The Political Determinants of the Cost of Equity: Evidence from Newly Privatized Firms*

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Abstract

We use a unique dataset of 126 privatized firms from 25 countries between 1987 and 2003 to investigate the political determinants of the cost of equity. We find strong, robust evidence that the cost of equity is increasing in government control, while controlling for other determinants of the cost of equity. We also find that the cost of equity is significantly related to the political system and government stability (tenure). Overall, our research suggests that the government's control rights and political characteristics determine the privatized firm's equity financing costs.

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1. Introduction

In this paper, we investigate the political determinants of the cost of equity in the context of privatization. The privatization context is interesting for many reasons. Privatization is accompanied by a drastic change in ownership structure and thus allows us to study more formally the dynamic link between the (new) ownership structure (and hence new corporate governance) and the cost of equity of the newly privatized firm. This switch from state to private ownership, which is accompanied by severe information asymmetry problems (Denis and McConnell (2003) and Dyck (2001)), provides us also with a unique setting in which we can investigate new determinants of the cost of equity: Specifically, the privatization context allows us to examine if and to what extent, political institutions that characterize the government (being simultaneously the residual owner and the issuer) matter to shareholders. To study this issue, we examine how government control and the political characteristics of the privatizing government may affect the cost of equity. More generally, we attempt to provide answers to the following questions: Is post-privatization government control considered as a risk factor by shareholders and does it influence the cost of equity of privatized firms? Do the political characteristics of the privatizing government (e.g., political orientation, the prevailing political system and government stability) also affect the cost of equity? In other words, are political factors priced in this setting?

This study is the first to analyze how government control and the political environment affect the implied cost of equity of firms operating in a wide set of countries, and extends recent research on the link between the political economy and corporate governance to include the role of government ownership. We focus on government control in privatized firms for two considerations. First, government ownership is an important dimension of the post-privatization corporate governance structure. Indeed, most privatization transactions in developing countries, and most initial privatizations in developed countries, are gradual (Perotti and Guney (1993)), allowing the government to remain a shareholder in the vast majority of privatized firms (e.g., Bortolotti and Faccio (2007)). Furthermore, government ownership is unique, because unlike

typical shareholders, the government pursues political objectives, which rarely coincide with profit maximization. In partial privatizations, one could expect that the grabbing hand of politicians is not completely neutralized, and thus the link between politicians and managers of the former state-owned firms is not completely severed. In such case, we face acute agency problems and extensive political entrenchment that may affect the cost of equity of the firm, as required by the remaining shareholders. Studying privatized firms is unique in the sense that political economy is embedded in the firms' management and operations, which provides us with a natural laboratory to test the link between the cost of equity capital and political economy.

Indeed, privatization is politically shaped. The political view of privatization held by Boycko et al. (1996) argues that by transferring the control of SOEs from the government to private owners, political interference will decrease or disappear, and thus should result in a lower risk of expropriation of minority shareholders' wealth. A primary prediction is that shareholders will demand a lower compensation for holding the shares of a privatized firm characterized by a lower level of government control. Perotti (1995) and Biais and Perotti (2002) theoretically show how the government's credibility, and commitment to privatization in particular, and market-oriented policies in general, command the way the process is conducted and the expected level of post privatization policy risk. According to Perotti's model, a committed government undertakes privatization for its micro- and macro-economic expected benefits, and should be associated with a lower policy risk once the firm is privatized. Biais and Perotti (2002) in turn argue that building confidence and credibility are influential factors in the privatization process: Right-wing governments are more likely to put in place market oriented policies and are more committed than left-wing governments. Hence, privatization by right wing governments should be associated with a lower policy risk. All these models suggest that potential shareholders will ask for a lower cost of equity to hold newly privatized companies' shares if they anticipate less policy risk after divestiture, even if the government still holds a residual stake.

To date, the issue on whether state ownership inhibits or drives post-privatization performance improvements is still debated. *On the one hand*, Boardman and Vining (1989) report that partially privatized firms underperform fully privatized firms and state owned enterprises. In the same vein, Boubakri and Cosset (1998) find that the performance improvements of firms

from developing countries after privatization are greater when the government relinquishes control. *On the other hand*, D'Souza, Megginson, and Nash (2005) document that state ownership of firms from developed countries induces more capital spending, while Gupta (2005), echoing this evidence, shows that partially privatized Indian firms exhibit a higher profitability after divestiture. We contribute to this debate by examining how government control may affect the equity financing costs of privatized firms, and how more generally, institutions and politics affect resource allocations around the dramatic regime shift that is privatization.

Rather than focusing on performance and value as in earlier studies, we choose to focus on the cost of equity for three main reasons. First, good corporate governance may improve the firm's valuation through a reduction of the diversion of the firms' cash flows (e.g., Claessens et al., 2002 and Gompers et al., 2003). Corporate governance can also affect firm value through the discount rate of the firm's expected future cash flows (i.e., the cost of equity).[1] Examining the latter link through which corporate governance may affect firm value is important, because the discount rate is a direct measure of the external equity financing costs, and determines the firm's financing and investing decisions (e.g., Shleifer and Vishny (2003)). Second, as argued by Suchard et al., (2007), unlike Tobin Q, the cost of equity is based on the firm's current operation risk and is less likely to be affected by the exogenous factors that affect the firm's growth opportunities. Therefore, the cost of equity is a more accurate measure of the changes in the firm's governance environments. Finally, the cost of equity captures the firm's agency and information asymmetry problems (e.g., Easley and O'Hara (2004) and Lambert, et al. (2007)).

Using a unique dataset of 126 privatized firms from 25 countries between 1987 and 2003, we find strong and robust evidence that the cost of equity is increasing in government control, while controlling for other determinants of the cost of equity. Our results also show that the cost of equity of the newly privatized firms is significantly related to the political system and government stability (tenure). More specifically, we find evidence that firms from countries with democratic and more stable governments enjoy a lower cost of equity. Therefore, our findings suggest that the presence of sound political institutions reduce the compensation demanded by shareholders for holding equity in privatized firms.

[1] Hail and Leuz (2006 p. 486) use a similar argument to motivate their choice of the cost of equity. They note: "It is possible that the valuation effects primarily reflect differences in the level of expropriation and firms' growth opportunities. But effective legal institutions may also reduce the risk premium demanded by investors, and hence firms' cost of capital."

Our paper contributes to the literature on several grounds: *First*, we contribute to the recent literature on the role of corporate governance in determining the firm's cost of equity, by introducing the corporate governance role of the government as a shareholder. *Second*, we add to the burgeoning literature on the political economy of corporate finance (e.g., Durnev et al., 2007; Bushman et al., 2004), by investigating the political determinants of the cost of equity. *Third*, we contribute to the privatization literature that provides, to date, little insights on the external financing costs of newly privatized firms.[2] *Finally*, we contribute to the debate on the link between government ownership/control and the firm performance by examining its impact on the cost of equity of newly privatized firms instead.

The rest of this paper is organized as follows. In section 2, we review the related literature and develop our hypothesis. Section 3 describes the sample and the construction of the implied cost of equity estimates, and provides descriptive information about the control structure of our sample of privatized firms. Section 4 presents our main empirical evidence and reports sensitivity analysis. Section 5 summarizes our findings and concludes.

2. Related Literature and Hypotheses

2.1 Government Control and the Cost of Equity

The literature is still debated on the impact of state ownership on post-privatization performance. On the one hand, the political view implies that state ownership is associated with post-privatization political interference (Boycko et al. (1996) and Shleifer and Vishny (1994)). The proponents of this view argue that managers in state owned enterprises (SOEs) may run the company to meet government leaders' political objectives, rather than to maximize profits. Typical manifestations of these political objectives include maintaining a high level of employment, and promoting regional development by locating production in politically desirable rather than economic attractive regions. Boycko et al. (1996) argue that a greater emphasis will be put on profits and efficiency only if privatization is associated with a transfer of control and ownership from the government to private shareholders, who will then strive to maximize firm value. In the same vein, Paudyal et al. (1998) argue that a lower percentage of capital sold by the government induces a higher level of post-privatization political interference

[2] A notable exception is Borisova (2007) that looks at the cost of debt of such firms from the European Union.

and a higher risk of renationalization. Therefore, the "political interference" hypothesis implies that higher government control is associated with a higher agency risk and thus with a lower post-privatization corporate performance or firm value. According to this argument, government control and the cost of equity should be positively related.

Several empirical studies provide support for the predictions of the political interference hypothesis. Boardman and Vining (1989) compare the performance of private firms, SOEs and partially privatized firms among the 500 largest non-US industrial firms. They report that partially privatized firms underperform private firms and SOEs. Similarly, Boubakri and Cosset (1998) find for developing countries that the performance improvement after privatization is greater when the government relinquishes control. More recently, Fan, Wang and Zhang (2007) document lower accounting and post-IPO long-term performances for Chinese privatized firms, when the government maintains control through political connections.

On the other hand, state ownership may be positively related to firm performance/valuation because it is associated with an implicit guarantee of government bail outs (i.e., a soft budget constraint). For example, Wang et al. (2008) argue that SOEs have lower incentives to enhance their information quality in order to obtain better contracting terms because they can appeal to soft-budget constraints when they encounter financial difficulties. Faccio et al. (2006) find that politically connected firms are more likely to be bailed out than non-politically connected peers. According to this view, the cost of equity should be positively associated with government control.

Overall, because the literature provides two competing predictions about the impact of government control on the cost of equity of privatized firms, our first hypothesis is non directional and states:

> *H_1: The cost of equity is related to the control rights held by the government, every thing else being equal.*

2.2 The Political Characteristics of the Government and the Cost of Equity

Perotti (1995) and Biais and Perotti (2002) suggest that the government's credibility and commitment toward privatization command the way the process is conducted and the expected

level of policy risk. Policy risk arises from post-privatization policies that may be undertaken by the government (e.g., deregulation and the implementation of new legislations and new administrative procedures) and could affect the allocation of the previously established rights. Several characteristics of the privatizing government may be related to policy risk. The political orientation of the government may determine the level of post-privatization policy risk. Left-oriented governments are more likely to intervene in the economy, and affect the post-privatization valuation by issuing policy changes that modify shareholders' control and income rights. In the sense of Biais and Perotti (2002), left-wing governments are less likely to put in place market-oriented policies and are less committed than right-wing governments. Therefore, we expect that policy risk should be higher in countries with left-oriented governments.

The political system may also determine the level of post-privatization policy risk. Democratic governments are more likely to put in place market-supporting reforms and thus should be more committed to privatization. Therefore, democratic governments should be associated with a lower risk of interfering in the operations of newly privatized firms (NPFs) through regulation or renationalization. As argued by Banerjee and Munger (2004 p.220), democracy also changes the incentives for rent-seeking. They note: "The checks and balances penalize self-interested politicians and hence limiting rent-seeking opportunities". Consequently, the policy risk faced by minority shareholders should be lower in countries with more democratic governments.

