To be published in *Foundations and Trends in Finance*

**PRIVATIZATION, STATE CAPITALISM, AND STATE OWNERSHIP OF BUSINESS IN THE 21ST CENTURY**

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Current draft: October 2, 2016

**Abstract**

This study summarizes the economic and political developments relating to privatization, state capitalism, and state ownership of business since 2000 and then surveys the extensive recent research examining these issues empirically. Through the early 21st century, there was an unambiguous global trend towards reducing government ownership of business enterprise, but this trend has since at least been slowed, and perhaps even reversed. We discuss the factors that have promoted a global resurgence of state ownership, then define and analyze the new ideology labeled “state capitalism.” Recent research examines whether privatization improves the operating and financial performance of divested companies, as well as when, where and how governments decide to privatize individual companies and how these sales are priced. All the performance studies surveyed document significant improvements after companies are divested. Recent academic and professional research categorizes and evaluates various types of state owners; examines determinants of the level of state ownership; studies how state ownership impacts the valuation of corporate assets and examines the relative efficiency of state versus private ownership; and assesses how state ownership impacts corporate financial policies, especially capital investment. This research highlights that different types of state owners have very different impacts on corporate value and performance, and that state ownership generally has a significant, and mostly pernicious, impact on corporate investment and financial policies. The separate effect of state ownership on corporate valuation is less clear-cut. This survey also summarizes recent empirical research examining the relationship between state ownership of business assets and financial markets and institutions, and also surveys the literature examining political connections between politicians and corporate managers. Sovereign wealth fund research yields essentially benign findings, but almost all studies examining state-owned banking show that state ownership reduces banks’ efficiency. All the financial markets and institutions studies examined highlight the distortive effects and economic costs of bailouts and guarantees, and almost all the political connections studies find that these connections are privately beneficial but socially costly. Finally, the research surveyed here convinces the author that “state capitalism” is an essentially failed model.

JEL Classification: G32, G15, G38  
Keywords: Sovereign wealth funds, International financial markets, Government policy and regulation

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1. **INTRODUCTION AND OVERVIEW**

Half-way through the second decade of the twenty-first century, is State involvement increasing or decreasing in the business affairs of the world? At the start of this millennium, it appeared that an ongoing wave of privatizations and market-oriented reforms worldwide was steadily reducing the sway of government over business activity, and particularly the direct state ownership of business enterprises. Then the world appeared to change: the economic rise of a China dominated by state-owned enterprises, the seemingly inexorable rise in global oil prices fueled by national oil companies wholly-owned by non-democratic countries, and the re-emergence of autocratic states (Russia, Iran, Venezuela) rife with cronyism all seemed to point to a world heading towards State Capitalism, where governments sometimes owned but always promoted the interest of national champions in key industries, discouraged inward foreign direct investment, and restricted competition. So which view is correct? Is the state’s role in global business increasing or decreasing, and what does this portend for global welfare?

This article will provide an overview of economic and political developments relating to privatization, state capitalism, and state ownership of business, and will then survey the extensive recent research examining privatization and state ownership. As a general rule, I will not cite work produced earlier than 2005, since this literature has already been surveyed in Megginson and Netter (*JEL*, 2001); Gupta, Schiller, Ma, and Thompson (*JES*, 2001); Shirley and Walsh (WP, 2001); Djankov and Murrell (*JEL*, 2002); and Megginson (*OUP*, 2005), among others. Similarly, I will not generally re-cite articles discussed in survey articles on privatization in transition economies [Estrin, Hanousek, Kocenda, and Svejnar (*JEL*, 2009)]; state-ownership and privatization of banking worldwide [Megginson (*JBF*, 2005)]; the impact of privatization on global capital markets [Megginson (*ARFE*, 2010)]; the rise of sovereign wealth funds as international investors [Megginson and Fotak (*JES*, 2015); Gao, Fotak, and Megginson (*OUP*, 2016)]; the relative efficiency of state versus private provision of heath care services [Mühlkenkamp (WP, 2013)]; or the promises and perils of privatization in developing economies [Estrin and Pelletier (*ESP*, 2015)]. As the reader will doubtless note, this article is plenty long even without integrating already-surveyed articles into this summary paper.

Anyone attempting to write a survey article on a theme as broad as privatization and state ownership of business, even one concentrating on research generated over the past dozen years, must confront the challenge or organizing and presenting the mass of published research and working papers, and also put this research into the context of real economic developments. I will adopt a policy of categorizing the post-2004 research into three principal areas: (1) empirical privatization studies; (2) theoretical and empirical studies examining the level, type, and valuation impact of state ownership of business enterprises; and (3)
empirical research examining the impact of state ownership on financial markets and institutions, plus the private and public social welfare implications of political connections between politicians and business executives. As an organizing principle, I will summarize the objectives, sample/methodologies, and results of key empirical and theoretical studies in each section of this paper in the form of eleven tables spread throughout the three topical sections. Over 100 articles are summarized in these tables, and presenting this information in tabular form allows me to economize on textual discussions of each paper’s objectives and findings and concentrate instead on synthesizing the research in text discussions. The perceptive reader will soon note that many of these articles are presented in two different tables, since any particular article may analyze, say, both the determinants of why companies are selected for privatization and the effectiveness of privatization in improving company performance, or both the determinants of the level of state ownership in a particular country or industry and the valuation effect of that state ownership.

In order to place this research into real economic context, I will begin each section with a statistical overview. This will involve showing, as examples, how much privatization has actually occurred over the past dozen years and predicting where the policy is headed worldwide, as well as examining the current level of state ownership in various regions and industries and assessing how state-owned enterprises are valued relative to privatized and always-private companies.

1.1. Megatrends in Privatization and State Ownership Examined in This Survey

Viewed from a high level of abstraction, six major themes can be observed by anyone studying the evolution of privatization and state ownership of business in the early years of the 21st century. These themes will be addressed, directly or indirectly, in various sections of this survey, and are presented in bullet form below. Given these conflicting influences, it is difficult to compute whether the net level of state ownership and influence has truly increased or decreased during this millennium.

- **The rise of China as a global economic power and as a competing model of business ownership and organization.** In 2000, China’s GDP at market prices was $1.21 trillion, and represented only about 3.6% of world GDP; by 2015 these values had reached $11.06 trillion and 17.52%, respectively. Over this period, China became the world’s leading manufacturer, leading exporter, and by some measures (such as GDP measured at purchasing power parity), the world’s largest economy. Besides the sheer growth in economic weight, China’s reliance on and support for state-owned and/or state-influenced “national champions” in key industrial sectors has prompted many observers to conclude that the country is explicitly developing a model of “state capitalism” that directly challenges the hegemonic sway of the free market model of capitalism long promoted by the United States and its allies. Other nations, such as Brazil, India, Russia, and Singapore have also risen to global prominence with business sectors dominated or heavily influenced by government-controlled companies.
• Outside of China—and Russia--state ownership of business assets has increasingly taken the form of portfolio equity investment by governments and state-owned investment funds, rather than direct ownership/operation of state-owned enterprises. The historic use of state-owned enterprises as tools of government industrial policy has been well documented. What is far less appreciated is the high frequency with which governments have been buying equity in listed and unlisted private firms. Contrary to public perceptions and despite the worldwide success of state privatizations, over the 2001-2012 period governments actually acquired more assets through stock purchases ($1.52 trillion) than they sold through share issue privatizations and direct sales ($1.48 trillion).¹ Much of this state investment was channeled through sovereign wealth funds—which grew from less than $1 trillion in assets under management in 2000 to over $6 trillion AUM in early 2016—and the vast bulk of these stock purchases have been cross-border transactions. At the same time, another set of governments has continued actively privatizing SOEs and other state assets through public share offerings and direct asset sales. Figure 1 shows the annual value of state purchases of equity (nationalizations) and sales of assets and equity (privatizations) between 1988 and 2013. The world has thus been witnessing two powerful, simultaneous, and apparently contradictory economic phenomena over recent years: continuing sales of state-owned assets and enterprises to private investors by some governments, coupled with increasingly large purchases of private, often listed, corporate equity by other governments.

**** Insert Figure 1 about here ****

• The “middle innings” (2005-2014) of the early 21st century were transformed, financially and economically, by a massive rise in global oil prices that shifted power and wealth to (mostly) non-democratic petroleum exporting nations and their wholly state-owned national oil companies. The rise in oil prices from below $25 per barrel in 2004 to a high of $147/barrel in 2008 and an average of over $100/barrel for 2010-14, when multiplied by period-average global production of about 90 million barrels per day, enriched a set of countries with rentier economies dominated by state-owned enterprises, and gave these societies unprecedented sway over the world’s most important commodity. On the other hand, the collapse in oil prices that began in 3Q2014 and continues to the present day presages an even more dramatic likely shift in global economic power, and probably a surge in privatization of the formerly sacrosanct NOCs, beginning with Saudi Aramco in 2018.

¹ Reported in Megginson (2013, Figure 3), based on data from the Thomson Reuters SDC Platinum M&A database and Privatization Barometer (http://www.privatizationbarometer.net). During 2013, state asset sales (privatizations) reverted to the pre-2001 historical pattern, exceeding state purchases by more than $50 billion, and the relative dominance of privatization over state purchases of corporate equity has increased since then.
The Global Financial Crisis of 2008-10, and governments’ subsequent policy responses, reversed—at least temporarily—the long term trend towards lower state intervention in and ownership of business. The sudden collapse of Lehman Brothers in September 2008, following a slower but almost equally corrosive meltdown of the US subprime mortgage lending market, triggered a global financial and economic crisis unmatched since the Great Depression of the 1930s. In response, many governments took emergency action to rescue banks and other financial institutions, often partially nationalizing these in the process. Outside the United States, governments have been slow to unwind these ownership stakes, which has halted the long-term trend towards lower state ownership of business in many countries, particularly Europe. Rescues of American banks through capital infusions by the federal government put the United States in the odd position of being the world’s largest government buyer of corporate equity during 2008 and 2009, and subsequently the world’s largest privatizer during 2009, 2010, and 2012. In immediate response to the crisis, the world’s major central banks flooded markets with liquidity and sharply lowered interest rates, and later embarked on a series of increasingly unorthodox actions—particularly quantitative easing—designed to rekindle economic growth and avoid deflation. The financial distortions and record low interest rates engendered by these policies endure to the present day.

The economic and political unity of Europe increased significantly after the introduction of the euro in 1999 and the expansion of the European Union by ten member states in 2004, but Europe entered an extended period of instability and crisis after 2011. The introduction of the euro as the currency of most continental European countries went far more smoothly than predicted, and seemed to function synergistically for Eurozone member state for over a decade. Then financial crises in Spain, Portugal, Ireland and, especially Greece ushered in a seemingly endless round of “rescues” by the European Central Bank, the IMF, and member states—particularly Germany. The austerity measures imposed as a condition for these rescues, though perhaps necessary, have yielded low or negative economic growth and rising political tensions throughout much of Europe. The “Brexit” vote in June 2016 appeared to symbolize Europe’s disarray and increasing disunity.

Privatizations continued after 2000, and in some years even accelerated, but the pattern of global privatizations shifted from secondary-share public offerings in western Europe to a wide variety of divestment methods in emerging markets, especially China. European privatizations represented roughly half of the world’s total value of all divestments during the years 1988-2000, the “Golden Age ofPrivatization,” but the total value of European privatizations dropped sharply during 2001-03, and Europe’s share of global privatization proceeds has averaged less than 25% since 2009. Instead, emerging market countries such as Turkey, Brazil, Russia, India
and especially China took over as leading privatizers most years—with the United States leading the world in 2009, 2010, and 2012. Furthermore, China almost uniquely privatizes companies by allowing SOEs to raise capital by selling newly-issued primary shares to investors, thus diluting state ownership only indirectly by increasing total shares outstanding, rather than having the state sell its existing shareholdings directly to investors. This policy hugely increased the size and liquidity of China’s stock market, but also forced the government to shut down China’s IPO market during 2005-07 as it implemented a major split-share structure reform that allowed state-controlled investors to trade their heretofore non-tradable shareholdings for tradable shares. As a core global economic policy, privatization remains in robust health, with a record $240 billion being raised through privatization sales in 2012, and over $812 billion being raised between January 2012 and August 2015 [Meggison (PB, 2015)].

Unsurprisingly, the academic research examining privatization and state ownership has also evolved rapidly over the past dozen years, mirroring the momentous political, financial, and economic events described above. The number and quality of empirical studies examining Chinese state-owned enterprises and investments funds has increased dramatically; the perceptive reader will note that over a third of the studies cited in this survey employ Chinese data exclusively. New empirical methodologies have been adopted, allowing much better identification of economic, financial and policy event-dates and impacts. Two examples of this empirical innovativeness are the implementation of difference-in-difference estimation techniques and the search for quasi-natural experiments such as major policy changes or unexpected market valuation shocks. Many more researchers have examined how state ownership impacts corporate financial policies—such as capital investments, cash holdings, and the cost of capital—than in previous years, thus allowing for better estimation of the overall impact of government ownership of or influence on the financial management of target companies.

Entirely new avenues of research have also emerged since 2000. Soon after sovereign wealth funds rose to prominence as global investors in 2007-08, the first of a series of empirical studies appeared examining both the announcement-period stock market returns of target companies and the long-run impact of SWF investment on operating performance. Several empirical studies examining the impact of state ownership and privatization in that most important of global industries—petroleum exploration, production, and refining—were produced and published after oil prices began rising sharply in 2005. Perhaps most intriguingly, the new millennium has seen growing research interest in the importance of political connections between politicians and business executives in both state and privately-owned businesses. While it has long been known that political connections were valuable for the companies and politicians
involved, recent research has also documented the social welfare costs such connections might impose on the overall economy.

1.2. **Organization of the Survey**

This paper is organized as follows. First, I will survey the recent empirical privatization research in section 2, beginning with a summary of studies examining whether divestment improves the performance of newly privatized companies, but also encompassing related research assessing which companies will be privatized, as well as when, how, to whom, and at what price the state enterprises will be divested. Second, I will summarize the empirical and theoretical research examining the level, type, and valuation impact of state ownership in the world’s major economic regions in section 3. This summary will also assess research examining the relative efficiency of state versus private ownership, and the effect of state ownership on observed corporate financial policies, such as capital investment and cash holdings. This will be the longest and most amorphous body of literature surveyed. Third, I will summarize the empirical research examining the intersection of state ownership and finance in section 4. This will begin with the literature assessing the rise of sovereign wealth funds, then will survey research examining the efficiency of state owned banks—as well as the related issues of the effectiveness and welfare implications of state bailouts of failing banks and government loan and deposit guarantees—and will conclude by summarizing research questioning the private and public social welfare implications of political connections between politicians and business executives. Section 5 concludes.

2. **Empirical Research on Privatization of State Owned Enterprises**

According to *Privatization Barometer*, governments around the world have raised around $3.5 trillion since 1977 by selling state-owned enterprises to private investors and corporations [Megginson (*PB*, 2015)], with over $2.0 trillion of that being raised in the dozen years after 2004. As in the period before 2005, the privatization wave since that time has significantly impacted global capital markets, and truly altered the development path of important national economies, particularly China’s. The overall pattern of global privatization has, however, changed quite dramatically during the period 2005-2016 as compared to the pre-2005 era, with the most recent period reflecting an overall shift in divestments away from European government sales of utilities, telecoms, airlines, and energy companies and much more towards sales by emerging market country governments—and the United States—of stakes in national oil companies, manufacturers and, especially, banks. Whereas the $659.9 billion worth of privatizations executed by European governments during 1988-2004 represented 48.3% of the global total of $1,367.8 billion during that period, the $536.3 billion in EU privatization sales accounted for only 28.3% of the global privatization total over for January 2005-August 2015.
Table 1 presents the 76 largest privatization sales, those raising $5.0 billion or more, executed between January 2005 and August 2015, which collectively raised $712.7 billion, or about 40% of the overall 2005-2015 world total. Three distinct patterns can be observed in these data that differentiate privatizations of the past dozen years from those of the pre-2005 period, beginning with the most striking difference—that the United States accounted for the largest national fraction of the sales described in Table 1 and was second only to China in the broader sample of all privatizations during 2005-2015. As noted earlier, the United States was the world’s leading privatizing nation in 2009, 2010, and 2012. There are 17 privatizations by the US federal government detailed in Table 1, and these sales yielded $219.0 billion for the Treasury. Most of these were full or partial redemptions of the nearly $205 billion in newly issued non-voting, non-convertible preferred shares that the federal government purchased in 34 banks between October 2008 and January 2009 under the Troubled Asset Relief Program (TARP). Three massive TARP capital redemptions by U.S. banks yielded no less than $70.0 billion for the U.S. Treasury during December 2009 alone. These three large sales, coupled with several smaller TARP redemptions during 2H2009 and the $68 billion of redemptions in June, yielded total repayment proceeds of $140.1 billion for the U.S. Treasury within a year of the original TARP investments [Holland (2010)]. Besides these TARP repurchases, Table 1 also details six offerings of the insurer AIG that raised $50.3 billion—the highest total proceeds to the U.S. Treasury for selling any single company—during 2011 and 2012, and the November 2010 IPO of shares in General Motors, which raised $20.1 billion and was America’s largest ever IPO until Alibaba went public on the New York Stock Exchange in September 2014, raising $25.0 billion.

Bank redemptions of state-owned shares were not limited to the United States; European banks also redeemed $28.8 billion worth of preferred shares during 2009 that had been purchased by governments as part of rescue packages during 2008 and early 2009. In almost all cases, the banks funded their share repurchases through large seasoned equity offerings executed during the second or third quarters of 2009. The American banks sold shares through general cash offers—the standard method of selling seasoned equity in the United States—while almost all of the European banks executed large rights offerings targeted at their existing shareholders.

The second major trend gleaned from analyzing Table 1 is the inexorable rise of China as the world’s largest privatizer. The 16 large ($5.0 billion or more) Chinese sales, worth $147.8 billion, detailed in the table actually understate China’s true importance during the 2005-2015 period, since there were also over 1,000 smaller sales that raised the country’s overall privatization total for this period to $501.9 billion.

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2 Privatization proceeds totaled a record $265.17 billion worldwide during 2009, and bank repurchases of government holdings of preferred shares (mostly the US redemptions described above) accounted for $168.8 billion of this record—or almost two-thirds of the total.
Eight of the sixteen large Chinese privatizations were sales (mostly IPOs) of stakes in its gargantuan state-owned banks, and these alone raised $90.4 billion. The bulk of China’s privatization proceeds came from public and private-placement offerings of newly-issued (primary) shares by Chinese state-owned enterprises that reduced the state’s equity ownership stake only indirectly, by increasing the total number of shares outstanding.

The third trend revealed by analyzing Table 1 is the dramatic shift in global privatizations away from Europe and towards emerging markets (and the United States), especially the BRIC countries of Brazil, Russia, India and China, which collectively executed 25 large sales worth $243.1 billion. As described above, China accounted for the bulk of the BRIC privatizations, but Brazil (five sales worth $63.0 billion) and Russia (four deals worth $32.4 billion) together executed nine large sales worth $95.3 billion plus many smaller deals not represented in Table 1 which would bring their combined total proceeds close to $125 billion. India has long had “on again, off again” privatization program featuring relatively small stakes sales, and this accelerated somewhat after the Modi government came to power in 2011, but none of these divestments met the $5.0 billion cut-off for inclusion in Table 1.

Although many of the deals described in Table 1 are the large, secondary-market offerings of existing common equity shares sold by developed country governments through share issue privatizations, familiar from prior years, most of the largest deals on this list are fundamentally different from privatizations executed before 2005. First, the $27.50 billion Petrobras seasoned equity offering (SEO) in September 2010 was actually part of a $70.0 billion share offering transferring ownership of offshore oil deposits between Petrobras and the Brazilian government, which was both history’s largest ever stock offering and the largest corporate security offering of any kind. Second, the $22.1 billion initial public offering of Agricultural Bank of China in July was the largest IPO in world history to that time. As has been the case for over three decades, share issue privatizations have been the largest share offerings in almost all the world’s stock markets and have vastly increased the market capitalization and liquidity of global stock exchanges.

2.1. Recent (Since 2004) Research Examining Privatization’s Impact on Financial and Operating Performance of Divested Companies

Research on when, how, and why governments have chosen to privatize state-owned enterprises by selling all or part of companies to private investors—and the impact such privatizations have had on the operating and financial performance of divested companies—was voluminous even when the survey articles by Megginson and Netter (JEL, 2001), Gupta, Schiller, Ma, and Thompson (JES, 2001); Djankov and Murrell (JEL, 2002); and Megginson (OUP, 2005) were published in the early 2000s. This section will summarize the post-2004 empirical studies that test whether privatization improves the operating and financial performance of divested companies. Section 2.2 will survey studies examining when, where and
how governments decide to privatize individual companies and how these asset sales and share issue privatizations are priced.

Seventeen empirical studies have been produced or published since 2004 examining whether privatization improves the operating and financial performance of former SOEs, and the determinants of the cross-sectional variation in those outcomes. These studies are summarized in Table 2, using the tabulation format of Megginson and Netter (JEL, 2001), wherein citation details—author surnames, article name, journal, and date—of each study are listed in the first column, while a summary of each study’s objectives, sample, and methodology is presented in the second column and the study results/findings are described in the third column. Thirteen of the studies summarized in Table 2 examine a single country’s privatization experience; no fewer than eight of these study China, while two others examine India’s program and two evaluate the post-privatization performance of companies in the transition economies of Central and Eastern Europe. The remaining four studies examine banking privatizations (two studies), full or partial sales of stakes in national oil companies, and Vietnam’s recent “equitization” experience. All seventeen studies document significant performance improvements after companies are divested by share issue privatization (SIP), after control is transferred from state to private owners through asset sale or private share trades, or after government ownership is reduced through equitization (Vietnam) or by primary share offerings in which the government does not participate (China).

**** Insert Table 2 about here ****

2.1.1. Studies examining China’s privatization experience

Since no country has loomed larger on the global privatization stage recently than has the nominally communist People’s Republic of China, it is unsurprising that almost half of all empirical studies examining privatization’s effect on divested companies produced since 2004 examine Chinese firms. Three of these studies—Chen, Firth, Xin, and Xu (JFQA, 2008); Berkman, Cole, and Fu (EJF, 2012); and Gan, Guo, and Xu (WP, 2014)—examine transfers of controlling ownership stakes among state-controlled groups and/or between state-controlled and private owners. First, Chen, Firth, Xin, and Xu (JFQA, 2008) employ a sample of 156 transfers of controlling stakes in listed Chinese SOEs to test for differential performance effects when control is transferred from state to private ownership (62 cases) or from private to state entities (94 cases) over 1996-2000, and document a significant performance improvement after a transfer of ownership control, but only when the new owner is a non-state entity (for state to private transfers).

The second Chinese privatization study is Berkman, Cole, and Fu (EJF, 2012). These authors examine changes in market value and accounting returns around announcements of 631 large block-share transfers—those large enough to result in true transfers of control—over 1998-2002 among government agencies (“State Bureaucrats,” 83 transfers), market-oriented SOEs (“MOSOEs,” 308 transfers), and private investors (“Private Entities,” 238 transfers). They find that all large block-share transfers are associated with
significantly positive announcement period abnormal returns, but the excess returns are significantly higher for transfers from state owners to private owners (33.6%) than between state owners (20.9% and 26.6%), and the annual return on assets is over 300 bp higher over two years for state-to-private transfers than the reverse.

Third, Gan, Guo, and Xu (WP, 2014) take a different approach to test for privatization’s impact than do the previous two studies. These authors use results from a 2006 survey of 3000 Chinese SOEs privatized in over 100 cities to study how city governments choose among different privatization methods and whether differing methods yield different post-sale restructuring, performance, and ownership structures. They find that fiscal and political constraints determine city governments’ decisions; those which are fiscally stronger and which face less political opposition to labor shedding choose sales to insiders (MBOs), which transfer control rights most completely and achieve greatest performance improvements, while fiscally and politically weaker city governments choose divestment methods that do not fully transfer control and which yield less significant performance improvements and employment reductions.

Three Chinese empirical studies examine the efficiency-enhancing impact of China’s remarkable split share structure reform program adopted in 2005, and implemented over the next two years. This process involved converting the non-tradable state and legal-person shares in about 1,100 companies owned by government-controlled investors into fully tradable shares \textit{pari passu} with the already-tradable shares sold to private investors during a company’s IPO. The central government required that the non-tradable share (NTS) holders negotiate with the tradable share (TS) holders and reach an arms-length agreement wherein the tradable shareholders receive compensation—in the form of additional share allocations averaging about three new shares for every ten already owned—for converting the non-tradable shares, which averaged about 61% of total capitalization, into fully tradable ones.

Each of the three split share structure reform studies presented in Table 2 examines a different impact of this program on the post-reform performance of the companies involved, though all three document significantly improved risk-sharing and a consequent improvement in the stock price informativeness of the resulting single class of tradable shares.\(^3\) Li, Wang, Cheung, and Jiang (\textit{RFS}, 2011) test whether and how removal of market frictions associated with the tradable and non-tradable share structure is associated with efficiency gains, and document significant benefits from improved risk sharing after reform. They also find that the compensation ratio (paid by NTS holders to TS holders) is positively

\(^3\) There is a fourth study examining this reform, but it does not test whether consolidating NTS and TS classes improves firm performance after consolidation. Instead, Firth, Lin, and Zou (\textit{JFQA}, 2010) examine the determinants of the compensation levels offered to holders of tradable (listed) Chinese shares by state and legal-person shareholders. They find that state ownership increases the level of compensation offered, whereas mutual fund ownership reduces the compensation level, suggesting that state shareholders have political incentives to complete the share reform quickly rather than to maximize the size and value of their post-reform ownership shares.
associated with gains from risk sharing, the price impact, and the weak bargaining position of NTS holders—resulting from the government mandate to complete the split share reform quickly and through negotiation with tradable shareholders. The compensation ratio is negatively associated with subsequent firm performance.

