Research Report

Privatisation Potential in the European Union

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Study on behalf of United Europe

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Executive Summary

Public debt in the Eurozone increased sharply following the outset of the financial crisis in 2007. Privatisation can help reduce debt levels by front-loading future cash flows into a single lump-sum. This enables governments to pay back part of their debts early, thus lowering their debt financing costs. The main benefit of privatisation is, however, that (private) investors are generally expected to generate additional firm-level productivity increases, thus raising the future stream of cash flows in comparison to what can be expected in the case of state ownership. The productivity increases, in turn, have a positive effect on employment in the sense that they help safeguard jobs or even lead to an increase in the number of jobs in the medium run.

In the present study we calculate the expected privatisation volume from state-owned shares in listed and non-listed firms for the largest ten Eurozone member states according to the gross domestic product (Germany, France, Italy, Spain, Netherlands, Belgium, Austria, Finland, Greece and Portugal) and for the non-Eurozone member states United Kingdom, Poland, the Czech Republic and Romania.

Our investigation analyses the equity value of government stakes in firms belonging to the manufacturing and service sectors. We exclude sovereign mandates, such as the police force, the army and courts. Furthermore, privatisation potential in the education and health sector is outside the realm of this study. Our study focuses on the government stake in firms with a potentially positive net present value without having to rely on subsidies and addresses firms with a turnover of at least 100 million euro.

The value of equity held by government in the fourteen EU member states analysed in the study amounts to 511 billion euro. France has the largest expected privatisation potential worth up to 105 billion euro, followed by Germany with up to 76 billion euro, and Italy and the Netherlands with up to 59 billion euro each.

The equity value of the government share held in listed firms is equal to 273 billion euro. Again, the French government holds the largest share in listed firms worth 85.8 billion euro, followed by the British government with a share amounting to 50.9 billion euro. For Germany the government stake amounts to 49 billion euro, for Finland to 17.7 billion euro, for Poland to 15.3 billion euro and for Italy to 12.9 billion euro. The listed firms, in which the selected European governments hold shares, represent a turnover equal to 1.5 trillion euro and employment amounting to 3.9 million persons, corresponding to 2 percent of all employees in the countries analysed.

The current equity value of listed firms can be deduced from the market capitalisation of the relevant firms. Future stock prices are influenced by unforeseen future events and by the general trend of the economy and the financial markets. Nevertheless, the value of government shares in listed firms can be estimated far more precisely than for non-listed firms. We used firm-level accounting data from the Orbis database for calculating the expected equity value of non-listed firms, in which the governments of the fourteen countries analysed hold relevant shares.

The expected equity value of the governments' shares held in non-listed firms amounts to 238 billion euro, 101 billion euro thereof in financial institutions and the remaining amount in non-financial institutions. We did not include state-owned corporations for the construction and the maintenance of highways. As in the case of listed firms, we focused on firms with an expected positive future firm value, a positive discounted future cash flow without having to rely on subsidies, and a turnover of about 100 million euro or more.

Expected privatisation proceeds are, however, not sufficient to eliminate the debt burden facing the European Union. Portugal could pay back 5.9 percent, Italy 3.8 percent, Greece 3.7 percent and Spain 3.3 percent of its public debt by selling their state-owned shares. Public debt has reached so enormously high levels in most Eurozone countries that the privatisation of state-owned assets in large firms is not sufficient to cut debt sharply. Additional real estate sales ought to be considered in order to generate a stronger debt relief.

Even though reducing debt is one of the main motivations behind privatisation, empirical research shows that privatisation increases financial and operating performance in addition to lowering firm debt levels. The transparency of the privatisation process and the choice of appropriate procedures are extremely important in order to prevent irregularities and to (re)gain the necessary public support. Privatisation should be seen as an opportunity to raise the competitiveness of firms and to increase their rate of innovation, thereby improving the overall growth prospects of Europe in a globalised world.

1 Expected benefits of privatisation

1.1 Why do governments privatise?

Many member states of the Eurozone and the European Union face the necessity of having to consolidate their public finances. The aftermath of the financial crisis led to increases in the already high public debt levels in many member states. Unsustainable public debt levels, in combination with already high tax levels and the perceived necessity for growth stimuli, limit the scope for fiscal consolidation measures. Given these limitations, proceeds from privatisation can potentially support fiscal restructuring measures.

Ernst & Young conducted a survey using the interviews of senior members in government, management teams and private equity who were involved in privatization transactions from 1995 to 2010 and found that privatisations are primarily driven by the need for funds (Ernst and Young, 2010).

Other motives for conducting privatisations include increasing economic efficiency, reducing government interference in the economy, positive impacts on the domestic capital markets (including the promotion of wider-spread share ownership), introducing competition and subjecting state-owned enterprises to market discipline (see for example Price Waterhouse, 1989). Bräuninger (2013) identified the following direct and indirect benefits of privatisations:

1. Additional revenues from privatisation can reduce public debt levels.
2. Public subsidies to compensate losses in state-owned firms might be discontinued in the wake of privatisation.
3. If state-owned firms were previously classified as part of the government sector, public sector debt can be reduced if a buyer from the private sector takes over the company's debts.
4. Privatisation offers crisis-stricken countries the opportunity to attract foreign capital and technological know-how from abroad. This leads to an improvement of the companies' integration in international value chains – with positive effects for the economy in general.
5. Privatisation enables governments to document the credibility of their fiscal consolidation programmes, improving the countries' prospects for lower bond yields and the conditions for funding of the public sector.

6. The retreat of the government from market activities can directly stimulate economic growth, because this paves the way to innovative opportunities for private-sector activity.[1]

The expectation that privatisation is able to achieve this multitude of beneficial economic effects are the rationale behind the contractual obligations imposed by the so-called "troika" - consisting of the European Central Bank, the European Commission and the International Monetary Fund - on Eurozone countries applying for funds from these institutions. The necessity for governments to privatise public assets is an essential component of the restructuring plans defined by the troika.

1.2 Theoretical implications of the ownership structure

The benefits of private ownership have been analysed both from a theoretical and an empirical point of view. Private ownership offers several advantages.

One important benefit includes the mitigation of asymmetrical information and moral hazard, thus better aligning the incentives of the management with that of the owners. Private owners receive information on management performance. This does not occur in the case of public management, when the owners do not have direct access to information about the performance of the managers.

Private owners can respond directly and frequently to inferior management. This is not possible in the case of public ownership, where the public has no possibility of directly influencing board decisions. The public as the ultimate owner has to resort to a very indirect way of influencing board decisions, viz. by way of elections every couple of years.

Political interference is common in publicly-held firms, creating inefficiencies and blurring the objectives. Furthermore, publicly-held firms need to take a multitude of interests into account. This may also result in inefficiencies. Private ownership permits the formulation of clear(er) performance objectives.