In addition, government stability may determine the level of post-privatization policy risk. A high government turnover increases the likelihood of policy reversals. Furthermore, governments uncertain about the probability of being reappointed engage in sub-optimal policies in order to worsen the state of the economy to be inherited by a successor. Therefore, the policy risk faced by the shareholders of NPFs should be higher in countries with unstable governments. In light of this discussion suggesting that the political characteristics of the government determine the level of post-privatization policy risk, we can derive our second hypothesis:

> *H_2: The cost of equity is related to political characteristics of the privatizing government, every thing else being equal.*

3. Data and Variables

3.1 Sample Construction

We obtain the list of privatized firms from several sources such as the *World Bank* privatization database for developing countries, the *Privatization Barometer* for OECD countries and Megginson's (2003) updated list of privatized firms in developed and developing countries. We follow the usual practice of eliminating firms from ex-communist countries and China (e.g., Megginson et al. (2004) and Bortolotti and Faccio (2007)).[3] Next, we hand match this database on the details of privatization with *I/B/E/S* and *Worldscope*, which we use to collect data on current stock prices and analysts' earnings forecasts, and financial data, respectively on our post-privatization period of five years i.e., from the year following the privatization to five years after privatization.

We require for each observation to have (i) a positive one-year-ahead and two-years-ahead earnings forecasts, (ii) either a three-years-ahead positive earnings forecast or a long term growth rate forecast, (iii) a contemporaneous price per share, and (iv) a positive book value from *Worldscope*. Analysts' forecasts and the stock price are measured as of the fiscal year-end + 10 months while financial data is measured as of the fiscal year-end.[4] All items are denominated in local currency. Next, we implement the four models of the implied cost of equity described in the appendix and exclude firm-years observations if: (i) the inflation rate for the country in that year is above 25%, (ii) one the cost of equity models does not converge or is not defined, (iii) we do not have data on the firm's ultimate ownership structure. We end up with a final sample of 126 firms privatized in 25 counties over the period of 1987 to 2003.[5] Table A_1 defines the variables used in our empirical analysis and their sources.

[3] Our sample does not include privatized companies in the ex-communist countries for at least two reasons. First, the traditional law system in these countries is based on the Soviet law which has undergone many changes during their transition period (La Porta et al., 2000). Second, the post-privatization ownership structure in these countries is mainly in the hands of insiders (managers and employees). Recent surveys of the experience of transition economies include Djankov and Murrell (2002) and Svejnar (2002).

[4] Followig Hail and Leuz (2006), we use analyst forecasts and the stock price at month +10 after the fiscal year end to compute our estimates of the implied cost of equity in order to ensure that financial data are publicly available and priced at the time of our computations.

[5] This number of firms represents 75% of the firms for which we are able to estimate the cost of equity.

Table 1 provides some descriptive statistics about the 126 firms from 25 countries used in this study.[6] The 126 firms are diversified across development level and legal origin. Specifically, 29.37% of the sample firms are located in developing countries while the remaining 70.63% are located in industrialized countries. Additionally, 71.44% of the sample firms come from civil law countries while 28.56% of our sample firms come from common law countries. Interestingly, this diversification involves countries with different legal, political and institutional environments, allowing us to investigate the impact of these cross country differences on the cost of equity. As reported in Table 1, our sample is also diversified across industries, with 17.46% in the financial sector, 7.94% in the petroleum sector, 11.91% in the transportation sector and the 22.22% in the utility sector. Furthermore, 81% of our sample privatization transactions occurred in the 1990s.[7]

Insert Table 1 about here

3.2 Cost of Equity Estimates

One measure of the cost of equity, commonly used in the asset pricing literature, is the ex-post realized return. However, this measure has been criticized in the recent finance literature (e.g., Fama and French (1997) and Elton (1999)). For example, Elton (1999) argues that the realized return is a poor and potentially biased proxy of the cost of equity.[8] Additionally, Fama and French (1997) conclude that the single factor capital asset pricing model and Fama-French three-factor model offer imprecise cost of equity estimates.[9] An alternative proxy of the cost of equity, largely used in the recent accounting and finance literature (e.g., Botosan and Plumlee (2005), Hail and Leuz (2006), Dhaliwal et al. (2006), among others) is the ex-ante rate of return implied by the discounted cash flow method. We follow this line of research by relying

[6] This sample is comparable with those of multinational studies on privatized firms: Megginson et al. (1994) with a sample of 61 firms from 18 countries, Boubakri and Cosset (1998) with a sample of 79 firms from 21 countries, D'Souza and Megginson (1999) with a sample of 78 firms from 25 countries, Dewenter and Malatesta (2001) with a sample of 61 firms from 8 countries, D'Souza et al. (2005) with a sample of 129 firms from 23 countries and Bortolotti and Faccio (2007) with a sample of 141 firms from 22 countries.

[7] Our sample firms show similar patterns to privatized firms listed on *Worldbank,* implying that our sample is representative of the underlying population. For example, 31% of the privatized firms listed on *Worldbank* come from common law countries and 65% come from civil law countries. Additionally, we note that 80% of the privatization transactions on the *Worldbank*'s *list* occurred in the 1990s.

[8] Elton (1999) indicates that a large or a sequence of correlated information surprises having significant permanent effect on realized returns will cause expected and realized returns to differ systematically over long periods.

[9] Fama and French (1997) find that the cost of equity estimates based on the single capital asset pricing model and their three-factor model are characterized by large standard errors.

on the discounted cash-flow method to estimate the cost of equity. Specifically, we use estimates of implied cost of equity based on the four following models: Claus and Thomas (2001 CT), Gebhardt, Lee and Swaminathan (2001 GLS), Easton (2004 ES) and Ohlson and Juettner-Nauroth (2005 OJ), denoted as R_{CT}, R_{GLS}, R_{ES} and R_{OJ}, respectively. These four models are based on either the residual income valuation model or an abnormal earnings growth valuation model and are primarily different in their assumptions on growth rates, forecast horizons and inputs. A description of these models and detailed implementation procedures on each model are summarized in the Appendix. Since there is not in the literature a strong consensus on the best performing model in estimating the cost of equity, we follow Hail and Leuz (2006) and Dhaliwal et al. (2006) by using the average of implied estimates from the four models as our estimate of the cost of equity.

Table 2 reports descriptive statistics for the implied cost of equity estimates. Panel A shows that the GLS model produces the lower estimates of the cost of equity, consistent with Gode and Mohanram (2003) and Hail and Leuz (2006), among others. Our estimate of the implied cost of equity R_{AVG}, the average of implied estimates from the four models, has a mean of 12.16% and a standard deviation of 4.30%. Panel B shows the pairwise Pearson correlations between the estimates from the four models. Similarly to Hail and Leuz (2006), we find that the estimates of cost of equity from the four models are highly correlated and the GLS model exhibits the lowest pair-wise correlation coefficients. Panel C, which reports descriptive statistics on the implied cost of equity (R_{AVG}) by country, shows differences on R_{AVG} between countries. R_{AVG} ranges from 8.74% in New Zealand to 18.30% in Brazil.

Insert Table 2 about here

3.3 Explanatory Variables

3.3.1 Control Structure. To measure the ultimate control (voting) rights of the largest shareholders of our sample firms, we hand-collected data on the ultimate ownership structure mainly relying on annual reports. We also use additional sources such as *Worldscope* and the Asian and Brazilian handbooks. We use the approach described in La Porta et al. (1999), Claessens et al. (2000) and Faccio and Lang (2002) to determine the ultimate control structure of privatized firms. Corporate ownership is measured by cash-flow rights, and control is measured

by voting rights. Following Bortolotti and Faccio (2007), we define a large shareholder as an entity which holds directly or indirectly at least 10% of the privatized firms' voting rights. This approach accounts for ownership leveraging devices, namely pyramids, dual-class shares, cross-holdings and multiple control chains. These devices allow largest shareholders to obtain excess control (control rights in excess of ownership rights). Using this approach allows us to tackle the problem of understatement of government control over NPFs as advocated by Bortolotti and Faccio (2007). Indeed, the government may divest more than 50% of the privatized firm, but still control the firm indirectly for example through a pyramidal ownership structure that involves other state-owned-firms.

Following the above cited studies on ultimate ownership, we classify the largest ultimate owner of each firm in the six following types: (i) State, (ii) Family, (iii) Widely-held corporation, (iv) Widely held financial institution, (v) Miscellaneous, and (vi) Cross-holdings. Table 3 reports descriptive information on the control structure of our sample firms over the period from year 0 to year +5. Panel A reports the percentage of firms controlled by each type of ultimate owner. The largest ultimate owner of the privatized firms is most frequently the state, in each of the six years. This evidence is consistent with Bortolotti and Faccio's (2007) findings for privatized firms from developed countries, that is, the state is the largest ultimate owner in both of the two years for which they collected ultimate ownership data, i.e., 1997 and 2000.

Five years after privatization, the government is the largest ultimate owner with 68.96% for our sample firms. Thus, even five years after the privatization, the government is the largest ultimate owner in almost two thirds of the sample firms. The second most frequent type of ultimate owner is family. Families control on average 7.66% of our sample firms during the post-privatization window. 5.54% of our sample firms do not have a large shareholder under the 10% threshold, and are classified as widely held. The percentage of widely held firms increases from 3.74% in year +1 to 10.34% in year +5. The largest owner is also frequently a widely held corporation. Widely held corporations control, on average, 5.11% of our sample firms over the post-privatization window. Panel B reports descriptive information on the use of control enhancing mechanisms by the government in firms in which it is the largest ultimate owner. During the post-privatization window, 49.45% of privatized firms in which the government is the largest ultimate owner use at least one of the enhancing control mechanisms. Globally, we find that the state is the largest ultimate owner in the post-privatization period. Panel C

provides descriptive statistics on the ultimate control rights held by the government. The statistics indicate a decline in government control rights over the post-privatization window. The mean government voting rights decline from 44.98% in year +1 to 32.72% in year +5, which is equivalent to a shift of 27.26%. Interestingly, we note that the government is the ultimate controlling shareholder (more than 50% of shares) in 95.35% of the sample firms before privatization. The percentage of firms in which the government is the ultimate controlling shareholder is also high during the post-privatization period. It ranges from 89.77% in year +1 to 77.05% in year+5.

Insert Table 3 about here

3.3.2 Political Economy Variables. As proxies of the political characteristics of the privatizing government, we use the following variables from the *Worldbank's* Database of Political Institutions (*DPI*):

Political orientation (*LEFT*): A dummy variable equal to one if the government is left-oriented, and 0 otherwise. Following Biais and Perotti (2002), we distinguish between left-wing and right-wing governments since right-wing governments are more committed and thus are expected to be associated with lower post-privatization policy risk. Hence a lower cost of equity.

Political regime (*SYSTEM*): This index is a proxy of the type of political system-democratic versus authoritarian. A higher score indicates more democratic governments. More democratic governments should be more inclined to put in place market supporting institutions. Furthermore, as argued by Banerjee and Munger (2004), more democratic governments are more likely to change the rent seeking incentives by the politicians. Therefore, more democratic governments should be associated with a lower policy risk. Hence a lower cost of equity.