Tan, Tian, Zhang, and Zhao (WP, 2014) exploit the quasi-natural experiment created by China’s split share structure reform to establish causality, and then examine how these secondary privatizations affect firms’ innovation, measured by R&D spending and patent filings. They find that the expectation of converting non-tradable, state-held shares into tradable shares has a positive causal effect on firm innovation, and show that better incentive alignment between controlling and minority shareholders, enhanced stock price informativeness, and improved risk sharing are all plausible mechanisms explaining why privatization improves performance.

Finally, Liao, Liu, and Wang (JFE, 2014) examine whether the split share structure reform process improves the operating performance and corporate governance of the firms involved, and find the expectation of privatization quickly boosts the listed SOEs’ output, profits, and employment, but does not change their operating efficiency or corporate governance. They also show that performance improvements strongly correlate with state actors’ incentives to increase shareholder value.

The remaining three empirical studies examining China’s privatization program presented in Table 2 cannot readily be grouped together, other than by the facts that each examines some aspect of China’s divestment program and all show that increasing private ownership is associated with superior performance. Fan, Wong, and Zhang (JFE, 2007) collect CEO and board of director data for 790 IPOs of Chinese SOEs on Shenzhen and Shanghai Stock Exchanges over 1993-2001, and use this dataset to test whether privatized firms with politically connected CEOs perform worse than companies without connected CEOs. They find that companies with politically connected CEOs underperform those without by almost 18%, based on 3-year post-IPO stock returns, and have poorer earnings growth, sales growth, and changes in return on sales.

Huang, Li, Ma, and Qian (WP, 2014) examine 4,734 companies that were 100% state owned after 1998 and were subsequently privatized; 1,214 of these were re-nationalized after an average of two years. They ask why these firms were re-nationalized and what effect this had on performance, and find that companies located in provinces with newly appointed communist party leaders not affiliated with one of the dominant CPC factions are most likely to be re-nationalized. This process leads to lower profitability and labor productivity, and while re-nationalization temporarily lowers unemployment in a province, it does not appear to have any long-run economic benefits.

Finally, Li, Megginson, Shen, and Sun (WP, 2016) use triple difference-in-difference (DDD) methodology to test whether Chinese share issue privatizations improve profitability post-sale, after accounting for negative effect of IPO listing. They document a negative listing effect, since the profitability
(measured as ROS and EBIT/Sales) of private companies declines significantly after IPO. After adjusting for this negative listing effect, the profitability of newly privatized companies increases significantly (by 2-3 percentage points). Capital spending and sales growth also improve significantly based on DDD tests.

2.1.2. Other Recent Studies of Privatization’s Impact on the Operating and Financial Performance of Divested Companies

The Chinese privatization experience is not the only one that has been studied by researchers since 2004. Two empirical studies employ data from India’s long-standing divestment program. First, Gupta (JF, 2005) tests whether partial privatizations (of less than 25% of stock) of 47 Indian SOEs over 1991-2002 can yield performance improvements comparable to those documented in other countries, and finds that even partial privatizations positively impact profitability, productivity, and investment of divested firms. Since government control is never threatened, these benefits must be due to stock market monitoring and incentive-based compensation of firm managers.

Second, Dinç and Gupta (JF, 2011) examine the influence of political and financial factors on the decision to privatize Indian SOEs over 1999-2003, specifically whether privatization is delayed in regions where the governing party faces strong competition from opposition parties. They also test whether privatization improves divested firm performance and find that privatization significantly improves profitability for the 49 of 259 federal SOEs that were divested, and that more initially profitable SOEs and those with a lower wage bill are divested first. However, the government delays privatizing firms in regions where opposition parties are stronger.

Two recent studies examine the success of the massive privatization programs undertaken by governments of the transition economies of Central and Eastern Europe after 1989. Brown, Earle, and Telegdy (JPE, 2006) estimate the effect of privatization on multifactor productivity using comprehensive panel data over 1992-2002 on initially state-owned manufacturing firms in Hungary, Romania, Russia, and Ukraine. They find a substantial positive effect of privatization in Romania, with a range of estimates from 15-50% (15%, using the preferred measure). Estimated effects are also positive for Hungary, from 8-28% (8%, using the preferred measure), and much lower but still significantly positive effects for Ukraine, in the 2-16% range (2%, using the preferred measure). The estimated effects for Russia, which relied almost entirely on voucher privatization, range from -5% to +14% (-3%, using the preferred measure). In Brown, Earle, Telegdy (WP, 2015), these same authors re-examine why the reported effects of privatization on firm performance—profitability, efficiency, and growth—in former Soviet-bloc countries varies so much using long-panel data for 71,470 companies and 645,848 firm-year observations from Lithuania, Russia, Ukraine, Hungary, and Romania. The average privatization effects they find are significantly positive, about 5-12%, but vary across countries and time periods. They find significant positive impacts for the fraction of a
company privatized, sales to foreigners, sales after 2000, sales for cash (rather than vouchers), for better quality firms, and in better macroeconomic and institutional environments.

While the efficiency and welfare aspects of state-owned banks will be evaluated in detail in section 3, discussion of two recent studies examining the privatization of state-owned banks is appropriate here. Berger, Clarke, Cull, Klapper, and Udell (*JBF*, 2005) jointly analyze the static, selection, and dynamic effects of domestic, foreign, and state ownership on bank performance using data on 180 Argentine banks (with 2290 firm year observations) privatized during the 1990s. They first document that state and local government ownership fell sharply over this period, while foreign ownership increased from 15.6% to 50.3% of total assets, and then show that state-owned banks (SOBs) exhibited poor long-term performance, especially those that were slated for privatization. In static analysis, the authors find that SOBs have poorer long-term average performance than domestically or foreign-owned private banks, and that SOBs have strikingly higher non-performing loan ratios, perhaps reflecting their differing goals. They also find that, even though the worst performing SOBs are selected for privatization (selection effect), these banks dramatically improve performance post-sale (dynamic effect), although most of the measured improvement is likely due to placing non-performing loans into residual entities, yielding “good” privatized banks. Mohsni and Otchere, (WP, 2013) study another effect that transitioning from state to private ownership might have on former state owned banks: whether risk-taking behavior changes for 242 banks privatized in 42 countries over 1998-2007. They show that bank risk-taking declines after privatization, but remains higher than that of their rivals, and that ownership changes, rather than industry-wide factors, lead privatized banks to become more prudent.

The remaining two empirical studies of privatization’s effectiveness presented in Table 2 examine, respectively, whether full or partial divestment of ownership stakes in national oil companies improves firm performance and whether Vietnam’s unusual method of privatization through “equitization” yields performance improvements comparable to those documented for most other countries. Wolf and Pollitt (WP, 2008) empirically examine the impact of privatization on firm performance in the global oil industry using a dataset of 60 share issue privatizations by 28 national oil companies over 1977-2006. Testing for operating, financial performance changes using the Megginson, Nash, and van Randenborgh (*JF* 1994) methodology, plus supplementary regression analyses, they find that privatization is associated with significant and comprehensive performance improvements over the 7-year period (-3 to +3 years) surrounding the initial privatization event. Profitability, measured as return on sales (ROS) increases 3.6 percentage points, while real output (sales) and capital spending increase by 30% and 47%, respectively, and employment intensity declines by 35%. Intriguingly, the authors also find that most performance improvements are realized before (in anticipation of) privatization and level off after sale, and conclude that improvements can be achieved even without governments ceding control.
Finally, and most recently, O’Toole, Morgenroth, and Ha (JCF, 2016) test for differences in investment efficiency of SOEs and private firms in Vietnam—and examine whether privatizing SOEs causes efficiency to change—using a database of 23,120 observations of private firms (15,990 obs) and SOEs (7,130 obs) over 2001-2012. They find that fully privatized firms and former SOEs that have been privatized and equitized with minority residual state shareholdings show positive links between Tobin’s Q and investment. This effect is even stronger for privatized companies than for always-private firms, leading the authors to conclude that privatization and equitisation have improved capital allocation and increased economic efficiency in the Vietnamese economy.

2.2. Recent Studies Examining Non-Performance Aspects of Privatization—Determinants of Timing of Divestment, Fraction Sold, and Offer Pricing

While the bulk of privatization empirical studies produced since 2004 examine whether divestment is associated with performance improvements for divested firms, several researchers study other aspects of the privatization decision. This section summarizes five such studies. Three examine the “whether, which, and when” questions governments must ask before initiating a privatization program and selecting specific companies for divestment, while two studies test whether restructuring of a company prior to privatization impacts the sale price received by divesting governments. Table 3 summarizes these five studies.

**** Insert Table 3 about here ****

We begin with two papers examining whether and how political calculations impact the privatization decision. Dinç and Gupta (JF, 2011) assess the influence of political and financial factors on the decision to privatize Indian SOEs over 1999-2003, specifically asking whether privatization is delayed in regions where the governing party faces strong competition from opposition parties. They show that the government of the day delays privatizing firms in regions where opposition parties are stronger, and no firm located in the home state of a sitting minister is ever privatized. Belloc, Nicita, and Sepe (JCE, 2014) investigate political determinants of liberalization and privatization policies in six network industries in 30 OECD countries over 1975-2007, and specifically ask whether left- or right wing governments favor liberalization over privatization, or vice versa. Using a dataset with 4,774 firm-year observations, they find that both right-wing (RW) and left-wing (LW) governments implement liberalization and privatization during the neo-liberal era under study, though the privatization rate is higher than the liberalization rate under RW governments, and vice versa under LW. These two studies highlight that privatization is controversial almost everywhere and that political opposition can slow or even halt the policy’s adoption.

Subramanian and Megginson (WP, 2011) ask and answer a somewhat different question: whether stringent employment protection laws (EPLs) hinder privatization. Using privatization data from 14 EU countries and within-country variation in EPLs, and employing fixed-effects panel-data regression and triple difference-in-difference estimation techniques at the country, year level, these authors find that
stringent EPLs significantly deter privatization, and do so proportionately more in industries with high employee separation rates and proportionately less in industries with high employee hiring rates. Using US-level measures as instruments, they find that EPLs inhibit privatization disproportionately more in less productive industries.

Finally, two studies examine whether pre-divestment restructuring of companies slated for privatization impacts the net price received upon sale. Chong, Guillen, and López-de-Silanes (JPubEc, 2011) use a new database, constructed by randomly selecting 400 companies privatized globally over 1982-2002, to analyze labor retrenchment programs before privatization—and study their effects on prices paid and rehiring pursued by new private owners. They find evidence of skimming and adverse selection, where the most productive workers (those with the best outside opportunities) take the severance package offered under voluntary retrenchment programs, leaving firms saddled with the least productive workers. Some downsizing programs may lead to a higher frequency of post-privatization re-hiring, and only skill-biased retrenchment programs are associated with (marginally) higher net privatization prices and minimal re-hiring, but these also have the highest political and social costs. Santos (WP, 2016) studies the impact of restructuring policies before sale, and the resulting ownership structure after sale, on privatization prices using a new dataset of companies privatized in Brazil over 1991-2004, covering 118 transactions. After controlling for endogeneity, he finds that replacing the CEO is associated with higher net prices, but efficiency measures such as voluntary downsizing do not. Other pre-sale restructuring, such as debt absorption or mandatory downsizing, actually reduce net prices.

3. **EMPIRICAL RESEARCH ON STATE CAPITALISM AND STATE OWNERSHIP OF BUSINESS ASSETS**

From the early 1980s through the first years of the 21st century, there was an unambiguous global trend towards reducing government ownership of business enterprise and converting state-owned enterprises into (at least partly) privately owned and controlled businesses. Though prompted by the perceived success of Margaret Thatcher’s UK government at privatizing a heretofore quite state-dominated economy, the most powerful impetus towards private ownership was the collapse of the Soviet Union and the resulting imperative to rapidly transition the economies of Central and Eastern Europe towards democracy and capitalism. Even China adopted a massive privatization and restructuring program aimed at reducing overall levels of state ownership in the economy, while solidifying government (and Party) control over the very largest SOEs. The triumphalist mood of market oriented policy-makers during the 1990s and early 2000s was encapsulated in the “Washington Consensus” pushed by western governments and multinational financial institutions on developing countries around the world, and was reflected in the academic and research literature of the period—particularly Shleifer (JEP, 1998), Shirley and Walsh (WP,
It is very hard to determine whether the trend towards declining state ownership of business assets and global relevance of SOEs has continued, halted, or reversed since the early 2000s. As discussed in section 2 above, privatization programs continued more or less around the world after 2004, and in some regions and some time periods even seemed to accelerate. Additionally, most western governments and multi-national financial institutions remained broadly committed to a market-oriented economic policy agenda, both at home and in the foreign policy sphere. Finally, even in regions—most particularly Latin America--where the political tides shifted strongly leftwards over much of the past dozen years, few governments actually re-nationalized the former SOEs that had been privatized during the 1990s and early 2000s.

And yet, a strong case can be made that the past dozen years has witnessed both a resurgence of state ownership and the rise to prominence of an ideology widely, if somewhat incongruously, termed “State Capitalism.” This policy emphasizes that governments can and should retain control over vital national economic assets and promote the development of national champions in various globally competitive industries, and invest some or most of the national savings through state-owned vehicles. In my opinion, there are five pillars undergirding the “rise of state capitalism” hypothesis, as discussed in turn below.

Probably the most important political and economic event of the past dozen years—and the one promoting state capitalism most forcefully--has been the rise of China to become the world’s second largest (by some measures, the largest) economy, leading manufacturer and exporter, and largest net financial creditor. Though the overall level of state ownership in China has been declining almost monotonically for four decades, the largest companies—even entire industrial sectors [see Milhaupt and Zheng (GLR, 2016)]—remain state controlled, and the sheer scale of China’s economic growth has raised the global profile and attraction of the state capitalist model.

The second factor suggesting that state ownership was again on the march in the early 21st century was the emergence of a high oil-price regime that began in 2005 and lasted through 3Q2014. This price structure massively enriched and empowered the petroleum-exporting nations and financed their new sovereign investment funds. Most of the large national oil companies which produce and export petroleum are 100% state owned, usually by non-democratic governments committed to preserving state economic control at home and abroad. Many oil-producing countries tightened state control over their petroleum reserves and producing assets, and at least two formerly democratic oil exporting countries, Russia and Venezuela, also embraced nationalistic and/or statist policies overtly hostile to liberal western ideology. The surpluses generated by $100+ oil massively expanded the financial resources of existing and newly formed sovereign wealth funds (SWFs) to the point where the funds now have roughly $7 trillion of assets
under managements, most of which is invested outside of their home markets. Figure 2 details the growth of SWF assets from 3Q2004 through 4Q2015.

**** Insert Figure 2 about here ****

The third factor promoting recent growth in state ownership was the onset of the Global Financial Crisis and the government-focused policy responses adopted by most nations to rescue imperiled banks and soften the economic blow on citizens. Even the United States government employed state ownership and fiscal stimulus to a degree not seen since World War II. Much of this reversed quickly, but in many other countries—particularly in the EU—state ownership remains much higher in key industries than before the Crisis, and the state’s role (particularly that of the central bank) has fundamentally expanded.

Fourth, the militarization of western, particularly American, foreign policy after the 9-11 attacks ushered in a new era of global conflict, focused on ethnic and religious strife but also with a major economic component. Much of this conflict took place in the oil-rich Middle East, and so its effects reverberated globally. The West’s promotion of democratic politics and market-oriented economic policies globally gave way to a search for reliable military/political allies, and the meager success of American military efforts partly discredited its economic and political philosophy in the eyes of many national elites.

Fifth, the demonstration effect of successful countries operating with large dollops of state ownership and direction encouraged the view that a path to development was open to countries that did not involve wholesale adoption of market-oriented policies. The largest such country was China, but the most successful has doubtless been Singapore [Cheng-Han, Puchniak, and Varottil (WP, 2015)], which seemingly found a way to combine state ownership and direction with clean government and open trade and investment policies.

Overall, it is probable that the absolute level of state ownership of business assets worldwide has increased over the last dozen years. Stated differently, the five factors promoting state ownership discussed above likely more than offset the ongoing trends favoring greater reliance on private ownership. Nonetheless, this author believes that the trend towards state capitalism is turning again and that the immediate future will see a resurgence of privatization and greater adoption of market oriented economic policies. No more potent symbol of this emerging trend is the widely anticipated partial privatization of Saudi Aramco, and the probably knock-on effect this will have promoting the partial privatization of many other national oil companies.

We turn now to a survey of the academic and professional literature examining various aspects of state ownership and the economic role of state-owned enterprises. As before, I will focus almost exclusively on research produced since 2004, and will emphasize empirical analyses, though particularly relevant theoretical articles will also be surveyed. I begin by summarizing the research categorizing and evaluating various types of state owners, then progress to evaluating research examining determinants of the level of
(newly created and residual) state ownership of business assets and equity. The subsequent two sections will be the longest and most important of this part of the paper—in which I summarize the literature studying how state ownership impacts the valuation of corporate assets and studies examining the relative efficiency of state versus private ownership. The final two sections survey the rapidly growing literature assessing how state ownership impacts corporate capital investments and financial policies such as cash holdings, the cost of debt and equity capital, and security issuance.

3.1. Recent Research Examining Types of State Ownership

An important innovation in the economic literature has been the recognition that there is more than one type of “state owner”, and that the various categories of government investors can have very different valuation, control, and governance effects. This section discusses seven papers produced since 2004 that differentiate between different types of state owners and assess how these differences impact portfolio companies. These studies are summarized in Table 4. Unsurprisingly, three of the seven studies examine China, and these are discussed first.

**** Insert Table 4 about here ****

Chen, Firth, Xin, and Xu (JBF, 2009) trace the identities of large bloc shareholders in listed Chinese companies over 1999-2004, and examine whether there are significant efficiency differences between those controlled by state asset management bureaus (SAMBS), SOEs controlled by the central government (SOECGs), SOEs controlled by local governments (SOELGs), and private investors. The sample they create has 6,113 firm-year observations, and private investor controlled firms represent 20.3% of these firm-year observations. The overall median largest blocholding is 42.6%. The authors find that the operating efficiency of Chinese listed companies varies across types of controlling shareholders, with SOECG controlled firms being the most efficient, private investor-controlled firms the least efficient, and SOELC controlled firms falling in the middle.

Berkman, Cole, and Fu (EJF, 2012) arrive at a very different conclusion when they examine changes in market value and accounting returns around announcements of 631 large block-share transfers over 1998-2002 among government agencies (“State Bureaucrats,” 83 transfers), market-oriented SOEs (“MOSOEs,” 308 transfers), and private investors (“Private Entities,” 238 transfers). They find that all large block-share transfers are associated with significantly positive announcement period abnormal returns, but the excess returns are significantly higher for transfers from state owners to private owners (33.6%) than between state owners (20.9% and 26.6%), and the annual return on assets is over 300 bp higher over two years for state-to-private transfers than the reverse. Like Chen et al (2009), these authors find that China’s central government is a much better steward of corporate assets than are regional and city governments but, unlike them, Berkman et al (2012) find that private ownership is more effective than any type of state ownership.
The third Chinese study, Jiang, Lee, and Yue (JFE, 2010), examines different types of state ownership, though this was not the main focus of their paper. Instead they principally investigate a particularly brazen form of corporate abuse, in which controlling shareholders of listed Chinese companies use intercorporate loans to siphon off billions of RMB during 1996-2006. Their sample includes 1,377 public companies listed on the two major exchanges (SZSE and SHSE) during 1994-2004, with 7,557 firm-year observations, and they show that tunneling was significantly worse for companies controlled by regional and local governments than the national government. The practice only ceased when eight government ministries issued a joint declaration mandating the process end and the loans be repaid. Among SOEs, the problem was significantly worse for companies controlled by regional and local governments than the national government.

In addition to studies employing Chinese data, two papers examine the differential impact various types of state-owned investors have on target companies when their equity stake acquisitions are announced. Karolyi and Liao (WP, 2011) test whether state-controlled acquirers, sovereign wealth funds (SWFs) and other funds select targets in different industries or with different firms’ characteristics than do private acquirers. They study 4,026 cross-border acquisitions over 1998-2008, worth $434 billion, that were led by government-controlled acquirers, and compare these to 127,786 similar acquisitions worth $9.04 trillion made by private acquirers and 733 deals worth $158 billion made by SWFs and other state-owned funds. The authors find surprisingly small, though often significant, differences between state-controlled acquirers’ and private acquirers’ investment patterns and preferences, but find somewhat larger differences with SWFs and other state funds. SWFs/other state funds pursue larger targets with higher growth options, and are more deterred by high insider or institutional share ownership.

Second, Holland (WP, 2016) examines shareholder wealth effects associated with different types of government investors and varying levels of political interference using a sample of 2,118 government equity investments in 71 countries involving 2,118 transactions in 1,670 target firms over 1987-2013. The investor groupings are: political group (national governments, treasuries, industrial and finance ministries, central bank, regulatory boards), local governments (regional, city, municipal), and national funds. She finds government investors are not viewed by the market as a homogeneous group. Instead, market investors differentiate their expectations of government investment targets based on the government investor’s implied level of political interference. Those most likely to have political motivations have negative value effects on target firms, while other government investors have positive effects, similar in size to other, non-government investors.

The remaining two studies detailed in Table 3 examine pension fund investors and industrial partners operating airports, respectively. Giannetti and Laeven (RFS, 2009) examine whether and how pension reform in Sweden improved corporate monitoring by the large state and private pension funds that
the reform created. They find that listed firm valuations improve if public and large independent private pension funds increase their shareholdings, and that only pension funds large enough to acquire significant blocs and independent from industrial groups and financial institutions appear able to enhance firm valuations.

Finally, Oum, Adler, and Yu (JATM, 2006) measure and compare the productive efficiency and profitability among airports owned and operated by (1) government departments; (2) 100% government owned corporations; (3) independent airport authorities; (4) mixed enterprises with government majority ownership and (5) mixed enterprises with private majority private ownership using a dataset of major North American, European, Asia-Pacific airports over 2000-2001. They find (1) strong evidence that airports with majority government ownership and those with multi-level government ownership are significantly less efficient than those with private majority ownership; (2) “private” airports achieve significantly higher operating profits than all others, while government and mixed-ownership airports the worst; (3) private airports achieve much higher proportion of revenues (56%) from non-airport services; and (4) conclude that public-private partnerships (PPP) should be avoided.

### 3.2. Recent Research Studying Determinants of the Level of State Ownership

Seven articles produced since 2004 examine empirically the factors influencing the level of residual and newly-created state ownership in privatized or always private companies. These studies are summarized in Table 5. For once, none of these studies focus on China, and six of seven are multi-country analyses, so these are surveyed first.

**** Insert Table 5 about here ****

Boubakri, Cosset, and Guedhami (JFE, 2005) use a sample of 209 privatized firms from 39 countries—25 emerging markets and 14 developed countries—over 1980-2001 to examine how ownership and control evolve over time after initial divestment. They specifically investigate whether private ownership increases after the initial sale and which investor groups increase their share ownership fractions, and document that governments relinquish control over time to the benefit of local institutions, individuals, and foreign investors, and that private ownership tends to concentrate over time. Firm size, growth, industry affiliation, privatization method, and institutional development level and investor protection explain the differences in ownership concentration. In a later study, these authors plus one examine the political determinants of residual state ownership for 221 privatized companies in 27 emerging markets over 1980-2001. Boubakri, Cosset, Guedhami, and Saffar (JCF, 2011) investigate residual state ownership using (1) direct share ownership; (2) ultimate ownership, such as through pyramids; (3) golden shares; and (4) political connections. They find that political factors—especially the political system (parliamentary versus presidential) and degree of political constraints on the executive—significantly influence residual ownership, which is higher in parliamentary than in presidential systems and where the president is more
constrained. On average, governments retain 33.5% stakes in privatized companies, with the retained ownership much higher following share issue privatizations than following asset sales. Unlike in OECD countries, they find there is no significant difference in how much ownership left and right wing governments retain in emerging market countries.

Bortolotti and Faccio (RFS, 2009) study changes in government control of privatized firms in the OECD during the 1990s and ask whether privatization is really as complete as it appeared after the largest wave of privatizations in history. They show that governments retain control of 62.4% of “privatized” companies at year-end 2000, and find more prevalent government influence in countries with proportional electoral rules and centralized political authority. In civil law countries, governments tend to retain large holdings; in common law countries governments tend to use golden shares. Avsar, Karayalcin, and Ulubasoglu (WP, 2011) also examine the political determinants of state ownership. Using cross-country data from 1978-1991, they examine whether left wing governments are more likely to establish or expand SOEs than are center or right-wing governments, and whether left wing governments are associated with greater redistribution through SOEs in more unequal societies. As expected, they find that left wing governments are much more likely to establish or expand SOEs than are center or right-wing governments. Left-wing governments are also associated with greater redistribution through SOEs in more unequal societies, but this becomes much harder to achieve in societies with high levels of inequality.

Borisova, Brockman, Salas, and Zagorchev (JBF, 2012) test whether the general increase in state ownership of European public companies precipitated by the global financial crisis that began in 2008 has led to increasing or decreasing quality of corporate governance in the targeted firms. Drawing on a sample of 372 companies in 14 EU countries over 2003-08 and, using the RiskMetrics Corporate Governance Quotient (CGQ) and its six sub-components as measures of governance quality, they find that increased state equity ownership is associated with significantly lower governance quality in targeted firms. They also show that while government intervention is negatively related to governance quality in civil law countries, it is positively related in common law countries, and document that the preferential voting rights of golden shares are especially damaging to governance quality.

The most recent multi-national study of the determinants of state ownership is Carney and Child (JFE, 2013), who investigate changes to the ownership and control of East Asia’s largest companies in 1996 and 2008. They use data for 1,386 publicly traded companies at the end of 2008, supplemented with existing data on 1606 companies at the end of 1996 to test whether family ownership and control is still dominant in Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. They find that family control remains the most common form of ownership, though clear changes have occurred for nearly all countries, with the State generally increasing its ownership in both domestic and
foreign companies—especially in Hong Kong, Malaysia, and Thailand. Widely held ownership has also
gained market share in many countries.

Finally, Chernykh (JFE, 2008) studies who actually owns and controls Russian publicly traded
companies in 2000-02, most of which were “privatized” during the 1990s. She finds that most listed Russian
companies are in fact controlled either by the state or by anonymous private owners, and that both groups
exercise control through extensive use of pyramids. Though holders are anonymous, most market
participants in fact know their identities.