Budget constraints and takeover threats can act as incentives for an efficient use of financial means and for choosing the best investment projects. State-owned firms may face soft budget constraints, which can lead to the selection of investment projects with an inferior expected risk/return profile. The possibility of takeovers acts as a disciplining mechanism on the management, because takeovers usually result in a new management being installed. By comparison, managers of state-owned firms do not confront takeover threats of the same kind.

[1] For more details see Bräuninger (2013), p.2.

State-owned firms are frequently overstaffed. Soft budget constraints and insufficient monitoring tend to favour sub-optimally large firms. Furthermore, sectors dominated by state-owned firms sometimes suffer from particularly inflexible labour market regulations.

1.3 Empirical effects of privatisation

Empirical studies on the effects of privatisation find that financial and operating performance improve when state-owned enterprises are privatised. The vast majority of empirical studies on the effects of privatisation conclude that output, productivity, profitability and capital investment increase significantly subsequent to privatisation and that the degree of leverage decreases. In a large survey of studies evaluating the impact of privatization on firm performance, Megginson and Netter (2001) find that productivity (defined as real sales per employee) increases by 19 percent on average, profitability (defined as net income divided by sales) increases by 4 percent, output (measured in terms of real sales) rises by 83 percent and leverage decreases by 5 percent on average in the three years after privatisation in comparison to the three years before privatisation.

The effect on employment is mixed. Boubakri and Cosset (1998), Megginson, Nash and van Randenborgh (1994) and Galal et al. (1994) find significant increases in employment. D'Souza and Megginson (2000) find insignificant changes. LaPorta and Lopez-de-Silanes (1999) find massive employment declines shortly after privatisation. We conclude that employment does not necessarily fall following the privatisation of state-owned enterprises but that it tends to decrease insignificantly in the three years following the privatisation of state-owned enterprises. The medium to long-run effect of privatisation on employment has not been investigated so far, however. Due to the widely observed increases in competitiveness due to privatisation, the medium-term and longer-term effect on employment may well be presumed to be positive.

A positive impact on domestic capital markets is found by Megginson and Netter (2001) and numerous other studies.

Increases in innovation productivity and patent levels are found in a study investigating the effects of privatisation on innovation in EU member states by Munari and Sobrero (2005). According to this study, switching to private ownership leads to an increase in the quantity of patents granted and in their quality, measured in terms of the frequency of citations. The study concludes that privatisation may raise the productivity of innovative activities.[2]

[2] Munari and Sobrero (2005) also find significant decreases in the mean levels of R&D intensity after privatization, however. The authors suggest that it is probable „that the reduction in R&D investments and increasing attention on the economic

Futhermore, Eckel, Eckel, and Singal (1997) demonstrate that consumers benefit from lower prices subsequent to privatisation. Inter alia, U.S. competitors lowered their prices after the privatisation of British Airways. The positive effects on consumer prices are not generally confirmed by other empirical studies, however.

1.4 Potential scope of privatisation

Privatisation is recommended for all industries which can be disciplined either by sufficiently strong competitive forces or by effective regulation. All potentially competitive sectors are well-suited for privatisation, including mobile telecommunication services, electricity generation, and air-borne transportation services.

By contrast, physical network infrastructure often constitutes a natural monopoly. Private ownership of physical network infrastructure is nevertheless feasible. In this case, an effective regulatory design needs to ensure adequate investment incentives and the independence of the regulators. For a more detailed discussion see for example Borrmann, Alt, Helmenstein and Berrer (2013).

By contrast, sovereign mandates, such as the police force, the army and the courts are typically provided by the state since the private provision of such services might put constitutional rights at risk.

2 Methodology

2.1 Scope of the study

In this study, we calculate the expected privatisation volume from government stakes in listed and non-listed firms for the largest ten Eurozone member states according to the gross domestic product (Germany, France, Italy, Spain, Netherlands, Belgium, Austria, Finland, Greece and Portugal) and for the non-Eurozone member states United Kingdom, Poland, the Czech Republic and Romania.

Our investigation analyzes the equity value of government stakes in firms belonging to the production or the service sector. We exclude sovereign mandates, such as the police force, the army and the courts. Furthermore, the privatisation potential in the education and health sectors is

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exploitation of research results are coupled with a redefinition of resource allocation criteria leading to a scaling back of long-term research and an increased focus on more applied work“ (p. 38).

outside the realm of this study, inter alia due to severe difficulties in providing a robust valuation for entities in these sectors. We do not include state-owned corporations for the construction and maintenance of streets because of high transaction costs involved in billing, given the current state of technology. This does not necessarily apply to highways but is still relevant when addressing the entire road network. As IT-based monitoring tools become less costly and more readily available this is likely to change.

Our study focuses on the government stake (including the federal state, regional governments and municipalities) in firms with a potentially positive net present value, without reliance on subsidies. We address firms with a turnover of at least 100 million euro and an equity value of the government stake equal to at least 10 million euro.

2.2 Identification of the state-owned enterprises and the publicly held shares

We conducted an extensive web research on state-owned companies and the shares held by government. For some countries, inter alia the Czech Republic, Finland, France, Germany, Poland and Romania, we were able to spot official documentation on the firms held by the general government and the federal states. For the remaining countries we relied on web research and a multitude of other sources to identify the portfolio of state-owned enterprises and the relevant shares held by government.

The Ministry of Finance of the Czech Republic lists all firms in which the general government holds shares. The Prime Minister's Office of Finland publishes a report on the firms held by the state. The firms held by the French government are published by the Agence des participations de l'Etat. In Germany, both the general government and the federal states (*Länder*) publish annual reports listing the firms in which they hold shares (*Beteiligungsberichte*). Poland provides a list of the enterprises in which it holds shares on the website of the Polish Ministry of Treasury. The Directorate General of Treasury and Finance provides a list of the direct government holdings. The Ministry of Economy of Romania offers a list of firms in which the Romanian government holds shares.

Some countries maintain agencies for the management of government shareholdings. For Belgium we used the information available on the website of the Federal Holding and Investment Company (SFPI-FPIM) that centrally manages the federal government's shareholdings. The Hellenic Republic Asset Development Fund (HRAF) is responsible for the Greek shareholdings. For Spain the Sociedad Estatal de Participaciones Industriales (SEPI) manages the industrial shareholdings owned by the State. We used the list of firms provided on the SEPI website. The Netherlands hold shares in a

number of financial institutions; here NLFI is the relevant agency on behalf of the Dutch State. In the United Kingdom, the UK Financial Investments Limited (UKFI) manages the Government's investments in the Royal Bank of Scotland (RBS), Lloyds Banking Group (Lloyds) and UK Asset Resolution Ltd (UKAR). We took information from the UKFI website and conducted further research.

