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**What is Different about  
Government-Controlled  
Acquirers in Cross-Border  
Acquisitions?**

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### What is Different about Government-Controlled Acquirers in Cross-Border Acquisitions?

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#### Summary

We examine the motives for and consequences of 5,317 failed and completed cross-border acquisitions constituting \$619 billion of total activity that were led by government-controlled acquirers over the period from 1990 to 2008. We benchmark this activity at the aggregate country level and also at the deal level with cross-border acquisitions involving corporate acquirers over the same period. We find that government-led deal activity is relatively more intense for geographically-closer countries, but also relatively less sensitive to differences in the level of economic development of the acquirer's and target's home countries, in the quality of their legal institutions and accounting standards, and to how stringent are restrictions on FDI flows in their countries. Government-led acquirers are more likely to pursue larger targets with greater growth opportunities and more financial constraints. But, the share-price reactions to the announcements of such acquisitions are not different. Among those deals involving government-controlled acquirers, we do find important differences involving sovereign wealth funds (SWFs). SWF-led acquisitions are less likely to fail, they are more likely to pursue acquirers that are larger in total assets and with fewer financial constraints, and the market reactions to SWF-led acquisitions, while positive, are statistically and economically much smaller. We discuss policy implications in terms of recent regulatory changes in the U.S. and other countries that seek to restrict foreign acquisitions by government-controlled entities.

**Keywords:** Government-controlled Acquirers, Cross-Border Acquisitions

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# **What is Different about Government-Controlled Acquirers in Cross-Border Acquisitions?**

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## **Abstract**

We examine the motives for and consequences of 5,317 failed and completed cross-border acquisitions constituting \$619 billion of total activity that were led by government-controlled acquirers over the period from 1990 to 2008. We benchmark this activity at the aggregate country level and also at the deal level with cross-border acquisitions involving corporate acquirers over the same period. We find that government-led deal activity is relatively more intense for geographically-closer countries, but also relatively less sensitive to differences in the level of economic development of the acquirer's and target's home countries, in the quality of their legal institutions and accounting standards, and to how stringent are restrictions on FDI flows in their countries. Government-led acquirers are more likely to pursue larger targets with greater growth opportunities and more financial constraints. But, the share-price reactions to the announcements of such acquisitions are not different. Among those deals involving government-controlled acquirers, we do find important differences involving sovereign wealth funds (SWFs). SWF-led acquisitions are less likely to fail, they are more likely to pursue acquirers that are larger in total assets and with fewer financial constraints, and the market reactions to SWF-led acquisitions, while positive, are statistically and economically much smaller. We discuss policy implications in terms of recent regulatory changes in the U.S. and other countries that seek to restrict foreign acquisitions by government-controlled entities.

*“A signal event of the past quarter-century has been the sharp decline in the extent of direct state ownership of business as the private sector has taken ownership of what were once government-owned companies. Yet governments are now accumulating various kinds of stakes in what were once purely private companies through their cross-border investment activities...Governments are very different from other economic actors. Their investments should be governed by rules designed with that reality very clearly in mind.”*

Lawrence Summers, July 30, 2007<sup>1</sup>

## **1. Introduction**

The significant and growing participation of government-controlled firms in the market for cross-border acquisitions has drawn much attention in the media. Prominent deals include the failed \$19.5 billion investment (18% stake) by Chinalco, China’s state-owned metals group, in Rio Tinto, the U.K. and Australian dual-listed mining company, in 2009 and the acquisition attempt by Dubai World Ports, a ports management company owned by the government of the United Arab Emirates (UAE) to acquire Peninsular & Oriental Steam Navigation Company for \$6.8 billion in 2006. Though some of the largest deals involving sovereign acquirers gaining the most attention did indeed fail, many have been successfully completed. During the two years 2007-2008 alone, over \$230 billion across 886 cross-border mergers and acquisition deals (with at least a 5% stake in the target company) involved a government-controlled entity as acquirer and this activity comprised more than 10% of the total (constant dollar) value of all cross-border acquisitions during this period (see Figure 1 from Securities Data Company) and more than one-third of the total of all government-led acquisitions initiated over the period from 1980 through 2008. Some sovereign acquirers involve large sovereign wealth funds, like the Abu Dhabi and Kuwaiti Investment Authority, Singapore’s Temasek Holdings and the China Investment Corporation, but the vast majority of the deals involve state-controlled corporations and agencies, like Malaysia’s Petronas (\$2.5 billion acquisition of Australia’s Santos in 2008) and Sweden’s Vattenfall AB (\$600 million purchase of Poland’s Grupa Energetyczna in 2008).

There are serious and growing concerns about the expanded role of governments in global capital markets in general, of foreign block acquisitions (minority and majority stakes) led by government agencies in particular, and financial economists have devoted relatively little attention to their study. The main goal of this paper is to remedy this deficiency with a comprehensive global study of government-led cross-border acquisitions over the past two decades. We seek answers to the following specific questions. Do government-controlled acquirers pursue targets domiciled in countries that differ from cross-border acquisitions led by private corporations as acquirers from the same home country? If so, do they arise from restrictions imposed by the target’s country or do they stem from preferences revealed in country attributes of the acquirer firm, such as the level of economic, institutional or financial development? Are the characteristics and attributes of the target firms different for government-led acquirers? Are the target firm’s share-price reactions around the announcement of a government-

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<sup>1</sup> “Sovereign funds shake the logic of capitalism,” in *The Financial Times* (July 30, 2007).

led block acquisition different than those of a corporate acquisition? How is the longer-run financial and operating performance of the target firm of a government-controlled acquisition different?

Target firms become, at least, partially state-owned in such transactions and, as such, a major concern is that they become less efficient or less profitable than if they remained privately-owned firms following the acquisition. Indeed, there is a large literature that rationalizes how public enterprises are inefficient with excess employment and wages and with goods production that is closer to the needs of self-interested politicians or bureaucrats than any consumers. This inefficiency outcome arises naturally in a model of bargaining (through subsidies and bribes) between politicians and managers in Shleifer and Vishny (1994) and through agency problems in the internal organization of governments between bureaucrats and politicians and among bureaucrats themselves, what Tirole (1994) calls “dissonant objectives” in the division of labor within government entities (due to information problems or incentive contracts). These two views are very different from that which regards public enterprise objectives as one of maximizing social welfare, curing market failures, and improving on the decisions of private enterprises when monopoly power or externalities introduce divergence between private and social objectives (Atkinson and Stiglitz, 1980). But, whichever of these perspectives on government-controlled enterprises one accepts, there is an understanding that the financial and operating decisions differ from those of private enterprises and there is supportive empirical evidence in the relatively poor performance of state-owned banks and banking systems (by, among others, Berger, Clarke, Cull, Klapper and Udell, 2005; Mian, 2006; Micco, Panizza, and Yanez, 2007; and, Taboada, 2008) and of existing state-owned and newly-privatized firms (such as, Boyko, Shleifer and Vishny, 1993; Megginson, Nash and Randenborgh, 1994; and, Dewenter and Malatesta, 1997, 2001).

What motivates us to examine the motives for and consequences of cross-border acquisition activities of government-led acquirers is not only the significant increase in the activity in recent years, but also the heightened regulatory concerns that are now globally widespread. Consider, for example, the Dubai World Ports deal that was originally blocked by the U.S. Congress in March 2006 as it involved the potential transfer to a foreign government agency eleven terminals in six U.S. ports. One year later, Congress passed the Foreign Investment and National Security Act (FINSIA) of 2007 that gave legal status to the little-known Committee on Foreign Investment in the U.S. (CFIUS), a multi-agency group formed in 1975 to monitor U.S. policy on foreign investments that may have any effect on national security.<sup>2</sup> In August 2008, China formed a committee to review

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<sup>2</sup> H.R. 556 Foreign Investment and National Security Act of 2007 was first introduced by Rep. Carolyn Maloney on January 18, 2007 and signed into law by President Bush on July 26, 2007. The Act intends “to ensure national security while promoting foreign investment and the creation and maintenance of jobs, to reform the process by which such investments are examined for any effect they may have on national security, to establish the Committee on Foreign Investment in the United States, and for other purposes.” The full text of the legislation is available at <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:h556>. CFIUS was created in 1975 in the Exon-Florio Amendment to the Defense Production Act of 1950 in which, as the designee of the President, authority was granted to conduct an investigation into the possible impact on

foreign acquisitions of local companies for national security concerns as an outgrowth of its 2006 Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors.<sup>3</sup> In March 2009, Germany's Federal Council approved an amendment to the German Foreign Trade and Payments Act to allow the German Federal Ministry of Economics and Technology to prohibit investors from outside Europe from buying German enterprises (or voting stakes of 25% or more) if such acquisitions constitute a threat to security or public policy.<sup>4</sup> If government-led acquirers do pursue different kinds of targets and if target firms' shareholders react differently to the announcements of such acquisitions, the knowledge of how these deals differ in type and in terms and conditions can provide useful guidance on what kind of economic consequences such regulatory restrictions might have. Of course, if no differences are measurable, then one might wonder about the real value of such regulatory actions at all.

We are further motivated to pursue this question by a potential advantage of our empirical design.<sup>5</sup> One of the challenges in implementing tests of the theoretical models of resource misallocation in public enterprises due to political bargaining over control rights, agency problems in bureaucracies or the pursuit of broader social objectives is that the predictions are diffuse. No specific alternative hypotheses arise and none can thus be rejected in favor of the null that the decisions of public and private corporations are similar. All of this limits the power of the tests. As a result, we build our sample of government-led cross-border acquisitions involving majority and minority stakes in target firms around the world by culling it from the broader sample of all cross-border acquisitions by corporate acquirers, so that we can anchor our inferences and tests with an appropriate benchmark. This benchmarking exercise allows us to benefit from an existing literature on corporate-led cross-border acquisitions that has advanced specific hypotheses as to why firms pursue them and has tested them empirically. For example, there is considerable work on cross-border mergers - linked with other international investments as foreign direct investment (FDI) - that focuses on the role of internal factors, including corporate synergies, relative labor costs, tax incentives, research and development (R&D) or technology advantages, to explain why a foreign firm would value domestic assets more highly than a domestic firm (see, among many others, Caves, 1971; Williamson, 1979; Dunning, 1981, Cushman, 1987; Morck and Yeung, 1991; and, Graham and Krugman,

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national security of acquisitions involving "foreign persons which could result in foreign control of persons engaged in interstate commerce in the United States" (Title 50, U.S. Code § Appendix 2170(a)).

<sup>3</sup> "China forms committee to review foreign acquisitions, citing security," (*Wall Street Journal*, August 26, 2008).

<sup>4</sup> See "Germany Establishes National Security Review of Foreign Investments" (*Gibson, Dunn & Crutcher LLP Publications*, April 17, 2009 and <http://www.bmwi.de/BMW/Redaktion/PDF>). On August 4, 2009, Australia's Treasurer Wayne Swan announced an easing of certain foreign investment rules to a higher threshold of 15% worth A\$219 million or more (Media Press Release No. 089, <http://ministers.treasury.gov.au>). A February 2008 Report of the U.S. Government Accountability Office, entitled "Laws and Policies Regulating Foreign Investment in 10 Countries," provides a useful comparison of foreign investment review procedures in different countries (GAO-08-320, Table 3).

<sup>5</sup> This experimental design is similar to that advocated by Bargaron, Schlingemann, Stulz and Zutter (2008) in which they show that private acquirers pay a 63% lower premium to target shareholders compared to public acquirers. The power of their tests stems from cross-sectional regressions of target returns and bid premiums, dummy variables for the type of acquirer (private or public entity) and a number of control variables associated with alternative hypotheses that motivate acquisitions.

1995, for a survey). More recent studies of FDI flows and cross-border merger activity advocate the importance of external factors, such as unexpected exchange rate shocks (Froot and Stein, 1991; Klein and Rosengren, 1994; Dewenter, 1995; Klein, Peek and Rosengren, 2002; and, Baker, Foley and Wurgler, 2009), tariffs on trade, capital controls and taxes (Buckley and Casson, 1976; Desai, Foley and Hines, 2004a, 2004b, 2006), of geography and stock market valuation differences (Erel-Koksal, Liao and Weisbach, 2009), differences in corporate governance and legal systems (Rossi and Volpin, 2004; Antras, Desai and Foley, 2007; Bris and Cabolis, 2008; and Bris, Brisley and Cabolis, 2008), the role of institutional investors (Ferreira, Massa and Matos, 2009) and differences in market-wide capital scarcity (Chari, Chen and Dominguez, 2009).

The arguments for each of these potential drivers of cross-border activity guide us to specific alternative hypotheses for the government-led acquisitions. For example, Froot and Stein argue that wealth effects matter in cross-border deals because information problems in financial contracting cause external financing to be more costly than internal financing. When a firm's value increases (such as from an unexpected exchange rate appreciation in the currency of their home country), then the potential foreign acquirer can bid more aggressively for domestic assets than a domestic rival. Self-interested politicians, bureaucracies encumbered by agency problems or even those with broader social objectives that influence or control government agencies that might consider such overseas acquisition would be relatively less positively influenced by a real currency appreciation than an equivalent corporate acquirer domiciled in the same country. This constitutes a well-defined and specific testable alternative hypothesis that can be rejected in favor of the null that government- and corporate-led acquisitions are no different. To pursue the most robust and powerful tests, we evaluate a number of these alternative hypotheses and in terms of country-level factors that impact the overall level of cross-border activity across markets, in terms of the characteristics and attributes of target firms that government- and corporate-led acquirers pursue, and, finally, in terms of the share-price reactions to announcements of acquisitions by the two types of acquirers.

It turns out that government-led cross-border acquisitions are much more likely to involve minority stakes in the target firms (involving more than 5% but less than 50% of target firm's shares). Though less attention has been paid in the literature on minority block acquisitions – and especially on cross-border minority block acquisitions – we are usefully guided by studies by Allen and Phillips (2000), Fee, Hadlock and Thomas (2006), Kang and Kim (2008, 2009) and Liao (2009). Allen and Phillips examine 400 corporate minority block acquisitions in the U.S. and find that firms purchase equity stakes in other firms as a form of partial integration between trade partners. Equity stakes solidify such product-market relationships, they argue, to ensure stable partnerships because otherwise incomplete contracting problems, particularly in high R&D expense industries, can make property rights blurry (Aghion and Tirole, 1994). An alternative reason for minority or partial equity stakes is to relieve financial constraints in firms lacking enough financial slack. Firms with high asymmetric information problems often seek financing from market intermediaries, such as commercial banks (Fama, 1985;



James, 1987), private placement investors (Hertzel and Smith, 1993) or venture capitalists (Chan, 1983) who conduct needed due diligence and ex post monitoring, but an outside corporation might already possess substantial knowledge and experience in an industry and serve as a cheaper form of external financing. Fee, Hadlock and Thomas (2006) examine 10,000 customer-supplier relationships in the U.S. and show that partial equity stakes, though still rare between trading partners even in high R&D expense industries, are more likely to occur for financially-constrained suppliers. Liao (2009) broadens this analysis around the world and shows that financial constraints are even more important in other countries and especially in cross-border partial equity acquisitions. Kang and Kim (2008) study 700 block acquisitions in the U.S. and find that blockholders tend to invest in geographically-close firms and are more likely to pursue post-acquisition governance activities as a result; Kang and Kim (2009) examines 268 partial block acquisitions of U.S. target firms by foreign corporate acquirers and show that proximity matters here not only in terms of geographic distance, but also in terms of language, culture and similarity of legal systems. We propose and test each of these three specific alternative hypotheses in our paper. Are government-led acquirers, in fact, any less likely than corporate-led acquirers to take minority equity stakes in foreign targets in similar industries, in industries with high R&D expenses, in those with financial constraints or in those that are more proximate geographically or otherwise?

Finally, our experimental design allows us to contribute in an important way to the recent literature focusing on sovereign wealth funds (SWFs) and their investment strategies around the world. Studies by Kotter and Lel (2008), Bernstein, Lerner and Schoar (2009), Chhaochharia and Laeven (2009), Dewenter, Han and Malatesta (2009), Fernandes (2009), Fotak, Bertolotti, Megginson and Miracky (2009), Knill, Lee and Mauck (2009) each examine a list of SWFs from the Sovereign Wealth Fund Institute ([www.swfinstitute.org](http://www.swfinstitute.org)) or other related sites and compile data on equity investments for each SWF using a variety of sources.<sup>6</sup> Most of these studies examine only investments in publicly traded firms (except Bernstein, Lerner and Schoar who also consider private targets), almost all evaluate the share price reactions to their announcements and some consider longer-run consequences (including Kotter and Lel, Bernstein, Lerner and Schoar), and most differentiate between different SWFs by their varying levels of quality of governance and transparency as guided by a scoring index developed by Edwin Truman (2007). Most of these studies find a positive and statistically significant share price reaction around the announcement of an SWF acquisition in a public target (e.g. 0.8% in Fotak, Bertolotti, Megginson and Miracky), but also negative longer-run buy-and-hold returns; Bernstein, Lerner and Schoar show that the price-to-earnings ratios of the industry peers of the firms in which SWFs invest decline by over the year; and, while Dewenter, Han

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<sup>6</sup> SWFs are broadly defined as public investment agencies which manage part of the foreign-currency assets of national states and are typically funded by commodity export (e.g. oil) revenues or the transfer of assets directly from official foreign exchange reserves. Useful background studies on SWFs as a growing force in global capital markets and their legal and organizational structures include Butt, Shivdasani, Stendevad and Wyman (2008), Jory, Perry and Hemphill (2008), Balding (2008) and a new book by Saw and Low (2009).

and Malatesta uncover evidence of active monitoring by SWFs after the investment, Kotter and Lel show no evidence that operating performance or corporate governance changes.

An important challenge for each of these studies is how to define the appropriate benchmark against which to judge these investment decisions. Most studies exploit the cross-section of SWFs by governance or transparency scores of Truman (2008), by the extent to external managers or politicians are involved in investment decisions, by whether the acquisitions are domestic or cross-border and only one – Chhaochharia and Laeven – calibrates the country allocations of SWFs against those of other global investors, specifically U.S. mutual funds (they find that SWFs strongly prefer investments in closer proximity geographically, and by language, ethnicity, and culture).

Our study contributes to this emerging literature on SWFs by widening the lens on not just SWF acquisitions, but also those by government-controlled corporations and agencies that are not SWFs (and which include government-controlled entities that are owned and controlled by SWFs). Moreover, in our experiments, we are able to calibrate the cross-border acquisition choices of SWFs against non-SWF government acquirers as well as those of corporate acquirers. Our sample of government-led acquisitions is also by definition larger than most of these other studies which provides helpful statistical power for our basic inferences. Of course, we do only focus on acquisition blocks that exceed 5% of the target firm's shares, so we are not able to compare our findings to those of Fernandes (2009), in which the sample exceeds 21,000 acquisitions, but for which the median size of the SWF investment stake in the target firm is only 0.25%.

We use Thomson Reuters Security Data Corporation's (SDC) Platinum Mergers and Corporate Transactions database to collect data on 155,696 announced cross-border acquisitions between 1990 and 2008 with a total (constant dollar) transaction value equal to \$10.7 trillion. Government-controlled acquirers are identified as those in which the acquirer or acquirer's ultimate parent is flagged as a government entity, and these include corporations or "financial buyer" (which is usually a sovereign wealth fund). We exclude leveraged buyouts, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases and privatizations and we exclude acquirers from overseas territories of the U.K. and Netherlands that are tax havens, including the Bahamas, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man, Jersey and Netherland Antilles. We are ultimately left with a sample of 5,317 failed and completed government-led deals constituting over \$619 billion over the period from 1990 to 2008.