3.3. Recent Research Examining State versus Private Ownership: Valuation and Efficiency

Political theorists, economists, and policy-makers have been debating the relative merits of state
versus private ownership since the dawn of the industrial age, and no final resolution of this ideological
struggle is in sight. What academic researchers can contribute to this debate, however, are rigorous and
objective analyses of the valuation, economic efficiency, and distributional implications of state versus
private ownership. The two sections below summarize academic and professional research produced since
2004 that examines, first, the impact of state ownership on the valuation of corporate assets and equity and,
second, on the relative efficiency of state versus private ownership. Given the centrality of these two topics
to the wider ideological debate on state versus private ownership of business, it is unsurprising that more
research has been generated on these two topics than on any other covered in this survey.

3.3.1. Recent Research on the Impact of State Ownership on Corporate Valuation

Table 6 summarizes fifteen studies—fourteen empirical analyses and one descriptive paper—that
researchers have produced since 2004 examining how state ownership of a company’s equity impacts that
company’s market value. Six of these studies use Chinese data only, six employ multi-national data (though
two of these are regional—the European Union and East Asia), two focus on Singapore and one previously
discussed paper examines Sweden’s experience with pension reform. Eight of the thirteen empirical studies
employ Tobin’s Q or market-to-book ratio as their principal measures of market value, while three papers
use event study methodology to examine how investors react to announcement of an ownership related
corporate event. The remaining three empirical studies use, respectively, a measure of stock price
synchronicity (co-movement with the market index), an index measure of corporate governance quality
(RiskMetrics Corporate Governance Quotient), and interest rate spreads above treasury yields for corporate
bonds to test the valuation impact of state ownership.

**** Insert Table 6 about here ****

I will organize discussion of these papers below by describing the studies employing multi-national
data first, and will then discuss the six Chinese studies and finally the other single-country studies in turn.
In the course of describing each paper, I will clearly state whether that paper’s results suggest that state
ownership is significantly positively, significantly negatively, or not significantly related to the valuation
measure employed. The perceptive reader will note that this exercise ends in something of a draw: six of the empirical studies find state ownership positively related to firm value; six find state ownership negatively related to valuation; one finds state ownership negatively related to value in one period, but positively related in a subsequent period; and one finds state ownership to be insignificant.

As it happens, the first multi-national empirical study is also the only one finding no significant relationship between state ownership and valuation. Caprio, Laeven, and Levine (JFI, 2007) assess the impact of the ownership structure of banks and shareholder protection laws on valuations, while controlling for differences in financial regulations, using a database on ownership structure, valuation, and country and bank-specific data for 244 publicly listed banks in 44 countries in 2001, accounting for 83% of total banking system assets in those countries. Except in a few countries with very strong shareholder protection laws, banks are not widely held, but are instead controlled by families or the State. They also find that larger cash-flow rights by the controlling owner boost valuations, measured by Tobin’s Q and market-to-book ratio, as do stronger shareholder protection laws, while the separate effect of state ownership on valuation is negative but insignificant.

The second multi-national study, Karolyi and Liao (WP, 2011), was discussed in another context in section 3.1 above. It is included here, as a test of state versus private valuations, because the authors examine whether state-controlled acquirers and SWFs/other funds impact target firm valuations differently than do private acquirers. They study 4,026 cross-border acquisitions over 1998-2008, worth $434 billion, that were led by government-controlled acquirers, and compare the announcement period valuation impact of these to 127,786 similar acquisitions worth $9.04 trillion made by private acquirers and 733 deals worth $158 billion made by sovereign wealth funds (SWFs) and other state-owned funds. They find that private acquirers are associated with more positive announcement period abnormal returns than are state-owned acquirers, though the differences are surprisingly small, and private acquisition announcements are viewed much more positively than those by SWFs and other state funds. Chalk up a win for private ownership.

Borisova, Brockman, Salas, and Zagorchev (JBF, 2012), also discussed previously, examine whether the general increase in state ownership of European public companies precipitated by the global financial crisis that began in 2008 has led to increasing or decreasing quality of corporate governance in the targeted firms. They draw on a sample of 372 companies in 14 EU countries over 2003-08 and use the RiskMetrics Corporate Governance Quotient (CGQ) and its six sub-components as measures of governance quality. They find that increased state equity ownership is associated with significantly lower governance quality in targeted firms, and that while government intervention is negatively related to governance quality in civil law countries, it is positively related in common law countries. They also show that the preferential voting rights of golden shares are especially damaging to governance quality. Chalk up another win for private ownership.
Boubakri, El Ghoul, Guedhami, and Megginson (WP, 2015) is the first study showing that state ownership can be value-enhancing. These authors use the Carney and Child (JFE, 2013) dataset to identify ultimate controlling shareholdings, as well as ultimate cash flow (ownership) and voting (control) rights for 956 publicly traded companies (5,301 firm-year observations) in nine East Asian countries, and investigate the effects of governments as controlling shareholders on market valuations. They find strong, robust evidence that government-controlled firms (GCFs) exhibit higher market valuations than non-GCFs, and document that the benefits of control extend to closely held firms where the government is the second largest shareholder. These effects hold both before and during the global financial crisis, and the quality of a country’s institutional environment influences the effect on valuation.

The next multi-national study has also been discussed previously in another context. Holland (WP, 2016) employs standard event-study methods to examine shareholder wealth effects associated with different types of government investors and varying levels of political interference using a sample of government equity investments in 71 countries involving 2,118 transactions in 1,670 target firms over 1987-2013. She finds that market investors have different valuation responses based on the government investor’s implied level of political interference. Those most likely to have political motivations have negative value effects on target firms, while other government investors have positive effects, similar in size to other non-government investors. The negative effects are stronger for investments in domestic firms, in more regulated industries, by left-wing governments, and for large share purchases; the post-acquisition stock performance is also weaker for these targets. On balance, this must be considered a win for private ownership, or at least a win for “commercially oriented” versus “politically motivated” investments.

The final multi-national study is the one with mixed results, varying by time period. Borisova, Fotak, Holland, and Megginson (JFE, 2015) use a sample of 6,671 credit spreads from 1,723 bonds issued by 244 firms from 43 countries over 1991-2010 to examine the impact that state ownership (including 1,060 firm-years with SWF investment) of a firm’s stock has on that company’s cost of debt, as measured by the yield spread above treasuries. The authors examine bond prices for the entire 1990-2010 sample period, as well as before (1990-2007) and during and after (2008-10) the Global Financial Crisis. In the full 1990-2010 sample, they find that state ownership (0/1) is associated with significantly higher (40 bp) cost of debt, and this is even larger during pre-crisis period, 1990-2007. From 2008 on, the basic cost of debt rises sharply, and state ownership becomes associated with a significantly lower (18 bp) cost of corporate debt. Since we are scoring, let’s say this study shows state ownership reduces corporate value (yields a higher cost of debt) during normal times, but the implicit guarantee implied by state ownership enhances value (reduces the cost of debt) during crises.

We now turn to the six empirical studies examining whether state ownership of corporate equity enhances or reduces the market valuations of Chinese companies. To foreshadow and summarize these
studies, three show a positive relationship between state ownership and corporate value, while three find
the opposite. First, Wei, Xie, and Zhang (JFQA, 2005) investigate the relation between ownership structure
and firm value across a sample of 5,284 firm-years of China’s partially privatized non-financial SOEs from
1991-2001. They use Tobin’s Q as a valuation metric and test for the endogeneity of ownership. The authors
find that state and institutional shareholdings are significantly negatively related to Tobin’s Q, and that
significant convex relations exist between Q and state shares, as well as between Q and institutional shares.
They also find foreign ownership is significantly positively related to Q, and that Q and state/foreign
ownership are not jointly determined. This is a win for private ownership.

Lin and Su (JCF, 2008) will count as another win for private ownership. These authors investigate
the relationship between industrial diversification, state versus private ownership, and firm valuation for
816 listed Chinese companies during 2000-2002. They also test whether the effect of diversification on firm
value is related to ownership structure—including state ownership—and find that state and legal ownership
is negatively related to firm value for most groupings. State-controlled multi-segment firms have
significantly lower Tobin’s Q than do multi-segment private firms, and government controlled diversified
companies are significantly less valuable than non-government controlled diversified firms. While
diversification is positively related to value for all listed Chinese companies, diversification’s benefits are
much reduced for state controlled firms where the political costs of tunneling and expropriation may be
especially high.

The previously cited Chen, Firth, and Xu (JBF, 2009) study will be the first showing that at least
one type of Chinese state ownership (central government controlled SOEs) is associated with enhanced
corporate valuations. They trace the identities of large bloc shareholders in listed Chinese companies over
1999-2004 and examine whether there are significant efficiency differences between those controlled by
state asset management bureaus (SAMBs), SOEs controlled by the central government (SOECGs), SOEs
controlled by local governments (SOELGs), and private investors. They show that SOECG controlled
firms are the most efficient; private investor-controlled firms are the least efficient; and SOELC controlled
firms are in the middle. The authors predicted that privately owned firms would not necessarily be most
efficient, since different types of Chinese owners will have different objectives and motivations.

The fourth Chinese study also provides strong event-study based evidence that investors consider
state ownership value enhancing, at least in China. Calomiris, Fisman, and Wang (JFE, 2010) examine the
market reaction to two unexpected announcements relating to the sale of government-owned shares in
China. One announcement, in July 2001, surprised investors by implying the government was planning to
allow heretofore non-tradable shares to be sold, while the second announcement in June 2002 revoked this
policy. Their sample consists of 107 B-share firms listed on SHSE and SZSE, and they are able to abstract
from possible liquidity effects by examining market reactions to B shares, which are separate from the A
shares involved in the announcement. The authors find a negative effect of government ownership on returns at the July 2001 announcement date (indicating investor displeasure at reduced government ownership) and a symmetric positive effect from the policy’s cancellation eleven months later, suggesting that the benefits of political ties outweigh the efficiency costs of government shareholdings in the absence of a Chinese political transition to accompany economic reforms. Companies managed by former government officials have positive abnormal returns, suggesting that personal ties can substitute for state share ownership as a source of connections.

Chinese study number five can be considered at least something of a win for private ownership, though the valuation implications of the synchronicity measure employed by Gul, Kim, and Qiu (JFE, 2010) are not unambiguous. These authors investigate the effects of largest shareholder ownership concentration, foreign (and state) ownership, and audit quality on the amount of firm-specific information incorporated into stock prices, measured as stock price synchronicity, of Chinese listed companies over 1996-2003. Synchronicity is defined as the ratio of common (joint with other companies) return variation to total return variation, which is equivalent to $R^2$ of the market model used. Gul, et al (2010) find that synchronicity is a concave function of ownership by the largest shareholder with its maximum at about 50%, and find that synchronicity is higher when the largest shareholder is government related. This means that share prices of state controlled firms contain less firm-specific information than do shares of companies controlled by private investors.

The final Chinese study counts as a win for state ownership. Liao and Young (EMR, 2012) employ a panel dataset of 2,775 firm year observations of 514 listed companies over 1999-2004 to investigate the determinants of residual government ownership and the impact this has on post-privatization performance of Chinese companies. Contrary to the “political interference hypothesis,” the authors find that residual state shareholdings have a significantly positive impact on Tobin’s Q, and show that when risk of expropriation is high, government shareholdings can add value to firms by signaling the State’s commitment to privatization. They also find that government shareholdings are more likely to be present in small firms, while large companies are more likely to have politically connected CEOs on their boards.

Through our first two sets of papers—the six employing multi-national studies and the six Chinese studies—the tally of studies showing a negative valuation effect of government ownership on corporate valuations stands at six, four studies show a positive valuation effect of state ownership, one shows positive one period/negative the other, and one study shows an insignificant relationship. As we will see, the final two, single-country empirical studies both show a positive relationship between government ownership and firm value, and the one non-empirical study cited describes Singapore’s unique historical and corporate governance history and discusses how state ownership has contributed positively to Singapore’s evolution into the world’s most economically free and non-corrupt economy.
The Giannetti and Laeven (RFS, 2009) study was discussed in another context in section 3.1. It is included here because they find that listed firm valuations in Sweden improve if public and large independent private pension funds increase their shareholdings. Public pension funds are especially likely to be named to firms’ key nominating committees, and thus to influence the choice of directors, and only pension funds large enough to acquire significant blocs and independent from industrial groups and financial institutions appear able to enhance firm valuation.

The final two studies to be discussed examine the Singaporean model of state ownership of business, which also features government refraining from managing or directly controlling portfolio companies. First, Ang and Ding (JMFM, 2006) investigate the governance structure of government-linked companies (GLCs) in Singapore under the ownership/control structure of Temasek Holdings, which typically owns substantial cash flow rights but disproportional control rights and exercises no operational control. They study Singaporean GLCs (between 9-19, depending upon year) and non-GLCs (68-204) over 1990-2000, and show that Singaporean GLCs have higher valuations (Tobin’s Q, stock returns, ROE and other ratios) and better corporate governance than the control group of non-GLCs, and these results hold even after controlling for firm-specific characteristics such as profitability, leverage, firm size, and foreign ownership.

The final study described in Table 6 is descriptive rather than empirical, but is included in this survey because it provides an excellent historical, legal, economic, and financial analysis of the success story that is Singapore, Inc. Cheng-Han, Puchniak, and Varottil (WP, 2015) describe how Singapore’s historical and competitive political evolution has shaped the country’s business culture and structure of corporate ownership. The State has long played a leading role in the governance, but not management of leading enterprises, and the authors discuss what parts of this culture could be transplanted abroad. With no natural resources, effective corporate governance and non-corrupt strategic economic direction by state-owned enterprises and funds has been key to Singapore’s success, and the governing party’s need to compete in robust democratic elections has reinforced the need to promote growth and curb self-interested official behavior. Both proponents and opponents of state ownership can cite aspects of Singapore’s success to bolster their positions, but these authors make clear their belief that the state directed Singaporean model of development would be very difficult to emulate, and may in fact be evolving towards greater private ownership in the home country in any case.

3.3.2. Recent Empirical Research Examining the Relative Efficiency of State versus Private Ownership

Academic and professional researchers have produced nine studies comparing the relative efficiency of state and private ownership in a particular industry or country. These studies are summarized in Table 7. Seven of these studies are empirical, one is theoretical, and one is an excellent descriptive legal and economic analysis of China’s corporate governance system. No fewer than five of the papers in Table
7 examine some aspect of the global oil and gas industry, easily the world’s largest and most capital intensive industrial sector. In contrast to the literature assessing state ownership’s impact on corporate valuation discussed above—which showed a rough equivalence in research implying a positive and negative valuation impact for state ownership—all seven empirical studies summarized here show that private ownership is more efficient than state ownership, often massively so.

**** Insert Table 7 about here ****

As noted, five of the empirical studies presented in Table 7 analyze the relative efficiency of privately owned international oil companies (IOCs) and state-owned national oil companies (NOCs). First, Berkowitz and Semikolenova (WP, 2005) argue that in the privatization of Russia’s crude oil sector during 1994-2003 the Russian federal government both retained monopoly control over the transport of crude oil onto world markets and also obtained substantial representation on some oil company boards. They assess whether the government exploited this privileged position to favor state owned and connected firms—which they show are much less productive than privately controlled companies—and measure the costs this policy imposed on the economy. The authors show that the government did in fact used its control over scarce (and highly prized) export transport capacity to provide privileged access to favored companies, and that this system detracted significantly from economic efficiency. Fully private companies had to be much more productive than state-influenced companies (SICs) to receive comparable access to world markets. SICs had preferential access to higher capacity routes, and allocation of route capacity was sensitive to transport costs only in the state-influenced sector. Over time, state ownership in the Russian oil sector declined, but its influence did not.

The first empirical oil and gas study employing multi-national data, Wolf (EP, 2009), investigates the existence of ownership effects in the global oil and gas industry, specifically whether there are systematic performance and efficiency differentials between national oil companies (NOCs) and privately owned international oil companies (IOCs). His dataset covers the 50 largest oil companies over 1987-2006, so 1000 firm-year observations, and 87 countries are represented in the sample. The number of fully state-owned NOCs declines from 26 to 18 over the study period, while the number of mixed ownership (partially privatized) firms rose from 4 to 11. Using panel data regression analysis, Wolf (2009) shows that NOCs produce a significantly lower annual percentage of upstream (exploration and production) revenues than do IOCs—but also concludes this is a poor measure of efficiency. He also shows that NOCs significantly under-perform private-sector IOCs in terms of output efficiency and profitability.

The next oil and gas empirical study is a bit of an outlier, in that it does not examine the relative efficiency of state versus private oil companies directly, but instead analyzes the political incentives and economic costs of nationalizing private oil companies over the half-century after 1960. Guriev, Kolotilin, and Sonin (JLEO, 2009) study global nationalizations in the oil industry during 1960-2006, and assess
which factors make nationalization more likely. The largest single wave of nationalizations occurred after the first oil price shock of 1973-74, but recent years have also seen a pick-up in nationalization frequency. Additionally, the authors consider the interaction effect between government and foreign ownership on nationalization likelihood and show, both theoretically and empirically, that governments are more likely to nationalize when oil prices are high and political institutions are weak. Even though nationalizations are economically inefficient—both because privately controlled oil companies are more efficient than state controlled ones and because of the investment reducing effect that nationalization has on domestic and foreign investors—they do occur when oil prices are high. These results hold even with country fixed effects.

Eller, Hartley, and Medlock (EE, 2011) test the relative efficiency of private vs state ownership in the global petroleum industry by applying data envelope analysis (DEA) and Malmquist’s measure of annual productivity changes and parametric stochastic frontier analysis (SFA) to a panel of 78 oil companies, including ten of the twelve OPEC national oil companies (NOCs), for the year 2004. They use revenue as a measure of output, because this allows them to capture effects of forced subsidization of domestic energy prices, and find, with few exceptions, that NOCs are less efficient than shareholder owned oil companies (SOCs). Much of this inefficiency can be explained by different structural and institutional features—and perhaps differing objectives for NOCs and SOCs. Governments favor domestic consumers and NOC employees, and thus force NOCs to pursue economically sub-optimal pricing policies. The DEA and SFA scores for the 78 oil companies in Eller, Hartley, and Hedlock’s analysis are presented graphically in Figure 3. This clearly shows that SOCs are on average much more efficient than NOCs.

Two years later, Hartley and Medlock (EJ, 2013) use data from 61 oil companies from 2001-2009 to examine the evolution of revenue efficiency of national oil companies (NOCs) and shareholder owned oil companies (SOCs) and test whether SOCs are more efficient than NOCs and whether partial privatization (pNOC) improves relative efficiency and growth rates. As before, the authors use two sets of relative inefficiency measures, data envelope analysis (DEA) and Malmquist’s measure of annual productivity changes and parametric stochastic frontier analysis (SFA). Most companies (34) are always SOC throughout the study period, ten are always NOC, and 17 are mixed (pNOC). Hartley and Medlock (2013) find that NOCs are generally less efficient than SOCs, but their efficiency increased faster than SOCs’ over the decade 2001-2009. They also find that partial privatization increases operational efficiency and weaker evidence that mergers and acquisitions increase the efficiency of the merging firms. Both DEA and SFA, which are highly correlated, document increased relative efficiency growth for NOCs and partially privatized firms. The SFA analysis shows that government ownership tends to encourage over-employment, while average DEA scores for SOCs, NOCs and partially privatized NOCs are 0.771, 0.586,
and 0.668, respectively. Saudi Aramco and Sonangol were standout NOCs, while three pNOCs produced DEA scores similar to the best SOCs.

The final two empirical studies presented in Table 7 examine the global airport management industry and Chinese state-owned enterprises, respectively. The first of these, Oum, Adler, Yu (Journal of Air Transport Management, 2006), was cited previously in section 3.1’s discussion of the various types of state owners. It is included here because it shows very dramatically that airports with majority government ownership and those with multi-level government ownership are significantly less efficient than those with private majority ownership; that “private” airports achieve significantly higher operating profits than all others, while government and mixed-ownership airports perform the worst; and that private airports achieve much higher proportions of revenues (56%) from non-airport services than do government and mixed-ownership airports.

The only empirical study of the relative efficiency of Chinese state-owned versus privately-owned companies concludes strongly in favor of private ownership and against China’s “State Capitalism” model. Chen, Jiang, Ljungqvist, Lu, and Zhou (WP, 2015) use highly granular data on within-group capital transfers in 321 Chinese business groups over 2004-13 to study the efficiency of internal capital markets at state controlled and privately owned groups. Their empirical models estimate the extent to which a given business group’s internal capital allocations to member companies correlate with that company’s investment opportunity set. They conjecture that capital allocations at the 230 state controlled groups (which control 660 listed firms) will reflect the political career objectives of their CEOs, whereas allocations in the 91 private groups (which control 166 listed companies) will not. The authors document stark differences between net capital allocation patterns of state controlled groups (SCGs) and privately owned groups (POGs): while POGs allocate more capital to units with better investment opportunities (higher Tobin’s Q), SOGs do the opposite. Minority shareholders at SOGs suffer as a result. They show that promotion for SOG chairmen depends not on increasing profitability, but on avoiding layoffs. Consistent with career motivations, SOG capital allocations are used to prop up large and struggling employers, but only if the CEO has a realistic chance of being promoted and if the cost of self-interested behavior is not too high.

The final study cited in Table 7 is a descriptive legal and economic analysis of China’s corporate governance system. Milhaupt and Zheng (GLJ, 2015) show that, while Chinese state capitalism has been treated as essentially synonymous with SOEs, drawing a sharp distinction between SOEs and privately owned enterprises (POEs) misperceives the reality of China’s institutional environment and its impact on the formation and operation of large enterprises of all types. These authors gather data to show that the Chinese state has less control over SOEs and more control over POEs than its direct ownership interest in these firms suggests—and that this system imposes large efficiency and distributional costs on China’s
economy. Milhaupt and Zheng discuss how large, successful firms—regardless of ownership type—exhibit substantial similarities in areas commonly thought to distinguish SOEs and POEs: market dominance, receipt of state subsidies, proximity to state power, and execution of the state’s policy objectives. Chinese state control is also associated with state capture, meaning large firms of all types survive and prosper because they foster connections to state power and obtain state-generated rents. The State-Owned Assets Supervision and Administration Commission (SASAC), the “world’s largest controlling shareholder,” routinely rotates senior executives among business groups and coordinates policy among sectoral companies. Antitrust enforcement is virtually non-existent, and the state collects very little or no dividends from SOEs—and recycles most of what it does collect back as subsidies. One major source of state-generated rents is access to financing from state-owned banks; another is pervasive state-sanctioned monopolies of key industries.

3.4. Recent Research Investigating the Impact of State Ownership on Corporate Financial Policies

An intriguing new area of research has emerged since 2004—examining how state ownership affects corporate financial decision-making. This section surveys this research, beginning with studies assessing the interaction of state ownership and corporate investment spending.

3.4.1. State Ownership and Corporate Capital Investment

Eight studies examining empirically how state ownership impacts corporate capital investment have been produced since 2004, and these are summarized in Table 8. Three of these employ multi-national data, four examine China’s experience, and one studies Vietnam’s “equitisation” program and its impact on corporate capital spending. I address the multi-national studies first.

**** Insert Table 8 about here ****

The first empirical examination of the impact of state ownership on corporate investment that employs multi-national data is Chen, El Ghoul, Guedhami, and Wang (JCF, 2014). They compile a sample of 506 privatized non-financial companies from 64 countries over 1981-2008, with 3,054 firm-year observations, then use this sample to examine the relationship between ownership type and firm-level capital allocations, as captured by sensitivity of investment expenditures to investment opportunities. The authors find strong and robust evidence that government (foreign) ownership weakens (strengthens) investment-Tobin’s Q sensitivity, thereby increasing investment inefficiency (efficiency). They also find the relation between foreign ownership and investment efficiency is stronger when governments relinquish control and country-level governance institutions are weaker. Overall, these findings highlight the importance of ownership type in determining firms’ investment behavior and efficiency, and suggest that state ownership generally reduces investment efficiency.
Dos Santos (WP, 2015) uses a database of 67 SOEs and 155 privatized firms from 65 countries operating in five natural advantage based industries covering 13 natural resources over 2000-2013 to study the impact of rent-seeking related to natural advantage (such as substantial oil reserves or mineral deposits) on investment efficiency. He finds that ultimate state ownership discourages investment efficiency in natural advantage-based firms, and that local natural resource endowment seems not to govern such a relation. He also documents that natural advantage-based firms located in ethnically fractionalized countries experience greater investment inefficiencies.

The third multi-national empirical investment study is Jaslowitzer, Megginson, and Rapp (WP, 2016), who use a matched panel of 624 EU companies with 5,272 firm year observations over 1997-2013 to investigate the relation between state ownership and corporate investment. Overall, they find that ownership is associated with inefficient but stability-seeking investment policies and increased levels of capital constraints. Firms with high state ownership invest considerably less than do always private companies, and do so in a way that is significantly less responsive to changing investment opportunities and more related to internal financing constraints. However, state ownership does mitigate the decline in capital spending that occurs during the global financial crisis.

China invests more than any other major country, and many key industries are dominated by state-owned companies, so it is no surprise that four studies examine how state ownership impacts capital spending in Chinese companies. The first such study, Cull and Xu (JFE, 2005), re-examines the importance of property rights and external finance to economic development, well established in the existing finance development economics literatures, using the example of China in 2002. The authors separate proxies for property rights into two groups—those measuring the risk of expropriation by government and those measuring the ease and reliability of contract enforcement—and employ data on up to 760 companies drawn from an early-2003 World Bank survey of the investment climate in China. They restrict analysis to private firms, with ≥ 50% private ownership, and find that secure property rights are a significant predictor of firm reinvestment, as is access to external finance in the form of bank loans. Both expropriation and contract enforcement risk play a role in Chinese firms’ reinvestment decisions—which contrasts to previous research findings from other countries showing that only expropriation risk matters. These authors also find another aspect of property rights, the extent of private ownership, associated with greater reinvestment, and present some evidence suggesting that access to finance and government expropriation risk affects small firms more than large ones.

