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**State-Invested Enterprises  
in the Global Marketplace:  
Implications for a Level  
Playing Field**

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Yunhee Kim**

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# State-Invested Enterprises in the Global Marketplace: Implications for a Level Playing Field

By Hans Christiansen and Yunhee Kim\*

Approved by Adrian Blundell-Wignall, Director, OECD Directorate for Financial and Enterprise Affairs

## ABSTRACT

State-owned and other state-invested enterprises (SIEs) have become more prominent in the global economy over the last decade. A growing role for state-invested enterprises in the marketplace is not in itself onerous. According to an OECD consensus, as expressed through the Organisation's legal instruments, SOEs can be operated according to similarly high standards of governance, transparency and efficiency as private companies, in which case the ownership issue is moot. However, only some of the world's most advanced economies, following decades of reform of their SOE sectors, have approached this point. Moreover, when SOEs operate across borders the challenges may multiply. With this background, this paper compares the difference between SIEs and non-SIEs in five sectors: air transportation, electricity, mining, oil & gas and telecommunication. The empirical analysis indicates that, in addition to any financing advantages, large state-invested enterprises also seem to benefit from an unusually favourable position in their home markets. A comparative analysis further shows that, in the course of the last ten years, SIEs have generally enjoyed higher rates of return than comparable private companies. The paper concludes that the growing role of state-invested enterprises in the international marketplace does not yet present a serious macroeconomic challenge. However, since it is likely to keep growing for some time, challenges need to be addressed relatively soon. This makes for a strong case for enhanced policy coordination and information sharing. If legally binding instruments cannot be developed in the near to medium-term to ensure competitive neutrality, consultation mechanisms could be established through which the main players in international trade and investment can exchange views on matters of common concern related to the state in the marketplace. The ultimate purpose would be ensuring that the international trade and investment environment remains open, non-discriminatory and offering a level playing field.

*JEL Classification:* F21, F23, G30, G38, L32, L33

*Keywords:* competition, competitive neutrality, international investment, multinational firms, state-owned enterprises

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## I. INTRODUCTION: THE STATE IN THE MARKETPLACE

The presence of state-owned or state-invested enterprises in the global corporate landscape is greater than what is commonly assumed. What is more, it has increased over the last decade: earlier research by the OECD Secretariat indicated that the presence of state-owned enterprises (SOEs) in the world's top-50 and top-100 enterprises has grown significantly in the course of the last decade – mostly reflecting the fact that Chinese companies have risen in the rank tables. To create some more clarity over the methodologies applied to State participation in the corporate sector some definitions are proposed in Box 1.

### Box 1. Definitions of state-invested enterprises

For the purpose of this paper the word state-invested enterprise (SIE) denotes a corporation in which the State is the ultimate beneficiary owner, on a consolidated basis, of at least 10% of the voting stock (or equivalent, if the corporation is not a joint stock company)<sup>1</sup>.

By “State” is meant the central level of government, except for federal nations where sub-national levels of government in whom sovereignty is vested (insofar as the relevant information is available) are also included. There are two categories of SIEs:

- *State-owned enterprises (SOEs)*. This category includes: (1) corporate entities entirely owned by the State; (2) joint stock companies or partnerships in which the State (on a consolidated basis) owns more than 50% of the voting rights; and (3) corporate entities in which the State has a degree of control that is equivalent to majority ownership.
- *Partially state-owned enterprises (PSOES)*. Corporate entities where the state controls at least 10% but less than 50% of the voting stock (or has an equivalent degree of control).

An illustration of the importance of SOEs in the global corporate landscape is provided on Table 1. The table is based on the latest available version of Forbes Global 2000, which ranks companies according to an average of their valuation, sales, profit and asset value. It appears from the table that eleven of the world's largest 50 corporations are state-owned. The nationality distribution is distinctly skewed: among the world's largest 25 SOEs, 13 are domiciled in China (including Hong Kong, China), 3 are Russian, 2 are Brazilian and 3 are domiciled within OECD countries. Moreover, according to the ranking methodology applied by Forbes, the world's two largest corporations in 2013 (ICBC and China Construction Bank) were both Chinese and both located in the banking sector.

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<sup>1</sup> For a further discussion of methodology, see Christiansen and Kane (2013).

**Table 1. The world's largest 25 SOEs in the business year 2012-13 (US\$ billion)**

Global rank	Company	Sector	Domicile	Market value	Sales	Assets
1	ICBC	Banking	China	237.3	134.8	2813.5
2	China Construction Bank	Banking	China	202.0	113.1	2241.0
8	Agricultural Bank of China	Banking	China	150.8	103.0	2124.2
10	PetroChina	Oil & Gas	China	261.2	308.9	347.8
11	Bank of China	Banking	China	131.7	98.1	2033.8
17	Gazprom	Oil & Gas	Russia	111.4	144.0	339.3
20	Petrobras	Oil & Gas	Brazil	120.7	144.1	331.6
26	Sinopec-China Petroleum	Oil & Gas	China	106.9	411.7	200.0
29	China Mobile	Telecom	Hong Kong, China	213.8	88.8	168.7
30	ENI <sup>2</sup>	Oil & Gas	Italy	86.3	163.7	185.2
38	Statoil	Oil & Gas	Norway	78.1	126.8	140.2
59	Rosneft	Oil & Gas	Russia	73.2	68.8	126.3
61	Sberbank	Banking	Russia	73.3	36.1	441.1
67	Banco do Brasil	Banking	Brazil	37.9	69.0	552.2
74	EDF	Electricity	France	35.3	95.9	325.2
94	Saudi Basic Industries	Chemicals	Saudi Arabia	74.8	50.4	90.2
106	China Life Insurance	Insurance	China	79.9	63.2	304.6
111	CNOOC	Oil & Gas	Hong Kong, China	84.3	39.2	73.2
114	Ecopetrol	Oil & Gas	Colombia	116.2	39.0	64.4
115	China Shenhua Energy	Metals & Mining	China	70.8	39.7	70.2
128	China Citic Bank	Banking	China	32.5	24.4	474.7
136	State Bank of India	Banking	India	28.1	35.1	359.1
139	China Telecom	Telecom	China	42.0	44.9	87.4
143	Industrial Bank	Banking	China	38.2	18.7	382.3
144	PTT	Oil & Gas	Thailand	32.9	89.9	53.3

Source: Forbes 2000 and Christiansen and Kane (2013)

The previous findings might lead some to the conclusion that state control over commercial enterprises is a phenomenon largely confined to emerging economies – notably China. However, if the shares in, for instance, a listed company are widely held then a major investor need to hold significantly less than 50% of the voting shares in order to effectively control that company. For the purpose of this paper it is assumed (in keeping with a methodology also applied in international investment statistics) that investors do not hold more than 10% of the shares in a company unless they have strategic intent. This is the basis for the definition of partly state-owned enterprises proposed in Box 1. Table 2 provides an overview of the world's largest (again according to Forbes 2000 methodology) 25 PSOEs. From this table a different picture emerges. True, the governments of emerging economies are also non-trivial part-owners of enterprises, but the majority of PSOEs (sixteen out of the 25) are located in OECD countries. A raft of European governments, in particular, has retained significant minority stakes in large listed companies. For example, France and Germany appear prominently.

<sup>2</sup> ENI is 30% state-owned, but the Italian government is entitled to appoint the majority of board members (Christiansen and Kane, 2013).

**Table 2. The world's largest 25 PSOEs in the business year 2012-13 (US\$ billion)**

Global rank	Company	Sector	Domicile	Market value	Sales	Assets
14	Volkswagen Group	Auto industry	Germany	94.4	254.0	408.2
22	BNP Paribas <sup>3</sup>	Banking	France	71.3	126.2	2504.2
47	NTT	Telecom	Japan	58.2	126.9	226.0
54	Bank of Communications	Banking	China	56.7	43.5	846.4
87	Vale	Iron & Steel	Brazil	92.7	45.7	130.4
95	GDF Suez	Utilities	France	45.0	128.0	268.9
101	China Merchants Bank	Banking	China	44.1	28.4	547.0
107	China Minsheng Banking	Banking	China	43.9	27.9	515.5
118	Nordea Bank <sup>4</sup>	Banking	Sweden	47.1	23.2	892.6
125	Shanghai Pudong	Banking	China	31.6	25.4	504.5
135	EADS	Aerospace & Defense	Netherlands	46.0	74.5	115.5
145	ENEL <sup>5</sup>	Electricity	Italy	32.2	111.9	226.3
169	France Telecom	Telecom	France	29.2	57.4	113.9
175	Renault	Auto industry	France	20.3	54.4	98.9
190	Deutsche Post	Postal	Germany	29.4	73.2	45.0
191	Japan Tobacco	Tobacco	Japan	61.6	24.6	43.0
219	DNB	Banking	Norway	26.5	14.4	406.8
240	China Everbright Bank	Banking	China	21.0	13.5	275.1
275	DBS Group	Banking	Singapore	30.7	8.8	288.9
294	CNP Assurances	Insurance	France	9.9	53.2	466.1
304	ÖMV Group	Oil & Gas	Austria	14.7	56.3	39.8
368	Safran	Aerospace & Defense	France	19.6	18.0	30.0
391	Lloyds Banking Group	Banking	U.K.	53.8	75.6	1495.9
433	Deutsche Telekom	Telecom	Germany	48.4	76.7	136.1
456	Bharti Airtel	Telecom	India	21.8	14.0	29.8

Source: Forbes 2000 and Christiansen and Kane (2013)

Combining Tables 1 and 2 leads to the conclusion that the State in various countries yields dominant or significant influence in at least 22 of the world's 100 largest corporations. Smaller companies can of course also be SOEs and PSOEs, but a full analysis of the Forbes 2000 database reveals a clear size bias. The smaller an enterprise, the lower is the likelihood of state ownership. Of the world's 2000 largest companies, 282 are found to be state-invested enterprises (SIEs).

The question that proposes itself is whether a significant, and apparently growing, weight of SIEs in the corporate landscape poses challenges for policy makers and regulators. On the one hand it is neither surprising nor onerous that big and fast-growing emerging economies with large SOE sectors begin to appear more visibly in the corporate league tables. On the other hand, OECD countries have undertaken extensive reform of their national SOE sectors over recent decades

<sup>3</sup> The Belgian government retains a 10% shareholding in BNP Paribas which dates back to the rescue operation of Fortis Bank.

<sup>4</sup> Nordea Bank was privatised in 2013.

<sup>5</sup> ENEL might arguably be classified as SOE since the Italian state (like in the case of ENI) wields significant powers over board nominations.



(indeed several governments would concede to have important unfinished business) and there is a risk that the large state-owned firms that have appeared in the corporate landscape may be weighed down by beset by many of the same problems.

The reform priorities that have been addressed in recent decades included a lacklustre operational efficiency of SOEs (and to a much lesser extent PSOEs) as well as an excessive politicisation of the operational objectives of some of these companies. Both have been addressed by governments through a combination of privatisation and reforms of the ownership and governance of SOEs in accordance with the recommendations laid down in the OECD Guidelines on Corporate Governance of State-Owned Enterprises. Another area of concern is the effect that SIEs can have on the competitive landscape in which they operate. Even efficient and well governed enterprises may occasionally be tasked by their government owners with non-commercial objectives, which can have wide ranging consequences throughout the national or global marketplace. Some of these concerns are further elaborated in the following section.

A related issue is whether the impact of an increasing presence of SIEs is predominantly felt in these enterprises' domestic economy or is of broader, global consequence. This, in turn, depends on the extent to which they compete with foreign companies through participation in international trade, investment in foreign jurisdictions as well as competition in third markets. An extensive analysis of SOEs and international trade was undertaken by the OECD Trade Committee (Kowalski et al., 2012). It found significant links between national and sectoral concentrations of state-owned enterprises and international trade activities, but could not on the basis of existent data link this conclusively to the overseas activities of individual SOEs.

An earlier study by the OECD Working Party on State Ownership and Privatisation Practices, based on partial and anecdotal evidence from OECD some emerging market economies, concluded that there is no widespread or general evidence of an accelerated internationalisation of SOE activities. The cases where SOEs are particularly active in international trade and investment generally fall into three categories: (1) SOEs are located in sectors where all enterprises, including the private competition, operate internationally (e.g. the hydrocarbons and mining sectors); (2) there has been a wave of cross-border consolidations in the public utilities sectors in the EU area, which in many cases has involved SOEs; (3) Chinese SOEs in particular have been encouraged by their government to expand abroad as part of the so-called "go global" policy introduced more than a decade ago.

The latter point has unsurprisingly been perceived as onerous by some observers. However, a couple of observations deserve mentioning. First, the corporate sectors in countries with large current account surpluses have traditionally emerged as major outward investors. This has in the past for example been the case in Japan and Switzerland – the main difference being that most of the Chinese companies with capacity to expand abroad tend to be state-invested. Secondly, the "go global" policy seems to follow in the footsteps a number of other Asian economies. Japan and several ASEAN economies have developed their domestic industrial sectors amid a degree of state interventionism. In many cases the respective governments perceived the ability to compete internationally as one of the key performance criteria for a successful enterprise. However, with the exception of Singapore, they relied significantly less on direct state ownership of enterprises than the Chinese government (this was discussed at some length in OECD, 2013c).

Summing up, the relevant discussion is less about State ownership and internationalisation than about the operational and financial conditions under which SIEs compete with private and foreign companies. The remainder of the paper is structured as follows. Section II takes stock of

previous work by OECD to identify possible concerns about state-owned enterprises in the international economy; Section III compares the operational performance and financing of the world's largest SIEs in five key sectors (mining, oil&gas, air transport, telecom and electrics utilities) with comparable private enterprises; Section IV analyses the international investments of SIEs in the same sectors over the last 15 years; Section V concludes and proposes directions for follow-up and future work.

## II. PUBLIC-PRIVATE COMPETITION: CONCERNS AND CHALLENGES

As a starting point it must be recognised that the notion of state-owned enterprises operated according to totally commercial principles is in most cases “a pie in the sky”. Even privately owned companies may pursue objectives that are not wholly commercial. In the case of SOEs the reason the state has decided to remain as (majority) owner is logically that those enterprises are expected to behave differently from what private entities might do.

The question, then, is whether the state’s objectives can be pursued in a manner that does not impair the competitive landscape. According to “textbook economics” this is mostly possible when the state intervenes in the economy with the purpose of remedying market failure. In practice this argument is most convincingly brought forward in favour of SOEs in sectors with a strong element of natural monopoly, the potential abuse of which by private operators would be difficult to address through regulation. A variation of the externalities argument, which is particularly relevant in the light of the many commercially operating SOEs in emerging economies, relates to the use of SOEs as agents of developmental policies. The use of SOEs to develop certain economic activities for which, at the outset, there is no market in order to nurture private commercial activities can also be portrayed as an effort to correct externalities.

The OECD Guidelines on Corporate Governance of State-Owned Enterprises does not discourage such practices, provided there is full disclosure about the public policy objectives that SOEs are requested to pursue, and the associated costs are covered by the national treasury in a transparent manner. However, this argument is of a somewhat “national” character – based on an implicit assumption that the general public that is expected to benefit from SOEs’ public policy objectives consists of the same individuals who will carry the costs. Where SOEs engage in cross-border competition, issues can become somewhat more complex. Recent evidence from OECD economies suggests – in addition to remedying demonstrated market imperfections – at least four main reasons why governments may sometimes make a conscious decision to depart from commonly accepted commercial practices in their SOE sectors (see also Capobianco and Christiansen, 2011). These are briefly suggested below:

- *Maintaining public service obligations.* The most commonly heard rationale for protecting SOEs from “excessive” competition occurs in the network industries and relates to these companies public service obligations – such as maintaining postal and telecommunication services in outlying areas, providing essential utilities at affordable rates, etc. From a strictly economic perspective this does not imply that these companies must remain in the public domain as these objectives could be similarly met through targeted subsidies. (In effect the SOE Guidelines says that they should be, if the company remains in public ownership.) However, it is often seen by public planners as easier to continue providing public services through fully controlled entities. On a slightly more onerous note, continued state ownership also provides an opportunity for cross-subsidisation areas – e.g. by charging excessive revenues in certain “lucrative” areas in order to be able to fund the public service obligations elsewhere. In addition to their effects on the competitive landscape such practices also fall short of commonly agreed standards of transparency. However, they appear to be quite widespread. On numerous occasions, the first opening of segments of any given network industry to market competition has given rise to accusations of unfair “cherry picking” by the entrant. Taken literally this does seem to indicate that the activities concerned were previously used to generate extraordinary profits that could be used to cross-subsidise other activities.

- *SOEs as a tool for industrial policy and national development strategies.* Relatively few OECD countries these days appear to be assigning a pro-active industrial policy role to their SOEs sectors – such as, for example, obligations to develop certain capabilities or pursue knowledge and technologies in the broader national interest. Conversely, the practice has remained commonplace in several emerging economies. In countries at low levels of development SOEs are sometimes seen by governments as the only alternative to having no enterprises in a certain sector. At later stages of the development process SOEs may be tasked with developing politically prioritised economic activities or contribution to the formation and dissemination of commercial knowhow. Regardless of levels of development many countries also seem to attach “defensive qualities” to their state ownership, aiming to maintain companies alive and in state hands because of fears of no longer having a national champion in certain economic sectors. Some of the considerations motivating the internationalisation of SOEs point in that direction. Several governments encourage foreign operations of state-owned incumbents in the network industries “to protect their revenue streams” faced with increasing domestic competition. This motivation makes sense only in a context where the state attaches societal value to the maintenance of a state-owned company in the respective sectors. Governments may differ in respect of whether state-ownership is a goal in itself or a tool for preventing a foreign takeover.
- *Protecting fiscal revenues.* Some SOEs provide consistently large profits (or in some cases revenues) on which the national treasury comes to depend. This has most frequently been the case in the extractive industries, but is also not uncommon in the utilities sectors. From a competition viewpoint this may be particularly problematic, because not only does it imply that the government has a strong incentive to shield of such SOEs from competition, the high revenue stream itself may depend on monopoly rents.
- *The political economy of SOEs.* Policy makers sometimes feel they need to protect SOEs because of pressures from interest groups or the general public. For instance, SOEs remain a major source of employment in many OECD countries. Also, SOEs are often seen as offering civil service status or higher paid jobs – especially for blue collar employees – and in some countries have more generous retirement arrangements than the private sector. Any failure of the State to shield its enterprises from competition from companies decried as “low-wage” or “not maintaining adequate standards of corporate responsibility” could expose politicians to strong public pressures. Whilst formally related to democratic accountability, such mechanisms have the potential to be used by rent-seeking insiders to stifle competition

Finally, even where governments limit themselves to using SOEs to remedy market imperfection the cross-border dimension of commercial activities may lead to some adverse effects. For example, in sectors with strong economies of scale compensating enterprises for an inefficiently small size would qualify as an effort to overcome market failures. However, in an internationally operating industry where the (larger) competitors are domiciled abroad this would most likely trigger a hostile reaction from other governments and, where cross-border trade is involved, could fall foul of international treaties. Similarly, protecting a natural monopoly from a potentially destabilising failure would, even if it might perhaps be justified by longer-term economic considerations, be considered as hostile and disruptive by potential foreign market entrants.

## 1. Advantages (and disadvantages) of state ownership

An additional concern arises from the fact that many governments in practice choose to compensate SOEs for non-commercial priorities in other ways than through carefully calibrated fiscal outlays. It should, however, be noted that a number of governments fail to do this. SOEs, even where exposed to direct competition with private companies, sometimes find themselves as a competitive disadvantage due to the fact that they are either insufficiently compensated for the public policy objectives they are formally instructed to pursue, or because of ad-hoc political interventions in their operations. In addition, some commercial entities may also be operating inefficiently because – e.g. reflecting political constraints – they have not been given an appropriate legal form or otherwise are insufficiently separated from general government.

On the other hand, SOEs may enjoy privileges and immunities that are not available to their privately-owned competitors, which can provide a competitive advantage over their rivals. Such advantages are not necessarily based on better performance, superior efficiency, better technology or superior management skills but are merely government-created and can distort competition in the market. For example:

- *Outright subsidisation.* Some SOEs receive direct subsidies from their government or benefit from other public forms of financial assistance to sustain their commercial operations. For example, the favourable tax regimes or exemptions from certain taxes that are enjoyed by SOEs are tantamount to selective government subsidies. Another form of subsidisation is in-kind benefits, for instance where state-owned operators in the network industries receive benefits such as land usage and rights of way at a price significantly below what private competitors would have had to pay in like circumstance. These exemptions artificially lower the SOEs' costs and enhance their ability to price more efficiently than competitors subject to a full tax regime.
- *Concessionary financing and guarantees.* SOEs may enjoy credits directly from governments, or provided via state-controlled financial institutions, at below-market interest rates. A related area is explicit or implicit state guarantees for SOEs, which reduce their cost of borrowing and enhance their competitiveness vis-à-vis their privately-owned rivals. This anti-competitive effect may be somewhat more "accidental", in that it is perfectly rational for commercial lenders to lower their rates when the debtor is perceived as enjoying state backing, and it may in practice be difficult for the state to convince markets that a given enterprise is not subject to such guarantees. Conversely, the presence in OECD countries of a number of SOEs with negative book equity values may serve as an illustration of the continued importance of government guarantees. Moreover, SOEs of some sectors and/or some corporate forms may enjoy outright exemptions from bankruptcy rules.
- *Other preferential treatment by government.* In some cases, SOEs are not subject to the same costly regulatory regimes as private firms, lowering their operating costs. According to the national context, these exemptions may, for example, include compliance with disclosure requirements and exemptions from antitrust enforcement, building permit regulations or from zoning regulations. Moreover, notwithstanding the relatively stringent public procurement rules of most OECD countries, some SOEs may in practice continue to benefit from preference in public procurement. This may not necessarily reflect onerous practices at the level of general government – merely an accumulated competitive or informational advantage allowing SOEs to tailor their offers more closely to government requirements. SOEs may also benefit from more general

information asymmetries, by having access to government information or data which are not available to their private competitors or only available to a limited extent.

