CHINESE DIRECT INVESTMENT IN CALIFORNIA

BY DANIEL H. ROSEN AND THILO HANEMANN

SPECIAL REPORT

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Daniel H. Rosen is co-founder and China Practice Leader of Rhodium Group, a private research firm that advises both the public and private sectors. Mr. Rosen is a Visiting Fellow at the Peterson Institute for International Economics in Washington, D.C., with which he has been affiliated since 1993, and an Adjunct Associate Professor teaching graduate courses at Columbia University's School of International and Public Affairs since 2001. From 2000 to 2001, he was Senior Advisor for International Economic Policy to the White House National Economic Council and National Security Council, where he played a key role in completing China's accession to the World Trade Organization. Mr. Rosen is a Member of the Council on Foreign Relations and serves on the Board of the National Committee on U.S.–China Relations.

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Rhodium Group combines policy experience, quantitative economic tools, and on-the-ground research to analyze disruptive global trends. Its work supports the investment management, strategic planning, and policy needs of the financial, corporate, government, and not-for-profit sectors. Rhodium Group is based in New York City, with associates in Washington, D.C., Shanghai, and New Delhi (http://www.rhgroup.net).

The China Investment Monitor is an interactive online tool developed by Rhodium Group that allows users to track Chinese direct investment transactions in the United States by state and industry. It is updated on a quarterly basis, along with public notes discussing the most important deals and policy trends (http://rhgroup.net/interactive/china-investment-monitor).

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Foreword

As we proceed into the second decade of the twenty-first century, the web of global relationships that connects the major nations of the world is undergoing a series of high-speed, tectonic changes. One of the most significant of these changes is the way in which flows of foreign direct investment (FDI) now move around the world.

During the last century, most flows of global investment capital moved back and forth between the so-called developed nations of the Western world. With the largest, most open, and most dynamic economy, the United States has long been such an alluring destination for FDI that Americans hardly even needed to think about soliciting it.

But toward the end of the last century, Western countries also began to step up investments in "emerging markets"—that is, in the economies of countries once referred to, somewhat dismissively, as the "third world" or the "developing world."

Now, however, as we head into the second decade of the twenty-first century, the United States and the global economy find themselves on the precipice of yet another great and unanticipated change in global capital flows: funds moving from the developing to the developed world. In other words, increasing amounts of FDI are beginning to flow abroad from nations such as China and India. China has vastly ramped up its outward FDI in recent years, and in 2010, it even made the top 10 list of global investors.

In 2011, the United States was still the largest global recipient of FDI, with almost $230 billion in inflows. But the source of those flows is increasingly coming from countries such as China. While still relatively small—China invested only around $5 billion in the United States in 2010 and 2011—the aggregate amount of FDI flowing out of China nonetheless represents an average annual growth rate of 130% since 2007.

Indeed, our recent report, *An American Open Door? Maximizing the Benefits of Chinese Foreign Direct Investment* (published in 2011 by the Asia Society Center on U.S.–China Relations and the Kissinger Institute on China at the Woodrow Wilson International Center for Scholars) estimated that by 2020, some $1 trillion to $2 trillion of new investment capital will have flowed out of China. In other words, the river of investment that once ran almost exclusively from West to East is now beginning to flow in the other direction as well, from East to West.

This new reality raises a host of critical questions for the United States:

- Is this the "next big thing" in global capital flows? Where will all of this new FDI end up?
- How will the changing FDI landscape affect American interests?
- Is the United States prepared to maximize its share of this important new source of FDI stock?
- What are the current obstructions preventing the United States from doing so, and how can those obstructions be overcome?
- What new strategies should both the federal government and U.S. states and cities adopt to capitalize on this new trend?

The most notable conclusion that emerged from *An American Open Door?* was that American policy makers, businesspeople, and members of the public were grievously uniformed about this looming new reality. Three other realities seem inescapable:

- The historic change in flows of FDI from China will affect America in a profound way.
- It is emphatically in the U.S. national interest to gain a larger share of these new investment flows.
- It is dangerous to assume that because of the historic openness of the U.S. economy and the desirability of the U.S. investment climate that Chinese capital will automatically find its way here without any new efforts to woo or facilitate it.

So, how does California fit into this changing global picture?

As a follow-up to our last report, which looked generally at FDI flows from China to the United States, we thought that it would make sense to look at the question through the lens of a specific geographic region. Because California is not only the largest and arguably most iconic state in the United States, but also a dynamic and varied economy with a historical relationship with China, we thought that it was an obvious and logical choice. Again we chose to work with Daniel H. Rosen and Thilo Hanemann of Rhodium Group to help us illuminate the actual state of past flows of direct investment into California and to suggest what future flows can be anticipated. The report also recommends how the state might interface more effectively with Chinese state-owned and private investors to encourage further investment.

Toward that end, the Asia Society is pleased to offer this study. We do so in the hope that this effort will be of some utility to the state of California as it goes about the process of encouraging more Chinese investment.

We are also pleased to be working with California Governor Jerry Brown and other state officials in the belief that the state's economy can be invigorated by increased FDI from China and that, if we are successful, something of a model for other states can be created as well.

Finally, it is worth noting that although efforts to encourage mutually constructive kinds of Chinese investment in California will most certainly help forge closer relations between the state and China, we are also hopeful that in some modest way, they also will help cement better relations between the United States and China. For, as fraught as this bilateral relationship can be, because so many global problems cannot be remedied without joint Sino–U.S. action, it has become an inescapably important one.

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We are grateful to many people for their contributions to and support for this study. As with last year's *An American Open Door?* report, Asia Society has been the strongest and most creative partner in this undertaking. We would like to thank the principals at Asia Society for their support and encouragement, including Orville Schell at the Center on U.S.–China Relations, Bruce Pickering at the Asia Society Northern California Center, and Thomas McLain and John Windler at the Asia Society Southern California Center. Robert Bullock, Robert W. Hsu, Wendy Soone-Broder, Kate Ryge, Maria Scarzella-Thorpe, and other Asia Society staff provided useful feedback and worked hard behind the scenes to minimize the administrative burden and maximize the impact of our research. The Asia Society arranged considerable corporate sponsorship, and we want to add our appreciation to the firms they invited to contribute: Silicon Valley Bank, Wells Fargo, University of Southern California's Marshall School of Business, Citibank, and New Enterprise Associates. Our particular thanks are due to Jack Wadsworth, who, in addition to his leadership as Vice-Chairman of the Asia Society and a key supporter of this research, shared his experience, contacts, and wisdom from 49 years (and counting) in finance and investment.

The participants in three study groups in San Francisco (June 19, 2012), Sacramento (June 20), and Los Angeles (June 21) provided useful reactions and comments on early drafts of the report. We benefited greatly from discussions with a wide range of individuals at institutions in the United States and China, including SelectUSA, the U.S. Bureau of Economic Analysis, the Office of the Governor of California, GO-Biz, the California Chamber of Commerce, the Bay Area Council, ChinaSF, the Los Angeles County Economic Development Corporation, Columbia University, Stanford University, the University of Southern California, the University of California, Berkeley, Davis, and Los Angeles, China's Ministry of Commerce, the Export-Import Bank of China, China Development Bank, China Investment Corporation, the State Administration of Foreign Exchange, and the bureau of research of China's State-Owned Assets Supervision and Administration Commission.

We owe a debt of gratitude to a number of fellow economists at the Peterson Institute for International Economics who have worked on the larger topic of foreign direct investment in the past. Important among them are Ted Moran, Monty Graham (1944–2007), and Ted Truman. Jacob Kirkegaard provided critical feedback on our work and greatly helped inform our understanding of global capital flows.

Finally, special thanks go to our colleagues at Rhodium Group in New York City for their superb research support and critical comments. Adam Lysenko in particular was critical to our data assessment

and chart work. Shashank Mohan helped optimize our search algorithms and quantitative analysis. Michelle McKeehan managed the editorial process with enthusiasm and responsibility. While all of these people improved the outcome, imperfections surely remain, which are solely the responsibility of the authors.

Daniel H. Rosen, Thilo Hanemann
New York, October 2012

Executive Summary

The era of significant growth in outward foreign direct investment (OFDI) from China to advanced market economies has begun. Just as Chinese exports exploded in the last decade—from $250 billion in 2000 to nearly $2 trillion by 2011—China's OFDI is poised to skyrocket in the years ahead. We expect China's cumulative outward FDI to grow to between $1 trillion and $2 trillion by 2020. Given the evolving set of motives for Chinese investors, the United States and other developed economies can expect to receive a substantial share of these flows.

California, with its long history with China, the most sizable Chinese American population in the country, and more inward investment deals from China than any other state, is in a position to lead the nation in attracting Chinese investment in the decade to come. The Golden State has the potential to attract between $10 billion and $60 billion of Chinese direct investment by 2020. Those flows would bolster employment, feed the tax base, generate exports, and bring positive spillovers of know-how and relationships.