For Austria we drew upon a list of firms compiled through a recent study conducted by ourselves on the relevant privatisation potential (Alt et al., 2014). Italy is the only country for which we had to rely on web research for finding the government stakes in enterprises.

For reasons of quality assurance, we also consulted the individual websites of the firms in which governments hold shares and double-checked the data provided with the entries in business databases, beyond the information provided on the websites of ministries and agencies.

2.3 Valuation of the government holdings in listed firms

The valuation of the government holdings in listed firms was conducted as follows. First, we calculated the market capitalisation of the listed firms by multiplying the average closing price of a particular stock in the year 2013 by the number of outstanding shares. We researched the closing price of every trading day in the year 2013 and then calculated the mean closing price in the year 2013 for all listed firms, in which the governments of the fourteen European member states analysed in this study hold shares.

According to the efficient market hypothesis, it would make sense to take the most recent closing price and not the average closing price of the year 2013. However, privatisations do not take place overnight. Due to uncertainty concerning the future stock market development, including the fact that many capital market experts believe that stock market prices have reached levels above their "fair values" in the meantime, we believe the values of state-owned shares are estimated more realistically with regard to future privatisation considerations when the average share price of the year 2013 is used for the analysis. Furthermore, when large chunks of firms are placed on the stock exchange, this may have a dampening effect on the share price. However, large stakes may also be sold above current stock prices, due to the value of control rights.

Data on the daily closing prices for the year 2013 were taken from company websites, stock exchanges and from the website of the Wall Street Journal. Data on the number of shares outstanding were taken from company websites and websites offering information on stocks such as the Reuters website.

The value of equity held by the government was calculated by multiplying the market capitalisation of the firm by the percentage of the firm held by the government.

2.4 Valuation of the government holdings in non-listed firms

To calculate the value of non-listed firms, we drew upon both a discounted cash flow model and a multiple valuation method using price-to-book ratios of a relevant peer group.

First, we determine the equity value by the sum of the discounted free cash flows minus the net debt of the firm. According to the International Valuation Standards Council the free cash flow "is the cash flow for an asset or business derived on an annual basis by deducting from income the expenses and capital related items required to operate the asset or business. This includes for real property assets maintenance and repair costs, leasehold improvements and capital works. For businesses this includes the annual capital expenditure requirements and any changes in annual working capital requirements" (International Valuation Standards Council, 2011).

Free cash flow figures can be obtained by taking the cash flow from operations and subtracting the cash flow from investment activities (or net capital expenditure). The free cash flow represents the amount of cash generated in the current period that is available for distribution to investors (equity and debt) after having accounted for investment. Net debt is equal to the sum of all interest-bearing liabilities minus cash and cash equivalents. The free cash flow less net debt is equal to the amount of cash generated in the current period that is available for distribution to the equity holders.

The free cash flow is abbreviated as FCF, *w* denotes the weighted average cost of capital (WACC):

$$Equity\ Value = \frac{FCF_1}{(1+w)^1} + \frac{FCF_2}{(1+w)^2} + \cdots + \frac{FCF_n}{(1+w)^n} - Net\ Debt$$

Hence FCF_k refers to the expected cash flow in year *k.* If the FCF is constant over time, then the term can be expressed as follows:

$$Equity\ Value = \sum_{t=1}^{n} \frac{FCF}{(1+w)^t}$$

The limit of *n* tending to ∞ (in the formula below) can be calculated using the method for geometric series:

$$\lim_{n \to \infty} \sum_{t=1}^{n} \frac{FCF}{(1+w)^t} = \frac{FCF * (1+w)}{w}$$

To improve the significance and validity of the *Free Cash Flows* in the past three years, FCF_1, FCF_2 *and* FCF_3 are calculated by using the annual accounting data and by adjusting the values with the relevant inflation rate. The terminal value is then calculated using an infinite series starting with $t = 4$. Hence the complete formula reads as follows:

$$Equity\ Value = \frac{FCF_1}{(1+w)^1} + \frac{FCF_2}{(1+w)^2} + \frac{FCF_3}{(1+w)^3} + \sum_{t=4}^{\infty} \frac{FCF_c}{(1+w)^t} - Net\ Debt$$

For the implementation of the formula in a calculus programme, the formula was adapted to:

$$Equity\ Value = \frac{FCF_1}{(1+w)^1} + \frac{FCF_2}{(1+w)^2} + \frac{FCF_3}{(1+w)^3} + \frac{FCF_3 * (1+w)}{w} - Net\ Debt$$

WACC is the weighted average of the cost of debt and of the cost of equity. The cost of debt is weighted with the debt ratio and the cost of equity is weighted with the equity ratio. WACC represents the rate of return that a company has to pay on average to all its investors to finance its assets:

$$WACC = r_{debt} \frac{Debt}{Equity + Debt} + r_{equity} \frac{Equity}{Equity + Debt}$$

After-tax cost of debt = r_{debt} *= (*r_f *+ credit spread) * (1 – corporate tax rate)*

Cost of equity = r_{equity} *=* r_f *+* β ** equity risk premium.*

r_f is the risk-free rate of return. It was set to equal the interest rate for 10-year treasury bonds in the specific country analysed. We used Eurostat data on long-term Treasury bond rates for the fourteen member states of the European Union. The parameter β denotes the sensitivity to market risk of a particular stock. For the non-listed firms analysed here, we take the average β for a peer-group of listed firms in Europe using data by Damodaran (2014a). Country and equity risk premia are calculated using data provided by the same author. The credit spread measures the credit risk of a firm. We calculate the sum of the country risk premium and the average debt spread (of listed firms in the specific industry sector) by using data provided by Damodaran (2014a). Corporate tax rates are taken from KPMG (2013).

We used annual reports on company websites as well as the Orbis database for researching accounting and financial data on the state-owned enterprises in the fourteen member states of the European Union analysed in this study except for Austria. Orbis is a database provided by Bureau van Dijk and provides data on 70 million firms in Europe. For Austria, we used an Austrian company database and drew upon accounting information directly from the company websites.

For non-listed firms, Orbis provides data on the operating cash flow. It does not, however, offer data on the cash flow from investment activities. We researched these from annual reports provided on company websites. In a couple of cases the relevant information was not made available, however. Here we drew upon the amount of investment as a proxy for the cash flow from investing activities. Since Orbis does not provide data on net debt, we retrieved data from annual reports on company websites or estimated the relevant figures from the accounting information available through Orbis.

We used data for the past three years, that is for 2013, 2012 and 2011 whenever available, otherwise for 2012, 2011 and 2010. In a few cases, we only had data for two years from annual reports. Based on Orbis data, we calculated the equity value using accounting data of the past three years. We also calculated the value of equity for the past seven years (whenever the data was available) as a plausibility check.

