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

Hamdi Ben Nasr
Laval University, Quebec, Quebec G1V 0A6, Canada
hamdi.ben-nasr.1@ulaval.ca

Narjess Boubakri
American University of Sharjah, Sharjah (UAE) and HEC Montreal, Montreal, Quebec H3T 2A7, Canada
narjess.boubakri@hec.ca

Jean Claude Cosset
HEC Montreal, Montreal, Quebec H3T 2A7, Canada
jean-claude.cosset@hec.ca

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JEL classification: G32, G31, G38, G30

Keywords: Cost of Equity; Control structure; Political institutions; Privatization.

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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 newly privatized firm's cost of equity. This switch from state to private ownership, which is accompanied by severe information asymmetry problems (Denis and McConnell (2003) and Dyck (2001)), also provides us 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 answer the following questions: Do shareholders consider post-privatization government control a risk factor and does such control influence privatized firms' cost of equity? Do the political characteristics of the privatizing government (e.g., its political leaning, its prevailing political system, and its stability) also affect the cost of equity? In other words, are political factors priced in this setting?

This study, which is the first to analyze how government control and the political environment affect the implied cost of equity for firms operating in a wide set of countries, extends recent research on the link between political economy and corporate governance to include the role of government ownership. We focus on government control in privatized firms for two reasons. First, government ownership is a key dimension of the post-privatization corporate governance structure. Indeed, most privatization transactions in developing countries and most initial privatizations in developed countries take place gradually (Perotti and Guney (1993)), allowing governments to remain shareholders in the vast majority of privatized firms (e.g., Bortolotti and Faccio (2007)). Furthermore, government ownership has unique features, because, unlike typical shareholders, governments pursue political objectives that rarely

coincide with profit maximization. In partial privatizations, where existing links between politicians and managers of the former state-owned firms are seldom completely severed, it is unrealistic to expect that unscrupulous politicians could be prevented from grabbing lucrative deals. In such situations, we face acute agency problems and extensive political entrenchment that may affect the firm's cost of equity, as required by other shareholders. This study of privatized firms breaks new ground in that it views political economy as embedded in the firm's management and operations, thus making them a natural laboratory for testing the link between political economy and the cost of equity capital.

Indeed, privatization is shaped by political concerns and motives. In their political view of privatization, Boycko et al. (1996) argue that the transfer of control over SOEs from the government to private owners will decrease or remove political interference and thus should lower the risk that shareholders' wealth might be expropriated. A primary prediction is that shareholders will demand lower returns on the shares of a privatized firm with a lower level of government control. Perotti (1995) and Biais and Perotti (2002) show how, in theory, the government's credibility and commitment to privatization, in particular, and market-oriented policies, in general, will determine the way the process is conducted as well as the expected level of post-privatization policy risk. According to Perotti's model, the committed government which undertakes privatization for its expected micro- and macro-economic benefits should be associated with 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 apply market oriented policies and tend to be 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, even if the government still holds a residual stake, potential shareholders will accept a lower return on the newly privatized companies' shares if they anticipate less policy risk after divestiture.

To date, the question as to whether state ownership inhibits or stimulates post-privatization performance is still under debate. 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 post-privatization performance of firms in developing countries increases more when the government relinquishes control. On the other hand, D'Souza et al. (2005) document that state ownership of firms in

developed countries induces more capital spending, while Gupta (2005), echoing this evidence, shows that partially privatized Indian firms post higher profits after divestiture. We contribute to this debate by examining the potential effect of government control on the privatized firm's equity financing costs and, more generally, the possible effects of institutions and politics on resource allocations during the dramatic regime shift imposed by 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 by stemming the diversion of its 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, as it is a direct measure of the external equity financing costs, the discount rate determines the firm's financing and investing decisions (e.g., Shleifer and Vishny (2003)). Second, Suchard et al., (2007) argue that, unlike Tobin Q, the cost of equity is based on the firm's current operation risk and is less likely to be exposed to 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 multinational sample of 126 privatized from 25 countries between 1987 and 2003, we find strong and robust evidence that the cost of equity is increasing in government control, while also controlling for other determinants of the cost of equity. Our results also show that the cost of equity of newly privatized firms is significantly related to government stability (tenure) and the political system. More specifically, we find evidence that firms from countries with more democratic and more stable governments enjoy a lower cost of equity. Therefore, our findings suggest that the presence of sound political institutions will lower the rate of return shareholders require 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, it contributes to the recent literature on the role of corporate governance in determining the firm's cost of equity, by introducing the corporate governance role that the government plays as a shareholder. Second, by investigating the political determinants of the cost of equity, it adds to the burgeoning literature on the political economy of corporate finance (e.g., Durnev and Fauver (2007) and Bushman et al. (2004)). Third, it contributes to the privatization literature which, to date, has provided few insights into the external financing costs of newly privatized firms.[2] Finally, it contributes to the debate on the link between government ownership/control and the firm's performance by examining instead the impact of government control on the cost of equity of newly privatized firms.