However, these benefits are not foreordained. Competitors for these dollars are ramping up efforts to attract Chinese firms, and they could well out-compete California if the state fails to resolve its fiscal and political problems, provide attractive terms to Chinese firms, and demonstrate its readiness to stand up for Chinese investors and address OFDI impediments at the national level. To build the case for a robust response to these opportunities and looming risks, this report analyzes Chinese investment in California in depth, mining a unique database for insights about California's comparative advantages, the Chinese firms most suited to its economy, and the forces motivating this inflection in cross-border investment patterns. We explain where China is as an outbound investor relative to its past, its future, and other countries and assess California's position as a destination for Chinese OFDI flows compared to its sister states.

The report argues that maximizing California's success as a host for Chinese investors must start with better coordination among interested stakeholders, including government, business, and civil society. Just as it was state-level action, not federal horse-trading, that determined who benefited most from nearly $300 billion in Japanese FDI in America since the early 1980s, the contest to host China's firms will play out in the 50 state capitals. No single politician, government agency, or chamber of commerce can deliver success; attractiveness is truly a function of coordination across all of these actors, and many more.

In fact, the race has already begun, and because the United States is no longer the world's champion of consumption growth, the competition does not stop at the nation's borders—it extends to Canada, South America, Europe, and every other country that is eager for the benefits of FDI. Building on this call to action, the study suggests four initial steps in a long-term strategy to establish California as the top choice in America for Chinese OFDI dollars:

1. Understand California's value and China's needs. Amid tough competition for Chinese capital, a thorough understanding of Chinese motives and what California has to offer is the cornerstone of a strategy to promote Chinese investment. Chinese firms are considering a U.S. presence for various reasons, and California sets itself apart with distinct value propositions. Our analysis of more than 500 U.S. deals highlights several strengths of California that should be emphasized: It has the largest state market in the country, which offers Chinese firms a gateway to the rest of the U.S. marketplace; it is the national leader in many of the high-technology industries that Chinese firms wish to invest in; it is a global leader in higher-value-added service sector activity, one of the weaknesses of Chinese firms; it has an experienced, creative, and multicultural pool of workers, which can help Chinese firms enrich their homogenous and inexperienced staff; and it has an international reputation for its quality of life, which is attractive to both Chinese firms and individuals. Understanding these strengths is vital to developing a relationship with Chinese investors.

2. Target the right Chinese firms. China is a nation of almost 5 million businesses, but not all of these potential investors will be interested in California or serve the state's long-term objectives. The numbers presented in this study provide a starting point for segmenting and prioritizing prospects. First, our data set highlights that California is the place to go for China's *private* firms. The bastions of Chinese entrepreneurialism, such as Shanghai, Zhejiang, and Guangdong, should therefore be a geographic focus of outreach activities. Chinese investors are clearly favoring certain sectors in California—for example, information technology, renewable energy, hospitality, and electronic equipment. In each of these sectors, state investment officials should be capitalizing on past successes to make the case to the next generation of Chinese outbound investors: nothing motivates like the knowledge that your competitor is already doing something. In addition to such an approach based on past patterns, China's large investors, including sovereign wealth funds and industrial conglomerates, are an important potential source of capital. State leaders should systematically open lines of communication to these investment giants regardless of sector, reaching out to China's 100 largest firms and institutional investors.

3. Overhaul the institutional setup for investment promotion. California (and the United States as a whole) needs institutional change in its investment promotion efforts. The traditional hands-off approach is outdated, as officials from the President to local mayors have acknowledged. The United States is no longer unrivaled as a destination for FDI, and a new generation of Chinese investors looking abroad needs local partners and facilitators. Chinese investors are less familiar with Western culture and business practices, they are rooted in a different regulatory environment, and they have relatively little experience operating abroad. Active investment promotion can also help overcome negative preconceptions of the U.S. investment environment stemming from a handful of past deals

gone sour. As a first step, we recommend creating a state-level agency with a mandate to lead and coordinate local efforts to promote Chinese investment. The establishment of physical *presence* in China would be another element of such an overhaul, probably starting with Beijing, Shanghai and Guangzhou. The integration of relevant stakeholders is another key component, for example, through an advisory board of Chinese and other foreign firms already present in California, or regular conferences to improve the business environment for foreign firms.

4. Take a proactive stance on national anxieties. Growth in China's U.S. direct investment has rekindled old arguments about foreign firms and the national interest. Narrowly defined security screenings for foreign investments are imperative, and Chinese investment raises legitimate concerns because of a range of general and special considerations. However, security concerns can be misapplied in situations that present no real threat because of simple overreaction or—more worrying—as a back-door route to stifle competition. California, with the largest numbers of deals and a more high-tech economy than most American states, will suffer disproportionately if inflows are rejected arbitrarily. Rather than wait to see whether Washington strikes the right balance between caution and commerce, California should step forward and contribute to the solution. With firms in computing, telecommunications, energy, agriculture, and other sectors at the forefront of the security debate, and a disproportionate number of the deals that have been politicized over the past decade, California has ample experience from which to derive a model for avoiding politicization. In the signature case of OFDI politicization to date, China National Offshore Oil Corporation's bid for Unocal, California politicians in fact played the opposite role, actively rousing national anxiety. Taking a positive stance on the issue today would go a long way toward improving the state's reputation and would be in California's long-term interest.

The findings and recommendations presented in this report are intended to contribute to a better understanding of growing Chinese investment in California and help inform the policy debate on how to maximize the state's benefits from this new trend. While the recent growth is impressive, many chapters in the story of Chinese overseas investment have yet to be written. Securing the proper policy response is crucial, given the potential for future flows from China and from a range of other emerging economies that will follow the "south-north" trail that Chinese firms blaze.

Introduction: California and China, a Long Time Coming

California was built in no small part by foreign investment. Before there was statehood, before the California Republic, foreign traders and trading ports, natural resource prospectors, and financiers all made their mark on the Golden State's economy. When gold was discovered on the American River in 1848, a promising influx of foreign inflows turned into a rush, and immigration and direct investment boomed. In the years ahead, "California investment societies" proliferated in faraway France; the Franco-British Rothschild merchant banking giants opened offices to finance prospecting; English breweries built large-scale operations and bought into existing businesses; Sweden's Nobel family established the Giant Powder Company to manufacture high explosives in San Francisco; Hamburg's J. C. Godeffroy set up rep offices; and thousands of other concerns and individuals staked their capital on California's future. All became '49ers. After California entered the Union in 1850, the boom continued, and it was sustained through the decades by the bountiful allure of the state's resources, geography, rapid population growth, and unrivaled gifts for creativity and technological innovation.

California was no stranger to foreign direct investment (FDI), nor to China. While China's fabled tea played an infamous role in the American Revolution and silks and porcelain were common cargo on Boston's clipper ships, eighteenth-century Americans generally had little exposure to the Middle Kingdom. In contrast, more than 75,000 Chinese arrived in California between 1850 and 1880, with the same dreams of economic opportunity that lured sojourners from so many other nations. By 1880, around 9% of California's population hailed from China, the largest proportion in the Western world.[1] The Chinese presence on the Pacific Coast was large enough to trigger a darker side of Sino-American interaction—an era of injustice defined by Chinese exclusion legislation, anti-Asian violence, and unequal treatment.

Despite California's extensive history with both FDI and China, there was little, if any, FDI from China at the start. Chinese arrived as laborers, not investors. But, as elsewhere on the trail of the Chinese diaspora, hard work and an instinct for commerce built strong communities and brought prosperity. Images of railroad work gangs and collectives of Chinese gold panners banding together to resist abuse and images of thriving merchants involved in skilled crafts and trading carried equal truth.

Despite extensive immigration from China in the nineteenth century, FDI did not follow to California—or the United States more broadly. In the next hundred years, investment from England

[1] Historical data from the U.S. Census Bureau.

and continental Europe, then Japan, Latin America, and elsewhere took off; little investment came from China, for a few reasons. First, at the onset of its relationship with California, China was on the verge of collapse. From the British-provoked Opium Wars, through the Taiping internal revolt of the 1850s and 1860s, to the collapse of the Qing dynasty in 1911, which led first to civil war among warlords and then pitted Nationalists against Communists, China's firms could barely survive at home, let alone sustain a presence abroad. When unity came, it was under a socialist, Soviet-bloc banner, and firms (even if they had the wherewithal to operate in the exotic antipodes of America, which they did not) would shun interactions with capitalism for another 30 years. While firms from Mao's China were systematically dissolved and withdrawn after 1949, "Chinese" firms from the other Chinas—Taiwan, Hong Kong, and enclaves of overseas Chinese operation such as Singapore—thrived in California, building up the global production chains, innovation partnerships, and cross-border investment links that would change Asia and the world.