Government tenure (*YRSOFFC*): We employ the number of years that the chief has been in office. This variable measures the credibility of the government and its abilty to implement economic reforms and privatization (Cukierman and Leviatan (1992)) and Banerjee and Munger (2004)), which lowers the post-privatization policy risk faced by shareholders (Perotti (1995)). Hence a lower cost of equity.

3.3.3 Institutional Variables. Recent empirical studies emphasize the important role of the institutional environment in protecting the minority shareholders' rights (e.g., Hail and Leuz (2006), among others). They report evidence suggesting that sound institutions and extensive disclosure standards are associated with lower agency risk and with lower equity financing costs. We rely on the following institutional variables that are likely to affect the cost of equity of privatized firms:

Government Risk of Expropriation (*GOV_EXPROP*): This index from La Porta et al. (1998) measures the risk of outright confiscation or forced nationalization by the state. Recent studies use this index as a proxy of the degree of state involvement in the economy and government predation (e.g., Bushaman and Piotroski (2006) and Durnev and Fauver (2007)). It ranges from 0 to 10, with higher scores associated with a lower risk of government intervention in the economy in order to extract rents for self enrichment. We expect a negative association between the cost of equity and government risk of expropriation index.

Law Order *(LAW_ORDER)*: This index from ICRG measures the country's law and order situation. The index ranges from 0 to 6, with higher scores indicating sound political institutions and a strong court system. We expect a negative association between the cost of equity and the country's law and order index.

Accounting Standards (*DISCLOSURE*): This variable from La Porta et al. (1998) is an indicator of disclosure standards based on inclusion or omission of 90 items in the annual reports. A higher score indicates extensive disclosure standards. We expect a negative association between the cost of equity and the accounting standards index.

Anti-self Dealing (*ANTISELF*): This index is a new measure of legal protection developed by Djankov et al. (2008). The index ranges from 0 to 1, with higher scores indicating better legal protection of minority shareholders. We expect a negative association between the cost of equity and the anti-self dealing index.

3.3.4 Control Variables. Following the recent empirical literature on the cost of equity, we control for the following risk and control variables:

Firm size *(SIZE)*: Fama and French (1992) suggest that the cost of equity is negatively related to the firm's size. Hail and Leuz (2006) document that the implied cost of equity is negatively and significantly related to the firm's size. We use the logarithm of the firm's total assets in US dollar as our proxy of the firm's size and we expect a negative association between the cost of equity and *SIZE*.

Stock Returns Volatility (*RETURN_VOL*): The CAPM suggests that the market beta should be positively associated with the cost of equity. However, in the tests that use realized returns (e.g., Fama and French, 1992; 1997), the estimated cost of equity using beta is found to be imprecise. Furthermore, some empirical studies on the cost of equity (Gebhardt et al. (2001) and Lee et al. (2004), among others) document no or even a negative association between the implied cost of equity and the market beta. In addition, Hail and Leuz (2006) find that that stock return variability explains cross-country differences in the cost of equity better than the market beta. Thus, we use stock return volatility rather than market beta to measure market risk. Lee et al. (2004), and Hail and Leuz (2006) find that the stock return variability is positively related to the cost of equity. Consequently, we expect a positive association between stock return volatility and the implied cost of equity.

Leverage (*LEVRAGE*): Modigliani and Miller (1958) show that without taxes and transaction costs the cost of equity of a firm is an increasing function of its debt ratio. With corporate taxes, Modigliani and Miller (1963) show also that the cost of equity is positively related to the leverage ratio of the firm. The same result is implied by Dhaliwal et al. (2006) who expand Modigliani and Miller (1963) by adding investor level taxes. Using implied cost of equity estimates and proxies for the firm's corporate tax rate and the personal tax disadvantage of debt, Dhaliwal et al. (2006) conclude that the cost of equity is positively associated with leverage. Accordingly, we expect the cost of equity to be positively associated with the firm's leverage ratio.

Market-to-Book Ratio (*MARKET TO BOOK*): Fama and French (1992) find that realized stock returns are positively related to book to market ratio, implying a negative association between market to book ratio and the implied cost of equity. Recent empirical studies on the implied cost of equity (e.g., Gebhardt et al., 2001; Gode and Mohanram, 2003; Hail and Leuz,

2006) report evidence consistent with the Fama and French's (1992) findings. Accordingly, we expect a negative association between the market to book ratio and the implied cost of equity.

Long-term Growth Rate (*GROWTH_RATE*): Gebhardt et al. (2001) and Gode and Mohanram (2003), among others, measure the firm's long term growth rate by the five-year earnings growth rate available in I/B/E/S, and find a positive association between the earnings growth rate and the implied cost of equity. This evidence suggests that the market perceives high growth firms riskier, consistent with the asset pricing theory. Consequently, we expect a positive association between the cost of equity and the expected long-term earnings growth rate.

Dispersion of Analyst Forecasts (*VAR_ANALYSTCOV*): A higher dispersion in earnings forecasts implies a greater disagreement among analysts, and thus results in a greater uncertainty about the forecasted earnings per share and in a higher cost of equity. Empirical evidence provided by Gode and Mohanram (2003) is consistent with this point of view. Therefore, we expect a positive association between the cost of equity and the dispersion of analyst forecasts.

Inflation *(INFL)*: Analyst forecasts, stock price, the book value of equity, the key inputs of the cost of equity are all expressed in nominal terms and local currencies. Consequently, our estimates of the cost of equity reflect the country's expected inflation rate. Following Hail and Leuz (2006), we control for the expected inflation rate that we measure as the annualized yearly median of a country specific one-year-ahead realized monthly inflation rate.

GDP Growth (*GDPG*): We incorporate GDP growth per capita to control for cross-country differences in the level of economic development. We also introduce *GDPG*, which may capture country fixed effects, to control for potential country-specific unobservable or omitted variables.

Industry Membership *(INDUSTRY CONTROLS):* Several empirical studies on the cost of equity (e.g., Gebhardt et al. (2001), Gode and Mohanram (2003) and Hail and Leuz (2006), among others) show that the firm's implied cost of equity is positively and significantly associated with its industry membership. To control for this effect, we follow Campbell (1996)

and classify our sample firms in 12 industries based on the firm's two digit SIC codes to indicate industry membership.

4. Empirical Analysis

To test our predictions in H_1 and H_2, we regress the privatized firm's cost of equity on government control, political, and institutional variables, while controlling for standard firm- and country-level determinants of the cost of equity. More specifically, we estimate several specifications of the following general model:

$$R_{AVG_{it}} = \delta_0 + \delta_1 GOVCONT_{it} + \delta_2 POLITICAL_{it} + \delta_3 INSTITUTIONAL_{it} + \delta_4 CONTROLS + \gamma_t + \varepsilon_{it} \quad (1)$$

where $R_{AVG_{it}}$ is the average of implied cost of equity estimates for firm i at time t based on the four different models described in the Appendix, $GOVCONT_{it}$ represent the ultimate control rights held by the government in firm i at time t, $POLITICAL_{it}$ represents the political economy variables outlined in section *3.3.2*, $INSTITUTIONAL_{it}$ refers to the institutional environment variables outlined in section *3.3.3,* $CONTROLS_{it}$ comprises the set of firm- and country-level control variables outlined in section *3.3.4*, γ_t are year dummies (i.e., an indicator for each post-privatization year) controlling for year fixed effects, and ε_{it} is the error term.

Megginson and Netter (2001) identify some methodological shortcomings of existing empirical studies on the effects of privatization on performance mainly related to potential selection bias. One of the selection bias problems is related to the fact that the government in order to make privatization "attractive", may divest the "healthiest" and the "easiest" firms first (Megginson and Netter (2001)). Therefore, government control may be systematically related to both unobservable and observable firm characteristics. Following several privatization studies (e.g., Villalonga (2000), Boubakri et al. (2005) and Gupta (2005)), we address the selection bias by estimating a fixed-effects model. We believe that a particular firm exhibits the same characteristics as the whole industry. Governments generally privatize firms from particular industries using the same timing and sales methods. Therefore, using industry-fixed effects allows us to control for unobservable selection effects.

Table 4 provides summary descriptive statistics on the regression variables and their pairwise correlations. Panel A presents statistical properties of individual explanatory variables. Panel B provides Pearson correlation coefficients between the regression variables. The correlation coefficients that are significant at the 1% level are bold faced. Consistent with our predictions in H_1, we find that *GOVCONT* is significantly and positively correlated with the cost of equity at the 1% level over our post-privatization window of five years. This initial evidence is consistent with the political interference hypothesis that higher government control is associated with a higher post-privatization political interference and thus with a higher cost of equity. We also find that the correlation coefficients between the cost of equity and the political economy variables are highly significant, giving initial support for our conjecture in H_2 that the political characteristics of the privatizing government are priced. Additionally, we find that all institutional variables are negatively correlated at the 1% level with the cost of equity, except for *ANTISELF*. We generally report lower correlation coefficients between government control and the political economy variables and our control variables, respectively, mitigating multicolinearity concerns that could affect our regression results. As expected, the pairwise correlation coefficients between the institutional variables are high. Given that, we follow the recent literature on the cost of equity (e.g., Hail and Leuz (2006)) by separately controlling for our institutional variables.

4.1 Main Evidence

Table 5 reports the results of estimating equation (1) for the post-privatization window of five years. In all models, we control for firm- and country-level determinants of the firm's cost of equity. In Model 1, our basic regression, we only include the government control and political economy test variables. The model provides evidence, which is consistent with our predictions in H_1 and H_2 that the cost of equity of NPFs is related to government control and the political characteristics of the privatizing government. The coefficient of *GOVCONT* is positive and statistically significant at the 5% level, suggesting that higher government control is associated with higher post-privatization political interference and thus with a higher cost of equity. This finding is consistent with the political interference hypothesis. We can interpret it as implying that minority shareholders anticipate the post-privatization political interference and discount the share prices, hence raising the cost of equity financing and potentially reducing the ability of the NPF to fund its investments. The coefficient of *LEFT* is positive, but is not statistically

distinguishable from zero. Therefore, our regression results do not support the conjecture that firms from countries with left-wing governments, which are associated with a higher policy risk, are penalized with higher equity financing costs. The coefficient of *SYSTEM* is negative and significant at the 1% level, implying that firms from countries with a higher political system index experience a lower cost of equity, suggesting that firms from more democratic countries have a lower cost of equity. This evidence is consistent with the argument that post privatization policy risk is lower in more democratic countries. Furthermore, the coefficient of *YRSOFFC* is negative and statistically significant at the 1% level, suggesting that the cost of equity is decreasing in the number of years that the government has been in power. This finding implies that governments which have been in power for a long time are more stable and are associated with a lower policy risk and thus with a lower cost of equity.