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 the results of our sensitivity analysis. Section 5 summarizes our findings and concludes.

2. Related Literature and Hypotheses

2.1 Government Control and the Cost of Equity

In the literature, the impact of state ownership on post-privatization performance is still a topic of debate. 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 be swayed to pursue government leaders' political objectives, rather than to maximize profits. Typical evidence of this pursuit of political objectives would include maintaining a high level of employment and promoting regional development by locating production in politically desirable rather than economically attractive regions. Boycko et al. (1996) argue that a greater emphasis will be put on profits and efficiency only if privatization transfers 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 the level of post-privatization political

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

interference and the risk of renationalization will both be higher when the government sells a relatively low percentage of its capital. Therefore, the "political interference" hypothesis implies that greater government control is associated with a higher agency risk and will thus 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 support the predictions of the political interference hypothesis. Boardman and Vining (1989) compare the performance of the private firms, SOEs, and partially privatized firms listed 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 that, in developing countries, post-privatization performance improves more when the government relinquishes control. More recently, Fan et al. (2007) document lower accounting and post-IPO long-term performances for privatized Chinese 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 carries an implicit guarantee of government bail outs (i.e., a soft- budget constraint). For example, Wang et al. (2008) argue that, because they can appeal to soft-budget constraints when they encounter financial difficulties, SOEs have lower incentives to report higher quality accounting information in order to obtain better contracting terms. Faccio et al. (2006) find that politically connected firms are more likely to be bailed out than non-politically connected peers. In the same vein, Charumilind et al. (2006) show that Thai firms with connections to banks and politicians obtained more long-term loans and needed less collateral during the period preceding the Asian financial crisis of 1997 compared to firms without such connections. 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 privatized firms' cost of equity, our first hypothesis is non-directional and states:

H_1: The cost of equity is related to the control rights held by the government, all 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 its commitment to privatization will command the way the process is conducted as well as the expected level of policy risk. Policy risk arises from post-privatization policies that may be applied by the government (e.g., deregulation, enactment of new legislations, and new administrative procedures) and could affect the allocation of previously established rights. Several characteristics of the privatizing government may be related to policy risk. The government's political orientation may determine the level of post-privatization policy risk. Left-wing governments are more likely to intervene in the economy and to affect the post-privatization valuation by issuing policy changes that modify shareholders' control and income rights. In the view of Biais and Perotti (2002), left-wing governments are less likely to apply market-oriented policies and tend to be less committed than right-wing governments. We therefore expect policy risk to be higher in countries with left-wing governments.

The political system may also determine the level of post-privatization policy risk. Democratic governments are more likely to introduce market-supporting reforms and thus should be more committed to privatization. Therefore, democratic governments should be less inclined to interfere with 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, minority shareholders should face a lower level of policy risk in countries with more democratic governments.

In addition, government stability may determine the level of post-privatization policy risk. High government turnover will increase the likelihood of policy reversals. Furthermore, governments uncertain about their chances of being re-elected may 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 the political characteristics of the privatizing government, all 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 contemporaneous stock prices, analysts' earnings forecasts, and financial data, respectively, for our post-privatization period of five years i.e., from the year following the privatization to five years after privatization.

For each observation we require: (i) a positive one-year-ahead and two-year-ahead earnings forecasts, (ii) either a three-year-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 stock prices 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-year observations if: (i) the inflation rate for the country in that year is above 25%, (ii) one of 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

[3] Our sample does not include privatized companies in the ex-communist countries for at least two reasons. First, in these countries, the traditional law system is based on Soviet law which has undergone many changes during its transition period (La Porta et al., 2000). Second, post-privatization ownership structures in these countries are still 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.

of 126 firms privatized in 25 countries over the 1987-2003 period.[5] Table A_1 defines the variables used in our empirical analysis and their sources.

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 levels and legal origins. 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, whereas 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 what impact these cross-country differences have 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 22.22% in the utility sector. Furthermore, 81% of our sample's 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 for the cost of equity.[8] Additionally, Fama

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

[6] This sample is comparable to 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 patterns similar to those of the 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) shows that a sequence of correlated information surprises that have a significant permanent effect on realized returns will cause expected and realized returns to differ systematically over long periods.

and French (1997) conclude that the single-factor, capital-asset pricing model and the Fama-French three-factor model produce imprecise cost-of-equity estimates.[9] An alternative cost-of-equity proxy widely 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 on the discounted cash-flow method to estimate the cost of equity. We use estimates of the 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—based either on the residual income valuation model or on an abnormal earnings growth valuation model—are primarily different in their assumptions about growth rates, forecast horizons, and inputs. A description of these models and detailed implementation procedures for each of them are summarized in the Appendix. Since the literature shows no strong consensus on which of the models most accurately estimates 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 lowest estimates of the cost of equity, consistent with Gode and Mohanram (2003) and Hail and Leuz (2006)'s findings, 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 cost-of-equity estimates from the four models are highly correlated and that 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

[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.