China's absence from the FDI ranks persisted long after it shed its aversion to engagement with the market-oriented Western world. After 30 years of reform-driven boom, China has now reached the threshold of investing directly in the mature marketplace of the United States.[2] In recent years, the nation's firms have taken the first significant steps through that door, with more than 500 investments worth $16.4 billion deployed in America from 2000 to 2011. California is at the forefront of this burgeoning of Chinese investment in the United States, attracting more Chinese firms than any other state. The benefits of that inflow are beyond bragging rights: an infusion of investment capital, jobs, and wages; increased trade and exports, including back to China; better positioning in global production chains; additional research and development (R&D) spending; and growth in the tax base. Foreign investment benefits consumers and improves the overall quality of competition in the marketplace. And China's bet on California can supply the confidence needed to accelerate crucial investments in state infrastructure and other public goods.

But the potential benefits are not guaranteed. Mobilizing diverse state interest groups will require political leadership. Beyond California, there are national-level anxieties about China in Congress and the White House, and an inclination to hold investment access back for negotiating leverage. While such horse-trading has no basis in United States law, the political impulse to haggle is natural, and will unavoidably enter the picture given the mix of real and illusory national security concerns arising from Chinese deal making. If California is to maximize the benefits of inbound Chinese FDI, it must do more than local housekeeping: the Golden State must lead the United States forward on this new front in the global economy.

In this report, the evidence on Chinese investment in California and worldwide is analyzed and pulled together into a toolbox. Section 1 lays out the national picture for Chinese investment in the United States and provides the comparative and historical context. In Section 2, we summarize the benefits from Chinese investment to illustrate the opportunities arising from this new trend. Section 3 offers the most in-depth analysis to date of the detailed patterns and trends in Chinese mergers and

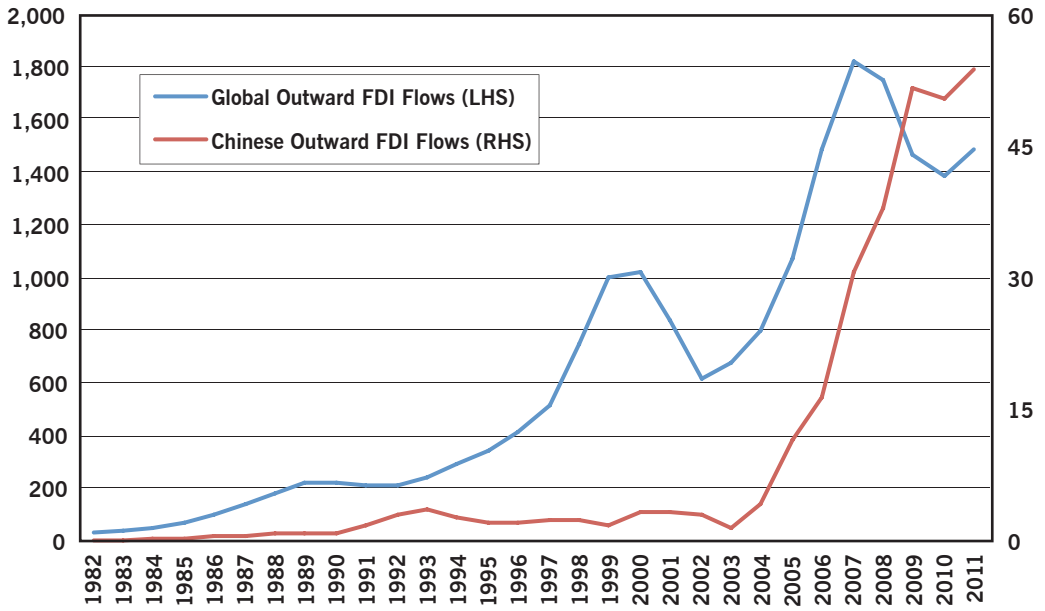
[2] See Rosen and Hanemann (2011)

acquisitions (M&A) and greenfield investments in California, helping clarify areas of promise and potential. In Section 4, we turn to the drivers and prerequisites for Chinese firms making the trek to distant shores, with a detailed sector-by-sector analysis of Chinese investment in California. We continue the focus on current and potential investors in Section 5, with a careful assessment of the ownership structure, entry modes, and other deal-specific details of the firms arriving in California with checkbooks ready. Section 6 discusses the long-term dimensions of Chinese investment flows and outlines California's advantages in attracting a significant share of these flows. In the conclusion, we summarize the key findings and offer our recommendations on how to position the state of California to maximize the benefits from the beginning Chinese investment boom.

I. A Chinese Investment Boom in the United States

China's outward foreign direct investment (OFDI) has grown quickly over the past decade, from an annual average of less than $3 billion before 2005 to $20 billion in 2006 and to more than $50 billion in 2008. By 2010 and 2011, China's annual OFDI topped $60 billion, despite declining levels of global FDI, making China one of the world's top 10 exporters of direct investment in the post-financial-crisis years (Figure 1). At year-end 2011, China's global OFDI stock reached $365 billion. Initially, the major recipients of this boom in investment were developing countries and just a handful of resource-rich advanced economies, including Australia and Canada. For the most part, forays to invest in developed economies were few and far between.

Figure 1: China's Outward FDI versus Global FDI Flows
Billions of U.S. dollars, three-year average



Sources: Ministry of Commerce and State Administration of Foreign Exchange, People's Republic of China; United Nations Conference on Trade and Development; Rhodium Group.

Now, the story has changed. Since 2008, Chinese direct investments in the United States and other developed economies have taken off. While official statistics have not yet caught up in reflecting these new trends, a bottom-up analysis of greenfield and acquisition projects shows that Chinese

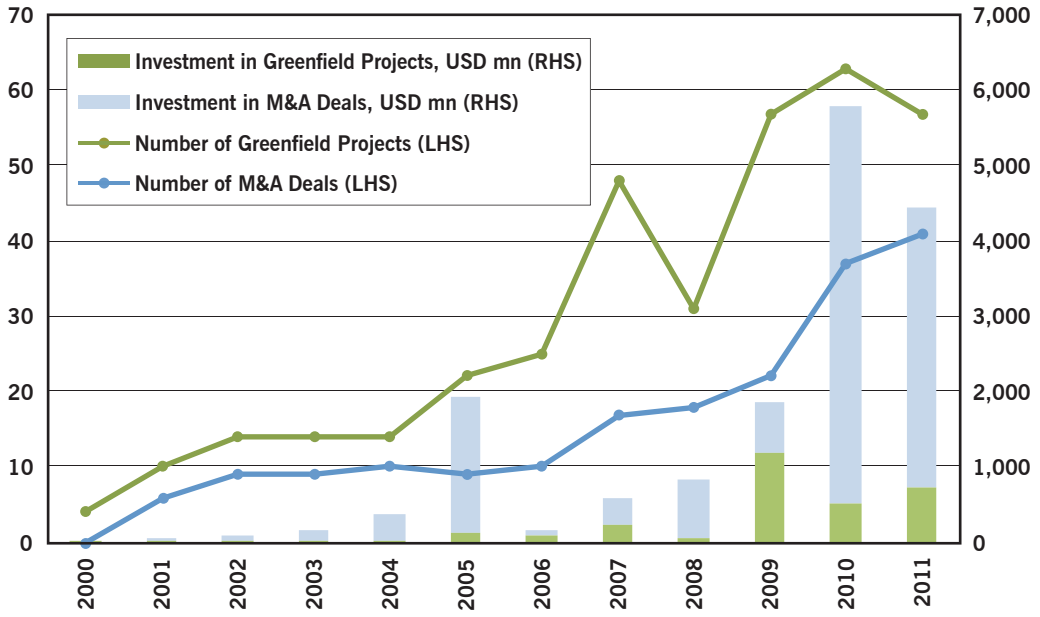
direct investment in the United States has accelerated sharply over the past four years, from a low base. An alternative data set based on such a bottom-up assessment was released in the 2011 report *An American Open Door?* and since then, Chinese OFDI in the United States based on this alternative methodology has been tracked through Rhodium Group's China Investment Monitor.[3]

These 547 deals include 359 greenfield projects—factories, offices, and other facilities built from scratch—and 188 mergers and acquisitions of existing companies and assets. Acquisitions account for 81% of total investment value ($13.2 billion) and greenfield projects for the remaining 19% ($3.1 billion).

Before 2008, annual direct investment in the United States from China typically stood well below $1 billion, with the singular exception of Lenovo's acquisition of IBM's personal computer division in 2005 for $1.75 billion. Since 2008, Chinese investment has gained momentum, growing to just under $2 billion in 2009 and to a record $5.8 billion in 2010. In 2011, full-year Chinese investment came in slightly lower at $4.5 billion because of a weak second half. However, this temporary drop in no way indicates declining Chinese investment interest in America. In the first half of 2012, Chinese firms completed transactions worth $3.4 billion, setting the stage for a new record year for Chinese investment in the United States.