- *Monopolies and advantages of incumbency.* In many cases, governments entrust SOEs with exclusive or monopoly rights over some of the activities that they are mandated to pursue. This can be seen, for example, in postal services, utilities and other universal services that the state decided to pursue through state-controlled entities. Where SOEs continue to benefit from a legal or natural monopoly this may be of little practical consequence for the competitive landscape, but a number of SOEs in the network industries operate as vertically integrated structures with incipient monopolies in parts of their value chains. This can have a direct effect on relative competitiveness, and it may also allow them to influence the entry conditions of would-be competitors across a number of commercial activities.
- *Captive equity.* SOEs' equity is generally "locked in", i.e. in other words control of an SOE cannot be transferred as easily as in privately-owned firms. The inability to transfer ownership rights will result in a number of advantages for SOEs, such as: (i) some SOEs are generally absolved from paying dividends or indeed any expected return to shareholders ; (ii) SOEs will be more inclined to engage in anti-competitive (and rarely profitable) exclusionary pricing strategies, such as predation, without fear of falling stock prices when losses are incurred due to the below-cost pricing; and (iii) SOEs' management will have less incentives to operate the company efficiently as it is not subject to the threat of takeovers and generally impervious to the disciplining effects of capital markets.
- *Exemption from bankruptcy rules and information advantages.* SOEs often enjoy exemptions from bankruptcy rules. Because equity capital is locked, SOEs can generate losses for a long period of time without fear of going bankrupt. In addition, SOEs may also benefit from information asymmetries. Information asymmetries occur when SOEs have access to data and information which are not available to their private competitors or only available to a limited extent.

## **2. Ensuring a level playing field**

To respond to these challenges OECD recently developed a "best practice report" identifying priority areas for policy makers that are committed to maintaining a level playing field – commonly referred to as "competitive neutrality" – between SOEs and private enterprises (OECD, 2012 and OECD, 2013a). The report was based on a large body of earlier OECD studies, guidelines and best practices which, while not directly addressing competitive neutrality, have a bearing on the subject. The main conclusion is that governments wishing to obtain and enforce competitive neutrality need to focus attention on the following seven priority areas:

- *Streamline government businesses either in terms of corporate form or the organisation of value chains.* An important question when addressing competitive neutrality is the degree of corporatisation of government business activities and the extent to which commercial and non-commercial activities are structurally separated. Separation makes it easier for commercial activities to operate in a market-consistent way. Incorporating public entities having a commercial activity and operating in competitive, open markets, as separate legal entities enhances transparency.
- *Ensure transparency and disclosure around cost allocation.* Identifying the costs of any given function of commercial government activity is essential if competitive neutrality is

to be credibly enforced. For incorporated SOEs, the major issue is accounting for costs associated with fulfilling public service obligations (if applicable). For unincorporated entities, problems arise where they provide services in the public interest as well as commercial activities from a joint institutional platform.

- *Devise methods to calculate a market-consistent rate of return on business activities.* Achieving a commercial rate of return is an important aspect in ensuring that government business activities are operating like comparable businesses. If SOEs operating in a commercial and competitive environment do not have to earn returns at market consistent rates then an inefficient producer may appear cheaper to customers than an efficient one.
- *Ensure transparent and adequate compensation for public policy obligations.* Competitive neutrality concerns often arise when public policy priorities are imposed on public entities which also operate in the market place. It is important to ensure that concerned entities be adequately compensated for any non-commercial requirements on the basis of the additional cost that these requirements impose.
- *Ensure that government businesses operate in the same or similar tax and regulatory environments.* To ensure competitive neutrality government businesses should operate, to the largest extent feasible, in the same or similar tax and regulatory environment as private enterprises. Where government businesses are incorporated according to ordinary company law, tax and regulatory treatment is usually similar or equal to private businesses.
- *Debt neutrality remains an important area to tackle if the playing field is to be levelled.* The need to avoid concessionary financing of SOEs is commonly accepted since most policy makers recognise the importance of subjecting state-owned businesses to financial market disciplines. However, many government businesses continue to benefit from preferential access to finance in the market due to their explicit or perceived government-backing.
- *Promote competitive and non-discriminatory public procurement.* The basic criteria for public procurement practices to support competitive neutrality are: (1) they should be competitive and non-discriminatory; and (2) all public entities allowed to participate in the bidding contest should operate subject to the above standards of competitive neutrality.

In a cross-border context there is little doubt that a portmanteau commitment to competitive neutrality such as outlined above would eliminate almost all concerns about the operating conditions of foreign SOEs. What is perhaps less clear is whether such an approach would be efficient – or even feasible – in the global political economy. Ongoing negotiations of international trade and investment treaties have grappled with the role of SOEs, and one of the topics for discussion has reportedly been whether it would be more efficient to concentrate on subsidised SOEs operating abroad rather than aim for a broader neutrality commitment. At issue is, first, the difficulty in assessing and regulating intangible advantages that an internationally active SOE may enjoy such as, for example, regulatory forbearance and a privileged position in the domestic economy. Also, at the political level there seems to be limited appetite for a broad commitment that would apply the competition in the domestic economy between foreign entrants and purely national SOEs.

Hence, while competitive neutrality is a useful reference point – domestically and to assess the commercial orientations of other countries' SOEs – some more narrowly focused approaches may in practice be called for. One area that has been frequently brought up in the debate about internationally expanding SOEs is their cost of funding and financing. This is discussed in some details in the following sub-section.

### **3. Funding and financing of SOEs**

The OECD Working Party on State Ownership and Privatisation Practices recently undertook a study of the way in which state-owned enterprises in the Organisation's member countries fund their operations and investments (OECD, 2014). A main finding from this report was that authorities in an average OECD country actually approach the issue of financing SOE operations with quite a high degree of professionalism. This contrasts with the experience of previous decades where SOEs were sometimes perceived either as "fiscal sinks" where hidden reserves could be parked, or "milk cows" to be exploited as a source of revenue to the point where their viability was seriously imperilled. This confirms a tendency explored by other publications by the Working Party (e.g. OECD, 2011) which have found that recent SOE reform has largely moved national practices closer to commonly agreed standards. However, in the context of the current paper it bears mentioning that anecdotal evidence abounds that practices pursued in enterprises controlled by sub-national levels of government in a number of OECD countries are far less progressed with their reform processes.

While the state ownership functions and individual SOEs may have become more "professional" and approached themselves to the practices in similar private enterprises, it is also fair to say that no single model has emerged. For instance, only a minority of OECD's member countries systematically engage in assessments of the appropriateness of SOEs' capital structure, but a significant additional number make implicit decisions to a similar effect through evolving rate-of-return requirements and dividend policies. Only a minority of countries make such decisions purely or largely on an ad-hoc basis. Most OECD governments retain the option of redressing the capital/debt balance of SOEs through the infusion of direct subsidies, but – inter alia reflecting the strictures of WTO rules and, in many cases also the EU Single Market – generally reserve this for SOEs that are assigned special public policy obligations.

Most OECD area governments retain the option of recapitalising their SOEs – through share issuance, debt-equity swaps or, in the case of wholly-owned enterprises, infusion of funds. In most cases this is apparently motivated by a need to fund additional capital formation by the SOE, but it may also reflect a need to address excessive leverage (e.g. in case of initially too optimistic profit expectations and dividend policies) or, in rarer cases, to stave off a threatening corporate failure.

State-owned enterprises in OECD countries generally obtain most of their debt finance from privately owned banks. Only some of the largest and most commercially operating companies issue tradable debt, and quite a few SOEs that could profitably do so seem to refrain because of concerns about the additional corporate governance and reporting requirements that this entails under securities rules. Conversely, some of the SOEs that have issued corporate bonds have done so specifically in connection with their owners' efforts to upgrade their governance. Some governments which make treasury loans available to SOEs (one even demands that SOEs raise debt finance only from the national Treasury) generally have rules in place to ensure market consistency of interest rates and conditions. Loans from state-owned financial institutions are generally available only under circumstances (e.g. export credit; development banks) where a certain subsidisation would be available to private companies in like circumstances. The



conclusion therefore offers itself that SOEs in OECD countries generally borrow money on market-consistent terms.

That said, the relative sound financial operating environment in most OECD countries, including recent improvements, should however not lead to the conclusion that there are no remaining problems to be addressed. Again, from a competitive neutrality perspective some areas of concerns offer themselves. As in other cases this is particularly the case in SOEs that pursue both commercial and non-commercial priorities and are unable to account separately for the cost structures of the two sets of activities. Based on the findings of the present report they include:

- *Rates of return.* Perhaps the most important outstanding issue is the trouble with monitoring whether rate-of-return requirements imposed on SOEs are comparable with those demanded of private enterprises. Even in an ideal situation this would be problematic since rate-of-return measures necessarily need to be considered over a long time span. In the case of OECD countries' current practices it is potentially more serious as a majority of countries, by their own admission, do not impose rate-of-return requirements on their wholly state-owned enterprises. Some governments moreover appear to compensate SOEs for having to assume public policy functions (rather than through a carefully calibrated subsidy) by negotiating relatively low rates-of-return, effectively providing these enterprises with a perverse incentive to expand in the market place.
- *Recapitalisation.* The conditions on which recapitalisation is offered to (wholly-owned) SOEs is notoriously difficult to assess empirically. Some disciplines on the conditions of recapitalisation exist, including the EU Commission's demand that practices may not differ from private enterprises in like circumstances. However, such requirements can be difficult to enforce in practice, including in cases where recapitalisation efforts may be conducted in unison with private investors acting in concert with governments.
- *Perceived guarantees.* Finally, an indisputable advantage enjoyed by SOEs across OECD countries (with the possible exception of Australia) lies in the fact that their ownership puts them in a lower risk category in the eyes of other market participants. Actual lending to SOEs may be undertaken on market terms by commercial lenders, but the latter almost invariably perceive state-owned enterprises as more credit-worthy than their private competitors. Explicit guarantees to SOEs are rare within the OECD area, but credit ratings and interest rate differentials indicate that financial market participants in many cases perceive guarantees. This provides SOEs with a competitive advantage already in their domestic activities, and if the low interest rates can be retained to finance more risky overseas expansions then the advantage is further compounded when SOEs operate abroad.

### III. PERFORMANCE AND FINANCING OF THE WORLD'S LARGEST SOEs

This section employs firm specific data to investigate the performance and financing patterns of SIEs. Using the *Forbes*® *Global 2000* list of companies from 2013, we compare SIEs with private firms in five sectors where state ownership is perceived to be particularly widespread: oil and gas, mining, air transportation, power generation and telecommunication. Here, SIEs mean companies where the central government, or in the case of federal structures, autonomous sub-national levels of government, have at least 10% ownership of the voting shares.

#### 1. The *Forbes*® *Global 2000* and the OECD corporate database

For the five sectors under consideration<sup>6</sup>, there are 335 firms among the 2000 largest enterprises in the world. Table 3 provides their break down by sector and according to their SIE status (see Table A1 in the Annex for the full list). A total of 112 firms are SIEs, with 104 being from non OECD economies, representing 49 different countries. In particular, the sample covers 33 companies from China, 17 from Russia and 13 from India. Moreover, more than 70% of non-OECD companies in *Forbes Global* within the five sectors are SIEs, while this is only the case for 17% of the companies domiciled in the OECD area.

**Table 3. Distribution of companies by sector and according to their SIE status**

Industry	Percent	Ownership:		Region:		Total
		Private	SIEs	Non-OECD	OECD	
Airline	6.87	15	8	5	18	23
Diversified Metals & Mining	18.51	45	17	25	37	62
Electric Utilities	25.37	51	34	24	61	85
Oil & Gas Operations	29.25	70	28	25	73	98
Telecommunications services	20.00	42	25	25	42	67
Total	100	223	112	104	231	335

Source: OECD Secretariat and *Forbes Global 2000*

To analyse the performance and the financing structure of these firms, firm-level information has been extracted from an OECD corporate database taking as its point of department from Bureau Van Dijk publishing (BvDEP) that contains financial and ownership information for over 44 million companies across the world, with more than 200 variables. The OECD corporate database is the output of treatment of the raw data provided by Bureau van Dijk to the OECD, involving a consortium of 8 directorates using the data for various projects involving firm-level cross-country analysis. With the corporate database, OECD has analysed a variety of issues such as productivity growth, export performance, innovation or international investment consistent with methodologies previously applied in economic literature (Peter N Gal, 2013, A Ragoussis and E Gonnard, 2012, Samuel Pinto Ribeiro et al., 2010). The database has also often been used to calculate mark-ups or price-cost margins.

The company information in the OECD corporate database includes firm-specific details that, in principle, do not change from one year to another, such as the company name, its city and

<sup>6</sup> The five sectors have been selected from 80 industries classified in *Forbes*® *Global2000*: <http://www.forbes.com/global2000/>.

country, as well as the core sectoral industrial activity of the firm (with four-digit NACE rev. 2 codes).<sup>7</sup> The financial information is broken down into two major components: the firm's balance sheet and the profit and loss account reported for given time periods. The firm's balance sheet includes figures on the firm's assets, liabilities, its net value, as well as the number of persons the firm employs. The profit and loss account includes information on revenues, the costs of production of goods, financial expenses, taxation, and the firm's profits. The account is complemented by information on value added, the cost of employees and export turnover, on a non-systematic basis.

It has been decided to extract companies with the following criteria (See also Table A2 in the Annex):

- Geographic: OECD countries and 21 non-OECD economies<sup>8</sup>
- Status: Active main business unit without considering subsidies and affiliates
- Financial information: 10 years of consolidated statements from 2000 to 2010.
- Monetary data is expressed in '000 Euros (Thousand Euros).
- The amounts have been converted to constant 2005 US-dollars using the private final consumption expenditure deflator from the OECD Economic Outlook database.

#### a) ***Profitability***

During the past few decades the pace of privatisation of SIEs around the world has continued apace, albeit with a significant slowdown during the current financial crisis. The privatisation of SOEs has generated large revenues for many governments and, perhaps even more importantly, it has provided a potential solution to the problem of inadequate SOE performance such as, transparency, agency problems and governmental interference. Despite the growing popularity of privatisation schemes, important questions remain for both researchers and policy makers, such as the effect of privatisation or reforming of SOEs on their profitability and margins.

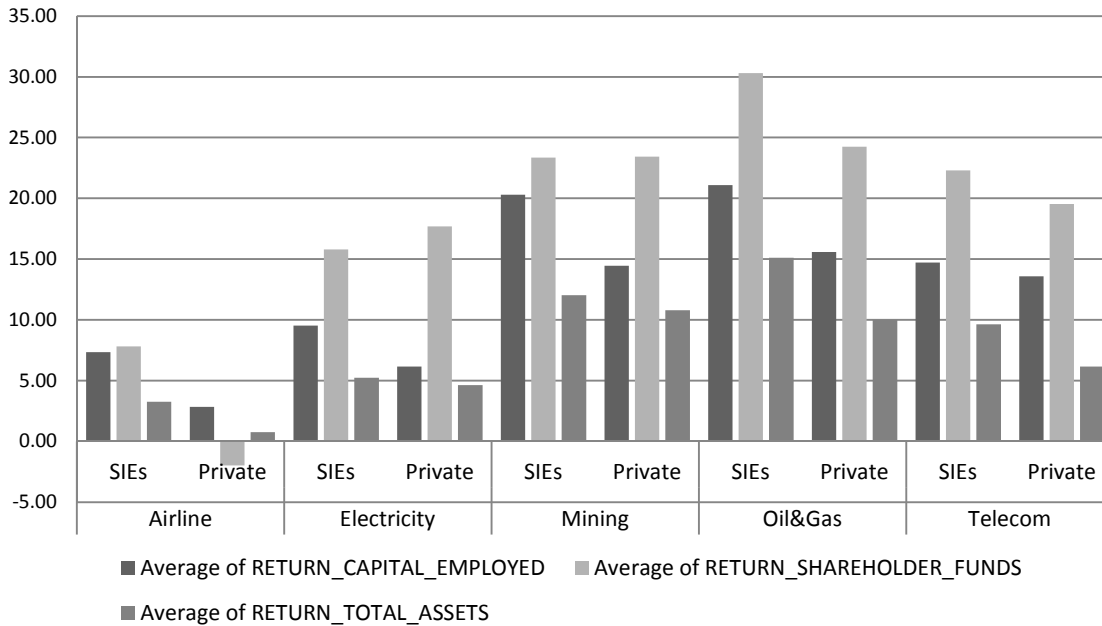
Using the available information this section assesses the impact of ownership on the financial performance of SOEs. We use three indices to measure profitability: (i) return on total assets (ROA), which is defined as total profits (net income) divided by total fixed assets; (ii) return on shareholder funds, essentially identical to return on equity (ROE) which is defined as total profits divided by total shareholder funds; and (iii) return on capital employed (ROCE), which is defined as total profits divided by total shareholder fund plus non-current liabilities.

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<sup>7</sup> For mining industry, NACE Rev. 2 = 510, 520, 710, 729, 899, 1310, 2059, 2441, 2444, 2445, 2454, 2811, 2932, 4211, 672, 6419, 6512, 7810; for air industry, NACE Rev. 2 = 1011, 2910, 4778, 4910, 5110, 5229, 6201, 6420; for electricity industry, NACE Rev. 2 = 520, 2059, 2711, 2815, 2910, 3511, 3512, 3513, 3522, 4211, 4719, 6020, 6190, 6420, 6619; for gas and oil industry, NACE Rev. 2 = 610, 910, 1200, 1910, 1920, 2016, 2059, 2892, 2899, 3511, 3512, 3530, 4671, 4730, 4950, 5223, 5510, 6419, 6420; for telecom industry, NACE Rev. 2 = 3511, 6020, 6190, 6209, 6419, 6499, 6500, 6831.

<sup>8</sup> Among non-OECD economies, all accession and key partner countries were included. So were a selection of other countries known where large SIEs in the five sectors are domiciled, including Saudi Arabia, Singapore and some other Asian economies.

**Figure 1. Performance by ownership and sector between 2000 and 2010**

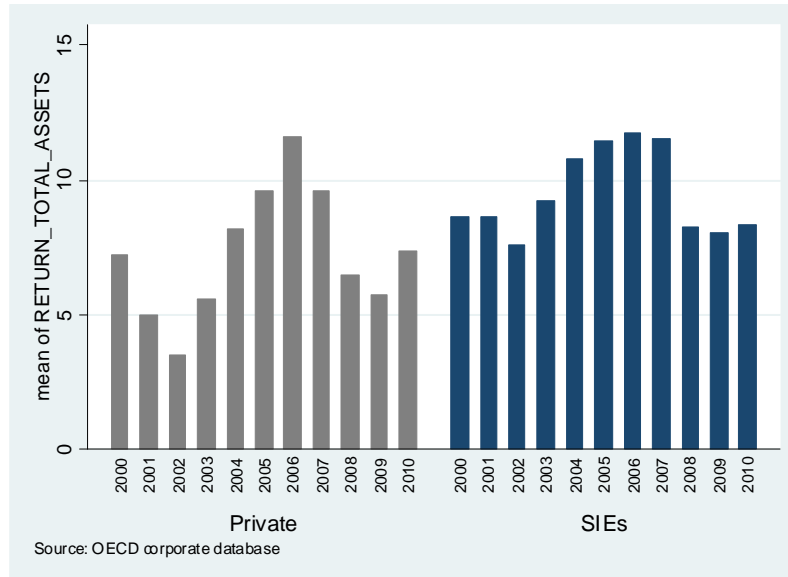


Source: OECD corporate database

Figure 1 provides an overview of the profitability of SIEs and private firms across sectors. Remarkably, in the airline industry the average profitability of private enterprises over the last decade appears to have been negative or close to zero. Conversely, state-invested airline have earned a certain – albeit modest – return on their investments. Generally, with respect to the return on assets and return on capital, the performance of SIEs is higher than private companies. Only in the case of electricity is there by some measures (though not including ROA) a higher degree of profitability in the private sector.

Looking at Figure 2 and the evolution of returns to total assets over years, there are interesting findings. First, the figure shows that there is more volatility in the ROAs of private firms. In particular, the effect of the financial crisis in 2008-2009 is more pronounced as compared to SIEs, despite the fact that the five sectors cover mostly network industries. However, we find that the private sector has recovered at a higher pace and profitability levels are closer to those of SIEs at the end of the period. Over the last 10 years, the profitability of the private sector has fluctuated but differences between SIEs and non-SIEs are getting smaller over years. Second, one might infer from the gradually more resilient returns in the private sector that these companies have become relatively less vulnerable to crises. Compare the episodes of turmoil in the 2000s (2001/02 and 2008/09), the adjustment of private firms to the external shock is faster in the second case.

Figure 2. Return to Total Assets over time

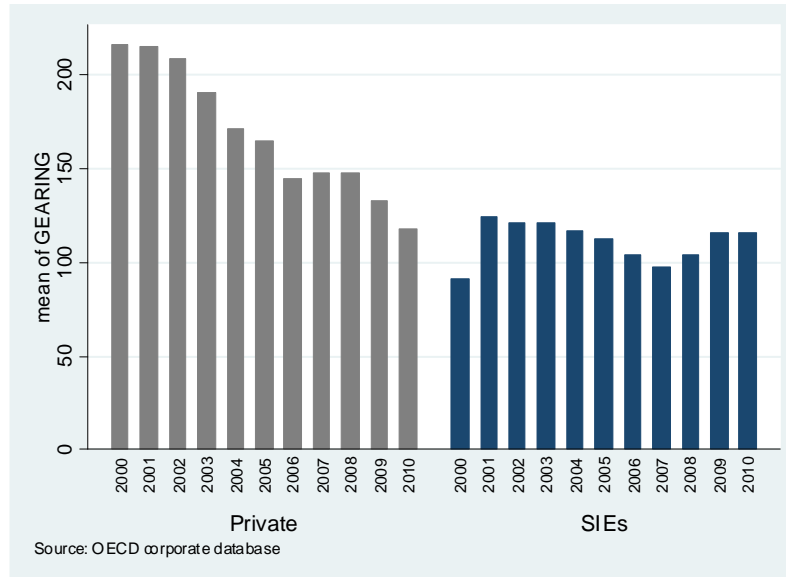


Summing up, it would appear that state-invested enterprises do not only tend to be more profitable than similar private firms, they also display less variability in their earnings. This could reflect a number of different factors, including access to cheaper funding, differently structured balance sheets, concessionary treatment by their government owners and/or greater market powers in the jurisdictions in which they operate.