Liu and Siu (JFQA, 2011) assess the impact of institutions on Chinese firms’ corporate investment using an investment Euler equation framework. They employ data from the NBS of China database covering large companies over 2000-2005 to create a balanced panel of 36,103 firms in six categories: (1) SOEs; (2) collectives; (3) mixed; (4) private; (5) Hong Kong/Taiwan; and (6) foreign owned, and then
document robust evidence that ownership is the primary institutional factor affecting Chinese corporate investment. The derived discount rate for a non-SOE is approximately 10 percentage points higher than an otherwise equivalent SOE, but SOEs tend to use higher derived discount rates to invest after being partially privatized. The authors suggest that improving institutions helps impede widespread over-investment, so shifting capital from the state to the private sector is socially beneficial.

Firth, Malatesta, Xin, and Xu (JCF, 2012) investigate the relation between internally generated cash flows and fixed asset investments using a sample of 650 Chinese manufacturing firms listed on SHSE and SZSE over 1999-2008. The sample encompasses 4,084 firm-year observations for 501 government controlled firms (where control is defined as ≥ 30% shareholdings) and 1,018 firm-year observations for 149 privately controlled firms. The authors find that the relation between internally generated cash flows (CF) and fixed asset investments is U-shaped, meaning CF and investment are negatively related for low CF levels, but positively related for high CF levels. Government-controlled firms have greater investment-CF sensitivities than do private firms, especially on the left-hand side of the U, where CF is negative. They find no evidence that access to finance or soft-budget constraints explain the investment-CF sensitivity differences between government-controlled and private firms.

The authors of the fourth China study, Lin and Bo (EJF, 2012), use a sample of Chinese listed firms during 1998-2008 to examine how state ownership affects financial constraints on investment. They consider not only the standard factors in the investment estimation model, but also the firm’s equity financing behavior explicitly. They find that while the average sample firm experiences some financial constraints, state ownership does not necessarily help reduce these constraints, nor does it lead to more borrowing from Chinese state banks. These results suggest China’s corporatization movement has effectively removed soft budget constraints from former SOEs, and these firms can be seen as modern corporations operating in a market environment, though still state owned.

The final study examining how state ownership impacts corporate capital investment was assessed previously as a privatization impact study. O’Toole, Morgenroth, and Ha (JCF, 2016) is also discussed here because they test for differences in investment efficiency of SOEs and private firms in Vietnam, and the study examines whether privatizing SOEs causes efficiency to change, using a structural model to test the relation between Tobin’s Q and capital spending with a database of 23,120 observations of private firms (15,990 obs) and SOEs (7,130 obs) over 2001-2012. They find no evidence of investment spending being linked to marginal Q for SOEs, but find a positive and significant relation for private firms. Fully privatized firms and former SOEs that have been privatized and equitized with minority residual state shareholdings show positive links between Q and investment, and this effect is even stronger for privatized companies than for always-private firms.

3.4.2. State Ownership’s Impact on Corporate Cost of Capital, Cash Holdings, and Risk Taking
We conclude our summary of the recent literature examining the valuation and efficiency impact of state ownership of business assets by evaluating the six empirical studies produced since 2004 that examine the impact of state ownership on firms’ cost of capital, propensity to hold cash balances, and risk-taking behavior. These papers are summarized in Table 9. Three studies examine the relation between state ownership and the cost of corporate debt, two assess how state shareholdings impact the corporate incentive to hold cash balances, and one examines the impact of government share ownership on corporate risk-taking incentives. I discuss the cost of debt papers first.

**** Insert Table 9 about here ****

The first authors to empirically examine how state shareholdings impact the cost of debt for portfolio companies is Lin, Ma, Malatesta, and Xuan (JFE, 2011). They test whether the “wedge” between the largest ultimate shareholder’s control rights and cash flow rights significantly impacts the cost of corporate debt for a sample of syndicated loans to 3,468 borrowers in 22 countries (13 in Europe, nine in Asia) over 1996-2008. These authors employ loan spreads (over similar maturity treasuries) as their cost of debt measure, and test whether the identity of controlling shareholder matters, identifying families, the State, widely held corporations, and financial institutions as possible controlling shareholders. They find the cost of debt financing is significantly higher for firms with a wider divergence between the largest ultimate owners’ control rights and cash flow rights, and that loan spreads are less sensitive to the control-ownership wedge in state-owned firms than in private firms with a controlling shareholder. A one standard deviation increase in the control-ownership wedge increases average loan spreads by 14-19%, or by 27-38 bp. They also find evidence of “propping” activities by ultimate owners, wherein assets will be moved through the ownership pyramid to bolster firms where the owners have the highest cash flow ownership.

Next, Borisova and Megginson (RFS, 2011) explore whether residual government ownership affects the cost of debt using a sample of fully and partially privatized companies. Their dataset consists of 1,651 yearly bond observations covering 308 bonds of 60 companies from 14 countries and six industries (finance and real estate, manufacturing, petroleum, telecommunications, transportation, and utilities) over 2001-2009. On average across firms, the authors find that a one percentage point decrease in government ownership is associated with an increase in the credit spread, used as a proxy for the cost of debt, by three-quarters of a basis point. However, fully privatized companies exhibit lower credit spreads than partially privatized firms, indicating the cost of a lengthy privatization process. Supplemental analysis suggests these findings result from decreasing government guarantees, firm performance improvements, ownership uncertainty, and bondholder-shareholder conflicts.

The third cost of debt study has been cited previously, in the section discussing different types of government owners. Borisova, Fotak, Holland, and Megginson (JFE, 2015) is also included here because it is in many ways the clearest empirical test of how state ownership—of varying types—can impact the
cost of debt for individual companies. Specifically, they use a sample of 6,671 credit spreads from 1,723 bonds issued by 244 firms from 43 countries over 1991-2010 to examine the impact that state ownership (including 1,060 firm-years with sovereign wealth fund investment) of a firm’s stock has on that company’s cost of debt, as measured by the yield spread above treasuries. The authors also examine whether the relationship might have been different before and after the onset of the 2008 Global Financial Crisis. In the full 1990-2010 sample, they find that state ownership (0/1) is associated with significantly higher (40 bp) cost of debt, and this is even larger during the pre-crisis period, 1990-2007. From 2008 on, the basic cost of debt rises sharply—the average spread over treasuries for bonds of corporations without any state ownership roughly triples to 420 bp—and state ownership becomes associated with significantly lower (18 bp) cost of corporate debt, probably due to the implied bailout effect of state ownership.

Three studies assess the intriguing question whether residual state ownership influences the decisions of corporate managers to hold cash balances—and, if so, in what direction? Chen, Chen, Schipper, Xu, and Xue (RFS, 2012) use a sample of newly privatized firms (NPFs) from 55 countries over 1981-2008 to examine whether state shareholdings significantly influence corporate cash holdings. Besides studying the agency costs of state ownership, they also study the corporate governance role of country-level institutions. The authors document strong and robust evidence that state share ownership is positively related to corporate cash holdings. As state holdings increase, markets discount the value of corporate cash holdings more in countries with weak institutions. Stronger institutional environments mitigate the negative relationship between state ownership and cash holdings.

The second cash holdings study examines only China. Megginson, Ullah, and Wei (JBF, 2014) use an unbalanced panel dataset of 16,441 firm-year observations for 2,065 unique firms over the period 2000-2012 to study the relation between state ownership and cash holdings in China’s share-issue privatized firms from 2000 to 2012. They also examine and quantify the effect of state ownership on the value of cash, and find that the level of cash holdings increases as state ownership declines. For the average sample company, a 10 percentage-point decline in state ownership leads to an increase of about RMB 55 million in cash holdings. This negative relation can be attributed to the soft-budget constraint inherent in state ownership (at least Chinese state ownership). The next RMB added to cash reserves of the average firm is valued at RMB 0.96 by the market; the marginal value of cash in firms with zero state ownership is RMB 0.36 higher than in firms with majority state ownership.

The final study evaluated in this section--Boubakri, Cosset, and Saffar (JFE, 2013)--examines the role of state and foreign owners in corporate risk-taking, using evidence from privatizations. They use a unique database of 381 newly privatized firms from 57 countries to investigate the impact of shareholders’ identity on corporate risk-taking behavior, their primary measure of which is earnings volatility computed over several post-privatization windows. They find strong and robust evidence that state (foreign)
ownership is negatively (positively) related to corporate risk-taking and that high risk-taking by foreign owners depends on the strength of country-level governance institutions. Their results suggest that relinquishment of government control, openness to foreign investment, and improvement of country-level governance institutions are key determining factors of corporate risk-taking in newly privatized firms.

4. **EMPIRICAL RESEARCH ON STATE OWNERSHIP AND FINANCIAL MARKETS AND INSTITUTIONS**

The final section of this survey summarizes recent empirical research examining the relationship between state ownership of business assets and financial markets and institutions. Besides the obvious need to assess academic research on the efficiency and optimality of state-owned banks, this section will also summarize recent research evaluating government guarantees of private-sector financial transactions and the incentive and distribution effects government bailouts of failing private financial institutions—which has occurred with disturbing frequency over the past decade. I will also survey the burgeoning literature examining the private and social benefits and costs of political connections between politicians and corporate managers. I will, however, begin this section by summarizing the recent empirical literature examining the most direct method of creating state ownership of corporate equity—creating sovereign wealth funds and using these funds to purchase common stock either directly from companies or from investors on the open market. This is the form of financial investment by government actors that has shown the sharpest rise over the past dozen years.

4.1. **Research Examining the Impact of Sovereign Wealth Fund Investment on Target Companies**

There have been two surveys of sovereign wealth fund (SWF) research produced recently—Megginson and Fotak (*JES*, 2015) and Gao, Fotak, and Megginson (*OUP*, 2016)—which describe the historical evolution of SWFs and detail the investment objectives of different types of SWFs. In the interest of brevity, those summaries will not be repeated here; instead, I will concentrate on summarizing the seven articles presented in Table 10 that assess the valuation impact of SWF investment on target firms’ security values and financial performance.

**** Insert Table 10 about here ****

Let’s begin by discussing the target firms’ short and long-term market performance following SWF investments. The evidence for the short-run market reaction is highly consistent. Four published papers—Dewenter, Han, and Maltesta (*JFE*, 2010), Kotter and Lel (*JFE*, 2011), Bortolotti, Fotak and Megginson (*RFS*, 2015), and Karolyi and Liao (*JCF*, 2015)—all use standard event study methods and find that the announcement of a SWF equity investment in a listed company yields significantly positive announcement-period excess returns of 1-3%. However, the long-term reaction findings are inconclusive.

Dewenter, Han, and Maltesta (*JFE*, 2010) analyze the short and long-term impact of SWF investments on target firm values using a sample of 227 stock purchases and 47 SWF stock sales over
January 1987-April 2008, and try to determine whether there is a trade-off between SWF monitoring and lobbying benefits and tunneling and expropriation costs. These authors find significant announcement period (-1,+1) excess returns for SWF stock purchases (+1.52%) and divestments (-1.37%); they document significantly negative median 1-year cumulative market-adjusted excess returns (-4.5%), but significantly positive median 3-year (+7.3%) and 5-year (+31.2%) returns for target firm stocks after SWF investments. These authors also find that SWFs are active monitors, with over half of target firms experiencing one or more events indicating SWF monitoring or influence.

Kotter and Lel (JFE, 2011) use a sample of 417 SWF investments into listed firms over 1980-February 2009 to examine the effect of SWF investment on the short and long term valuation and performance of target firms. They also study which types of target firms attract SWF investment, and find that SWFs prefer large, poorly performing companies facing financial difficulties, and news of their investments yields significantly positive initial returns (+2.25%) that are higher for more transparent funds. Mean long-term stock returns after investment are insignificantly positive (3-year significant); median returns are insignificantly negative. These authors conclude that SWFs are generally passive shareholders.

Karolyi and Liao (JCF, 2015) and Bortolotti, Fotak and Megginson (RFS, 2015) explicitly test whether the average stock price reaction to news of a SWF investment is significantly different than the average reaction following announcements of investments in listed firms made by otherwise similar privately-owned institutional and corporate investors. Karolyi and Liao use a sample of cross-border acquisition transactions over 1998-2008 to study the target firm announcement period returns. They divide their data into three groups based on the different types of acquirers—government controlled acquirers, private acquirers, and SWF/other state-owned fund acquirers. They find that the private acquirer group has the highest announcement period return (5.0%), which is almost twice the return for the government controlled acquirer group (2.8%). The SWF/other state-owned fund acquirer group has the lowest announcement period return (0.8%), far below the other two groups. Bortolotti, Fotak and Megginson (2015) document a “sovereign wealth fund discount” in their study. They compare the valuation impact of SWF investments with those of comparable private investments and find that the market reaction to SWF investment (0.9% announcement period abnormal return including the investment by Norway’s GPFG, and 2.45% without Norway) over a three-day event window (-1,+1) is significantly lower than that of comparable private-sector investments (5.02% announcement period abnormal return). They attribute this SWF discount to the inconsistency between political objectives and profit maximization inherent in state-owned fund investing.

A second group of papers examine how SWF equity investments impact the valuation, credit risk, and/or financial return volatility of target firms post-investment. Since these studies employ differing methodologies and samples, and examine different performance metrics, it is harder to draw general
conclusions regarding their findings, except to say that two of these studies—Bertoni and Lugo (JCF, 2014) and Gagliardi, Gianfrate, and Vincenzi (WP, 2014)—find that SWF investments generally increase target firm value and/or reduce the target’s credit risk, while Knill, Lee, and Mauck (JFI, 2012) find that both the risk and return of target firms’ stocks decline following SWF investments. Finally, Borisova, Fotak, Holland, and Megginson (JFE, 2015) document that SWF investment in target firms’ stock is associated with an increase in those firms’ bond yield spreads—and thus their cost of debt financing.

Bertoni and Lugo (JCF, 2014) study the effect of SWF stock purchases on the credit risk of target firms. The authors compute and analyze changes in credit default swap (CDS) spreads for a sample of 391 direct SWF investments over 2003-10. They find the target company’s CDS spreads decrease significantly after SWF investment and that the results are stronger when the SWF originates from a politically stable non-democratic country. The authors interpret the results as suggesting that creditors expect SWFs to protect target companies from bankruptcy.

Gagliardi, Gianfrate, and Vincenzi (WP, 2014) construct a sample of 113 SWF investments over the period 1998-2011 to analyze the market reaction to SWF investments from the target firm bondholders’ perspective, and find that target firm bondholders experience significantly positive abnormal returns both in the short run (+0.32%) and in the medium run (+2.67%). Excess returns are higher when the target is a non-financial or a non-strategic firm. They show that the bond price performance is positively related to cash flows and earnings of the targets, and negatively related to their credit rating and outlook.

Knill, Lee, and Mauck (JFI, 2012) use a sample of 231 SWF acquisitions of listed firm stock over 1984-2009 to examine whether these investments significantly impact the return-to-risk performance of target firms, and find that target firm raw returns do indeed decline following SWF investment. Though risk also declines, they document a net reduction in the compensation offered to investors for the risk they assume over five years after investment, suggesting that SWFs may not provide the same monitoring benefits for targets offered by other institutional investors.

Borisova, Fotak, Holland, and Megginson (JFE, 2015), cited previously, examine the impact that state ownership has on a company’s cost of debt using a sample of 6,671 credit spreads from 1,723 bonds issued by 244 companies from 43 countries over 1991-2010 (including 1,060 firm-year observations with SWF ownership). The authors hypothesize that, on one hand, state ownership provides domestic companies an implicit guarantee on the debt of the firm and therefore might reduce the cost of debt. On the other hand, state ownership may have a negative effect on a firm’s cost of debt due to the inconsistent goals between the government and regular for-profit investors. They show that, during normal times, state ownership is associated with an increase in the cost of debt. However, during the financial crisis, the benefit of an implicit government guarantee is more pronounced and state ownership is associated with lower spreads. Further,
SWF ownership is linked to a higher cost of debt compared to ownership by central banks, the treasury, and state-owned non-financial enterprises in both normal times and during the financial crisis.

4.2. **Summary of Recent Empirical Studies of State Owned Banks, Guarantees, Bailouts**

Numerous academic studies over the years have examined the efficiency and effectiveness of state-owned banks. Perhaps the most famous such study is LaPorta, Lopez-de-Silanes, and Shleifer (JF, 2001), who find that countries with private banking systems have significantly faster economic growth and better capital allocation than do countries with state-owned banking systems. This section summarizes research produced since 2004 examining state-owned banking, as well as numerous studies examining the effectiveness and cost of government guarantees of private financial transactions (usually loans) and bailouts of failing banks. These studies are summarized in Table 11, and we begin by assessing recent state-owned banking studies.

**** Insert Table 11 about here ****

4.2.1. **Recent Studies of State-Owned Banks and Banking Systems**

No fewer than ten studies have been produced or published recently that examine some aspect of state-owned banking or the impact of government ownership of corporate equity on banking decisions. With one exception, these studies all show that state ownership distorts banking decisions, capital allocation efficiency, and/or the arms-length provision of credit to firms with the most promising investment prospects. The sole exception finds that state ownership has an insignificantly negative effect on corporate valuation. Seven of these studies employ large, multi-national datasets and thus provide both cross-country and inter-temporal analyses, while the remaining three studies examine state-owned banks in Italy, Argentina, and China, respectively. We begin with the multi-national studies.

Dinç (JFE, 2005) examines the behavior of government-owned banks (GOB) to determine whether the banks follow a “social” or “political” model of lending. He uses a sample of 360 banks from 36 countries over 1994-2000, and documents that GOBs significantly increase lending during election years—by an average of 11% of their total loan portfolio—relative to private banks. However, lending by GOBs over the electoral cycle is no higher than private banks, and they hold significantly larger fractions (50% higher) of government securities as a share of total bank assets than do private institutions.

Caprio, Laeven, and Levine (JFI, 2007), cited previously, assess the impact of the ownership structure of banks and shareholder protection laws on bank valuations while controlling for differences in bank regulations. They build and use a database on ownership structure, valuation, and country and bank-specific data for 244 publicly listed banks in 44 countries in 2001, accounting for 83% of total banking system assets in those countries. Except in a few countries with very strong shareholder protection laws, these authors find that banks are not widely held; rather, families or the State control banks. They also find that larger cash-flow rights by the controlling owner boost valuations; (2) stronger shareholder protection
laws increase valuations, and (3) greater cash-flow rights mitigate the adverse effects of weak shareholder protection laws on valuations. The separate effect of state ownership on valuation is negative but insignificant.

In an earlier version of a study that was ultimately accepted for publication in the *Journal of Finance*, Karolyi and Taboada (WP, 2011) use a sample of 9,122 domestic and 2,486 cross-border bank acquisitions to examine whether cross-border deals are more common in countries with weak accounting standards and higher levels of government ownership of banks. They find that acquirers are typically from countries with lower government ownership of banks and better investor protection. Lower government ownership in the acquirer’s (target’s) country leads to higher (lower) abnormal returns for targets and to improvement (deterioration) in post-acquisition profitability and cost efficiency.

The next multi-national state ownership and banking study does not examine government ownership of banking, per se, but instead assesses the effect that state ownership of national media outlets has on bank lending policies. Specifically, Houston, Lin, and Ma (*JFE*, 2011) use a unique World Bank dataset covering more than 5,000 companies across 59 countries, conducted in 2000 to examine whether state ownership of (news) media is associated with higher levels of bank corruption. This can take many forms, but includes (1) a borrower directly bribing a bank officer and (2) bank supervisors or politicians using disciplinary power to induce banks to provide credit to connected borrowers for private gain. They find strong evidence that state ownership of media is associated with higher levels of bank corruption. Both state ownership of media and media concentration increase corruption, both directly and indirectly; both also accentuate the positive link between media concentration and corruption in lending. The link between media structure and corruption is more pronounced when the borrowing firm is privately owned.

Nguyen, Skully, and Perera (WP, 2012) examine the association between government ownership and bank stability over 1997-2010 across 103 countries using generalized method of moments (GMM) estimation methods. They find that the relation between growth and stability depends on a country’s level of economic development and regulatory quality. In developed, high income countries, government ownership is positively associated with distance to default, but the opposite is true for middle and low income countries. These findings are consistent with the political and agency views of state ownership of banks, though the effect is mitigated by economic development and regulatory quality.

Mohsni and Otchere (WP, 2013) examine how risk-taking behavior changes for 242 banks privatized in 42 countries over 1998-2007. Privatization usually also involves removal of government guarantees. These authors employ both accounting (Z-score, ROA, ROE volatility, ratio of NPL, solvency ratio) and market-based (interest rate risk, and total and idiosyncratic volatility) measures of risk, and find that bank risk-taking declines after privatization, but remains higher than that of their privately owned rivals. Ownership changes, rather than industry-wide factors, lead privatized banks to become more
prudent, but high share fractions sold induce more risk-taking, as firms become more accountable to shareholders. Their results are robust across all measures of risk.

The final multi-national state ownership and banking study is Iannotta, Nocera, and Sironi (JFI, 2013), who use a sample of 210 banks from 16 EU countries over 2000-2009, with a total of 1,541 bank-year observations, to evaluate the impact of state ownership on bank risk, measured by Altman’s Z-score. They use credit ratings, ownership structure and accounting data to distinguish between default risk (likelihood of creditor loses) and operating risk (likelihood of negative equity from losses) and document that government owned banks (GOBs) have lower default risk but higher operating risk than do privately owned banks (POBs), suggesting that government protection induces higher risk taking. GOB risk taking also tends to increase during election years, suggesting GOBs pursue political rather than strictly commercial goals.

Researchers have also examined state-owned or influenced banking systems within a single country. First, Sapienza (JFE, 2004) examines the behavior of government-owned banks (GOB) to determine whether Italian banks follow a “social” or “political” model of lending. She employs a database of 37,000 Italian corporate borrowers and 85 banks—40 always private, 43 always state owned, and two privatized—to test whether political factors affect loan interest rate offered, and finds that GOBs’ motives are more consistent with pursuing political advantage than with promoting a social cause or filling a market niche left unfilled by private banks. The lending behavior of SOBs is affected by electoral results of the party affiliated with the bank; the stronger the political party is in the area where the firm is borrowing, the lower the interest rate charged.

Berger, Clarke, Cull, Klapper, and Udell, (JBF, 2005), cited previously, jointly analyze the static, selection, and dynamic effects of domestic, foreign, and state ownership on bank performance using data on 180 Argentine banks (with 2,290 firm year observations) privatized during the 1990s—mostly after 1995. They show that state and local government ownership fell sharply over the study period, while foreign ownership increased from 15.6% to 50.3% of total assets. State-owned banks (SOBs) showed poor long-term performance, especially those slated for privatization.

Finally, Bailey, Huang, and Yang (JFQA, 2011) study the state controlled Chinese banking system, where state owned banks (SOBs) make loan decisions based on noisy inside information on prospective borrowers, which may be based on a political (not commercial) desire to avert unemployment and social unrest. They employ event study methodology and a sample of 285 bank loan announcements (mostly to separate borrowers) to SZSE and SHSE listed companies over 1999-2004 and find that in China poor borrowing-firm financial performance and high managerial expenses increase the likelihood of obtaining a bank loan, and loan approval predicts poor subsequent borrower performance. Negative event study
responses are observed at loan announcements, particularly for borrowers who rate poorly on quality and creditworthiness, and for banks involved in litigation regarding loans.

4.2.2. Recent Studies of Government Guarantees and Bailouts

We conclude this section by summarizing two studies examining the efficiency and welfare cost of government guarantees and two studies examining government bailouts of failing banks. Without exception, these studies highlight the distortive effects and economic costs of bailouts and guarantees. We begin with studies examining bailouts, then summarize research on guarantees.

The first study of bailouts, the previously cited Dinç (JFE, 2005) article, examines the behavior of government-owned banks (GOB) to determine whether the banks follow a “social” or “political” model of lending. The author uses a sample of 360 banks from 36 countries over 1994-2000 and documents that GOBs significantly increase lending during election years—by an average of 11% of their total loan portfolio—relative to private banks. However, lending by GOBs over the electoral cycle is no higher than private banks, and they hold significantly larger fractions (50% higher) of government securities as a share of total bank assets than do private institutions. Next, Gropp, Hakenes, and Schnabel (RFS, 2011) investigate the competitive effects of government bailouts in OECD countries, using a cross-sectional sample of 5,000 banks in OECD countries during 2003. In their definition, “protected” banks include state-owned banks, institutions receiving explicit guarantees, and most large banks which receive implicit guarantees. They find that government guarantees extended to troubled banks strongly increase the risk-taking of competitor banks, but they do not find that guarantees significantly impact protected banks’ risk-taking behavior, except in those banks that are actually state-owned.

Both studies examining government (explicit and implicit) guarantees of private financial transactions were produced quite recently. Acharya, Anginer, and Warburton (WP, 2013) use a sample of 84,057 bond issues by 567 US financial institutions (FIs) over 1990-2011 to examine whether investors believe the U.S. government will shield bondholders of major financial institutions from losses in the event the companies become financially distressed. They find that “too big to fail” is alive and well; investors do expect the government to shield bondholders of major FIs from loss and consequently do not accurately price institution-specific default risk. While bond credit spreads are sensitive to risk for most FIs, this is not true for the largest ones. This constitutes an implicit subsidy to the largest FIs, and passage of Dodd-Frank Act did not end “too big to fail.”

Finally, Gropp, Gruendl, and Guettler (ROF, 2014) exploit a natural experiment—the lawsuit-induced removal of state guarantees for some German banks in 2001—to study whether and how the lifting of guarantees impacted risk-taking behavior. They employ a dataset of commercial loan customers of all 452 German state savings banks from 1996-2006, with 252,562 observations of loans extended to 87,702 customers. These authors find that removing the guarantees caused affected banks to reduce credit risk by
dropping their riskiest borrowers and simultaneously increase the rates charged to their remaining borrowers. Overall, their results suggest that public guarantees may be associated with substantial moral hazard effects.