For every non-listed firm analysed in this study, we also applied a multiple method to calculate the equity value. Using average price-to-book ratios by industry sectors provided by Damodoran (2014b), we estimated the value of equity for non-listed firms by using the relevant book value of equity and multiplied it with the average price-to-book ratio.

Finally, we calculated the average equity value of a firm by taking the result of the discounted cash flow valuation and the equity value estimate according to the price-to-book ratio of the peer group for all firms with expected positive future earnings and a positive equity value estimate. In case that we either had little data or where the cash flows in the past three years did not permit us to derive a clear picture of the expected future stream of earnings, the expected equity value of the firm was set equal to the book value of equity.

2.5 Valuation of financial institutions

The prevailing difficult market environment for financial sector institutions leads to substantial fluctuations in the cash flow stream. Valuations on the basis of the discounted cash flow method, as advanced they may be, would render unreliable results. Instead, dividend discount models are often applied by financial analysts.[3] However, due to the restructuring processes faced by nationalised banks, financial institutions have substantially reduced their dividend payments compared to pre-crisis levels or have even ceased dividend payouts. The banks selected as privatisation candidates in

[3] Damodaran (2006) provides arguments in favour of using dividend disount models instead of DCF models for the valuation of firms in the financial service sector.

our analysis are all active market participants and are expected to remain active in the market.[4] Thus, we used as alternative valuation methods the price-to-book ratio or the price-earnings ratio for the valuation of financial sector institutions.

Non-listed firms do not have a traded market price. We use multiples for the price-to-book ratio based on median peer group valuations for banking provided by PwC (2013) to calculate the market price of the non-listed financial institutions analysed here. The median price-to-book value of the twenty largest depository banks in the US according to their market capitalisation was 1.7 on December 31th 2013 (PwC, 2013).

The price-to-book ratio compares a company's current market price to its total book value according to the balance sheet. Price-book ratios are often used for comparing the performance of banks, because the assets and liabilities of banks are valued at market prices. Industries that require a lot of infrastructure capital tend to have lower price-to-book ratios than for example IT firms with a few tangible assets and whose equity value is primarily based on the expected cash flow from the innovative ideas of the firm.

We also use multiples for the price-earnings ratio based on median peer group valuations for banking provided by PwC (2013) to calculate the market price of the non-listed financial institutions analysed here. The price-earnings ratio compares the market price of a firm to its earnings in the relevant time period, i.e. the earnings in the latest available year. The median price-earnings value of the twenty largest depository banks in the US according to their market capitalisation was 14.8 on December 31th 2013 (PwC, 2013).

We estimated the equity value of the non-listed financial institutions analysed in this study by using the median price-to-book ratio and the price-earnings ratio of the peer group valuations according to PwC. For reasons of commercial prudence, we then take the minimum of these two values as our equity value estimate for the relevant financial institution. Using this approach, we take account of both the expected development of the profit and earnings situation as well as the current book value of equity.

[4] We have excluded “bad banks” from our analysis since our focus is on companies and assets that are able to achieve an expected positive economic value by continuing their business operations. We did not include firms that have no positive outlook and can only achieve a positive valulation by the liquidation or sale-off of their assets.

3 Value of government-held shares in firms

3.1 Value of government-held shares in listed firms

The equity value of the government-held shares in listed firms in the fourteen member states of the European Union analysed in this study is equal to 273.1 billion euro. Our valuation is based on the average market capitalisation in the year 2013. France holds the largest share in listed firms worth 85.8 billion euro, followed by the United Kingdom with a share amounting to 50.9 billion euro, Germany with a share of 49 billion euro, Finland with 17.7 billion euro and Italy with 12.9 billion euro (cf.

Table 1).

The listed firms represent a turnover equal to 1.5 trillion euro and employ 3.9 million people, i.e. two percent of all employees in the countries analysed.

Table 1: Total equity value of government shares in listed firms by country

Country	Equity value in bln euro
FR	85.8
UK	50.9
DE	49.0
IT	12.9
FI	17.7
PL	15.3
BE	11.2
AT	8.2
CZ	7.8
GR	5.7
RO	4.6
ES	3.4
PT	0.7
NL	-
TOTAL	273.1

Source: Economica (2014).

The fourteen member states of the European Union analysed in this study hold shares in 89 listed firms with a total value of 273.1 billion euro. The largest holdings include the British government's shares in the Royal Bank of Scotland (RBS) worth 35.4 billion euro, the French government's share in Electricité de France (EDF) worth 30.9 billion euro and in GDF Suez worth 17.4 billion euro (see Table 2 for the largest thirty equity holdings in listed firms by governments in the fourteen member states analysed in this study; for a complete list of firms see Table 6 in the Appendix).

Table 2: Thirty largest equity holdings in listed firms held by governments

Country	Company	Equity value of gov. share in mln euro	Gov. share
UK	RBS	35,393	81%
FR	EDF	30,910	84%
FR	GDF Suez	17,432	37%
DE	Deutsche Telekom	13,660	32%
UK	Lloyds	13,514	25%
DE	Volkswagen	9,946	13%
FR	CNP	8,585	100%
IT	ENEL	8,573	31%
CZ	CEZ	7,811	70%
DE	EnBW	7,775	98%
FI	Fortum	6,906	51%
BE	BNP Paribas	6,088	10%
FR	Orange	5,970	27%
DE	Deutsche Post	5,271	21%
FR	Safran	5,160	30%
FR	Areva	4,711	88%
PL	PGE	4,686	62%
FR	Airbus	4,580	13%
PL	PKO	3,638	33%
DE	Airbus	3,634	11%
FR	ADP	3,597	51%
AT	OMV	3,551	32%
BE	Belgacom	3,536	54%
PL	PZU	3,128	35%
IT	ENI	2,771	4%
DE	RWE	2,615	16%
FI	Sampo	2,483	14%
FR	Renault	2,459	15%
GR	Hellenic Football Prognostics Org.	2,408	100%
FI	Telia Sonera	2,384	10%

Source: Economica (2014).

3.2 Value of government held shares in non-listed financial institutions

The equity value of the government stake in non-listed financial institutions in the fourteen member states of the European Union analysed in this study is equal to 101 billion euro (

Table 3).[5] We did not include financial institutions with an equity value of less than 10 million euro. The largest government holding in a non-listed financial institution is the 80.1 percent stake held by the Italian Ministry of Economy and Finance in the bank Cassa Depositi e Prestiti. It is worth around 28.7 billion euro. The second largest share in a financial institution is the ABN Amro Group held by the Dutch State, being worth around 23 billion euro. In Germany the government share in Bayerische Landesbank is worth 10 billion euro.