We find significant cross-country variation in the cross-border activity that is led by government acquirers in terms of the country of domicile of the acquirers and of the host targets. China's government-controlled corporations represent the largest contingent having initiated \$115 billion worth of acquisitions over this period, and is followed closely by those from France (\$94 billion), Singapore (\$69 billion) and Saudi Arabia (\$23 billion). As a fraction of the total dollar value of cross-border activity, Venezuela, UAE, China and Saudi Arabia lead with over 70% comprising government-led deals. Among countries that represent the prime targets for these government-led acquisitions, the U.S. is the largest in absolute terms (\$124 billion), followed by the U.K. (\$91

billion), Hong Kong (\$66 billion) and Australia (\$27 billion), but, relative to the flow of corporate cross-border acquisitions that target their countries, the leaders are UAE (44%), Hong Kong (40%), Malaysia (20%), Finland (20%) and the Slovak Republic (20%). We test the hypothesis that the overall cross-country determinants of cross-border acquisition flow from domicile of acquirer and to that of target are different for government-led deals and find that it is relatively more intense for geographically-closer countries, but also relatively less sensitive to differences in the level of economic development of the acquirer and target, of the quality of its legal institutions and accounting standards, and how stringent are the restrictions on foreign direct investment (FDI) flows in the acquirer's country. However, overall differences in the determinants of government-controlled and corporate acquisition flows are economically small.

When we turn our attention to a deal-level analysis, we show that there are few, if any, firm attributes of the target and country-level attributes of the target and acquirer that affect the likelihood of a cross-border deal led by a government acquirer any differently than a corporate acquirer. There is some evidence that government-led acquirers are more likely to pursue larger targets with greater growth opportunities (market-to-book ratios), and more financial constraints, but the explanatory power of these logistic regression models are generally quite low. We are able to reject almost all of the specific alternative hypotheses that we explore in favor of the null that these government-led acquisitions are no different than corporate acquisitions in the types of deals they pursue, so we interpret this evidence in the cross-border acquisition market as not supportive of the predictions of theories about resource misallocation due to political bargaining, agency problems or the mandate of social objectives. Interestingly, SWF acquisitions tend to be less likely to fail than other government-led acquisitions and they are more likely to pursue targets that are larger in total assets and with fewer financial constraints. There is considerable more explanatory power in these supplementary tests on SWFs than in those comparing all government-led and corporate-led acquisitions.

Finally, we show that the median cumulative abnormal market-adjusted returns (CMARs) around announcements (with a three-day investment horizon) of cross-border deals by corporate acquirers are 5.8% for those seeking majority stakes and 1.4% for minority stakes while those of government acquirers are only 2.1% and 1.0%, respectively. In cross-sectional tests, we are unable to detect any differences statistically once we control for various country-level and firm-specific factors and the resulting differences are economically small. The CMARs using longer horizon investment windows around the announcements are larger (up to 26% for 21 day window), reliably positive statistically, but still insignificantly different for government-led and corporate-led cross-border acquisitions. The three-day CMARs are positive and statistically significant for both SWF-led and non-SWF-led government cross-border acquisitions, but there is reliable evidence that the former's stock price reactions are statistically significantly lower (median 1.32% for non-SWFs instead of 0.88% for SWFs only).<sup>7</sup> Our

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<sup>7</sup> Our mean share-price reactions equal 1.52% to the 181 SWF acquisitions (1.41% for the 77 deals excluding financial services and utilities firms as targets) are very close in magnitude to the 1.52% and 2.15% 3-day market-model-adjusted

novel calibration exercise of SWF investments relative to other government-led acquisitions thus lends an important new perspective on how much – or, more importantly, how little - the market reacts to SWF announcements.

The plan of the remainder of this paper is as follows. In the next section, we outline how we built our data and provide preliminary statistics on the level of cross-border activity that is led by government-controlled acquirers. Section 3 presents cross-sectional regression analysis of the determinants of the aggregate level of cross-border acquisition activity across countries by government-led and corporate acquirers, including a discussion of the alternative hypotheses that we explore and the country-level variables we use to test them. In Section 4, we shift to a deal-level analysis using a logistic regression analysis of government-led versus corporate-led deals. Our analysis of the share price reactions to the deal announcements follow in Section 5 and we end the paper with some concluding remarks.

## **2. Data and Descriptive Statistics**

### *A. The Sample of Cross-Border Deals*

We use Thomson Reuters Security Data Corporation's (SDC) Platinum Mergers and Corporate Transactions database to collect data on 155,696 announced cross-border acquisitions between 1990 and 2008 with a total (constant dollar) transaction value equal to \$10.6 trillion. We collect a number of data items, including the announcement date, whether it succeeded, failed or was withdrawn, the target's name, its status (subsidiary, joint venture partner, private, government-owned or publicly-listed company), its 4-digit Standard Industrial Classification (SIC) code and country of domicile, the name of the acquirer, its SIC code and country of domicile, its intermediate and ultimate parent firm's name, status (if either relevant), and the deal value, if disclosed, and the fractional stake in the target that the deal represents. We only consider deals in which the fractional stake in the target exceeds 5% and classify the deal as a minority block acquisition if the fractional stake in the target is less than 50%. We also collected other deal characteristics, including the medium of exchange (cash/stock payment), whether the shares were purchased on the open market or through private negotiation and the 4-week premium paid for the shares acquired of the offer price relative to the 4-week trailing price of the target's shares. We convert all deal values reported into U.S. dollars using national exchange rates from the WM/Reuters prevailing at the time of the deal (WMR quotes are based on 4:00pm London (Greenwich Mean Time) in U.K. Pound Sterling, which are, in turn, converted into U.S. dollars at the same U.S. dollar/Pound Sterling national exchange rate and we further report them in Constant 2000 U.S. dollar terms using the U.S. Consumer Price Index.

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returns in Dewenter, Han and Malatesta (2009) and Kotter and Lel (2008), respectively, but larger than the 0.82% 5-day market-model-adjusted returns in Chhaochharia and Laeven (2009), and 0.81% volatility- and market-adjusted 3-day returns in Fotak, Bortolotti, Megginson and Miracky (2009)..

We exclude leveraged buyouts, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases and privatizations and we exclude acquirers from overseas territories of the U.K. and Netherlands that are tax havens, including the Bahamas, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man, Jersey and Netherland Antilles. This filter on cross-border acquirers from overseas territories excluded 10,962 corporate deals worth cumulatively \$353 billion (in Constant 2000 U.S. dollars) or 6% of the sample count and 3% of the value of the entire sample.

Government-controlled acquirers are identified as those in which the acquirer or acquirer's ultimate parent is flagged as a government entity, and these include corporations or "financial buyers" (which usually signals an SWF). The variable of interest is "AUPPUB" and whether it identifies the ultimate parent as government-owned, which SDC defines as one in which 50% or more of the shares outstanding are government owned. We are ultimately left with a sample of 5,317 failed and completed cross-border deals constituting over \$619 billion over the period from 1990 through 2008. We proceeded to double-check the ultimate parent's ownership status at the time of the deal's announcement by hand using a variety of company annual reports, regulatory filings, on-line news reports and other resources. We sorted from highest to lowest all of the government-led acquirers by cumulative total U.S. dollar Constant 2000 value (again using the U.S. Consumer Price Index and WMR exchange-rate quotes from Datastream) across all deals in which they were involved. We confirmed by hand the government-controlled status of the top 72 acquirers which ultimately represented 78% of the cumulative cross-border deal value (\$461 billion) and over 526 of the deals. Consider, for example, that the EDF (Electricité de France) Group of France, which was a 100% government-controlled until 2004 and is still 84%-owned by the government, initiated 19 acquisition deals between 1992 and 2008 cumulatively totaling \$42.3 billion in Constant 2000 U.S. dollars and its targets included Constellation Energy Group (U.S., \$4.5 billion), Delmagyarorszagi Aramsolgalta (Hungary, \$3.6 billion) and PowerGen plc (U.K., \$3.4 billion).

We also screened financial acquirers to be those firms whose primary SIC codes range between 6000 and 6999. We double-check the name of the acquirer, its intermediary and ultimate parent against the list of names supplied on the SWF Institute website ([www.swfinstitute.org](http://www.swfinstitute.org)) to confirm its status as an SWF. The largest SWFs in our data sample of cross-border acquisitions included Singapore's Temasek Corporation, which was involved in 167 deals cumulatively totaling \$39.8 billion, Singapore's Government Investment Corporation (GIC; 81 deals, \$19.8 billion), Saudi Arabia's SABIC (4 deals, \$12.3 billion), Dubai World (39 deals, \$17.2 billion), China Investment Corporation (7 deals, \$7.4 billion) and the Abu Dhabi Investment Authority (22 deals, \$8.7 billion). It is noteworthy that collectively SWFs are prominent among the largest cross-border acquirers, but they comprise less than \$141 billion of the cumulative deal value, or one-quarter of our total of all government-led acquisition activity. But this relatively low cumulative value may arise from the difficulty of defining exactly what a SWF is,

an important point which Fotak, Bertolotti, Megginson and Miracky (2009) so aptly point out (see their Panels A and B, Table I comparing SWF classifications by Truman (2007) and by the SWF Institute).<sup>8</sup>

### *B. Summary Statistics*

Table 1 presents summary statistics – overall and by year - on the number and cumulative value of cross-border acquisition deals involving at least a 5% stake in a target corporation. In Panel A, we report those associated with government-controlled acquirers and, in Panel B, those with corporate acquirers. In each panel, we present the total number of deals, only those in which transaction values are reported, the cumulative and average per deal value across all those for which data is reported, the number of failed deals (rejected or withdrawn), those involving minority stakes (less than 50% of target shares), those involving financial acquirers and the number of targets that are publicly-listed corporations. As noted above, our overall sample across all years constitutes 5,317 deals cumulatively totaling \$619 billion in value, which represents about 3.5% of all corporate-led acquisitions (150,379) and 6% of their cumulative value (\$10.1 trillion). Figure 1 already demonstrated that a significant increase in government-led acquisition activity occurred in 2007 and 2008, particularly in terms of cumulative deal value. Almost 17% of all government-led acquisition deals and 37% of the cumulative value were concentrated in those two years. Corporate-led acquisition activity was also heightened during 2007-2008, but not as intensely in terms of cumulative value of all deals (\$2.26 trillion, or only 22%).

Only 1,812 of the 5,317, or about one-third of the government-led acquisition deals report deal values which implies that many deals involve subsidiaries, plants or joint venture transactions in which the deal value is too small to report, there are differences across countries in disclosure requirements or the parties to the transaction, both companies themselves and their advisors, simply choose not to do so. The third explanation is most likely as the proportion of corporate deals for which values are disclosed is much higher at 46% (69,877 deals reported out of 150,379 in total). The average deal value involving a government-controlled acquirer is twice the size of corporate acquirers (\$238 million versus \$137 million) and this difference has widened in recent years (\$572 million versus \$137 million in 2008) with the large SWF-led acquisition deals in major financial institutions. The most prominent examples include GIC of Singapore's \$9.8 billion stake in UBS, GIC and Abu Dhabi Investment Council's \$6.9 billion and \$7.6 billion stakes in Citigroup, China Investment Corporation's \$5 billion in Morgan Stanley and Singapore's Temasek Holdings and the Kuwaiti Investment Authority's \$5 billion and \$3.7 billion investment in Merrill Lynch. As a fraction of the total number of deals initiated by government-controlled

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<sup>8</sup> By comparison, Bernstein, Lerner and Schoar (2009) identify 1752 deals by SWFs averaging \$351 million per deal implying about \$615 billion in cumulative SWF activity, but these are not inflation adjusted and the sample runs from 1983 to 2007. Fotak, Bertolotti, Megginson and Miracky (2009) in their SDC sample evaluate 141 deals at \$572 million per deal or cumulatively \$80.6 billion. Their Bureau van Dijk "Zephyr" sample is much larger at 314 deals at €1.253 billion per deal or \$1.57 trillion over 1997-2008. Beck and Fidora (2008) report \$91.5 billion of deal activity in 2007 and 2008 alone, which, in turn, dwarfs any of the other samples. A quick check of their Table 2 of the "major" investments with our sample confirms that we have most of their largest deals.

acquirers, more than one-third fail (1,926 out of 5,317); by contrast, only 26% of the sample of corporate-led acquisition deals fail.

Another major difference between the government-led and corporate-led acquisitions is the proportion of them that involve minority stakes in the target firm; over 63% of government-led deals involve stakes below 50%, while only 41% of corporate deals do. The finance literature proposes that the motives behind these two types of transactions differ, so we will separate out the majority control and minority stake deals for both government and corporate acquirers in most of our analysis. A large fraction (26%) of the government-led deals involve financial acquirers (designated by SIC codes 6000 to 6999); many of these are identified as SWFs or financial holding companies for which the intermediary parent is a SWF. Finally, more than one-third of the sample of targets among government-led deals involves a publicly-traded firm, a much higher fraction than for corporate deals (only 17,845 out of 150,379 or 11%). This is an important constraint for our analysis at the deal level for which we will need to obtain financial statement information to evaluate by which attributes the targets of government and corporate acquirers differ.

### **3. Determinants of Cross-Border Acquisition Activity Led by Government-Controlled Acquirers**

#### *A. Measuring the Level of Cross-Border Acquisition Activity by Type of Acquirer*

Our next goal is to measure whether the level of cross-border acquisition activity led by government-controlled acquirers differs from that of corporate acquirers by the country of the acquirer and the target firms. Does deal activity that is led by government-controlled acquirers emanate from some countries more intensely than others? Are government-controlled acquirers more likely to pursue targets in certain countries over others? If so, in either case, what are the country-level attributes or market conditions of those countries that dominate government-led cross-border acquisition activity and which determine the target markets that attract this activity? In order to answer these questions, we need to compute two kinds of cross-border ratios of deal counts and cumulative deal value (in 2000 Constant U.S. dollars): the first measures the fraction of all cross-border acquisition activity emanating from a given country  $i$  which involves government-led acquirers and the second measures the fraction of all acquisition activity that targets a particular country  $j$  which involves government-led acquirers. In order to measure these fractions in a reasonable way, there must be sufficient activity overall to justify its consideration, so we exclude countries in which there are fewer than 50 cross-border acquisitions, whether led by government-controlled or corporate acquirers.<sup>9</sup>

In Table 2, we report the countries in rank order by those which have the highest fractions of government-led activity measured by cumulative deal value by acquirer country (Panel A) and by target country (Panel B). The acquirer countries in which government-led deals dominate all cross-border activity include Venezuela (85% of

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<sup>9</sup> This constraint has only a modest impact on the overall sample. The overall count of cross-border deals fall from 5,317 to 4,759 and the cumulative deal value drops from \$619 billion to \$592 billion.

deal value, 47% of deal counts), UAE (77%, 48%), China (72%, 39%), Saudi Arabia (70%, 50%), the Czech Republic (68%, 17%), Kazakhstan (65%, 17%) and Kuwait (62%, 18%). By raw cumulative deal value, however, China leads the list with 833 deals and \$114 billion of deal activity, both statistics that far exceed any other countries in the sample (interestingly, France is second with 717 deals and \$93 billion). Many of the countries at the top of the list are those that are typically identified with large SWFs built up with accumulated foreign currency reserves due to oil exports and export-driven trade, but it is not exclusively so (e.g. France, Italy, Japan, Sweden each represent more than \$20 billion of government-led deal activity).

The leading target countries for government-led cross-border acquisition activity are somewhat more surprising. UAE has the highest fraction by cumulative deal value (44%), but its fraction by the count of deals is low (3%) indicating that several large deals dominate their market. Hong Kong is second by the fraction of cumulative deal value (40%), first by fraction of deal count (16%), and is by far the largest target market in absolute terms (583 deals, \$66 billion) on the list. Much of this activity stems from the government-led deals emanating from China, as seen in Panel A. But, in fact, the U.S. and U.K. are both larger target markets in both instances at \$125 billion and \$90 billion, respectively. Because the fraction of the activity that targets the U.S. and U.K. with government-led acquirers is so low (less than 4%), they are both reported in the “Others” category and dominate it almost exclusively. The other countries that are primary targets for government-led cross-border acquisitions include Malaysia (20% of deal value, 4% of deal count), Finland (20%, 4%), the Slovak Republic (20%, 6%), Egypt (17%, 7%) and Indonesia (17%, 13%).

Though it is relatively easy to connect the dominant presence of China’s government-led acquirers in Hong Kong as the primary target market, it is more complex to discern it for the broader level of activity around the world. We will develop another more refined measure of the proportion of government-led activity by pairs of acquirer and target countries next, but Figure 2 offers a preliminary look by region. In Panel A, we report the countries in declining rank by raw cumulative deal value led by government-controlled acquirers and indicate which regions they target for their activity. For China’s \$114 billion of deal activity, the largest target component is Developed Asia (about \$65 billion, almost all of which targets Hong Kong), followed by the U.S./Canada (about \$25 billion) and Developed Europe (about \$10 billion). France’s \$90 billion of government-led acquisitions mostly target Developed Europe, then the U.S./Canada, whereas Singapore’s acquisitions are evenly split between Developed Asia and Europe. UAE’s and Saudi Arabia’s government-led acquirers total about \$65 billion each, but UAE’s prefer Developed Asia and Europe whereas Saudi Arabia’s tilt their acquisitions toward Developed Europe and the U.S./Canada.

The U.S. is the largest target country for government-led acquisitions (\$125 billion) and, in Panel B, we note that the dominant acquirer countries are surprisingly from the EMEA region (Emerging Europe, Middle East and Africa), followed by Developed Europe and then Emerging Asia. The \$90 billion in government-led acquisition activity targeting the U.K. arises from Developed Europe, Developed Asia and then the EMEA region. For Hong



Kong, the dominance of Emerging Asia (mostly all China) in its \$65 billion of deal activity is quite apparent. Cross-border activity involving government-controlled acquirers targeting Australia almost exclusively come from Emerging and Developed Asia.

### B. *Evaluating Alternative Hypotheses for Cross-Border Acquisition Activity*

We next disaggregate our measure of cross-border activity due to government-controlled acquirers into country pairs. But, in order to do this, we need to benchmark the activity to construct fractions and in two different ways: first, by the total government-led activity that emanates from the acquirer's home country and, second, by the total government-led activity that selects the target firm's country. That is, when evaluating by acquirer country, we divide the total number of deals (or cumulative deal value) involving government-controlled acquirers from country  $i$  that targets country  $j$  by all government-led acquisition activity emanating from country  $i$  over the period. When evaluating by target country, we compute the fraction of total number of deals (or cumulative deal value) involving government-led acquirers that targets country  $j$  from country  $i$  to the total activity by government-led acquirers that target country  $j$ .

One important advantage of our experimental design is that we can perform the exact same computations for all corporate-led cross-border acquisition activity between country pairs. Even more importantly, we can compute the differences between the fraction of government-led activity that takes place between countries  $i$  and  $j$  and the fraction of corporate-led activity that takes place between those same two countries.<sup>10</sup> In this way, we are able to determine whether government-led acquirers from country  $i$  *disproportionately* identify targets in country  $j$  relative to corporate acquirers that come from country  $i$  and whether government-led acquirers that target country  $j$  do so from acquirer countries that are different from corporate acquirers that target firms in country  $j$ . Our approach represents a natural benchmarking experiment that is similar in spirit to that employed by Rossi and Volpin (2004), Erel, Liao and Weisbach (2009), and others to benchmark cross-border acquisition activity between country pairs relative to domestic acquisition activity in one of the countries. In order that the calculation of this ratio is sensible, we further impose the restriction that the total number of cross-border deals by government-controlled acquirers from a given acquirer country exceeds 30 over the period of our analysis (in addition to the constraint that the total number of all cross-border deals must exceed 50 over the period).<sup>11</sup>

What country-level factors determine toward which target countries government-led acquirers tilt their acquisition activity? Are these country-level factors the same as those that influence the decisions of corporate

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<sup>10</sup> We have also calculated other proxies to measure these differences. For example, we compute the ratios of the fraction of government-led activity that takes place between countries  $i$  and  $j$  relative to the fraction of all government and corporate-led activity that takes place between those same two countries.