#### b) ***Funding and financing***

One factor that could bias the measures of economic return relative to assets or equity is if the liabilities of SIEs and private enterprises are structured differently. An overview is provided in Figure 3, which displays the trend in gearing ratios (debt equity relative to shareholders' funds – expressed in percent) over the last decade. First, the figure shows that, on average, private companies in the five sectors have been more leveraged than SIEs during the period under review. However, other things equal this should have contributed to a higher ROSF in private companies than in SIEs, and the above documentation showed little indication of this. Secondly, the figure also illustrates a gradual reduction in the gearing of private companies in the five sectors, to a point where both they and the SIEs carry broadly equal amounts of equity and other liabilities. This is consistent with a broader trend toward corporate deleveraging since the beginning of the millennium. Thirdly, the figure appears to confirm a finding by OECD (2013) that the government owners of SOEs and other companies watch the debt/equity ratios of their companies closely and are quick to act in case of deviations from target values. The gearing of SIEs in the five sectors has been remarkably stable over the period under review.

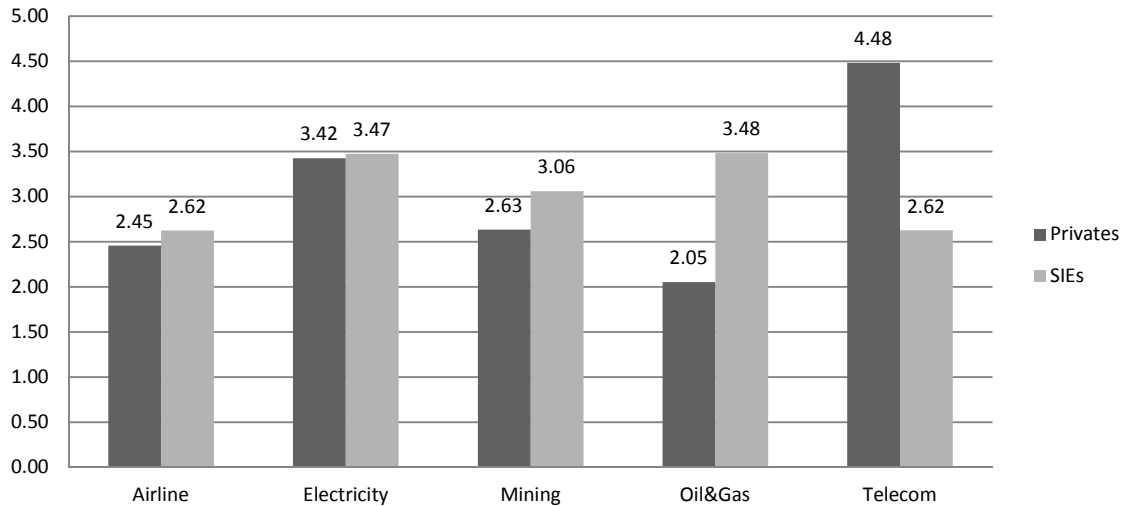
**Figure 3. The comparison of gearing ratio (%)**



To shed light on the question of whether SIEs benefit from cheaper finance than private competitors, figure 4 shows the evolution over time of a measure of “effective interest rates” based on the company database. Caution in interpreting the figure is, however, called for: no data is available purely on interest-bearing liabilities. The figure displays an approximation calculated as total interest paid (from the company profit and loss account) relative to short and long-term non-equity liabilities. The latter include such items as supplier credits, tax arrears, etc. so insofar as there are systematic differences between SIEs’ and private firms’ approach toward such liabilities this is a source of systematic bias.

Figure 4 indicates little difference between the effective interest rates paid by large SIEs and private firms in the five sectors. In airlines, electricity and mining the differences are not statistically significant. Private oil and gas companies have, on average, paid less interest on their non-equity liabilities during the period under review, whereas in the telecom sector the opposite has been the case. All in all the evidence must be characterised as pretty inconclusive, which is perhaps related to the fact that the world’s largest SIEs tend to be listed companies operating under financing conditions that may – contrary to smaller SOEs held closely by the State – not differ materially from their private counterparts.

**Figure 4. Effective Interest Rate**



Source: OECD corporate database

### c) **Indicators of margins and market power**

This section compares price costs margins across firms<sup>9</sup>, as well as other indicators of operating margins. One assumption is that the level of competition in an industry or the degree of privatisation has an impact on margins. In other words, the increased competition resulting from privatisations significantly reduces margins and the concentration of the market affects the price elasticity of demand.

Analysing price-cost margins assumes positive correlations between various measures of profitability at the industry level and concentration because the variation in margins will be different in concentrated and liberalised industries<sup>10</sup>. Hence, the analysis of concentration across sectors can explain the variation in margins, as highlighted in previous studies that have used price-cost margins to analyse the margin model (Keith Cowling and Michael Waterson, 1976, Ian Domowitz et al., 1986, Nikolaos P Eriotis et al., 2011, Stephen Machin and John Van Reenen, 1993).

Table 4 compares PCMs and other margin indicators by sector from 2000 to 2010. As would be expected given the low levels of return discussed above, in the case of air transportation there are lower EBITDA margins<sup>11</sup>, gross margins<sup>12</sup> and profit margins<sup>13</sup> than in other industries. This is,

<sup>9</sup>  $PCM = \frac{\text{Value of Sales} - \Delta \text{Inventories} - \text{Payroll} - \text{Cost of Materials}}{\text{Value of Sales} + \Delta \text{Inventories}} = \frac{\text{Value added} - \text{Payroll}}{\text{Value added} + \text{Cost of Materials}}$ , see Ian Domowitz et al., (1986) for the more detail equations and assumptions.

<sup>10</sup> There might be the omission of the industry price elasticity in country. However, considering PCM possibly reasonable to premise that the problem is less severe when we more consider the changed in structure effecting changes in performance; i.e., assuming the constancy if industry price elasticity by time is less critical than assuming that they are constant across industries (Cowling and Waterson, 1976).

<sup>11</sup> The EBITDA Margin =  $\frac{\text{Operating profit/loss (EBIT)}}{\text{Operating revenue (turnover)}}$

among other things, almost certainly related to the greater degree of international competition in this sector affecting both private firms and SIEs. Even so, there is a clear indication of higher operating margins where the State is a significant owner, as well as some indications of greater market concentration (i.e. higher PCM).

**Table 4. Comparison of PCM and other margin indicators by sector from 2000 to 2010**

	Average of EBITDA margin	Average of gross margin	Average of profit margin	Average of PCM
<b>Airline</b>	<b>11.2</b>	<b>36.6</b>	<b>1.9</b>	<b>0.02</b>
Private	8.8	29.7	0.9	0.01
SIEs	16.1	49.3	3.8	0.03
<b>Electricity</b>	<b>31.1</b>	<b>52.9</b>	<b>14.8</b>	<b>0.10</b>
Private	27.9	53.3	12.9	0.03
SIEs	37.2	52.2	18.4	0.22
<b>Mining</b>	<b>30.4</b>	<b>41.1</b>	<b>19.5</b>	<b>0.02</b>
Private	31.1	41.3	19.4	0.02
SIEs	27.9	40.7	19.7	0.01
<b>Oil &amp; Gas</b>	<b>30.9</b>	<b>45.7</b>	<b>18.3</b>	<b>0.02</b>
Private	32.9	47.4	17.5	0.01
SIEs	26.4	41.7	20.1	0.05
<b>Telecom</b>	<b>36.2</b>	<b>63.7</b>	<b>12.8</b>	<b>0.05</b>
Private	33.8	61.0	9.5	0.04
SIEs	40.3	69.4	18.7	0.07
<b>Grand Total</b>	<b>30.5</b>	<b>49.6</b>	<b>15.3</b>	<b>0.05</b>

Source: OECD corporate database

The telecom sector has generally highest margins as compared to other sectors. This finding is perhaps unsurprising: the telecom sector was the scene of significant technological evolutions as well as rapidly growing penetration of fixed lines, mobile and internet services during this period. However, as the costs of funding the expansion were correspondingly high, this did not (as demonstrated above) result in abnormally high rates of return. In the telecom sector as well the gap between margins in SIEs and private firms is non-trivial. In the electricity and mining sectors, the difference between private firms and SIEs is not compelling, although on the whole earnings margins tend to be a tad higher when the state is involved.

The calculation of PCM confirms that SIEs appear to have greater market power. In particular, SIEs in the electricity sector have higher price-cost margins. A textbook explanation of this would be that producing additional electricity does not require important marginal costs and the elasticity of demand is very low.

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<sup>12</sup>The Gross Margin =  $\frac{\text{Gross profit}}{\text{Operating revenue (turnover)}}$

<sup>13</sup> The Profit Margin =  $\frac{\text{Profit / loss before tax \& extra items}}{\text{Operating revenue (turnover)}}$



## 2. Summing up

It appears from the above that the largest SIEs in the five sectors under review have indeed been more profitable than their private sector counterparts over the last ten years. Partly this may reflect the fact that a disproportionate number of them are domiciled in high-growth markets (e.g. in emerging economies), but some additional factors seem to be at play:

- Whereas advantages of state ownership in obtaining financing is well documented by OECD research, in the present sample of large and in many cases partially-state owned enterprises this does not appear to be a decisive factor behind SIEs' greater profitability.
- State-invested enterprises seem to enjoy generally higher profit and operating margins than similar private companies. Evidence based on mark-up margins surveyed in this section suggests that this reflects a generally higher concentration in the markets in which they operate<sup>14</sup>. If confirmed this would indicate that internationally operating SIEs benefit largely from home markets where competitive pressures are weak – which might for example indicate concrete measures by their government owners to shield them from competition or a generally favourable market position due to incumbency.

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<sup>14</sup>A competing, or supplementary, explanation might be that SOEs enjoy other unquantified advantages such as, for example, the use of free land and other resources.

## IV. INTERNATIONAL INVESTMENTS BY STATE-OWNED AND OTHER ENTERPRISES

### 1. Definitions and summary statistics

Like the previous part of the report this chapter focuses on five sectors in which state control is relatively widespread: oil and gas extraction; mining; air transport; power generation and telecommunications. This chapter focuses on one aspect of the internationalisation and cross-border competition of such enterprises, namely the acquisition of foreign corporate assets through mergers and acquisition (M&A).

The main source of information is the Dealogic database<sup>15</sup>. Dealogic records all “deals” defined as the transaction of a corporate asset. The asset types includes, broadly speaking, such assets as would appear on the acquirers’ balance sheet, including fully or partly-owned incorporated entities, unincorporated production and distribution sites as well as physical assets such as mines and oilfields. Contractual rights such as concessions and patents are generally not included. All transactions taking place between 1998 and 2012 in the five sectors under consideration have been recorded. To establish the ownership (i.e. public versus private) of investors the data have been combined with information from the recent stocktaking of SOEs in OECD and partner countries<sup>16</sup> as well as supplementary inputs from the “Ownership Module” of Thompson Financials database.

Some limitations following from the chosen methodology must be acknowledged:

- M&As provide only a partial picture of corporations’ internationalisation though investment. In developing countries in particular a sizeable part of inward corporate investment consists of “greenfield” transactions rather than takeovers of existent enterprises.
- The analysis is, to keep the amount of data manageable, limited to M&As undertaken by companies operating in the five sectors under consideration. This implies that, for example, the acquisition of telecommunication assets by a company that is not itself located in the telecom sector is not included. This is potentially of some importance in the mining sector where a number of transactions have been undertaken, for instance, by metal producers as part of vertical integration strategies.
- That valuation of transactions according to Dealogic is often unclear, and for a large number of transactions the valuation is completely missing. (This is discussed at some length below.) For this reason, much of the analysis focuses on the number of transactions. Where valuation is addressed it must be kept in mind that the analysis is based on a truncated sample – which could be of particular importance where SOEs are involved as they may have less incentive to disclose pricing details than, for example, listed private corporations.
- Only transactions resulting in a subsequent ownership by the acquirer of at least 10% of the target have been included. This was done to exclude portfolio investment from the sample.

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<sup>15</sup> The assistance of DAF/INV in obtaining an extensive amount of data from this source is gratefully acknowledged.

<sup>16</sup> See Christiansen and Kane (2013).

The *Dealogic* database provides comprehensive information on international deals with the industry, region and main characteristics of the deal. It also frequently records information on the participants (acquirer, target and divestor), value of the deal, acquired and final stake and premium to target's shareholders. In total, 46, 045 deals involving 165 countries are covered over the last 15 years. In the five sectors of interest, 89.2 percent of the international acquisitions involve private companies, while 10.8 percent are deals involving SIEs. Limiting the dataset to the activity of SIEs reduces the number of countries to 58.

With respectively 1,370 and 859 deals by SIEs, China and Russia are the most represented countries. Together they account for 45 percent of all international transactions of SIEs. More than half of the deals involve emerging markets. In the case of China, the activity of SIEs is twice as big as the activity of private companies. Among OECD countries, the top five countries with large SIEs' international transactions are France (415 deals), Italy (216 deals), Norway (205 deals), Japan (155 deals) and Germany (137 deals).

#### a) **Private and state-invested enterprises**

SIEs are defined as companies where the government at the central or federal level has at least 10% ownership in 2012. (In federal nations some enterprises owned by States have, where information is available also been included.) The SIEs in the sample covering the five sectors are domiciled in 58 countries (see Table A3 in the Annex). They include companies listed on stock exchanges, wholly or partially-owned, non-listed companies and statutory corporations. Private enterprises are all the other companies. They can be fully owned by one person, partially listed with less than 10 percent shares for the state or fully listed in public with less than 10 percent shares for the state.

Of potential concern is the fact that this methodology allocates enterprises owned by regional and municipal authorities to the private sector. This is a particular problem in power generation where many of the main players are municipal undertakings. However, with a few exceptions these companies do not engage in cross-border transactions, so the classification problem is largely confined to domestic investments. Table 5 shows the ratio between private and SIEs deals by type and by sector. The number of deals by private enterprises is 41,062, representing 89 percent of the total.

**Table 5. Number of deals by nationality and sector (1998-2012)**

	Domestic	International	Total
Non-SIEs (Private deals)	25,539	15,523	41,062
SIEs:			
Air	104	84	188
Electricity	646	384	1,030
Mining	672	213	885
Oil & gas	773	966	1,739
Telecom	487	654	1,141
<b>Total</b>	<b>28,221 (61%)</b>	<b>17,824 (39%)</b>	<b>46,045 (100%)</b>

Source: Dealogic

**b) General and specific industry sectors**

To identify the industry of the acquirer, target and divestor, the Dealogic database provides a general industry group (GIG) and a specific industry group (SIG). For the five sectors we have picked in the database, two correspond to a general industry group (air transportation and mining) while the three others are subdivided into smaller specific industry groups: four for electricity (hydroelectric power generation, nuclear power generation, electric power generation and diversified electricity), five for oil & gas (exploration & development, pipeline, refinery/marketing, diversified oil & gas) and three for telecommunication (telephone, wireless and services). For the purpose of this study were selected 14 sectors on the basis of the specific industry group. Table 6 shows the distribution of observations across these sectors.

The total number of international transactions is of a comparable size across the general industry groups, with the exception of airline transportation where there are only 918 deals for the last 15 years. With respect to specific industry sectors, Table 6 reports the percentage of deals by SIEs. For instance, international transactions by SIEs in the nuclear power sector represent more than 60% of the deals over the period. On the contrary, private companies are the main investors in telecommunication services (96.5 percent). This high participation of private companies in the case of telecommunication services is related to the liberalisation of telecom markets over the last decades with price and competition regulations.

**Table 6. Distribution of observations by specific industry sectors (1998-2012)**

General Industry Group	Specific Industry Group	Private deals	SIEs					Total	% of SIEs
			Air	Electricity	Mining	Oil & Gas	Telecom		
Airline	Transportation-Airlines	730	188	-	-	-	-	918	20.5
Electricity	Utility & Energy-Diversified	1,249	-	126	-	-	-	1,375	9.2
	Utility & Energy-Electric Power	5,102	-	824	-	-	-	5,926	13.9
	Utility & Energy-Hydroelectric Power	127	-	32	-	-	-	159	20.1
	Utility & Energy-Nuclear Power	31	-	48	-	-	-	79	60.8
Mining	Mining-General	11,897	-	-	885	-	-	12,782	6.9
Oil & Gas	Oil & Gas-Diversified	1,486	-	-	-	387	-	1,873	20.7
	Oil & Gas-Exploration & Development	6,677	-	-	-	937	-	7,614	12.3
	Oil & Gas-Pipeline	1,152	-	-	-	61	-	1,213	5.0
	Oil & Gas-Refinery/Marketing	892	-	-	-	141	-	1,033	13.7
	Utility & Energy-Gas	1,674	-	-	-	213	-	1,887	11.3
Telecommunication	Telecommunications-Services	3,733	-	-	-	-	135	3,868	3.5
	Telecommunications-Telephone	4,334	-	-	-	-	868	5,202	16.7
	Telecommunications-Wireless/Cellular	1,978	-	-	-	-	138	2,116	6.5
Total		41,062	188	1,030	885	1,739	1,141	46,045	10.8

Source: Dealogic

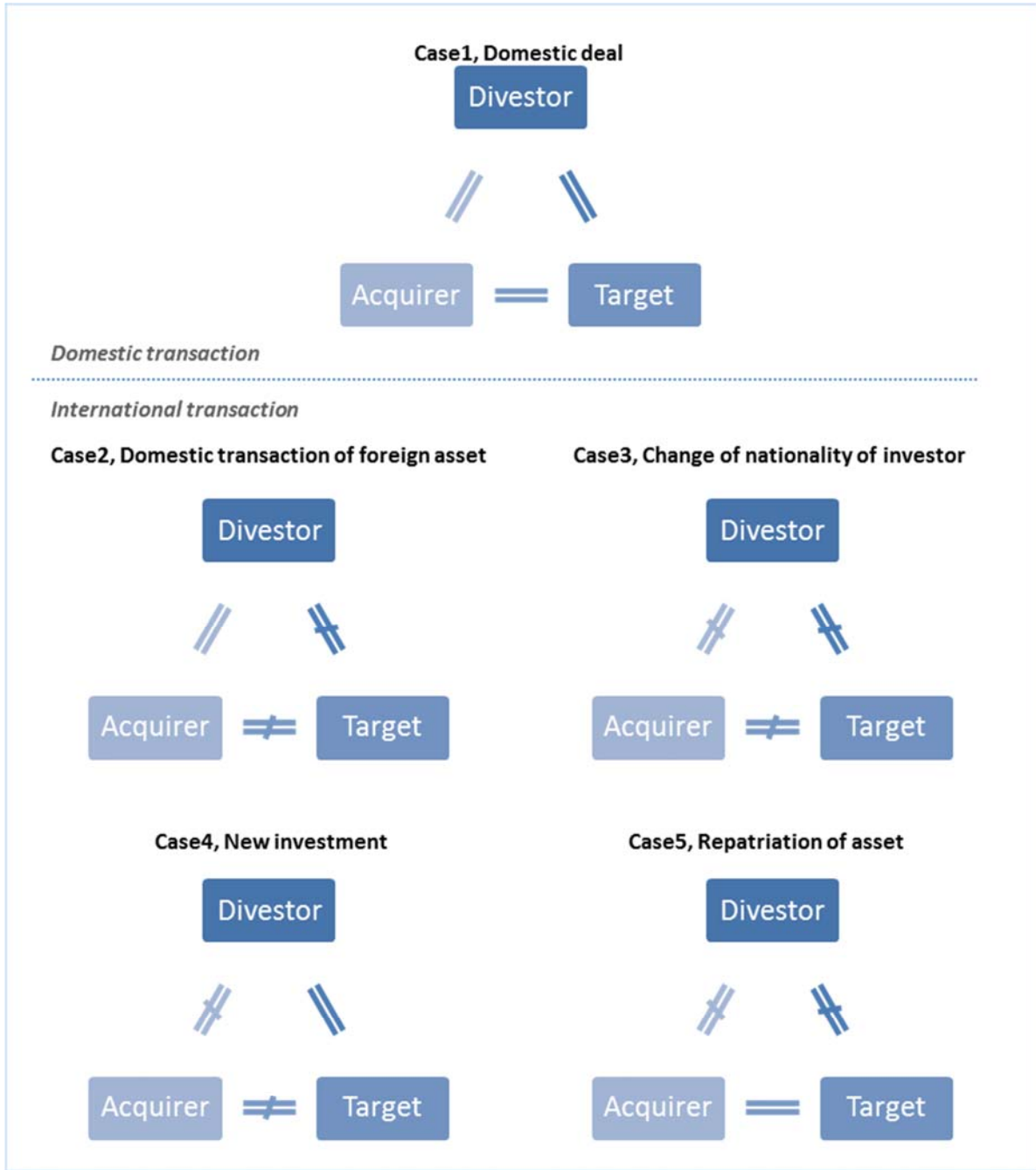
### c) **International transactions**

For each deal, the database provides the information on the nationality of the acquirer, target and divestor. In some cases, there is no information on the divestor, but the acquirer and the target are always indicated. International transactions are the deals where, among the acquirer, the target and the divestor, at least one has a different nationality. All other cases are considered as domestic transactions (with the acquirer, the target and the divestor all sharing the same nationality). When the information on the divestor is missing it has been assumed that it has the same nationality as the target.

For international transactions, there are several types of deals according to the nationality of the acquirer, target and divestor. Based on the difference in the nationality of each, five cases can be identified (see also Figure 5 below):

- *Case 1: Domestic deal.* The nationalities of the acquirer, target and divestor are the same.
- *Case 2: Domestic transaction of foreign asset.* The acquirer and divestor have the same nationality but the nationality of the target is different. The target company is located abroad and the deal is concluded in the domestic market.
- *Case 3: Change of nationality of investor.* In this case, the nationalities of the acquirer, target and divestor are different. This is a cross-border deal between the acquirer and the divestor with a target located in another country.
- *Case 4: New investment.* The nationality of the target and the divestor is the same but the acquirer has a different nationality. This case is the pure cross-border deal where a domestic asset is acquired by a foreign investor.
- *Case 5: Repatriation of asset.* The acquirer and the target have the same nationality, but the nationality of the divestor is different. This is a cross-border transaction involving an asset located in the domestic country, *i.e.* a repatriation of asset.