Figure 2: Chinese Direct Investment in the United States, 2000–2011

Millions of U.S. dollars, number of deals



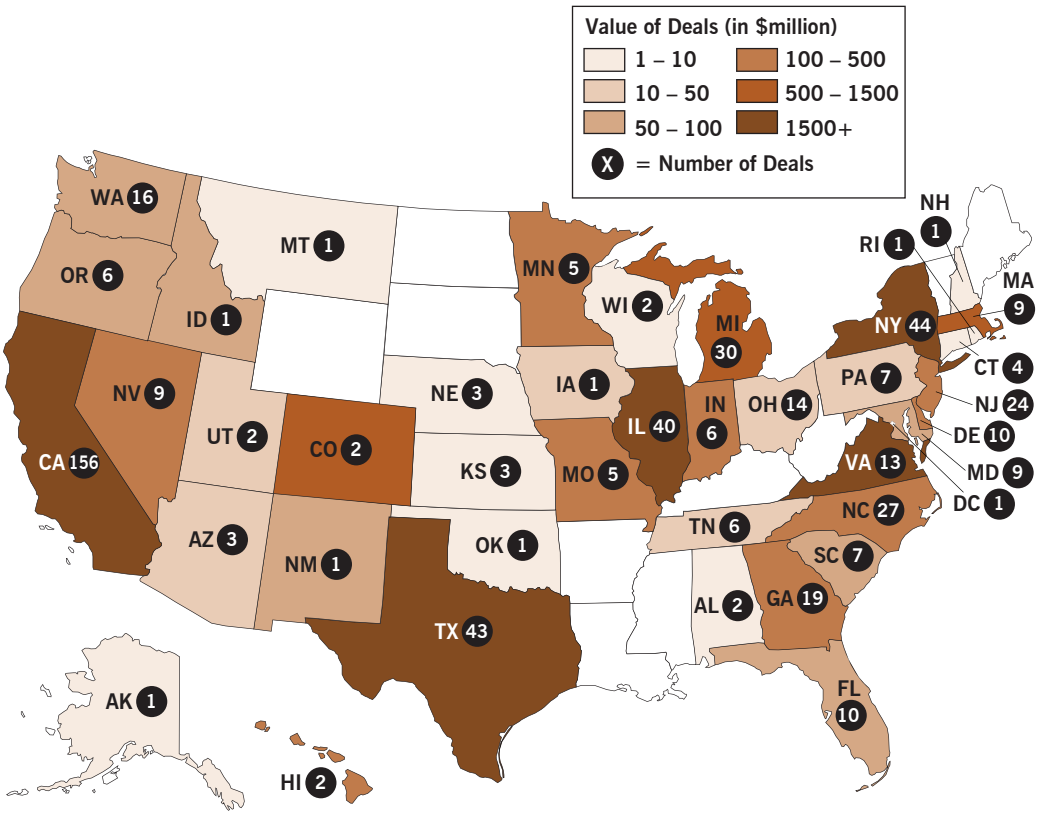
Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.

[3] Available at http://rhgroup.net/interactive/china-investment-monitor.
[4] For a detailed discussion of the methodology behind data compilation, please see the appendix.

This takeoff in investment has brought Chinese firms to most of America; today, Chinese direct investors are operating in at least 40 of 50 states (Figure 3). California is by far the number-one destination for Chinese investment, based on the total number of deals. In terms of total investment value, New York, Texas, Illinois, Virginia and California are the top five states.

Figure 3: Geographic Distribution of Chinese Direct Investment in the United States, 2000–2011

Millions of U.S. dollars, number of deals



Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.

Box 1: Foreign Direct Investment: Definition and Data Sources

In national accounting statistics, cross-border investment flows are commonly separated into five distinct categories: direct investment, portfolio investment, derivatives, other investment, and reserves.[5]

- By common definition, **direct investment** refers to cross-border capital flows that entail significant management influence and a long-term investment relationship. The common threshold for a direct investment is 10% of voting shares.

[5] See IMF (2010a). The IMF definitions also are used by other international organizations such as the OECD and UNCTAD.

- **Portfolio investment** is typically a shorter-term investment in liquid (easily bought and sold) securities, which might include holdings of equity shares with less than 10% of voting rights or corporate debt instruments (neither of which convey control or, in the case of debt, ownership).
- The **derivatives** category includes financial instruments such as swaps, futures, and options, which are only contractually related to the underlying value of real assets such as firms or commodities.[6]
- The residual category of **other investment** captures all flows that do not fall under the previous categories, such as foreign bank deposits, currency holdings, cross-border loans, and trade credits.
- **Reserves** held by governments in the form of gold, foreign exchange, or International Monetary Fund (IMF) special drawing rights are another category in international financial statistics.

Foreign direct investment flows comprise three components: equity investment, reinvested earnings, and other capital flows. A direct investment relationship starts with an equity injection into an overseas subsidiary, either to establish a new overseas subsidiary (greenfield investments) or to acquire a controlling stake (greater than 10%) in an existing company (mergers and acquisitions). Once such a direct investment relationship begins, subsequent capital flows between the parent company and the foreign subsidiary are counted as direct investment. In addition to potential additional equity injections, this can include profits that are not sent home but rather are reinvested in the company (reinvested earnings) and other capital flows between the two firms—for example, when the overseas parent lends money to its overseas subsidiary, or vice versa (intracompany debt).[7]

A range of different **measures and sources** are available for tracking FDI flows and stocks. Most countries compile balance of payments statistics that include information on annual inflows and outflows for each type of cross-border investment and related income flows. The corresponding numbers for the inward and outward stock of each category—the accumulated flows adjusted for exchange rate and valuation changes—are recorded in a country's international investment position statistics. The IMF uses these figures as reported by its member states to compile global financial statistics.

In addition to national accounting statistics based on IMF standard definitions, many countries publish data sets that provide a more disaggregated view of their investment

[6] The new category of derivatives was introduced in the sixth edition of the IMF's *Balance of Payments and International Investment Position Manual*, released in 2009; most countries' statistics still are based on earlier versions and thus do not yet show derivatives as a separate category.
[7] Detailed information on the nature of direct investment and its measurement can be found in the OECD's "Benchmark Definition of Foreign Direct Investment" (OECD 2008a).

relationship with other economies. These detailed statistics are usually published by central banks or national statistical authorities. Several international organizations, such as the United Nations Conference on Trade and Development (UNCTAD) or the Organization for Economic Co-operation and Development (OECD), also collect data on FDI and other cross-border investment flows.

Unfortunately, the accuracy and quality of official statistics on cross-border investment flows suffers as financial transactions become increasingly complicated, with tax optimization strategies, transfer pricing, and the use of shell companies in offshore financial centers. In light of these distortions, alternative methods of data collection—such as the bottom-up collection of transaction data based on completed greenfield projects and acquisitions—often produce results that are more reliable than official statistics. Online-based research opportunities, commercial databases for certain types of cross-border investment flows, and specialized research products provide a fertile ground for alternative data collection strategies.

The Rhodium Group (RHG) data set captures expenses by Chinese investors for greenfield projects and acquisitions in the United States with a value of $1 million or more and any publicized follow-up financing flows related to these projects. It is not directly comparable to official balance of payments data but allows a real-time assessment of Chinese expenses for FDI projects in the United States. More information on the methodology can be found in the appendix of this report. The China Investment Monitor, an interactive web application based on the RHG data set, is available at http://rhgroup.net/interactive/china-investment-monitor.

II. The Benefits Of Chinese Investment

The increase in Chinese investment in the United States is tangible, but many wonder whether these flows are beneficial. America's historical openness to foreign investment has been based on the conviction that FDI is overwhelmingly advantageous for the host economy and that existing risks can be dealt with through specific policy frameworks such as national security screenings for acquisitions and a competition policy regime. Is China an exception to that analysis?

Foreign direct investment generally increases the welfare of both producers and consumers. It allows firms to explore new markets and to operate more efficiently across borders, thereby reducing production costs, increasing economies of scale, and promoting specialization. It is particularly important when serving overseas markets requires an on-the-ground presence—such as in machinery or high-end appliances. Foreign direct investment also means better prices for firms looking to divest assets, thanks to a bigger and more competitive pool of bidders. For consumers, foreign investment increases competition for buyers' attention, leading to more choices, lower prices, and innovation. And in local communities, foreign investment brings new jobs, tax revenue, and knowledge spillovers from worker training, technology transfers, and R&D activities. Analyzing more than 500 investments in the United States from 2000 to 2011, we find that Chinese FDI has so far produced the same benefits as direct investment from other countries.