Government holdings in financial institutions increased as a result of the financial crisis. The Dutch State for example took over ABN AMRO Group, ASR Nederland, SNS Reaal[6] and Propertize. They have been transferred into NL Financial Investments (NLFI). The Dutch Minister of Finance is expected to decide upon when to privatise the financial institutions held by NLFI.

Table 3: Equity value of non-listed financial institutions

Country	Financial Institution	Equity value of gov. share in mln €	Gov. share
IT	Cassa Depositi e Prestiti	28,673	80%
NL	ABN AMRO Group	23,066	100%
DE	Bayerische Landesbank	10,005	100%
BE	Belfius Banque	8,843	100%
PT	Caixa Geral de Depositos	6,829	100%
NL	BNG Bank Nederlandse Gemeenten	5,831	100%
NL	SNS Reaal	4,496	100%
DE	HSH Nordbank	4,103	85%
NL	ASR Nederland	3,019	100%
DE	Landesbank Baden-Wuerttemberg	2,393	41%
FR	BPI-Groupe	1,146	50%
DE	Landesbank Hessen-Thüringen Girozentrale	921	12%
DE	Norddeutsche Landesbank Girozentrale	665	59%
DE	Landesbank Saar	474	50%
DE	NRW.Bank	368	99%
CZ	Ceskomoravska Zarucni a Rozvojova Banka	167	49%

[5] The German bank Portigon AG is not included in the non-listed financial institutions because the outlook regarding its operating performance is still unclear and not necessarily positive. However, the book value of equity is currently equal to around 4 billion euro.

[6] In 2013, the Dutch State took over SNS Reaal in order to avoid bankruptcy, thereby expropriating shareholders and subordinated creditors. In return the Dutch State incurred 3.7 billion euro of direct costs by injecting 2.2 billion euro of fresh capital, writing-off 0.7 billion euro of the real estate portfolio and 0.8 billion euro from an earlier aid package. Additionally, the Dutch State extended 1.1 billion euro in loans plus guarantees worth 5 billion euro. SNS Reaal has a book value of equity equal to 4.5 billion euro.

CZ	Czech Export Bank	155	100%
FR	Caisse des Depots et Consignations	66	100%
CZ	Prisko	53	100%
DE	InvestitionsBank Schleswig-Holstein	44	100%
	TOTAL	101	

Source: Economica (2014).

3.3 Value of government-held shares in non-listed firms excl. financial institutions

The total value of government holdings in non-listed firms is equal to 238 billion euro, thereof 101 billion euro held in financial institutions and 136 billion euro in non-financial firms, i.e. mostly in manufacturing, including utilities that are suitable for privatisation (see Table 7 in the Appendix).[7]

Spain holds the largest share in non-listed firms (excluding financial institutions) with an estimated value of 33 billion euro. The Netherlands hold a share of about 23 billion euro and France holds a share of around 18 billion euro in non-listed firms (excluding financial institutions). The non-listed firms (excluding financial institutions) held by the Italian government amount to 17 billion euro. Austria's portfolio of non-listed firms is worth around 11 billion euro; that of Finland 10 billion euro and Germany has equity holdings of about 8 billion euro. Romania, the Czech Republic, the United Kingdom and Portugal each hold between 2 and 4 billion euro worth of non-listed firms excluding financial institutions. Belgium, Greece and Poland hold stakes worth 1.8, 1.6 and 0.5 billion euro, respectively.

3.4 Total value of government-held shares in listed and non-listed firms

The total value of the government-held shares in listed and non-listed firms amounts to 511 billion euro in the fourteen member states analysed here (see Table 4). France, Germany, the Netherlands, Italy and the United Kingdom have the largest holdings in firms; these are worth around 105 billion in France, 76 billion in Germany, 59 billion both in the Netherlands and Italy and 55 billion euro in the United Kingdom.

If governments are not obliged to respect minimum shareholding requirements, then government stakes in listed firms are fairly easy to dispose of via the stock exchange. Furthermore, the expected value of shareholdings in listed firms can be estimated rather precisely. From the European Union

[7] Numbers may not add up due to rounding.

member states analysed in this study, the Dutch government is the only government that does not hold shares in listed firms directly. Rather the Dutch State has stakes in listed firms indirectly via financial institutions such as ABN Amro. However, the stakes indirectly held via the NLFI are of temporary character and will most probably be disposed of as a whole, without selling off shares in listed firms separately.

Table 4: Total government holdings of listed and non-listed firms according to country

	Equity value of gov. share in bln euros			
Country	**Listed firms**	**Non-listed firms**	**Non-listed financial institutions**	**TOTAL**
AT	8.2	11.1	-	19
BE	11.2	1.8	8.8	22
CZ	7.8	2.9	0.4	11
DE	49.0	7.9	19.0	76
ES	3.4	32.6	-	36
FI	17.7	10.1	-	28
FR	85.8	18.2	1.2	105
GR	5.7	1.6	-	7
IT	12.9	17.2	28.7	59
NL	-	22.7	36.4	59
PL	15.3	0.5	-	16
PT	0.7	2.2	6.8	10
RO	4.6	3.8	-	8
UK	50.9	4.0	-	55
TOTAL	273.1	136.4	101.3	511

Source: Economica (2014).

Expected privatisation proceeds reach about half the amount that can be expected in the case of a total sell-off if governments retain a 25% share in the state-owned firms, to the extent that this is still possible (see

Table 5). If governments keep a 25% share, then expected privatisation proceeds amount to 272 bln euros, in comparison to expected revenues amounting to 511 bln euros in the case of a total sell-off. In case governments decide to retain even 50% of the shares, the expected privatisation proceeds amount to 145 bln euros.