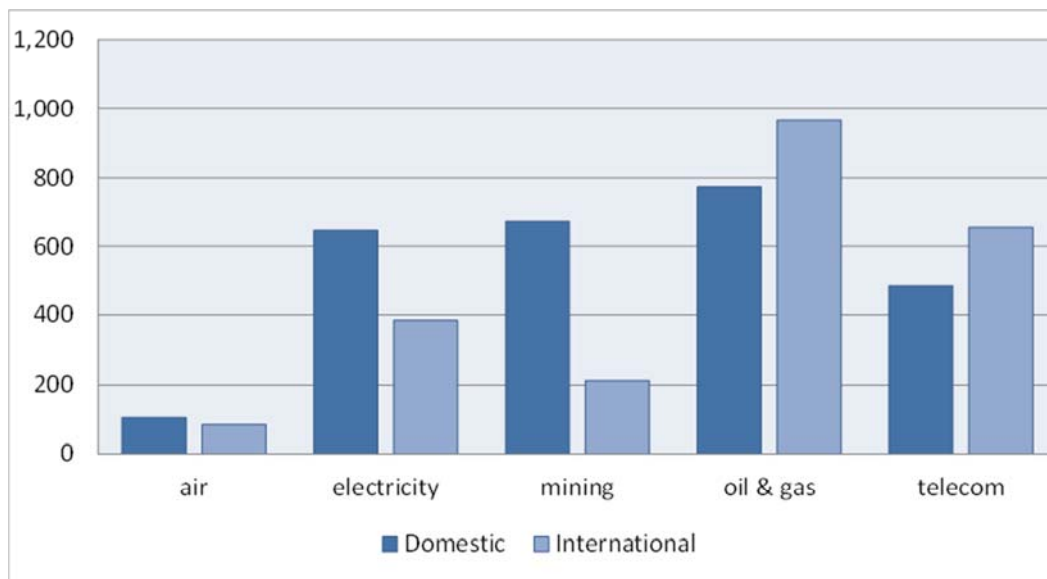
Figure 5. Typology of deals



Source: OECD Secretariat based on Dealogic

Figure 6 shows the distribution of cross border and domestic deals by SIEs in the five sectors included in the dataset. In the oil & gas and telecommunication sectors, there are more international transactions than domestic deals. The activity of SIEs in mining is on the contrary rather oriented towards domestic deals. However, the number of deals should be analysed with caution as it does not take into account the deal value, nor the time trend or regions.

**Figure 6. Distribution of domestic and international deals by SIEs (1998-2012)**



Source: Dealogic

Except the case where the acquirer, target and divestor have the same nationality (domestic deals), all other deals are international transactions and can be classified into one of the 4 cases described above. Table 7 shows the distribution of deals according to these cases and highlights that 61 percent of the deals are domestic. Among international deals, new investments are prevalent (25 percent). Interestingly, the number of international new investments by SIEs in telecommunications is higher than the number of domestic transactions.

**Table 7. Distribution of deals by type and by sector (1998-2012)**

Type of deals	Total	Percent	Private	SIEs				
				Air	Electricity	Mining	Oil & Gas	Telecom
1. Domestic deal	28,221	61.3	25,539	104	646	672	773	487
2. Domestic transaction of foreign asset	1,081	2.4	1,022	1	19	5	24	10
3. Change of nationality of investor	2,538	5.5	2,071	8	80	18	261	100
4. New investment	11,723	25.5	10,245	66	237	141	542	492
5. Repatriation of asset	2,482	5.4	2,185	9	48	49	139	52
<b>Total</b>	<b>46,045</b>	<b>100</b>	<b>41,062</b>	<b>188</b>	<b>1,030</b>	<b>885</b>	<b>1,739</b>	<b>1,141</b>

Source: Dealogic and OECD Secretariat

#### d) **Valuation data**

For those deals where the value of the transaction is known the amounts have been converted to constant 2005 US-dollars using the private final consumption expenditure deflator from the OECD Economic Outlook database. However, as mentioned earlier there are some closed deals without any information on the value. The value is missing for 18,435 deals, representing 40 percent of the total. In the case of the oil & gas industry, the information is not announced for half of the deals (See table 8, for availability of valuation data for deals).

**Table 8. Availability of valuation data for deals (1998-2012)**

	<b>Information available</b>	<b>Undisclosed</b>	<b>Total</b>
Non-SIEs (Private deals)	24,443	16,619	41,062
Air	120	68	188
Electricity	680	350	1,030
Mining	775	110	885
Oil & gas	883	856	1,739
Telecom	709	432	1,141
<b>Total</b>	<b>27,610</b>	<b>18,435</b>	<b>46,045</b>

Source: Dealogic

#### e) **Transactions by region**

When taking into account the nationalities reported for the acquirer, target and divestor, there are more than 200 countries involved. Therefore, a regional classification is needed. Four groups of region are used:

- OECD: the 34 OECD members
- Asia: all Asian countries, except Japan, Korea and countries included in FUSSR(see below)
- FUSSR: Former Union of Soviet Socialist Republics, except OECD members
- Others: Other countries including economies from Africa, Latin America, etc.

Table 9 summarises the regional distribution of international transactions for non-SIEs and SIEs in the five sectors selected. The total number of international deals is 17,824. As it could be expected, intra-regional transactions are much higher than cross-regional transactions. In particular, OECD to OECD deals are by far the most common, but Asia to Asia deals also represent a significant number of deals. Regarding cross-regional transactions, Asia to Other region's international transactions in the oil & gas industry are quite significant as compared to the other four sectors. This highlights that international transactions from Asia to Africa or Latin America are an important part of Asia's outward investment strategy.



**Table 9. Distribution of international deals by region (1998-2012)**

Direction of flows	Total	Private	SIEs				
			Air	Electricity	Mining	Oil & Gas	Telecom
Asia to Asia	1,034	761	16	12	47	124	74
Asia to FUSSR	38	9	-	-	10	19	-
Asia to OECD	529	301	11	10	104	89	14
Asia to Others	193	96	2	1	15	62	17
FUSSR to Asia	17	15	-	1	-	1	-
FUSSR to FUSSR	293	196	-	26	-	63	8
FUSSR to OECD	135	89	-	4	1	40	1
FUSSR to Others	62	41	-	2	-	19	-
OECD to Asia	1,299	1,189	3	13	1	38	55
OECD to FUSSR	573	481	2	15	-	33	42
OECD to OECD	9,688	8,758	34	222	-	303	371
OECD to Others	2,917	2,724	5	47	-	72	69
Others to Asia	40	34	-	-	4	2	-
Others to FUSSR	20	20	-	-	-	-	-
Others to OECD	316	274	-	6	11	25	-
Others to Others	670	535	11	25	20	76	3
<b>Total</b>	<b>17,824</b>	<b>15,523</b>	<b>84</b>	<b>384</b>	<b>213</b>	<b>966</b>	<b>654</b>

Source: Dealogic and OECD Secretariat

#### **f) Takeover premiums**

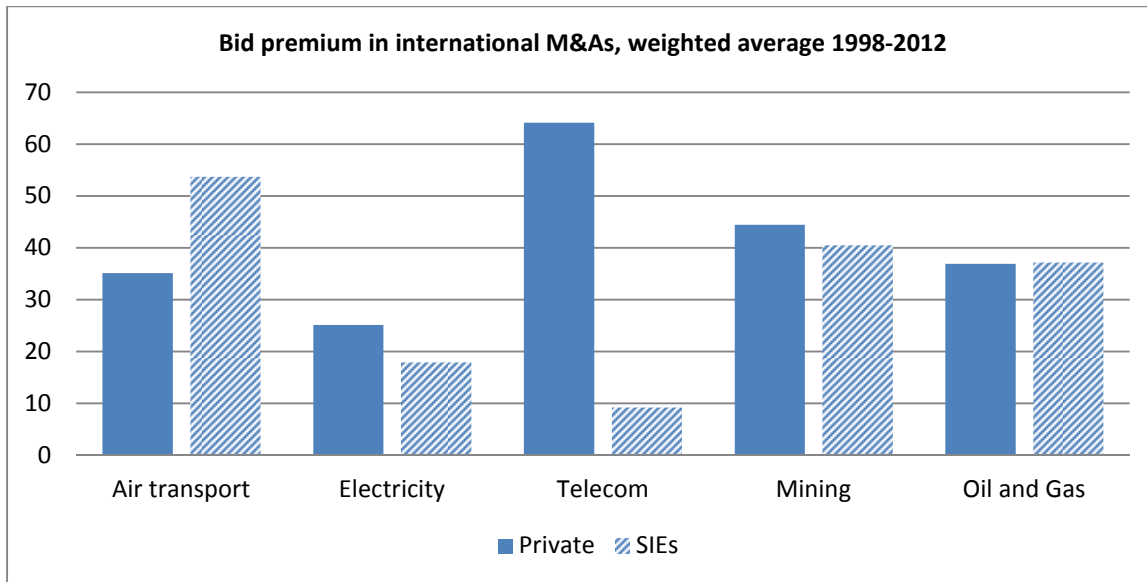
Finally, there is some information on premiums in the Dealogic database. This refers to the premium paid to the target's shareholders based on the closing share price of the target one month before the announcement date of the deal. The data are generally only available for listed companies, but it is worth comparing premiums across sectors and regions, as well as according to the type of deal. Such data are available for 3,378 of the transactions included in the dataset analysed in the present paper. Of these, 398 transactions were undertaken by SIEs.

Figure 7 provides the mean of the premium according to ownership (private versus state-invested enterprises) in international M&As in each sector. Averages have been weighted according to deal sizes. First of all, private investors pay broadly the same, or slightly higher, takeover premiums compared with SIEs. The only exception is the relatively insignificant (in terms of number of transactions) air transport sector. Conversely, in telecommunications the takeover premiums paid by private international investors is vastly above what is found in the state-invested sector. However, a closer examination of the data reveals that the private premium is strongly influenced by just two huge cross-border transactions by Vodafone at the beginning of the period.

This is an interesting observation. If SIEs had systematically benefited from concessionary finance – whether in general terms or specifically to fund international takeovers – there would be an expectation that they would overpay relative to private competitors. However, what figure 7 indicates that the case for a “subsidisation argument” is not compelling. Of course this finding may reflect the length of the period under review. It is not inconceivable that a more detailed analysis of the trend in premiums over time, with the regional composition of international M&A flows changing, would have yielded different results. However, given the percentage of

transactions for which Dealogic provides takeover premiums (generally between 5% and 10% per cent of all) such analysis is not supported by the available data.

**Figure 7. Premium in international takeovers by ownership and sector**



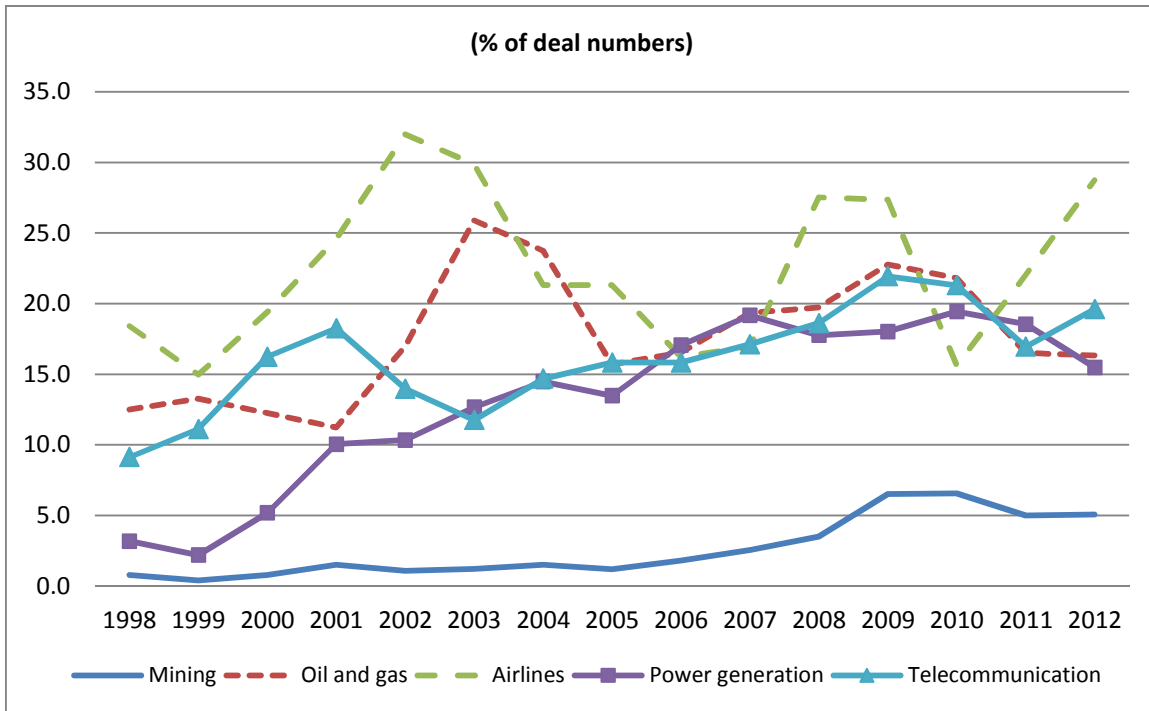
Source: Dealogic and OECD Secretariat

## 2. Analysis by sectors

The previous section indicates that in the world of M&As (at least in the five sectors under consideration) purely domestic transactions are vastly more important than international M&As. Moreover, in most sectors privately owned enterprises have been much more active investors than SIEs, and such international M&As as have been undertaken by SIEs have mostly targeted neighbouring countries rather than the wider global economy. It may seem tempting to conclude that, for these reasons, the concerns about SIE involvement in international investment are overblown. However, this is not a foregone conclusion: important additional questions relate to trends over time – which, if continued over coming decades, could radically change the picture – as well as the effects of the appearance of “newcomers” from emerging economies with large remaining SOE sectors in recent years. This section analyses in more depth the time trends as well as national and sectoral composition of M&A flows.

The shares of international M&As since 1998 in the five sectors that had an SIE as the investor are shown in Figure 8. The picture is somewhat mixed, but the trends are mostly upwards. With the exception of air transport (where, as mentioned earlier, there are comparatively few international M&As) the sectors under review have seen the share of SIEs rise since the beginning of the period. In power generation, telecommunication and mining, trends can be detected, whereas SIE share in the oil and gas sector rose sharply around year 2000, but has since then apparently found a plateau. In the mining sector the share of SIEs remains to date (just over 5% of all transactions) at a comparatively low level. However, as it started from almost zero in 1998 it must nevertheless be concluded that the trend has been significantly increasing.

**Figure 8. Share of international M&As with a state-invested acquirer**



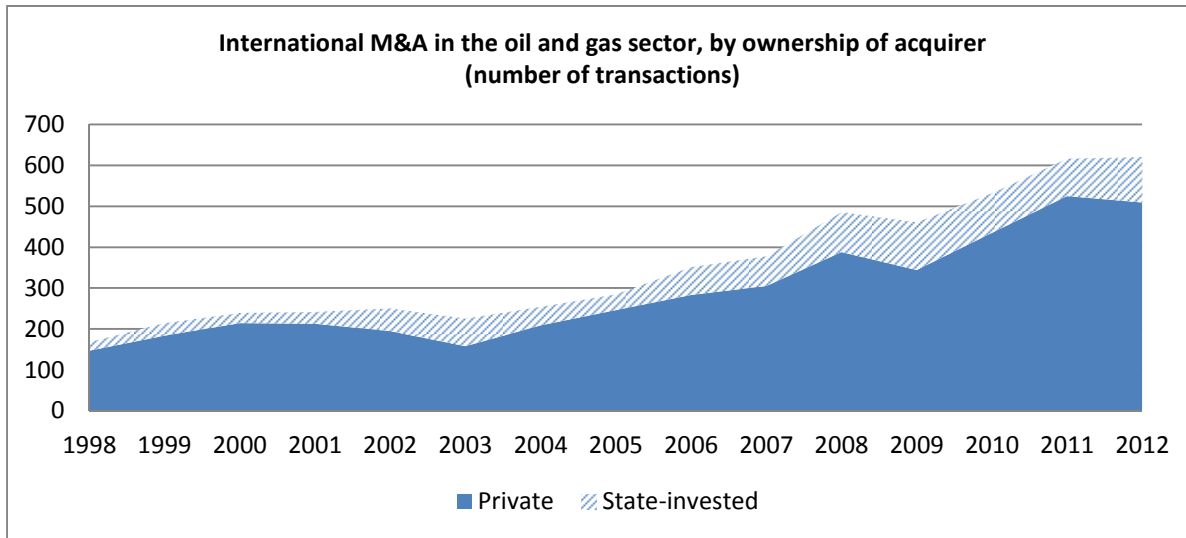
Source: Dealogic and OECD Secretariat

One reason why the relative importance of SIEs may have risen by more than Figure 8 indicates was proposed by OECD (2013b) which notes that the average deal size tends to be larger when SIEs are involved. The dataset prepared for the present study reproduces this finding for three of the five sectors (power generation; oil and gas; mining) where the deal size of SIEs' international M&As is generally twice the size of comparable private companies. However, this point should not be overstated: as mentioned earlier deal values are available for less than half of all transactions and the lack of information is particularly serious where SIEs are the investors. Possibly, the larger registered deal size may reflect a selection bias where SIEs systematically disclose deal values only where the target is a listed company or otherwise represents a particularly large investment.

**a) Oil and gas**

Figure 9 illustrates that the broadly unchanged share of SIEs in international M&As (around 20% of total) over the last ten years has taken place amid a sharply increasing number of transactions. A total 225 of international M&As in 2002 had by 2012 multiplied to 620. Of the latter, 111 transactions has a state-invested enterprise as the bidder.

Figure 9. International M&A in the oil and gas sector



Source: Dealogic and OECD Secretariat

As regards the direction and origins of these transactions, detailed data show that (for the period 1998-2012 as a whole) around 46% of the international M&As by SIEs was undertaken by companies domiciled in OECD countries. An additional 30% came from Asian (non-OECD) economies, and the rest was almost equally distributed among former USSR and other home countries. Again, this does not in itself provide support for concerns about a “takeover” by SIEs located outside the OECD area, although a couple of qualifications should be made. First, among the privately owned investors in the oil and gas sector, no less than 82% were domiciled in the OECD area. The relatively lower share of OECD countries in the SIE category must be taken to indicate that fewer oil and gas companies are state-invested within the OECD area than for example in Asia and the former USSR. Secondly, a much larger share of the OECD-based SIEs invested within their own geographic region. Almost 70% of the international investment originating with SIEs in the OECD area targeted assets located in another OECD country. In the case of Asia the corresponding share was 42%, with an additional 30% of the investment flowing to OECD economies.

During the period between 1998 and 2012 the change in regional composition of SIE-originated M&As has been relatively limited. In the early years Asian based SIEs accounted for a relatively low share of 10-20% of total international M&As in the sector, but they have since stabilised at around 30%. Conversely, the OECD countries’ SIEs came down from a very high share prior to 2002, but have since fluctuated around 40-50% of total outward investment. The former USSR and the “other” category each accounted for around 10-15% of the international investment by SIEs during the entire period.

The two largest international acquisitions by SIEs in the oil and gas sector were undertaken by OECD-based companies. The two-phased takeover of the British energy group International Power through GDF Suez of France was completed in 2012 (Table 10). According to market analysts at the time the deal, for which the acquirer was estimated to have paid a non-trivial premium, the logic behind the transaction was that it provided GDF Suez with greatly enhanced access to the Latin American and Asian markets. Other large transactions since 2008 included the purchase of the Belgian gas distributor Distrigaz through ENI of Italy. The purchase of

Canada's Progress Energy Resources by Petronas of Malaysia (which was ultimately approved though first resisted by Canadian investment regulators) was apparently motivated by a wish by the acquirer to secure access to natural gas resources.

**Table 10. Top-5 international M&As undertaken by SIEs in the oil and gas sector between 1998 and 2012 (by value)<sup>17</sup>**

Acquirer	Acquirer nationality	Target	Target nationality	Deal value (US\$ bn)	Date (announcement)
GDF-Suez	France	International Power plc (32%)	U.K.	11.1	March 2012
ENI Spa	Italy	Distrigaz	Belgium	7.4	March 2008
Petronas	Malaysia	Progress Energy Resources	Canada	5.7	June 2012
ENI Spa	Italy	LASMO plc	U.K.	5.0	December 2000
Statoil	Norway	Brigham Exploration	U.S.	4.7	October 2011

Source: Dealogic

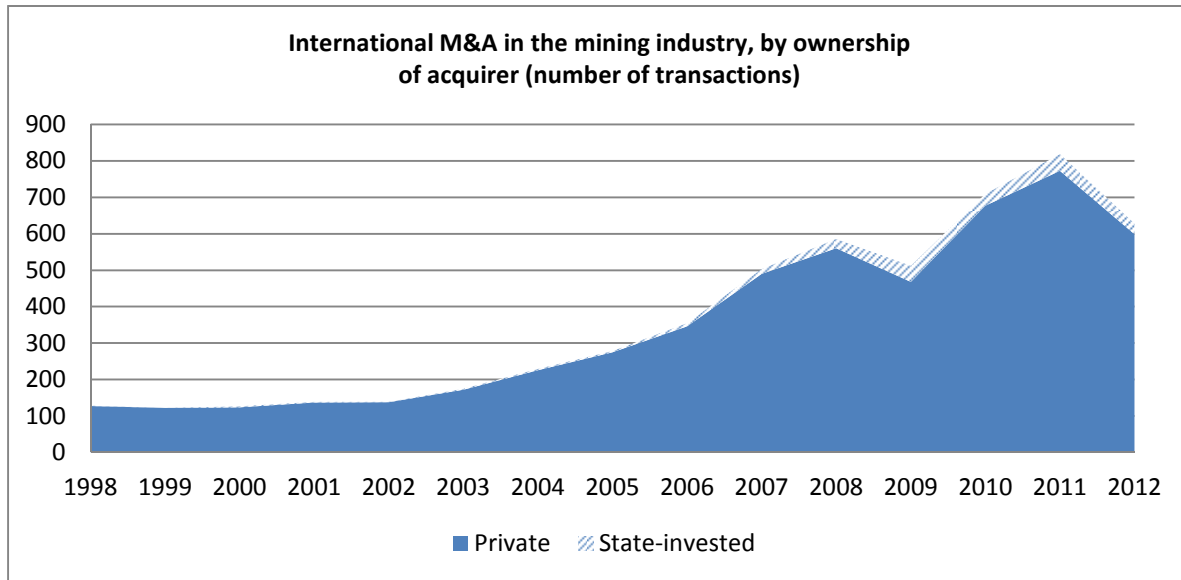
## **b) Mining**

Figure 10 illustrates the earlier point that international M&As in the mining sector has so far been almost totally dominated by private enterprises. In the period between 1998 and 2012, around 5,200 such (private) transactions were recorded, of which 2,071 had acquirers domiciled in Canada, 1,109 in Australia, 559 in the United States and 482 in the United Kingdom. During the same period there were 213 international M&As by SIEs. Of these, the vast majority came from China (including Hong Kong, China) which recorded 166 such transactions. In second place came Brazil with 35 SIE-engendered deals. In sum, the international transactions in this sector are largely accounted for by private sector enterprises domiciled in a handful of "Anglo-Saxon" economies. Such SIE involvement as there has occurred is accounted for by emerging economies that retain government ownership in their mining sectors.