First, Chinese FDI brings *fresh capital*. With the United States entrenched in a protracted period of tepid economic recovery and structural reform that is likely to impose reduced growth for some years to come, external capital infusions are more important than ever. While OFDI from traditional investors has fallen off severely—global FDI flows declined from a peak of $2.2 trillion in 2007 to $1.1 trillion in 2009 and recovered to only $1.6 trillion in 2011[8]—Chinese OFDI is growing rapidly, amplifying China's importance to developed nations including the United States. We project $1 trillion to $2 trillion in global OFDI from China over the decade from 2010 to 2020 based on an extrapolation of historical outward investment growth for other nations, China's current position, and its expected gross domestic product (GDP) performance. If the United States maintains its average intake of global FDI flows in the 2000s—around 17%—then by 2020, the United States would look for a cumulative $100 billion to $400 billion in new Chinese M&A and greenfield investments.

Second, by injecting capital into the U.S. economy, either through new greenfield projects or positions in existing ones, foreign investment is generating *employment*. Majority-owned U.S. affiliates

[8] Source: OECD, Foreign Direct Investment Statistics.

of foreign firms employed 5.3 million Americans in 2009, according to the most recent data, out of a total civilian workforce of 154 million (i.e., 3.4% of U.S. employment). According to 2009 figures from the U.S. Bureau of Economic Analysis (BEA), majority-owned U.S. affiliates of Chinese companies employed about 4,300 people in the United States. However, these outdated figures were released prior to the surge of Chinese investment. Our own data indicate that Chinese firms presently provide more than 25,000 jobs in the United States, or six times the latest official BEA figures.[9] While this number is still small compared to the total U.S. workforce, other historical examples illustrate the potential for job creation: in 2009, majority-owned U.S. affiliates of Japanese firms employed more than 660,000 Americans, with a total payroll of $49 billion.[10] There are concerns that Chinese firms are more likely than investors from elsewhere to acquire U.S. firms, move valuable assets back home, and shut down local U.S. operations. However, our database shows that such cases are very rare, if present at all. Prized American technology in most cases relies heavily on intangible skilled staff and know-how, which do not travel well. In most M&A transactions, the opposite trend can be observed: Chinese buyers of American high-tech assets actually inject additional capital after the acquisition to maintain or increase local staffing.[11] Exceptions to this have typically occurred in sunset industries in which the loss of employment can be primarily attributed not to Chinese ownership, but to an industry-wide decline in that sector.

Third, Chinese investment increases competition and delivers U.S. *consumer welfare* in the form of lower prices, product diversity and selection, and faster innovation cycles. These gains extend beyond traditional goods trade to product segments that require a more active presence in consumer markets and—especially—to services. Chinese firms have already developed strong global positions in several service industries. For instance, the market entrance of Haier America fostered greater competition in U.S. white goods markets, bringing American consumers lower prices and more innovative products. Haier's mini-fridges are now standard items in American college dorms and hotel mini-bars, and Lenovo laptops have become almost as commonplace.

Fourth, Chinese investment helps maximize *shareholder value*. Greater investment interest from China increases competition for assets and thus raises prices for American sellers. CNOOC's failed acquisition of Unocal in 2005 is an example. Unocal attracted an acquisition bid of $18.5 billion from CNOOC in mid-2005, compared to an initial bid of just $16.5 billion from Chevron. Although the Chinese bid ultimately was scuttled by U.S. politics, Chevron's winning bid ended up being raised by $600 million (which, in turn, increased the profit for pension funds and other holders of Unocal shares). There has been much speculation about whether Chinese investors are willing to "overpay" for direct investment assets. This might be true, given the lack of experience of Chinese firms in factoring global pricing variables into their deal making. However, this may be offset by positive information asymmetries: Chinese firms are often much better briefed on market conditions in China, and because Chinese marginal demand growth has become a huge share of total global growth, they

[9] This estimate refers to majority-owned affiliates only and does not include the thousands of jobs in firms in which Chinese firms own only minority stakes or provide financing.
[10] Source: U.S. Bureau of Economic Analysis, Financial and Operating Data for U.S. Affiliates of Foreign Multinational Companies.
[11] Some recent examples include the acquisitions of Cirrus in 2011, Nexteer in 2010, and certain Kennametal operations in 2009.

are often in a strong position to value productive assets. For unlocking American shareholder value, the impact of Chinese OFDI might be more than additive; it may be definitive.

Fifth, Chinese FDI can have positive effects on *productivity and innovation*. Given their lower starting level of technology and more modest management skills, it might seem premature to expect Chinese firms to bring to the United States the intellectual property and business know-how that fuels total factor productivity growth.[12] However, Japan is a historical example of how quickly emerging-market firms can swing from students to leaders. Japanese auto and electronics firms were dismissed as primitive when they arrived in the United States in the 1960s and 1970s, but little more than a decade later, they were at the forefront of technology, promoting important new management techniques, such as just-in-time logistics. A few Chinese firms such as Huawei have already moved beyond reverse engineering and imitation toward technological leadership in their industries, and they are investing heavily in American R&D capacities.

Sixth, growing Chinese FDI can help *keep China's market open*. By welcoming Chinese investment, the United States encourages China to keep its door open to American investment. While China has embraced an exceptionally open stance toward foreign investment since the late 1980s, U.S. firms have been outspoken about recent signs of backsliding as China's firms graduate from relying on partnerships with multinationals to possessing more homegrown capabilities. These concerns are not hallucinatory; there are indeed factions in China that are counseling less liberal treatment for foreign firms in the domestic economy. We are optimistic that pro-international arguments will prevail, but their success—and the plethora of economic and security benefits dependent on continuing Chinese convergence with liberal international norms—relies in part on America's continuing demonstration of the virtues of openness.

Finally, greater Chinese investment can lead to a *regulatory upward convergence*. Chinese firms investing in the United States, by necessity, absorb the global business norms and habits characteristic of OECD markets. As firms' global presence increases, China's multinationals may start lobbying for stricter compliance with global business norms as they realize that being able to comply with stricter regulatory supervisions gives them a strong competitive advantage over their homebound rivals. Also, if Chinese firms holding assets in the United States fail to internalize Western business norms, they are more vulnerable to litigation in U.S. courts, something they were immune from when serving the U.S. market solely through exports. This regulatory power to govern firms operating within U.S. borders offers a means of combating harmful Chinese business practices that did not exist before Chinese investors came to the United States.

While Chinese investment should deliver the same benefits as FDI from other countries, there are also concerns that it may present greater risks for host countries due to China's non-democratic political system and "socialist market economy". Existing economic concerns spring from the exceptional size

[12] Studies of business innovation in China generally conclude that manufacturers take low-tech approaches, reverse-engineer foreign innovation rather than make breakthroughs, and rely on foreign talent and inputs for a high share of advanced capabilities. See, e.g., the OECD's review of China's innovation system (OECD 2008b).

and velocity of China's growth, the role of the state in the economy, and the revival of interest in state capitalism and nationalism as alternatives to Western consumer-centric models. Concerns about greater national security risks result from China's authoritarian political system, its intention to re-shape the existing global and regional power balance, its history of sharing sensitive technologies with rogue regimes, and its record of commercial and political espionage. These concerns are legitimate, but they can be addressed through the existing policy framework for inward FDI in the United States. The Committee on Foreign Investment in the United States is effective and diligent in addressing national security risks from foreign acquisitions, and competition policy authorities are screening foreign acquisition to avoid anti-competitive impacts. These regimes ensure that the United States can keep the door open to Chinese investors and maximize the potential benefits of Chinese FDI.[13]

[13] For a more detailed analysis of the potential benefits and risks posed by Chinese investment and a discussion of future risks that existing frameworks may not be able to adequately address, see Rosen and Hanemann (2011) and Hanemann and Rosen (2012).