<sup>11</sup> With 64 countries represented in our overall sample of cross-border acquisitions, the potential number of country-pair observations is the square of the number of countries ( $64 \times 63$  or 4032). The effect of these screens is to limit the number of observations to include about 40 countries. We explored a number of alternative screens and, in fact, our cross-sectional regression analysis shows the sensitivity of our inferences to different screens based on the explanatory variables we include in the various specifications.

acquirers? Which factors, if any, can explain differences in the patterns of cross-border acquisitions by government-led and corporate acquirers? We propose a number of possible explanations for these cross-country acquisition patterns as drawn from prior literature.

- *Valuation Differences Between Target and Acquirer Firms.* Differences in valuations between target and acquirer firms can affect merger and acquisition propensities through two channels. Froot and Stein (1991) argue that differences in wealth that occur because of exchange rate or other shocks provide a financing advantage, lowering the cost of a potential acquisition. A wealthier country effectively has a lower cost of capital, leading its firms to purchase assets outside the country, including other companies. The second channel through which valuations can drive mergers and acquisitions is if these valuations diverge from fundamentals (Shleifer and Vishny, 2003).<sup>12</sup> Given misvaluation, managers of a relatively overvalued firm will have incentives to purchase undervalued assets, especially if they can use their overvalued stocks as a means of payment. Erel, Liao and Weisbach (2009) find differences in real stock market returns and in real exchange rate changes explain much of the level cross-border merger activity between country pairs and argue that it can stem from overall differences in investor sentiment and from currency movements that are more than warranted by changing underlying economic conditions. In a closely related effort to ours, Bernstein, Lerner and Schoar (2009) find that SWFs do choose foreign investments that are in industries with relatively low P/E ratios, so, for such types of government-controlled acquirers at least, valuation differences matter. We predict that stock return differences of the country indices (average annual local-currency real stock market returns) and the relative appreciation of the two countries' currencies (the average annual real exchange rate return) over the sample period will be associated with more acquisition activity between country pairs and, under our central null hypothesis, activity led by government-controlled and corporate acquirers would be no differently affected by these valuation differences. Details on our construction of the stock market returns and exchange rate changes are in Appendix Table A1 and summary statistics are in Table A2.
- *The Role of Corporate Governance.* In a world of perfect markets, corporate assets would be channeled toward their best possible use. Mergers and acquisitions facilitate this process by reallocating control over companies. However, frictions such as transactions costs, information problems, and agency conflicts can prevent efficient transfers of control. Recent studies of corporate governance employ measures of the quality of the legal and regulatory environment within a country as proxies for some of these frictions and show that differences in legal systems, regulation, accounting and disclosure requirements correlate with the development of capital markets, the ownership structure of firms, the cost of capital and in the intensity and the pattern of merger and acquisition activity around the world.<sup>13</sup> Rossi and Volpin (2004), Starks and Wei (2004), Antras, Desai and Foley (2007), Bris and Cabolis (2008) and Bris, Brisley and Cabolis (2008) find that cross-border mergers and acquisition activity between two countries increases the greater the difference in the quality of investor protections and accounting standards between the acquirer's and target's countries.<sup>14</sup> Liao (2009) shows, however, that cross-border minority block acquisitions are much less affected by differences in legal systems, regulation or accounting and disclosure requirements. Studies of investment decisions by SWFs do emphasize governance-related motives, but most focus on fund-related measures of transparency (based on scoring system of Truman (2007)) or on political affiliations of SWF board members (Bernstein, Lerner and Schoar, 2009) and not of the country of domicile. We also consider a related measure of the autocratic control or democratic nature of the government as a proxy for the risk of agency conflicts

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<sup>12</sup> For evidence of valuation drivers of domestic merger activity, see Moeller, Schlingemann and Stulz (2005), Dong, Richardson, Hirshleifer and Teoh (2006), Rhodes-Kropf and Viswanathan (2004), and, in terms of FDI flows, see Baker, Foley and Wurgler (2008).

<sup>13</sup> Important contributions that support these inferences, among many others, include La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998), Hail and Leuz (2006)

<sup>14</sup> These studies also show that the takeover premiums are smaller and the fraction of the deal financed with cash is lower, the higher the quality of the foreign bidding firm's home country governance.

that stem from politicians or bureaucracies pursuing their self interests (Stulz, 2005). We predict that larger positive differences in investor protection (using the anti-self dealing index of Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008)), democracy of the political system (using the PolityIV scores of democracy/autocracy) and in accounting standards (using the Center for International Financial Analysis and Research scores in La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998)) will be associated with more acquisition activity between country pairs and, under our central null hypothesis, activity led by government-controlled and corporate acquirers would be no differently affected by these governance and disclosure differences. Details on these variables are also in Appendix Table A1 with summary statistics in Table A2.

- *Geographic Proximity.* The empirical literature on trade and FDI flows emphasizes the important role that geography plays (among others, see the gravity models of Anderson, 1979; Portes and Rey, 2005; and, Anderson and Wincoop, 2003). The arguments are based indirectly on the role of transactions costs, tariffs and barriers that are linked to bilateral geographical distance, although they can similarly be linked to commonness of culture, language, ethnicity and religion (Stulz and Williamson, 2003). Coeurdacier, De Santis and Aviat (2009) emphasize that geographic distance is a primary force driving cross-border mergers and acquisitions, especially among developing countries, and there is additional support in Rossi and Volpin (2004) and Erel, Liao and Weisbach (2009) though they do not emphasize these findings. Kang and Kim (2009) examines 268 partial equity block acquisitions of U.S. target firms by foreign corporate acquirers and show that proximity matters here not only in terms of geographic distance, but also in terms of language, culture and similarity of legal systems. Chhaochharia and Laeven (2009) show that foreign equity holdings of SWFs are most importantly explained by geographic distance, ethnicity, language and religion. We predict that closer geographic proximity (using great circle distance, see Tables A1 and A2) will be associated with more acquisition activity between country pairs and, under our central null hypothesis, activity led by government-controlled and corporate acquirers would be no differently affected by geographic distance.
- *Control Variables.* We examine a number of other variables that have been proposed as a potential driver of cross-border merger and acquisition flows in the literature. We include differences in the logarithm of Gross Domestic Product (GDP) per capita, as a measure of the country's wealth, and in average real GDP growth as a proxy for the change in macroeconomic conditions. Rossi and Volpin (2009), Chari, Chen and Dominguez (2009), and Erel, Liao and Weisbach (2009) show that developed countries' firms are, in fact, more likely to acquire less developed countries' firms. Couerdacier, De Santis and Aviat (2009) show that the European integration process – through joining the European Union (EU) and/or the Euro bloc – led to a doubling of merger and acquisition activity towards their members and away from the rest of the world, so we include a dummy variable for those country pairs that involve both as members of the EU. We also create a dummy variable if the target country is a tax haven, as designated by the International Monetary Fund's List of Countries, Territories and Jurisdictions with offshore financial centers (see Table A1). We include a measure of correlation of returns between the national indexes of the two countries to evaluate the importance of risk diversification as a motive. The lower the returns correlation between countries, the more important the risk diversification motive for the acquirer. Finally, for a subset of OECD countries, Golub (2003) devised a scoring system for the overall restrictiveness on inward FDI for each country, based foreign ownership limits on equity, mandatory screening, licensing and approval, nationality restrictions on board members, and input and operational restrictions. Government-controlled acquirers are, after all, more likely to be impacted by FDI restrictions because of political concerns related to threats to national security and excessive political influence (Graham and Krugman, 1995).

### C. Country-Level Results

Table 3 presents the results of our cross-sectional regressions of the level of government-controlled acquisitions across country pairs. In Panel A, we show the results by acquirer country in which the number of cross-border deals between two countries is divided by the total cross-border activity emanating from the country

of the acquirer, and, in Panel B, we show the results by target country in which the divisor is the total cross-border activity attracted to the country of the target. Most of the specifications (Models 1 to 10) are for government-controlled acquirers, but results are also presented for corporate acquirers (Models 11 to 14) and for the difference between the two (Model 15). Models 9 and 13 focus on government-led and corporate acquisition activity only in terms of deals that involve a minority stake in the target firm, whereas Models 10 and 14 measure only cross-border majority-control merger deal activity for the two types of acquirers. The models are all estimated using ordinary least squares (OLS) with robust standard errors correcting for heteroscedasticity.

For the results by acquirer country in Panel A, Model 1 shows that there is a valuation effect, but it has low explanatory power ( $R^2$  less than 1%) and it only involves the exchange rate return. Surprisingly, the negative coefficient implies that government-controlled firms from countries whose currencies have appreciated over the period are *less* likely to be acquirers of firms whose currencies depreciated. This result is not reliable, and, in fact, disappears in the all-inclusive Model 7. Interestingly, when we measure the acquisition activity by the value of the deals (in Constant 2000 U.S. dollars) in Model 8, the exchange rate effect takes on the expected positive sign. The equivalent specifications for corporate acquisitions are in Models 11 (for number of deals) and 12 (for value of deals). The valuation effects are somewhat more reliably positive for the corporate deals, but these differences are economically small. In fact, in Model 15 for the ratio of government-controlled to corporate acquisitions by acquirer country, there is no reliable difference statistically.

Differences in the level of economic development do matter, but surprisingly with the wrong sign. Acquirers from better economically developed countries are less likely to acquire firms in less developed countries and this finding is reliable for the multiple regression Models 7 and 8 for government-controlled acquirers and corporate acquirers (Models 11 and 12). It may arise from the large number of SWFs located in less-developed countries, but this would not explain why the results are similar for corporate acquirers. Model 15 performs the regression with the difference between government-controlled and corporate acquisition activity and shows that this wealth effect is statistically indistinguishable between the two types. Average GDP growth differences between target and acquirer countries do not have any explanatory power.

Geographic proximity matters. The closer are the two countries, the higher the level of government-controlled acquisition activity between them. Moreover, the market correlation measure is also statistically reliably different from zero, but with a positive sign. Government-controlled acquirers are more likely to pursue targets in countries that are less likely to diversify their risks. Both coefficients are positive and significant in the simple and multiple regressions. Interestingly, they are similarly so and with same magnitude of coefficients for corporate acquirers. There is a good chance that the market correlation measure proxies for the same kind of proximity measures that other cross-border merger studies have uncovered associated with regional blocs, religion, culture or language.

The governance, democracy and accounting standards variables are generally not reliable in the specification for government-led acquisition activity (Models 5 and 6). The coefficient on accounting standards is negative

implying acquirers from countries with better standards are *less* likely to pursue targets in countries with weaker standards, which is not what we would expect. An exception is Golub's measure of FDI restrictiveness of the country of the target for which the coefficient is negative and significant, as expected. Government-controlled acquirers are less likely to pursue targets in countries with more FDI restrictions. Though not shown in the table, the coefficients on accounting standards and on FDI restrictiveness are of the same sign and magnitude for the corporate acquisitions.

Overall, the findings in Panel A indicate that the country drivers of cross-border acquisitions led by government-controlled acquirers are similar to those led by corporate acquirers, at least from the perspective of the acquirer. Overall, the  $R^2$  in Model 15 of the ratio of government-led to corporate acquisitions across country pairs is less than 1%. The only variable that is significant, and only weakly so, is that associated with the tax haven dummy control variable. The motives for acquisitions, at least, are indistinguishable for government and corporate acquirers.

The results in Panel B for acquisition activity between countries by target country are different. The perspective in this case is taken from that of the target firm in terms of which attributes and market conditions in the country of the government-led acquirer matter. Models 1 and 7 (multiple regression), as well as those exclusively for minority stakes (Model 9) and majority control acquisitions (Model 10) show that valuation differences matter and in a way we expect. Target firms are more likely to attract government acquirers from countries with higher stock market valuations and more favorable exchange rate movements over the period. The effect is weaker for corporate acquisitions (see Model 11 for deal count and 12 by deal value) and the differences are, in fact, statistically significant (see Model 15). The economic magnitude of the difference is not trivial, however. Consider that the coefficient on the real exchange rate change is 0.09 for government-led deals and is 0.02 for corporate deals. A one-standard-deviation increase in the real exchange rate for a given country pair (or 12.7%) is associated with an increase of 1.1% ( $0.09 \times 0.127$ ) in cross-border government acquisitions, which is a 55% increase relative to its unconditional mean (average level of cross-border acquisitions between country pairs is 2%) and about 16% of its unconditional standard deviation (cross-sectional standard deviation in level of acquisitions between country pairs is 7.1%). The equivalent exchange-rate impact associated with corporate acquisitions is 0.3% ( $0.02 \times 0.127$ ), which is only a 23% increase relative to its unconditional mean and only about 8% of its unconditional standard deviation. Similar differences in economic magnitude pertain to stock market return differences.

We also see that there are important differences among drivers of government-led and corporate acquisitions in terms of the level of economic development and the role of geographic proximity and market correlation. Model 15 shows that, from the target's perspective, knowing that an acquirer is from a better developed country matters more for corporate than government acquirers. Acquisitions from geographically close and between markets with higher correlations are more likely in both cases, but the risk motive matters less for government-led

acquisitions. There is some weak evidence that cross-border deals within the EU involving corporate acquirers are less likely than those involving government-led acquirers. Although not shown in the tables, the governance motive for cross-border acquisitions is much weaker for corporate deals than for government-led deals. The negative and significant coefficients on anti-self dealing (Model 4) and on democracy (Model 5) for government acquirers, both of which run the opposite of what we would expect based on Rossi and Volpin (2004) and others, is indistinguishable from zero for corporate acquirers. The negative coefficient on the FDI restrictiveness variable of Golub (2003) is very similar in precision and magnitude for both government-controlled and corporate acquirers.

Overall, the results in Panel B point to some discernible differences in the importance of country factors for government-controlled and corporate acquirers. But it is important to note that the overall explanatory power of these models is quite low. The best specification to explain government-controlled acquisition activity is 11% (Model 7) and that for the corporate acquisition activity is 16% (Model 11). It is quite likely that there are important unobservable factors for both target and acquirer countries. In fact, comparable studies by Rossi and Volpin (2004) and Erel, Liao and Weisbach (2009) include target and acquirer fixed effects and obtain adjusted  $R^2$  around 50% for similar samples of corporate cross-border acquisitions. We expect that many of the differences we see in Table 3 associated with each of these specific alternative hypotheses (differences in market valuations, in governance, and geographic proximity) would likely diminish with the inclusion of country fixed effects. We also performed a number of robustness tests in terms of the composition of the sample. When we consider only developed countries or only OECD countries (per the Golub (2003) sample), the number of country pairs drops to a third of its original size (around 556 from 1500). Many of the results for both government-controlled and corporate acquirer deal activity – whether from the perspective of the acquirer country (Panel A) or target country (Panel B) – are statistically more reliable and economically more important, but the differences between types of acquirers are even weaker still.

#### **4. What Factors Drive Government-Controlled Acquirers in Cross-Border Deals?**

##### *A. Logistic Regression Analysis*

We have documented so far that valuation and governance factors and geographic proximity as country-level factors appear to play a role in determining which firms are likely to merge with or acquire stakes in other firms across borders. What we have also shown is that the statistical and economic differences between acquisitions led by government-controlled acquirers and those led by corporate acquirers are small. One of the problems with this analysis is that it is aggregated activity at the level of country pairs for our sample period. Consequently, it fails to account for firm-level and deal-specific factors that potentially affect the decision to acquire. There is a substantial literature that shows that the likelihood of being a merger target or even that involving a minority stake is affected importantly by the target firm's own financial and operating conditions, ownership structure,

governance, those of the acquirer, as well as the terms and conditions of the deal. Unfortunately, to control for firm-level factors, we must consider only the subsample of target firms for which we have public data. This subsample is necessarily unrepresentative of the overall sample of mergers and acquisitions. In fact, in Table 1, and as discussed earlier, the number of public targets of government-controlled acquirers falls by half (5,317 to 2,261 deals) and those for corporate deals falls by 88% (150,379 to 17,845 deals). The sample erodes because we exclude target firms in the financial services and utilities sectors and even further depending on what firm-specific variables are readily available in Thomson Reuters' Worldscope database, our primary source, and the impact of this constraint may be disproportionate for targets in emerging markets where Worldscope's coverage may be more limited. The key for our analysis, however, is whether the impact of these data constraints and consequences are different for those deals involving government-controlled acquirers than corporate acquirers.

With these cautions in mind, we perform the following experiment. We estimate a logistic regression (logit) model to predict whether an observed cross-border acquisition is initiated by a government-controlled acquirer (dependent variable equals one) or a corporate acquirer (equals zero). Intuitively, this approach presumes that corporate-led acquisitions represent a reasonable benchmark through which we can understand the nature of government-controlled acquirers. All specifications include country (acquirer) and year fixed effects with robust standard errors controlling for heteroscedasticity. The coefficients are all reported in terms of marginal effects to allow for economic interpretation. Given that such a large proportion of government-controlled acquisitions involve minority stakes in the targets, we test our models for minority and majority-control deals separately.

#### *B. Evaluating Alternative Hypotheses for Deal Determinants*

Our central null hypothesis is that government-controlled acquirers are not any more likely to occur than corporate acquirers in cross-border acquisition deals and that the firm-level and deal-specific determinants are not different for the two types of deal. To give power to our tests of this null, we need to identify firm-level and deal-specific variables associated with specific alternative hypotheses that we might be able to reject in favor of the null. Some of these alternative hypotheses carry over from our analysis at the country level in the previous section. Valuation differences can matter at the deal level in cross-border transactions due to unexpected changes in exchange rates or market returns or due to deviations of those valuations from fundamentals. In deal-specific setting, we evaluate valuations in a more timely way using the trailing 12-month market and exchange rate returns in the target country.

We evaluate the governance motive, not by use of the anti-self dealing, accounting standards or PolityIV democracy indexes, but rather by employing a variable related to the ownership structure of the target. The corporate governance literature has emphasized the monitoring role of outside shareholders (Shleifer and Vishny, 1986; Pagano and Roell, 1998). Yet, greater monitoring by large blockholders does not necessarily assure value maximizing policies (see, among others, Grossman and Hart, 1986; Burkart, Gromb and Panuzzi, 1997; and, Bennedsen and Wolfenzon, 2000). Whether target firms have large blocks of shares held closely by institutions,

corporate directors or managers could play a role in an environment characterized by agency problems. Indeed, the fraction of closely-held shares is often used as a proxy for agency costs (Faccio and Lang, 2002; Doidge, Karolyi, Lang, Lins and Stulz, 2008) and Leuz, Lins and Warnock (2009) show that a large block of closely-held shares can deter foreign investment in the firm. We use a proxy for closely-held share ownership from Worldscope.<sup>15</sup> Specifically, we create a dummy variable for those target firms that lie in the highest quartile of all Worldscope firms in terms of closely-held shares. We predict, under our null hypothesis, that government-controlled acquirers are no more likely to pursue a target in another country with a higher fraction of shares closely-held by institutions and insiders than are corporate acquirers.

We also investigate two additional alternative hypotheses that arise from the literature on minority or partial block acquisitions and also include a series of firm-level control variables.