It follows from the above that the relatively little international M&A activity that has been undertaken by SIEs has (measured by number of transactions) mostly originated in China and other Asian countries. It was virtually nil until around 2006, following which there was a pickup in takeover activity, which in recent years has accounted for between 25 and 40 transactions per year. Around two thirds of this is accounted for by Asian investment in OECD economies – chiefly those Anglo-Saxon economies (above) that have large mining sectors. Around one third of the transactions were undertaken among Asian economies. Independently of this, mining companies in "other" countries (mostly Brazil) have engaged in a steady – but, in terms of deal numbers, relatively low – stream of overseas investments throughout the period.

<sup>17</sup> Not including the acquisition by Gazprom OAO of 50% of the fellow Russian company Sakhalin Energy Investment from a group of international investors.

**Figure 10. International M&A in the mining sector**



Source: Dealogic and OECD Secretariat

Table 11 illustrates that by far the largest international M&A (according to Dealogic's valuation data) by an SIE during the period was the all-cash takeover of the Canadian nickel producer Inco by Brazil's Vale do Rio Doce. Other large transactions include the Chinese company's Yangzhou Coal's foray into the Australian coal mining sector (e.g. Felix Resource and Gloucester) – reportedly in order to gain access to this strategic resource. The investments by Yangzhou gave rise at the time to some regulatory concerns in Australia, but (as illustrated in Box 2) amid a subsequent weakening of coal prices the authorities' stance appears to have softened somewhat.

**Table 11. Top-5 international M&As undertaken by SIEs<sup>18</sup> in the mining sector between 1998 and 2012 (by value)**

Acquirer	Acquirer nationality	Target	Target nationality	Deal value (US\$ bn)	Date (announcement)
Vale do Rio Doce	Brazil	Inco Ltd.	Canada	18.7	August 2006
Yangzhou Coal	China	Felix Resources	Australia	2.8	August 2009
Yangzhou Coal	China	Gloucester Coal	Australia	2.5	December 2011
Vale do Rio Doce	Brazil	BSG Resources, Guinea (51%)	Guinea	2.5	April 2010
Jinchuan Group	China	Metorex Ltd.	South Africa	1.4	July 2011

Source: Dealogic

<sup>18</sup> Not including the acquisition by Gazprom OAO of 50% of the fellow Russian company Sakhalin Energy Investment from a group of international investors.

## **Box 2. The expanding presence of Yanzhou Coal in the Australian mining sector**

Yanzhou Coal, a Chinese SOE controlled at the regional level of government and the fourth-largest coal producer in China, has been present in the Australian economy since 2004. It operates through a locally incorporated subsidiary, Yancoal Australia. The company has grown rapidly in terms of market presence, employment and revenue through the ten years to 2013, acquiring six operating coal mines plus several development projects. Mostly, the expansion has taken place through the acquisition of existent Australian mining corporations. The largest two such acquisitions concerned the companies Felix Resources and Gloucester Coal, both of which stock-market listed prior to the takeovers.

The acquisition of Felix Resources in 2009 for A\$ 3.5 billion was at the time the biggest-ever Chinese takeover of an Australian company. The largely debt-financed transaction valued the target companies at a premium of around 23% above its market capitalization. Government regulators placed the condition for the deal that Yancoal must subsequently reduce its share in the company to “below 50%”. In other, smaller mining companies (e.g. Syntech Resources and Premier Coal) Yancoal was required to sell down to 70%.

At end-2011 Yancoal merged with Gloucester Coal. The combined company, retaining the name Yancoal Australia, became listed in the stock exchange in 2012 with the previous owners of Gloucester retaining 23% of the combined company. Yanzhou is estimated to have paid A\$ 2.1 billion for the deal, which values Gloucester shares at around 45% above their closing price. The bid premium was considered as high at the time of the deal, but attributed by market analysts to the fact that Gloucester, in addition to its coal assets, also disposed over strategically important port facilities. Australian regulators made the deal conditional on the Chinese parent company gradually reducing its ownership in Yancoal to less than 70%.

As of late 2013 the value of the combined company, mostly reflecting a steady decline in the international price of coal, had been reduced by almost half (from A\$ 1.3 billion at the time of the merger to around A\$ 0.7 billion). Moreover, the company's shares were traded well below book equity value – a fact attributed by equity analysts to concerns about an extraordinarily high debt-equity ratio.

In December 2013 the Australian Treasury eased certain of the foreign investment conditions that had been placed on the company. An option was put on the table to let Yancoal diverge, subject to prior Treasury approval, from the agreed reductions in ownership shares insofar as operating conditions are affected by changes in economic conditions and other factors. The Australian Treasurer informed the public that Yanzhou Coal had provided commitments to continue to support ongoing operations in Australia and maintaining its position as a major regional employer. He was cited as saying that “so long as Yanzhou continues to own at least 51% of the shares of Yancoal, Yanzhou will ensure Yancoal continues to operate so that it remains solvent”.

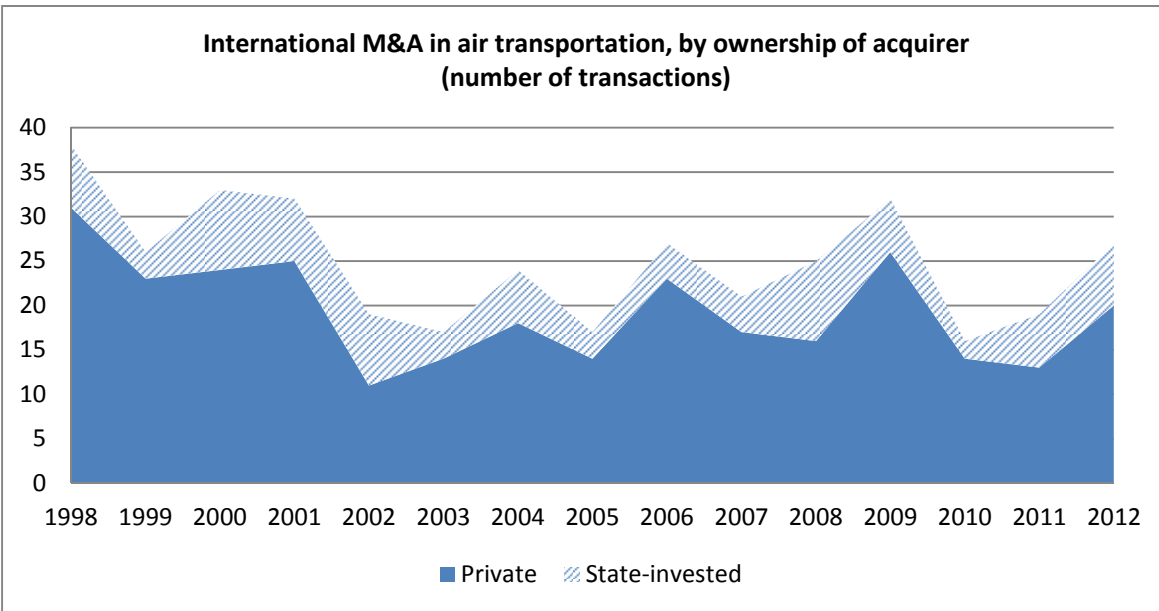
Sources: KPMG and various issues of Wall Street Journal and The Australian

An illustration of the recurrent allegation that state-owned mining companies may – whether for public policy reasons, or because of access to concessionary financing – are sometimes overpaying may arguably have been provided when the Chinese Jinchuan Group took the South African metal miner Metorex private in 2011. The agreed price of ZAR 8.90 per share was described by market analysts as very generous; the highest rival bid at the time was reportedly ZAR 7.35 per share.

### **c) *Air transport***

As already mentioned, air transport is the only one of the sectors under review where international M&As are relatively rare. This applies equally to private companies and SIEs, and reflects that fact that airlines tend to conduct international transactions through arms-length trade or via branches and small-size subsidiaries. Figure 11 shows that number of deals has generally fluctuated between 15 and 30 per year, 5-10 of which accounted for by SIEs. Such cross-border M&As as have taken place relate mostly to takeovers of ailing rivals and the acquisition of companies in related industries as part of vertical or horizontal diversification strategies.

**Figure 11. International M&A in the air transport sector**



Source: Dealogic and OECD Secretariat

In a limited sample of only 84 international M&As by SIEs it is possible to follow the investment patterns of individual companies. For example, almost half of all transactions were affected between OECD countries. This mainly reflects three factors: (1) the Air France/KLM merger and subsequent investments by the combined group; (2) takeovers of a number of small regional airlines by Scandinavian Airlines in the first half of the period; and (3) investments by Air New Zealand in Australia. Outside the OECD area there have been a number of international M&As by Chinese airlines, mainly within the Asian region, and by Singapore Airlines and companies located at the Persian Gulf in a mixture of OECD and non-OECD economies.

As shown by Table 12 the value of transactions in this sector (where the necessary data is available) tends to be smaller than what is seen elsewhere. To some extent this is due to the fact that many investments – reflecting international rules on the ownership of flag carriers – take the form of minority stakes, but it is also related to widespread recent troubles with profitability in this sector which has led to generally low market valuations. Considering the latter, it may be surprising that not more international consolidation has taken place, but a number of governments continue to perceive their national airlines as strategic assets and/or as the upholders of the national capitals as international air transport hubs. Where consolidations of loss-making airlines through a strategic outside investor have taken case (with the notable exception of Air France-KLM) the acquirer has usually been a private company. One example of the latter has been the German Lufthansa’s expansion on the European continent during the period under consideration.



**Table 12. Top-5 international M&As undertaken by SIEs in the air transport sector between 1998 and 2012 (by value)<sup>19</sup>**

Acquirer	Acquirer nationality	Target	Target nationality	Deal value (US\$ bn)	Date (announcement)
Air France SA	France	KLM Royal Dutch (89%)	Netherlands	5.0	September 2003
Singapore Airlines	Singapore	Virgin Atlantic (49%)	U.K.	1.0	December 1999
Air China	China	Cathay Pacific (12.5%)	Hong Kong, China	0.8	August 2009
Air France-KLM	France	Alitalia (25%)	Italy	0.4	January 2009
Air New Zealand	New Zealand	Ansett Australia (50%)	Australia	0.4	February 2000

Source: Dealogic

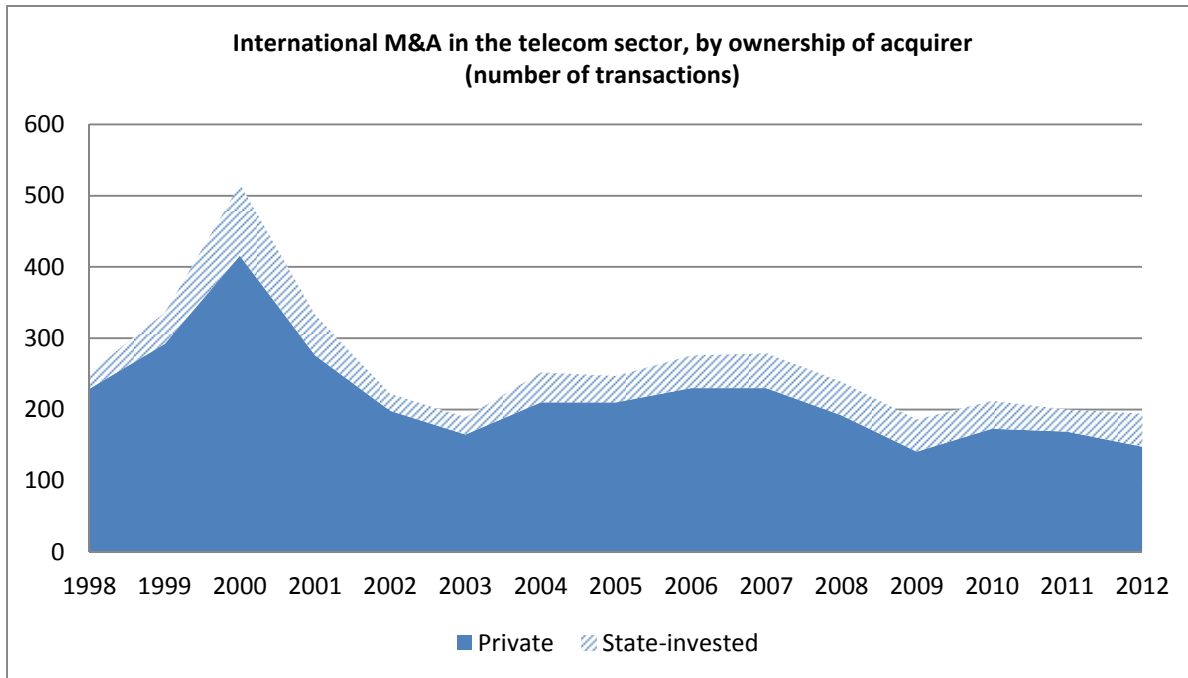
#### **d) Telecommunication**

International M&A activities in the telecommunications sector have been somewhat untypical in the sense that they peaked (both in terms of numbers as illustrated in Figure 12 and, apparently, in value terms) in the beginning of the period and have receded ever since. Of course this mostly reflects the takeovers and consolidation during the “dot-com bubble” leading up to year 2000. However, as far as SIEs are concerned a secondary reason may have been the ongoing effect of the liberalisation of the utilities sectors in a number of European economies, since many of the concerned economies had state-owned incumbents in the telecom sector. As noted earlier, the share of SIEs in total international M&As has increased somewhat toward the end of the period under review, so this is apparently one of the sectors where the role of the state is trending upwards. However, as indicated in a related context by OECD (2013b), this largely reflects an unchanged level of activity among the SIEs since the onset of the current financial crisis (they have constantly accounted for 40-50 international M&As per year) whereas takeovers by the private sector have receded amid the weakening economy. There is no indication of transaction size in state-controlled takeovers having being larger in the period since 1998, and indeed during the dot-com boom the record-hitting deals were mostly found within the private sector.

International M&As in telecommunications display a strong intra-regional bias, with most transactions taking place among countries that are either geographically close or at an equal level of economic development. Moreover, most activity has taken place within the OECD area. In every year since 1998 did SIEs based in the OECD area account for at least 70% of international SIE-engendered M&As – though it must be admitted that the share has declined somewhat during the period. Mostly this has reflected North European state-owned companies buying into the telecommunication sectors of either neighbouring or post-transition economies (plus, during the crisis, to some extent South European countries as well). The early period as well as the last few years moreover saw a number of foreign takeovers by Japan’s NTT. Outside the OECD area the SIEs active in international M&As have largely been located in eastern Asia and the Persian Gulf countries. The targets have, with a few exceptions, been located in the same two regions plus South Asia.

<sup>19</sup> Not including the acquisition by Gazprom OAO of 50% of the fellow Russian company Sakhalin Energy Investment from a group of international investors.

Figure 12. International M&A in the telecom sector



Source: Dealogic and OECD Secretariat

Reflecting the previous observations, all top-5 international M&As undertaken by SIEs since 1998 (in value terms) were found in large OECD economies: France, Germany and Japan (Table 13). By far the largest were the takeovers of Orange (of the U.K.) by France Telecom and VoiceStream Wireless (of the U.S.) by Deutsche Telekom. If any common trend can be derived by the table it may be that (1) most of the largest transactions took place during the dot-com bubble; and (2) the targets were mostly located in economies with widely dispersed share-ownership and a mostly relaxed regulatory approach to inward investment. The spirit of those days can perhaps be epitomised through the fact that, for example, France Télécom also bought stakes in several other international firms (GlobalOne, Equant, Internet Telecom, Freeserve, EresMas, NTL, Mobilcom) some of which have since been sold back.

**Table 13. Top-5 international M&As undertaken by SIEs in the telecom sector between 1998 and 2012 (by value)<sup>20</sup>**

Acquirer	Acquirer nationality	Target	Target nationality	Deal value (US\$ bn)	Date (announcement)
France Telecom	France	Orange plc	U.K.	46.3	May 2000
Deutsche Telekom	Germany	VoiceStream Wireless	U.S.	34.6	July 2000
Deutsche Telekom	Germany	One 2 One	U.K.	13.6	August-1999
France Telecom	France	Retevisión Movil (80%)	Spain	10.8	July 2005
Nippon Telegraph & Telephone	Japan	AT&T Wireless Group (16%)	U.S.	9.8	November 2000

Source: Dealogic

### e) **Electricity**

The growing share of SIEs in international M&As in the electricity (power generation and integrated producers) sector reflects an actual increase in the number of transactions (See figure 13). From virtually zero in the beginning of the period they have grown to around 40 deals per year. As was the case with the telecom sector, the bulk of these transactions originated with SIEs located within the OECD area (more than two thirds of total in all years). And, with the exception of a few takeovers of electricity producers located in the former USSR and other post-transition economies, the transactions largely targeted other OECD countries. The largest number of transactions took place among European countries and seemed to be connected to a cross-border consolidation of the sector – perhaps triggered by the increasingly integrated European energy markets.

Outside the OECD area there were signs of a similar cross-consolidation of electricity sectors within Latin America and the former USSR – with acquirers located in Colombia and Russia, respectively, in the driving seat. In the Asian continent international M&A activity has rather sedate. The most active players (both within the region and in OECD countries) have been power generators located in the Persian Gulf states, notably the U.A.E. Overall, in Asia, Latin America and the former USSR no particular trend – neither upward nor downward – can be detected in international M&As by SIEs over the last decade.

When addressing individual transactions during the period, two international M&As by SIEs stand out (Table 14). ENEL of Italy acquired 71% of Spanish Endesa for an estimated US\$ 52.6 billion in two staggered transactions in 2007 and 2009 – which, in combination with earlier investments, brought its ownership stake above 92%. This investment is illustrative of a couple of the issues that are commonly discussed in the context of SIE investment. First, ENEL achieved the takeover after a contest with E.On of Germany, which makes it a case of a state-invested enterprise outbidding a private one. Secondly, there were significant “national” concerns in Spain about the incumbent electricity provider being taken over by a foreign company, as well as political embarrassment when a rival bid by a Spanish utility company was turned down on anti-trust grounds. One of the factors contributing to ENEL’s success may have been the fact that it bid jointly with a Spanish company – which it subsequently bought out.

<sup>20</sup> Not including the acquisition by Gazprom OAO of 50% of the fellow Russian company Sakhalin Energy Investment from a group of international investors.

### **Box 3. The acquisition of British Energy by EDF**

In January 2009, completing what was one of the largest-ever cross-border takeovers in the energy sector, the state-owned French company Électricité de France (EDF) obtained 100% ownership of British Energy. British Energy was at the time the largest power generation company in the United Kingdom and the country's sole operator of nuclear power stations. The deal, valued at US\$ 23.1 billion, involved the sale of a large minority shareholding by the UK government as well as a number of smaller stakes by institutional and other investors. Following the transaction, The proceeds were reportedly 10% above the valuation estimates presented to the government by the UK Shareholder Executive. EDF subsequently sold a 20% stake in the company to the private British utilities group Centrica in a deal which also saw EDF acquire majority control of the Belgian electricity company SPE.

The background to the transaction was the following. British Energy had been state-owned until its privatisation through a stock market flotation in 1996. The Government obtained a financial interest in the business once again in 2005 after helping British Energy achieve a solvent restructuring, following a sustained deterioration in its financial position. The Government agreed to provide assistance because the Company was of national strategic importance. British Energy agreed to make annual payments to the Nuclear Liabilities Fund of 65 per cent of the Company's available free cash flow as a condition of the restructuring. The Nuclear Liabilities Fund, which is responsible for the future cost of decommissioning British Energy's existing fleet of nuclear power stations, was directed by the Government to exercise its right to convert part of this entitlement into shares in June 2007 when it reduced its interest from 65 per cent to 36 per cent in a sale to institutional investors, raising £2.3 billion.

The impetus for the sale came from British Energy, which wanted to play a part in new nuclear build but was unable to raise investment funds because of its financial record, the poor performance of some of its reactors, and its lack of experience of building new reactors. The board saw operating British Energy solely as a run-down agency for its eight existing nuclear power stations as commercially unsustainable. However, the Government would have barred British Energy from building new nuclear power stations as long as it retained an interest in the Company as the Government did not want to expose taxpayers to nuclear investment risk.

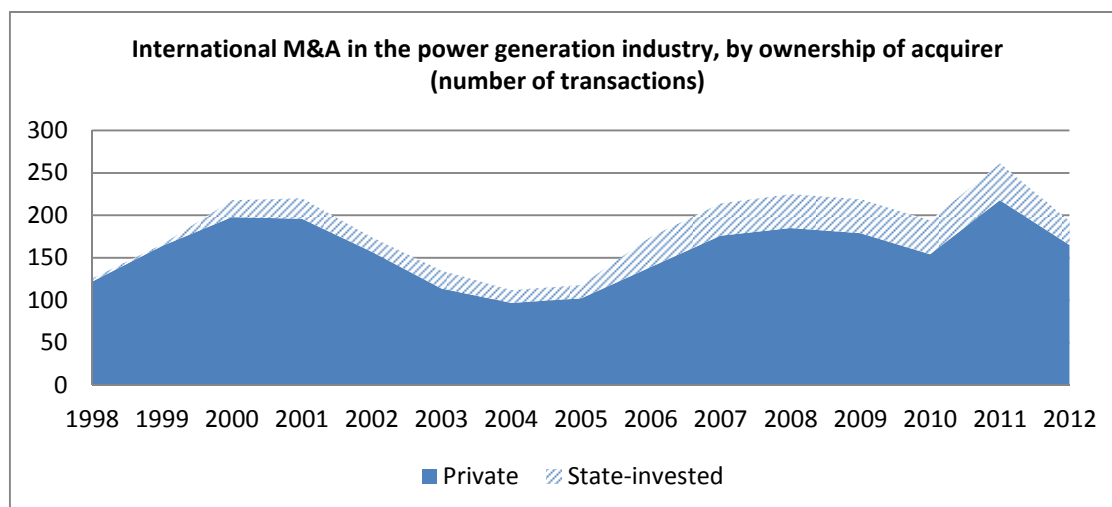
EDF declared at the time of the acquisition that it intends to build four nuclear reactors on the land acquired through its purchase of British Energy, and that it is aiming to build the reactors by 2025, with the first operational by 2017. The UK Government concluded on the basis of discussions with EDF that EDF had a credible programme to deliver the new reactors. It also publicly recognised that the construction of these new stations was not a foregone conclusion. It would depend on a range of factors, including future prices of fossil fuels, obtaining the requisite planning permits, and EDF's own evolving corporate strategies.