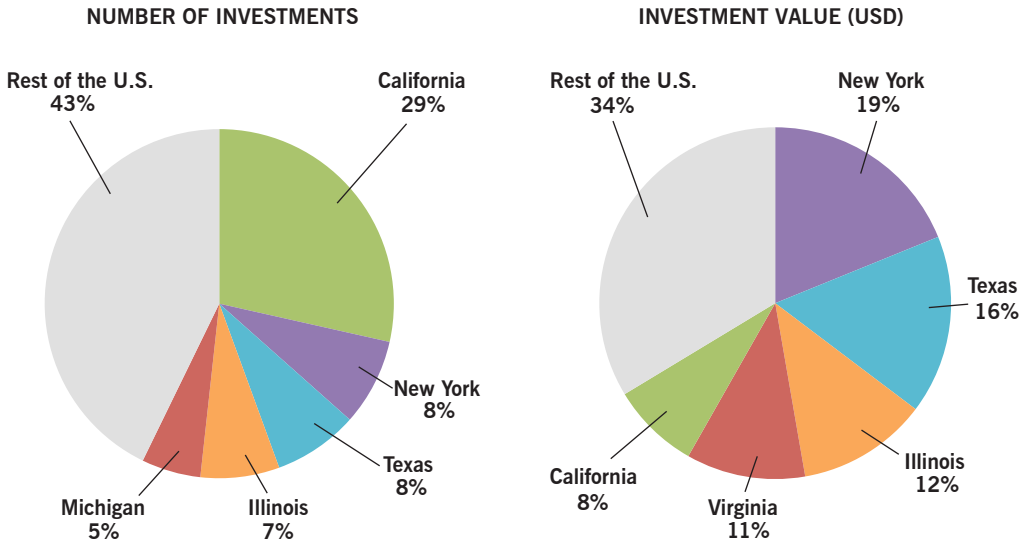
III. Patterns of Chinese Investment in California

California is at the forefront of China's beginning investment boom in the United States. It is by far the number-one destination for Chinese investment, based on the total number of deals. The Golden State attracted 156 deals from 2000 to 2011, more than any other state (Figure 4). The state accounts for more than one-quarter of all Chinese investments in the United States and has attracted far more deals than the other top recipient states—New York, Texas, Illinois, and North Carolina. It has attracted the most greenfield deals (109), as well as the most acquisitions (47). In terms of total investment value, California ranks fifth nationwide, with $1.3 billion of consummated deals. This reflects the fact that California has not—unlike New York, Texas, Illinois, or Virginia—attracted large-scale takeover deals.

California's prime position mirrors the state's overall economic importance and general attractiveness to foreign investors. As the most economically potent state in the nation, with a GDP of more than

Figure 4: Top Destinations of Chinese Direct Investment in the United States, 2000–2011

Percentage of total deals, percentage of total investment value



Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.

$1.9 trillion and a population of almost 38 million, California's economy is the eighth largest in the world. While an official estimate of the foreign investment stock in California is not available, some proxy figures—such as employment generated by foreign affiliates—suggest that California's vibrant and unique economy attracts the most foreign investment of all the states (Table 1). Investors from China are following the example set by other foreign investors in making the Golden State their preferred investment destination. At the same time, Chinese investment patterns in California differ substantially from those in the rest of the nation. These differences and distinct features will be explored in this and the following two sections.

Mirroring the overall trend in the United States, Chinese investment flows into California were tiny prior to 2008 (Figure 5). From 2000 to 2007, the China Investment Monitor records an average of about eight investments per year, with an average annual value of less than $25 million.[14] After 2008, these numbers increase significantly in terms of both deals and investment value. While M&A deals account for the majority of investment dollars since 2008, several large-scale greenfield projects have also been undertaken, a sign that Chinese firms are preparing for the long haul in California and not just making opportunistic purchases. Following the national pattern, Chinese investment growth in California was not derailed by the global financial crisis, despite a global drop in FDI of 40% by value in 2010. Slower M&A activity led to a temporary drop of investment in 2009, but flows rebounded strongly in 2010 and 2011. In 2011, Chinese firms invested a record $560 million in 15 greenfield projects and 13 acquisitions, double the previous year's value. This stands in contrast to the investment value in all of the United States, which largely remained flat in 2011.

Table 1: Employees of Foreign Affiliates by State, 2009

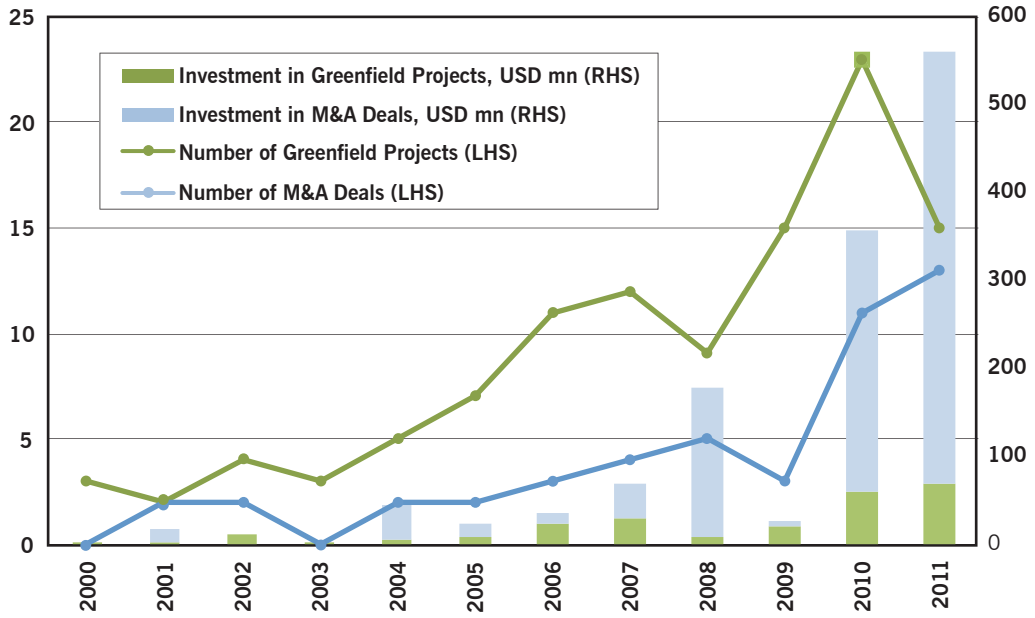
	Number of Employees (thousands)	Share of Total
United States	5970.1	100.0%
California	**636.0**	**10.7%**
New York	472.8	7.9%
Texas	446.1	7.5%
Pennsylvania	290.4	4.9%
Florida	268.5	4.5%
Illinois	268.2	4.5%
New Jersey	263.7	4.4%
Ohio	246.5	4.1%
North Carolina	213.6	3.6%
Michigan	210.7	3.5%
Rest of U.S.	2653.6	44.4%

Sources: U.S. Bureau of Economic Analysis; Rhodium Group.

[14] This does not include many modestly scaled deals that are hard to capture, including small family businesses and property investments by individuals. For more information on methodology, see the appendix.

Figure 5: Chinese Direct Investment in California, 2000–2011

Millions of U.S. dollars, number of deals



Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.

Chinese investment in the Golden State is concentrated in the northern and southern coastal hubs with the largest metropolitan areas, the densest populations, and the highest per capita GDP.[15] In the south, the Los Angeles–Long Beach–Santa Ana metropolitan area is California's most populous region and the metropolitan area with the third-highest per capita GDP in California. It is also the premier destination for Chinese investment, by both number of deals and value. The 69 deals recorded in this region from 2000 to 2011 account for $618 million in investments. A significant portion of this came from a single $250 million acquisition of Los Angeles–based Riot Games in 2011. However, even without this transaction, the Los Angeles–Long Beach–Santa Ana area would remain top ranked, receiving more Chinese investment from 2000 to 2011 than any other California metropolitan area. The remainder of China's investment flows to Southern California include acquisitions in San Diego County, which ranks fourth among California metropolitan areas in terms of per capita GDP. A handful of smaller greenfield projects in the San Diego and Riverside–San Bernardino–Ontario metropolitan areas round out the rest from 2000 to 2011.