- *Product Market Relationships and the Contracting Motive.* Product market relationships between customers and suppliers are often strengthened by a partial integration of the two firms. Studies by Williamson (1979), Grossman and Hart (1986) and Aghion and Tirole (1994) have rationalized circumstances in which full integration (merger) versus partial integration (partial equity stakes) might be optimal with specific regard to information environments in which incomplete contracting arises. We explore two variables related to product market relationships and contracting problems. The first is a dummy variable is a proxy for whether product market relationship might exist and it simply identifies deals in which the acquirer and target are in the same industry (based on the first three digits of the firm's Standard Industrial Classification (SIC) code). Aghion and Tirole argue that property rights become blurry and contracting more complex when it comes to research and development (R&D) activities, so firms that partner and share knowledge in such industries can easily benefit or hurt the other party in ways outside the scope of any contract. Our second variable measures whether the target firm operates in a global industry (four-digit SIC code) which is in the upper quartile of all U.S. firms by ratio of R&D expenses to total assets. Target firms in high R&D expense industries and circumstances in which target and acquirer are in the same industry are more likely to involve a minority or majority stake, but, under our null hypothesis, we predict that government-controlled acquirers are not more likely than corporate acquirers to pursue cross-border deals with such circumstances.
- *Financial Constraints and the Financing Motive.* Another reason for at least partial equity stakes is that target firms are financially constrained. Firms facing high asymmetric information problems seek financing from intermediaries, such as banks (Fama, 1985), private placement investors (Hertzel and Smith, 1993) and venture capitalists (Chan, 1983) who conduct ex-post monitoring. Another corporation, however, may also possess sufficient knowledge or experience in the industry of the target so that an equity stake can furnish cheaper forms of external capital than other means. Firms facing difficulties in raising capital are more likely to sell partial equity stakes to other firms and empirical studies of the U.S. markets by Allen and Phillips (2000) and Fee, Hadlock and Thomas (2006) provide support for this idea. Liao (2009) shows that financial constraints are even more important in other countries and especially in cross-border partial equity acquisitions. We use several proxy variables for financial constraints including one based on a composite index from an intertemporal investment model by Whited and Wu (2006), two proposed by Hadlock and Pierce (2008) incorporating firm size, firm age, operating cash flows and leverage (and based on previous work of Kaplan and Zingales (1997, 2000)), and a simple dummy variable if the firm pays no dividend. In the case of the Whited-Wu, and two Hadlock-Pierce variables, we create dummy variables of financial constraints for those in the upper quartile of all Worldscope firms. See Table A1 for details on variable construction and summary statistics in Table A2. All are computed based on information in the year prior to the deal. Our null

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<sup>15</sup> See Kho, Stulz and Warnock (2009) for a useful discussion about the problems and limitations associated with the Thomson Reuters' Worldscope variable "Closely-held Shares" (Worldscope data item WS08021, see Table A1).



hypothesis specifies that government-controlled acquirers in minority stake or majority control cross-border acquisitions are no more likely than corporate acquirers to pursue targets that are financial constrained.

- *More Control Variables.* Important attributes of a deal can matter. We obtain information from SDC as to whether the deal failed or was withdrawn, and in the case of majority control transactions, whether the offer was all cash and the fraction of shares in the target the acquirer was after. We also include target firm-specific control variables from the year prior to the deal including the (logarithm of) total assets, return on assets, leverage (long-term debt to assets), and sales growth (preceding year in real terms).

### *C. Deal-Level Results*

The results of the logit regressions are presented in Table 4. We present three model specifications for acquisitions involving minority stakes (Models 1 to 3) and three others for majority control acquisitions (Models 4 to 6). Coefficients are reported as marginal effects, both country and year fixed effects are included, pseudo-R<sup>2</sup> and the number of observations are presented at the bottom of the table and the standard errors are robust to heteroscedasticity. With the data constraints that we impose above, our sample of minority acquisition targets includes 5,736 observations, of which 4.44% are government-controlled acquisitions, and that of majority acquisition targets includes 2,396 observations of which 2.83% are government-controlled acquisitions. The lower actual number of observations in each of the specifications is dictated by the combination of explanatory variables we choose.

For minority acquisition stakes, we find that several variables are statistically reliable predictors of government-controlled relative to corporate acquisitions. The zero-dividend proxy in Model 1 for financial constraints is significantly positive coefficient (of 0.015) which implies that government-controlled acquirers are more likely to pursue financially-constrained targets. About 47% of target firms do not pay dividends, but we find that they are associated with a 1.50% higher likelihood of a government-controlled acquisition, which is sizeable compared to the unconditional mean likelihood. The Whited-Wu proxy, which is a dummy variable mostly based on low cash flows, low dividend payout, high leverage, low total assets and high past sales growth (about 21% of our sample firms are so classified) is also positive and significant in Model 2 (coefficient of 0.012). The Hadlock-Pierce financial constraint variable in Model 3 is not significant (nor is the simpler variant from Hadlock and Pierce (2008) based on just a firm's size and age). So, there is statistical support for the alternative hypothesis that the financing motive emphasized by Allen and Phillips (2001), Fee, Hadlock and Thomas (2006) and Liao (2009), but, in economic terms, it is not a large effect.

The valuation motive, for which we found some support in the previous section on acquisition flows, also plays a role in the logit model. In each of the three models, the coefficient on the trailing 12-month market returns in the country of the target is significant and negative. The coefficient of -0.026 implies that a one-standard deviation in annual market returns (about 31% on a unconditional mean of 14.5%) is less likely to be associated with a government-controlled acquirer by 0.81%, which is a smaller effect than those of the financial constraint

proxies. The 12-month trailing exchange rate returns variable is never significant. Again, while we are unable to reject the alternative hypothesis that valuation factors matter, the economic effects are small.

There is no evidence that the contracting motive matters, as the related industry dummy has no explanatory power in any specification. In unreported tests, we also found that our dummy variable for the high R&D expense industry membership was insignificant. We also find that the closely-held shares variable has no explanatory power. There is no evidence that government-controlled acquirers in cross-border deals are deterred the fact by more shares of the target are held closely by institutions or insiders than corporate acquirers. In other tests, we replace the closely-held shares variable with the anti-self-dealing country variable with no different outcome, but this variable is likely to be hampered by the country fixed effects.

Among the control variables, there is positive, but weak, evidence that government-controlled acquirers are more likely to fail (or be withdrawn) relative to corporate acquirers. Government-controlled acquirers are also more likely to be associated with larger target firms, given the positive and significant coefficient on total assets, target firms with more growth opportunities (weak positive coefficient on market-to-book ratio) and faster-growing targets (positive sales growth coefficient in Models 2 and 3). Overall, the low pseudo- $R^2$  coefficients in these models are noteworthy for any of these alternative hypotheses we examine. They are even more remarkably low given that we include country and year fixed effects.

For the logit models of majority-control transactions in Models 4 to 6, the sample sizes are smaller again by half. The Whited-Wu financial constraint dummy variable shows some explanatory power in Models 1 and 3, but its economic effect is similar to that for the minority deals. The related-industry dummy for the contracting motive is weak and the closely-held shares dummy variable, which we associate with the governance motive, is also weak. Interestingly, none of the control variables on the size of the firm, its growth opportunities, or leverage seem to explain any variation. We include two variables related to majority control transactions, such as the terms of payment and the size of the acquisition stake. It turns out that cross-border acquisition deals that involve majority control in our sample (on average 86% of shares of target acquired) involve exclusively cash and no stock 76% of the time. Indeed, government-controlled acquirers are more likely to use cash only, but this again is not a large economic effect. The higher pseudo- $R^2$  for majority control transactions likely arise from the smaller sample available to us and likely the greater importance of unobservable country and market conditions factors picked up by the country and year fixed effects.

In Table 5, we perform an additional analysis of the government-controlled acquisitions that are led by SWFs and those by other government-controlled entities. That is, the dependent variable equals one if the acquisition is led by a SWF and zero, otherwise. We define those which are SWF-led, as discussed above, according to whether SDC identifies the acquirer, or the acquirer's intermediary parent, as one of the listed SWFs on the SWF Institute's website.

We believe this is an important exercise because it helps to calibrate the findings in a number of the recent studies of SWF investments. For example, Chhaochharia and Laeven (2009, their Table 9) present a matched-sample analysis of 76 SWF equity investments in which the benchmark firms are drawn from the same country, industry and are similar in size (total sales), but are not necessarily the targets of other similarly-motivated entities. They find that SWF's do not seek out targets with unusual growth opportunities (Tobin's q ratio) or leverage, but do so for those that are more financial constrained (using Kaplan and Zingales' (1997, 2000) indexes). Fernandes (2009, his Table V) performs cross-sectional regressions of over 7,000 SWF investments - though most of which involve very small stakes in the targets (median less than 0.25%) - and finds that there are preferences toward larger, more profitable firms and those with lower dividend yields and leverage. But again, he benchmarks against the population of all Worldscope firms and not necessarily those that are involved as targets of other entities' acquisitions. Kotter and Lel (2008, their Table 4) present firm characteristics of targets, but they do not benchmark them at all, though they are employed in cross-sectional regressions of the share-price reactions to the investment announcements.

We present two sets of tests in Table 5, Models 1 to 3 in which we include targets of government-controlled acquirers in the financial services and utilities sectors (they were excluded in Table 4) and Models 4 to 6, in which they are excluded. The sample sizes for the latter set of tests drop by half. The variables are identical to those in Table 4 with country and year fixed effects, also as before. Several interesting findings arise. First, there is some evidence that the financial constraints motive matters. The zero dividend dummy is negative and reliably significant in Models 1 and 4, though the Whited-Wu and Hadlock-Pierce variables are not in Models 2 or 5 and 3 or 6, respectively. This implies that SWFs are less likely to pursue financially constrained targets than other government-controlled acquirers. More reliable is the related-industry dummy with negative coefficients in each of the six model specification. SWFs are less likely to pursue targets in the same industry than other government-controlled entities. We need to apply caution here as a related-industry definition for the SWFs is the financial services sector (with SIC codes between 6000 and 6999), but remember that we also associate SWF investments in terms of acquirers which are controlled by SWFs as intermediary parents, so there is some integrity to this variable when financial services firms are excluded (Models 4 to 6). Whether it relates to the contracting motive or not, non-SWF government entities engaged in cross-border deals as acquirers are clearly more likely to be influenced by product market considerations. SWF investments are less likely to fail than other government-led entities, especially when financial services and utilities sectors are excluded.

SWFs are more likely to be influenced by market valuations relative to other government-led acquirers. The coefficients on trailing 12-month market returns are positive and significant in Models 4 to 6. These findings are consistent with the primary inferences in Bernstein, Lerner and Schoar (2009). We offer only weak evidence that other firm-specific variables matter, such as size (SWFs more likely to seek out firms with higher total assets in Models 2 and 3) and leverage (SWFs more likely to pursue highly-levered targets). Unlike Fernandes (2009) and

Chhaochharia and Laeven (2009), our findings on the importance of these firm-specific variables are very weak. We argue then that how one benchmarks these SWF investments does matter.

## 5. Market Reactions to Announcements of Cross-Border Deals Led by Government-Controlled Acquirers

We next examine how shareholders react to the announcements of cross-border deals led by government-controlled acquirers. As we have done throughout this study, we benchmark the magnitude of these reactions to minority and majority stake acquisitions led by corporate acquirers. Under the central null hypothesis that government-controlled and corporate cross-border acquirers are not different, we predict that the shareholders' reactions to the announcements of such deals should also be indistinguishable. Further, we test a number of alternative hypotheses that have been proposed in the literature to try to rationalize the motives for minority and majority cross-border acquisitions to give additional power to our approach. The motives are similar to those which we presented in previous sections.

The challenge that we face with this additional analysis is that we need to collect stock returns data from Datastream for the sample of public targets and this will adversely impact the sample sizes. For majority acquisitions, our sample of government-controlled and corporate acquirers falls to 3,516 observations and, for minority deals, our sample includes 8,361 observations. Financial services and utilities sector target firms are excluded. We compute the cumulative market-adjusted returns for varying-length windows around deal announcements obtained from SDC, report the average reactions for government-controlled and corporate acquisitions, and perform cross-sectional tests of the reactions using variables that are related to the different alternative hypotheses as well as control variables.

We also do a supplementary analysis of the market reactions to cross-border deal announcements comparing those involving SWFs and other government-controlled entities as acquirers. Our sample here includes 490 observations with financial and utilities sector targets excluded and 954 observations with them included. Our goal is again to calibrate the findings in other recent studies of share price reactions of SWF investments, but specifically using non-SWF government acquisitions and corporate acquisitions as benchmarks.

### A. Cumulative Market-Adjusted Returns (CMARs)

To measure the share price reactions, we compute cumulative market-adjusted buy-and-hold returns (CMARs) over three different windows around the deal announcements: 21 days (from 10 days before announcement to 10 days after, denoted “(-10, +10)”), 11 days (“(-5, +5)”), and 3 days (“(-1, +1)”). The market index returns are those based on market-capitalization-weighted index for each country from Datastream.

Table 6 presents summary statistics of the CMARs. In Panel A, we compare the CMARs for government-controlled and corporate led cross-border acquisitions separately for minority and majority stakes and, in Panel B, we do so for the SWF and non-SWF government-controlled acquisitions for target samples separately that include and exclude financial services and utilities sectors. The means and medians and the numbers of observations are

presented for each of the three investment windows around deal announcements. We also report the  $p$ -values associated with paired two-tailed  $t$ -statistics for tests of the differences of the means and Wilcoxon rank-sum  $z$ -statistics for differences in the medians between the comparisons of interest.

For majority acquisitions, the target firm's CMARs for our sample of corporate acquirers in majority control transactions average around 26% for the 21-day window and 16%, for the 3-day window. Both of these means are statistically significantly different from zero. The sample is skewed significantly by some large positive reactions as the equivalent median returns are 12% and 6%, respectively. Both medians are also statistically significantly different from zero based on Wilcoxon-rank-sum tests. The sizes of these reactions are comparable to those in other recent studies of cross-border mergers. For example, in Bris and Cabolis (2008) for their sample of 420 target firms, they find a positive and statistically significant 14% cumulative abnormal return (CAR) for a 5-day window and a further 11% CAR for up to 10 days following the announcement window. Starks and Wei (2004) report a statistically-significant 28.24% CAR for their 11-day window in cross-border mergers. When we cull out the government-controlled acquirers, we find CMARs of 21% for the 21-day window and 12% for the 3-day window. The equivalent medians are also smaller in magnitude at 11% and 2%, respectively. These are somewhat smaller than for the corporate-led acquisitions, but in each case, the  $p$ -values for the tests on the means and medians reject that they are different.

We also examine a larger sample of minority stake acquisitions. The corporate cross-border acquisitions average 17% for the 21-day window and only 6% for the 3-day window; the associated median reactions are smaller at only 4% and 1.4% for the respective windows. Again, we can compare these reactions to other studies. Kang and Kim (2008) find 9% CARs in their out-of-state partial equity acquisitions and Allen and Phillips (2000) uncover a 6.9% reaction for their full sample of minority block acquisitions. Both studies use long windows (close to 21-day horizon) but focus on U.S. firms and domestic transactions only. Liao (2009) compares minority block acquisitions that are domestic and cross-border around the world and finds that her 4,780 domestic deals (in 49 countries around the world) have an average CMAR of 8.7% for a 21-day horizon and 7.42% for her 1,851 cross-border deals. The CMARs in our minority-stake sample involving government-controlled acquirers are smaller than the corporate deals and, at least for the longer windows around announcement, significantly so. Reactions are only 8.5% for the 21-day window on average (1.99% median), both of which are half as large as for the corporate acquisitions. Both  $p$ -values for mean and median differences are significant. The comparisons for the 11-day and 3-day horizons also show the reactions to government-controlled acquirers are more muted, but these simple differences are typically not significant.

In Panel B, we perform the same kind of comparisons of market reactions to government-controlled cross-border acquisitions, but this time compare those led by SWFs to those led by non-SWF government-controlled entities. Whether financial services or utilities targets are included or not, the differences are large and significant statistically. On average, reactions to SWF acquisitions are only 1.41% for the 3-day horizon and 0.69% for the

21-day horizons; the equivalent reactions to non-SWF acquisition announcements are 8.05% and 12.52%. The magnitude of the differences in medians is smaller (0.88% for SWFs versus 1.32% for non-SWFs in the 3-day window, for example, with  $p$ -value of 10% in this case), but the differences are larger for longer horizons, even with medians. The magnitude of the reactions to SWF acquisitions when financial services and utilities targets are included are larger (1.52% for 3-day horizon compared to only 1.41%), but almost all of our inferences comparing reactions to SWFs and to non-SWFs remain.

By comparing the share price reactions of SWF investment announcements to those of non-SWF government-controlled acquisitions, we get a very different perspective than from those of other recent studies of SWF investments. For example, Fotak, Bertolotti, Megginson and Miracky (2009, their Table 7, Panel B) find a statistically significant average CMAR of 0.46% (0.81% on volatility-adjusted basis) for the equivalent 3-day window for their 212 SWF investment announcements. Kotter and Lel (2008, their Table 3) find 3-day CARs of 2.15% for their sample of 163 SWF investment announcements. Chhaochharia and Laeven (2009, Table 7) find an average 0.82% CAR for a 5-day horizon around their 89 investment announcements.<sup>16</sup> What we learn is that these reactions, though reliably positive (which we acknowledge as important), are actually smaller than what one might expect if comparing to those of other non-SWF government-controlled acquirers and corporate-led cross-border acquisitions. Of course, in both sets of comparisons (government-controlled versus corporate deals or SWF versus non-SWF government-controlled deals), it is important to ascertain whether these reactions are significantly different even after controlling for a variety of country-level, deal- and firm-specific factors.

#### *B. Cross-Sectional Test Results*

Table 7 reports results from cross-sectional regressions of the 21-day CMARs of cross-border acquisition announcements on country-level and firm-specific variables. These variables are the same as what we included in our logit models in the previous section and we line them up with the various hypotheses that have been put forward to motivate such deals. In each of the model specifications in Panel A, we include a dummy variable for those which are government-controlled acquirers. In Panel B, the sample includes only the government-controlled acquirers and each specification here includes a dummy variable for those involving SWFs. These models are estimated with ordinary least squares and robust standard errors for the coefficients are computed with corrections for heteroscedasticity. We include year fixed effects in all specifications.

In Model 1 of Panel A, we confirm the finding in Table 6 that CMARs of government-controlled acquirers are indistinguishably different from those of corporate acquirers, though this time with robust standard errors and year fixed effects. In each of the additional specifications that we consider (Models 2 to 9) with different combinations of control variables, this finding does not change. The next four models evaluate individual proxies

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<sup>16</sup> None of the studies by Fotak, Bertolotti, Megginson and Miracky (2009), Kotter and Lel (2008) or Chhaochharia and Laeven (2009) indicate how many of the announcements are associated with cross-border acquisitions and which are only domestic by the SWFs, so a direct comparison is difficult.

for high industry R&D expenses associated with the contracting motive and for financial constraints associated with the financing motive. These specifications have varying impact on the number of observations in the regressions, but typically reduce it by 30%. Firms with high R&D expenses are not associated with different market reactions. As in the logit regression results of Table 4, the zero-dividend and Hadlock-Pierce dummy variables have explanatory power, while the Whited-Wu dummy does not. Firms with greater financial constraints that are targets of cross-border acquisition are associated with a statistically-significant and economically-large additional 3.7% or 8.2%, which is about 10% and 20%, respectively, of the unconditional standard deviation of 21-day CMARs. In Models 6 to 9, we retain the zero-dividend dummy and in three of those models, it remains positive and statistically significant though its magnitude varies somewhat.

We also include additional variables in those four models associated with the governance and valuation motives outlined in the previous section. We see that target firms with a higher fraction of shares closely-held by institutions and insiders do not experience different market reactions, but the coefficients on the anti-self-dealing index (ASDI) of Djankov, La Porta, Lopez-de Silanes and Shleifer (2008) are positive, statistically reliable and economically large. The average country score on ASDI is 0.61 and its cross-sectional standard deviation is 0.24. A one-standard deviation higher ASDI score (going from a low to high legal protection country) is associated with a 3.6% higher 21-day CMARs around a cross-border acquisition announcement, which is still sizeable relative to the unconditional mean CMAR of 9.6%. The trailing 12-month market returns for the target firm have no explanatory power. Among the control variables, total assets, return on assets and market-to-book ratios have negative coefficients, so larger, more profitable target firms with more growth options are associated with lower CMARs, all else being equal.

Overall, we confirm that targets in cross-border acquisitions involving government-controlled acquirers experience no different market reactions to their announcements than those involving corporate acquirers. The finding is robust to a number of control variables, some of which have useful explanatory power for the cross-section of CMARs. Generally, the explanatory power of the models we investigate is quite low (around 2%).