In Models 2 through 5, we separately control for the institutional variables. We find that the coefficient of *GOV_EXPROP* is negative and significant at the 5% level, suggesting that a higher risk of expropriation by the government is associated with a higher cost of equity. We can interpret this finding as implying that the shareholders of NPFs from countries with higher state intervention in the economy require a higher compensation to finance the investment needs of such firms. We also find that the coefficient of *ANTISELF* is negative, but insignificant at the 10% level, suggesting that a better legal investor protection is associated with a lower cost of equity. This evidence is consistent with the findings of recent studies on the implied cost of equity (e.g., Hail and Leuz (2006), among others) that firms from countries with a higher quality of legal institutions exhibit a lower cost of equity. Furthermore, we find that the coefficients of *LAW_ORDER* and *DISCLOSURE* are both negative, but are not significant. Therefore, our results do not provide evidence that disclosure standards and the country's law and order situation influence the cost of equity of NPFs. More importantly, for our purposes, we continue to estimate the positive and highly significant relation between *GOVCONT* and the cost of equity as well as the negative and highly significant association between *SYSTEM*, *YRSOFFC*, and the cost of equity. In Model 6, we include all of our institutional variables and we find that our inferences on the impact of government control and the political economy variables on the cost of equity of NPFs remain materially unchanged.

Turning to our firm- and country-level control variables, we find that the coefficient of our proxy for firm size is negative and highly significant. This evidence is consistent with the

findings of Fama and French (1992) and Gebhardt et al. (2001) that the cost of equity is negatively associated with the firm's size. Consistent with Gode and Mohanram's (2003) findings, we also find that the coefficient on *VAR_ANALYSTCOV* is positive and significant at the 1% level across all models, suggesting that a greater disagreement among analysts on earnings forecasts results in a greater uncertainty and thus in a higher cost of equity. Furthermore, we find positive and highly significant coefficients for *RETURN_VOL* and *GROWTH_RATE,* in line with the findings of the literature on the implied cost of equity (e.g., Gode and Mohanram (2003), among others). The coefficient of *LEVERAGE* is also positive and significant in four of the six model, giving support for the theoretical and empirical literature on the impact of the leverage on the cost of equity. Additionally, we find that the coefficient of market to book ratio is significant at the 1% level in all regressions, consistent with Gode and Mohanram (2003) and Hail and Leuz (2006), among others. Consistent with Hail and Leuz (2006), we find that the coefficient of our proxy of the country's expected inflation rate, *INFL,* is positive and significant at the 1% level across all models. Finally, the coefficient of *GDPG* doesn't seem to explain the cost of equity. A possible explanation of this finding is that our institutional variables capture the cross-country differences on the development level.

Insert Table 5 about here

We extend our analysis of the impact of government control and political economy variables on the cost of equity in table 5 by controlling in table 6 for the following privatization variables: (i) privatization progress, (ii) golden share, (iii) local institutions' control, and (iv) foreign control. Privatization sustainability may affect policy risk and thus the cost of equity of privatized firms. Perotti (1995) argues that privatization sustainability transmits a credible signal of government commitment to investors. Additionally, Perotti and Leaven (2002) argue that only a sustained and consistent privatization program can convey a credible signal that eliminates policy risk. Therefore, we predict sustained privatization to decrease policy risk, and thus to be negatively associated with the cost of equity. To capture sustained privatization, we use *PRIV_PROGRESS*, which is the cumulated average of privatization proceeds to GDP.[10] Data on privatization proceeds come from *SDC Platinuim* and data on GDP are collected from *World Development Indicators*. Golden share, which can be defined as a mechanism by which

[10] See Perotti and Laeven (2002) for the details on the calculation of this variable.

governments can maintain their control over privatized firms, may also influence the cost of equity. By retaining a golden share governments may have special veto power over the firm's major decisions such as merger and hostile takeover or impose constraints on other owners such as limits on their voting rights.[11] The data on golden shares come mainly from Bortolotti and Siniscalco (2004) and Megginson (2003).

Furthermore, the presence of foreigners as large shareholders may influence the NPF's equity financing costs. In fact, foreign owners maintain for several concerns a strict control of managers' actions (Frydman et al. (1999) and D'Souza et al. (2005)). These concerns include reputation, corporate governance expertise etc. In addition, foreign owners require a high quality of accounting information. For example, Stulz (1999) shows that the openness of domestic capital markets to foreign investors is associated with a higher demand for good corporate governance and higher corporate transparency. Therefore, foreign control which may result in a better monitoring and a higher quality of accounting information should be associated with a lower cost of equity. Additionally, local institutional investors as large shareholders in NPFs may also affect the cost of equity. Boubakri et al. (2005) report results suggesting that local institutions may be an effective mechanism of post-privatization corporate governance. Therefore, we expect a negative association between the cost of equity and local institutional investors' control.

Model (1) indicates that the coefficient of *PRIV_PROGRESS* is negative and significant at the 5% level, suggesting that privatization sustainability is indeed associated with a lower policy risk and thus a lower cost of equity. This evidence supports Perotti (1995)'s conjecture that privatization sustainability provides a credible signal of government commitment to privatization and reduces policy risk. Model (2) shows no effect of golden shares as an alternative mechanism of government control on the cost of equity of NPFs. Similarly, Model (3) reveals an insignificant relation between foreign control and the cost of equity. Therefore, our

[11] Bortolotti and Faccio (2007) define golden share used by the goverment to maintain control over privatized firms as: "the system of the State's special powers and statutory constraints on privatized companies. Typically, special powers include (i) the right to appoint members in corporate boards; (ii) the right to consent to or to veto the acquisition of relevant interests in the privatized companies; (iii) other rights such as to consent to the transfer of subsidiaries, dissolution of the company, ordinary management, etc. The above mentioned rights may be temporary or not. On the other hand, statutory constraints include (i) ownership limits; (ii) voting caps; (iii) national control provisions."

results do not provide support for the conjecture that the presence of foreign investors in NPFs is associated with a lower cost of equity.

Model (4) shows a negative and significant relation at the 5% level between local institutional investors' control and the cost of equity. This finding, which is consistent with Boubakri et al. (2005)'s finding suggest that local institutions are associated with a better monitoring of managers and thus with a lower the risk of expropriation of minority shareholders' wealth. More interestingly for our purposes, we continue to estimate a positive and highly significant relation between *GOVCONT* and the cost of equity across the four models as well as a highly significant association between *SYSTEM*, *YRSOFFC* and the cost of equity. These findings are consistent with those reported in table 5 and provide additional support for our predictions in H_1 and H_2 that the cost of equity of NPFs is related to government control and the political characteristics of the privatizing government.

Insert Table 6 about here

4.2 Sensitivity Tests

In this section, we conduct a battery of sensitivity tests to ensure the robustness of our findings. The results of our main sensitivity tests reported in Table 7 generally reinforce our core findings in Table 5 and Table 6 that the cost of equity of privatized firms is related to government control and the political characteristics of the privatizing government.

4.2.1 Alternative Control Variables. The empirical studies on the implied cost of equity (e.g., Gebhardt et al. (2001)) use analyst coverage as a proxy of firm size. Indeed, firms with larger size are more likely to have greater analyst coverage. Analyst coverage is also used as a proxy of information availability. In fact, firms with higher analyst coverage are more likely to have more precise public information (Bowen et al. (2006)), and thus fairer valuation of their stocks. Gebhardt et al. (2001), among others, document a negative association between the implied cost of equity and analyst coverage. In Model (1) we control for *ANALYSTCOV*– measured as the number of analysts who provided estimate of forecasted earnings per share reported in I/B/E/S. The coefficient of *ANALYSTCOV* is positive and significant at the 10% level. More importantly for our purposes, the coefficient of *GOVCONT* remains positive and

significant at the 5% level and the coefficients of *SYSTEM* and *YRSOFFC* remain negative and significant at the 1% level, respectively.

Our estimates of the cost of equity are derived from stock prices and analysts' earnings forecasts. If analysts' earnings forecasts are biased estimates of future earnings, the errors in these forecasts could affect our cost of equity estimates. The forecast bias may reflect the firm's disclosure policies. For example, Hope (2003) documents significant cross-country differences in forecast accuracy and find a significant association between forecasted accuracy and the firm's annual reported disclosure. The forecast bias may also reflect earnings surprises. For example, Gebhardt et al. (2001) argue that the forecast bias reflects unpredictable earnings forecasts. Mikhail et al. (2004) find that firms with repeated earnings surprises experience a higher cost of equity. We define *FORBIAS* as the difference between mean one-year-ahead consensus forecast and the actual earnings per share reported in I/B/E/S divided by mean one-year-ahead consensus forecast. Model (2), which includes forecast bias, indicates that the coefficient of *FORBIAS* is positive and significant at the 10% level. This evidence is consistent with Hail and Leuz (2006)'s findings. Previous evidence that the cost of equity is increasing in *GOVCONT* and decreasing in *SYSTEM* and *YRSOFFC* persists in this model, respectively.

In our main empirical analysis we use *INFL* to control for cross-country differences in expected future inflation rates. In Model (3), we replace *INFL* by local risk free rates, R_f, which is equal to yields of local treasury bills, central bank papers, or interbank loans from Datastream.[12] Controlling for local risk free rates allows us to capture several cross-country differences beyond cross-country differences in expected inflation rates such as for example cross-country differences in interest rate regimes. Model (3) indicates that our main previous results and inferences remain materially unchanged after controlling for local risk free rates.

4.2.2 Alternative Political Economy Variables. Several recent studies examining the link between politics and corporate governance and transparency (e.g., Bushman et al. (2004) and Durnev and Fauver (2007)) use variables from *Polity V*. We check the sensitivity of our

[12] Hail and Leuz (2006 p. 517) use a similar argument to motivate this sensitivity test. They note: "our design assumes that differences in the nominal risk-free rate stem only from differences in expected inflation rates. Although this assumption is common in the international finance literature, it is likely that real interest rates differ across countries, reflecting, among other things, saving rates or interest rate regimes. Thus, it would be desirable to control for the real risk free rate in each country."

inferences about the role of politics by using alternative political economy variables from *Polity V*. In model (4), we replace our political economy variables from *DPI* by the autocratic index, *AUTOCRACY*, which is calculated as the difference between *Polity V*'s autocratic index and *Polity V*'s democratic index. The autocratic index measures general closedness of the political institutions while the democratic index measures general openness of the political institutions. We find that the coefficient of *AUTOCRACY* is positive and significant at the 5% level, suggesting that the risk of expropriation of shareholders' wealth is higher under autocratic governments.