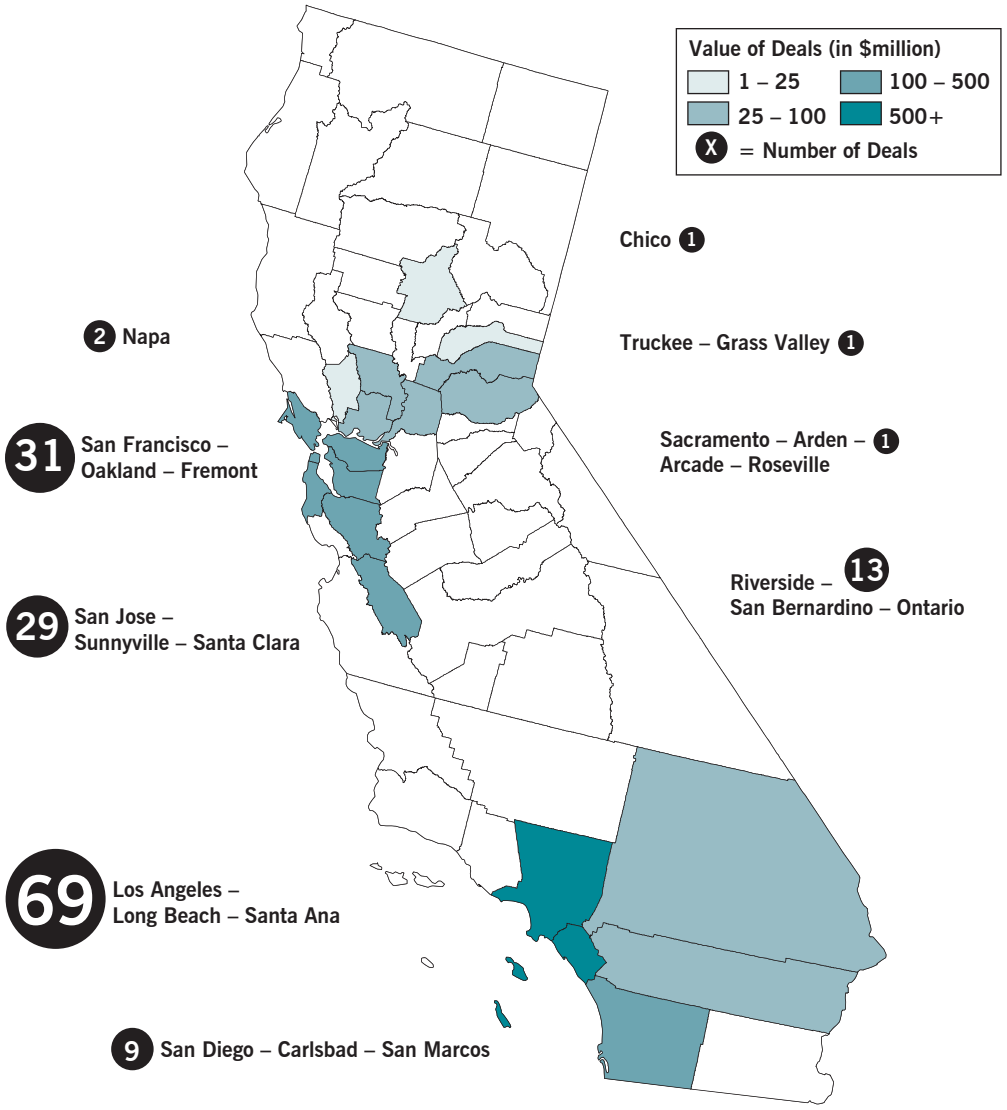
The San Francisco–Oakland–Fremont metropolitan area, with the fifth-highest per capita GDP in the nation and the second highest in California, ranks second in Chinese investment in California by number of deals and third in total deal value. Conversely, the San Jose–Sunnyville–Santa Clara metropolitan area, which has the highest per capita GDP of any metropolitan area nationwide, ranks third in Chinese investment in California by number of deals and second in total deal value. This is

[15] All GDP and income data used in this section are from the U.S. Bureau of Economic Analysis's Regional Economic Accounts.

because the average deal value of both greenfield and M&A investments in the San Jose area is higher than that in the San Francisco area. Outside of these two central Californian metropolitan areas, there is relatively little Chinese investment activity in the region. Four out of the five deals that we captured in the Chico, Napa, Truckee–Grass Valley, and Sacramento–Arden–Arcade–Roseville metropolitan areas are smaller M&A transactions.

Figure 6: Chinese Direct Investment in California by Metropolitan Area, 2000–2011

Millions of U.S. dollars, number of deals

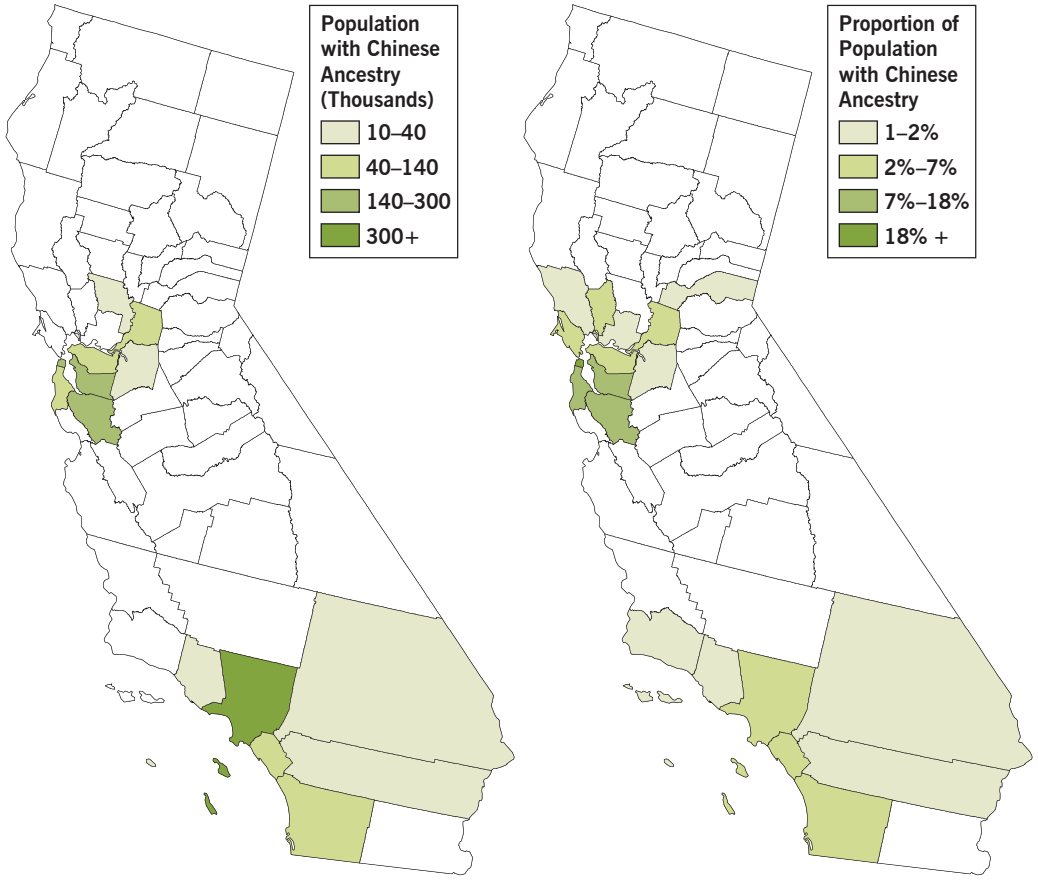


Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.
The U.S. Office of Management and Budget defines "metropolitan" and "micropolitan" statistical areas, which are core areas containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Metropolitan statistical areas contain at least one urbanized area with a population of 50,000 or more. Micropolitan statistical areas contain at least one urban cluster with a population of 10,000 to 50,000. The Truckee–Grass Valley statistical area referenced here is a micropolitan statistical area; the rest are metropolitan statistical areas.

It is notable that the most popular Chinese investment destinations in California all possess large populations of individuals with Chinese ancestry (Figure 7). The most popular target of Chinese investment, the Los Angeles–Long Beach–Santa Ana metropolitan area, has the largest population of individuals of Chinese ancestry in all of California. The second most popular destination by number of deals is the San Francisco–Oakland–Fremont metropolitan area, which contains the highest proportion of Chinese residents to total population in all of California. The cultural and historical ties shared with these ethnic Chinese populations may help explain why these locations have emerged as preferred targets for Chinese investors.

Figure 7: Chinese Populations in California, 2010

Thousands, percentage of total population



Sources: U.S. Census Bureau; Rhodium Group.

Box 2: Other Chinese Capital Flows to California

The RHG data set used for this report consists of **direct investment** transactions with a total value of more than $1 million, which includes greenfield projects, joint ventures, and acquisitions with a final ownership stake of 10% or more. In addition

to direct investment projects, there are other Chinese capital flows to California not captured in our assessment, most of which are increasing as well.

First, Chinese investors are financing California-based firms through the purchase of **corporate bonds** and **portfolio equity stakes** below the 10% threshold. Most of these investments are made by portfolio managers inside or outside China and are impossible to track down accurately, unless they are significant investments that are announced voluntarily or through mandatory regulatory filings. In 2008, for example, China Life and China International Capital Corporation reportedly invested in the initial public offering of San Francisco–headquartered Visa.[16] There are also smaller firms buying smaller equity stakes for investment diversification, strategic learning, or preparation for a more significant stake. Recent examples include a 6% stake by JiLin Aodong Medicine Industry Group in San Diego–based Vital Therapies Inc. and a planned 5% stake by Xiamen-based Kaifajing Lighting in BridgeLux Inc., a Livermore-based manufacturer of light-emitting diodes. There are also signs of increasing activity by Chinese private equity firms in the United States, which does not count as FDI if the stakes are below the 10% level. In California, recent investments have been focused on venture capital in high-tech start-ups. Chinese Internet giant Tencent, for example, recently announced a series of venture capital investments in small Internet start-ups in the Bay Area.[17]

Second, Chinese banks are increasingly providing **cross-border loans** to projects and firms in the United States. Bank of China, for example, recently expanded its financing for real estate projects in Manhattan.[18] In California, China Development Bank has committed to provide financing for several projects, among them the development of solar photovoltaic fields by SPI Solar.[19] As of the writing of this report, China Development Bank is also in negotiations to provide up to $1.7 billion to revitalize two stalled large-scale real estate development projects in San Francisco.[20]

Finally, Chinese capital is flowing into **U.S. government bonds**, financing state and federal expenses. As of May 2012, China officially held $1.17 trillion in U.S. Treasury bills and bonds.[21] Detailed statistics on Chinese holdings of municipal bonds from California are not available.