In October 2013 a deal was struck between the UK government, EDF and two Chinese partners - the state-owned China National Nuclear Corporation and China General Nuclear Power Corporation - to ensure the construction of the first nuclear power plant. As part of the agreement the UK government will allow the Chinese companies to act as investors (initially minority-stake owners) in British nuclear power stations in partnership with EDF. To ensure the profitability of the investment, EDF is guaranteed a wholesale electricity price for the first 35 years of operation which is twice the current rate. The public purse will subsidise the difference, the subsidy being justified as a means of converting the country's energy mix to low-carbon sources.

Source: UK National Audit Office and various press articles.

An equally illustrative transaction was the takeover by Electricité de France (EDF) of the likewise state-owned company British Energy for US\$ 23 billion in 2008. The deal surprised some at the time because it effectively implied the transfer of the entire UK nuclear energy generation to French government control. However, the transaction was apparently motivated largely by fiscal and commercial concerns, such as a lack of adequate technological knowhow and domestic public funding to finance a renovation and expansion of British Energy's generation capacity (Box 3).

**Figure 13. International M&A in the electricity sector**



Source: Dealogic and OECD Secretariat

Subsequent controversy arose when EDF brought on board two Chinese state-owned companies as minority partners in the project. Far from opposing this move, the UK government negotiated a minimum wholesale price on electricity with EDF to guarantee the future financial viability of the project. This could arguably serve as an illustration of a more wide-ranging issue: host country governments – whether in developing countries or mature economies – are often grateful for investment by foreign state-owned enterprises, especially when offered on concessionary terms. The “losers” (if any) tend to be competing private enterprises, and if no one such is domiciled in the host economy then the “level playing field” argument tends to receive little political attention.

**Table 14. Top-5 international M&As undertaken by SIEs in the power generation sector between 1998 and 2012 (by value)<sup>21</sup>**

Acquirer	Acquirer nationality	Target	Target nationality	Deal value (US\$ bn)	Date (announcement)
ENEL SpA;	Italy	Endesa (71%) <sup>22</sup>	Spain	52.6	2007/2009
Electricité de France	France	British Energy	U.K.	23.1	September 2008
Electricité de France	France	Edison SpA (30%)	Italy	6.4	December 2011
Abu Dhabi National Energy	U.A.E.	PrimeWest Energy	Canada	4.6	September 2007
Electricité de France	France	Constellation Energy Group (49.9%)	U.S.	4.5	December 2008

Source: Dealogic

<sup>21</sup> Not including the acquisition by Gazprom OAO of 50% of the fellow Russian company Sakhalin Energy Investment from a group of international investors.

<sup>22</sup> ENEL has gradually built up a stake of 92% of the voting shares of Endesa. The largest single transaction saw the acquirer buy 71% of the stock jointly with the Spanish Acciona (in 2007) and subsequently (in 2009) buy out its partner's shares.

## V. CONCLUSIONS AND MAIN FINDINGS

***A growing role for the state in the marketplace.*** State-owned and state-invested enterprises have become more prominent in the global economy over the last decade. This mostly reflects the growing importance of merging economies where the state continues to play a dominant role in the commercial economy – but it is also related to a continued ownership of sizeable minority stakes in listed enterprises in a number of OECD countries. The trend toward a growing role for SOEs is likely to continue in the short and medium-term future. Most medium-term projections foresee significantly higher growth rates in those economies that have many SOEs than the more mature economies, and while some of these have embarked on privatisation programmes the macroeconomic growth has generally outpaced the divestments.

***Adherence to best practices would defuse concerns – but most countries are “not there yet”.*** A growing role for state-invested enterprises in the marketplace is not in itself onerous. According to an OECD consensus, as expressed through the Organisation’s legal instruments, SOEs can be operated according to similarly high standards of governance, transparency and efficiency as private companies, in which case the ownership issue is moot. The fact that SOEs are commonly charged with pursuing certain non-commercial priorities needs not be a problem either, provided these priorities are disclosed and their costs compensated (without being overcompensated). However, it would appear that only some of the world’s most advanced economies, following decades of reform of their SOE sectors, have approached this point. Many other countries still have a long way to go, and in the interim their state-owned enterprises could be a source of economic inefficiencies and/or market distortions.

***Cross-border operations may compound the concerns.*** When SOEs operate across borders the challenges may multiply. For example, governments may decide to maintain companies that have significant monopolies in their domestic economy in State ownership purely on efficiency grounds. However, if they expand into the competitive economies of other countries the challenge of maintaining a “level playing field” can become extremely complex. Also, SOEs may be charged with non-commercial priorities that are in the interest of, and commonly accepted by, the general public in their home country – yet perceived as onerous in foreign jurisdictions.

***An overall commitment to competitive neutrality?*** One way of addressing these challenges proposed by OECD is a widespread commitment to a competitive neutrality framework for companies engaged in international commerce. Such a framework would ensure that no company, purely in consequence of its ownership, is at a competitive advantage or disadvantage in the marketplace. Some countries have implemented elements of this in their domestic legislation and regulation. A more widespread international understanding of the domestic and cross-border importance of maintaining a level playing field may be within reach. However, an broader multilateral, extra-territorially enforceable commitment to competitive neutrality still appears to be a remote prospect.

***Specific action aimed at levelling some aspects of the playing field.*** In the absence of a portmanteau undertaking towards competitive neutrality, some of the most frequently-cited departures from competitive neutrality might be addressed through targeted action. One such area might be the conditions on which SOEs obtain their funding and financing. Explicit or implicit government guarantees continue to allow many SOEs to operate with more leverage and obtain cheaper loans (including from purely commercial lenders) than private enterprises in like circumstances. Numerous investment and trade agreements also address the issue of state-

owned enterprises operating across borders, as do some recent changes in national investment regulation.

***There are some indications that state-invested firms enjoy competitive advantages.*** The empirical analysis presented in this paper indicates that, in addition to any financing advantages, large state-invested enterprises also seem to benefit from an unusually high degree of market dominance in their home countries. A comparative analysis of five sectors where state ownership is prevalent shows that, in the course of the last ten years, SIEs have generally enjoyed higher rates of return than comparable private companies. This may be partly related to the aforementioned easier access to financing, but the empirical evidence of this is inconclusive. Far more compelling evidence points to comparatively high profit margins and mark-ups in the state-controlled enterprises. Among anti-trust practitioners this is usually taken as an indication of a high degree of market concentration – perhaps in combination with other, unspecified advantages for the SIEs.

***SOEs are becoming more “international”, but not necessarily more “political”.*** The actual internationalisation of state-invested enterprises has continued apace, mostly because many of them are located in sectors where cross-border transactions are the commercial norm. However, contrary to what is sometimes alleged in public debate, with a few exceptions there is little evidence that state-owned enterprises have been actively encouraged to go abroad for “political” reasons. A certain rise in the share of SIEs in cross-border mergers and acquisitions has been seen over the last 1-2 decades, but in most sectors the SIEs are still dwarfed by private investors, and purely domestic transactions continue to outstrip international M&As by a wide margin.

***Contributing factors have been intra-EU consolidation and Asian outward investment.*** At the sectoral level, an increase in state-driven cross-border investment in some of the public utilities sectors is acknowledged, relating to a large extent to intra-OECD takeovers engendered by companies that are part-owned by the governments of European countries. One sector in which a growing SIE involvement is attributed to companies located in emerging economies is the mining industry. Here, SIEs have grown from almost an almost zero share prior to the 21<sup>st</sup> century – a development driven largely by Chinese and other Asian companies. True, at 5-6% of total international M&As the SIEs still have an internationally low share, with the bulk of transactions still attributed to private mining companies domiciled in a handful of Anglo-Saxon countries. However, if current trends continue in the future state-controlled mining companies operating from emerging economies are set to become an important international factor.

***Host countries have often welcomed the contribution from foreign state-owned investors.*** Based on evidence from some of the largest individual transactions it would appear that concerns about a level international playing field goes beyond the actions of SOE owners. In many cases the host country authorities have actively welcomed the inward investment by foreign SOEs, hailing them as a source of funding or knowhow that were not available locally. Again, insofar as the foreign SOEs are operating according to normal commercial criteria this is a win-win situation. However, if they enjoy unfair advantages then the losers will be the private competitors – a fact to which host country authorities may or may not be sensitive according to where the private competition is domiciled. In other words, the commitment to uphold basic principles of competitive neutrality on the part of host governments may in practice depend on whether there is a significant domestic production in the sector concerned.

***Given the lingering doubts a more structured international approach may be called for.*** Summing up, the growing role of state-invested enterprises in the international marketplace does not yet present a serious macroeconomic challenge. However, since it is likely to keep growing in

the coming decade, some challenges need to be addressed relatively soon. Mostly, these relate to the benefits that SIEs seem to derive from privileged access to finance and, often, a dominant position in their home markets. The evidence reviewed in the previous sections of advantages to state-invested has been mixed – but precisely because it is mixed a number of doubts and concerns linger. Going forward, this creates a strong case for enhanced policy coordination and information sharing.

***OECD is well placed to take the lead.*** The OECD could take the lead. If legally binding instruments cannot be developed in the near to medium-term to ensure competitive neutrality, a consultation mechanism could be established through which the main players in international trade and investment can regularly exchange views on matters of common concern related to the state in the marketplace. Through information gathering and the creation of an informal “contact point” such a mechanism could be instrumental in defusing disagreements and prevent the advent of state-invested enterprises from spurring a protectionist backlash. The ultimate purpose would be ensuring that the international trade and investment environment remains open, non-discriminatory and offering a level playing field.



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## ANNEX

**Table A1. Distribution of SIEs indicators in Forbes Global 2000 (for the selected 5 sectors)**

Forbes Rank	Company	Industry	Country	Market value (B\$)	Sales (B\$)	Pro-fits (B\$)	Ass-ets (B\$)	State investment? (1: yes; 0: no)		
								>10%	>25%	>50%
5	Exxon Mobil	Oil & Gas Operations	United States	400.4	420.7	44.9	334	0	0	0
7	Royal Dutch Shell	Oil & Gas Operations	Netherlands	213.1	467.2	26.6	360	0	0	0
10	PetroChina	Oil & Gas Operations	China	261.2	308.9	18.3	348	1	1	1
13	Chevron	Oil & Gas Operations	United States	232.5	222.6	26.2	233	0	0	0
17	Gazprom	Oil & Gas Operations	Russia	111.4	144	40.6	339	1	1	1
18	BP	Oil & Gas Operations	United Kingdom	130.4	370.9	11.6	301	0	0	0
20	Petrobras	Oil & Gas Operations	Brazil	120.7	144.1	11	332	1	1	1
23	Total	Oil & Gas Operations	France	115.5	240.5	14.1	224	0	0	0
24	AT&T	Telecommunications services	United States	200.1	127.4	7.3	272	0	0	0
26	Sinopec-China Petroleum	Oil & Gas Operations	China	106.9	411.7	10.1	200	1	1	1
29	China Mobile	Telecommunications services	Hong Kong, China	213.8	88.8	20.5	169	1	1	1
30	ENI	Oil & Gas Operations	Italy	86.3	163.7	10	185	1	1	0
33	Vodafone	Telecommunications services	United Kingdom	135.7	74.4	11.1	220	0	0	0
38	Statoil	Oil & Gas Operations	Norway	78.1	126.8	12.4	140	1	1	1
44	BHP Billiton	Diversified Metals & Mining	Australia	184.7	72.2	15.4	129	0	0	0
47	Nippon Telegraph & Tel	Telecommunications services	Japan	58.2	126.9	5.6	226	1	1	0
59	Rosneft	Oil & Gas Operations	Russia	73.2	68.8	11.2	126	1	1	1
63	Telefónica	Telecommunications services	Spain	67.1	82.3	5.2	162	0	0	0
64	Lukoil	Oil & Gas Operations	Russia	55.4	116.3	11	99	0	0	0
73	ConocoPhillips	Oil & Gas Operations	United States	72.1	58.4	8.4	117	0	0	0
74	EDF	Electric Utilities	France	35.3	95.9	4.4	325	1	1	1
95	GDF Suez	Electric Utilities	France	45	128	2	269	1	1	0
99	E.ON	Electric Utilities	Germany	32.5	174.2	2.9	185	0	0	0

Forbes Rank	Company	Industry	Country	Market value (B\$)	Sales (B\$)	Pro-fits (B\$)	Ass-ets (B\$)	State investment? (1: yes; 0: no)		
								>10%	>25%	>50%
100	América Móvil	Telecommunica-tions services	Mexico	70.7	60.2	7.1	74.6	0	0	0
111	Cnooc	Oil & Gas Operations	Hong Kong, China	84.3	39.2	10.1	73.2	1	1	1
114	Ecopetrol	Oil & Gas Operations	Colombia	116.2	39	8.4	64.4	1	1	1
115	China Shenhua Energy	Diversified Metals & Mining	China	70.8	39.7	7.7	70.2	1	1	1
121	Reliance Industries	Oil & Gas Operations	India	50.4	70.3	3.9	64.2	0	0	0
124	Iberdrola	Electric Utilities	Spain	33.6	45.1	3.7	122	0	0	0
130	Phillips 66	Oil & Gas Operations	United States	39.9	166.1	4.1	48.1	0	0	0
134	Verizon Communications	Telecommunica-tions services	United States	137.3	115.8	0.9	225	0	0	0
139	China Telecom	Telecommunica-tions services	China	42	44.9	2.4	87.4	1	1	1
141	Repsol YPF	Oil & Gas Operations	Spain	28.8	77.7	2.7	81.2	0	0	0
142	Suncor Energy	Oil & Gas Operations	Canada	47.3	38.8	2.8	76.8	0	0	0
144	PTT PCL	Oil & Gas Operations	Thailand	32.9	89.9	3.4	53.3	1	1	1
145	ENEL	Electric Utilities	Italy	32.2	111.9	1.1	226	1	1	0
148	Softbank	Telecommunica-tions services	Japan	47.2	38.7	3.8	58.3	0	0	0
151	Occidental Petroleum	Oil & Gas Operations	United States	67.4	24.3	4.6	64.2	0	0	0
155	Oil & Natural Gas	Oil & Gas Operations	India	50.5	28.9	5.5	52.1	1	1	1
157	Glencore International	Diversified Metals & Mining	Switzerland	41.7	214.4	1	106	0	0	0
159	TNK-BP Holding	Oil & Gas Operations	Russia	33	43.3	7.6	43.3	0	0	0
163	BG Group	Oil & Gas Operations	United Kingdom	60.6	19.3	4.6	64.4	0	0	0
169	France Telecom	Telecommunica-tions services	France	29.2	57.4	1.5	114	1	1	0
177	RWE Group	Electric Utilities	Germany	22.9	67	1.7	112	0	0	0
187	Surgutneftegas	Oil & Gas Operations	Russia	33.7	23.4	7.2	51.4	0	0	0
197	Valero Energy	Oil & Gas Operations	United States	24.4	139.2	2.1	44.5	0	0	0
198	Duke Energy	Electric Utilities	United States	49.3	19.6	1.8	114	0	0	0
199	KDDI	Telecommunica-tions services	Japan	29.1	43.2	2.9	47.4	0	0	0
200	Telstra	Telecommunica-tions services	Australia	58.4	25.8	3.5	40.5	0	0	0
202	Xstrata	Diversified Metals & Mining	Switzerland	52.1	32.3	1.2	83.1	0	0	0
214	JX Holdings	Oil & Gas Operations	Japan	14.4	129.5	2.1	80.7	0	0	0

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217	China Unicom	Telecommunica-tions services	Hong Kong, China	32.4	39.5	1.1	82.8	1	1	1
222	BT Group	Telecommunica-tions services	United Kingdom	32.5	30.9	3.2	37.3	0	0	0
225	Marathon Petroleum	Oil & Gas Operations	United States	29.1	76.5	3.4	27.2	0	0	0
229	Southern Co	Electric Utilities	United States	39.6	16.5	2.4	63.1	0	0	0
236	Hess	Oil & Gas Operations	United States	24.8	37.7	2	43.4	0	0	0
241	BCE	Telecommunica-tions services	Canada	35.6	20	2.8	41.2	0	0	0
255	Apache	Oil & Gas Operations	United States	29.6	17.1	2	60.7	0	0	0
259	Exelon	Electric Utilities	United States	28.5	23.5	1.2	78.6	0	0	0
267	Anadarko Petroleum	Oil & Gas Operations	United States	42.7	13.4	2.4	52.6	0	0	0
270	VimpelCom	Telecommunica-tions services	Norway(Neth-erlands)	19	23.1	2.1	55.4	1	0	0
273	Freeport-McMoRan Copper	Diversified Metals & Mining	United States	32.1	18	3	35.4	0	0	0
282	NextEra Energy	Electric Utilities	United States	31.6	14.3	1.9	64.4	0	0	0
286	TeliaSonera	Telecommunica-tions services	Sweden	31	16.1	3.1	38.1	1	1	0
288	Canadian Natural Resources	Oil & Gas Operations	Canada	36	14.7	1.9	49.2	0	0	0
289	Husky Energy	Oil & Gas Operations	Canada	29	22.5	2	35.3	0	0	0
295	SingTel	Telecommunica-tions services	Singapore	45.7	15	3.2	31.4	1	1	1
304	OMV Group	Oil & Gas Operations	Austria	14.7	56.3	1.8	39.8	1	1	0
326	Telenor	Telecommunica-tions services	Norway	34.1	18.3	1.7	29.6	1	1	1
339	American Electric	Electric Utilities	United States	23.3	14.9	1.3	54.4	0	0	0
342	Inpex	Oil & Gas Operations	Japan	20.6	14.3	2.3	36.9	0	0	0
346	MTN Group	Telecommunica-tions services	South Africa	34.5	16.5	2.5	21.4	0	0	0
348	Marathon Oil	Oil & Gas Operations	United States	24.8	15.6	1.6	35.3	0	0	0
350	Indian Oil	Oil & Gas Operations	India	14.2	70.8	0.8	43.2	1	1	1
359	Saudi Telecom	Telecommunica-tions services	Saudi Arabia	21.7	15.8	1.9	31.3	1	1	1
361	Delta Air Lines	Airline	United States	13.6	36.7	1	44.6	0	0	0
366	SK Innovation	Oil & Gas Operations	South Korea	13.7	65.1	1.1	31.8	0	0	0
369	CenturyLink	Telecommunica-tions services	United States	21.5	18.4	0.8	54	0	0	0

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376	EDP-Energias de Portugal	Electric Utilities	Portugal	11.5	21.6	1.3	55.2	1	1	0
377	Coal India	Diversified Metals & Mining	India	37.4	12.3	2.9	20.8	1	1	1
384	NTPC	Electric Utilities	India	22.3	12.8	1.9	30.5	1	1	1
385	Norilsk Nickel	Diversified Metals & Mining	Russia	32.9	12.8	3.3	18.8	0	0	0
389	PPL	Electric Utilities	United States	17.8	12.3	1.5	43.6	0	0	0
398	PG&E	Electric Utilities	United States	19.1	15	0.8	52.4	0	0	0
403	Deutsche Lufthansa	Airline	Germany	9.7	39.7	1.3	37.5	0	0	0
404	Huaneng Power International	Electric Utilities	China	14.9	21.1	0.9	41.2	1	1	1
405	SK Holdings	Oil & Gas Operations	South Korea	7	106.3	0.9	85.2	0	0	0
418	FirstEnergy	Electric Utilities	United States	17.6	15.3	0.8	50.4	0	0	0
427	Cenovus Energy	Oil & Gas Operations	Canada	24.4	16.9	1	24.3	0	0	0
429	CEZ Group	Electric Utilities	Czech Republic	15.7	11.3	2.2	33.4	1	1	1
432	Consolidated Edison	Electric Utilities	United States	17.3	12.2	1.1	41.2	0	0	0
433	Deutsche Telekom	Telecommunications services	Germany	48.4	76.7	-6.9	136	1	1	0
434	Swisscom	Telecommunications services	Switzerland	24	12.4	1.9	21.5	1	1	1
435	Rio Tinto	Diversified Metals & Mining	United Kingdom	98.5	51	-3	118	0	0	0
437	CLP Holdings	Electric Utilities	Hong Kong, China	21.7	13.5	1.1	29.4	0	0	0
440	Grupo Mexico	Diversified Metals & Mining	Mexico	32.3	10.4	2.4	18.4	0	0	0
448	Newmont Mining	Diversified Metals & Mining	United States	19.7	9.9	1.8	29.6	0	0	0
449	Rogers Communications	Telecommunications services	Canada	25.3	12.5	1.7	19.7	0	0	0
456	Bharti Airtel	Telecommunications services	India	21.8	14	0.8	29.8	1	1	0
473	China Coal Energy	Diversified Metals & Mining	China	12.2	13.6	1.5	29.5	1	1	1
475	EnBW-Energie Baden	Electric Utilities	Germany	10.8	24.7	0.6	48.5	0	0	0
480	Fortum	Electric Utilities	Finland	17.6	8.1	1.9	32.3	1	1	1
483	Woodside Petroleum	Oil & Gas Operations	Australia	31.9	6.4	3	23.9	0	0	0
484	Tatneft	Oil & Gas Operations	Russia	14.8	13	2.1	19.5	1	1	0
489	Public Service Enterprise	Electric Utilities	United States	16.8	9.8	1.3	31.7	0	0	0
494	Origin Energy	Electric Utilities	Australia	14.9	13.2	1	28.7	0	0	0