4.2.3 Endogeneity of Government Control. One potential concern is that *GOVCONT* itself may be not exogenous. In fact, the control rights held by the government may be determined by unobserved variables that also affect the cost of equity, which can lead to biased and inconsistent OLS estimates. We address this issue by using an instrument variable approach. The instrumental variables must be highly correlated with *GOVCONT* but not with our estimate of the implied cost of equity i.e., R_{AVG}. We use the country's legal origin as an instrument variable. Specifically, we use a dummy variable, which is equal to 1 for firms from common law countries, and zero otherwise. The significant relation between government ownership and control and legal rights has been well documented in the finance literature (e.g., Bortolotti and Faccio (2007)). We estimate our basic model in table 5 using two-stage least squares regression. In the first stage, we predict *GOVCONT* using the country's legal origin as well as all of the other independent variables used in Model 1 of Table 5. In the second stage, we use the first-stage fitted values as instruments for *GOVCONT*. The 2SLS regression results are reported in Model 5. Importantly, we find that the coefficient of *GOVCONT* is positive and significant at the 5% level, indicating that our previous findings are not due to endogenous nature of *GOVCONT*.

4.2.4 Alternative estimations and specifications. We use an alternative approach to control for cross-country differences in expected inflation rates. The approach consists to subtract the expected inflation rates from the implied cost of equity estimates and use inflation adjusted cost of equity as a dependent variable. However, we acknowledge that this approach has the disadvantage that it forces a coefficient of minus one on our proxy of the expected inflation rates. Model (6), in which we use risk premia, we find that the coefficient of *GOVCONT* is positive and significant at the 5% level. However, our political economy variables become insignificant. Similarly to Hail and Leuz (2006), we find that the fit from this model is lower than

in the models (R^2=0.242), in which we simply add the expected inflation rate as an explanatory variable.

As outlined in section 3.1 we use analyst forecasts and the stock price at the fiscal year end +10 months and financial data at the fiscal year end. This time lag allows the firm's financial information to be publically traded and incorporated in prices. To ensure that our results are not affected by the time lag, we discount for each model the fiscal year end +10 months price to the fiscal year end using the corresponding implied cost of equity.[13] The unreported results show that *GOVCONT* remains positive and significant at the 5% level and *SYSTEM* and *YRSOFFC* continue to load negative and significant at the 1% level. Therefore, our results are not affected by the fact that we use stock prices at the fiscal year end +10 months together with financial data at the fiscal year end.

We test the sensitivity of our findings to alternative assumptions on the long term growth rate. In our previous analysis, we assume that the long term growth rate is equal to the country's expected inflation rate. This assumption affects only the CLS and OJ model that have the long term growth rate as an output. We replace the country's expected inflation rate by a fix constant rate of 3% for all countries. The unreported results show that *GOVCONT* continue to load positive and significant. We also find that *SYSTEM* and *YRSOFFC* remain positive and highly significant. Consequently, our findings are not driven by a particular assumption on the long term growth rate.

Finally, we use the four individual estimates of the cost of equity R_{OJ}, R_{CT}, R_{GLS} and R_{ES} to examine the impact of government control and the political characteristics of the privatizing government on the cost of equity. The unreported results show that *SYSTEM* and *YRSOFFC* continue generally to load negative and significant across all models. We also find that *GOVCONT* is positive and significant when the dependent variable is R_{CT} or R_{OJ} and insignificant when the dependent variable is R_{GLS} or R_{ES}. These findings are consistent with Botosan and Plumlee's (2005) findings that the correlation coefficients between the implied cost of equity and the risk factors vary across different models. These findings are also consistent

[13] Hail and Leuz (2006 p. 527) argue that this time lag doesn't affect earnings forecasts. They note: "In the absence of any new information, a US$ 2 earnings per share forecast at the beginning of the fiscal year (t) yields the same number just 10 months later (t'). Prices, on the other hand, increase as they move closer to future expected cash flows, even without new information."

with Dhaliwal's (2006) findings that the impact of taxes and leverage on the cost of equity varies across the four models.[14] Overall, these findings outline the caveat associated with the use of a single model to estimate the implied cost of equity.

Insert Table 7 about here

5. Conclusions

In this paper, we investigate the effects of government control and the political characteristics of the privatizing government on the cost of equity of newly privatized firms. To do so, we use a unique sample of 126 firms from industrialized (19) and developing (6) countries that were privatized between 1987 and 2003. Descriptive information on our ultimate ownership data shows that the largest ultimate owner of the privatized firms is most frequently the state. More specifically, we find that the state remains the largest ultimate owner of most firms in our sample even five years after privatization.

Using the cost of equity estimates (derived from the discounted cash flow method), we find strong evidence that it is increasing in government control, after controlling for firm-level and country-level variables shown to affect the cost of equity. This finding implies that minority shareholders anticipate some level of post-privatization political interference, and discount the share prices, hence raising the cost of equity financing of newly privatized firms. This behavior could adversely affect the ability of these firms to fund their investments and growth. We also find that the cost of equity of privatized firms is significantly related to the political system and government stability (tenure). More specifically, we find evidence that firms from countries with democratic and more stable governments enjoy a lower cost of equity. Therefore, our findings suggest that the presence of sound political institutions reduce the compensation demanded by shareholders for holding equity in privatized firms where the government is still a partial owner.

[14] Dhaliwal et al. (2006 p. 711) note that: "Using the average cost of equity estimate, the results provide consistent support for H2 and H3; however, these hypotheses are not uniformly supported by the individual models. Notably, we obtain insignificant results for personal tax effects when the dependent variable is r_{gls} , and insignificant results for corporate tax effects when the dependent variable is r_{ct} and r_{mpeg}."

Our paper contributes to the literature on the link between political economy and corporate finance (e.g., Durnev et al., 2007; Bushman et al., 2004). We also add to the literature on the external financing costs of privatized firms. This issue is important since the survival of these firms depends to a large extent on the easy access to new funding resources on the capital markets, at a reasonable cost, now that the budget constraint is hardened after privatization.

APPENDIX

Models of Implied cost of equity estimates

We first define the following variables that are common to the four models:

P_t = Market price of a firm's stock at time t.

B_t = Book value per share at the beginning of the fiscal year.

$FEPS_{t+i}$ = Mean forecasted earnings per share from I/B/E/S or implied EPS forecasts for year $t+i$.

LTG = The consensus long term growth rate form I/B/E/S or the percentage change in forecasted earnings between year $t+2$ and year $t+3$.

$POUT$ = The forecasted payout ratio. To estimate the dividend per share for year $t+i$, we use the firm's dividend payout ratio at time t if available and 50% if not, as in Claus and Thomas (2001).

R_j = The implied cost of equity derived from each of the four different models.

Ohlson and Juettner-Nauroth (2005)

$$P_t = (FEPS_{t+1} / R_{OJ}).(g_{st} + R_{OJ} \cdot DPS_{t+1} / FEPS_{t+1} - g_{lt}) / (R_{OJ} - g_{lt}) \quad (1)$$

where $g_{st} = (FEPS_{t+2} - FEPS_{t+1}) / FEPS_{t+1}$.

This model is derived from the abnormal earnings valuation model developed by Ohlson and Juettner-Nauroth (2005). It uses one-year-ahead and two-years-ahead earnings per share, the future dividend per share and a proxy of the long term growth rate. The future dividend, DPS_{t+i}, is estimated as $FEPS_{t+i}$ multiplied by $POUT$. The asymptotic long term growth rate, g_{lt}, is calculated using the annualized yearly median of a country specific one-year-ahead realised monthly inflation rates. g_{lt} constitutes a lower bound for the cost of equity estimates.

Claus and Thomas (2001)

$$P_t = B_t + \sum_{i=1}^{5} \frac{FEPS_{t+i} - R_{CT} B_{t+i-1}}{(1+R_{CT})^i} + \frac{\left[FEPS_{t+5} - R_{CT} B_{t+4}\right](1+g_{lt})}{(R_{CT} - g_{lt})(1+R_{CT})^5} \quad (2)$$

In this model the price is a function of the future forecasted earnings per share, the book value per share and the asymptotic long term growth rate. Claus and Thomas (2001) implement the model using the I/B/E/S forecasted earnings per share for the next five years. If the forecasts earnings per share, $FEPS_{t+i}$, are not available in I/B/E/S for years $t+3$, $t+4$ and $t+5$, $FEPS_{t+i} = FEPS_{t+i-1}(1+LTG)$. The long-term abnormal earnings growth rate, g_{lt}, is calculated using the annualized yearly median of a country specific one-year-ahead realised monthly inflation rates. The future book values are estimated by assuming the clean surplus relation i.e., $B_{t+i} = B_{t+i-1} + FEPS_{t+i} - DPS_{t+i}$. The future dividend, DPS_{t+i}, is estimated by multiplying $FEPS_{t+i}$ by $POUT$. g_{lt} constitutes a lower bound for the cost of equity estimates.

Gebhardt, Lee and Swaminathan (2001)

$$P_t = B_t + \sum_{i=1}^{T} \frac{(FROE_{t+i} - R_{GLS})B_{t+i-1}}{(1+R_{GLS})^i} + \frac{(FROE_{t+T+1} - R_{GLS})B_{t+T}}{(1+R_{GLS})^T R_{GLS}} \quad (3)$$

For years $t+1$ to $t+3$, $FROE_{t+i}$ is equal to $FEPS_{t+i} / B_{t+i-1}$. After the forecast period of three years, $FROE_{t+i}$ is derived by linear interpolation to the industry-median ROE. Average ROEs are computed in a given year and country for each of the 12 industry classifications of Campbell (1996). Negative industry median ROEs are replaced by country-year medians. The abnormal earnings at year $t+12$ are then assumed to remain constant afterwards. Future book values are estimated by assuming clean surplus. The future dividend, DPS_{t+i}, is estimated as $FEPS_{t+i}$ multiplied by $POUT$. We assume that $T = 12$.

Easton (2004)

$$P_t = \frac{FEPS_{t+2} - FEPS_{t+1} + R_{ES}DPS_{t+1}}{R_{ES}^2} \quad (4)$$

To implement the model, Easton (2004) uses one-year ahead and two-years ahead forecasted earnings per share reported in I/B/E/S. The future dividend, DPS_{t+i}, is estimated by multiplying $FEPS_{t+i}$ by $POUT$. This model requires a positive change in forecasted earnings per share to yield a numerical solution.