In Panel B, we examine only the sample of cross-border acquisitions involving government-controlled acquirers and include in each model specification a dummy variable for SWF acquirers. The number of observations average around 800 events, but are as few as 236 in our largest model specification (Model 9). Several results are noteworthy. First, the early indication in Table 6 that market reactions to SWF-led acquisitions are lower than those for other government-controlled acquirers is confirmed here and in a way that is robust to inclusion of almost all combinations of control variables. The coefficient on the SWF acquirer dummy averages around -0.06 and is statistically significant for each except Model 8. A 6% lower CMAR in this sample is economically large relative to the unconditional mean of around 7.8% and represents about 22% of the cross-sectional standard deviation in CMARs for this smaller set of observations (about 28%). Second, there is some empirical support for the financing and governance motives in this sample of only government-controlled

acquirers. The coefficient on the Hadlock-Pierce financial constraint dummy variables is positive and significant, but those for the other two financing motive proxies are not. In three of four models with the ASDI variable, the coefficient is statistically significant and averages around 18%. A one-standard deviation higher ASDI score is associated with a 5% higher CMAR in this sample of government-led cross-border acquisitions, a much higher level of sensitivity than for the broader sample that includes the corporate acquirers. The closely-held shares dummy variable again has no predictive power. In this smaller sample of government-led acquirers, we also find no evidence that the contracting motive (through the high R&D expense dummy) or valuation motive (12-month market returns) matter. Among the control variables, we find that larger target firms (total assets) and those with higher growth opportunities (market-to-book ratio) are associated with lower CMARs, as in the larger sample with corporate acquirers, but the magnitude and precision of these relationships are much weaker.<sup>17</sup>

The key finding in these regressions is that, though SWF cross-border investments are indeed associated with positive and statistically significant market reactions (in Table 6), they are actually much smaller than those of other government-controlled acquirers and corporate acquirers. The differences are economically large and robust to many different control variables that seek to capture different possible motives for initiating such transactions.

## 6. Concluding Remarks

In this study, we examine the motives for and consequences of 5,317 failed and completed cross-border acquisitions constituting \$619 billion of total activity that was led by government-controlled acquirers over the period from 1990 to 2008. We benchmark this activity at the aggregate country level and also at the deal-specific level relative to cross-border acquisitions involving corporate acquirers over the same period and uncover several important findings.

First, we test whether the cross-country determinants of cross-border acquisition activity are different for government-controlled and corporate acquirers and find that government-led deals are relatively more intense for geographically-closer countries, but also relatively less sensitive to the level of financial development of the acquirer's home country, the quality of its legal institutions and accounting standards, and to how stringent are restrictions on FDI flows in their country. Overall, however, we find that the differences in the determinants of the two types of acquisition flows are economically small.

Second, we examine whether firm-specific and country-level attributes of the target firms have any different influence on the likelihood of a cross-border acquisition led by a government-controlled than a corporate acquirer.

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<sup>17</sup> Among the SWF studies that measure market reactions to their investment announcements, Kotter and Lel (2008, their Table 5) provide some useful comparisons for our findings. They find in their sample of 124 investments that target firm characteristics have little or no explanatory power compared to those associated with the type of SWFs (level of transparency and governance, per Truman (2007) scoring index). Only the level of institutional ownership is associated with higher 2-day CARs, but the economic magnitudes are difficult to determine. They show that whether target firms' market reactions are not affected by the legal environment, but those from better developed markets (market capitalization to GDP ratio) experience higher CARs. The explanatory power of their models is high (around 50%) but they also include industry controls.



We uncover some evidence that government-led acquirers are more likely to pursue larger targets with greater growth opportunities and more financial constraints, but the overall explanatory power of these tests are generally quite low. We are able to reject a number of alternative hypotheses related to product-market relationships, financial constraints, corporate governance, or market-timing motives for such acquisitions that might allow us to differentiate government-led and corporate-led acquisitions. When we examine only the subset of deals involving government-controlled acquirers that involve sovereign wealth funds (SWFs) and benchmark them, in turn, by those led by other non-SWF government-controlled agencies and corporations, however, we do find some differences. SWF-led acquisitions are less likely to fail and they are more likely to pursue acquirers that are larger in total assets and with fewer financial constraints.

Thirdly, we show that the cumulative market-adjusted returns (CMARs) around announcements of cross-border acquisitions led by government-controlled and corporate acquirers are large, positive (median reaction around 6% for a 3-day announcement-day window) and indistinguishably different for the two types. This result holds up even when we control for different possible motives for such acquisitions based on country-level, deal- and target firm-specific attributes. An important difference in market reactions we do find, however, is between government-controlled acquisitions led by SWFs and those of other government agencies. Though both are positive and statistically significant reactions, the CMARs for SWF-led acquisitions are statistically and economically much smaller and these differences also hold up in cross-sectional regressions that control for a variety of country-level and target firm-specific attributes.

These findings are important not only because of the large and growing amount of cross-border acquisition activity that involves government-controlled acquirers, but also because of the heightened regulatory concern about such deals in many countries around the world. The Foreign Investment and National Security Act of 2007 in the U.S. has instituted much tougher scrutiny of potential foreign acquirers that involve a government entity, and similar legislation is in place or forthcoming in China, Australia and Germany, among many other countries. Our findings suggest that these concerns may be unwarranted for most government-led acquisitions. Greater attention on SWFs as a particular type of acquirer may indeed be worthy of further scrutiny, but the vast majority of government-led foreign acquirers in terms of deal count and cumulative value of deal activity appears to be motivated no differently than corporate-led cross-border deals and the economic consequences appear to be indistinguishably different.

Our study also makes an important contribution to the literature on the operational and financial performance of state-owned enterprises. A number of scholars have argued why and how government firms are less efficient or less profitable due to the natural conflicts that arise from self-interested politicians and bureaucrats and there is considerable evidence that government-controlled firms are indeed associated with poorer operational and financial performance. Our study involves a special experiment to examine these questions that focuses on transactions in which the target firm becomes, at least partially, a state-owned enterprise. We exploit a natural

benchmark in terms of corporate-led deal activity and also existing theoretical and empirical research that guides us to different possible motives for such transactions. These motives furnish testable alternative hypotheses to the null hypothesis that acquisitions by government-led and corporate acquirers are not different and thus allow us more powerful tests. We also offer an important new perspective on findings in the recent growing literature focused on SWF acquisitions by benchmarking their decisions and outcomes relative to acquisitions led by other government-controlled entities. We find that the attributes and characteristics of targets and SWFs are somewhat different and, though the market reactions are positive to SWF investment announcements (as other studies have shown), they are significantly smaller than those associated with other government-controlled acquirers.

There are still many open questions. We readily admit that there are several possible alternative explanations for government-led acquisitions that we have not yet considered. For example, we have not yet tried to identify characteristics of the different types of government agencies that represented these acquirers. We have also not tried to separate out the types of SWFs by governance and transparency attributes, as the other studies of SWFs have done. Our study only examines the short-term reactions to these government-controlled acquirers. Indeed, there are likely important longer-term operational and financial consequences from their newly-acquired stakes and even in terms of financial investment returns and risks from the perspectives of the acquirers. Another form of analysis that we have largely ignored is at the policy level. A number of countries have instituted rules and legislation for foreign investment reviews and we have not evaluated what, if any, are the consequences of those rule changes for cross-country acquisition activity or for terms and conditions at the deal level. Finally, we have not evaluated any positive or negative externalities of cross-border government-led deal activity for other social and economic objectives. After all, decision-makers that influence the government-controlled acquirers that we study likely have a broader set of concerns than which targets are chosen and how shareholders react to their announcement.

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**Table 1. Summary Statistics.**

This table presents summary statistics on cross-border block acquisitions involving at least a 5% stake in the target corporation announced during the period of 1990 to 2008. The data are obtained from Thomson Reuter's Security Data Corporation's (SDC) Platinum Mergers and Corporate Transactions database. We exclude leveraged buyouts, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases and privatizations and deals in which acquirers are domiciled in overseas territories of the U.K. (Bahamas, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man) and the Netherlands (Netherland Antilles). The acquirer's ultimate parent public status is used to identify government controlled acquirers, which is defined as at least 50% cash flow ownership. We collect announcement dates, their public status, percentage of shares acquired, the medium of payment, open market or private negotiation, premium paid. By year, we report the total number of deals, the subset with disclosed values, the average deal value (measured in millions of constant US dollars as of 2000), the cumulative deal value, the number of failed or withdrawn deals, the number involving minority stakes (less than 50%), the number involving a financial acquirer (including a sovereign wealth funds and those with SIC codes between 6000 and 6999), and the number of publicly-traded target firms.

Year	Total No. of Deals	No. of Deals with Values Disclosed	Average Deal Value (Constant 2000 US\$ millions)	Cumulative Deal Value (Constant 2000 US\$ millions)	No. of Failed Deals	No. of Minority Acquisitions	No. of Financial Acquirers	No. of Public Targets
Panel A: Government-Controlled Acquirers								
1990	214	84	\$ 441	\$ 37,082	72	118	42	102
1991	256	77	\$ 171	\$ 13,198	83	158	64	94
1992	209	59	\$ 118	\$ 6,976	57	112	49	79
1993	223	78	\$ 121	\$ 9,418	88	157	68	98
1994	212	73	\$ 43	\$ 3,146	66	139	57	81
1995	209	69	\$ 96	\$ 6,649	68	126	45	68
1996	207	72	\$ 145	\$ 10,432	65	126	40	72
1997	238	123	\$ 166	\$ 20,421	60	156	67	106
1998	222	91	\$ 280	\$ 25,502	66	128	55	96
1999	295	110	\$ 278	\$ 30,533	70	164	43	93
2000	388	168	\$ 194	\$ 32,632	104	200	73	141
2001	302	140	\$ 193	\$ 27,015	97	157	49	117
2002	250	136	\$ 230	\$ 31,269	70	132	58	95
2003	281	125	\$ 110	\$ 13,796	102	150	66	114
2004	285	127	\$ 150	\$ 19,067	113	171	82	106
2005	319	157	\$ 356	\$ 55,920	108	173	101	120
2006	321	149	\$ 320	\$ 47,616	127	190	102	125
2007	436	203	\$ 543	\$ 110,208	194	285	136	186
2008	450	208	\$ 572	\$ 119,006	202	294	143	202
Total	5,317	1,812	\$ 238	\$ 619,886	1,926	3,353	1,434	2,261
Panel B: Corporate Acquirers								
1990	3,501	1,613	\$ 134	\$ 216,797	731	1,488	800	1,287
1991	4,124	1,537	\$ 69	\$ 105,328	1,031	1,905	935	1,460
1992	3,761	1,459	\$ 76	\$ 111,269	943	1,669	866	1,458
1993	4,249	1,702	\$ 74	\$ 126,407	1,136	1,965	924	1,560
1994	5,307	2,142	\$ 76	\$ 163,753	1,374	2,545	1,227	1,854
1995	6,309	2,476	\$ 99	\$ 244,657	1,561	2,732	1,372	2,153
1996	6,700	2,714	\$ 107	\$ 291,619	1,534	2,763	1,394	2,309
1997	7,198	3,151	\$ 124	\$ 391,184	1,374	2,571	1,539	2,448
1998	8,634	3,696	\$ 183	\$ 675,740	1,854	3,133	1,830	2,923
1999	10,024	4,152	\$ 311	\$ 1,289,934	2,135	3,836	2,197	3,412
2000	12,110	5,139	\$ 209	\$ 1,076,562	2,904	5,000	2,548	3,996
2001	9,029	3,727	\$ 142	\$ 527,995	2,256	3,591	1,971	3,307
2002	6,981	3,080	\$ 97	\$ 297,468	1,919	2,811	1,700	2,741
2003	7,377	3,224	\$ 87	\$ 279,079	2,140	3,157	2,034	3,052
2004	8,244	3,883	\$ 118	\$ 456,499	2,254	3,325	2,219	2,877
2005	9,492	4,439	\$ 144	\$ 640,520	2,237	3,327	2,592	3,138
2006	11,507	5,372	\$ 172	\$ 926,168	3,309	4,665	3,234	3,700
2007	13,631	6,395	\$ 241	\$ 1,541,320	4,252	6,088	4,177	4,011
2008	12,201	5,317	\$ 137	\$ 726,242	4,075	5,900	3,401	3,686
Total	150,379	69,877	\$ 137	\$ 10,088,541	39,019	62,471	36,960	17,845

**Table 2. Intensity of Cross-Border Acquisition Activity Led by Government-Controlled Acquirers by Country of Acquirers and Targets.**

This table presents the number of deals and the cumulative deal value (in 2000 Constant US\$ millions) of cross-border block acquisitions led by government-controlled and corporate acquirers involving at least a 5% stake in the target corporation announced over the period from 1990 to 2008. The data are obtained from Thomson Reuter's Security Data Corporation's (SDC) Platinum Mergers and Corporate Transactions database. We exclude leveraged buyouts, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases and privatizations and deals in which acquirers are domiciled in overseas territories of the U.K. (Bahamas, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man) and the Netherlands (Netherlands Antilles). We exclude countries in which there are fewer than 50 cross-border acquisitions, whether led by government-controlled or corporate acquirers, over the 1990-2008 period. The acquirer's ultimate parent public status is used to identify government controlled acquirers, which is defined as at least 50% cash flow ownership. The results are reported by country in order of the fraction of total cumulative deal value that government-led acquirers comprise for leading acquirer countries (Panel A) and for the leading target countries (Panel B).

Panel A: By Acquirer Country							Panel B: By Target Country						
Acquirer	Number of Deals			Cumulative Deal Value (2000 Constant US\$ millions)			Target	Number of Deals			Cumulative Deal Value (2000 Constant US\$ millions)		
	Govt	Corp	Fraction	Govt	Corp	Fraction		Govt	Corp	Fraction	Govt	Corp	Fraction
Venezuela	28	38	47.4%	\$2,068	\$354	85.4%	UAE	6	219	2.7%	\$2,613	\$3,324	44.0%
UAE	185	204	48.0%	\$66,902	\$20,101	76.9%	Hong Kong	583	3053	16.0%	\$66,138	\$100,921	39.6%
China	833	841	38.8%	\$114,224	\$45,240	71.6%	Malaysia	57	1519	3.6%	\$6,435	\$25,335	20.3%
Saudi Arabia	37	170	50.2%	\$23,149	\$9,906	70.0%	Finland	75	1790	4.0%	\$12,277	\$49,270	19.9%
Czech Republic	20	100	17.4%	\$2,007	\$932	68.3%	Slovak Rep	21	307	6.4%	\$1,040	\$4,307	19.5%
Kazakhstan	8	35	16.7%	\$1,297	\$687	65.4%	Egypt	88	1224	6.7%	\$7,426	\$36,556	16.9%
Kuwait	58	136	17.8%	\$14,177	\$8,693	62.0%	Indonesia	32	224	12.5%	\$4,764	\$23,626	16.8%
Singapore	390	3109	11.2%	\$68,865	\$84,881	44.8%	Kazakhstan	22	184	10.7%	\$2,238	\$13,422	14.3%
Colombia	4	47	18.8%	\$876	\$1,296	40.3%	Argentina	40	1555	2.5%	\$10,997	\$81,016	12.0%
Estonia	6	26	7.4%	\$84	\$126	40.0%	Taiwan	21	726	2.8%	\$3,012	\$24,814	10.8%
Qatar	28	37	43.1%	\$8,834	\$21,917	28.7%	Austria	63	1400	4.3%	\$4,869	\$40,658	10.7%
Norway	280	1638	15.0%	\$21,138	\$55,915	27.4%	Singapore	61	2133	2.8%	\$7,597	\$66,060	10.3%
Liechtenstein	4	47	9.1%	\$470	\$1,781	20.9%	Hungary	73	979	6.9%	\$3,187	\$28,536	10.0%
Portugal	47	470	10.8%	\$6,946	\$26,627	20.7%	Thailand	81	1880	4.1%	\$10,139	\$97,934	9.4%
Thailand	21	270	3.7%	\$946	\$4,810	16.4%	Norway	64	1239	4.9%	\$2,352	\$22,799	9.3%
Malaysia	79	2119	7.2%	\$10,869	\$57,390	15.9%	Russian Fed.	56	1558	3.5%	\$6,948	\$70,119	9.0%
Finland	241	1754	12.6%	\$12,495	\$70,088	15.1%	Spain	218	6145	3.4%	\$27,366	\$289,329	8.6%
Poland	19	168	10.2%	\$478	\$2,804	14.6%	Australia	5	44	10.2%	\$107	\$1,223	8.0%
Chile	7	153	4.3%	\$643	\$4,642	12.2%	Bahrain	140	3875	3.5%	\$23,800	\$284,771	7.7%
Sweden	202	4333	9.1%	\$21,404	\$164,585	11.5%	Ireland Rep.	4	79	4.8%	\$61	\$746	7.6%
France	717	8164	4.3%	\$93,687	\$839,185	10.0%	Saudi Arabia	88	1732	4.8%	\$5,136	\$63,077	7.5%
Slovenia	12	44	21.4%	\$45	\$460	8.8%	Denmark	31	1182	2.6%	\$3,348	\$42,373	7.3%
India	49	1285	4.7%	\$4,326	\$48,471	8.2%	Sweden	58	2569	2.2%	\$11,644	\$152,085	7.1%
Italy	122	2821	3.7%	\$22,441	\$267,016	7.8%	Italy	164	3899	4.0%	\$23,218	\$313,220	6.9%
Japan	46	5357	9.0%	\$21,393	\$266,348	7.4%	Switzerland	13	377	3.3%	\$2,049	\$28,248	6.8%
Austria	132	1416	2.5%	\$3,480	\$46,174	7.0%	Greece	9	238	3.6%	\$3,067	\$43,905	6.5%
South Korea	31	723	4.1%	\$2,226	\$34,686	6.0%	Mexico	27	1700	1.6%	\$5,817	\$84,162	6.5%
Taiwan	16	641	0.8%	\$992	\$16,778	5.6%	India	115	3162	3.5%	\$4,931	\$78,099	5.9%
Brazil	33	310	10.2%	\$3,462	\$58,825	5.6%	Bermuda	36	1416	2.5%	\$3,362	\$53,447	5.9%
Croatia	1	29	3.3%	\$21	\$374	5.3%	Portugal	192	3200	5.7%	\$11,857	\$205,102	5.5%
Hong Kong	2	4135	7.0%	\$4,898	\$105,403	4.4%	South Africa	383	13743	2.7%	\$91,205	\$1,638,613	5.3%
Denmark	24	2019	0.0%	\$2,093	\$52,415	3.8%	Colombia	29	846	3.3%	\$1,534	\$30,228	4.8%
Others	1077	97912	1.1%	\$55,792	\$7,503,019	0.7%	Others	1904	76354	2.4%	\$222,191	\$5,824,602	3.7%
All	4759	140551	3.3%	\$592,725	\$9,821,927	5.7%	All	4759	140551	3.3%	\$592,725	\$9,821,927	5.7%

**Table 3. Cross-Country Determinants of Cross-Border Acquisition Activity Led by Government-Controlled Acquirers.**

This table presents cross-sectional regressions of country-level determinants on the cumulative number (or deal value in constant 2000 US\$ millions) of cross-border block acquisition deals led by government-controlled or corporate acquirers from country  $i$  in a target corporation in country  $j$  announced over the period from 1990 to 2008. The dependent variable is the cumulative number (or value) of deals between country  $i$  and  $j$  divided by the total number (value) of all deals involving acquirers in country  $i$  (Panel A) or all those involving targets in country  $j$  (Panel B). See Table 1 for data sources, identification of type of acquirer and exclusions by type of deal. We exclude activity between country pairs ( $i, j$ ) in which there are fewer than 50 (30) cross-border acquisition deals involving corporate and government-controlled (government-controlled only) acquirers over the 1990-2008 period. Models 1 to 10 include only government-controlled acquirers, Models 11 to 14, only corporate acquirers, and Model 15 is the ratio of the fraction of deals led by government-controlled acquirers between countries  $i$  and  $j$  per all government acquirers from country  $i$  relative to the fraction of deals led by corporate acquirers between countries  $i$  and  $j$  per all corporate acquirers from country  $i$ . Models 8 and 12 measure activity by the cumulative total constant-dollar deal activity, Models 9 and 13 consider only those minority stake deals that involve between 5% and 50% block purchases in targets and Models 10 and 14 consider only deals with majority stakes (greater than 50% of target shares). See Table A1 for details on variable construction and Table A2 for summary statistics. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5% and 10% levels using robust standard errors and associated  $t$ -statistics are in parentheses below the coefficients.