4.3. Recent Research Examining Political Connections

At least since Fisman (AER, 2001), many researchers have studied the scope, mechanisms, and private versus social valuation impact of political connections between politicians and owner/managers of private companies. While this research does not study state ownership of business enterprises, per se, it most certainly examines how political relationships affect corporate performance and economic efficiency and so fits within the purview of this survey. Twelve papers produced since 2004 examine some aspect of political connections, and these are summarized in Table 11. Nine of these studies examine either China (five studies) or the United States (four studies), the two countries with the largest and most important economies, and the most dissimilar corporate governance systems, and we examine these studies first. We then summarize two multi-national studies and the remaining single-country (Pakistan) analysis of political connections. The principal conclusion from the studies surveyed below is that political connections tend (with a few exceptions) to enhance valuations of connected companies, but these private benefits are usually associated with significant costs for the overall economy and financial system.

**** Insert Table 12 about here ****

As noted, five studies empirically examine how political connections impact corporate valuation and/or performance. The first is actually an exception to overall patterns in that it shows certain connections between CEOs and firms reduce value in privatized Chinese companies. Fan, Wong, and Zhang (JFE, 2007) manually collect CEO and board of director data for 790 IPOs of Chinese SOEs privatized on the Shenzhen and Shanghai Stock Exchanges over 1993-2001, and use this dataset to test whether privatized firms with politically connected CEOs perform worse than companies without connected CEOs. Almost 27% of CEOs of new privatized firms are current or former government officials. The authors show that companies with politically connected CEOs underperform those without by almost 18%, based on 3-year post-IPO stock returns, and have poorer earnings growth, sales growth, and changes in return on sales (ROS). These firms are also more likely to appoint other bureaucrats to their boards, rather than directors with relevant professional experience.

Calomiris, Fisman, and Wang (JFE, 2010), cited previously, present contrasting results. They examine the market reaction to two unexpected announcements relating to the sale of government-owned shares in China. One announcement, in July 2001, surprised investors by implying the government was planning to allow heretofore non-tradable shares to be sold, while the second announcement in June 2002 revoked this policy. The sample employed consists of 107 B-share firms listed on the Shanghai and Shenzhen stock exchanges (SHSE and SZSE). The authors are able to abstract from possible liquidity
effects by examining market reactions to B shares, which are separate from the A shares involved in the announcement, and find a negative effect of government ownership on returns at the July 2001 announcement date—indicating investor displeasure at reduced government ownership—and a symmetric positive effect from the policy’s cancellation eleven months later. They suggest that the results are due to the absence of a Chinese political transition to accompany economic reforms, so that the benefits of political ties outweigh the efficiency costs of government shareholdings. Companies managed by former government officials have positive announcement-periods abnormal returns, implying that personal ties can substitute for state share ownership as a source of connections.

Berkman, Cole, and Fu (JFQA, 2010) study the wealth effects of three regulatory changes designed to improve minority shareholder protection in China using event study tests on a sample of 887 firms. There were three regulatory changes over a two-month period in early 2000, and all were designed to make expropriation of minority shareholders more difficult. Using the value of a firm’s related-party transactions as an inverse proxy for the quality of corporate governance, the authors find that firms with weaker corporate governance experienced larger abnormal returns around announcements of policy changes than did companies with stronger governance. Shareholders of firms with strong ties to the government did not benefit from regulatory change announcements, suggesting that minority shareholders did not expect the new rules to be enforced for these companies.

Liao and Young (WP, 2011) investigate the determinants of residual government ownership and the impact this has on post-privatization performance of Chinese companies employing a panel dataset of 2,775 firm year observations of 514 listed companies over 1999-2004. Contrary to the “political interference hypothesis,” they find that residual state shareholdings have a significantly positive impact on Tobin’s Q. They further show that, when risk of expropriation is high, government shareholdings can add value to firms by signaling the state’s commitment to privatization, and find that government shareholdings are more likely to be present in small firms, while large companies are more likely to have politically connected CEOs on their boards.

The final Chinese study on political connections is Piotroski and Zhang (JFE, 2014). Exploiting a research setting where politicians are rewarded for capital market development, these authors examine whether the incentives created by the impending turnover of a powerful local Chinese official can accelerate the pace of IPO activity in the region he/she currently oversees. They study the period 2001-2008 and examine 48 promotion events for regional Party Secretary and Governor, testing whether firms accelerate equity issues in anticipation of officials’ promotion and departure, and find that the rate of exchange-eligible firms engaging in an IPO increases significantly in advance of impending promotion events. These results also hold for SEOs and private placements. Promotion period IPOs (1) under-perform non-promotion period ones in terms of both future financial performance and long-run stock returns; (2) have controlling
shareholders who retain a larger fraction of their company; and (3) are more likely to divert proceeds away from their intended use post-IPO.

The four studies examining the valuation impact of political connections for U.S. companies all show that the connected companies benefit. Goldman, Rocholl, and So (RFS, 2009) employ a hand collected dataset on political contributions of board members of S&P 500 companies over 1996-2000 to examine whether political connections increase value for companies on whose boards directors serve. They also use event study methods to evaluate announcement effects when connected board members are nominated and document positive abnormal returns following nomination of politically connected people to the board of directors. The authors find that each connected board member makes an average of 4.6 political contributions. Finally, the Republican win in the 2000 presidential election caused the value of Republican connected firms to increase, but values of Democratic connected firms to decrease.

Cooper, Gulen, and Ovtchinnikov (JF, 2010) use a new and comprehensive database of 819,815 firm-level contributions to U.S. political campaigns by 1,930 firms from 1979-2004 to investigate whether contributions are associated with positive long-run excess returns for contributing firm shareholders. They also construct a variable measuring the strength of support by firms for candidates and find the measures of political contributions are positively and significantly correlated with the cross-section of future stock returns. The effects are strongest for firms supporting a greater number of candidates that hold office in the same state that the firm is based, and the effect is stronger for House candidates and for Democrats. Only a small number (9.49%) of mostly very large, listed firms make contributions.

Duchin and Sosyura (JFE, 2012) use a hand collected dataset of 537 financial institutions (FIs) that were eligible to apply for government funding support under the Troubled Asset Relief Program of 2008-2009 to examine whether politically connected firms are more likely to receive government funding under TARP’s Capital Purchase Program than are unconnected firms. Only the very best FIs choose not to participate/apply for funding. The authors find that politically connected FIs are significantly more likely (9.1 percentage points) to be funded under TARP, controlling for other firm characteristics. After the program ended, difference-in-difference tests show that connected funding recipients under-perform non-connected FIs using both stock and accounting measures.

The final U.S. study is Houston, Jiang, Lin, and Ma (JAR, 2014), who analyze whether political connections of listed U.S. firms affect costs and terms of loan contracts using a hand collected dataset of political connections of S&P 500 companies over 2003-2008. The sample has 2,115 loan contracts with 417 companies. The authors find that the cost of loans is significantly lower for companies that have board of director members with political ties. They consider a Borrower Channel, where lenders charge lower rates because connections enhance borrower’s creditworthiness, and a Bank Channel in which lenders
assign greater value to connected loans to enhance their own relationship with politicians; the results strongly favor the Borrower Channel.

Two studies employ multi-national samples to examine the impact of political connections on corporate valuation and performance. First, Faccio, Masulis, and McConnell (JF, 2006) analyze the likelihood of a government bailout being extended to 450 politically connected firms in 35 countries over 1997-2002 and find the politically connected companies are significantly more likely to be bailed out than unconnected ones. Among bailed out firms, those with political connections have significantly worse financial performance at the time of and after being bailed out. Connections thus influence capital allocations through the mechanism of bailouts during periods of financial distress. Second, Boubakri, Cosset, Mishra, and Saffar (JCF, 2012) examine whether the cost of equity capital differs between politically connected and unconnected firms using a sample of 1,248 firm-year observations from 26 countries over 1997-2001, drawn from Faccio (AER, 2006). They use propensity score matching to match connected and unconnected firm data, compute cost of equity using four different models drawn from extant literature, and find that connected firms have significantly lower cost of equity than do non-connected companies. Connections are also more valuable for firms with the strongest ties to political power. These results provide strong evidence that investors require a lower return for connected companies, suggesting these firms are considered less risky than unconnected companies.

The final study we survey examines the impact of political connections in a single country: Pakistan. Khwaja and Mian (QJE, 2005) use a hand collected dataset of more than 90,000 firms, that represents the universe of corporate lending in Pakistan over 1996-2002, to investigate rents to connected firms in banking. A borrowing firm is classified as “political” if its director participates in an election. They document that connected companies borrow 45% more than unconnected borrowers, but also have 50% higher default rates. Such preferential treatment only occurs in government owned banks. The economy-wise cost of these rents is estimated as 0.3 to 1.9% of GDP each year.

5. SUMMARY AND CONCLUSIONS

This article presents an overview of the economic and political developments relating to privatization, state capitalism, and state ownership of business since 2000 and then surveys the extensive recent research examining these issues empirically. Through the first years of the 21st century, there was an unambiguous global trend towards reducing government ownership of business enterprise, but this trend has at least been slowed, and perhaps even reversed, since then. We discuss the six factors that have promoted a global resurgence of state ownership--most particularly the rise of China as a global economic power, the massive rise in global oil prices that shifted power and wealth to petroleum exporting nations and their wholly state-owned national oil companies, and the Global Financial Crisis of 2008-10 and
governments’ subsequent policy responses to the crisis—then define and analyze the new ideology labeled “state capitalism.”

Recent privatization research is classified into studies (1) testing whether privatization improves the operating and financial performance of divested companies, and (2) examining when, where and how governments decide to privatize individual companies and how these asset sales and share issue privatizations are priced. All seventeen performance studies document significant improvements after companies are divested by share issue privatizations or asset sale/private share trades. The five “when, where, how” studies show, unsurprisingly, that political forces shape governments’ decisions about when and how to privatize and, more surprisingly, that most forms of pre-divestment corporate restructurings reduce net prices received.

The academic and professional literature examining various aspects of state ownership and the economic role of state-owned enterprises has surged since 2004. This is classified into: (1) seven studies categorizing and evaluating various types of state owners; (2) seven papers examining determinants of the level of (newly created and residual) state ownership of business assets and equity; (3) fifteen articles studying how state ownership impacts the valuation of corporate assets and nine studies examining the relative efficiency of state versus private ownership in various countries and industries (especially petroleum); and (4) eight articles assessing how state ownership impacts corporate capital investments and six studies testing how state ownership affects financial policies such as cash holdings, the cost of debt and equity capital, and corporate risk-taking. This research highlights that different types of state owners have very different impacts on corporate value and performance, and that state ownership generally has a significant, and mostly pernicious, impact on corporate investment and financial policies. The separate effect of state ownership on corporate valuation is surprisingly ambiguous—six studies find positive effects, six find negative effects, and the others present ambiguous results—but all the empirical studies surveyed show that private ownership is more efficient than state ownership, often massively so.

The final section of this survey summarizes recent empirical research examining the relationship between state ownership of business assets and financial markets and institutions, and also surveys the burgeoning literature examining the private and social benefits and costs of political connections between politicians and corporate managers. This research is classified into: (1) eight articles examining sovereign wealth fund investments in private company stock; (2) ten studies assessing the efficiency and optimality of state-owned banks; (3) four articles evaluating the effectiveness and cost of government guarantees of private financial transactions and bailouts of failing banks; and (4) twelve papers studying the scope, mechanisms, and private versus social valuation impact of political connections between politicians and owner/managers of private companies.
The sovereign wealth fund research consistently finds that SWF investments in private firms are associated with significantly positive announcement-period excess returns, but these returns are lower than those associated with announcements of comparable private-sector investments. With one exception, all the studies examining state-owned banking show that state ownership distorts banking decisions, capital allocation efficiency, and/or the arms-length provision of credit to firms with the most promising investment prospects, and all the studies examined highlight the distortive effects and economic costs of bailouts and guarantees. Finally, almost all the political connections studies find that these connections are beneficial for the companies (and politicians) involved, but these private benefits are usually associated with significant costs for the overall economy and financial system.

In conclusion, the research summarized here broadens but does not fundamentally change the conclusions presented in a series of influential survey articles published in the early 2000’s. Privatization generally improves the financial and operating performance of formerly state-owned enterprises and enhances the capacity and efficiency of national capital markets. State ownership of business assets is inherently less efficient than private ownership, and this effect is especially damaging for financial institutions and in the global oil and gas industry. On the other hand, in countries with weak institutions and/or poor investor protection residual state ownership can enhance value in partially privatized firms by providing monitoring and protecting dispersed minority shareholders from exploitation by controlling private owners.

The new results presented in this survey address issues not examined in prior surveys. On balance, state ownership has a generally distortive effect on corporate financial policies, most importantly capital investment spending. The emergence of sovereign wealth funds as a separate (and large) class of global investors should be considered an essentially benign development; these funds create value through investing, even if this is less than private counterparts create. Government guarantees of private financial transactions and bailouts of failing private sector firms are inherently distortive—though bailouts may be unavoidable in the face of systemic crises.

Finally, the research surveyed here convinces me that “state capitalism” is an essentially failed model. The economic rise of China and the high oil-price regime of 2005-2014 made this seem a plausible model for development, but the abysmal relative performance of state-controlled versus private owned firms in key industries—especially petroleum, banking, and technology—clearly shows the model’s inherent weakness. State ownership of business will certainly remain an important economic fact, due to the size of the economies where state ownership is most prevalent and the currently dominant ownership position of national oil companies over petroleum reserves, but state capitalism is not the future. And unless the price of oil unexpectedly returns to the $100 level, we will soon witness a series of oil company privatizations of unprecedented scale.
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Figure 1. Worldwide Sales of State-owned Enterprises and Assets (Privatizations and Sales) and Purchases of Privately-owned Stock by Governments (Nationalizations and Investments), 1988-2011.

Source: The Economist, Setting out the Store (January 11, 2014).
http://www.economist.com/news/briefing/21593458-advanced-countries-have-been-slow-sell-or-make-better-use-their-assets-they-are-missing
Table 1. The World's Largest Privatization Sales, January 2005-August 2015

This table details the date, company name, country, industry, US dollar value, and method of sale—usually asset sale or share issue privatization (SIP)—of the privatization sales by national governments around the world that raised at least US$ 5 billion since the beginning of 2005.

| Issue Date | Company | Nation     | Industry    | % Sold  | Value (US$ mil) | Type of sale |
|------------|---------|------------|-------------|---------|----------------|--------------|
| Sep 2010   | Petrobras | Brazil     | Petroleum   | 15.10   | 27,500         | SEO          |
| Jun 2009   | JPMorgan Chase & Co. | USA     | Finance     |         | 25,000         | TARP Repayment |
| Dec 2009   | Wells Fargo & Company | USA | Finance     |         | 25,000         | TARP Repayment |
| Jul 2008   | Gaz de France    | France    | Utilities   | 44.10   | 24,025         | PO           |
| Jul 2010   | Agricultural Bank of China | China | Finance   | 15.00   | 22,100         | IPO          |
| Oct 2006   | Industrial & Commercial Bank of China | China | Finance   |         | 21,200         | IPO          |
| Nov 2010   | General Motors  | USA       | Manufacturing | 28.00  | 20,100         | IPO          |
| Dec 2009   | Citigroup Inc.  | USA       | Finance     |         | 20,000         | TARP Repayment |
| Jan-Dec 2010 | Citigroup       | USA       | Finance     | 17.00   | 17,600         | SEO          |
| Sep 2012   | AIG            | USA       | Finance     | 31.90   | 18,000         | SEO          |
| Dec 2009   | Bank of America Corp. | USA | Finance     |         | 15,000         | TARP Repayment |
| Aug 2008   | Companhia Vale do Rio Doce | Brazil | Mining     |         | 12,060         | SEO          |
| Jun 2006   | Bank of China   | China     | Finance     |         | 11,190         | IPO          |
| Dec 2010   | Citigroup       | USA       | Finance     | 10.00   | 10,500         | IPO          |
| Nov 2006   | Telstra        | Australia | Tlc         | 34.00   | 10,400         | IPO          |
| Jul 2006   | Rosneft (including Yukos) | Russian Fed | Petroleum   |         | 10,400         | IPO          |
| Jun 2009   | Morgan Stanley | USA       | Finance     |         | 10,000         | TARP Repayment |
| Jun 2009   | The Goldman Sachs Group, Inc. | USA | Finance     |         | 10,000         | TARP Repayment |
| Sep 2009   | Bank of America Corp. | USA | Finance     |         | 10,000         | TARP Repayment |
| Nov 2007   | Petro China    | China     | Petroleum   |         | 9,900          | IPO          |
| Feb 2013   | Bank of Piraeus | Greece | Finance     |         | 9,821          | IPO          |
| Dec 2010   | Electricity & gas distribution grids | Turkey | Utilities |         | 9,600          | Auction      |
| Jan 2007   | Caisse Nationale de Caisses d'Epargne (CNCE) | France | Finance     | 35.00   | 9,440          | IPO          |
| Sep 2005   | China Construction Bank | China | Finance     |         | 9,200          | IPO          |
| Feb 2012   | Sao Paulo – Guarulhas International Airport | Brazil | Services    |         | 8,960          | IPO          |
| Mar 2012   | Bank of Communications | China | Finance     |         | 8,919          | IPO          |
| Mar 2008   | Vin S Spirit AB | Sweden | Manufacturing | 100.00 | 8,910          | IPO          |
| Nov 2007   | PetroChina     | China     | Petroleum   |         | 8,900          | IPO          |
| Oct 2007   | China Shenhua Energy Group | China | Utilities   |         | 8,800          | IPO          |
| Feb 2007   | Sberbank       | Russian Fed | Finance     |         | 8,800          | IPO          |
| May 2011   | AIG            | USA       | Insurance   |         | 8,700          | IPO          |
| Sep 2012   | Japan Airlines Co Ltd | Japan | Transportan |         | 8,474          | IPO          |
| Nov 2005   | Electricite' de France | France | Utilities   |         | 8,400          | IPO          |
| May 2007   | Vneshtorgbank  | Russian Fed | Finance     |         | 8,000          | IPO          |
| Nov 2009   | Iran Telecom   | Iran      | Tlc         |         | 7,800          | IPO          |
| Mar 2013   | Japan Tobacco  | Japan     | Manufacturing | 16.70  | 7,753          | IPO          |
| Jul 2008   | Vasakronan     | Sweden    | Finance     | 100.00  | 7,744          | IPO          |
| Sep 2007   | China Construction Bank | China | Finance     |         | 7,700          | IPO          |
| Date     | Company                        | Country | Industry       | Price ($) | Shares | Type                           |
|----------|--------------------------------|---------|----------------|-----------|--------|--------------------------------|
| Dec 2012 | AIG                            | USA     | Finance        | 16.00     | 7,610  | SEO                            |
| Oct 2009 | BNP Paribas                    | France  | Finance        | 7,519     | Repurch govt shs                  |
| Jul 2009 | Suez Environment               | France  | Utilities      | 7,423     | IPO                        |
| Jul 2009 | China State Construction       | China   | Construction   | 7,300     | IPO                        |
| Dec 2009 | ING                            | Netherlands | Finance | 7,159     | Repurch govt shs                  |
| Jun 2012 | RBS Aviation Capital          | Ireland | Finance        | 7,079     | PS                        |
| Mar 2014 | Lloyds Banking Group PLC       | United Kingdom | Finance | 6,954     | SEO                        |
| Mar 2015 | Fortum                        | Sweden  | Utilities      | 6,945     | AS                        |
| Aug 2014 | CITIC Pacific Ltd             | China   | Finance        | 6,874     | IPO                        |
| Jul 2009 | Nuon NV                        | Netherlands | Utilities | 6,856     | PS                        |
| Jan 2009 | British Energy PLC            | United Kingdom | Utilities | 6,544     | PS                        |
| Dec 2010 | EnBW Energie Baden-Wurttemberg| France  | Utilities      | 6,260     | AS                        |
| Jan-Jul 2015 | Lloyds Banks               | United Kingdom | Finance | 6,141     | SEO                        |
| Mar 2012 | AIA Group Ltd                 | Hong Kong | Finance | 6,016     | SEO                        |
| Nov 2014 | National Commercial Bank      | Saudi Arabia | Finance | 6,000     | IPO                        |
| Mar 2012 | AIG                           | USA     | Finance        | 6,000     | IPO                        |
| Mar 2014 | BOE Technology Group Co Ltd   | China   | Services       | 5,996     | SEO                        |
| Oct 2009 | BPCE/Natixis                  | France  | Finance        | 5,935     | Repurch govt shs                  |
| Apr 2007 | China Citic Bank              | China   | Finance        | 5,900     | IPO                        |
| Jun 2010 | Areva T&D SAS                 | France  | Utilities      | 5,769     | AS                        |
| Apr 2013 | BB Seguridade Participacoes   | Brazil  | Finance        | 5,740     | IPO                        |
| Mar 2008 | China Railway Construction Corporation | China | Construction | 5,700     | IPO                        |
| Jan 2008 | China Coal Energy             | China   | Utilities      | 5,700     | IPO                        |
| Dec 2012 | General Motors                | USA     | Transportation | 5,500     | PS                        |
| Dec 2007 | Electricite’ de France        | France  | Utilities      | 5,461     | AT                        |
| Feb 2006 | Westinghouse Electric Plc (BNFL) | United Kingdom | Manufacturing | 5,395     | PS                        |
| Jul 2011 | NAMA Properties - assets sales| Ireland | Real Estate    | 5,250     | AS                        |
| Jun 2008 | LEG Landesentwicklungs         | Germany | Finance        | 5,225     | PS                        |
| Jan 2007 | Sampo Bank                    | Finland | Finance        | 5,156     | PS                        |
| Sep 2012 | Sberbank Rossii               | Russian Fed | Finance | 5,155     | PO                        |
| Sep 2013 | Lloyds Banking Group PLC      | United Kingdom | Finance | 5,109     | SEO                        |
| Sep 2009 | Metallurgical Corpor of China | China   | Manufacturing  | 5,100     | IPO                        |
| Apr 2013 | Botany Port, Port Kembla      | Australia-NW | Transportation | 5,019     | AS                        |
| May 2015 | Huatai Securities Co Ltd      | China   | Finance        | 5,000     | SEO-HK                    |
| Aug 2012 | AIG                           | USA     | Finance        | 5,000     | IPO                        |
| May 2012 | AIG                           | USA     | Finance        | 5,000     | IPO                        |
| Nov 2007 | Dubai Ports World             | UAE     | Maritime       | 5,000     | IPO                        |
| Feb 2007 | Ping An Insurance             | China   | Insurance      | 5,000     | IPO                        |