TABLE A_1

Variables, Definitions, and Sources

Variable	Definition	Source
RAVG	Dependent variable, our estimate of the cost of equity, which is the average cost of equity estimated using the four models described in the Appendix.	Authors' estimation
GOVCONT	The ultimate control rights held by the government.	Authors' calculation
LEFT	A dummy variable equal to one for the left oriented government, and 0 otherwise.	Database of Political Institutions
SYSTEM	Political system index: Direct Presidential (0); Strong president elected by assembly (1); Parliamentary (2).	Database of Political Institutions
YRSOFFC	The years that the chief has been in office.	Database of Political Institutions
GOV_EXPROP	ICRG's assessment of the risk of outright confiscation or forced nationalization by the state. Scale from 0 to 10, with higher scores for lower risk.	La Porta et al. (1998)
LAW_ORDER	The ICRG assessment of both the strength and impartiality of the legal system (law component) and popular observance of the law (order component). Scale from 0 to 6, with higher scores indicating sound political institutions and a strong court system.	International Country Risk Guide.
DISCLOSURE	The ratings for disclosure standards based on inclusion or omission of 90 items in the annual reports.	La Porta et al. (1998)
ANTISELF	Average of ex-ante and ex-post private control of self-dealing.	Djankov et al. (2008)
SIZE	The logarithm of the firm's total assets in US dollar.	Worldscope
RETURN_VOL	The annual standard deviation of monthly stock returns.	Authors' calculation
LEVERAGE	Total book value of debt divided by the sum of market value of equity and the book value of debt.	Worldscope
MARKET TO BOOK	The ratio market to book.	Worldscope
GROWTH_RATE	Five year growth rate from I/B/E/S. If this rate isn't available in I/B/E/S we estimate it using forecasted second and third years earnings per share.	I/B/E/S
VAR_ANALYSTCOV	Standard deviation of estimated first year earnings per share divided by average forecasted first year earnings per share.	Authors' calculation
INFL	The annualized yearly median of a country specific one-year-ahead realised monthly inflation rate.	Datastream
GDPG	GDP growth per capita.	World Development Indicators

References

Albuquerque, R., Wang, N., 2005. Agency conflicts, investment, and asset pricing. *Working paper*, University of Rochester and Columbia Business School.

Banarjee, G.B., Munger, M., 2004. Move to markets? An empirical analysis of Privatization in developping countries, *Journal of International Development* 16, 213-240.

Biais, B., Perotti, E., 2002. Machiavellian Privatization. *American Economic Review* 92:240-258.

Boardman, A.E., Vining, A.R., 1989. Ownership and performance in competitive environments: A comparaison of the performance of private, mixed, and state-owned enterprises. *Journal of Law and Economics*, 1-33.

Borisova, G., 2007. Does privatization affect the cost of debt? Evidence from the European Union. *Woking Paper*, Oklahoma University.

Bortolotti, B., Faccio, M., 2007. Government control of privatized firms. *Review of Financial Studies,* forthcoming.

Bortolotti, B., Siniscalco, D., 2004. The challenges of privatization: an international analysis. Oxford University Press, New York.

Botosan, C., Plumlee, M., 2005. Assessing alternative proxies for expected risk premium. *The Accounting Review* 80, 21-53.

Boubakri, N., Cosset, J.C., 1998. The financial and operating performance of newly privatized firms: Evidence from developing countries. *Journal of Finance* 53, 1081–1110.

Boubakri, N., Cosset, J.C., Guedhami, O., 2005. Post-privatization corporate governance: The role of ownership structure and investor protection. *Journal of Financial Economics* 76, 369-399.

Boycko, M., Shleifer, A., Vishny, R., 1996. A theory of privatization. *The Economic Journal*, 309-319.

Bowen, R., Chen, X., Cheng, Q., 2006. Analyst coverage and the cost of raising equity capital: Evidence from underpricing of seasoned equity offerings. *Working Paper*, Sauder School of Business.

Bushman, R., Piotroski, J., Smith, A., 2004. What determines corporate transparency? *Journal of Accounting Research* 42, 207-252.

Campbell, J.Y., 1996. Understanding risk and return. *Journal of Political Economy* 104, 298-345.

Claessens, S., Djankov, S., Fan, J., Lang, L., 2002. Disentangling the incentive and entrenchment effects of large shareholdings. *Journal of Finance* 57, 2741-2771.

Claessens, S., Djankov, S., Fan, J., Lang, L., 2000. The separation of ownership and control in East Asian corporations?, *Journal of Financial Economics* 58, 81-112.

Claus, J.J., Thomas, J.K., 2001. Equity premia as low as three percent? Evidence from analysts'earnings forecasts for domestic and international stock markets. *Journal of Finance* 56, 1629-1666.

Cukierman A., Leviatan, N., 1992. Dynamics of optimal gradual stabilisation. *World Bank Economic Review* 6, 439-458.

Denis, D. K., McConnell, J.J., 2003. International corporate governance. *Journal of Financial and Quantitative Analysis* 38, 1-36.

Dewenter, K.L., Malatesta, P.H., 2001. State-owned and privately owned firms: An empirical analysis of profitability, leverage, and labour intensity. *American Economic Review* 91, 320–334.

Dhaliwal, D., Heitzman, S., Li, O.Z., 2006. Taxes, leverage, and the cost of equity capital. *Journal of Accounting Research*. 44, 691-723.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2008. The law and economics of self-dealing. *Journal of Financial Economics* 88, 403-465.

Djankov, S., Murrell, P., 2002. Enterprise restructuring in transition: A quantitative survey. *Journal of Economic Literature*, 739-792.

D'Souza, J., Megginson, W., 1999. The financial and operating performance of privatized firms during the 1990s. *Journal of Finance* 54, 1397-1438.

D'Souza, J., Megginson, W.L., Nash, R., 2005. Effect of institutional and firm-specific characteristics on post-privatization performance: evidence from developed countries. *Journal of Corporate Finance* 11, 747-766.

Durnev, A., Fauver, L., 2007. Stealing from thieves: Firm governance and performance when states are predatory, *Working Paper,* McGill University.

Dyck, A., 2001. Privatization and corporate governance: Principles, evidence, and future challenges. *The World Bank Research Observer* 16, 59-84.

Easley D., O'Hara, M., 2004. Information and the cost of capital. *Journal of Finance* 59, 1553-1583.

Easton, P., 2004. PE ratios, PEG ratios, and estimating the implied expected rate of return on equity capital. *The Accounting Review* 79, 73-96.

Easton, P., Monahan, S., 2005, An evaluation of accounting based measures of expected returns, *The Accounting* Review 80, 501-538.

Elton, E., 1999, Expected return, realized return, and asset pricing tests. *Journal of Finance* 54, 1199-1220.

Faccio, M., 2006. Politically connected firms. *American Economic Review* 96: 369-386

Faccio, M., Lang, L., 2002. The Ultimate ownership of western European corporations, *Journal of Financial Economics* 65, 365-395.

Fama, E., French, K., 1992. The cross sections of expected stock returns. *Journal of Finance* 47, 427 466.

Fama, E., French, K., 1997. Industry costs of equity. *Journal of Financial Economics* 43, 153-194.

Fan, J.P.H., Wong, T.J., Zhang, T., 2007. Politically-connected CEOs, corporate governance and post-IPO performance of China's newly partially privatised firms. *Journal of Financial Economic* 84, 330-357.

Gebhardt, W.R., Lee, C.M.C., Swaminathan, B., 2001. Toward an implied cost of capital. *Journal of Accounting Research* 39, 135-176.

Gode, D., Mohanram, P., 2003. Inferring the cost of capital using the Ohlson-Juettner model. *Review of Accounting studies* 8, 399-431.

Gompers, PA., Ishii, J.L., Metrick, A., 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* 118, 107-155.

Gupta, N., 2005. Partial privatization and firm performance. *Journal of Finance* 60, 987 -1015.

Hope, O., 2003, Disclosure practices, enforcement of accounting standards and analysts' forecast accuracy: An International study." *Journal of Accounting Research* 41 235–73.

Hail, L., Leuz, C., 2006, International differences in cost of equity capital: Do legal institutions and securities regulations matter? *Journal of Accounting Research* 44, 485-531.

Laffont, J.J., Tirole, J., 1993. A theory of incentives in procurement and regulation. MIT Press, Cambridge, MA.

Lam, S.S., Tan, R.S., and Wee, T.M., 2007. Initial public offerings of state-owned enterprises: An international study of policy risk. *Journal of Financial and Quantitative Analysis* 42, 313-338.

Lambert R., Leuz C., Verrecchia, R., 2007, Accounting information, disclosure and the cost of capital. *Journal of Accounting Research* 45, 385-420.

La Porta, R., Lopez-de-Silanes, R., Shleifer, A., 1999. Corporate ownership around the World. *Journal of Finance* 54, 471-517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1997. Legal determinants of external finance. *Journal of Finance* 52, 1131-1150.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1998. Law and finance. *Journal of Political Economy* 106, 1113-1155.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 2000. Investor protection and corporate governance. *Journal of Financial Economics* 58, 3-27.

Lee, C., Ng, D., Swaminathan, B., 2004. International asset pricing: Evidence from cross section of implied cost of capital. *Working paper*, Cornell University.

Lombardo, D., Pagano, M., 2002. Law and equity markets: a simple model. In Joseph A. McCahery, ed.: Corporate Governance Regimes: Convergence and Diversity (Oxford University Press, London).

Majumdar, S.K., 1998. Slack in the state-owned enterprise: An evaluation of the impact of soft-budget constraints. *International Journal of Industrial Organization* 16, 377–394.

Megginson, W. L., Nash, R., Netter, J.N., Poulsen, A.B., 2004. The choice of private versus public capital markets: Evidence from privatizations. *Journal of Finance*, 59: 2835-2870.

Megginson, W. L., Nash, R., van Randenborgh, M., 1994. The financial and operating performance of newly privatized firms: An international empirical analysis. *Journal of Finance* 49, 403-452.

Megginson, W., Netter, J.N., 2001. From state to market: a survey of empirical studies on privatization. *Journal of Economic Literature* 39, 321–389.

Megginson, W., Sutter, N.L., 2006. Privatization in developing countries. *Corporate Governance: An International Revie*w 14, 234-265.

Megginson, W., 2003. Appendix 1: Details of share issue privatizations, 1961–2003. In: Megginson, W.L.(Ed.), Financial Economics of Privatization. Oxford University Press, New York.

Mikhail, M., Walther, B., Willis, R., 2004. Earnings surprises and the cost of equity capital. *Journal of Accounting Auditing and Finance* 9, 491-514.

Ohlson, J., Juettner-Nauroth, B., 2005. Expected EPS and EPS growth as determinants of value. *Review of Accounting Studies* 10, 349–65.

Paudyal, K., Saadouni, B., Briston, R., 1998. Privatisation initial public offerings in Malaysia: initial premium and long-term performance. *Pacific-Basin Finance Journal* 6, 1 –25.

Perotti, E., Guney, S.E., 1993. Successful privatization plans: Enhanced credibility through timing and pricing of sales. *Financial Management* 22, 84-98.

Perotti, E., 1995. Credible privatization. *American Economic Review* 85, 847-859.

Perotti, E., Laeven, L., 2002. Confidence building in emerging stock markets. *CEPR Discussion Paper* 3055.

Shleifer, A., Vishny, R., 1994. Politicians and firms. *Quarterly Journal of Economics* 109, 995–1025.

Shleifer, A., Vishny, R., 1997. A survey of corporate governance. *Journal of Finance* 52, 737–777.

Shleifer, A., and Vishny, R.W., 2003. Stock market driven acquisitions. *Journal of Financial Economics* 70, 293-311.

Stulz, R., 1999. Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance* 8-25.

Suchard, J., Pham, P.L., Zein, J., 2007. Corporate governance cost of capital and performance: Evidence from Australian firms. Available at SSRN: http://ssrn.com/abstract=1015986.