Table 5: Privatisation thresholds – three scenarios

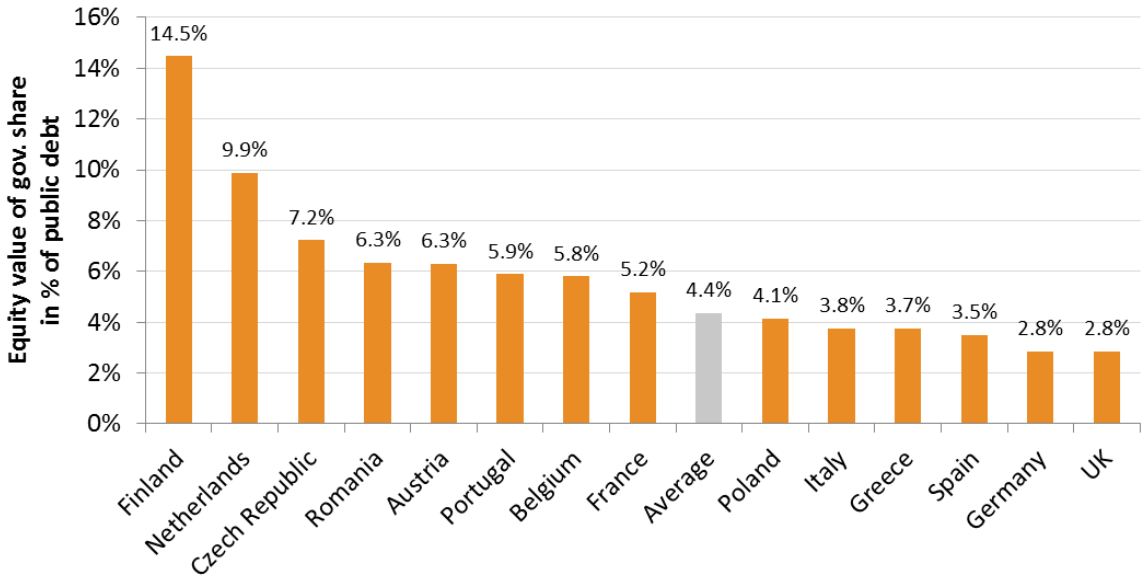
Country	Total sell-off	State keeps 25%, whenever still possible	State keeps 50%, whenever still possible
AT	19	11	5
BE	22	18	5
CZ	11	7	4
DE	76	28	13
ES	36	24	16
FI	28	12	5
FR	105	54	28
GR	7	4	2
IT	59	34	19
NL	59	43	28
PL	16	0	0
PT	10	7	4
RO	8	5	2
UK	55	25	14
TOTAL	**511**	**272**	**145**

Source: Economica (2014).

Privatisation proceeds are not high enough at all to eliminate the debt burden faced by the EU member states. Portugal could pay back 5.9 percent, Italy 3.8 percent, Greece 3.7 percent and Spain 3.5 percent of its public debt by selling the state-owned shares (see

Figure 1). On average, the fourteen member states analysed in our study could pay back 4.4 percent of their public debt with the expected privatisation proceeds. Public debt has reached such enormously high levels in most Eurozone countries that the privatisation of state-owned corporate assets is not sufficient to cut debt sharply. Real estate sales would have to be considered additionally in order to generate a larger debt relief. Reducing debt should, however, not constitute the prime motivation for privatisation. Instead, privatisation should be considered as an opportunity to raise the competitiveness of firms, thereby contributing to sustainable growth.

Figure 1: Expected privatisation proceeds as a percentage of public debt



Source: Economica (2014).

4 Conclusion

Privatisation can help unleash growth and innovation in Europe, thereby safeguarding jobs in the medium to longer term. Empirical research shows that privatisation increases financial and operating performance, and productivity. It also helps decrease average debt at firm level and renders firms more robust in the case of an economic downturn.

Ambitious stock market valuations, as they are presently prevailing, provide an environment which is beneficial for reaping high privatisation proceeds from the sale of government-held assets. These proceeds could be used to finance growth-enhancing investment projects in areas with above-average social returns, such as innovation, broadband infrastructure, and education. This applies all the more so since the expansionary monetary policy of the ECB permits the roll-over of public debt at favourable financing conditions, thus reducing the necessity for the sale of public assets to ensure (or restore) debt sustainability. The objective to break free of the upward trend in public indebtedness has to be accomplished otherwise, viz. through expenditure-related fiscal discipline, in order not to waste the proceeds from privatisation and its growth-enhancing benefits.

Safeguards are indispensable to ensure transparent privatisation procedures. To this end, it might be considered to further professionalise public privatisation procedures and to establish a Europe-wide

privatisation monitor, intended to establish best practices in privatisation, in particular so as privatisation has primarily remained a matter of national competence so far.

Privatisation should primarily be understood as an instrument to increase the productivity of (formerly) state-owned companies. To the extent that productivity on the macroeconomic level is the result of firm-level productivity, privatisation is conducive to foster competitiveness and thus sustainable growth throughout the European Union.

5 References

- Agence des participations de l'Etat (2013), "The French State as Shareholder - 2013 Report".
- Alt, R., H. Berrer, M. Fichtinger, C. Helmenstein, S. Maidorn, G. Neumüller (2014), "Privatisierungspotentiale bei öffentlichen Unternehmen in Österreich", Report by Economica on behalf of the Vienna Stock Exchange, Vienna.
- Bayerisches Staatsministerium der Finanzen, für Landesentwicklung und Heimat (2013), "Beteiligungsbericht des Freistaats Bayern 2013", Staatliche Beteiligungen an Unternehmen zum 31. Dezember 2012, Munich.
- Boardman, A. C. Laurin and A. Vining (2002), "Privatization in Canada: Operating, Financial and Stock Price Performance With International Comparisons", Canadian Journal of Administrative Sciences, Vol. 19(2), pp. 137–154.
- Borrmann J., R. Alt, C. Helmenstein, H. Berrer (2013), "The Privatisation Goldmine", Report prepared for and published by New Direction Foundation, June 2013.
- Boubakri N. and J.-C. Cosset (1998), "The Financial and Operating Performance of Newly-Privatized Firms: Evidence From Developing Countries", Journal of Finance, Vol. 53, pp. 1081-1110.
- Bräuninger, D. (2013), "Privatisation in the euro area: Differing attitudes towards public assets", Research Briefing, 20. August 2013, Deutsche Bank Research, Frankfurt/Main.
- Bundesministerium der Finanzen (2013), "Vermögensrechnung des Bundes - Für das Haushaltsjahr 2012", Berlin.
- Damodaran, A. (2014a), "Data set: Cost of Capital by Industry Sector - Europe", http://pages.stern.nyu.edu/~adamodar/
- Damodaran, A. (2014b), "Data set: Price and Value to Book Ratios and ROE by Industry Sector - Europe", http://pages.stern.nyu.edu/~adamodar/
- Damodaran, A. (2006), „Valuation Approaches and Metrics: A Survey of the Theory and Evidence", Stern School of Business, Working Paper, New York.
- D'Souza, J., R. Nash, and W. Megginson (2000), "Determinants of Performance Improvement in Newly-Privatized Firms: Does Restructuring and Corporate Governance Matter?", Working Paper, University of Oklahoma.
- D'Souza, J. and W. Megginson (1999), "The Financial and Operating Performance of Newly Privatized Firms in the 1990s," Journal of Finance, Vol. 54, pp. 1397-1438.