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496	Telus	Telecommunica-tions services	Canada	22.3	11	1.3	20.5	0	0	0
498	Etisalat	Telecommunica-tions services	United Arab Emirates	21.8	9	1.8	21.8	1	1	1
511	EOG Resources	Oil & Gas Operations	United States	35.4	11.7	0.6	27.3	0	0	0
513	Teck Resources	Diversified Metals & Mining	Canada	17.4	10.4	0.8	34.8	0	0	0
516	Tenaga Nasional	Electric Utilities	Malaysia	12.6	11.5	1.3	28.3	1	1	1
522	Anglo American	Diversified Metals & Mining	United Kingdom	39.9	29.4	-1.5	78.1	0	0	0
529	Saudi Electricity	Electric Utilities	Saudi Arabia	15.3	9	0.7	63.6	1	1	1
531	Murphy Oil	Oil & Gas Operations	United States	11.8	28.6	1	17.5	0	0	0
536	Vivendi	Telecommunica-tions services	France	27.8	38.3	0.2	76.6	0	0	0
539	SSE	Electric Utilities	United Kingdom	21.2	50.8	0.3	31.1	0	0	0
548	Korea Electric Power	Electric Utilities	South Korea	17.4	43.9	-2.8	129	1	1	1
550	KT Corp	Telecommunica-tions services	South Korea	8.1	21.1	0.9	32.4	0	0	0
553	Entergy	Electric Utilities	United States	11.6	10.3	0.9	43.2	0	0	0
555	SK Telecom	Telecommunica-tions services	South Korea	11.5	14.5	1	24.1	0	0	0
559	Goldcorp	Diversified Metals & Mining	Canada	26.4	5.4	1.7	31.2	0	0	0
560	Xcel Energy	Electric Utilities	United States	14.2	10.1	0.9	31.1	0	0	0
578	Novatek	Oil & Gas Operations	Russia	31.3	6.9	2.3	15.1	0	0	0
588	Telecom Italia	Telecommunica-tions services	Italy	15.2	37.9	-2.1	102	0	0	0
589	Dominion Resources	Electric Utilities	United States	32.7	13.1	0.3	46.8	0	0	0
597	Cemig	Electric Utilities	Brazil	10.7	9.5	2.2	19.4	1	1	1
609	Sprint Nextel	Telecommunica-tions services	United States	17.5	35.3	-4.3	51.6	0	0	0
618	Chunghwa Telecom	Telecommunica-tions services	Chinese Taipei	24.3	7.4	1.4	15.2	0	0	0
632	Virgin Media	Telecommunica-tions services	United States	12.5	6.7	4.6	17.1	0	0	0
639	Datang International Power	Electric Utilities	China	8.4	12.2	0.6	42.4	1	1	1
644	HollyFrontier	Oil & Gas Operations	United States	10.8	20.1	1.7	10.3	0	0	0
645	Galp Energia	Oil & Gas Operations	Portugal	13.1	24.4	0.5	18	0	0	0
647	Rostelecom	Telecommunica-tions services	Russia	11.3	10.4	1.1	17.7	1	1	0
649	Japan Airlines	Airline	Japan	8.7	14.6	2.3	13.2	0	0	0

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650	Jiangxi Copper	Diversified Metals & Mining	China	10.8	25	0.8	12.5	1	1	0
651	PKN Orlen	Oil & Gas Operations	Poland	7.4	38.8	0.8	16.9	1	1	0
657	China Resources Power	Electric Utilities	Hong Kong, China	12.4	8.1	1	22.9	1	1	1
658	Inter RAO	Electric Utilities	Russia	7.2	18.3	1.2	16.6	1	0	0
659	Barrick Gold	Diversified Metals & Mining	Canada	28.7	14.5	-0.7	47.3	0	0	0
660	MOL Hungarian Oil	Oil & Gas Operations	Hungary	7.5	24.6	0.7	21.6	1	1	0
669	Ooredoo Telecom	Telecommunications services	Qatar	10	9.3	0.8	25.9	1	1	0
674	Yanzhou Coal Mining	Diversified Metals & Mining	China	11.8	9.2	1	18	1	1	1
681	PGE	Electric Utilities	Poland	10.5	9.4	1	18.8	1	1	1
685	Idemitsu Kosan	Oil & Gas Operations	Japan	3.5	52.1	0.8	32.4	0	0	0
686	Telekom Indonesia	Telecommunications services	Indonesia	21.4	8	1.3	11.5	1	1	1
696	MegaFon	Telecommunications services	Russia	17.6	8.8	1.2	11.5	0	0	0
701	KPN	Telecommunications services	Netherlands	5.5	16.4	0.9	27.2	0	0	0
702	DTE Energy	Electric Utilities	United States	11.4	8.8	0.6	26.3	0	0	0
706	RusHydro	Electric Utilities	Russia	6.9	11.3	1	25.3	1	1	1
722	Chubu Electric Power	Electric Utilities	Japan	9	29.6	-1.1	65.8	0	0	0
736	United Continental Holdings	Airline	United States	10.3	37.2	-0.7	37.6	0	0	0
740	China Yangtze Power	Electric Utilities	China	19.4	3.3	1.2	25.2	1	1	1
745	Newcrest Mining	Diversified Metals & Mining	Australia	17.5	4.5	1.1	20.8	0	0	0
751	NRG Energy	Electric Utilities	United States	8.4	8.4	0.6	35.1	0	0	0
756	Antofagasta	Diversified Metals & Mining	United Kingdom	16.1	6.7	1	12.9	0	0	0
760	Kansai Electric Power	Electric Utilities	Japan	7	34	-2.9	86.7	0	0	0
762	S-Oil	Oil & Gas Operations	South Korea	9.4	30.8	0.5	11.7	0	0	0
763	Northeast Utilities	Electric Utilities	United States	13.4	6.3	0.5	28.3	0	0	0
764	Formosa Petrochemical	Oil & Gas Operations	Chinese Taipei	26.5	30.2	0.1	15.4	0	0	0
766	Tesoro	Oil & Gas Operations	United States	7.8	33	0.7	10.7	0	0	0
768	Devon Energy	Oil & Gas Operations	United States	23.6	9.5	-0.2	43.3	0	0	0
771	Southwest Airlines	Airline	United States	9	17.1	0.4	18.6	0	0	0



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772	Edison International	Electric Utilities	United States	16.6	11.9	-0.1	44.4	0	0	0
782	Chesapeake Energy	Oil & Gas Operations	United States	15	12.3	-0.8	41.6	0	0	0
785	KGHM Polska Miedz	Diversified Metals & Mining	Poland	10.7	8.7	1.6	10.7	1	1	0
786	Pgnig Group	Oil & Gas Operations	Poland	11	8.8	0.7	15.5	1	1	1
790	Sistema	Telecommunications services	Russia	8.1	30	0.2	43.7	0	0	0
791	Noble Energy	Oil & Gas Operations	United States	20.8	4.2	1	17.6	0	0	0
793	Mobily	Telecommunications services	Saudi Arabia	16.3	6.3	1.6	10.3	1	1	0
797	IDGC Holding	Electric Utilities	Russia	2.6	19.7	0.7	27.3	1	1	1
799	GD Power Development	Electric Utilities	China	8	8	0.6	29.2	1	1	1
802	Turk Telekom	Telecommunications services	Turkey	15	7.1	1.5	9.5	1	1	0
806	AES	Electric Utilities	United States	9.3	18.1	-0.9	41.8	0	0	0
814	All Nippon Airways	Airline	Japan	7.8	17.1	0.3	23.5	0	0	0
819	Oi	Telecommunications services	Brazil	6.1	12.3	0.4	38	0	0	0
821	Federal Grid of UES	Electric Utilities	Russia	7.2	4.3	1.5	36.2	1	1	1
822	Sumitomo Metal Mining	Diversified Metals & Mining	Japan	8	10.2	0.8	13.9	0	0	0
837	CPFL Energia	Electric Utilities	Brazil	10.4	7.7	0.6	15.2	0	0	0
839	Tokyo Electric Power	Electric Utilities	Japan	3.6	64.6	-9.4	189	0	0	0
843	Turkcell	Telecommunications services	Turkey	14.8	5.9	1.2	10.5	0	0	0
859	China Southern Airlines	Airline	China	5.8	15.7	0.4	22.9	1	1	1
868	China Eastern Airlines	Airline	China	5.7	13.5	0.5	19.4	1	1	1
871	Power Assets Holdings	Electric Utilities	Hong Kong, China	19.5	1.3	1.3	13.1	0	0	0
880	Zijin Mining Group	Diversified Metals & Mining	China	10.8	7.6	0.8	10.8	0	0	0
887	Belgacom	Telecommunications services	Belgium	8.9	8.5	0.9	10.7	1	1	1
912	International Airlines	Airline	United Kingdom	7.6	23.9	-1.2	25.6	0	0	0
925	Industrias Peñoles	Diversified Metals & Mining	Mexico	17.4	7.4	0.8	6.4	0	0	0
935	Eletróbrás	Electric Utilities	Brazil	5	17.5	-3.5	84.1	1	1	1
936	AngloGold Ashanti	Diversified Metals & Mining	South Africa	9.5	6.1	0.8	12.6	0	0	0
959	Ryanair Holdings	Airline	Ireland	10.7	5.8	0.7	12	0	0	0

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964	Advanced Info Service	Telecommunica-tions services	Thailand	23.2	4.6	1.1	3.1	0	0	0
972	Singapore Airlines	Airline	Singapore	10	11.8	0.3	17.5	1	1	1
1007	Latam Airlines	Airline	Chile	11.1	9.7	0	20.6	0	0	0
1014	Santos	Oil & Gas Operations	Australia	13.1	3.4	0.5	17.7	0	0	0
1031	Tohoku Electric Power	Electric Utilities	Japan	3.6	20.4	-2.8	48.9	0	0	0
1035	Air France-KLM	Airline	France	3.1	33.8	-1.6	34.7	1	0	0
1043	Talisman Energy	Oil & Gas Operations	Canada	12.7	7.3	0.1	21.9	0	0	0
1045	Kyushu Electric Power	Electric Utilities	Japan	4.3	18.2	-2	51.6	0	0	0
1054	Zain	Telecommunica-tions services	Kuwait	10.8	4.6	0.9	10.4	1	1	0
1056	Power Grid of India	Electric Utilities	India	9.3	2	0.6	18.2	1	1	1
1060	PLDT	Telecommunica-tions services	Philippines	15.1	4	0.9	9.9	0	0	0
1064	KazMunaiGas Exploration	Oil & Gas Operations	Kazakhstan	7.9	5.3	1.1	10.4	1	1	1
1076	Vedanta Resources	Diversified Metals & Mining	United Kingdom	4.7	14	0.1	45.4	0	0	0
1082	Cathay Pacific Airways	Airline	Hong Kong, China	7.1	12.6	0.1	20.5	1	1	1
1105	Terna	Electric Utilities	Italy	8.3	2.3	0.6	18.6	1	1	0
1109	Continental Resources	Oil & Gas Operations	United States	17.2	2.6	0.7	9.1	0	0	0
1112	Bharat Petroleum	Oil & Gas Operations	India	5.4	36.7	0.2	15.3	1	1	1
1113	CMS Energy	Electric Utilities	United States	7.3	6.3	0.4	17.1	0	0	0
1122	Wisconsin Energy	Electric Utilities	United States	9.5	4.2	0.5	14.3	0	0	0
1130	Canadian Oil Sands	Oil & Gas Operations	Canada	10.2	3.7	1	10.2	0	0	0
1134	Tullow Oil	Oil & Gas Operations	United Kingdom	17.2	2.4	0.6	9.4	0	0	0
1140	Cosmo Oil	Oil & Gas Operations	Japan	1.8	37.6	-0.1	20	0	0	0
1141	AMR	Airline	United States	1.3	24.9	-1.9	23.5	0	0	0
1149	Chugoku Electric Power	Electric Utilities	Japan	4.4	14.3	0	34.2	0	0	0
1159	First Quantum Minerals	Diversified Metals & Mining	Canada	10.2	3	1.8	7.5	0	0	0
1166	EnCana	Oil & Gas Operations	Canada	15	5.2	-2.8	18.7	0	0	0
1168	Alrosa	Diversified Metals & Mining	Russia	7.7	4.7	0.9	10	1	1	1
1174	NMDC	Diversified Metals & Mining	India	10.6	2.2	1.4	6.9	1	1	1

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1178	US Airways Group	Airline	United States	2.6	13.8	0.6	9.4	0	0	0
1181	Inner Mongolia Yitai	Diversified Metals & Mining	China	8.7	5	1	6.4	1	1	1
1192	Fresnillo	Diversified Metals & Mining	Mexico	16.1	2.2	0.7	3.3	0	0	0
1195	Ameren	Electric Utilities	United States	8.3	6.8	-1	21.8	0	0	0
1201	Portugal Telecom	Telecommunications services	Portugal	4.7	8.5	0.3	26.5	0	0	0
1203	GS Holdings	Oil & Gas Operations	South Korea	5.4	8.7	0.4	12	0	0	0
1210	Turkish Airlines	Airline	Turkey	4.8	8.3	0.6	10.5	1	1	0
1217	Hindustan Petroleum	Oil & Gas Operations	India	1.9	32.6	0	16.8	1	1	1
1230	Verbund	Electric Utilities	Austria	7.4	4.1	0.5	16.3	1	1	1
1242	AGL Energy	Electric Utilities	Australia	9.5	7.6	0.1	14.5	0	0	0
1243	Mitsubishi Materials	Diversified Metals & Mining	Japan	3.8	17.4	0.1	21.1	0	0	0
1254	Qantas Airways	Airline	Australia	4.1	16.1	-0.3	21.7	0	0	0
1256	Orica	Diversified Metals & Mining	Australia	9.6	6.9	0.4	7.7	0	0	0
1260	Maxis	Telecommunications services	Malaysia	15.6	2.9	0.6	5.8	0	0	0
1272	Consol Energy	Diversified Metals & Mining	United States	7.7	5.4	0.4	12.7	0	0	0
1279	Yamana Gold	Diversified Metals & Mining	Canada	11	2.3	0.4	11.8	0	0	0
1288	Huadian Power International	Electric Utilities	China	4.8	9.4	0.2	26.4	1	1	0
1293	Polyus Gold International	Diversified Metals & Mining	United Kingdom	9.8	2.8	0.9	5.6	0	0	0
1295	Red Eléctrica	Electric Utilities	Spain	7.5	2.3	0.6	12	1	0	0
1297	Showa Shell Sekiyu	Oil & Gas Operations	Japan	2.6	30.3	0	14	0	0	0
1308	Manila Electric	Electric Utilities	Philippines	9.2	6.8	0.4	5.3	0	0	0
1311	Crown Castle International	Telecommunications services	United States	20.5	2.4	0.2	16.1	0	0	0
1313	TDC	Telecommunications services	Denmark	6.4	4.6	0.6	11.2	0	0	0
1318	Essar Energy	Oil & Gas Operations	United Kingdom	2.9	16.7	-0.6	17.4	0	0	0
1319	Tele2	Telecommunications services	Sweden	7.4	6.7	0.5	6.9	0	0	0
1320	Aurubis	Diversified Metals & Mining	Germany	3.1	17.7	0.5	6.3	0	0	0
1331	Oil & Gas Development	Oil & Gas Operations	Pakistan	8.7	1.8	1	3.6	1	1	1
1341	Umicore	Diversified Metals & Mining	Belgium	5.9	16.6	0.3	4.7	0	0	0
1350	Eurasian Natural Resources	Diversified Metals & Mining	United Kingdom	6.8	6.3	-0.8	20.2	0	0	0

Forbes Rank	Company	Industry	Country	Market value (B\$)	Sales (B\$)	Pro-fits (B\$)	Ass-ets (B\$)	State investment? (1: yes; 0: no)		
								>10%	>25%	>50%
1357	Calpine	Electric Utilities	United States	9.2	5.5	0.2	16.5	0	0	0
1368	Thai Oil	Oil & Gas Operations	Thailand	4.7	14.6	0.4	5.6	1	1	0
1373	Korean Air	Airline	South Korea	2.6	11.3	0.2	21.6	0	0	0
1385	Inner Mongolia Rare-Earth	Diversified Metals & Mining	China	11.8	1.8	0.6	2.2	1	1	1
1394	Silver Wheaton	Diversified Metals & Mining	Canada	10.8	0.8	0.6	3.2	0	0	0
1395	Scana	Electric Utilities	United States	6.6	4.2	0.4	14.6	0	0	0
1399	A2A	Electric Utilities	Italy	1.9	8.1	0.3	15.8	1	1	1
1400	Caltex Australia	Oil & Gas Operations	Australia	6.2	24.2	0.1	5	0	0	0
1401	TAQA	Electric Utilities	United Arab Emirates	2.2	7.5	0.2	33.3	1	1	1
1405	Millicom International	Telecommunications services	Luxembourg	8.2	4.9	0.5	7.9	0	0	0
1406	Peabody Energy	Diversified Metals & Mining	United States	5.9	8.1	-0.6	15.8	0	0	0
1407	Taiwan Mobile	Telecommunications services	Chinese Taipei	12	3.4	0.5	3.2	0	0	0
1408	Alpiq Holding	Electric Utilities	France	3.3	13.6	-1.1	16.2	1	0	0
1412	Hellenic Telecom	Telecommunications services	Greece	3.7	6.2	0.6	10.7	1	0	0
1429	Exxaro Resources	Diversified Metals & Mining	South Africa	6.4	1.5	1.2	4.9	0	0	0
1432	Impala Platinum Holdings	Diversified Metals & Mining	South Africa	9.3	3.4	0.5	8.9	0	0	0
1435	Gold Fields	Diversified Metals & Mining	South Africa	5.9	3.4	0.7	11.2	0	0	0
1437	Denbury Resources	Oil & Gas Operations	United States	7	2.5	0.5	11.1	0	0	0
1439	Pioneer Natural Resources	Oil & Gas Operations	United States	17.3	3.2	0.2	13.1	0	0	0
1446	Yang Quan Coal Industry	Diversified Metals & Mining	China	5.4	8	0.4	4.4	1	1	1
1475	Electric Power Development	Electric Utilities	Japan	3.8	7.9	0.2	23.9	0	0	0
1480	Fortis (Canada)	Electric Utilities	Canada	6.9	3.8	0.4	15	0	0	0
1481	Tauron Group	Electric Utilities	Poland	2.5	7.6	0.5	10.1	1	1	0
1490	Concho Resources	Oil & Gas Operations	United States	10.1	1.8	0.4	8.6	0	0	0
1496	Petronas Dagangan	Oil & Gas Operations	Malaysia	7.4	9.6	0.3	3.2	1	1	1
1518	EasyJet	Airline	United Kingdom	6.4	6.2	0.4	6.9	0	0	0
1524	Neste Oil	Oil & Gas Operations	Finland	3.8	23.7	0.2	9.7	1	1	1
1530	Public Power	Electric Utilities	Greece	2	7.7	0	21.2	1	1	1
1532	Crescent Point Energy	Oil & Gas Operations	Canada	14.4	2	0.2	12.2	0	0	0

Forbes Rank	Company	Industry	Country	Market value (B\$)	Sales (B\$)	Pro-fits (B\$)	Ass-ets (B\$)	State investment? (1: yes; 0: no)		
								>10%	>25%	>50%
1546	Saudi Arabian Mining	Diversified Metals & Mining	Saudi Arabia	8.1	1.5	0.3	14.7	1	1	1
1551	Kinross Gold	Diversified Metals & Mining	Canada	9.1	4.3	-2.5	14.9	0	0	0
1553	China Communications Services	Telecommunica-tions services	China	4.7	9.8	0.4	7.2	1	1	1
1560	Hokkaido Electric Power	Electric Utilities	Japan	1.7	7.7	-0.9	19.6	0	0	0
1565	Pinnacle West	Electric Utilities	United States	6.3	3.3	0.4	13.4	0	0	0
1586	Hyosung	Diversified Metals & Mining	South Korea	1.6	11.2	0.1	12.9	0	0	0
1588	Plains Exploration	Oil & Gas Operations	United States	6.1	2.6	0.3	17.3	0	0	0
1595	CVR Energy	Oil & Gas Operations	United States	4.8	8.6	0.4	3.6	0	0	0
1601	Buenaventura	Diversified Metals & Mining	Peru	6.3	1.5	0.7	4.5	0	0	0
1609	Atco	Electric Utilities	Canada	5	4.4	0.4	14.4	0	0	0
1614	Shandong Gold-Mining	Diversified Metals & Mining	China	7.6	6.3	0.3	2	1	1	1
1617	Western Refining	Oil & Gas Operations	United States	3.1	9.5	0.4	2.5	0	0	0
1620	NHPC	Electric Utilities	India	4.6	1.4	0.6	11.8	1	1	1
1632	Jizhong Energy Resources	Diversified Metals & Mining	China	4.9	6	0.5	6	1	1	1
1638	Oil India	Oil & Gas Operations	India	6.1	1.9	0.7	4.5	1	1	1
1641	Pacific Rubiales Energy	Oil & Gas Operations	Canada	7.1	3.9	0.5	7.1	0	0	0
1648	Boliden	Diversified Metals & Mining	Sweden	4.6	6.2	0.5	6.1	0	0	0
1660	Korea Zinc	Diversified Metals & Mining	South Korea	5.7	4.9	0.5	4.6	0	0	0
1673	Pepco Holdings	Electric Utilities	United States	4.8	5.1	0.3	15.8	0	0	0
1688	Hellenic Petroleum	Oil & Gas Operations	Greece	3.3	13.8	0.1	9.7	1	1	0
1696	Shikoku Electric Power	Electric Utilities	Japan	2.3	7.2	-0.1	16.3	0	0	0
1702	Windstream	Telecommunica-tions services	United States	5.2	6.2	0.2	14	0	0	0
1705	Randgold Resources	Diversified Metals & Mining	Channel Islands	7.7	1.3	0.4	3.1	0	0	0
1718	PBF Energy	Oil & Gas Operations	United States	3.8	20.1	0	4.3	0	0	0
1727	Hanwa	Diversified Metals & Mining	Japan	0.8	18.9	0.1	7.1	0	0	0
1759	OGE Energy	Electric Utilities	United States	6.7	3.7	0.4	9.9	0	0	0
1787	Emirates Integrated Telecom	Telecommunica-tions services	United Arab Emirates	5.8	2.7	0.5	3.8	1	1	0