Svejnar, J., 2002. Transition economies: Performance and challenges. *Journal of Economic Perspectives* 16, 3-28.

Vickers, J., Yarrow, G., 1991. Economic perspectives on privatization. *Journal of Economic Perspectives* 5, 111–32

Villalonga, B. 2000. Privatization and efficiency: Differentiating ownership effects from political, organizational, and dynamic effects. *Journal of Economic Behavior and Organization* 42, 43-74.

Wang, Q., Wong, T.J., Xia, L., 2008. State ownership, institutional environment, and auditor choice: Evidence from China. *Journal of Accounting and Economics*, forthcoming.

TABLE 1

Description of the Sample of Newly Privatized Firms

By Country

Country	Number	Percentage
Australia	3	2.38
India	13	10.32
Ireland	1	0.79
Israel	4	3.17
Malaysia	4	3.17
New Zealand	1	0.79
Singapore	2	1.59
Thailand	5	3.97
UK	3	2.38
Common Law	***36***	***28.56***
Austria	6	4.76
Brazil	10	7.94
Finland	7	5.56
France	12	9.53
Germany	7	5.56
Greece	4	3.17
Italy	12	9.53
Indonesia	3	2.38
Japan	2	1.59
Korea	1	0.79
Philippines	2	1.59
Netherlands	4	3.17
Norway	1	0.79
Portugal	7	5.56
Spain	11	8.73
Sweden	1	0.79
Non-common Law	***90***	***71.44***
Total	126	100

By year

Year	Number	Percentage
1987	1	0.8
1989	1	0.8
1990	1	0.8
1991	6	4.76
1992	4	3.17
1993	4	3.17
1994	11	8.73
1995	13	10.32
1996	11	8.73
1997	17	13.49
1998	19	15.08
1999	16	12.7
2000	9	7.14
2001	4	3.17
2002	5	3.97
2003	4	3.17
Total	126	100

By industry

Industry	Number	Percentage
Basic industries	20	15.87
Capital goods	7	5.56
Consumer durables	5	3.97
Construction	8	6.35
Finance/real estate	22	17.46
Leisure	1	0.79
Petroleum	10	7.94
Services	6	4.76
Textiles/trade	4	3.17
Transportation	15	11.91
Utilities	28	22.22
Total	126	100

By development level

Category (countries)	Number	Percentage
Industialized countries (19)	37	29.37
Developing countries (6)	89	70.63
Total (25)	121	100

Notes: This table provides some descriptive statistics for the sample of 126 privatized firms used in this study, We report the distribution of privatization in the countries included in the sample by year, industry, legal origin, and development level.

TABLE 2

Summary of Implied Cost of Equity

Panel A: Descriptive statistics

Variable	N	Mean	Standard Deviation	Min	Q1	Q2	Q3	Max
R_{OJ}	382	13.49%	4.60%	3.77%	10.52%	12.63%	15.83%	30.45%
R_{CT}	382	11.10%	5.02%	3.55%	7.95%	9.91%	12.67%	37.23%
R_{GLS}	382	10.43%	5.60%	1.25%	6.37%	9.08%	13.47%	29.85%
R_{ES}	382	13.62%	5.44%	2.91%	9.90%	12.51%	16.38%	34.42%
R_{AVG}	382	12.16%	4.30%	4.24%	9.07%	11.22%	13.98%	27.51%

Panel B: Pearson correlation coefficients between implied cost of capital estimates

	R_{OJ}	R_{CT}	R_{GLS}	R_{ES}
R_{CT}	0.795			
R_{GLS}	0.468	0.444		
R_{ES}	0.878	0.622	0.407	
R_{AVG}	0.930	0.846	0.709	0.865

Panel C: Implied cost of equity by country

Country	N	Mean	Median	Standard Deviation	Min	Max
Australia	7	9.53%	9.70%	2.41%	6.26%	13.23%
Austria	18	12.28%	10.61%	4.31%	7.45%	20.99%
Brazil	16	18.30%	17.06%	4.93%	10.84%	27.51%
Finland	16	11.75%	12.14%	3.18%	6.35%	16.17%
France	38	11.43%	11.86%	3.24%	5.53%	19.88%
Germany	24	10.42%	10.44%	3.12%	4.82%	15.98%
Greece	11	11.95%	11.96%	1.84%	8.34%	14.69%
India	46	17.82%	17.39%	4.32%	9.87%	26.07%
Indonesia	7	12.22%	12.74%	1.40%	10.37%	14.15%
Ireland	2	11.22%	11.22%	0.01%	11.21%	11.23%
Israel	11	12.06%	10.87%	3.75%	6.37%	20.04%
Italy	41	9.07%	9.37%	2.88%	4.24%	19.94%
Japan	4	9.32%	9.25%	1.93%	7.08%	11.68%
Korea	3	11.05%	8.67%	4.66%	8.06%	16.41%
Malaysia	14	8.83%	8.87%	1.67%	5.76%	11.75%
Netherlands	11	12.64%	12.31%	4.25%	8.00%	23.92%
New Zealand	3	8.74%	8.56%	0.39%	8.47%	9.19%
Norway	4	8.89%	8.67%	0.60%	8.44%	9.75%
Philippines	6	16.72%	18.74%	5.10%	9.34%	22.31%
Portugal	23	10.75%	10.25%	2.82%	7.16%	19.86%
Singapore	5	10.11%	9.98%	2.97%	7.56%	15.03%
Spain	45	10.74%	10.77%	2.91%	5.83%	19.31%
Sweden	4	16.11%	15.44%	2.69%	13.94%	19.61%
Thailand	12	11.49%	12.06%	2.03%	8.48%	14.44%
United Kingdom	11	11.29%	11.10%	2.46%	8.01%	15.18%

Notes: This table reports descriptive statistics for the implied cost of equity estimates based on four models for a sample of 126 privatized firms from 25 countries between 1987 and 2003. The implied cost of equity estimates, R_{OJ}, R_{CT}, R_{GLS}, and R_{ES} are derived respectively from Ohlson and Juettner-Nauroth (2005), Claus and Thomas (2001), Gebhardt, Lee, and Swaminathan (2001), and Easton (2004). R_{GLS} is the average of the four estimates for the implied cost of equity. Detailed description of theses models is given in the Appendix.

TABLE 3

Distribution of the Control Structure

	(year relative to privatization)					
	0	1	2	3	4	5
Panel A: Distribution of owner type						
State	83.81	80.37	77.39	73.28	71.43	68.96
Identified family (A)	0.95	2.80	5.22	5.17	6.67	4.60
Unlisted firm (B)	3.81	4.67	3.48	3.45	2.85	2.30
Family (A) + (B)	4.76	7.47	8.70	8.62	9.52	6.90
Widely held corporation	3.81	3.74	4.34	5.17	4.76	8.05
Widely held financial	0.95	3.74	2.61	3.45	2.86	3.45
Miscellaneous	2.86	0.94	2.61	3.45	3.81	1.15
Cross holdings	0.00	0.00	0.87	0.86	0.95	1.15
Widely held	3.81	3.74	3.48	5.17	6.67	10.34
N	105	107	115	116	105	87
Panel B: Control enhancing mechanisms						
Number of government controlled firms	88	86	89	85	75	60
Firms using control enhancing devices (%)	36.36	36.05	46.07	48.23	58.57	58.33
Panel C: Post privatization government control						
Mean	47.90	44.98	41.01	37.42	34.46	32.72
Median	51.92	51.00	42.87	41.10	38.33	35.41
N	105	107	115	116	105	87

Notes: this table reports descriptive information on ultimate ownership structure of our sample of 126 privatized firms from 25 countries between 1987 and 2003. Panel A reports the percentage of firms controlled by each type of ultimate owner over the period from year 0 to year +5. Largest ultimate owner are classified in six types: (i) State, (ii) Family, (iii) Widely held corporation, (iv) Widely held financial institution, (v) Miscellaneous, and (vi) Cross holdings. Panel B reports descriptive information on the control enhancing mechanisms used by firms in which the government is the largest ultimate owner. Firms using control enhancing mechanisms denotes the percentage of government controlled firms using such mechanisms. Panel C reports summary statistics for the ultimate control rights held by the government.

TABLE 4

Descriptive Statistics for the Explanatory Variables

Panel A: Summary of the variables

Variable	N	Mean	Median	Standard Deviation	Min	Max
GOVCONT	345	0.381	0.411	0.268	0	0.934
LEFT	367	0.414	0	0.493	0	1
SYSTEM	367	1.801	2	0.588	0	2
YRSOFFC	367	3.886	3	3.892	1	24
GOV_EXPROP	385	3.886	9.35	1.018	5.22	9.98
LAW_ORDER	365	4.784	5	1.158	1.5	6
DISCLOSURE	376	62.348	64	9.858	36	83
ANTISELF	385	0.473	0.42	0.213	0.2	1
SIZE	382	15.466	15.336	1.777	10.949	19.213
RETURN_VOL	382	0.352	0.296	0.234	0	1.623
LEVERAGE	383	0.437	0.43	0.298	0	4.252
MARKET TO BOOK	385	2.346	1.65	2.549	0.340	27.280
GROWTH_RATE	385	0.167	0.138	0.158	-0.353	1.625
VAR_ANALYSTCOV	382	0.296	0.125	1.221	0	21.111
INFL	385	0.025	0.023	0.020	0.001	0.203
GDPG	385	0.023	0.026	0.026	-0.115	0.106

TABLE 4 (continued)

Panel B: Correlation coefficients

VARIABLE	R_{AVG}	*GOVCONT*	*SYSTEM*	*LEFT*	*YRSOFFC*	*GOV_EXPROP*	*LAW_ORDER*	*DISCLOSURE*	*ANTISELF*	*SIZE*	*RETURN_VOL*	*LEVERAGE*	*MARKET TO BOOK*	*GROWTH_RATE*	*VAR_ANALYSTCOV*	*INFL*
GOVCONT	**0.148**															
SYSTEM	**-0.260**	-0.009														
LEFT	0.119	0.099	0.002													
YRSOFFC	**-0.160**	0.135	0.074	-0.082												
GOV_EXPROP	**-0.389**	**-0.174**	**0.451**	0.119	-0.013											
LAW_ORDER	**-0.278**	-0.040	**0.455**	0.081	-0.053	**0.613**										
DISCLOSURE	**-0.153**	-0.029	0.095	**-0.148**	**0.157**	**0.169**	**0.179**									
ANTISELF	-0.068	0.037	0.081	**-0.278**	**0.172**	**-0.235**	0.056	**0.384**								
SIZE	-0.062	-0.039	-0.016	0.129	-0.051	**0.192**	0.126	-0.061	**-0.189**							
RETURN_VOL	**0.267**	0.043	**-0.195**	**0.136**	-0.067	**-0.237**	**-0.216**	0.002	-0.001	-0.118						
LEVERAGE	0.049	0.040	0.037	0.027	-0.005	0.125	0.109	0.035	-0.063	**0.521**	-0.042					
MARKET TO BOOK	**-0.267**	-0.126	0.068	-0.008	0.073	0.080	-0.029	0.095	0.002	**-0.190**	0.054	-0.021				
GROWTH_RATE	**0.221**	0.057	-0.051	-0.010	-0.012	-0.081	-0.093	-0.022	0.019	-0.090	**0.143**	0.055	0.029			
VAR_ANALYSTCOV	0.115	0.041	-0.032	0.035	-0.062	0.049	0.046	-0.026	-0.102	-0.001	0.023	0.093	-0.034	0.028		
INFL	**0.384**	0.079	**-0,321**	0.062	0.025	**-0.280**	**-0.382**	**-0.134**	0.068	-0.094	0.130	**-0.139**	0.036	-0.002	-0.011	
GDPG	0.058	0.077	**0.184**	0.064	***0.107***	-0.085*	0.025	0.089*	**0.170**	-0.076	**-0.153**	-0.125	0.009	-0.088	0.015	**0.175**

Notes: This table reports summary descriptive statistics for the explanatory variables (Panel A) and Pearson pairwise correlation coefficients between the regression variables (Panel B) for a sample of 126 privatized firms from 25 countries between 1987 and 2001. Boldface indicates statistical significance at the 1% level. R_{AVG} is the average cost of equity estimated using the four models described in the Appendix. Definitions and data sources for the explanatory variables are outlined in Table A1.