Panel A: By Acquirer Country

	Government-Controlled Acquirers Only										Corporate Acquirers Only				Ratio (15)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
							Total No. of Deals	Total Value of Deals	Minority Deals Only	Majority Deals Only	Total No. of Deals	Total Value of Deals	Minority Deals Only	Majority Deals Only	Fraction of Govt Deals
Average Annual Exchange Rate Return Differences	-0.028** (-2.07)						-0.007 (-0.35)	0.051** (2.03)	-0.020 (-0.79)	0.022 (0.93)	0.014 (1.00)	0.049** (2.29)	0.010 (0.72)	0.019 (1.30)	-0.022 (-1.38)
Average Annual Real Stock Market Return Differences	0.039 (1.43)						0.057* (1.71)	0.060 (1.38)	0.040 (1.09)	0.050 (1.15)	0.047* (1.88)	0.069* (1.93)	0.037 (1.52)	0.056** (2.11)	0.011 (0.41)
Average Log GDP per capita Differences		-0.003*** (-3.17)					-0.003* (-1.79)	-0.007*** (-2.82)	-0.002 (-1.07)	-0.006*** (-3.35)	-0.004*** (-3.01)	-0.007*** (-4.50)	-0.003** (-2.30)	-0.005*** (-3.52)	0.001 (0.69)
Average GDP Growth Differences		0.080* (1.90)					-0.017 (-0.21)	-0.058 (-0.56)	0.011 (0.13)	-0.101 (-1.36)	-0.074 (-1.42)	-0.076 (-1.17)	-0.096* (-1.91)	-0.052 (-0.94)	0.058 (0.93)
Geographic Proximity			0.004*** (6.35)				0.004*** (6.74)	0.003*** (4.11)	0.004*** (6.11)	0.004*** (6.20)	0.004*** (8.33)	0.003*** (4.37)	0.004*** (8.20)	0.004*** (7.88)	0.000 (0.64)
Market Correlation			0.076*** (5.16)				0.092*** (5.46)	0.104*** (4.61)	0.084*** (4.82)	0.097*** (5.28)	0.099*** (7.83)	0.117*** (7.87)	0.088*** (7.43)	0.107*** (7.90)	-0.007 (-0.64)
Anti-Self Dealing Index Differences				0.001 (0.21)											
Accounting Disclosure Index Differences				-0.038** (-2.55)											
PolityIV Democracy Differences					-0.005 (-0.78)										
FDI Restrictiveness Target					-0.129*** (-2.59)										
European Union Dummy						0.027** (2.57)	-0.007 (-0.62)	-0.013 (-1.02)	-0.004 (-0.30)	-0.020** (-2.50)	-0.013* (-1.95)	-0.025*** (-3.98)	-0.012* (-1.84)	-0.014* (-1.94)	0.006 (0.56)
Tax Haven Dummy Target						-0.012*** (-3.60)	-0.025*** (-4.89)	-0.025*** (-3.52)	-0.024*** (-4.25)	-0.030*** (-5.29)	-0.019*** (-4.50)	-0.025*** (-5.89)	-0.017*** (-4.12)	-0.020*** (-4.62)	-0.007* (-1.93)
Constant	0.024*** (12.73)	0.023*** (13.82)	0.016*** (2.61)	0.027*** (11.42)	0.059*** (6.48)	0.021*** (13.65)	0.014** (2.56)	0.006 (0.75)	0.016*** (2.66)	0.014** (2.24)	0.010*** (2.81)	0.001 (0.21)	0.014*** (3.80)	0.008** (1.98)	0.004 (0.89)
Observations	1640	1980	1640	1122	552	2352	1482	1482	1482	1482	1482	1482	1482	1482	1482
Adjusted R-squared	0.00	0.01	0.06	0.01	0.02	0.01	0.08	0.05	0.07	0.08	0.15	0.10	0.14	0.15	0.00

**Table 3. Cross-Country Determinants of Cross-Border Acquisition Activity Led by Government-Controlled Acquirers. (continued)**

Panel B: By Target Country

	Government-Controlled Acquirers Only										Corporate Acquirers Only				Ratio
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
							Total No. of Deals	Total Value of Deals	Minority Deals Only	Majority Deals Only	Total No. of Deals	Total Value of Deals	Minority Deals Only	Majority Deals Only	Fraction of Govt Deals
Average Annual Exchange Rate Return Differences	0.065*** (6.97)						0.090*** (4.71)	0.084*** (2.84)	0.088*** (4.40)	0.092*** (4.11)	0.022 (1.59)	0.033** (1.99)	0.024* (1.74)	0.021 (1.49)	0.068*** (3.16)
Average Annual Real Stock Market Return Differences	0.075*** (3.13)						0.117*** (3.89)	0.039 (0.81)	0.100*** (3.27)	0.144*** (4.29)	-0.083*** (-3.42)	-0.081*** (-2.73)	-0.087*** (-3.55)	-0.079*** (-3.24)	0.200*** (6.32)
Average Log GDP per capita Differences		0.002** (2.05)					0.000 (0.17)	0.000 (0.10)	-0.000 (-0.21)	0.001 (0.46)	0.006*** (4.65)	0.006*** (3.94)	0.006*** (4.38)	0.007*** (4.86)	-0.006*** (-3.11)
Average GDP Growth Differences		0.134*** (2.88)					0.140** (2.09)	0.188* (1.87)	0.127* (1.75)	0.165** (2.37)	-0.003 (-0.06)	-0.049 (-0.84)	-0.016 (-0.30)	0.007 (0.13)	0.143* (1.84)
Geographic Proximity			0.004*** (9.18)				0.004*** (7.96)	0.004*** (4.92)	0.004*** (7.50)	0.004*** (7.63)	0.003*** (7.03)	0.003*** (5.13)	0.003*** (7.13)	0.003*** (6.70)	0.001** (1.98)
Market Correlation			0.060*** (4.87)				0.063*** (4.55)	0.066*** (4.04)	0.060*** (4.44)	0.064*** (4.10)	0.101*** (7.70)	0.100*** (7.37)	0.098*** (7.66)	0.103*** (7.75)	-0.038** (-2.40)
Anti-Self Dealing Index Differences				-0.010** (-2.00)											
Accounting Disclosure Index Differences				0.057*** (5.24)											
PolityIV Democracy Differences					-0.012*** (-3.20)										
FDI Restrictiveness Acquirer					-0.205*** (-4.51)										
European Union Dummy						0.044*** (4.02)	0.014 (1.27)	-0.001 (-0.05)	0.017 (1.41)	0.013 (1.12)	-0.012* (-1.87)	-0.004 (-0.45)	-0.010 (-1.46)	-0.013** (-2.07)	0.026*** (2.69)
Tax Haven Dummy Acquirer						-0.003 (-0.50)	-0.016*** (-2.73)	-0.004 (-0.35)	-0.015** (-2.49)	-0.019*** (-2.72)	-0.019*** (-4.85)	-0.021*** (-4.90)	-0.017*** (-4.33)	-0.021*** (-5.22)	0.003 (0.50)
Constant	0.023*** (13.96)	0.021*** (14.51)	0.024*** (5.89)	0.023*** (11.91)	0.068*** (7.02)	0.019*** (14.57)	0.022*** (4.95)	0.017*** (2.76)	0.022*** (4.61)	0.024*** (4.58)	0.008** (1.97)	0.006 (1.22)	0.008** (2.09)	0.007* (1.83)	0.015*** (2.99)
Observations	1640	1980	1640	1122	552	2352	1482	1482	1482	1482	1482	1482	1482	1482	1482
Adjusted R-squared	0.02	0.00	0.08	0.02	0.04	0.02	0.11	0.05	0.10	0.10	0.16	0.13	0.16	0.15	0.06

**Table 4. Logistic Regression Analysis of Probability of Firm Targeted by Government-Controlled Acquirer.**

This table presents logistic regressions of the probability that a firm is targeted by a government-controlled acquirer in a given year. The dependent variable equals one if the firm is targeted by a government-controlled acquirer in any given year between 1990 and 2008 and zero, if it is targeted by a corporation. Financials and utilities as target firms are excluded as are firms with total assets smaller than US\$1 million (in 2000 constant dollars) and with negative book values of equity. See Table 1 for data sources, identification of type of acquirer and exclusions by type of deal. Models 1 to 3 present results for minority stake acquisitions (above 5% but below 50% of target firm's shares acquired) and Models 4 to 6, for majority control transactions (above 50% of target firm's shares acquired). Firm variables include a dummy variable indicating whether target and acquirer firms are in the same industry ("Related Industry Dummy"), three proxies for firm financial constraints ("Zero-dividend Dummy," "High Whited and Wu Index," "High Hadlock and Pierce Index II"), a proxy for high levels of closely-held share by insiders ("High Closely-held Share Dummy"), the cumulative 12-month market and U.S. dollar exchange-rate returns for the domicile of the target ("12-month Market Returns," "12-month Exchange Rate Returns," respectively), log of total assets ("Total Assets"), profitability ("Return on Assets"), leverage ("Long-term Debt/Assets"), a dummy variable for withdrawn or failed deals ("Failed Deals Dummy") and trailing one-year sales growth ("Sales Growth"). For majority-stake acquisitions, two deal-level variables are included: a dummy variable for deals paid entirely in cash ("All Cash Payment Dummy") and percentage of shares owned by acquirer ("Percentage of Shares Acquired"). See Table A1 for details on variable construction and Table A2 for summary statistics. Coefficients are reported as marginal effects. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5% and 10% levels using robust standard errors that allow country and year fixed effects and associated *t*-statistics are in parentheses below the coefficients.

	Minority Stake Acquisitions			Majority Stake Acquisitions		
	(1)	(2)	(3)	(4)	(5)	(6)
Related Industry Dummy	-0.003 (-0.67)	-0.004 (-0.82)	-0.004 (-0.95)	-0.004 (-0.80)	-0.004 (-0.74)	-0.003 (-0.60)
Failed Deals Dummy	0.009* (1.89)	0.009* (1.86)	0.009* (1.87)	0.005 (0.27)	0.006 (0.27)	0.004 (0.24)
Zero-dividend Dummy	0.015*** (2.60)					
High Whited and Wu Index		0.012** (2.14)		0.013* (1.70)	0.008 (0.91)	0.013* (1.67)
High Hadlock and Pierce Index II			0.014 (1.43)			
All Cash Payment Dummy					0.013** (2.19)	
Percentage of Shares Acquired						-0.000 (-1.53)
High Closely-held Shares Dummy	-0.005 (-0.99)	-0.006 (-1.20)	-0.006 (-1.13)	-0.001 (-0.11)	-0.003 (-0.50)	0.000 (0.03)
12-month Market Returns	-0.026** (-2.05)	-0.025** (-2.07)	-0.025** (-2.04)	0.015 (0.95)	-0.012 (-0.58)	0.013 (0.88)
12-month Exchange Rate Returns	0.011 (0.33)	0.004 (0.12)	0.004 (0.12)	-0.041 (-1.15)	-0.021 (-0.43)	-0.042 (-1.20)
Total Assets (log)	0.009*** (6.47)	0.008*** (6.24)	0.009*** (5.97)	0.003 (1.61)	0.003 (1.22)	0.003* (1.70)
Market-to-book	0.002* (1.93)	0.002* (1.81)	0.002* (1.77)	0.001 (0.80)	0.001 (1.06)	0.001 (0.76)
Return on Assets	0.000 (0.04)	-0.002 (-0.29)	0.001 (0.07)	-0.008 (-1.50)	-0.007 (-0.85)	-0.008 (-1.48)
Long-term Debt/Assets	0.003 (0.24)	0.006 (0.41)	-0.001 (-0.04)	-0.003 (-0.14)	-0.018 (-0.72)	-0.002 (-0.10)
Sales Growth	0.003 (1.59)	0.004* (1.87)	0.004** (2.08)	-0.000 (-0.05)	0.003 (1.17)	-0.000 (-0.13)
Country fixed effects?	yes	yes	yes	yes	yes	yes
Year fixed effects?	yes	yes	yes	yes	yes	yes
Observations	3175	3320	3320	1384	914	1384
Pseudo R-squared	0.151	0.145	0.143	0.270	0.263	0.276

**Table 5. Logistic Regression Analysis of Probability of Firm Targeted by Sovereign Wealth Fund (SWF) as Acquirer.**

This table presents logistic regressions of the probability that a firm is targeted by a sovereign wealth fund (SWF) as one type of government-controlled acquirer in a given year. The dependent variable equals one if the firm is targeted by a SWF in any given year between 1990 and 2008, and zero if it is targeted by any other type of government-controlled acquirer. Firms with total assets less than US\$1 million (in 2000 constant dollars) and with negative book values of equity are excluded. See Table 1 for data sources, identification of type of acquirer and exclusions by type of deal. Models 1 to 3 present results with financial services and utilities firms included and Models 4 to 6, those in which they are excluded. We only include non-SWF led acquisitions by government-controlled firms that involve minority stake acquisitions (above 5% but below 50% of target firm's shares acquired). Firm variables include a dummy variable indicating whether target and acquirer firms are in the same industry ("Related Industry"), three proxies for firm financial constraints ("Zero-dividend Dummy," "High Whited and Wu Index," "High Hadlock and Pierce Index II"), a proxy for high levels of closely-held share by insiders ("High Closely-held Share Dummy"), the cumulative 12-month market and U.S. dollar exchange rate returns for the domicile of the target ("12-month Market Returns," "12-month Exchange Rate Returns," respectively), log of total assets ("Total Assets"), profitability ("Return on Assets"), leverage ("Long-term Debt/Assets"), a dummy variable for withdrawn or failed deals ("Failed Deals Dummy") and trailing one-year sales growth ("Sales Growth"). See Table A1 for details on variable construction and Table A2 for summary statistics. Coefficients are reported as marginal effects. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5% and 10% levels using robust standard errors that allow country and year fixed effects and associated *t*-statistics are in parentheses below the coefficients.

	Financial Services and Utilities Included			Financial Services and Utilities Excluded		
	(1)	(2)	(3)	(4)	(5)	(6)
Related Industry Dummy	-1.313*** (-2.93)	-1.252*** (-2.86)	-1.238*** (-2.83)	-1.286* (-1.77)	-1.132* (-1.75)	-1.154* (-1.80)
Failed Deals Dummy	-0.606 (-1.43)	-0.813* (-1.96)	-0.812* (-1.95)	-1.339** (-2.00)	-1.244** (-2.07)	-1.249** (-2.08)
Zero-dividend Dummy	-1.201** (-2.43)			-2.632*** (-3.25)		
High Whited and Wu Index		0.197 (0.43)			-0.086 (-0.13)	
High Hadlock and Pierce Index II			0.469 (0.67)			-0.365 (-0.41)
High Closely-held Shares Dummy	-0.886* (-1.71)	-0.800 (-1.58)	-0.836* (-1.65)	-0.788 (-1.06)	-0.872 (-1.31)	-0.836 (-1.24)
12-month Market Returns	1.071 (1.02)	0.575 (0.58)	0.623 (0.63)	4.426** (2.12)	2.852* (1.67)	2.867* (1.68)
12-month Exchange Rate Returns	-0.562 (-0.20)	-1.068 (-0.39)	-1.252 (-0.45)	4.550 (0.73)	-0.457 (-0.08)	-0.418 (-0.08)
Total Assets (log)	0.135 (1.14)	0.235** (2.05)	0.273** (2.12)	-0.089 (-0.44)	0.159 (0.89)	0.120 (0.59)
Market-to-book	-0.197 (-0.97)	-0.288 (-1.33)	-0.296 (-1.37)	-0.042 (-0.15)	-0.138 (-0.56)	-0.131 (-0.55)
Return on Assets	0.003 (0.34)	0.012 (0.94)	0.013 (1.02)	-0.001 (-0.05)	0.009 (0.64)	0.008 (0.52)
Long-term Debt/Assets	0.972 (0.81)	0.092 (0.08)	-0.082 (-0.07)	4.773** (2.09)	1.068 (0.61)	1.278 (0.70)
Sales Growth	0.001 (0.58)	0.000 (0.31)	0.000 (0.24)	0.002 (0.88)	-0.000 (-0.20)	-0.000 (-0.24)
Country fixed effects?	yes	yes	yes	yes	yes	yes
Year fixed effects?	yes	yes	yes	yes	yes	yes
Observations	296	310	310	156	161	161
Pseudo R-squared	0.377	0.363	0.364	0.416	0.341	0.342

**Table 6. Cumulative Market-Adjusted Returns (CMARs) to Announcements of Cross-Border Acquisitions Led by Government-Controlled Acquirers, including Sovereign Wealth Funds, and Corporate Acquirers.**

This table reports the cumulative market adjusted buy-and-hold returns (CMARs) in percentage around the announcement dates of cross-border acquisitions led by government-controlled and corporate acquirers. See Table 1 for data sources, identification of type of acquirer and exclusions by type of deal. Buy-and-hold returns are cumulated over three different returns horizons around the announcement date ( $t=0$ ), including from days  $t=-10$  to  $t=+10$  (“CMARs(-10,+10)”), days  $t=-5$  to  $t=+5$  (“CMARs(-5,+5)”), and days  $t=-1$  to  $t=+1$  (“CMARs(-1,+1)”). In Panel A, results are reported separately for acquisitions that involve a minority stake in the target firm (more than 5% but less than 50% of shares) and a majority stake (greater than 50% of shares). Financial services and utilities target firms are excluded. In Panel B, differences in means and medians in CMARs are reported between government-led acquisitions that involve sovereign wealth funds (SWF) as acquirers and those that do not. A SWF is identified as a financial acquirer in Securities Data Corporation under ACQUIROR\_TYPE data item and matched by name (SDC data item AN) to a list of SWFs at the SWF Institute website, <http://www.swfinstitute.org/funds.php>. Mean and median values are reported with  $p$ -values for the  $t$ -statistics associated with differences in means and Wilcoxon rank-sum tests associated with differences in medians between groups are presented in parentheses. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5% and 10% levels.