Forbes Rank	Company	Industry	Country	Market value (B\$)	Sales (B\$)	Pro-fits (B\$)	Ass-ets (B\$)	State investment? (1: yes; 0: no)		
								>10%	>25%	>50%
1794	Saras	Oil & Gas Operations	Italy	1.1	15.7	-0.1	5.2	0	0	0
1803	Air Canada	Airline	Canada	0.7	12.2	0.1	9.1	0	0	0
1808	Level 3 Communications	Telecommunica-tions services	United States	4.6	6.4	-0.4	13.3	0	0	0
1809	Hokuriku Electric Power	Electric Utilities	Japan	2.4	6	-0.1	16.4	0	0	0
1810	LG Uplus	Telecommunica-tions services	South Korea	3.5	10.2	-0.1	9.9	0	0	0
1820	Telecom of New Zealand	Telecommunica-tions services	New Zealand	3.4	3.5	0.9	2.9	0	0	0
1826	Grupa Lotos	Oil & Gas Operations	Poland	1.8	10.2	0.3	6.5	1	1	1
1833	Hainan Airlines	Airline	China	4.5	4.4	0.3	14.9	1	1	0
1834	China Hongqiao Group	Diversified Metals & Mining	China	3	3.9	0.9	7.1	0	0	0
1836	Total Access Communication	Telecommunica-tions services	Thailand	7.7	2.9	0.4	3.3	0	0	0
1848	Alpha Natural Resources	Diversified Metals & Mining	United States	1.9	7	-2.4	13.1	0	0	0
1849	Zhongjin Gold	Diversified Metals & Mining	China	6.9	5.3	0.3	3	1	1	1
1855	Far EasTone Telecom	Telecommunica-tions services	Chinese Taipei	7.6	3	0.4	3.4	0	0	0
1864	Shanxi Lu'an Environmental	Diversified Metals & Mining	China	6.7	3.1	0.4	6.4	1	1	1
1869	Cabot Oil & Gas	Oil & Gas Operations	United States	14.1	1.2	0.1	4.6	0	0	0
1891	Southwestern Energy	Oil & Gas Operations	United States	13.5	2.7	-0.7	6.7	0	0	0
1902	Dragon Oil	Oil & Gas Operations	United Arab Emirates	4.8	1.2	0.6	3.8	1	1	1
1903	Nippon Steel Trading	Diversified Metals & Mining	Japan	0.4	13.1	0.1	4	0	0	0
1904	Range Resources	Oil & Gas Operations	United States	13.4	1.5	0	6.7	0	0	0
1920	Motor Oil	Oil & Gas Operations	Greece	1.2	12.8	0.1	3.4	0	0	0
1923	Frontier Communications	Telecommunica-tions services	United States	4.1	5	0.1	17.7	0	0	0
1933	Alliant Energy	Electric Utilities	United States	5.4	3.1	0.3	10.8	0	0	0
1944	Tongling Nonferrous Metals	Diversified Metals & Mining	China	3.9	12.2	0.1	5.9	1	1	1
1949	Assore	Diversified Metals & Mining	South Africa	5.2	1.6	0.5	2.1	0	0	0
1951	Whiting Petroleum	Oil & Gas Operations	United States	6.1	2.2	0.4	7.3	0	0	0
1961	Telekom Malaysia	Telecommunica-tions services	Malaysia	6.1	3.2	0.4	7.3	1	1	1
1970	EQT	Oil & Gas Operations	United States	10	1.6	0.2	8.8	0	0	0

Forbes Rank	Company	Industry	Country	Market value (B\$)	Sales (B\$)	Pro-fits (B\$)	Ass-ets (B\$)	State investment? (1: yes; 0: no)		
								>10%	>25%	>50%
1974	Aeroflot-Russian Airlines	Airline	Russia	1.9	4.9	0.5	5.2	1	1	1
1984	Reliance Infrastructure	Electric Utilities	India	2	4.7	0.3	12.1	0	0	0
1985	Cimarex Energy	Oil & Gas Operations	United States	6.8	1.6	0.4	6.3	0	0	0
1996	San-Ai Oil	Oil & Gas Operations	Japan	0.4	11.2	0.1	2.6	0	0	0
1998	Interconexion Electrica	Electric Utilities	Colombia	5.8	2.4	0.2	14.6	1	1	1

Source: OECD Secretariat based on ThomsonOne, Wikipedia and company announcement in 2012

**Table A2. The descriptive statistics information**

Variable	Observations	Mean	Std. Dev.	Min	Max
ADDED_VALUE	1398	3,623,976	5,707,961	-7,937,188	38,200,000
CASH_FLOW	2849	2,117,024	-4,045,164	21,500,000	40,700,000
COST_GOODS	2689	7,371,756	16,800,000	6.6	212,000,000
COSTS_EMPLOYEES	1432	1,124,498	2,094,819	-634,993	16,100,000
CURRENT_ASSETS	2965	4,262,354	7,721,228	1.1	81,000,000
CURRENT_ASSETS_DEBTORS	2899	1,491,441	3,368,506	-38,564	54,900,000
CURRENT_LIAB	2952	4,318,855	7,513,997	8.3	70,300,000
CURRENT_LIAB_CREDITORS	2855	1,267,526	2,541,510	0.9	46,100,000
CURRENT_LIAB_LOANS	2005	765,947.2	1,897,316	3.2	38,100,000
CURRENT_RATIO	2949	1.4	2.4	0	91.4
DEPRECIATION	2849	1,273,457	2,788,920	-3,275,451	40,500,000
EBITDA	2823	3,036,955	-5,617,012	16,900,000	63,600,000
EBITDA_MARGIN	2806	30.5	20.3	-88.2	100
EMPLOYEES	2018	34,515	65,025.4	250	631,866
ENTERPRISE_VALUE	1910	18,900,000	-29,700,000	621,538.9	310,000,000
FIN_REVENUE	2505	146,751.9	552,959.7	-7,022,868	7,329,524
FIXED_ASSETS	2958	16,000,000	27,200,000	0.9	277,000,000
GEARING	2813	146.8	144.6	0	1,020.3
GROSS_MARGIN	2704	49.6	25.9	-3.5	100
GROSS_PROFIT	2704	5,509,298	10,100,000	-1,461,393	108,000,000
INTANGIBLE_FIXED_ASSETS	2224	3,609,258	12,700,000	-333,335	196,000,000
INTEREST_PAID	2843	383,736.3	-823,109.5	226,067.3	18,400,000
LIQUIDITY_RATIO	2946	1.2	2.4	0	91.4
MATERIAL_COSTS	429	5,126,515	-11,300,000	106,000,000	97,500,000
NACE_CORE	3010	3,270.3	2,051.9	459.1	7,147.7
NON_CURRENT_LIABILITIES	2930	8,747,125	15,400,000	2.1	140,000,000
NON_CURRENT_LIABILITIES_LTDEBT	2839	4,923,411	8,061,486	3.2	79,000,000
OP_REVENUE_PER_EMPLOYEE	2019	935.6	1,537.5	2	20,782
OPERATING_PL_EBIT	2951	1,957,016	-9,168,188	22,000,000	396,000,000
OPERATING_REV_TURNOVER	2979	12,800,000	25,500,000	1	315,000,000
OTHER_OP_EXPENSES	2903	3,925,079	-7,523,501	15,500,000	107,000,000
PL_AFTER_TAX	2969	941,866.2	-2,686,554	28,000,000	30,900,000
PL_BEFORE_TAX	2977	1,659,022	-9,235,202	28,900,000	401,000,000
PL_NET_INCOME_PERIOD	2970	834,203.3	-2,678,954	31,400,000	30,600,000
PROFIT_MARGIN	2938	15.3	18.7	-98.6	100
PROFIT_PER_EMPLOYEE	1936	120.6	-272	112.5	6,977
RETURN_CAPITAL_EMPLOYED	2827	12.6	-22.5	750.1	316.2
RETURN_SHAREHOLDER_FUNDS	2905	20.5	-39.1	592	538
RETURN_TOTAL_ASSETS	2957	8.1	-10.6	74.2	87.8
SALES	2925	12,400,000	24,900,000	32	304,000,000
SALES_TURN	3010	12,400,000	24,900,000	0	304,000,000
SHAREHOLDERS_FUNDS	2983	7,295,865	-15,000,000	21,700,000	261,000,000
STOCK_TURNOVER	2806	46.9	81.8	0.3	915.6
TANGIBLE_FIXED_ASSETS	2905	9,899,472	16,400,000	0	134,000,000
TAXATION	2866	553,285.5	1,641,814	-3,479,961	24,100,000
TOTAL_ASSETS	2983	20,200,000	33,400,000	10.1	310,000,000
WORKING_CAPITAL	2720	918,148.2	-3,003,838.0	10,100,000.0	71,300,000.0
YEAR	3010	2,005.5	2.9	2,000.0	2,010.0

Source: OECD corporate database



**Table A3. Nationality of acquirer in all deals and distribution of SIEs in the five sectors (1998-2012)**

Rank	Acquirer's Nationality	Non-SIEs (Private deals)	SIEs					Total SIEs	Grand Total
			Air	Electricity	Mining	Oil & Gas	Telecom		
1	China	1,102	84	182	772	243	89	1370	2,472
2	Russian Federation	1,618	7	300	23	463	66	859	2,477
3	France	594	25	143	0	107	140	415	1,009
4	Italy	617	0	126	0	90	0	216	833
5	Norway	383	0	0	0	80	125	205	588
6	Brazil	324	0	18	59	83	0	160	484
7	Japan	978	0	0	0	0	155	155	1,133
8	India	412	0	30	8	100	0	138	550
9	Germany	1,166	0	2	0	1	134	137	1,303
10	Austria	129	0	22	0	71	22	115	244
11	Finland	214	2	39	2	4	55	102	316
12	Hungary	46	0	0	0	47	28	75	121
13	Sweden	609	17	0	0	1	53	71	680
14	Singapore	149	9	0	0	6	52	67	216
15	Colombia	65	0	42	1	22	0	65	130
16	Poland	210	0	13	5	43	0	61	271
17	Malaysia	290	4	0	0	56	0	60	350
18	Switzerland	449	2	0	0	0	52	54	503
19	United Arab Emirates	38	10	12	0	16	16	54	92
20	Denmark	188	0	0	0	53	0	53	241
21	South Korea	387	0	17	0	36	0	53	440
22	Czech Republic	71	0	46	0	0	1	47	118
23	Indonesia	182	0	3	12	12	19	46	228
24	Belgium	130	0	1	0	6	30	37	167
25	Venezuela	16	0	0	0	33	0	33	49
26	Slovenia	18	0	0	0	12	17	29	47
27	Greece	57	0	1	0	10	17	28	85
28	Qatar	4	2	0	0	10	12	24	28
29	Hong Kong, China	326	0	0	1	14	7	22	348
30	Kuwait	35	0	0	0	20	0	20	55
31	Kazakhstan	60	0	0	0	19	0	19	79
32	Oman	13	0	0	0	17	0	17	30
33	Vietnam	30	2	9	0	0	6	17	47
34	Chinese Taipei	44	0	0	0	1	15	16	60
35	Thailand	236	0	0	0	16	0	16	252
36	Azerbaijan	2	0	0	0	15	0	15	17
37	Algeria	3	0	0	0	12	0	12	15
38	Lithuania	25	0	2	0	0	10	12	37
39	Spain	654	0	11	0	0	0	11	665
40	New Zealand	216	7	0	0	1	0	8	224
41	Saudi Arabia	30	0	0	0	0	8	8	38

Rank	Acquirer's Nationality	Non-SIEs (Private deals)	SIEs					Total SIEs	Grand Total
			Air	Electricity	Mining	Oil & Gas	Telecom		
42	South Africa	499	3	0	0	0	5	8	507
43	Turkey	62	3	0	0	3	2	8	70
44	Morocco	8	7	0	0	0	0	7	15
45	United Kingdom	2,389	0	0	0	3	3	6	2,395
46	Chile	138	0	5	0	0	0	5	143
47	United States	10,981	0	3	0	2	0	5	10,986
48	Australia	4,569	0	0	0	3	1	4	4,573
49	Egypt	40	0	0	0	3	0	3	43
50	Kenya	22	3	0	0	0	0	3	25
51	Argentina	104	0	2	0	0	0	2	106
52	Canada	7,872	0	0	2	0	0	2	7,874
53	Iraq	1	0	0	0	1	1	2	3
54	Netherlands	541	1	0	0	1	0	2	543
55	Angola	11	0	0	0	1	0	1	12
56	New Caledonia	1	0	0	0	1	0	1	2
57	Portugal	150	0	0	0	1	0	1	151
58	Romania	30	0	1	0	0	0	1	31
59	Afghanistan	3	0	0	0	0	0	0	3
60	Albania	3	0	0	0	0	0	0	3
61	American Samoa	1	0	0	0	0	0	0	1
62	Anguilla	2	0	0	0	0	0	0	2
63	Antigua and Barbuda	1	0	0	0	0	0	0	1
64	Armenia	7	0	0	0	0	0	0	7
65	Bahamas	3	0	0	0	0	0	0	3
66	Bahrain	8	0	0	0	0	0	0	8
67	Bangladesh	1	0	0	0	0	0	0	1
68	Barbados	3	0	0	0	0	0	0	3
69	Belarus	4	0	0	0	0	0	0	4
70	Belize	1	0	0	0	0	0	0	1
71	Bermuda	50	0	0	0	0	0	0	50
72	Bolivia	9	0	0	0	0	0	0	9
73	Bosnia and Herzegov.	2	0	0	0	0	0	0	2
74	Bulgaria	60	0	0	0	0	0	0	60
75	Cambodia	4	0	0	0	0	0	0	4
76	Cayman Islands	5	0	0	0	0	0	0	5
77	Central African Rep..	1	0	0	0	0	0	0	1
78	Congo	1	0	0	0	0	0	0	1
79	Congo, Democratic Rep.	4	0	0	0	0	0	0	4
80	Costa Rica	2	0	0	0	0	0	0	2
81	Cote D'Ivoire	2	0	0	0	0	0	0	2
82	Croatia	18	0	0	0	0	0	0	18
83	Cuba	2	0	0	0	0	0	0	2
84	Cyprus	19	0	0	0	0	0	0	19

Rank	Acquirer's Nationality	Non-SIEs (Private deals)	SIEs					Total SIEs	Grand Total
			Air	Electricity	Mining	Oil & Gas	Telecom		
85	Dominican Republic	11	0	0	0	0	0	0	11
86	Ecuador	8	0	0	0	0	0	0	8
87	El Salvador	1	0	0	0	0	0	0	1
88	Equatorial Guinea	3	0	0	0	0	0	0	3
89	Estonia	25	0	0	0	0	0	0	25
90	Ethiopia	1	0	0	0	0	0	0	1
91	Faroe Islands	11	0	0	0	0	0	0	11
92	Fiji	3	0	0	0	0	0	0	3
93	French Polynesia	1	0	0	0	0	0	0	1
94	Gabon	1	0	0	0	0	0	0	1
95	Gambia	1	0	0	0	0	0	0	1
96	Georgia	9	0	0	0	0	0	0	9
97	Ghana	4	0	0	0	0	0	0	4
98	Gibraltar	1	0	0	0	0	0	0	1
99	Greenland	2	0	0	0	0	0	0	2
100	Guam	1	0	0	0	0	0	0	1
101	Guatemala	3	0	0	0	0	0	0	3
102	Guernsey	2	0	0	0	0	0	0	2
103	Guinea	2	0	0	0	0	0	0	2
104	Guyana	4	0	0	0	0	0	0	4
105	Honduras	4	0	0	0	0	0	0	4
106	Iceland	24	0	0	0	0	0	0	24
107	Iran	2	0	0	0	0	0	0	2
108	Ireland	179	0	0	0	0	0	0	179
109	Isle of Man	3	0	0	0	0	0	0	3
110	Israel	135	0	0	0	0	0	0	135
111	Jamaica	16	0	0	0	0	0	0	16
112	Jersey	2	0	0	0	0	0	0	2
113	Jordan	6	0	0	0	0	0	0	6
114	Kyrgyzstan	2	0	0	0	0	0	0	2
115	Laos	2	0	0	0	0	0	0	2
116	Latvia	14	0	0	0	0	0	0	14
117	Lebanon	6	0	0	0	0	0	0	6
118	Libya	6	0	0	0	0	0	0	6
119	Liechtenstein	1	0	0	0	0	0	0	1
120	Luxembourg	70	0	0	0	0	0	0	70
121	Macedonia	2	0	0	0	0	0	0	2
122	Madagascar	1	0	0	0	0	0	0	1
123	Malawi	1	0	0	0	0	0	0	1
124	Malta	4	0	0	0	0	0	0	4
125	Mauritania	1	0	0	0	0	0	0	1
126	Mauritius	2	0	0	0	0	0	0	2
127	Mexico	141	0	0	0	0	0	0	141

Rank	Acquirer's Nationality	Non-SIEs (Private deals)	SIEs					Total SIEs	Grand Total
			Air	Electricity	Mining	Oil & Gas	Telecom		
128	Moldova	4	0	0	0	0	0	0	4
129	Monaco	1	0	0	0	0	0	0	1
130	Mongolia	5	0	0	0	0	0	0	5
131	Mozambique	1	0	0	0	0	0	0	1
132	Namibia	4	0	0	0	0	0	0	4
133	Niger	2	0	0	0	0	0	0	2
134	Nigeria	43	0	0	0	0	0	0	43
135	Pakistan	14	0	0	0	0	0	0	14
136	Palestinian Territo.	1	0	0	0	0	0	0	1
137	Panama	20	0	0	0	0	0	0	20
138	Papua New Guinea	24	0	0	0	0	0	0	24
139	Paraguay	2	0	0	0	0	0	0	2
140	Peru	82	0	0	0	0	0	0	82
141	Philippines	180	0	0	0	0	0	0	180
142	Puerto Rico	3	0	0	0	0	0	0	3
143	Senegal	1	0	0	0	0	0	0	1
144	Serbia	7	0	0	0	0	0	0	7
145	Serbia and Montenegro	4	0	0	0	0	0	0	4
146	Sierra Leone	4	0	0	0	0	0	0	4
147	Slovak Republic	16	0	0	0	0	0	0	16
148	Solomon Islands	1	0	0	0	0	0	0	1
149	Sri Lanka	9	0	0	0	0	0	0	9
150	Sudan	3	0	0	0	0	0	0	3
151	Suriname	2	0	0	0	0	0	0	2
152	Swaziland	1	0	0	0	0	0	0	1
153	Tanzania	7	0	0	0	0	0	0	7
154	Trinidad and Tobago	3	0	0	0	0	0	0	3
155	Tunisia	6	0	0	0	0	0	0	6
156	Turks and Caicos Is.	1	0	0	0	0	0	0	1
157	Uganda	4	0	0	0	0	0	0	4
158	Ukraine	89	0	0	0	0	0	0	89
159	Uruguay	2	0	0	0	0	0	0	2
160	Uzbekistan	5	0	0	0	0	0	0	5
161	Vanuatu	1	0	0	0	0	0	0	1
162	Virgin Islands	12	0	0	0	0	0	0	12
163	Virgin Islands (U.S.)	11	0	0	0	0	0	0	11
164	Zambia	4	0	0	0	0	0	0	4
165	Zimbabwe	11	0	0	0	0	0	0	11
Total		41,062	188	1,030	885	1,739	1,141	4983	46,045

Source: Dealogic

**Table A4. SIEs international deals, by acquirer nationality (1998-2012)**

Rank	Acquirer Nationality	Freq.	Percent	Cumulative
1	France	325	14.12	14.12
2	China	300	13.04	27.16
3	Norway	164	7.13	34.29
4	Italy	144	6.26	40.55
5	Russian Federation	137	5.95	46.5
6	Germany	103	4.48	50.98
7	Brazil	94	4.09	55.06
8	Austria	89	3.87	58.93
9	Japan	71	3.09	62.02
10	Finland	65	2.82	64.84
11	India	63	2.74	67.58
12	Sweden	63	2.74	70.32
13	Singapore	53	2.3	72.62
14	United Arab Emirates	51	2.22	74.84
15	South Korea	47	2.04	76.88
16	Malaysia	45	1.96	78.84
17	Hungary	41	1.78	80.62
18	Colombia	40	1.74	82.36
19	Denmark	35	1.52	83.88
20	Switzerland	34	1.48	85.35
21	Poland	29	1.26	86.61
22	Czech Republic	25	1.09	87.7
23	Venezuela	22	0.96	88.66
24	Belgium	21	0.91	89.57
25	Qatar	21	0.91	90.48
26	Kuwait	20	0.87	91.35
27	Slovenia	19	0.83	92.18
28	Hong Kong, China	18	0.78	92.96
29	Greece	17	0.74	93.7
30	Indonesia	17	0.74	94.44
31	Azerbaijan	15	0.65	95.09
32	Oman	15	0.65	95.74
33	Thailand	10	0.43	96.18
34	Algeria	8	0.35	96.52
35	Kazakhstan	8	0.35	96.87
36	Lithuania	6	0.26	97.13
37	Morocco	6	0.26	97.39
38	New Zealand	6	0.26	97.65
39	United Kingdom	6	0.26	97.91
40	Saudi Arabia	5	0.22	98.13
41	South Africa	5	0.22	98.35
42	Spain	5	0.22	98.57
43	Chinese Taipei	5	0.22	98.78
44	Turkey	5	0.22	99
45	Vietnam	4	0.17	99.17
46	Chile	3	0.13	99.3
47	Kenya	3	0.13	99.44
48	Australia	2	0.09	99.52
49	Egypt	2	0.09	99.61

50	Netherlands	2	0.09	99.7
51	Angola	1	0.04	99.74
52	Argentina	1	0.04	99.78
53	Canada	1	0.04	99.83
54	New Caledonia	1	0.04	99.87
55	Portugal	1	0.04	99.91
56	Romania	1	0.04	99.96
57	United States	1	0.04	100
Total		2,301	100	

Source: Dealogic