TABLE 5

Impact of Government Control and Political and Institutional Variables on the Cost of Equity

Variable	Prediction	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	?	0.178***	0.209***	0.175***	0.194***	0.230***	0.233***
		(7.651)	(8.213)	(7.508)	(7.942)	(5.46)	(7.960)
GOVCONT	+	0.016**	0.015**	0.018**	0.015**	0.016**	0.016**
		(2.299)	(2.168)	(2.568)	(2.215)	(2.223)	(2.202)
LEFT	+	0.003	0.005	0.003	0.001	0.001	0.001
		(0.754)	(1.257)	(0.709)	(0.175)	(0.302)	(0.223)
SYSTEM	-	-0.008***	-0.006**	-0.009***	-0.009***	-0.008***	-0.008***
		(3.727)	(2.538)	(3.376)	(4.150)	(3.755)	(3.069)
YRSOFFC	-	-0.001***	-0.002***	-0.002***	-0.001***	-0.001***	-0.002***
		(4.211)	(4.276)	(4.275)	(3.969)	(3.780)	(3.911)
GOV_EXPROP	-		-0.005**				-0.008**
			(2.137)				(2.567)
LAW_ORDER	-			-0.001			0.001
				(0.581)			(0.336)
DISCLOSURE	-				-0.001		-0.001
					(1.423)		(0.010)
ANTISELF	-					-0.017*	-0.020*
						(1.669)	(1.675)
SIZE	-	-0.005***	-0.004**	-0.004***	-0.004***	-0.005***	-0.003**
		(3.189)	(2.280)	(2.789)	(2.998)	(3.377)	(1.969)
RETURN_VOL	+	0.024***	0.020**	0.023***	0.027***	0.024***	0.022***
		(2.785)	(2.485)	(2.768)	(3.178)	(2.811)	(2.704)
LEVERAGE	+	0.024**	0.023**	0.020*	0.017	0.024**	0.012
		(2.241)	(2.177)	(1.922)	(1.560)	(2.260)	(1.060)
MARKET TO BOOK	-	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***
		(3.600)	(3.429)	(3.534)	(3.347)	(3.601)	(3.367)
GROWTH_RATE	+	0.040***	0.041***	0.040***	0.037***	0.040***	0.038***
		(2.834)	(2.936)	(2.742)	(2.776)	(2.810)	(2.754)
VAR_ANALYSTCOV	+	0.003*	0.003**	0.003*	0.003**	0.003*	0.003**
		(1.958)	(2.083)	(1.967)	(2.242)	(1.847)	(2.106)
INFL	+	0.012***	0.011***	0.011***	0.013***	0.013***	0.013***
		(4.646)	(4.420)	(4.144)	(4.731)	(5.024)	(4.774)
GDPG	-	0.074	0.058	0.083	0.078	0.080	0.067
		(1.150)	(0.896)	(1.310)	(1.165)	(1.216)	(1.036)
INDUSTRY EFFECTS		YES	YES	YES	YES	YES	YES
YEAR EFFECTS		YES	YES	YES	YES	YES	YES
Adj R2		0.331	0.341	0.334	0.356	0.337	0.379
N		324	324	322	318	321	316

Notes: This table presents fixed effects estimation results from regressing the average of implied cost of equity estimates on government control, political and institutional variables and control variables. The full sample includes 126 privatized firms from 25 countries between 1987 and 2003. Beneath each estimate is reported the *z*-statistic. The superscripts asterisks ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise. R_{AVG} is the average cost of equity estimated using the four models described in the Appendix. The definitions and data sources for the variables are outlined in Table A1.

TABLE 6

Impact of Government Control and Privatization and Political Variables on the Cost of Equity

Variable	Prediction	Model 1	Model 2	Model 3	Model 4
Intercept	?	0.175***	0.192***	0.175***	0.177***
		(7.227)	(4.558)	(7.547)	(7.573)
GOVCONT	+	0.017**	0.021**	0.018***	0.016**
		(2.264)	(2.050)	(2.605)	(2.277)
LEFT	+	0.004	0.001	0.003	0.003
		(0.995)	(0.194)	(0.743)	(0.702)
SYSTEM	-	-0.010***	-0.009**	-0.006***	-0.006**
		(4.161)	(2.060)	(2.866)	(2.589)
YRSOFFC	-	-0.002***	-0.002***	-0.001***	-0.001***
		(4.361)	(3.311)	(3.946)	(3.829)
PRIV_PROGRESS	-	-0.534**			
		(2.188)			
GOLDEN_SHARE	+		0.010		
			(1.507)		
FOR	-			0.039	
				(1.291)	
LOCALINST	-				-0.046**
					(2.479)
SIZE	-	-0.004***	-0.007**	-0.005***	-0.005***
		(2.899)	(2.589)	(3.065)	(3.139)
RETURN_VOL	+	0.026***	0.030**	0.025***	0.027***
		(2.864)	(2.461)	(2.663)	(2.917)
LEVERAGE	+	0.022**	0.060***	0.020*	0.022**
		(2.054)	(3.504)	(1.962)	(2.163)
MARKET TO BOOK	-	-0.004***	-0.004***	-0.004***	-0.004***
		(3.348)	(2.877)	(4.176)	(3.683)
GROWTH_RATE	+	0.038***	0.024*	0.040***	0.038***
		(2.637)	(1.870)	(2.871)	(2.834)
VAR_ANALYSTCOV	+	0.003**	0.001	0.003	0.003*
		(2.179)	(0.710)	(1.609)	(1.886)
INFL	+	0.011***	0.007*	0.012***	0.012***
		(4.244)	(1.795)	(4.720)	(4.568)
GDPG	-	0.070	0.115	0.040	0.059
		(0.981)	(0.745)	(0.588)	(0.861)
INDUSTRY EFFECTS		YES	YES	YES	YES
YEAR EFFECTS		YES	YES	YES	YES
Adj R2		0.349	0.311	0.328	0.330
N		313	184	318	318

Notes: This table presents fixed effects estimation results from regressing the average of implied cost of equity estimates on government control, privatization and political variables and control variables. The full sample includes 126 privatized firms from 25 countries between 1987 and 2003. Beneath each estimate is reported the *z*-statistic. The superscripts asterisks ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise. R_{AVG} is the average cost of equity estimated using the four models described in the Appendix. The definitions and data sources for the variables are outlined in Table A1.

TABLE 7

Sensitivity Tests

Variable	Prediction	Analyst Coverage (1)	Forecast Bias (2)	Local risk free rates (3)	Autocratic index (4)	2SLS model (5)	RP model (6)
Intercept	?	0.115***	0.174***	0.193***	0.069	0.065	0.159***
		(14.601)	(7.346)	(7.139)	(1.150)	(0.979)	(6.952)
GOVCONT	+	0.017**	0.018**	0.020**	0.015**	0.150**	0.014**
		(2.279)	(2.487)	(2.579)	(2.016)	(2.023)	(1.982)
LEFT		0.002	0.004	0.006		-0.001	0.002
		(0.504)	(0.984)	(1.417)		(0.192)	(0.486)
SYSTEM	-	-0.008***	-0.008***	-0.013***		-0.007***	-0.004
		(3.359)	(3.532)	(2.760)		(3.040)	(1.084)
YRSOFFC	-	-0.001**8	-0.002***	-0.001***		-0.003***	-0.002***
		(3.417)	(4.452)	(3.451)		(2.903)	(4.680)
ANALYST_COV	-	-0.001*					
		(1.786)					
FORBIAS	+		0.001*				
			(1.769)				
RISK FREE RATE	+			0.073			
				(0.837)			
AUTOCRACY					0.010**		
					(2.160)		
SIZE	-		-0.005***	-0.004***	-0.005***	0.001	-0.005***
			(3.023)	(2.594)	(3.005)	(0.100)	(3.208)
RETURN_VOL	+	0.026***	0.023**	0.026***	0.024***	0.012	0.022**
		(2.998)	(2.558)	(2.806)	(2.811)	(1.107)	(2.584)
LEVERAGE	+	0.008	0.024**	0.014	0.021*	0.016	0.030***
		(1.453)	(2.201)	(1.279)	(1.664)	(1.380)	(2.843)
MARKET TO BOOK	-	-0.004***	-0.004***	-0.004***	-0.004***	-0.003**	-0.005***
		(3.491)	(3.551)	(3.779)	(3.422)	(2.456)	(3.493)
GROWTH_RATE	+	0.043***	0.047***	0.035**	0.040***	0.047***	0.041***
		(3.044)	(3.076)	(2.178)	(2.884)	(3.210)	(3.227)
VAR_ANALYSTCOV	+	0.003***		0.003*	0.003**	0.002*	0.003**
		(2.685)		(1.820)	(2.225)	(1.723)	(2.032)
INFL	+	0.012***	0.012***		0.009***	0.008***	
		(4.647)	(4.471)		(3.413)	(2.850)	
GDPG	-	0.068	0.078	0.169**	0.093	0.066	0.028
		(1.022)	(1.169)	(2.478)	(1.140)	(1.015)	(0.451)
INDUSTRY EFFECTS		YES	YES	YES	YES	YES	YES
YEAR EFFECTS		YES	YES	YES	YES	YES	YES
Adj R2		0.314	0.334	0.267	0.298	0.331	0.242
N		321	316	320	307	323	324

Notes: This table presents the results of our main sensitivity tests. The full sample includes 126 privatized firms from 25 countries between 1987 and 2003. Beneath each estimate is reported the *z*-statistic. The superscripts asterisks ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise. R_{AVG} is the average cost of equity estimated using the four models described in the Appendix. The definitions and data sources for the variables are outlined in Table A1.