**Panel A: Government-Controlled versus Corporate Cross-border Acquisitions**

		No. of Announcements	CMARs (-10, +10)	CMARs (-5, +5)	CMARs (-1, +1)
<u>Differences in Means</u>					
Majority Stakes	Corporate acquirer	3,431	25.67%**	19.87%**	15.76%**
	Government acquirer	85	20.71%**	18.35%**	11.56%**
	Diff (p-value)		(0.38)	(0.69)	(0.13)
Minority Stakes	Corporate acquirer	7,956	16.86%**	13.27%**	5.34%***
	Government acquirer	405	8.49%***	7.26%***	6.02%***
	Diff (p-value)		(0.09)	(0.20)	(0.59)
<u>Differences in Medians</u>					
Majority Stakes	Corporate acquirer	3,431	11.72%**	9.37%***	5.79%***
	Government acquirer	85	10.58%**	6.41%***	2.09%***
	Diff (p-value)		(0.90)	(0.89)	(0.22)
Minority Stakes	Corporate acquirer	7,956	3.76%***	3.17%***	1.41%***
	Government acquirer	405	1.99%***	1.31%***	1.00%***
	Diff (p-value)		(0.02)	(0.01)	(0.11)

**Panel B: Sovereign Wealth Funds versus Other Government-Controlled Acquisitions**

		No. of Announcements	CMARs (-10, +10)	CMARs (-5, +5)	CMARs (-1, +1)
<u>Differences in Means</u>					
Financial Services and Utilities Firms Excluded	Other Non-SWF Government-Controlled acquirer	413	12.52%**	10.70%**	8.05%***
	Sovereign Wealth Funds (SWFs) only	77	0.69%	1.49%	1.41%**
	Diff (p-value)		(<0.01)	(<0.01)	(<0.01)
Financial Services and Utilities Firms Included	Other Non-SWF Government-Controlled acquirer	773	8.93%***	7.93%***	6.10%***
	Sovereign Wealth Funds (SWFs) only	181	2.73%**	2.01%*	1.52%***
	Diff (p-value)		(<0.01)	(<0.01)	(<0.01)
<u>Differences in Medians</u>					
Financial Services and Utilities Firms Excluded	Other Non-SWF Government-Controlled acquirer	413	3.76%***	2.58%***	1.32%***
	Sovereign Wealth Funds (SWFs) only	77	(0.46%)	(0.03%)	0.88%**
	Diff (p-value)		(<0.01)	(<0.01)	(0.10)
Financial Services and Utilities Firms Included	Other Non-SWF Government-Controlled acquirer	773	2.81%***	2.28%***	1.09%***
	Sovereign Wealth Funds (SWFs) only	181	0.60%**	0.72%*	0.85%***
	Diff (p-value)		(0.03)	(0.01)	(0.22)

**Table 7. Regression Analysis of Cross-section of Cumulative Market-Adjusted Returns (CMARs) to Announcements of Cross-Border Acquisitions Led by Government-Controlled Acquirers, including Sovereign Wealth Funds, and Corporate Acquirers.**

This table reports the results for cross-sectional regressions of cumulative market adjusted buy-and-hold returns (CMARs) around the announcement dates of cross-border acquisitions led by government-controlled and corporate acquirers on a variety of firm-specific and country-level variables. See Table 1 for data sources, identification of type of acquirer and exclusions by type of deal. Buy-and-hold returns are cumulated around the announcement date ( $t=0$ ) for days  $t=-10$  to  $t=+10$  (“CMARs(-10,+10)”). In Panel A, results are reported for acquisitions that involve a minority (more than 5% but less than 50% of shares) of the target firm for acquisitions led by government-controlled and corporate acquirers. Financial services and utilities target firms are excluded. Panel B presents results for only acquisitions (involving minority or majority stakes above 50% in the target) led by government-controlled acquirers, including those of sovereign wealth funds (SWFs, denoted “SWF Acquirer Dummy”). Financial services and utilities firms are included in these regressions. See Table 5 for identification of SWF acquirers. Firm variable names are defined in Tables 4 and 5 and Table A1 presents details on variable construction and Table A2 for summary statistics. We include a variable “High R&D Industry” which is a dummy variable that equals one if the target firm operates in an industry that is in the upper quartile of R&D expenditures divided by total net assets among all 4-digit SIC industries in the U.S. on Compustat. Country variables include the Anti-Self Dealing Index of Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008). \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5% and 10% levels using robust standard errors that allow year fixed effects and associated  $t$ -statistics are in parentheses below the coefficients.

Panel A: CMARs around Acquisition Announcements of All Government-Controlled and Corporate Acquirers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Government-Controlled Acquirer Dummy	-0.003 (-0.17)	0.011 (0.52)	0.001 (0.03)	0.010 (0.45)	0.012 (0.58)	-0.003 (-0.15)	0.012 (0.57)	0.006 (0.29)	0.013 (0.53)
High R&D Industry Dummy		0.010 (0.68)				0.021 (1.18)	0.021 (1.19)	0.014 (0.80)	0.007 (0.45)
Zero-dividend Dummy			0.037*** (2.97)			0.034*** (2.84)	-0.002 (-0.17)	0.019* (1.77)	0.026** (2.16)
High Whited and Wu Index				0.013 (0.83)					
High Hadlock and Pierce Index II					0.082*** (4.03)				
High Closely-held Shares Dummy						0.010 (0.54)	0.006 (0.34)	0.012 (0.58)	0.018 (0.79)
Ant-Self Dealing Index						0.085*** (5.09)	0.048*** (2.92)	0.078*** (4.61)	0.080*** (4.56)
12-month Market Returns						-0.022 (-1.16)	-0.022 (-1.18)	-0.011 (-0.58)	-0.013 (-0.66)
Total Assets (log)							-0.019*** (-5.24)		
Return on Assets								-0.001** (-2.51)	
Market-to-book									-0.008*** (-3.00)
Long-term Debt/Assets									-0.047 (-1.40)
Sales Growth									0.000 (0.95)
Year fixed effects?	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	7351	5531	4487	5531	5531	4309	4302	4070	3592
Pseudo R-squared	0.01	0.01	0.02	0.01	0.02	0.02	0.03	0.02	0.02



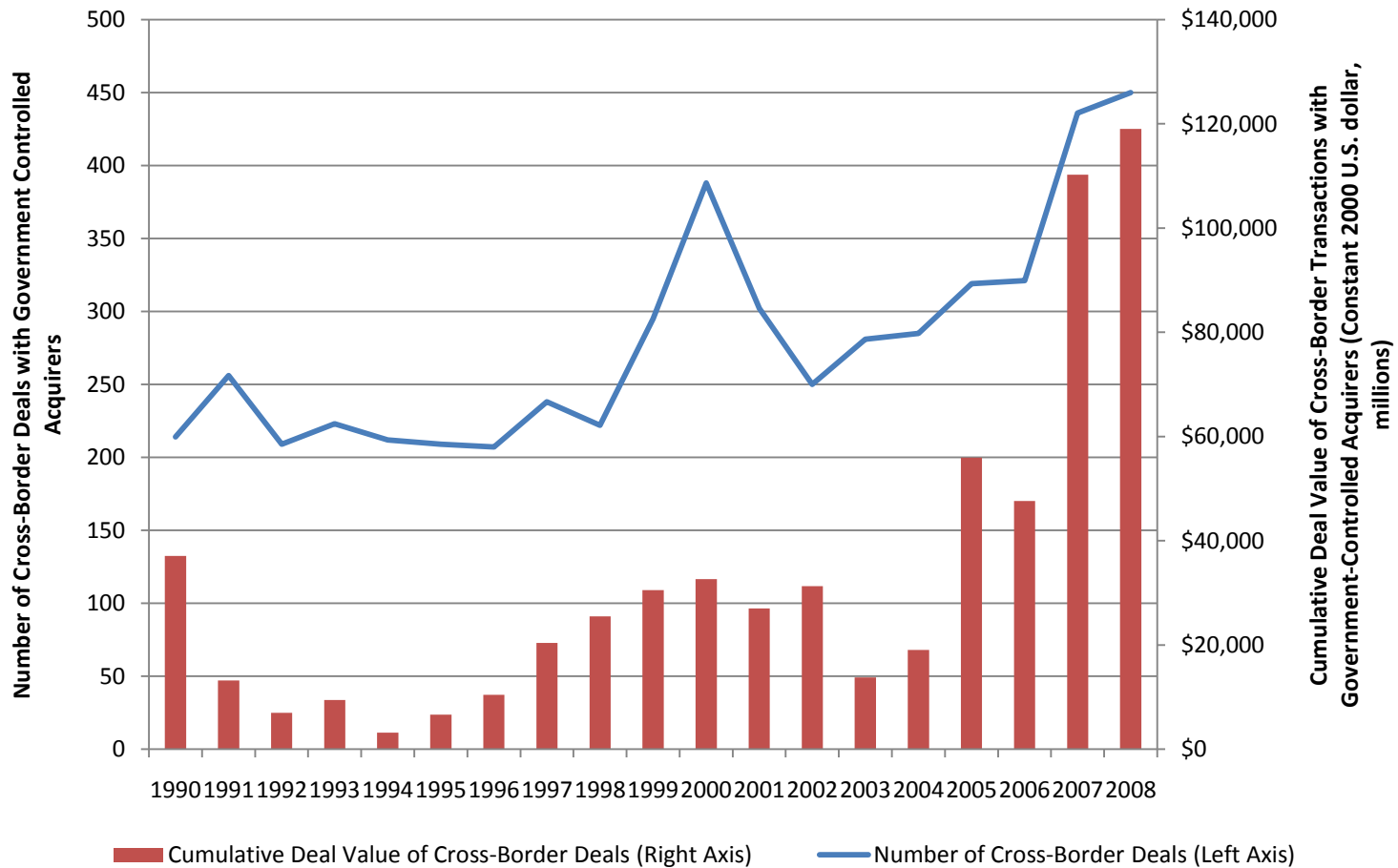
**Table 7. Regression Analysis of Cross-section of Cumulative Market-Adjusted Returns to Announcements of Cross-Border Acquisitions Led by Government-Controlled, including Sovereign Wealth Funds, and Corporate Acquirers.** (continued)

Panel B: CMARs around Acquisition Announcements of Only Government-Controlled Acquirers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SWF Acquirer Dummy	-0.066*** (-3.88)	-0.077*** (-2.69)	-0.070** (-2.34)	-0.071** (-2.42)	-0.062** (-2.20)	-0.066** (-1.99)	-0.055* (-1.75)	-0.055 (-1.64)	-0.081* (-1.71)
High R&D Industry Dummy		0.000 (0.01)				0.038 (0.73)	0.045 (0.87)	0.046 (0.92)	0.039 (0.72)
Zero-dividend Dummy			0.019 (0.48)			0.014 (0.36)	-0.027 (-0.62)	-0.016 (-0.41)	0.047 (0.95)
High Whited and Wu Index				0.043 (0.96)					
High Hadlock and Pierce Index II					0.152** (2.52)				
High Closely-held Shares Dummy						0.072 (1.13)	0.070 (1.10)	0.045 (0.71)	0.072 (1.10)
Ant-Self Dealing Index						0.158** (2.09)	0.120 (1.62)	0.182** (2.53)	0.202** (2.52)
12-month Market Returns						0.115 (1.19)	0.090 (0.93)	0.162* (1.68)	0.165 (1.60)
Total Assets (log)							-0.022** (-2.31)		
Return on Assets								-0.002 (-1.53)	
Market-to-book									-0.024* (-1.88)
Long-term Debt/Assets									0.210 (0.72)
Sales Growth									-0.000 (-0.98)
Year fixed effects?	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	839	356	297	356	356	285	285	268	236
Pseudo R-squared	0.05	0.07	0.06	0.07	0.10	0.09	0.10	0.14	0.18

**Figure 1. Number of and Total Deal Value of All Cross-Border Acquisitions Led by Government-Controlled Acquirers By Year.**

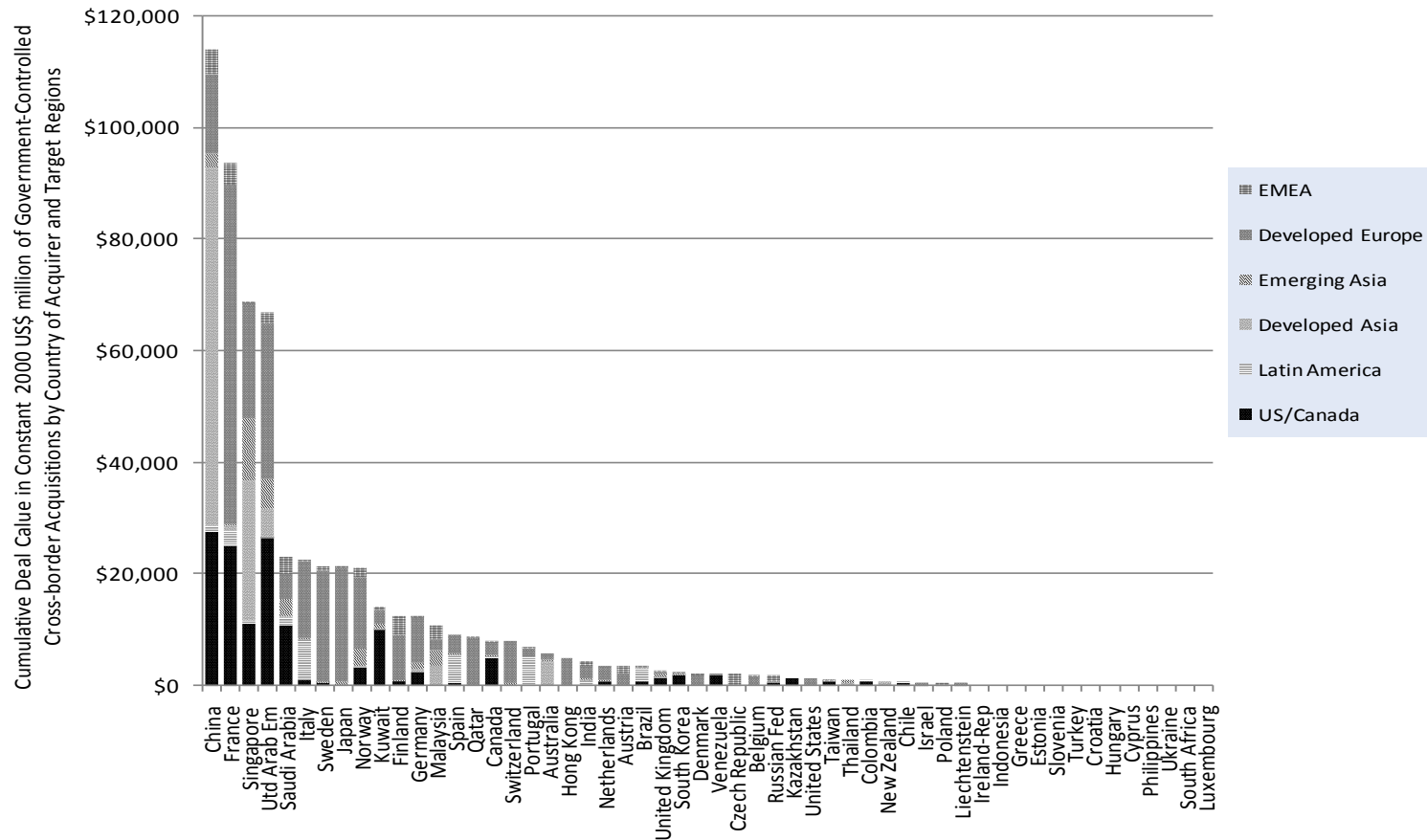
This figure exhibits the number of and total cumulative deal value (in 2000 Constant US\$ millions) of cross-border block acquisitions led by government-controlled involving at least a 5% stake in the target corporation announced over the period from 1990 to 2008. The data are obtained from Thomson Reuter’s Security Data Corporation’s (SDC) Platinum Mergers and Corporate Transactions database. We exclude leveraged buyouts, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases and privatizations and deals in which acquirers are domiciled in overseas territories of the U.K. (Bahamas, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man) and the Netherlands (Netherlands Antilles) and we further exclude countries in which there are fewer than 50 cross-border acquisitions, whether led by government-controlled or corporate acquirers, over the 1990-2008 period. The acquirer’s ultimate parent public status is used to identify government controlled acquirers, which is defined as at least 50% cash flow ownership.



**Figure 2. Total Deal Value of All Acquisitions Led by Government-Controlled Acquirers by Country of Acquirer and of Target Firms.**

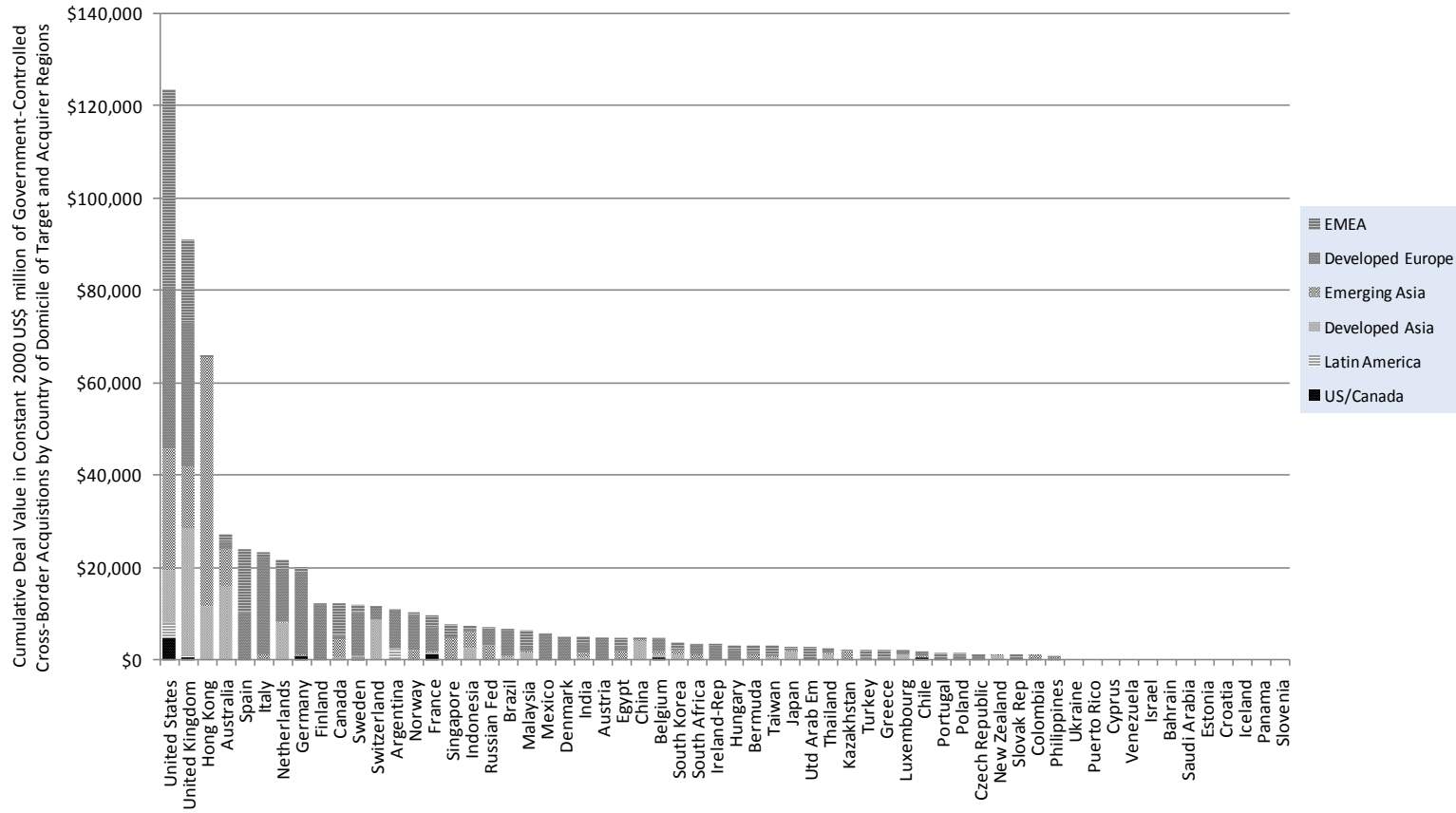
This figure exhibits the cumulative deal value (in 2000 Constant US\$ millions) of cross-border block acquisitions led by government-controlled and corporate acquirers involving at least a 5% stake in the target corporation announced over the period from 1990 to 2008. The data are obtained from Thomson Reuter’s Security Data Corporation’s (SDC) Platinum Mergers and Corporate Transactions database. We exclude leveraged buyouts, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases and privatizations and deals in which acquirers are domiciled in overseas territories of the U.K. (Bahamas, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man) and the Netherlands (Netherlands Antilles) and we further exclude countries in which there are fewer than 50 cross-border acquisitions, whether led by government-controlled or corporate acquirers, over the 1990-2008 period. The acquirer’s ultimate parent public status is used to identify government controlled acquirers, which is defined as at least 50% cash flow ownership. The results are reported by country in order of total cumulative deal value by government-led acquirers comprise for leading acquirer countries and their target country regions (Panel A) and for the leading target countries and the home country region of their acquirers (Panel B).