- Eckel, C., D. Eckel and V. Singal (1997), “Privatization and efficiency: Industry effects of the sale of British Airways”, Journal of Financial Economics, Vol. 43, pp. 275-298.
- Ernst and Young (2010), “Maximizing value from privatizations - Interviews with governments, management and private equity investors across Europe.
- Galal, A., L. Jones, P. Tandon and I. Vogelsang (1994), “Welfare Consequences of Selling Public Enterprises: An Empirical Analysis”, Oxford University Press, New York.
- HM Treasury (2013), “Whole of Government Accounts – year ended 31 March 2012”, London, UK.
- International Valuation Standards Council (2011), “The Discounted Cash flow (DCf) Method - Real property and Business Valuations”, Technical Paper 1 - Exposure Draft”, January 2011.
- KPMG (2013), “Corporate tax rates tables”, http://www.kpmg.com/global/en/services/tax/tax-tools-and-resources/pages/corporate-tax-rates-table.aspx
- LaPorta, R. and F. Lopez-de-Silanes (1999), "The Benefits Of Privatization: Evidence From Mexico", The Quarterly Journal of Economics, MIT Press, Vol. 114(4), p. 1193-1242.
- Megginson, W. and J. Netter (2001), “From State to Market: A Survey of Empirical Studies on Privatization”, Journal of Economic Literature, Vol. 39, pp. 321 - 389.
- Megginson, W., R. Nash and M. van Randenborgh (1994), “The Financial and Operating Performance of Newly Privatized Firms: an International Empirical Analysis, Journal of Finance, Vol. 49, pp. 403-452.
- Munari, F. and M. Sobrero (2005), “The Effects of Privatization on R&D Investments and Patent Productivity”, FEEM Working Paper No. 64.2002.
- PwC (2013), “Financial Services Industry - Banking Valuation Quarterly Update”, December 31, 2013.
- Price Waterhouse (1989a), “Privatization: Learning the Lessons from the U.K. Experience”, London, quoted in Megginson and Netter (2001).
- Prime Minister’s Office Finland (2013), “2012 Annual Report of the Ownership Steering Department in the Prime Minister’s Office”, Prime Minister’s Office Publications, Helsinki, Finland.

6 Appendix

Table 6: Equity value of government share in listed firms

Country	Company	Equity value of gov. share in mln euro	Gov. share
AT	OMV	3,551	32%
AT	Verbund	1,406	51%
AT	Post	1,156	53%
AT	EVN	998	51%
AT	Telekom Austria	694	28%
AT	Flughafen Wien	410	40%
BE	BNP Paribas	6,088	10%
BE	Belgacom	3,536	54%
BE	BPost	1,473	50%
BE	Fluxys	47	2%
BE	Dexia	39	50%
BE	Befimmo-Sicafi	35	3%
CZ	CEZ	7,811	70%
DE	Deutsche Telekom	13,660	32%
DE	Volkswagen	9,946	13%
DE	EnBW	7,775	98%
DE	Deutsche Post	5,271	21%
DE	Airbus	3,634	11%
DE	RWE	2,615	16%
DE	Fraport	2,292	51%
DE	Commerzbank	2,013	17%
DE	HHLA Hamburg Hafen	852	68%
DE	Salzgitter	500	27%
DE	EON	380	1%
DE	Lufthansa	17	0%
ES	Airbus	1,400	4%
ES	Red Electrica	1,140	20%
ES	Indra	373	20%
ES	Ebro Foods	253	10%
ES	Enagas	222	5%
FI	Fortum	6,906	51%
FI	Sampo	2,483	14%
FI	Telia Sonera	2,384	10%
FI	Outokumpu	1,688	30%
FI	Neste Oil	1,641	50%
FI	StoraEnso	566	12%
FI	Metso	504	11%
FI	Rautaruukki	303	40%
FI	Kemira	303	17%

FI	Elisa	278	10%
FI	Finnair	207	56%
FI	Outotec	153	8%
FI	Valmet	140	11%
FI	Tieto	121	10%
FI	Talvivaara Mining	55	9%
FR	EDF	30,910	84%
FR	GDF Suez	17,432	37%
FR	CNP	8,585	100%
FR	Orange	5,970	27%
FR	Safran	5,160	30%
FR	Areva	4,711	88%
FR	Aribus	4,580	13%
FR	ADP	3,597	51%
FR	Renault	2,459	15%
FR	Thales	1,983	27%
FR	AirFrance KLM	348	16%
FR	Dexia	35	44%
GR	Hellenic Football Prognostics Organisation	2,408	100%
GR	Public Power Corporation	940	51%
GR	Hellenic Petroleum	875	35%
GR	Athens Water Supply & Sewerage	426	61%
GR	Hellenic Telecommunications	344	10%
GR	Piraeus Port Authority	333	74%
GR	Thessaloniki Port Authority	171	74%
GR	EYATH Thessaloniki Water&Sewage	157	74%
IT	ENEL	8,573	31%
IT	ENI	2,771	25%
IT	STMicroelectronics	802	14%
IT	Finmeccanica	777	30%
PL	PGE	4,686	62%
PL	PKO	3,638	33%
PL	PZU	3,128	35%
PL	Energa	1,584	48%
PL	ENEA	785	52%
PL	Grupo Lotos	638	53%
PL	Grupo Azoty	526	33%
PL	PHN	209	73%
PL	Ciech	122	39%
PT	GalpEnergia	658	7%
PT	REN	58	10%
RO	Romgaz	2,111	70%
RO	OMV Petrom	1,173	21%
RO	SNN	589	82%
RO	Transgaz	296	59%
RO	Rompetrol	197	45%

RO	Transelectrica	132	59%
RO	Conpet	49	60%
RO	Oil Terminal	11	60%
UK	RBS	35,393	81%
UK	Lloyds	13,514	25%
UK	Royal Mail	1,962	30%

Source: Economica (2014).

Table 7: Equity value of government share in non-listed firms excl. financial institutions

Country	Company	Equity value of gov. share in mln euro	Gov. share
AT	Vorarlberger Illwerke	1,513	100%
AT	TIWAG	1,434	100%
AT	Energie Steiermark	1,189	75%
AT	Münze Österreich	1,121	100%
AT	Energie AG Oberösterreich	1,087	76%
AT	KELAG	1,014	86%
AT	Wien Energie GmbH	975	100%
AT	Salzburg	798	100%
AT	Bundesimmobilien Ges.	716	100%
AT	Austro Control	447	100%
AT	Regional Airports	378	100%
AT	Energie Burgenland	270	96%
AT	Casinos Austria	204	33%
BE	Apetra	951	51%
BE	Techspace Aero	331	31%
BE	Asco Industries	270	100%
BE	A.S.T.R.I.D.	201	39%
CZ	Cesky Aeroholding	1,351	100%
CZ	Cepro	773	100%
CZ	Mero CR	601	100%
CZ	Vipap	96	97%
CZ	Korado	26	34%
CZ	Thermal-F	18	100%
DE	Bundesdruckerei	1,145	100%
DE	Energiewerke Nord	824	100%
DE	Flughafen Stuttgart	721	65%
DE	Messe München	542	50%
DE	Badische Staatsbrauerei Rothaus	515	100%
DE	Flughafen Hamburg	400	51%
DE	Messe Frankfurt	383	40%
DE	Saga Siedlungs AG	308	36%
DE	BWI Informationstechnik	218	50%
DE	Bayernhafen	205	100%
DE	Leipziger Messe	155	50%
DE	Toto-Lotto Niedersachsen	144	100%
DE	Deutsche Klassenlotterie Berlin	138	100%