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 from annual reports. We also used additional sources such as *Worldscope* and the Asian and Brazilian handbooks. We used 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.

In this study, 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 the 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. Indeed, the government may divest more than 50% of the privatized firm and yet 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 under 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. In each of the six years, the largest ultimate owner of the privatized firms is most frequently the state. This evidence is consistent with Bortolotti and Faccio's (2007) findings for privatized firms from developed countries: 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 in 68.96% of our sample firms. Thus, even five years after 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 control enhancing mechanisms used 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 was 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 for 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 tend to be more committed and are thus expected to be associated with lower post-privatization policy risk. Hence a lower cost of equity.

Political regime (*SYSTEM*): This index is a proxy for the type of political system—democratic versus authoritarian. A higher score indicates more democratic governments. More democratic governments should be more inclined to set up market supporting institutions. Furthermore, as Banerjee and Munger (2004) argue, more democratic governments are more

likely to counteract the rent-seeking incentives of their 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 ability to implement economic reforms and privatization (Cukierman and Leviatan (1992) and Banerjee and Munger (2004)), which both lower 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 the institutional environment plays in protecting 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:

Risk of Government 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 for 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— higher scores indicating a lower probability that government will interfere in the economy to extract rents for self enrichment. We expect a negative association between the cost of equity and the government risk-of-expropriation index.

Law and 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 the 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 for the firm's size and we expect a negative association between the cost of equity and *SIZE*.

Volatility *of Stock Returns* (*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 association (or even a negative one) between the implied cost of equity and the market beta. In addition, Hail and Leuz (2006) find that stock-return variability explains cross-country differences in the cost of equity better than does the market beta. Thus, we use stock-return volatility rather than the market beta to measure market risk. Lee et al. (2004), and Hail and Leuz (2006) find that 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 firm's cost of equity is an increasing function of its debt ratio. With corporate taxes, Modigliani and Miller (1963) also show that the cost of equity is positively related to the firm's leverage ratio. The same result is implied by Dhaliwal et al. (2006) who expand Modigliani and Miller (1963) to include 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 the book-to-market ratio, implying a negative association between the 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 findings of Fama and French's (1992). 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 they 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 as 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 greater disagreement among analysts, thus causing greater uncertainty about forecasted earnings per share and 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 prices, 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, measuring it 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 introduce a set of dummy variables representing the 12 industries in Campbell (1996).

4. Empirical Analysis

To test our predictions in H_1 and H_2, we regress the privatized firm's cost of equity on ***the*** 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 (mainly related to selection bias) that weaken existing empirical studies on the impact of privatization on corporate performance. One of the selection bias problems is related to the fact that, in order to make privatization "attractive", the government 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 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 shown in bold. 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 five-year post-privatization window. This initial evidence is consistent with the political interference hypothesis that higher government control is associated with greater 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, the political economy variables, and our control variables, respectively, thus mitigating multicollinearity 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 from estimating equation (1) for the five-year post-privatization window. 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 confirms 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 will 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 our conjecture: It turns out that firms from countries whose left-wing governments pose a higher policy risk are not penalized by 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 benefit from a lower cost of equity. This suggests that firms from more democratic countries should be able to count on 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 government expropriation is associated with a higher cost of equity. We can interpret this finding as implying that shareholders in NPFs from countries with greater state intervention in the economy will require higher returns on their investments in such firms. We also find that the coefficient of *DISCLOSURE* is negative and significant at the 10% level, indicating that is a higher quality of accounting standards is associated with a lower cost of equity. This evidence is consistent with Hail and Leuz's (2006) finding that more extensive disclosure requirements are associated with a lower cost of equity. Furthermore, we find that the coefficient of *ANTISELF* is negative and significant at the 5% level, suggesting that better legal investor protection is associated with a lower cost of equity. This evidence is consistent with recent studies on the implied cost of equity (e.g., Hail and Leuz (2006), among others) which find that firms from countries with sounder legal institutions benefit from a lower cost of equity. However, we find that the coefficient of *LAW_ORDER* is negative, but is not significant. Therefore, our results provide no evidence that the country's law-and-order influences 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 significant association at the 1% level between *SYSTEM*, *YRSOFFC*, and the cost of equity. In Model 6, we include all of our institutional variables and we find that, as concerns the impact that government control and the political economy variables have on the cost of equity of NPFs, our inferences 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) which state that the cost of equity is negatively associated with the firm's size. Consistent with the findings of Gode and Mohanram's (2003), we also observe that the coefficient on *VAR_ANALYSTCOV* is positive and significant and highly significant across all models, suggesting that stronger disagreement among analysts on earnings forecasts will result in greater uncertainty and thus a higher cost of equity. Furthermore, we find positive and significant coefficients at the 1% level, for *RETURN_VOL* and *GROWTH_RATE* across all models, 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 generally positive and significant, lending support to the theoretical and empirical literature on the impact of leverage on the cost of equity. Additionally, we find that the coefficient of the 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 for 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

