 3510
Natural Gas	Included in ISIC rev 4.0 3520 and 4930

Note: In individual countries, some of the above sectors may not be represented.

Source: OECD Product Market Regulation Database <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>.

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