Panel A: By Country of Domicile of Government-Led Acquirers and Target Regions



**Figure 2. Total Deal Value of All Acquisitions Led by Government-Controlled Acquirers by Country of Acquirer and of Target Firms. (continued)**

Panel B: By Country of Domicile of Target Firms of Government-Led Acquirers and Home Country Regions of Acquirers



**Table A1. Variable Definitions.**

Variable	Definition
Government-controlled (corporate) acquirer deal ratio between countries $i$ and $j$	The ratio of the number of deals in which the target is from country $i$ and the acquirer is a government-controlled corporation (non-government-controlled) from country $j$ (where $i \neq j$ ) to the total number of cross-border deals with government-controlled (non-government-controlled) acquirers from country $j$ (Source: SDC Mergers and Corporate Transactions database).
Government-controlled (corporate) acquirer deal ratio between countries $i$ and $j$ (minority stakes only)	The ratio of the number of minority block acquisitions in which the target is from country $i$ and the acquirer is a government-controlled (non-government-controlled) corporation from country $j$ (where $i \neq j$ ) to the total number of cross-border minority block acquisitions with government-controlled (non-government-controlled) acquirers from country $j$ (Source: SDC Mergers and Corporate Transactions database).
Government-controlled (corporate) acquirer deal ratio between countries $i$ and $j$ (majority stakes only)	The ratio of the number of majority control acquisitions in which the target is from country $i$ and the acquirer is a government-controlled (non-government-controlled) corporation from country $j$ (where $i \neq j$ ) to the total number of cross-border majority control acquisitions with government-controlled (non-government-controlled) acquirers from country $j$ (Source: SDC Mergers and Corporate Transactions database)
Average Annual Exchange Rate Return Difference	Difference in the average annual real bilateral U.S. dollar exchange rate return from 1990 to 2007 between acquirer and target country. We use national exchange rates from Datastream from WM/Reuters. WMR quotes are based on 4:00pm London (Greenwich Mean Time). We obtain National Exchange Rates for the U.K. Pound Sterling and manually convert these currency quotes to get the quotes for the U.S. dollar. These indices are then deflated using the 2000 constant dollar Consumer Price Index (CPI) to calculate real exchange rate returns (in U.S. dollars).
Average Annual Exchange Rate Return Acquirer (Target)	Average annual real bilateral U.S. dollar exchange rate return from 1990 to 2007 of the acquirer (target) firm's country of domicile. See above.
Average Annual Real Stock Market Return Differences	Difference in the average annual local real stock market return from 1990 to 2007 between acquirer and target country. We obtain country-level stock return indices in local currency (Datastream code: RI) and deflate these indices using the 2000 Constant Price Index (CPI) to calculate real stock returns. (Source: Datastream)
Average Annual Real Stock Market Return Acquirer (Target)	The average annual local real stock market return from 1990 to 2007 of the acquirer (target) firm's country of domicile (Source: Datastream).
Average Log GDP per capita Differences	Difference between target and acquirer firm's country of domicile in the average logarithm of Gross Domestic Product (in US\$) divided by the average population from 1990 to 2007 (Source: World Bank Development Indicators)
Average Log GDP per capita Acquirer (Target)	The average Gross Domestic Product (in US\$) divided by the population of the acquirer (target) firm's country of domicile from 1990 to 2007 (Source: World Bank Development Indicators)

Variable	Definition
Average GDP Growth Differences	The difference between acquirer and target in the average annual real growth rate of the gross domestic product from 1990 to 2007 (Source: World Bank Development Indicators)
Average GDP Growth Acquirer (Target)	The average annual real growth rate of the gross domestic product of the acquirer (target) country from 1990 to 2007 (Source: World Bank Development Indicators)
Accounting Disclosure Index Differences	The difference between acquirer and target in the index created by the Center for International Financial Analysis and Research to rate the quality of 1990 annual reports on their disclosure of accounting information (Source: LaPorta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998)).
Accounting Disclosure Index Acquirer (Target)	The index created by the Center for International Financial Analysis and Research to rate the quality of 1990 annual reports on their disclosure of accounting information of the acquirer (target) firm's country of domicile (Source: LaPorta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998)).
Anti-Self Dealing Index Differences	The difference between acquirer and target in the anti-self dealing index (Source: Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008)).
Anti-Self Dealing Index Acquirer (Target)	The anti-self dealing index of the acquirer (target) firm's country of domicile (Source: Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008)).
Geographic Proximity	The negative of the great circle distance between the capitals of countries i and j. We obtain latitude and longitude of capital cities of each country. We then apply the standard formula: $3963.0 * \arcsin[\sin(\text{lat1}) * \sin(\text{lat2}) + \cos(\text{lat1}) * \cos(\text{lat2}) * \cos(\text{lon2} - \text{lon1})]$ , where lon and lat are the longitudes and latitudes of the acquirer ("1" suffix) and the target country ("2" suffix) locations, respectively. (Source: <a href="http://www.mapsofworld.com/utilities/world-latitude-longitude.htm">http://www.mapsofworld.com/utilities/world-latitude-longitude.htm</a> )
Market Correlation	The correlation coefficient using monthly country-level stock index returns denominated in US dollars (Datastream code: RI) from Datastream between 1990 and 2000.
PolityIV Democracy Differences	The difference between acquirer and target in the measure of regime democracy and/or autocracy, ranging from -10 (high autocracy) and +10 (high democracy). The PolityIV Project is led by Monty Marshall (George Mason University), Keith Jagers (Colorado State) and was founded originally by Ted Robert Gurr (University of Maryland) (Source: <a href="http://www.systemicpeace.org/polity/polity4.htm">http://www.systemicpeace.org/polity/polity4.htm</a> )
PolityIV Democracy Acquirer (Target)	The measure of regime democracy and/or autocracy, ranging from -10 (high autocracy) and +10 (high democracy) of the acquirer (target) firm's country of domicile (Source: <a href="http://www.systemicpeace.org/polity/polity4.htm">http://www.systemicpeace.org/polity/polity4.htm</a> ).
FDI Restrictiveness Differences	The difference between acquirer and target in the proxy that quantifies discrimination against foreign firms regarding right of establishment, ranging from 0 (least restrictive) to 1 (most restrictive) (Source: Golub (2003)).
FDI Restrictiveness Acquirer (Target)	The proxy that quantifies discrimination against foreign firms regarding right of establishment, ranging from 0 (least restrictive) to 1 (most restrictive) of the acquirer (target) firm's country of domicile (Source: Golub (2003))

Variable	Definition
European Union Dummy	Equals 1 if both target and acquirer belongs to the European Union
Tax Haven Dummy Target (Acquirer)	Equals 1 if the target (acquirer) country is classified as an “offshore financial center” (OFC) by International Monetary Fund’s definition (Source: IMF Background Paper, Monetary and Exchange Affairs Department, June 23, 2000, List of Countries, Territories and Jurisdictions with OFCs at <a href="http://www.imf.org/external/np/mae/oshore/2000/eng/back.htm#table1">http://www.imf.org/external/np/mae/oshore/2000/eng/back.htm#table1</a> )
Bilateral Trade (Annual)	Value of imports by target firm’s country of domicile from acquirer firm’s country of domicile as a percentage of total imports by target country by year (Source: <a href="http://comtrade.un.org/db/">http://comtrade.un.org/db/</a> )
Developed Country Dummy	Equals 1 for developed countries (Source: Standard & Poor’s Emerging Market Database)
Government Acquirer dummy	Equals 1 if acquirer's ultimate parent is ultimately controlled by government and 0 otherwise (Source: SDC Mergers and Corporate Transactions database).
Related Industry Dummy	Equals 1 if the target firm’s Standard Industrial Code (SIC) overlaps with that of the acquirer at three-digit level (Source: SDC Mergers and Corporate Transactions database).
All Cash Payment Dummy	Equals 1 if the deal is 100% paid in cash and 0 otherwise; when the payment is unknown, it is set to missing (Source: SDC Mergers and Corporate Transactions database).
Failed Deals Dummy	Equals 1 if the deal is announced but not completed (Source: SDC Mergers and Corporate Transactions database).
Percent of Shares Acquired	The percentage of shares of the target ultimately owned by the acquirer (Source: SDC Mergers and Corporate Transactions database).
Total Assets (log)	Book value of total assets in millions of constant 2000 US dollars (Source: WORLDSCOPE item WC07230)
Return on Assets	$(\text{Net Income before Preferred Dividends} + ((\text{Interest Expense on Debt} - \text{Interest Capitalized}) * (1 - \text{Tax Rate}))) / \text{Average of Last Year's and Current Year's (Total Capital} + \text{Last Year's Short Term Debt} \& \text{ Current Portion of Long Term Debt}) * 100$ (WORLDSCOPE item WC08376)
Market-to-Book	$(\text{Book value of total assets (WORLDSCOPE item WC02999)} - \text{book value of equity (WC05491*WC05301)} + \text{market value of equity (WC08001)}) / \text{book value of assets (WC02999)}$
Long-term Debt/Assets	Ratio of long-term debt to book value of assets (WORLDSCOPE items WC03251/WC02999)
Sales Growth	One-year local country CPI inflation-adjusted sales growth (WORLDSCOPE item WC01001)

Variable	Definition
12-month Stock Market Returns	12-month cumulative real stock returns in US dollars at the country level. We obtain country-level stock return indices in US dollars from Datastream (Datastream code: RI) and deflate these indices using the 2000 Constant Price Index (CPI) to calculate real stock returns for the trailing 12-month period up to the target acquisition announcement..
High R&D Industry	Equals 1 if the firm operates in the upper quartile of R&D expenditures divided by total net assets among all 4-digit SIC industries on Compustat. (Source: WORLDSCOPE item 07021)
Zero-dividend dummy	Equals 1 if the firm pays no dividends (Source: WORLDSCOPE item WC04551)
High Whited and Wu Index	Equals 1 if the firm's Whited and Wu (WW, 2006) index is in the upper quartile of all WORLDSCOPE firms. We calculate for each firm WW index as $-.091 * \text{EBITDA} (\text{WC18198}/\text{WC02999}) - 0.062 * \text{Positive Dividend Dummy} (\text{WC04551}) + 0.02 * \text{Long-term debt ratio} (\text{WC03251}/\text{WC02999}) - 0.04 * \log \text{ of total assets} (\text{WC02999}) + 0.102 * \text{Industry sales growth} (\text{WC01001})$ .
High HP2 Index	Equals 1 if the firm's Hadlock and Pierce (HP, 2008) size, age, operating cash flows, and leverage index is in the upper quartile of all WORLDSCOPE firms. The index is constructed for each firm as $\text{HP2} = -0.352 * \log \text{ of total assets} (\text{WC02999}) - 0.025 * \text{age} (\text{calendar year} - \text{WC18273}) - 0.584 * \text{EBITDA} (\text{WC18198}/\text{WC02999}) + 1.747 * \text{Long-term debt} (\text{WC03251}/\text{WC02999})$
DKLMS High Flexibility Index	Equals 1 if the firm's Doidge, Karolyi, Lins, Miller and Stulz (DKLMS, 2009) financial flexibility index equals to 0 or 1; The index ranges from 0 to 3 and is constructed as a count variable by adding one point for a firm with high cash and liquid assets (WC02001/WC02501), one point for high dividend (WC04551/WC02501), and one point for low capital expenditures (WC04601/WC02501). A firm is classified as having high cash and liquid assets if its cash and liquidity asset holdings are in the upper quartile of all firms within their country. A similar rule is applied to both dividends and capital expenditures.
High Closely-Held Shares Dummy	Equals 1 if the firm's insider ownership is in the upper quartile of all WORLDSCOPE firms (WC08021)
SWF Acquirer Dummy	Equals 1 if the firm is targeted by a sovereign wealth fund (SWF); 0 if the firm is targeted by a non-SWF government acquirer (Source: SDC and SWF institute website, fund identified as financial acquirer in Securities Data Corporation under ACQUIROR_TYPE data item and matched by name AN to list of SWFs at <a href="http://www.swfinstitute.org/funds.php">http://www.swfinstitute.org/funds.php</a> )
Minority Block Acquisition Dummy	Equals 1 if the deal is a minority block purchase (less than 50% of target firm's shares) and 0 if the deal is majority control acquisition (Source: SDC Mergers and Corporate Transactions database)
CARs (-10, +10), CARs (-5, +5), CARs (-1, +1)	Market-adjusted cumulative returns for the (-10, +10) interval centered around announcement date (Source: SDC Mergers and Corporate Transactions database and Datastream). Similar for (-5,+5) day and (-1,+1) day intervals around announcement date.



**Table A2. Summary Statistics on Variables.**

Tables	Variables	Obs	Mean	Std. Dev.	Min	Max
Table 3	Government-controlled acquirer deal ratio between countries <i>i</i> and <i>j</i>	2,352	0.021	0.070	0.000	1.000
	Government-controlled acquirer dollar ratio between countries <i>i</i> and <i>j</i>	2,352	0.020	0.094	0.000	1.000
	Government-controlled acquirer deal ratio between countries <i>i</i> and <i>j</i> (minority stakes only)	2,352	0.021	0.075	0.000	1.000
	Government-controlled acquirer deal ratio between countries <i>i</i> and <i>j</i> (majority stakes only)	2,352	0.020	0.078	0.000	1.000
	Corporate acquirer deal ratio between countries <i>i</i> and <i>j</i>	2,352	0.021	0.051	0.000	0.621
	Corporate acquirer dollar ratio between countries <i>i</i> and <i>j</i>	2,352	0.021	0.068	0.000	0.725
	Corporate acquirer deal ratio between countries <i>i</i> and <i>j</i> (minority stakes only)	2,352	0.021	0.050	0.000	0.553
	Corporate acquirer deal ratio between countries <i>i</i> and <i>j</i> (majority stakes only)	2,352	0.021	0.055	0.000	0.669
	(Government deal ratio - Corporate deal ratio)	2,352	0.000	0.053	-0.438	0.967
	Average Annual Exchange Rate Return Difference	1,640	0.000	0.128	-0.346	0.346
	Average Annual Real Stock Market Return Differences	1,640	0.000	0.058	-0.200	0.200
	Average Log GDP per capita Differences	1,980	0.000	1.680	-4.562	4.562
	Average GDP Growth Differences	2,070	0.000	0.031	-0.108	0.108
	Geographic Proximity	2,256	-4.472	3.034	-12.351	-0.062
	Market Correlation	1,640	0.343	0.163	-0.081	0.781
	Anti-Self Dealing Index Differences	1,260	0.000	0.363	-0.908	0.908
	Accounting Disclosure Index Differences	1,122	0.000	0.179	-0.590	0.590
	PolityIV Democracy Differences	1,722	0.000	6.897	-20.000	20.000
	FDI Restrictiveness Acquirer (Target)	552	0.174	0.073	0.064	0.352
	European Union Dummy	2,352	0.047	0.211	0.000	1.000
Tax Haven Dummy Target (Acquirer)	2,352	0.102	0.303	0.000	1.000	
Table 4	Government Acquirer dummy (Minority Deals)	5,736	0.044	0.206	0.000	1.000
	Government Acquirer dummy (Majority Deals)	2,396	0.028	0.166	0.000	1.000
	Related Industry Dummy	5,715	0.332	0.471	0.000	1.000
	Zero-dividend dummy	4,521	0.471	0.499	0.000	1.000
	High Whited and Wu Index	5,736	0.210	0.408	0.000	1.000
	High HP2 Index	5,736	0.204	0.403	0.000	1.000
	High Closely-Held Shares Dummy	5,736	0.140	0.347	0.000	1.000
	Anti-Self Dealing Index (target)	5,427	0.624	0.234	0.092	1.000
	12-month Stock Market Returns	5,616	0.181	0.306	-0.838	2.934
	Total Assets (log)	4,798	5.253	2.087	-1.961	10.093
	Market-to-Book	4,602	1.996	2.318	0.401	29.603
	Return on Assets	4,507	-0.036	0.386	-3.403	0.613
	Long-term Debt/Assets	4,793	0.136	0.160	0.000	0.837
	Sales Growth	4,155	0.304	0.925	-0.772	7.462
	Failed Deals Dummy	5,736	0.418	0.493	0.000	1.000
	Average Annual Exchange Rate Return (target)	5,731	0.008	0.114	-0.825	0.291
Table 5	SWF Acquirer Dummy (Financials and Utilities excluded)	628	0.185	0.388	0.000	1.000
	SWF Acquirer Dummy (Financials and Utilities included)	922	0.211	0.409	0.000	1.000
	Related Industry Dummy	880	0.407	0.492	0.000	1.000
	Zero-dividend dummy	585	0.403	0.491	0.000	1.000
	High Whited and Wu Index	751	0.237	0.426	0.000	1.000
	High HP2 Index	751	0.138	0.346	0.000	1.000
	High Closely-Held Shares Dummy	751	0.144	0.351	0.000	1.000
	12-month Stock Market Returns	722	0.196	0.316	-0.722	1.558
	Total Assets (log)	611	6.741	2.400	0.573	11.391
	Market-to-Book	554	1.874	2.213	0.392	21.665
	Return on Assets	550	0.020	0.299	-2.671	0.641
	Long-term Debt/Assets	611	0.175	0.185	0.000	0.889
	Sales Growth	512	0.419	1.191	-0.772	7.462
	Failed Deals Dummy	922	0.443	0.497	0.000	1.000
Average Annual Exchange Rate Return (target)	812	-0.003	0.107	-0.650	0.291	

Tables	Variables	Obs	Mean	Std. Dev.	Min	Max
7 (Panel A)	CAR (-10, +10)	7,351	0.096	0.428	-0.912	10.671
	Government Acquirer dummy	8,374	0.048	0.215	0.000	1.000
	High R&D Industry	5,668	0.247	0.431	0.000	1.000
	Zero-dividend dummy	4,600	0.461	0.499	0.000	1.000
	High Whited and Wu Index	5,668	0.212	0.409	0.000	1.000
	High HP2 Index	5,668	0.199	0.400	0.000	1.000
	High Closely-Held Shares Dummy	5,668	0.141	0.348	0.000	1.000
	Anti-Self Dealing Index (target)	5,398	0.622	0.237	0.092	1.000
	12-month Stock Market Returns	5,560	0.175	0.305	-0.722	2.934
	Total Assets (log)	4,871	5.324	2.101	-1.961	10.093
	Return on Assets	4,596	-0.039	0.381	-3.403	0.613
	Market-to-Book	4,697	1.957	2.239	0.401	29.603
	Long-term Debt/Assets	4,867	0.138	0.160	0.000	0.837
	Sales Growth	4,220	0.284	0.886	-0.772	7.462
	7 (Panel B)	CAR (-10, +10)	839	0.078	0.276	-0.756
SWF Acquirer Dummy		954	0.190	0.392	0.000	1.000
High R&D Industry		363	0.209	0.407	0.000	1.000
Zero-dividend dummy		303	0.512	0.501	0.000	1.000
High Whited and Wu Index		363	0.298	0.458	0.000	1.000
High HP2 Index		363	0.207	0.405	0.000	1.000
High Closely-Held Shares Dummy		363	0.152	0.359	0.000	1.000
Anti-Self Dealing Index (target)		348	0.707	0.249	0.172	1.000
12-month Stock Market Returns		360	0.188	0.288	-0.625	1.480
Total Assets (log)		311	5.744	2.193	0.573	10.093
Return on Assets		292	-0.001	0.334	-3.403	0.545
Market-to-Book		302	2.150	3.019	0.515	29.603
Long-term Debt/Assets		311	0.137	0.153	0.000	0.834
Sales Growth		264	0.387	1.107	-0.772	6.714

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