**Total**: 76 Transactions $712,686

*Sources: Privatization Barometer, Securities Data Corporation (SDC) New Issues and Mergers and Acquisitions files, and author’s search of various news media (principally Financial Times).*
Table 2: Summary of Recent Empirical Studies of Privatization’s Impact on Firm Performance

| Study                                                                 | Research question and methodology                                                                                                                                                                                                 | Summary of empirical findings and conclusions                                                                                                                                                                                                 |  |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| O’Toole, Morgenroth, Ha (Journal of Corporate Finance, 2016).        | Test for differences in investment efficiency of SOEs and private firms in Vietnam, and examine whether privatizing SOEs causes efficiency to change. Use structural model to test relation between Tobin’s Q and capital spending using a database of 23,120 observations of private firms (15,990 obs) and SOEs (7,130 obs) over 2001-2012. | Find that fully privatized firms and former SOEs that have been privatized and equitized with minority residual state shareholdings show positive links between Q and investment. This effect is even stronger for privatized companies than for always-private firms. Privatization and equitisation have improved capital allocation and increased economic efficiency. |  |
| Li, Meggison, Shen, Sun (Working paper, 2016). Do share issue privatisations really improve firm performance in China? | Use triple difference-in-difference (DDD) methodology to test whether Chinese share issue privatizations (SIPs) improve profitability post-sale, after accounting for negative effect of IPO listing. Overall privatization effect computed for 204 SIPs listed over 1999-2009 matched with comparable SOEs remaining state-owned, and listing effect derived by comparing performance of private IPOs with private companies that did not IPO. Perform robustness test with SOEs privatized by private sale (not IPO) versus SOEs remaining state-owned.  | Document a negative listing effect, since the profitability (measured as ROS and EBIT/Sales) of private companies declines significantly after IPO. After adjusting for negative listing effect, profitability of newly privatized companies increases significantly (by 2-3 percentage points). Capital spending and sales growth also improve significantly based on DDD tests. Positive privatization impact verified using alternate matching criteria, propensity score matching methods and other robustness checks. Strongest positive effects found comparing non-IPO privatizations with SOEs that remain state-owned. |  |
| Brown, Earle, Telegdy (Working paper, 2015). Where does privatization work? Understanding the heterogeneity in estimated firm performance effects. | Re-examines why reported effects of privatization on firm performance—profitability, efficiency, and growth—in former Soviet-bloc countries varies so much using long-panel data for 71,470 companies and 645,848 firm-year observations from Lithuania (over 1995-2006), Russia (1985-2005), Ukraine (1989, and 1992-2006), Hungary (1986-2005), and Romania (1992-2006). The regressions use a common set of dependent variables and estimation methods. | Estimated average privatization effects are significantly positive, about 5-12%, but these vary across countries and time periods. Find little systematic role for firm size, financial dependence, or technological complexity in explaining heterogeneity in privatization’s effectiveness, but find significant positive impacts for fraction privatized, sales to foreigners, sales after 2000, sales for cash (rather than vouchers), for better quality firms and in better macroeconomic and institutional environments. |  |
| Gan, Guo, Xu (Working paper, 2014). China’s decentralized privatization and change of control rights. | Using results from a 2006 survey of 3000 Chinese SOEs privatized in over 100 cities, study how city governments choose among different privatization methods and how differing methods yield different post-sale restructuring, performance, and ownership structures. Received 3,132 responses for 899 privatized firms, 475 non-privatized SOEs, and 1758 de novo private companies with data for 1998-2006. | Find that while privatization has substantially reallocated control rights in China the degree of residual state ownership and influence on corporate policies varies significantly. Fiscal and political constraints determine city governments’ decisions; those which are fiscally stronger and which face less political opposition to labor shedding choose sales to insiders (MBOs), which transfer control rights most completely and achieve greatest performance improvements. |  |
| Liao, Liu, Wang (Journal of Financial Economics, 2014). China’s secondary privatization: perspectives from the split-share structure reform. | Examine whether China’s split share structure reform of 2005-07 improved the operating performance and corporate governance of the 1,032 firms involved. The reform involved holders of non-tradable shares (NTS), mostly governments and state-owned financial institutions, negotiating with tradable share (TS) owners and agreeing on compensation to convert non-tradable into tradable shares. Market-based mechanism designed to better align incentives of two shareholder groups and allow state to sell heretofore sterile, illiquid stockholdings. | Find the expectation of privatization quickly boosted listed SOE output, profits, and employment, but did not change their operating efficiency or corporate governance. Performance improvements strongly correlate with state actors’ incentives to increase shareholder value. Median ratios of NTS to TS holdings similar for SOEs (633 companies) and non-SOEs (399) at beginning, 60.15% and 62.51%, and reform completed within two years. Shows that changing incumbent managements’ incentives can have strong positive effect on performance and that bringing in new managers is not required. |  |
| Authors | Title | Abstract |
|---------|-------|----------|
| Huang, Li, Ma, Qian (Working paper, 2014). | The political economy of corporate finance: Evidence from ‘re-nationalization’ in China. | Document large scale ‘re-nationalizations’ by Chinese local governments repossessing controlling stakes in previously privatized companies over 1999-2007. Examine 4,734 companies that were 100% state owned after 1998 and were subsequently privatized; 1,214 of these were re-nationalized after an average of two years. Ask why these firms were re-nationalized and what effect this had on performance. Find that companies located in provinces with newly appointed communist party leaders not affiliated with one of the dominant CPC factions are most likely to be re-nationalized. Process leads to lower profitability and labor productivity. While re-nationalization temporarily lowers unemployment in a province, it does not appear to have any long-run economic benefits. |
| Tan, Tian, Zhang, Zhao (Working paper, 2014). | Privatization and innovation: Evidence from a quasi-natural experiment in China. | Using difference-in-difference methodology and a sample of 13,986 firm-year observations over 2000-11, examine how Chinese privatizations affect firms’ innovation, measured by R&D spending and patent filings. To establish causality, exploit quasi-natural experiment created by China’s split share structure reform of 2005-07. Find that the expectation of secondary privatization (converting non-tradable, state-held shares into tradable shares) has a positive causal effect on firm innovation. Also show that better incentive alignment between controlling and minority shareholders, enhanced stock price informativeness, and improved risk sharing are all plausible mechanisms explaining why privatization improves performance. |
| Mohsni, Otchere, (Working paper, 2013). | Risk-taking behavior of privatized banks. | Examine how risk-taking behavior changes for 242 banks privatized in 42 countries over 1998-2007. Privatizing usually also involves removal of government guarantees. Employ both accounting (z-score, ROA, ROE volatility, ratio of NPL, solvency ratio) and market-based (interest rate risk, and total and idiosyncratic volatility) measures of risk. Bank risk-taking declines after privatization, but remains higher than that of their rivals. Ownership changes, rather than industry-wide factors, lead privatized banks to become more prudent, but high share fractions sold induce more risk-taking, as firms become more accountable to shareholders. Results are robust across all measures of risk. |
| Berkman, Cole, Fu (European Journal of Finance, 2012). | Improving corporate governance where the state is the controlling block holder: Evidence from China. | Examine changes in market value and accounting returns around announcements of 631 large block-share transfers over 1998-2002 among government agencies ("State Bureaucrats," 83 transfers), market-oriented SOEs ("MOSOEs," 308 transfers), and private investors ("Private Entities," 238 transfers). These transfers are large enough to result in true transfers of control. Bank risk-taking declines after privatization, but remains higher than that of their rivals. Ownership changes, rather than industry-wide factors, lead privatized banks to become more prudent, but high share fractions sold induce more risk-taking, as firms become more accountable to shareholders. Results are robust across all measures of risk. |
| Li, Wang, Cheung, Jiang (Review of Financial Studies, 2011). | Privatization and risk sharing: Evidence from the split share structure reform in China. | Using sample of 1,147 (of 1,254 total) listed Chinese companies involved in the split share structure reform process over 2005-07, study whether and how removal of market frictions associated with tradable and non-tradable share structure is associated with efficiency gains. Proxy for risk sharing is the idiosyncratic stock price risk from a market model estimation. Document significant benefits from improved risk improvements after reform. Also find that the compensation ratio (paid by NTS holders to TS holders) is positively associated with gains from risk sharing, the price impact, and the weak bargaining position of NTS holders (since speedy, arms-length, and complete reform mandated by government), while ratio is negatively associated with subsequent firm performance. |
| Dinc, Gupta (Journal of Finance, 2011). | The decision to privatize: Finance and politics. | Examines the influence of political and financial factors on the decision to privatize Indian SOEs over 1999-2003, specifically whether privatization is delayed in regions where the governing party faces strong competition from opposition. Also test whether privatization improves divested firm performance. Find that privatization significantly improves profitability for the 49 of 259 federal SOEs that were divested, and that more initially profitable SOEs and those with a lower wage bill were divested first. However, the government delays privatizing firms in regions where opposition parties are stronger, and no firm located in the home state of a minister in charge is ever privatized. |
| Chen, Firth, Xin, Xu (Journal of Financial and Quantitative Analysis, 2008). | Control transfers, privatization, and corporate performance: Efficiency gains in China’s listed companies. | Using a sample of 156 transfers of controlling stakes in listed Chinese SOEs, test for differential performance effects when control is transferred from state to private ownership (62 cases) or from private to state entities (94 cases) over 1996-2000. Examine both short-term stock returns and longer term operating performance. Most transfers involved cash trades of Document a significant performance improvement after a transfer of ownership control, but only when the new owner is a non-state entity (for state to private transfers). A major source of improvement is cost reduction, including declining labor costs. There are positive announcement-period abnormal stock returns for both types of |

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| Source                                                                 | Description                                                                                                                                                                                                 | Findings                                                                                                                                                                                                 | Note                                                                                                                                                                                                 |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wolf, Pollitt (Working paper, 2008). Privatising national oil companies: Assessing the impact on firm performance. | Empirically examine the impact of privatization on firm performance in the global oil industry using a dataset of 60 share issue privatizations by 28 national oil companies over 1977-2006. Test for operating, financial performance changes using Megginson, Nash, van Randenborgh (JF 1994) methodology. Also test whether performance improvements require that governments cede majority ownership. | Find that privatization is associated with significant and comprehensive performance improvements over 7-yr period (-3 to +3 yrs). ROS increases 3.6 percentage points, while real output (sales) and capital spending increase by 30% and 47%, respectively, and employment intensity declines by 35%. Most performance improvements realized before (in anticipation of) SIP, occur over time, level off after sale. Results verified with panel data regressions, and improvements achieved without governments ceding control. | The estimated privatization effect is larger (18-35%) in all countries. |
| Fan, Wong, Zhang (Journal of Financial Economics, 2007). Politically connected CEOs, corporate governance, and post-IPO performance of China’s newly partially privatized firms. | Manually collect CEO and board of director data for 790 IPOs of Chinese SOEs on Shenzhen and Shanghai Stock Exchanges over 1993-2001, and use this dataset to test whether privatized firms with politically connected CEOs perform worse than companies without connected CEOs. Almost 27% of CEOs of privatized firms are current or former government officials. | Show that companies with politically connected CEOs underperform those without by almost 18%, based on 3-year post-IPO stock returns, and have poorer earnings growth, sales growth, and changes in ROS. These firms are also more likely to appoint other bureaucrats than directors with relevant professional experience. | The estimated privatization effect is larger (18-35%) in all countries. |
| Gupta (Journal of Finance, 2005). Partial privatization and firm performance. | Examines whether partial privatizations (of less than 25% of stock) of 47 Indian SOEs over 1991-2002 can yield performance improvements comparable to those documented in other countries. Use sample with 2230 firm-year obs drawn from 339 SOEs owned by federal and state governments. | Even partial privatizations have positive impact on profitability, productivity, and investment of divested firms. Since government control is never threatened, benefits must be due to stock market monitoring and incentive-based compensation of firm managers. | The estimated privatization effect is larger (18-35%) in all countries. |
| Brown, Earle, Telegdy (Journal of Political Economy, 2006). The productivity effects of privatization: Longitudinal estimates from Hungary, Romania, Russia, and Ukraine. | Estimates the effect of privatization on multifactor productivity using comprehensive panel data over 1992-2002 on initially state-owned manufacturing firms in Hungary, Romania, Russia, and Ukraine. The total number of firms ever in the sample is 30,647 and there are 310,888 firm-year observations. They exploit the data's longitudinal dimension to control for pre-privatization selection and estimate long-run impacts. | Find a substantial positive effect of privatization in Romania, with a range of estimates from 15-50% (15% using preferred measure). Estimated effects also positive for Hungary, from 8-28% (8% preferred measure), and much lower but still significantly positive effects for Ukraine, in the 2-16% range (2% preferred measure). The estimated effects for Russia, which relied on voucher privatization, range from -5% to +14% (-3% preferred measure). The positive foreign privatization effect is larger (18-35%) in all countries. | The estimated privatization effect is larger (18-35%) in all countries. |
| Berger, Clarke, Cull, Klapper, Udell (Journal of Banking & Finance, 2005). Corporate governance and bank performance: A joint analysis of the static, selection, and dynamic effects of domestic, foreign, and state ownership. | Jointly analyze the static, selection, and dynamic effects of domestic, foreign, and state ownership on bank performance using data on 180 Argentine banks (with 2290 firm year observations) privatized during the 1990s—mostly after 1995. Show that state and local government ownership ceded sharply over period, while foreign ownership increased from 15.6% to 50.5% of total assets. State-owned banks (SOBs) showed poor long-term performance, especially those slated for privatization. | Even though worst performing SOBs were selected for privatization (selection effect), these banks dramatically improved performance post-sale (dynamic effect), although most of the measured improvement likely due to placing non-performing loans into residual entities, yielding “good” privatized banks. In static analysis, find that SOBs have poorer long-term average performance than domestically or foreign-owned private banks, and SOBs have strikingly higher non-performing loan ratios, perhaps reflecting their differing goals. | The estimated privatization effect is larger (18-35%) in all countries. |
| Study                                                                 | Research question and methodology                                                                 | Summary of empirical findings and conclusions                                                                 |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Santos (Working paper, 2016). Privatisation prices: The role of prior restructuring and emerging private ownership structure. | Uses a new dataset of companies privatized in Brazil over 1991-2004, covering 118 transactions, to study the impact of restructuring policies before sale and resulting ownership structure after sale on privatization prices. | After controlling for endogeneity, find that replacing the CEO is associated with higher net prices, but efficiency measures such as voluntary downsizing do not. Other pre-sale restructuring, such as debt absorption or mandatory downsizing, reduce net prices. Prices are also sensitive to competition in auction process (+), time to sale (-), post-sale ownership concentration (+), and employee ownership levels (-). |
| Belloc, Nicita, Sepe (Journal of Comparative Economics, 2014). Disentangling liberalization and privatization policies: Is there a political trade-off? | Empirically investigate political determinants of liberalization and privatization policies in six network industries in 30 OECD countries over 1975-2007. Specifically ask whether left- or right wing governments favor liberalization over privatization or vice versa. Have 4774 firm-year observations in dataset. | Find that both right-wing (RW) and left-wing (LW) governments implement liberalization and privatization during the neo-liberal era under study, though privatization rate is higher than liberalization rate under RW governments, and vice versa under LW. Conclude that political cleavages still affect pro-market reforms, particularly the combination of privatization and liberalization. |
| Dinç, Gupta (Journal of Finance, 2011). The decision to privatize: Finance and politics. | Examines the influence of political and financial factors on the decision to privatize Indian SOEs over 1999-2003, specifically whether privatization is delayed in regions where the governing party faces strong competition from opposition. Also test whether privatization improves divested firm performance. | Find that privatization significantly improves profitability for the 49 of 259 federal SOEs that were divested, and that more initially profitable SOEs and those with a lower wage bill were divested first. However, the government delays privatizing firms in regions where opposition parties are stronger, and no firm located in the home state of a minister in charge is ever privatized. |
| Chong, Guillen, López-de-Silanes (Journal of Public Economics, 2011). Privatization and labor policies. | Using a new database constructed by randomly selecting 400 companies privatized globally over 1982-2002, analyze labor retrenchment programs before privatization, their effects on prices paid, and rehiring pursued by new private owners. Sample includes data on 308 privatizations in 84 countries, representing 97.2% of privatizations by sales revenue. | Find evidence of skimming and adverse selection, where the most productive workers (those with the best outside opportunities) take the severance package offered under voluntary retrenchment programs, leaving firms saddled with the least productive workers. Some downsizing programs may lead to a higher frequency of post-privatization re-hiring. Only skill-biased retrenchment programs are associated with (marginally) higher net privatization prices and minimal re-hiring, but these also have the highest political and social costs. |
| Subramanian, Meffrinson (Working paper, 2011). Employment protection laws and privatization. | Examine whether stringent employment protection laws (EPLs) hinder privatization. Use privatization data from 14 EU countries and within-country variation in EPLs and employ fixed-effects panel-data regression and triple difference-in-difference estimation techniques at the country, year level. Also use industry-level measures for the US as an instrument to alleviate endogeneity concerns. | Find that stringent EPLs significantly deter privatization, and do so proportionately more in industries with high employee separation rates and proportionately less in industries with high employee hiring rates. Using US-level measures as instruments, find EPLs inhibit privatization disproportionately more in less productive industries. Results are robust to controlling for changes in a country’s government (right to left, or vice versa), trade liberalizations, and country-level economic growth. |
Figure 2. Growth in Estimated Assets Under Management in Sovereign Wealth Funds

Source: Sovereign Wealth Fund Institute, reported in Simon Clark, Mia Lamar, and Bradley Hope, “The Trouble with Sovereign Wealth Funds,” Wall Street Journal (December 22, 2015).
| Study                                                                 | Research question and methodology                                                                 | Summary of empirical findings and conclusions                                      |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Holland (Working paper, 2016). Are all government owners viewed the  | Employs standard event-study methods to examine shareholder wealth effects associated with different | Government investors are not viewed by the market as a homogeneous group. Instead, |
| same? Evidence from government acquisitions of publicly traded firms. | types of government investors and varying levels of political interference using a sample of 2,118  | market investors differentiate their expectations of government investment targets   |
|                                                                      | government equity investments in 71 countries involving 2,118 transactions in 1,670 target firms   | based on the government investor’s implied level of political interference. Those    |
|                                                                      | over 1987-2013. Investor groupings are: political group (national governments, treasuries,         | most likely to have political motivations have negative value effects on target     |
|                                                                      | industrial and finance ministries, central bank, regulatory boards), local governments (          | firms, while other government investors have positive effects, similar in size to   |
|                                                                      | regional, city, municipal) and national funds.                                                  | other non-government investors. The negative effects are stronger for investments  |
|                                                                      |                                                                                                   | in domestic firms, in more regulated industries, by left-wing governments, and for   |
|                                                                      |                                                                                                   | large share purchases. Post-acquisition stock performance also weaker for these     |
|                                                                      |                                                                                                   | targets.                                                                           |
| Berkman, Cole, Fu (European Journal of Finance, 2012). Improving    | Examine changes in market value and accounting returns around announcements of 631 large block-    | All large block-share transfers associated with significantly positive              |
| corporate governance where the state is the controlling block holder: | share transfers over 1998-2002 among government agencies (“State Bureaucrats,” 83 transfers),     | announcement period abnormal returns, but the excess returns are significantly     |
| Evidence from China.                                                  | market-oriented SOEs (“MOSOEs,” 308 transfers), and private investors (“Private Entities,”       | higher for transfers from state owners to private owners (33.6%) than between      |
|                                                                      | 238 transfers). These transfers are large enough to result in true transfers of control.         | state owners (20.9% and 26.6%). The annual return on assets is also over 300bp      |
| Karolyi, Liao (Working paper, 2011). What is different about         | Study 4,026 cross-border acquisitions over 1998-2008, worth $434 bn, that were led by government-    | higher over two years for state-to-private transfers than the reverse.              |
| government controlled acquirers in cross-border acquisitions?        | controlled acquirers, and compare to 127,786 similar acquisitions worth $9.04 tr made by private   |                                                                                     |
|                                                                      | acquirers and 733 deals worth $158 bn made by SWFs and other state-owned funds. Test whether     |                                                                                     |
|                                                                      | state-controlled acquirers and SWFs/other funds selected targets in different industries or with  |                                                                                     |
|                                                                      | different firms’ characteristics than did private acquirers.                                     |                                                                                     |
| Jiang, Lee, Yue (Journal of Financial Economics, 2010). Tunneling    | Investigate a particularly brazen for of corporate abuse, in which controlling shareholders of    | Find surprisingly small, though often significant, differences between               |
| through intercorporate loans: The China experience.                  | listed Chinese companies use intercorporate loans to siphon off billions of RMB during 1996-2006. | state-controlled acquirers’ and private acquirers’ investment patterns and          |
|                                                                      | Sample includes 1377 public companies listed on SZSE or SHSE during 1994-2004, with 7557 firm-    | preferences, but find somewhat larger differences with SWFs/other state funds,     |
|                                                                      | year observations.                                                                               | SWFs/other state funds pursue larger targets with higher growth options, and are   |
|                                                                      |                                                                                                   | more deterred by high insider or institutional share ownership. Conclude there is   |
|                                                                      |                                                                                                   | little reason for target-country policy-makers to discriminate against state-owned  |
|                                                                      |                                                                                                   | vs private acquirers.                                                             |
| Chen, Firth, Xin, Xu (Journal of Banking and Finance, 2009). Does    | By tracing the identities of large bloc shareholders in listed Chinese over 1999-2004, examine    | Show that tunneling was significantly worse for companies controlled by regional    |
| the type of ownership matter? Evidence from China’s listed          | whether there are significant efficiency differences between those controlled by state asset     | and local governments than the national government. The practice only ceased when   |
| companies.                                                           | management bureaus (SAMBs), SOEs controlled by the central government (SOECGs), SOEs controlled  | eight government ministries issued a joint declaration mandating the process end and |
|                                                                      | by local governments (SOELGs), and private investors. Sample has 6113 firm-year observations.    | the loans be repaid. Among SOEs, the problem was significantly worse for companies   |
|                                                                      |                                                                                                   | controlled by regional and local governments than the national government.         |
|                                                                      |                                                                                                   |                                                                                     |

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| Authors | Title and Source | Summary |
|---------|-----------------|---------|
| Giannetti, Laeven (Review of Financial Studies, 2009). | Pension reform, ownership structure, and corporate governance: Evidence from a natural experiment. | Examine whether and how pension reform in Sweden improved corporate monitoring by the large state and private pension funds that the reform created. Construct database with biannual information on the top 200 shareholders of listed companies over December 1999-June 2005. They find that listed firm valuations improve if public and large independent private pension funds increase their shareholdings. Public pension funds are especially likely to be named to represented on firms’ key nominating committees and thus to influence choice of directors. Only pension funds large enough to acquire significant blocs and independent from industrial groups and financial institutions appear able to enhance firm valuation. |
| Oum, Adler, Yu (Journal of Air Transport Management, 2006). | Privatization, corporatization, ownership forms and their effects on the performance of the world’s major airports. | Measure and compare the productive efficiency and profitability among airports owned and operated by (1) government departments; (2) 100% government owned corporations; (3) independent airport authorities; (4) mixed enterprises with government majority ownership and (5) mixed enterprises with private majority private ownership using dataset of major North American, European, Asia-Pacific airports over 2000-01. Find (1) strong evidence that airports with majority government ownership and those with multi-level government ownership are significantly less efficient than those with private majority ownership; (2) “private” airports achieve significantly higher operating profits than all others, while government and mixed-ownership airports the worst; (3) private airports achieve much higher proportion of revenues (56%) from non-airport services; and (4) conclude that public-private partnerships (PPP) should be avoided. |
Table 5: Summary of Recent Empirical Studies of the Determinants of the Level of State Ownership

| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|-----------------------------------|-----------------------------------------------|
| Carney, Child (Journal of Financial Economics, 2013). Changes to the ownership and control of East Asian corporations between 1996 and 2008: The primacy of politics. | Investigate changes to the ownership and control of East Asia’s largest companies in 1996 and 2008. Use data for 1386 publicly traded companies at the end of 2008, supplemented, with existing data on 1606 companies at the end of 1996 to test whether family ownership and control is still dominant in nine Southeast Asian countries. | Document that family control remains the most common form of ownership, though clear changes have occurred for nearly all countries, with the State generally increasing its ownership in both domestic and foreign companies—especially in Hong Kong, Malaysia, and Thailand. Widely held ownership has also gained market share in many countries. |
| Borisova, Brockman, Salas, Zagorchev (Journal of Banking & Finance, 2012). Government ownership and corporate governance: Evidence from the EU. | Examine whether the general increase in state ownership of European public companies precipitated by the global financial crisis that began in 2008 has led to increasing or decreasing quality of corporate governance in the targeted firms. Draw on a sample of 372 companies in 14 EU countries over 2003-08 and use RiskMetrics Corporate Governance Quotient (CGQ) and its six sub-components as measures of governance quality. | Find that increased state equity ownership is associated with significantly lower governance quality in targeted firms. Also show that while government intervention is negatively related to governance quality in civil law countries, it is positively related in common law countries. Find that the preferential voting rights of golden shares are especially damaging to governance quality. |
| Boubakri, Cosset, Guedhami, Saffar (Journal of Corporate Finance, 2011). The political economy of residual state ownership in privatized firms: Evidence from emerging markets. | Examine the political determinants of residual state ownership for 221 privatized companies in 27 emerging markets over 1980-2001. Investigate residual state ownership using (1) direct share ownership; (2) ultimate ownership—which as through pyramids; (3) golden shares; and (4) political connections. Test whether political factors, especially the political system (parliamentary vs presidential) and degree of constraints on the executive, influence residual ownership. | Residual state ownership is higher in parliamentary than in presidential systems and where the president is more constrained. On average, governments retain 33.5% stakes in privatized companies, with the retained ownership much higher following share issue privatizations than following asset sales. Unlike in OECD countries, they find there is no significant difference in how much ownership left and right wing governments retain in emerging market countries. |
| Avsar, Karayalcin, Ulubasoglu (Working paper, 2011). State-owned enterprises, political ideology, and redistribution. | Using cross-country data from 1978-1991, examine whether left wing governments are more likely to establish or expand SOEs than are center or right-wing governments, and whether left wing governments are associated with greater redistribution through SOEs in more unequal societies. | As expected, find that left wing governments are much more likely to establish or expand SOEs than are center or right-wing governments. Left-wing governments are also associated with greater redistribution through SOEs in more unequal societies, but this becomes much harder to achieve in societies with high levels of inequality. |
| Bortolotti, Faccio (Review of Financial Studies, 2009). Government control of privatized firms. | Study changes in government control of privatized firms in the OECD during the 1990s and ask whether privatization is really as complete as it appeared after the largest wave of privatizations in history. | Find governments retained 62.4% of “privatized” firms in 2000. Governments tended to retain large holdings in civil law countries, but use golden shares in common law ones. When two combined, found no connection between legal system and extent of government control. |
| Chernykh (Journal of Financial Economics, 2008). Ultimate ownership and control in Russia. | Examine who actually owns and controls Russian publicly traded companies in 2000-02, most of which were “privatized” earlier. Asks if weak legal disclosure requirements significantly impact corporate ownership and control structures. | Finds that most listed Russian companies are in fact controlled either by the state or by anonymous private owners, and that both groups exercise control through extensive use of pyramids. Though holders are anonymous, most market participants in fact know their identities. |
| Boubakri, Cosset, Guedhami (Journal of Financial Economics, 2005). Postprivatization corporate governance: The role of ownership structure and investor protection. | Using a sample of 209 privatized firms from 25 emerging markets and 14 developed countries over 1980-2001, examine how ownership and control evolve after initial divestment, whether private ownership increases after the initial sale and which investor groups increase their share ownership fractions. | Show that governments relinquish control over time to local institutions, individuals, and foreign investors, and that both groups exercise control through extensive use of pyramids. Though holders are anonymous, most market participants in fact know their identities. |
| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|-----------------------------------|-----------------------------------------------|
| Borisova, Fotak, Holland, Megginson (Journal of Financial Economics, 2015). Government ownership and cost of debt: Evidence from government investments in publicly traded firms. | Using a sample of 6,671 credit spreads from 1,723 bonds issued by 244 firms from 43 countries over 1991-2010, examine the impact that state ownership (including 1,060 firm-years with SWF investment) of a firm’s stock has on that company’s cost of debt, as measured by the yield spread above treasuries. Examine for full sample period and after 2008 Financial Crisis. | In the full 1990-2010 sample, they find that state ownership (0/1) is associated with significantly higher (40 bp) cost of debt, and this is even larger during pre-crisis period, 1990-2007. From 2008 on, basic cost of debt rises sharply, and state ownership becomes associated with significantly lower (18bp) cost of corporate debt. SWFs specifically are associated with a higher cost of debt both before (46.7 bp) and after (26.1 bp) the Crisis begins. |
| Holland (Working paper, 2016). Are all government owners viewed the same? Evidence from government acquisitions of publicly traded firms. | Employs standard event-study methods to examine shareholder wealth effects associated with different types of government investors and varying levels of political interference using a sample of government equity investments in 71 countries involving 2,118 transactions in 1,670 target firms over 1987-2013. Investor groupings are: political group (national governments, treasuries, industrial and finance ministries, central bank, regulatory boards), local governments (regional, city, municipal) and national funds. | Government investors are not viewed by the market as a homogeneous group. Instead, market investors differentiate their expectations of government investment targets based on the government investor’s implied level of political interference. Those most likely to have political motivations have negative value effects on target firms, while other government investors have positive effects, similar in size to other non-government investors. The negative effects are stronger for investments in domestic firms, in more regulated industries, by left-wing governments, and for large share purchases. Post-acquisition stock performance also weaker for these targets. |
| Cheng-Han, Puchniak, Varottil (Working paper, 2015). State-owned enterprises in Singapore: Historical insights into a potential model for reform. | Discusses how Singapore’s historical and competitive political evolution has shaped the country’s unique and successful business culture and structure of corporate ownership. The State long played a leading role in the governance, but not management of leading enterprises, and the authors discuss what parts of this culture could be transplanted abroad. | With no natural resources, effective corporate governance and non-corrupt strategic economic direction by state-owned enterprises and funds has been key to Singapore’s success. The beginnings of significantly expanded and more intrusive State role in the economy can be traced to Great Britain’s military withdrawal in the 1960s and the need to compete in active democratic elections has reinforced the need to promote growth and curb self-interested official behavior. |
| Boubakri, El Ghoul, Guedhami, Megginson (Working paper, 2015). The market value of government ownership. | Use Carney and Child (JFE 2013) dataset to identify ultimate controlling shareholdings, as well as ultimate cash flow (ownership) and voting (control) rights for 956 publicly traded companies in nine East Asian countries. Have 5301 firm-year observations over 2005-10. Investigate the effects of governments as controlling shareholders on market valuations. | Find strong, robust evidence that government-controlled firms (GCFs) exhibit higher market valuations than non-GCFs. The benefits of control extend to closely held firms where the government is the second largest shareholder. These effects hold both before and during the global financial crisis, and the quality of a country’s institutional environment influences the effect on valuation. |
| Borisova, Brockman, Salas, Zagorchev (Journal of Banking & Finance, 2012). Government ownership and corporate governance: Evidence from the EU. | Examine whether the general increase in state ownership of European public companies precipitated by the global financial crisis that began in 2008 has led to increasing or decreasing quality of corporate governance in the targeted firms. Draw on a sample of 372 companies in 14 EU countries over 2003-08 and use the RiskMetrics Corporate Governance Quotient (CGQ) and its six sub-components as measures of governance quality. | Find that increased state equity ownership is associated with significantly lower governance quality in targeted firms. Also show that while government intervention is negatively related to governance quality in civil law countries, it is positively related in common law countries. Find that the preferential voting rights of golden shares are especially damaging to governance quality. |
| Author(s) | Title | Description |
|----------|--------|-------------|
| Liao, Young | *Emerging Markets Review*, 2012 | The impact of residual government ownership in privatized firms: New evidence from China. Investigate the determinants of residual government ownership and the impact this has on post-privatization performance of Chinese companies. Employ a panel dataset of 2775 firm year observations of 514 listed companies over 1999-2004. Contrary to the “political interference hypothesis,” find that residual state shareholdings have a significantly positive impact on Tobin’s Q. Show that when risk of expropriation is high, government shareholdings can add value to firms by signaling State’s commitment to privatization. Find that government shareholdings are more likely to be present in small firms, while large companies are more likely to have politically connected CEOs on their boards. |
| Karolyi, Liao | Working paper, 2011 | What is different about government controlled acquirers in cross-border acquisitions? Study 4,026 cross-border acquisitions over 1998-2008, worth $434 bn, that were led by government-controlled acquirers, and compare to 127,786 similar acquisitions worth $9.04 tr made by private acquirers and 733 deals worth $158 bn made by SWFs and other state-owned funds. Test whether state-controlled acquirers and SWFs/other funds selected targets in different industries or with different firms’ characteristics than did private acquirers. Find surprisingly small, though often significant, differences between state-controlled acquirers’ and private acquirers’ investment patterns and preferences, but find somewhat larger differences with SWFs/other state funds. SWFs/other state funds pursue larger targets with higher growth options, and are more deterred by high insider or institutional share ownership. Conclude there is little reason for target-country policy-makers to discriminate against state-owned vs private acquirers. |
| Gul, Kim, Qiu | *Journal of Financial Economics*, 2010 | Ownership concentration, foreign shareholding, audit quality, and stock price synchronicity: Evidence from China. Investigate the effects of largest shareholder ownership concentration, foreign (and state) ownership, and audit quality on the amount of firm-specific information incorporated into stock prices, measured as stock price synchronicity, of Chinese listed companies over 1996-2003. Synchronicity defined as the ratio of common return variation to total return variation, which is equivalent to $R^2$ of the market model used. Show that synchronicity is a concave function of ownership by the largest shareholder with its maximum at about 50%, and find that synchronicity is higher when the largest shareholder is government related. Also find that foreign ownership and auditor quality are inversely related to synchronicity, and that the amount of earnings information reflected in stock returns is lower for firms with high synchronicity. |
| Calomiris, Fisman, Wang | *Journal of Financial Economics*, 2010 | Profiting from government stakes in a command economy: Evidence from Chinese asset sales. Examine the market reaction to two unexpected announcements relating to the sale of government-owned shares in China. One announcement, in July 2001, surprised investors by implying the government was planning to allow heretofore non-tradable shares to be sold, while the second announcement in June 2002 revoked this policy. Able to abstract from possible liquidity effect by examining market reactions to B shares, which are separate from the A shares involved in the announcement. Sample consists of 107 B-share firms listed on SHSE and SZSE. Find a negative effect of government ownership on returns at the July 2001 announcement date (indicating investor displeasure at reduced government ownership) and a symmetric positive effect from the policy’s cancellation 11 months later. Suggest that the results from the absence of a Chinese political transition to accompany economic reforms, so that the benefits of political ties outweigh the efficiency costs of government shareholdings. Companies managed by former government officials have positive ARs, suggesting personal ties can substitute for state share ownership as a source of connections. |
| Giannetti, Laeven | *Review of Financial Studies*, 2009 | Pension reform, ownership structure, and corporate governance: Evidence from a natural experiment. Examine whether and how pension reform in Sweden improved corporate monitoring by the large state and private pension funds that the reform created. Construct database with biannual information on the top 200 shareholders of listed companies over December 1999-June 2005. They find that listed firm valuations improve if public and large independent private pension funds increase their shareholdings. Public pension funds are especially likely to be named to represent on firms’ key nominating committees and thus to influence choice of directors. Only pension funds large enough to acquire significant blocs and independent from industrial groups and financial institutions appear able to enhance firm valuation. |
| Chen, Firth, Xu | *Journal of Banking and Finance*, 2009 | Does the type By tracing the identities of large bloc shareholders in listed Chinese over 1999-2004, examine whether there are significant efficiency differences between those controlled by state asset Find that the operating efficiency of Chinese listed companies varies across types of controlling shareholders. SOECG controlled firms are most efficient; private investor-controlled firms are the least efficient; |
| Study                                                                 | Overview                                                                                     | Findings                                                                                                                                                                                                 |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| of ownership matter? Evidence from China’s listed companies.        | management bureaus (SAMBS), SOEs controlled by the central government (SOECGs), SOEs controlled by local governments (SOELGs), and private investors. Sample has 6113 firm-year observations, and private investor controlled firms are 20.3%. The overall median largest blocholding is 42.61%. | and SOELC controlled firms are in the middle. Authors predicted that privately owned firms would not necessarily be most efficient, since different types of Chinese owners will have different objectives and motivations. |
| Lin, Su (Journal of Corporate Finance, 2008). Industrial diversification, partial privatization and firm valuation: Evidence from publicly listed firms in China. | Investigate the relationship between industrial diversification, state versus private ownership, and firm valuation for 816 listed Chinese companies during 2000-2002. Also test whether the effect of diversification on firm value is related to ownership structure—including state ownership. | Find that state and legal ownership is negatively related to firm value for most groupings. State-controlled multi-segment firms have significantly lower Tobin’s Q than multi-segment private firms, and government controlled diversified companies are significantly less valuable than non-government controlled diversified firms. While diversification is positively related to value for all listed Chinese companies, diversification’s benefits are much reduced for state controlled firms where the political costs of tunneling and expropriation may be especially high. |
| Caprio, Laeven, Levine (Journal of Financial Intermediation, 2007). Governance and Bank Valuation. | Assesses the impact of the ownership structure of banks and shareholder protection laws on bank valuations while controlling for differences in bank regulations. Build and use a database on ownership structure, valuation, and country and bank-specific data for 244 publicly listed banks in 44 countries in 2001, accounting for 83% of total banking system assets in those countries. | Except in a few countries with very strong shareholder protection laws, banks are not widely held. Rather, families or the State control banks. Also find that larger cash-flow rights by the controlling owner boost valuations; (2) stronger shareholder protection laws increase valuations, and (3) greater cash-flow rights mitigate the adverse effects of weak shareholder protection laws on valuations. The separate effect of state ownership on valuation is negative but insignificant. |
| Ang, Ding (Journal of Multinational Financial Management, 2006). Government ownership and the performance of government-linked companies: The case of Singapore. | Investigate the governance structure of government-linked companies (GLCs) in Singapore under the ownership/control structure of Temasek Holdings, which typically owns substantial cash flow rights but disproportional control rights and exercises no operational control. Study Singaporean GLCs (between 9-19, depending upon year) and non-GLCs (68-204) over 1990-2000. | Show that Singaporean GLCs have higher valuations (Tobin’s Q, stock returns, ROE and other ratios) and better corporate governance than the control group of non-GLCs, and these results hold even after controlling for firm-specific characteristics such as profitability, leverage, firm size, and foreign ownership. |
| Wei, Xie, Zhang (Journal of Financial and Quantitative Analysis, 2005). Ownership structure and firm value in China’s privatized firms: 1991-2001. | Investigate the relation between ownership structure and firm value across a sample of 5,284 firm-years of China’s partially privatized non-financial SOEs from 1991-2001. Use Tobin’s Q as a valuation metric and test for the endogeneity of ownership. | Find that state and institutional shareholdings are significantly negatively related to Tobin’s Q, and that significant convex relations exist between Q and state shares, as well as between Q and institutional shares. Also find foreign ownership is significantly positively related to Q, and that Q and state/foreign ownership are not jointly determined. |
Table 7: Summary of Recent Empirical Studies of Relative efficiency of State versus Private Ownership

| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|-----------------------------------|---------------------------------------------|
| Chen, Jiang, Ljungqvist, Lu, Zhou (Working Paper, 2015). State capitalism vs. private enterprise. | Using highly granular data on within-group capital transfers within 321 Chinese business groups over 2004-13, study the efficiency of internal capital markets at state controlled and privately owned groups. Their empirical models estimate the extent to which a given business group’s internal capital allocations to member companies correlate with that company’s investment opportunity set. Conjecture that capital allocations at the 230 state controlled groups (which control 660 listed firms) will reflect the (political) career objectives of their CEOs, whereas allocations in the 91 private groups (which control 166 listed companies) will not. | Document stark differences between net capital allocation patterns of state controlled groups (SCGs) and privately owned groups (POGs): while POGs allocate more capital to units with better investment opportunities (higher Tobin’s Q), SOGs do the opposite. Minority shareholders at SOGs suffer as a result. Show that promotion for SOG chairmen depends not on increasing profitability, but on avoiding layoffs. Consistent with career motivations, SOG capital allocations are used to prop up large and struggling employers, but only if the CEO has a realistic chance of being promoted and if the cost of self-interested behavior is not too high. |
| Milhaupt, Zheng (Georgetown Law Journal, 2015). Beyond ownership: State capitalism and the Chinese firm. | Although Chinese state capitalism has been treated as essentially synonymous with SOEs, authors argue that drawing a sharp distinction between SOEs and privately owned enterprises (POEs) misperceives the reality of China’s institutional environment and its impact on the formation and operation of large enterprises of all types. Gather data to assess assertion that the Chinese state has less control over SOEs and more control over POEs than its direct ownership interest in these firms suggests—and that this system imposes large efficiency and distributional costs on Chinese economy. The State-Owned assets Supervision and Administration Commission (SASAC) routinely rotates senior executives among business groups and coordinates policy among sectoral companies. | Discuss how large, successful firms—regardless of ownership type—exhibit substantial similarities in areas commonly thought to distinguish SOEs and POEs: market dominance, receipt of state subsidies, proximity to state power, and execution of the state’s policy objectives. Chinese state control associated with state capture, meaning large firms of all types survive and prosper because they foster connections to state power and obtain state-generated rents. Antitrust enforcement virtually non-existent, and state collects very little or no dividends from SOEs—and recycles most of what it does collect back as subsidies. One major source of state-generated rents is access to financing from state-owned banks; another is pervasive state-sanctioned monopolies of key industries. |
| Hartley, Medlock (Energy Journal, 2013). Changes in the operational efficiency of national oil companies. | Using data from 61 oil companies from 2001-09, examine the evolution of revenue efficiency of national oil companies (NOCs) and shareholder owned oil companies (SOCs) and test whether SOCs are more efficient than NOCs and whether partial privatization (pNOC) improved relative efficiency and growth rates. Use two sets of relative inefficiency measures, data envelope analysis (DEA) and Malmquist’s measure of annual productivity changes and parametric frontier analysis (SFA). Most companies (34) always SOC; ten always NOC, and 17 mixed (pNOC). | Find that NOCs generally less efficient than SOCs, but their efficiency increased faster than SOCs’ over decade 2001-09. Also find that partial privatization increases operational efficiency and weaker evidence that M&As increased efficiency of merging firms. Both DEA and SFA, which are highly correlated, documented increased relative efficiency growth for NOCs and partially privatized firms. SFA suggests that government ownership tended to encourage over-employment. Average DEA scores for SOC (0.771), NOC (0.586), and partially privatized NOCs (0.668). |
| Li, Liu, Wang (Working paper, 2012). A model of China’s state capitalism. | Develop a theoretical model to analyze a hallmark feature of China’s state capitalism—the state controlling the economy in a vertical economic structure. SOEs monopolize key industries and markets in the upstream, whereas downstream industries are generated rents. Antitrust | Theoretical model shows why this unique vertical structure, when combined with openness and labor abundance, can explain two puzzling facts about China’s economy: (1) that SOEs outperformed private firms during the 2000-09 decade, whereas the opposite was true during the 1990s [and is increasingly true again since 2010]; and (2) |
| Source / Title                                                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eller, Hartley, Medlock (*Empirical Economics*, 2011). Empirical evidence on | Test the relative efficiency of private vs state ownership in the global petroleum industry by applying data envelope analysis (DEA) and Malmquist’s measure of annual productivity changes and parametric stochastic frontier analysis (SFA) to a panel of 78 oil companies, including ten of the 12 OPEC national oil companies (NOCs), for year 2004. Use revenue as a measure of output, to capture effects of forced subsidization of domestic energy prices.                                                                                                                                                                                                 |
| the operational efficiency of national oil companies.                       | With few exceptions, find that NOCs are less efficient than shareholder owned oil companies (SOCs). Much of this inefficiency can be explained by different structural and institutional features—and perhaps differing objectives for NOCs and SOCs. Governments favor domestic consumers and NOC employees, and thus force NOCs to pursue economically sub-optimal pricing policies.                                                                                                                                                                                                                                           |
| Guriev, Kolotilin, Sonin (*Journal of Law, Economics, and Organizations*, 2009). | Study global nationalizations in the oil industry during 1960-2006, and assess which factors make nationalization more likely. The largest wave of nationalizations occurred after the first oil price shock of 1973-74, but have also picked up recently. Also consider effect of interaction between state and foreign ownership on nationalization likelihood.                                                                                                                                                                                                                                                                          |
| Determinants of nationalization in the oil sector: A theory and evidence from | Show, both theoretically and empirically, that governments are more likely to nationalize when oil prices are high and political institutions are weak. Even though nationalizations are economically inefficient, they do occur when oil prices are high. These results hold even with country fixed effects.                                                                                                                                                                                                                                                                       |
| panel data.                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Wolf, (*Energy Policy*, 2009). Does ownership matter? The performance and    | Investigates the existence of ownership effects in the global oil and gas industry, specifically whether there are systematic performance and efficiency differentials between national oil companies (NOCs) and privately owned international oil companies (IOC). Dataset covers the 50 largest oil companies over 1987-2006, so 1000 firm-year observations. 87 countries represented in the dataset.                                                                                                                                                                                                                                                                                                                       |
| efficiency of state oil vs. private oil (1987-2006).                       | Using panel data regression analysis, show that NOCs produce significantly lower annual percentage of upstream (exploration and production) revenues—but also concludes this is a poor measure of efficiency. Do show that NOCs significantly under-perform private-sector IOCs in terms of output efficiency and profitability, so state ownership comes at an economic cost. The number of fully state-owned NOCs declined from 26-18 over study period, while number of mixed ownership (partially privatized) firms rose from 4 to 11.                                                                                                                                                           |
| Oum, Adler, Yu (*Journal of Air Transport Management*, 2006). Privatization,  | Measure and compare the productive efficiency and profitability among airports owned and operated by (1) government departments; (2) 100% government owned corporations; (3) independent airport authorities; (4) mixed enterprises with government majority ownership and (5) mixed enterprises with private majority private ownership using dataset of major North American, European, Asia-Pacific airports over 2000-01.                                                                                                                                                                                                                       |
| corporatization, ownership forms and their effects on the performance of    | Find (1) strong evidence that airports with majority government ownership and those with multi-level government ownership are significantly less efficient than those with private majority ownership; (2) “private” airports achieve significantly higher operating profits than all others, while government and mixed-ownership airports the worst; (3) private airports achieve much higher proportion of revenues (56%) from non-airport services; and (4) conclude that public-private partnerships (PPP) should be avoided.                                                                                                                                 |
| the world’s major airports.                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Berkowitz, Semikolenova (Working paper, 2005). Privatization with government | Argue that in the privatization of Russia’s crude oil sector during 1994-2003 the Russian federal government both retained monopoly control over the transport of crude oil onto world markets and also obtained substantial representation on some oil company boards. Assess whether the government exploited this privileged position to favor state owned and connected firms and measure the costs this policy imposed on economy.                                                                                                                                                                                                                                               |
| control: Evidence from the Russian oil sector.                              | Show that the government did in fact used its control over scarce (and highly prized) export transport capacity to provide privileged access to favored companies, and that this system detracted significantly from economic efficiency. Fully private companies had to be much more productive than state-influenced companies (SICs) to receive comparable access to world markets. SICs had preferential access to higher capacity routes, and allocation of route capacity was sensitive to transport costs only in the state-influenced sector. Over time, state ownership in the Russian oil sector declined, but its influence did not. |
Source: Stacy L. Eller, Peter R. Hartley, Kenneth B. Medlock III, 2011. Empirical evidence on the operational efficiency of national oil companies. *Empirical Economics* 40, 623-643.
| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|-----------------------------------|-----------------------------------------------|
| O'Toole, Morgenroth, Ha (Journal of Corporate Finance, 2016). Investment efficiency, state-owned enterprises and privatization: Evidence from Viet Nam in transition. | Tests for differences in investment efficiency of SOEs and private firms in Vietnam, and examines whether privatizing SOEs causes efficiency to change. Use structural model to test relation between Tobin’s Q and capital spending using a database of 23,120 observations of private firms (15,990 obs) and SOEs (7,130 obs) over 2001-2012. | Find no evidence of investment spending being linked to marginal Q for SOEs, but find positive and significant relation for private firms. Fully privatized firms and former SOEs that have been privatized and equitized with minority residual state shareholdings show positive links between Q and investment. This effect is even stronger for privatized companies than for always-private firms. |
| Jaslowitzer, Megginson, Rapp (Working paper, 2016). Disentangling the Effects of State Ownership on Investment – Evidence from Europe. | Using a matched panel of 624 EU companies with 5,272 firm year observations over 1997-2013, investigate the relation between state ownership and corporate investment. Also empirically differentiate between multiple theoretical channels of influence. | Overall, find that ownership is associated with inefficient but stability-seeking investment policies and increased levels of capital constraints. Firms with high state ownership invest considerably less than do always private companies and in a way that is significantly less responsive to changing investment opportunities and more related to internal financing constraints. However, state ownership mitigates the decline in capital spending during the global financial crisis. |
| Dos Santos (Working paper, 2015). On investment efficiency: Privatization decisions and ethnicity. | Use a database of 67 SOEs and 155 privatized firms from 65 countries operating in five natural advantage based industries covering 13 natural resources over 2000-13 to study the impact of rent-seeking related to natural advantage (such as substantial oil reserves or mineral deposits) on investment efficiency. | Find that ultimate state ownership discourages investment efficiency patterns in natural advantage based firms, and that local natural resource endowment seems not to govern such a relation. Also document that natural advantage based firms located in ethnically fractionalized countries experience greater investment inefficiencies. |
| Chen, El Ghoul, Guedhami, Wang (Journal of Corporate Finance, 2014). Do state and foreign ownership affect investment efficiency? Evidence from privatizations. | Compile a sample of 506 privatized non-financial companies from 64 countries over 1981-2008 with 3054 firm-year observations. Then use this sample to examine the relationship between ownership type and firm-level capital allocations, as captured by sensitivity of investment expenditures to investment opportunities. | Find strong and robust evidence that government (foreign) ownership weakens (strengthens) investment-Tobin’s Q sensitivity, thereby increasing investment inefficiency (efficiency). Also find the relation between foreign ownership and investment efficiency is stronger when governments relinquish control and country-level governance institutions are weaker. Overall, highlight the importance of ownership type in determining firms’ investment behavior and efficiency. |
| Lin, Bo (European Journal of Finance, 2012). State ownership and financial constraints on investment of Chinese listed firms. | Use a sample of Chinese listed firms during 1998-2008 to examine how state ownership affects financial constraints on investment. Consider not only the standard factors in the investment estimation model, but also the firm’s equity financing behavior explicitly. | Find that while the average sample firm experiences some financial constraints, state ownership does not necessarily help reduce these constraints, nor does it lead to more borrowing from Chinese state banks. Results suggest China’s corporatization movement has effectively removed soft budget constraints from former SOEs, and these firms can be seen as modern corporations operating in a market environment, though still state owned. |
| Firth, Malatesta, Xin, Xu (Journal of Corporate Finance, 2012). Corporate investment, government control, and financing channels: Evidence from China’s listed companies. | Investigate the relation between internally generated cash flows and fixed asset investments using a sample of 650 Chinese manufacturing firms listed on SHSE and SZSE over 1999-2008. Have 4084 firm-year observations for 501 government controlled firms (where control defined as ≥ 30% shareholdings) and 1018 firm-year observations for 149 privately controlled firms. | Find that the relation between internally generated cash flows (CF) and fixed asset investments is U-shaped, meaning CF and investment are negatively related for low CF levels, but positively related for high CF levels. Government-controlled firms have greater investment-CF sensitivities than do private firms, especially on the left-hand side of the U, where CF is negative. Find no evidence that access to finance or soft-budget constraints explain the investment-CF sensitivity differences between government-controlled and private firms. |
| **Liu, Siu (Journal of Financial and Quantitative Analysis, 2011).** | **Document robust evidence that ownership is the primary institutional factor affecting Chinese corporate investment. The derived discount rate (DR) for a non-SOE is approximately 10 percentage points higher than an otherwise equivalent SOE, but SOEs tend to use higher DRs to invest after being partially privatized. Suggest that improving institutions helps impede widespread over-investment, so shifting capital from state to private sector is socially beneficial.** |
| **Institutional and Corporate Investment: Evidence from investment-implied return on capital in China.** | **Assess the impact of institutions on Chinese firms’ corporate investment using an investment Euler equation framework. Employ data from the NBS of China database covering large companies over 2000-05 to create a balanced panel of 36,103 firms in six categories: (1) SOEs; (2) collectives; (3) mixed; (4) private; (5) Hong Kong/Taiwan; and (6) foreign owned.** |
| **Cull, Xu (Journal of Financial Economics, 2005).** | **Find that secure property rights are a significant predictor of firm reinvestment, as is access to external finance in the form of bank loans. Both expropriation and contract enforcement risk play a role in Chinese firms’ reinvestment decisions—in contrast to previous research findings from other countries. Also find another aspect of property rights, the extent of private ownership, associated with greater reinvestment. Some evidence also suggests access to finance and government expropriation risk affect small firms more than large ones.** |
| **Institutions, ownership, and finance: the determinants of profit reinvestment among Chinese firms.** | **Re-examines the importance of property rights and external finance to economic development, well established in existing literature, using the example of China in 2002. Separate proxies for property rights into two groups—those measuring the risk of expropriation by government and those measuring the ease and reliability of contract enforcement. Employ data on up to 760 companies drawn from early-2003 World Bank survey of investment climate in China, and restrict analysis to private firms, with ≥ 50% private ownership.** |
| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|-----------------------------------|---------------------------------------------|
| Borisova, Fotak, Holland, Megginson (Journal of Financial Economics, 2015). Government ownership and cost of debt: Evidence from government investments in publicly traded firms. | Using a sample of 6,671 credit spreads from 1,723 bonds issued by 244 firms from 43 countries over 1991-2010, examine the impact that state ownership (including 1,060 firm-years with SWF investment) of a firm’s stock has on that company’s cost of debt, as measured by the yield spread above treasuries. Examine for full sample period and after 2008 Financial Crisis. | In the full 1990-2010 sample, they find that state ownership (0/1) is associated with significantly higher (40 bp) cost of debt, and this is even larger during pre-crisis period, 1990-2007. From 2008 on, basic cost of debt rises sharply, and state ownership becomes associated with significantly lower (18bp) cost of corporate debt. SWFs specifically are associated with a higher cost of debt both before (46.7 bp) and after (26.1 bp) the Crisis begins. |
| Megginson, Ullah, Wei (Journal of Banking and Finance, 2014). State ownership, soft budget constraints, and cash holdings: Evidence from China’s privatized firms. | Use an unbalanced panel dataset of 16,441 firm-year observations for 2,065 unique firms over the period 2000-2012 to study the relation between state ownership and cash holdings in China’s share-issue privatized firms from 2000 to 2012. Also quantify the effect of state ownership on the value of cash. | Find that the level of cash holdings increases as state ownership declines. For the average sample company, a 10 percentage-point decline in state ownership leads to an increase of about RMB 55 million in cash holdings. The marginal value of cash in firms with zero state ownership is RMB 0.36 higher than in firms with majority state ownership. |
| Boubakri, Cosset, Saffar (Journal of Financial Economics, 2013). The role of state and foreign owners in corporate risk-taking: Evidence from privatization. | Use a unique database of 381 newly privatized firms from 57 countries to investigate the impact of shareholders’ identity on corporate risk-taking behavior. Their primary measure of risk-taking is defined as earnings volatility computed over several post-privatization windows. | Find strong and robust evidence that state (foreign) ownership is negatively (positively) related to corporate risk-taking, and that high risk-taking by foreign owners depends on the strength of country-level governance institutions. Relinquishing government control, openness to foreign investment, and improvement of country-level governance institutions determine corporate risk-taking in newly privatized firms. |
| Chen, Chen, Schipper, Xu, Xue (Review of Financial Studies, 2012). The sensitivity of corporate cash holdings to corporate governance. | Using a sample of newly privatized firms (NPFs) from 55 countries over 1981-2008, examine whether state shareholdings significantly influence corporate cash holdings. Besides studying the agency costs of state ownership, also study the corporate governance role of country-level institutions. | Document strong and robust evidence that state share ownership is positively related to corporate cash holdings. As state holdings increase, markets discount the value of corporate cash holdings more in countries with weak institutions. Stronger institutional environments mitigate negative relation between state ownership and cash holdings. |
| Borisova, Megginson (Review of Financial Studies, 2011). Does government ownership affect the cost of debt? Evidence from privatization. | Explore whether government ownership affects the cost of debt using a sample of fully and partially privatized companies. Dataset consists of 1,651 yearly bond observations covering 308 bonds of 60 companies from 14 countries and six industries (finance and real estate, manufacturing, petroleum, telecoms, transportation, and utilities) over 2001-2009. | On average across firms, a one percentage point decrease in government ownership increases the credit spread, used as a proxy for the cost of debt, by three-quarters of a basis point. However, fully privatized companies exhibit lower credit spreads than partially privatized firms, indicating the cost of a lengthy privatization process. |
| Lin, Ma, Malatesta, Xuan (Journal of Financial Economics, 2011). Ownership structure and the cost of corporate borrowing. | Test whether the “wedge” between the largest ultimate shareholder’s control rights and cash flow rights significantly impacts the cost of corporate debt for a sample of syndicated loans to 3468 borrowers in 22 countries (13 in Europe, nine in Asia) over 1996-2008. Examine loan spreads (over similar maturity treasuries) as cost of debt. Measure also test whether identity of controlling shareholder matters, and identity: (1) families; (2) the State; (3) widely held corporations; and financial institutions as controlling shareholders. | Find the cost of debt financing is significantly higher for firms with a wider divergence between the largest ultimate owners’ control rights and cash flow rights, and that loan spreads are less sensitive to the control-ownership wedge in state-owned firms than in private firms with a controlling shareholder. A one standard deviation increase in the control-ownership wedge increases average loan spreads by 14-19%, or by 27-38 bp. Also find evidence of “propping” activities by ultimate owners, wherein assets will be moved through the ownership pyramid to bolster firms where the owners have the highest cash flow ownership. |
Table 10: Summary of Empirical Studies Examining Impact of Sovereign Wealth Fund Equity Investments on Target Firm Financial Performance