The analysis of the impact of government control and political economy variables on the cost of equity presented in table 5 is extended in table 6, where we control for the following privatization variables: (i) privatization progress, (ii) golden share, (iii) local institutional 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 Laeven (2002) argue that only a sustained and consistent privatization program can convey a credible signal that eliminates policy risk. Therefore, we predict that sustained privatization will decrease policy risk, and thus 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 governments can maintain their control over privatized firms, may also influence the cost of equity. By retaining a golden share governments may gain special veto power over the firm's major decisions such as merger and hostile takeover or may 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, moved by several concerns, maintain strict control ***over*** 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 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.

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

[11] Bortolotti and Faccio (2007 p. 10) define golden share used by the government 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."

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***'s*** conjecture (1995) that privatization sustainability provides a credible signal of government commitment and reduces policy risk. Model (2) shows a positive and significant relation at the 10% level between golden share and the cost of equity *GOLDEN_SHARE*, indicating that special powers are associated with a higher cost of equity. However, Model (3) reveals an insignificant relation between foreign control and the cost of equity. Therefore, our 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 1% level between local institutional investors' control and the cost of equity. This finding, which is consistent with Boubakri et al. (2005)'s finding suggest***s*** that local institutions are associated with better monitoring of managers and thus with a lower risk of expropriation of shareholders' wealth. More interestingly for our purposes, we go on 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 for firm size. Indeed, large firms are more likely to have greater analyst coverage. Analyst coverage is also used as a proxy for information

availability. In fact, firms with higher analyst coverage are more likely to have more precise public information (Bowen et al. (2006)) and will thus obtain 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 estimates of the forecasted earnings per share reported in I/B/E/S. The coefficient of *ANALYSTCOV* is negative and significant at the 5% level. More importantly for our purposes, the coefficient of *GOVCONT* remains positive and highly significant 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**s** and the actual earnings per share reported in I/B/E/S divided by mean one-year-ahead consensus forecast**s**. Model (2), which includes forecast bias, indicates that the coefficient of *FORBIAS* is positive and significant at the 5% level. This evidence is consistent with Hail and Leuz's (2006) 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 those in expected inflation rates or interest rate regimes. Model (3) indicates that our main

[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."

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 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 the general secrecy of political institutions, whereas the democratic index measures the general openness of 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 not ***be*** 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 instrumental 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***s*** as an instrument***al*** 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 the 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 in subtracting the

expected inflation rates from the implied cost of equity estimates and using an inflation-adjusted cost of equity as a dependent variable. However, we acknowledge that this approach has the drawback of forcing a coefficient of minus one on our proxy for 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 (R^2=0.242) is lower than that from models 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 publicly traded and incorporated in prices. To ensure that our results are not affected by this 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***ed*** 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 any 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*

[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."

generally continue 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 those of Botosan and Plumlee (2005): that the correlation coefficients between the implied cost of equity and the risk factors will vary across different models. These findings are also consistent with those of Dhaliwal (2006): that the impact of taxes and leverage on the cost of equity will vary 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 that are shown to affect the cost of equity. This finding implies that minority shareholders, anticipating some level of post-privatization political interference, discount the share prices, hence raising the cost of equity financing for 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 the government's stability (tenure). More specifically, we find evidence that firms from countries with democratic and more stable governments enjoy a lower cost of equity.

[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}."

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.

Our paper contributes to the literature on the link between political economy and corporate finance (e.g., Durnev and Fauver (2007) and Bushman et al. (2004)) by showing that corporate financing decisions are affected by the quality of political institutions. We also add to the literature on the external financing costs of privatized firms (e.g., Borisova (2007) who looks at the cost of debt of such firms). This issue is important, since the survival of the privatized firms (and hence the success of the privatization process) depends to a large extent on their easy access to new funding resources on capital markets, at a reasonable cost. Overall, economic growth is also at stake, for when newly privatized firms can borrow money on capital markets at lower costs this enables them to carry forward value-enhancing and positive net-present-value projects that will foster economic growth.

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 for earnings per share, $FEPS_{t+i}$, are not available in I/B/E/S for the 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 the 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 the 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 market-to-book ratio.	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

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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. The largest ultimate owners 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 2003. 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	Forecast Bias	Local risk free rates	Autocratic index	2SLS model	RP model
		(1)	(2)	(3)	(4)	(5)	(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***	-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.