DE	Flughafen Erfurt	136	95%
DE	Flughafen Nürnberg	135	50%
DE	Saarland-Sporttoto	125	100%
DE	Messe Düsseldorf	121	20%
DE	Land Brandenburg Lotto	107	100%
DE	Deutsche Messe	106	50%
DE	BBB Infrastruktur	92	100%
DE	Flughafen Saarbrücken	91	100%
DE	Duisburger Hafen	84	33%
DE	Flughafen Köln/Bonn	80	31%
DE	Flughafen Hannover-Langenhagen	80	35%
DE	VSE AG	79	41%
DE	Staatl. Porzellan-Manufaktur Meissen	79	100%
DE	Sächsische Lotto-Gmbh Leipzig	79	100%
DE	Saarland Spielbank	77	100%
DE	Nürnbergmesse	71	50%
DE	Staatliche Toto-Lotto	69	100%
DE	Landesmesse Stuttgart	64	50%
DE	Lotto Hamburg	63	100%
DE	Behala - Berliner Hafen- & Lagerhausges.	61	100%
DE	Lotto-Toto GmbH Sachsen-Anhalt	55	100%
DE	Baden-Würt. Spielbanken	55	100%
DE	Messe Erfurt	42	100%
DE	Staatliche Rhein-Neckar-Hafenges Mannheim	37	100%
DE	Friedrichstadt-Palast Betriebsges.	29	100%
DE	Lotto Rheinland-Pfalz	27	51%
DE	Lotterie-Treuhandges. Hessen	24	100%
DE	Lotterie Treuhandges. Thüringen	20	100%
DE	Berliner Grossmarkt	19	100%
DE	Hafenbetriebe Saarland	19	100%
DE	European Energy Exchange	19	5%
DE	Flughafen Dresden GmbH	18	5%
DE	NKL Nordwestdeutsche Klassenlotterie	11	64%
ES	SELEA - Sociedad Estatal Loterias y Apuestas Del Estado	20,571	100%
ES	Aena Aeropuertos	7,293	100%
ES	Correos	2,178	100%
ES	RTVE - Corporacion de Radio y Television Espanola SA	1,781	69%

ES	Tragsa - Empresa De Transformacion Agraria	363	100%
ES	Cofivacasa	210	100%
ES	Ensa - Equipos Nucleares	69	100%
ES	Mercasa	68	51%
ES	Defex	36	51%
FI	Veikkaus	3,759	100%
FI	Itella (Suomen Post)	2,262	100%
FI	Patria	1,102	73%
FI	Alko	628	100%
FI	Altia	534	100%
FI	Finavia	443	100%
FI	Destia	427	100%
FI	Gasum	264	24%
FI	Nordic Morning	150	100%
FI	Vapo	146	50%
FI	Suomen Rahapaja	121	100%
FI	Arctia Shipping	109	100%
FI	Ekokem	46	34%
FI	Suomen Lauttaliikenne	44	100%
FI	Suomen Viljava	37	100%
FI	Leijona Catering	23	100%
FR	La Poste	6,235	74%
FR	Nexter	1,884	100%
FR	France Televisions	1,462	100%
FR	Dcns	1,326	74%
FR	La Francaise des Jeux	1,179	100%
FR	LFB - Laboratoire Francais du Fractionnement et des Biotechnologies	877	100%
FR	Port Autonome De Paris	834	100%
FR	Grand port maritime du Havre	750	100%
FR	Aeroports de la Cote d'azur	548	100%
FR	Semmaris	495	94%
FR	Grand port maritime de Dunkerque	489	100%
FR	Imprimerie Nationale	401	100%
FR	Grand port maritime de Marseille	386	100%
FR	Aeroport Toulouse-Blagnac	342	100%
FR	Grand Port Maritime de Rouen	310	100%
FR	Aeroport Bale Mulhouse Fribourg	291	50%
FR	La Monnaie de Paris	276	100%

FR	Aeroports de Lyon	154	100%
GR	Depa - Public Gas Corp. of Greece	881	65%
GR	Athens International Airport	326	55%
GR	Hellenic Post (Elta)	247	90%
GR	Hellenic Casino of Parnitha	61	49%
GR	Patra Port Authority	56	100%
GR	Igoumenitsa Port Authority	15	100%
IT	Poste Italiane	12,996	100%
IT	Enav	1,566	100%
IT	Istituto Poligrafico e Zecca Dello Stato	1,388	100%
IT	RAI - Radiotelevisione Italiana	985	100%
IT	SoGIN	200	100%
IT	Cinecitta Luce	52	100%
NL	Nederlandse Gasunie	7,014	100%
NL	N,V, Luchthaven Schiphol	6,166	92%
NL	Tennet TSO	4,496	100%
NL	Havenbedrijf Rotterdam	2,537	99%
NL	Urenco	2,159	33%
NL	Koninklijke Luchtvaart Maatschappij	307	6%
PL	Krajowa Spolka Cukrowa	386	80%
PL	Huta Stalowa Wola	46	58%
PL	Zaklady Chemiczne Rudniki	30	100%
PT	TAP - Transportes Aereos Portugueses	463	100%
PT	APS - Administracao do Porto de Sines	322	100%
PT	APDL - Administracao dos Portos do Douro e Leixoes	299	100%
PT	APA - Administracao do Porto de Aveiro	287	100%
PT	Imprensa Nacional - Casa da Moeda	270	100%
PT	APL - Administracao do Porto de Lisboa	239	100%
PT	APSS - Administracao dos Portos de Setubal e Sesimbra	139	100%
PT	NAV - Navegacao Aerea de Portugal	85	100%
PT	EDM - Empresa de Desenvolvimento Mineiro	54	100%
PT	Lusa - Agencia de Noticias de Portugal	12	50%
RO	Hidroelectrica	2,770	80%
RO	Societatea Complexul Energetic Oltenia	953	77%
RO	Electrica Furnizare	37	100%
RO	Societatea Nationala A Sarii	34	51%
UK	Urenco Ltd	2,159	33%

UK	Nats Holdings	831	49%
UK	Eurostar International Ltd	807	40%
UK	The Royal Mint	106	100%
UK	David MacBrayne	97	100%

Source: Economica (2014),

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