| Study | Sample description, study period, and methodology | Summary of empirical findings and conclusions |
|-------|--------------------------------------------------|-----------------------------------------------|
| Borisova, Fotak, Holland, Megginson (Journal of Financial Economics, 2015) | Government ownership and cost of debt: Evidence from government investments in publicly traded firms. Using a sample of 6,671 credit spreads from 1,723 bonds issued by 244 firms from 43 countries over 1991-2010, examine the impact that state ownership (including 1,060 firm-years with SWF investment) of a firm’s stock has on that company’s cost of debt, as measured by the yield spread above treasuries. Examine for full sample period and after 2008 Financial Crisis. | In the full 1990-2010 sample, find that state ownership (0/1) is associated with significantly higher (40 bp) cost of debt, and this is even larger during pre-crisis period, 1990-2007. From 2008 on, basic cost of debt rises sharply, and state ownership becomes associated with significantly lower (18bp) cost of corporate debt. SWFs specifically are associated with a higher cost of debt both before (46.7 bp) and after (26.1 bp) the Crisis begins. |
| Bortolotti, Fotak, and Megginson (Review of Financial Studies, 2015). | The sovereign wealth fund discount: Evidence from public equity investments. Construct a dataset of 1,018 investments by SWFs (or by SWF-owned investment subsidiaries) in publicly traded firms completed over the 1980-November 2012 period, and generate a “benchmark” control sample of stock purchases by financial investors from the same home countries as our sample of SWFs, targeted at firms headquartered in the same countries as SWF investment targets, and executed over the same time period. | Find that announcements of SWF investments are associated with significant mean abnormal returns of 0.9% over (-1,+1), including investments by Norway’s GPFG, and 2.45% without Norway. However, these are significantly lower than the 5.02% mean abnormal returns generated by the private benchmark investors, implying the existence of a sovereign wealth fund “discount” due to their government ownership. |
| Karolyi, Liao (Journal of Corporate Finance, 2015). | State capitalism’s global reach: Evidence from foreign acquisitions by state-owned companies. Study 4,026 cross-border acquisitions over 1998-2008, worth $434 bn, that were led by government-controlled acquirers, and compare to 127,786 similar acquisitions worth $9.04 tr made by private acquirers and 733 deals worth $158 bn made by SWFs and other state-owned funds. Test whether investments by state-controlled acquirers and SWFs/other funds yield different short and long-run target firm stock returns than do acquisitions by private companies. | Find that announcement period (-5,+5) return for acquisitions by private companies (5.0%) is significantly higher than that for state-controlled acquirers (2.8%), and that the (-5,+5) return around SWF/other funds investment announcements (0.8%) is materially and significantly smaller than either. Also find the 3-yr mean and median buy-and-hold excess returns for SWFs/other funds (-50.3%; -62.8%) are significantly lower than for private acquirers (-9.4%; -40.3%) and state-controlled acquirers (-7.6%; -30.6%), though L-T excess returns post-deal are significantly negative for all groups over all time frames (1, 2, and 3 years). |
| Bertoni, Lugo (Journal of Corporate Finance, 2014) | The effect of sovereign wealth funds on the credit risk of their portfolio companies. Analyze the certification effect of SWF stock purchases on the credit risk of target firms by computing an adjusted measure of credit default swap (CDS) spread decrease (ADS) for 1-yr and 5-yr CDS for a sample of 391 direct SWF investments between 2003 and 2010. | Document a significant decline in target firm credit risk following SWF investments, especially for the 1-yr maturity CDS, even when investment is purely secondary (no new capital injected into target). Results consistent with market interpreting SWF investment as providing target with implicit insurance against short-term liquidity shocks. |
| Gagliardi, Gianfrate, and Vincenzi (Working paper, 2014). | Sovereign wealth funds’ investments: The bondholders’ perspective. Construct a sample of 113 SWF investments over the period 1998-2011 to analyze the market reaction to SWF investments from the target firm bondholders’ perspective. | Find that target firm bondholders experience significantly positive abnormal returns both in the short run (+0.32%) and in the medium run (+2.67%). Excess returns are higher when the target is a non-financial or a non-strategic firm. Positive bond price performance is positively related to cash flows and earnings of the targets, and negatively related to their credit rating and outlook. |
| Knill, Lee, and Mauck (Journal of Financial Intermediation, 2012) | Sovereign wealth fund | Use sample of 231 SWF acquisitions of listed firm stock over 1984-2009 to examine whether this investment significantly impacts the return-to-risk performance of target firms. | Find that target firm raw returns decline following SWF investment. Though risk also declines, find a net reduction in the compensation for risk assumed over 5 years after investment, suggesting SWFs may not |
| Investment and the return-to-risk relationship of their target firms. | Use sample of 417 SWF investments into listed firms over 1980-February 2009 to examine the effect of SWF investment on the short and long term valuation and performance of target firms. Also study which types of target firms attract SWF investment. | Find that SWFs prefer large, poorly performing companies facing financial difficulties, and news of their investments yields significantly positive initial returns (+2.25%) that are higher for more transparent funds. Mean long-term stock returns after investment are insignificantly positive (3-yr significant); median returns insignificantly negative. Conclude SWFs are generally passive shareholders. |
|---|---|---|
| Kotter and Lel (Journal of Financial Economics, 2011). Friends or foes? Target selection decisions of sovereign wealth funds and their consequences. | | Dewenter, Han, and Malatesta (Journal of Financial Economics, 2010). Firm value and sovereign wealth fund investments. | Use a sample of 227 stock purchases and 47 SWF stock sales over January 1987-April 2008. Try to determine whether there is a trade-off between SWF monitoring and lobbying benefits and tunneling and expropriation costs. | Find significant announcement period (-1,+1) excess returns for SWF stock purchases (+1.52%) and divestments (-1.37%). Document significantly negative median 1-yr cumulative market-adjusted excess returns (-4.5%), but significantly positive median 3-yr (+7.3%) and 5-yr (+31.2%) returns for target firm stocks after SWF investments. Also find SWFs are active monitors, with over half of target firms experiencing one or more events indicating SWF monitoring or influence. |
Table 11: Summary of Recent Empirical Studies of State Owned Banks, Guarantees, Bailouts

| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|----------------------------------|-----------------------------------------------|
| Gropp, Gruendl, Guettler (Review of Finance, 2014). The impact of public guarantees on bank risk-taking: Evidence from a natural experiment. | Exploit a natural experiment to study whether and how the lifting of guarantees impacted risk-taking behavior. Employ a dataset on commercial loans to 87,702 customers of all 452 German state savings banks from 1996-2006, with 252,562 observations of loans to. | Find that the lawsuit-induced removal of state guarantees for some German banks in 2001 caused affected banks to reduce credit risk by dropping their riskiest borrowers and simultaneously increasing rates charged to their remaining borrowers. Results suggest that public guarantees may be associated with substantial moral hazard effects. |
| Acharya, Anginer, Warburton (Working paper, 2013). The end of market discipline? Investor expectations of implicit state guarantees. | Using a sample of 84,057 bond issues by 567 US financial institutions over 1990-2011, examine whether investors believe the US government will shield bondholders of major financial institutions from losses in the event the companies are financially distressed. Ask if “Too Big to Fail” (TBTF) is alive and well. | Find investors do expect the government to shield bondholders of major FIs from loss and consequently do not accurately price FI-specific default risk. While bond credit spreads are sensitive to risk for most FIs, this is not true for the largest ones. This constitutes an implicit subsidy to largest FIs, so passing Dodd-Frank Act did not end TBTF. |
| Iannotta, Nocera, Sironi (Journal of Financial Intermediation, 2013). The impact of government ownership on bank risk. | Use a sample of 210 banks from 16 EU countries over 2000-09, with a total of 1541 bank-year observations, to evaluate the impact of state ownership on bank risk, measured by Altman’s Z-score. Use credit ratings, ownership structure and accounting data to distinguish default risk (likelihood of creditor loses) from operating risk (likelihood of negative equity from losses). | Document that government owned banks (GOBs) have lower default risk but higher operating risk than do privately owned banks (POBs), suggesting that government protection induces higher risk taking. GOB risk taking also tends to increase during election years, suggesting GOBs pursue political rather than strictly commercial goals. |
| Mohsni, Ochere (Working paper, 2013). Risk-taking behavior of privatized banks. | Examine how risk-taking behavior changes for 242 banks privatized in 42 countries over 1998-2007. Employ both accounting (z-score, ROA, ROE volatility, ratio of NPL, solvency ratio) and market-based (interest rate risk, and total and idiosyncratic volatility) measures of risk. | Bank risk-taking declines after privatization, but remains higher than that of their rivals. Ownership changes, rather than industry-wide factors, lead privatized banks to become more prudent, but high share fractions sold induce more risk-taking, as firms become more accountable to shareholders. Results are robust across all measures of risk. |
| Nguyen, Skully, Perera (Working paper, 2012). Government ownership, economic development, regulation and bank stability—International evidence. | Examines association between government ownership and bank stability over 1997-2010 across 103 countries using generalized method of moments (GMM) estimation methods. Asks whether findings are more consistent with political and agency view of state ownership of banks or with proposition that state owned banks overcome an important market failure. | Find the relation between growth and stability depends on levels of economic development and regulatory quality. In high income countries, state ownership is positively associated with distance to default, but the opposite is true for middle and low income countries. Findings are most consistent with political view of state bank ownership, though effect is mitigated by economic development and regulatory quality. |
| Bailey, Huang, Yang (Journal of Financial and Quantitative Analysis, 2011). Bank loans with Chinese characteristics: Some evidence on inside debt in a state-controlled banking system. | Study Chinese banking system where state owned banks (SOBs) make loan decisions based on noisy inside information on prospective borrowers, which may be based on a political (not commercial) desire to avert unemployment and social unrest. Employ event study methods and a sample of 285 bank loan announcements to listed companies over 1999-2004. | In China, poor borrowing firm financial performance and high managerial expenses increase the likelihood of obtaining a bank loan, and loan approval predicts poor subsequent borrower performance. Negative event study responses observed at loan announcements, particularly for borrowers who rate poorly on quality and creditworthiness, and for banks involved in litigation regarding loans. |
| Gropp, Hakenes, Schnabel (Review of Financial Studies, 2011). Competition, risk-shifting, and public bail-out policies. | Investigate the competitive effects of government bailouts in OECD, using a cross-section of 5000 banks in OECD countries during 2003. Define “protected” and “unprotected” banks. | Find that government guarantees extended to troubled banks strongly increase the risk-taking of competitor banks. Do not find that guarantees significantly impact protected banks’ risk-taking behavior, except in those banks that are actually state-owned. |
| Houston, Lin, Ma (Journal of Financial Economics 2011). | Using a unique World Bank dataset covering more than 5000 companies across 59 countries, conducted in 2000, examine | Find strong evidence that state ownership of media is associated with higher levels of bank corruption. Both state ownership of media and |
| Media ownership, concentration and corruption in bank lending. | whether state ownership of (news) media is associated with higher levels of bank corruption. This can take many forms, but includes (1) borrower directly bribing a bank officer and (2) bank supervisors or politicians using disciplinary power to induce banks to provide credit to connected borrowers for private gain. | media concentration increase corruption, both directly and indirectly. Both also accentuate the positive link between media concentration and corruption in lending. The link between media structure and corruption is more pronounced when borrowing firm is privately owned. |
| Karolyi, Taboada (Working paper, 2011). The influence of government in cross-border bank mergers. | Early version of paper to be published in JF (2016). Use a sample of 9122 domestic and 2,486 cross-border bank acquisitions to examine whether cross-border deals are more common in countries with weak accounting standards and higher levels of government ownership of banks. | Find that acquirers are typically from countries with lower government ownership of banks and better investor protection. Lower government ownership in the acquirer’s (target’s) country leads to higher (lower) abnormal returns for targets and to improvements (deterioration) in post-acquisition profitability and cost efficiency. |
| Caprio, Laeven, Levine (Journal of Financial Intermediation, 2007). Governance and Bank Valuation. | Assesses the impact of the ownership structure of banks and shareholder protection laws on bank valuations while controlling for differences in bank regulations. Build and use a database on ownership structure, valuation, and country and bank-specific data for 244 publicly listed banks in 44 countries in 2001, accounting for 83% of total banking system assets in those countries. | Except in a few countries with very strong shareholder protection laws, banks are not widely held. Rather, families or the State control banks. Also find that larger cash-flow rights by the controlling owner boost valuations; (2) stronger shareholder protection laws increase valuations, and (3) greater cash-flow rights mitigate the adverse effects of weak shareholder protection laws on valuations. The separate effect of state ownership on valuation is negative but insignificant. |
| Berger, Clarke, Cull, Klapper, Udell, (Journal of Banking & Finance, 2005). Corporate governance and bank performance: A joint analysis of the static, selection, and dynamic effects of domestic, foreign, and state ownership. | Jointly analyze the static, selection, and dynamic effects of domestic, foreign, and state ownership on bank performance using data on 180 Argentine banks (with 2290 firm year observations) privatized during the 1990s—mostly after 1995. Show that state and local government ownership fell sharply over period, while foreign ownership increased from 15.6% to 50.3% of total assets. State-owned banks (SOBs) showed poor long-term performance, especially those slated for privatization. | Even though worst performing SOBs were selected for privatization (selection effect), these banks dramatically improved performance post-sale (dynamic effect), although most of the measured improvement likely due to placing non-performing loans into residual entities, yielding "good" privatized banks. In static analysis, find that SOBs have poorer long-term average performance than domestically or foreign-owned private banks, and SOBs have strikingly higher non-performing loan ratios, perhaps reflecting their differing goals. |
| Brown, Dinç (Quarterly Journal of Economics, 2005). The politics of bank failures: Evidence from emerging markets. | Test whether political considerations play a significant role in delaying government intervention in failing banks in emerging markets. These failures occur with disturbing regularity; about 25% of all large private banks in 21 emerging markets failed during the 1994-2000 period. | Show that political considerations play a highly significant role in delaying government intervention in failing banks in emerging markets. Banks are much more likely to be taken over or lose their licenses after an election than before. Much of the within-country clustering of bank failures in emerging markets seems due to politics. |
| Dinç (Journal of Financial Economics, 2005). Politicians and banks: Political influences on government-owned banks in emerging markets. | Examines the behavior of government-owned banks (GOB) to determine whether the banks follow a “social” or “political” model of lending. Use a sample of 360 banks from 36 countries over 1994-2000. | Documents that GOBs significantly increase lending during election years—by an average of 11% of their total loan portfolio—relative to private banks. But GOB lending over the electoral cycle is no higher than private banks, and GOBs hold larger fractions (50% higher) of government securities as a share of total bank assets. |
| Sapienza (Journal of Financial Economics, 2004). The effects of government ownership on bank lending. | Examine the behavior of government-owned banks (GOB) to determine whether the banks follow a “social” or “political” model of lending. Employ a database of 37,000 Italian corporate borrowers and 85 banks—40 always private, 43 always state owned, and two privatize—to test whether political factors affect loan interest rate offered. | Finds that GOBs’ motives are more consistent with pursuing political advantage than with promoting a social cause or filling a market niche left unfilled by private banks. Lending behavior of SOBs is affected by electoral results of the party affiliated with the bank; the stronger the political party is in the area where the firm is borrowing, the lower the interest rate charged. |
| Study | Research question and methodology | Summary of empirical findings and conclusions |
|-------|-----------------------------------|-----------------------------------------------|
| Houston, Jiang, Lin, Ma (Journal of Accounting Research, 2014). political connections and the cost of bank loans. | Analyze whether political connections of listed US firms affect costs and terms of loan contracts using a hand collected dataset of political connections of S&P 500 companies over 2003-08 period. Sample has 2115 loan contracts by 417 companies. | Find the cost of loans is significantly lower for companies that have board of director members with political ties. Consider a Borrower Channel, where lenders charge lower rates because connections enhance borrower’s creditworthiness, and a Bank Channel in which lenders assign greater value to connected loans to enhance their own relationship with politicians. Results strongly favor Borrower Channel. |
| Piotroski, Zhang (Journal of Financial Economics, 2014). Politicians and the IPO decision: the impact of impending political promotions on IPO activity in China. | Exploiting a research setting where politicians are rewarded for capital market development, examine whether the incentives created by the impending turnover of a powerful local Chinese official can accelerate the pace of IPO activity in the region he/she currently oversees. Studies the period 2001-08 and examines 48 promotion events for regional Party Secretary and Governor and tests whether firms accelerate equity issues in anticipation of officials’ promotion and departure. | Find that the rate of exchange-eligible firms engaging in an IPO increases significantly in advance of impending promotion events. These results also hold for SEOs and private placements. Promotion period IPOs (1) under-perform non-promotion period ones in terms of both future financial performance and long-run stock returns; (2) have controlling shareholders who retain a larger fraction of their company; and (3) are more likely to divert proceeds away from their intended use post-IPO. |
| Boubakri, Cosset, Mishra, Saffar (Journal of Corporate Finance, 2012). Political connections and the cost of equity capital. | Examine whether the cost of equity capital differs between politically connected and non-connected firms using a sample of 1248 firm-year observations from 26 countries over 1997-2001, drawn from Faccio (AER, 2006). Use propensity score matching to match connected and non-connected firm data and compute COE using four different models drawn from extant literature. | Find that connected firms have significantly lower cost of equity than do non-connected companies, and connections are more valuable for firms with the strongest ties to political power. Provide strong evidence that investors require a lower return for connected companies, suggesting these firms are considered less risky than non-connected firms. |
| Duchin, Sosyura (Journal of Financial Economics, 2012). The politics of government investment. | Use hand collected dataset of 537 financial institutions (FIs) that were eligible to apply for government funding support under the Troubled Asset Relief Program of 2008-09 to examine whether politically connected firms were more likely to receive government funding under TARP’s Capital Purchase Program than were unconnected firms. | Find that only the very best FIs chose not to participate/apply for funding, and politically connected FIs were significantly more likely (9.1 percentage points) to be funded under TARP, controlling for other firm characteristics. After the program ended, difference-in-difference tests show that connected funding recipients under-perform non-connected FIs using both stock and accounting measures. |
| Liao, Young (Working paper, 2011). The impact of residual government ownership in privatized firms: New evidence from China. | Investigate the determinants of residual government ownership and the impact this has on post-privatization performance of Chinese companies. Employ a panel dataset of 2775 firm year observations of 514 listed companies over 1999-2004. | Contrary to the “political interference hypothesis,” find that residual state shareholders (S/Hs) have a significantly positive impact on Tobin’s Q. Show that when risk of expropriation is high, state S/Hs can add value by signaling State’s commitment to privatization. Find state S/Hs are more likely to be present in small firms, while large companies are more likely to have politically connected CEOs. |
| Berkman, Cole, Fu (Journal of Financial and Quantitative Analysis, 2010). Political connections and minority-shareholder protection: Evidence from Securities-Market regulation in China. | Examine the wealth effects of three regulatory changes designed to improve minority shareholder protection in China using event study tests on a sample of 887 firms. There were three regulatory changes over two-month period in early 2000, and all were designed to make expropriation of minority shareholders more difficult. | Using the value of firm’s related-party transactions as an inverse proxy for the quality of corporate governance, find that firms with weaker corporate governance experienced larger abnormal returns around announcement of policy changes than did companies with stronger governance. Shareholders of firms with strong ties to the government did not benefit from regulatory change announcements, suggesting that minority shareholders did not expect rules to be enforced for these. |
| Authors | Journal | Title | Abstract |
|---------|---------|-------|----------|
| Calomiris, Fisman, Wang (Journal of Financial Economics, 2010). | | Profiting from government stakes in a command economy: Evidence from Chinese asset sales. | Examine the market reaction to two unexpected announcements relating to the sale of government-owned shares in China. One announcement, in July 2001, surprised investors by implying the government was planning to allow heretofore non-tradable shares to be sold, while the second announcement in June 2002 revoked this policy. Able to abstract from possible liquidity effect by examining market reactions to B shares, which are separate from the A shares involved in the announcement. Sample consists of 107 B-share firms listed on SHSE and SZSE. Find a negative effect of government ownership on returns at the July 2001 announcement date (indicating investor displeasure at reduced government ownership) and a symmetric positive effect from the policy’s cancellation 11 months later. Suggest the results are due to the absence of a Chinese political transition to accompany economic reforms, so that the benefits of political ties outweigh the efficiency costs of government shareholdings. Companies managed by former government officials have positive ARs, suggesting personal ties can substitute for state share ownership as a source of connections. |
| Cooper, Gulen, Ovtchinnikov (Journal of Finance, 2010). | | Corporate political contributions and stock returns. | Using a new and comprehensive database of 819,815 firm-level contributions to US political campaigns by 1930 firms from 1979-2004, investigate whether contributions are associated with positive long-run excess returns for contributing firm stockholders. Also construct a variable measuring the strength of support by firms for candidates. Find measures of political contributions are positively and significantly correlated with cross-section of future stock returns. The effects are strongest for firms supporting a greater number of candidates that hold office in the same state that the firm is based, and effect is stronger for House candidates and for Democrats. Only a small number (9.49%) of mostly very large, listed firms make contributions. |
| Goldman, Rocholl, So (Review of Financial Studies, 2009). | | Do politically connected boards affect firm value? | Employ hand collected dataset on political contributions of board members of S&P 500 companies over 1996-2000 to examine whether political connections increase value for companies on whose boards directors served. Also examine announcement effects when connected board members are nominated. Document positive abnormal returns following nomination of politically connected people being nominated to the board of directors. The Republican win in the 2000 presidential election caused value of Republican connected firms to increase, but values of Democratic connected firms to decrease. Find each connected board member makes an average of 4.6 political contributions. |
| Fan, Wong, Zhang, (Journal of Financial Economics, 2007). | | Politically connected CEOs, corporate governance, and post-IPO performance of China’s newly partially privatized firms. | Manually collect CEO and board of director data for 790 IPOs of Chinese SOEs privatized on the Shenzhen and Shanghai Stock Exchanges over 1993-2001, and use this dataset to test whether privatized firms with politically connected CEOs perform worse than companies without connected CEOs. Almost 27% of CEOs of new privatized firms are current or former government officials. Show that companies with politically connected CEOs underperform those without by almost 18%, based on 3-year post-IPO stock returns, and have poorer earnings growth, sales growth, and changes in ROS. These firms are also more likely to appoint other bureaucrats than directors with relevant professional experience. |
| Faccio, Masulis, McConnell (Journal of Finance, 2006). | | Political connections and corporate bailouts. | Analyze the likelihood of a government bailout being extended to 450 politically connected firms in 35 countries over 1997-2002. Find the politically connected companies are significantly more likely to be bailed out than unconnected firms. Among bailed out firms, those with political connections have significantly worse financial performance at the time of and after being bailed out. |
| Khwaja, Mian (Quarterly Journal of Economics, 2005). | | Do lenders favor politically connected firms? Rent provision in an emerging financial market. | Using a hand collected dataset of more than 90,000 firms, that represents the universe of corporate lending in Pakistan over 1996-2002, investigate rents to connected firms in banking. Borrowing firm is classified as “political” if its director participates in an election. Find that connected companies borrow 45% more than unconnected borrowers, but also have 50% higher default rates. Such preferential treatment only occurs in government owned banks. The economy-wise cost of these rents estimated as 0.3 to 1.9% of GDP each year. |