[16] See "China Wealth Fund Said to Invest More than $100 Million in Visa," *New York Times*, March 25, 2008, http://dealbook.nytimes.com/2008/03/25/china-wealth-fund-said-to-invest-more-than-100-million-in-visa/.
[17] See "China's Giant Tencent Placing Bets on Small Silicon Valley Startups," *Bloomberg*, April 10, 2012, http://go.bloomberg.com/tech-deals/2012-04-10-chinas-giant-tencent-placing-bets-on-small-silicon-valley-startups/.
[18] See Lingling Wei, "Bank of China Ramps Up Presence in N.Y. Real Estate," *Wall Street Journal*, April 11, 2011, http://online.wsj.com/article/SB10001424052748703841904576257143952307056.html.
[19] See Syanne Olson, "China Development Bank Approves LDK's Project Loan for Two Solar Plants Totaling 8MW," *PV Tech*, January 5, 2012, http://www.pv-tech.org/news/china_development_bank_approves_ldks_project_loan_for_2_solar_plants_totall.
[20] See Dinny McMahon, "China in Talks with U.S. Home Builder," *Wall Street Journal*, June 25, 2012, http://online.wsj.com/article/SB10001424052702304458604577489062449154168.html.
[21] Monthly statistics on foreign ownership of U.S. Treasury securities can be found at http://www.treasury.gov/resource-center/data-chart-center/tic/Pages/ticsec2.aspx#ussecs.

IV. Drivers and Targeted Industries

Many assume that China's outward FDI is the product of strategic government campaigns guiding Chinese firms' overseas activities for political motivations. Analysts have strained to identify such a strategic rationale for a decade, and the Chinese government has given them plenty of fodder by portraying itself as a facilitator of outward FDI through a "Going Out" campaign promulgated since 2000.[22] However, although a new policy stance is an important variable for growing outward investment, we take the view that the growth of China's outward FDI stems from changes in China's growth model and marketplace rather than a political agenda. The recent surge in Chinese OFDI in the United States was mostly driven by changing commercial realities at home, forcing firms to look abroad to sustain their growth.

In the past, the attraction of domestic market growth overshadowed the lure of overseas opportunities, and outward FDI was limited to securing natural resources and trade-facilitating infrastructure. Most investment activity took place in developing countries, and forays into developed economies were few. This is true for California, where only a few Chinese firms were invested in early years, for example, logistics firms such as the China Ocean Shipping Group and smaller-scale trading firms. Chinese bids for natural resources assets in developed economies, such as China National Offshore Oil Corporation's (CNOOC) bid for Unocal in 2005, were met with strong political resistance.

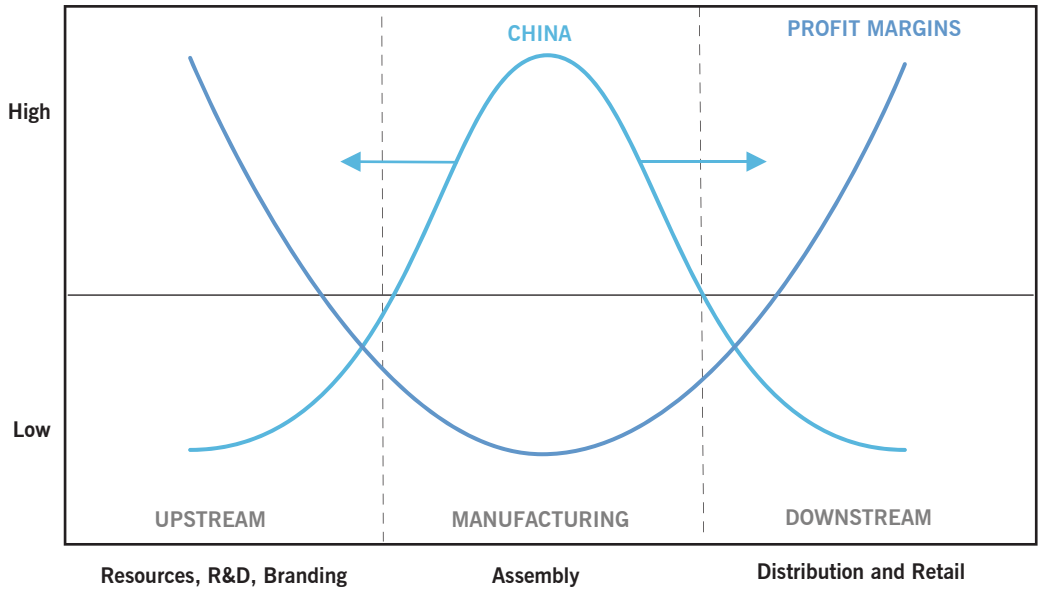
However, outward investment in developed economies is poised to grow substantially, as a structural adjustment process at home is forcing Chinese companies to adjust their business models. The foundations of China's old growth model, which relied on excessive fixed investment and exports of overcapacity to overseas markets, are eroding. The prices of key input factors are gradually rising: labor costs are increasing as a result of demographic and social pressures to give households a greater share of the national income; the cost of land has risen dramatically as a result of a property bubble; exchange rates are being reformed in response to inflation and increasing pressure from trading partners; regulatory compliance costs are rising quickly as the government is forced to address air pollution and other environmental damages; and, perhaps most importantly, capital costs are being pushed up as China is forced to reform its financial system in order to end financial repression of households, improve the allocation of capital to higher-return investments, and prepare for a gradual opening of the country's capital account.

[22] See, for example, Premier Wen Jiabao's report to the delegates of the 2012 National People's Congress, in which he said that the government would "guide Chinese enterprises under various forms of ownership in making overseas investments . . . in an orderly manner" (Wen 2012).

These changes are translating into pressure on firms to adjust their business model by moving up and down the value chain and to capture profits outside their traditional manufacturing focus (Figure 8). This process necessitates greater presence beyond China's borders. Overseas investment is one way to achieve deeper market penetration, explore new service provision opportunities, and buy assets that can give them a competitive edge at home and abroad. These new motives are leading Chinese investors to the industrialized world with great vigor.

Figure 8: China in the Global Value Chain

Stylized display



Source: Rhodium Group.

California's popularity as a destination for Chinese investment reflects these changing motivations. Table 2 breaks down Chinese investments in California by industry, ranked by number of investments. Several broad trends are important. First, the investments are spread across a range of industries, not only a few strategic sectors. Second, the service sectors are the most attractive to Chinese investors, as are the service components of manufacturing value chains. The top five industries are all service oriented, and even investments in manufacturing include a strong service component—whether it be upstream in R&D or downstream in distribution, branding, and customer service. Finally, high-tech industries (in which California traditionally has been strong), such as software or communications equipment, are the premier draw for Chinese firms.

Not surprisingly, software and information technology services top the list, both in number of investments and deal value. The biggest-ticket greenfield investments in this sector are concentrated in the Los Angeles and San Jose regions, while M&A deals are spread fairly evenly across the Los Angeles, San Jose, San Francisco, and San Diego metropolitan areas. Firms that have established operations in California include Internet portal Sohu (San Francisco), software outsourcing provider Neusoft

Table 2: Chinese Direct Investment in California by Industry, 2000–2011

Number of deals and investment value; services industry in blue, manufacturing in green

		Number of Projects			Investment Expenses (millions of U.S. dollars)		
Rank*	Sector	Greenfield	Acquisitions	TOTAL	Greenfield	Acquisitions	TOTAL
1	Software and IT services	8	13	21	8.3	517.4	525.7
2	Leisure and Entertainment	2	3	5	14.0	152.6	166.6
3	Communications Equipment and Services	14	5	19	63.0	76.2	139.2
4	Electronic Equipment and Components	15	1	16	17.5	100.0	117.5
5	Alternative/Renewable energy	14	3	17	49.5	52.9	102.4
6	Semiconductors	0	3	3	0.0	80.5	80.5
7	Furniture and Wood Products	3	1	4	3.0	18.9	21.9
8	Biotechnology	1	1	2	1.0	20.0	21.0
9	Food, Tobacco and Beverages	1	3	4	2.0	18.0	20.0
10	Consumer Electronics	3	2	5	3.0	14.0	17.0
11	Coal, Oil and Gas	1	1	2	1.0	15.5	16.5
12	Metals Mining and Processing	7	0	7	13.0	0.0	13.0
13	Paper, Printing and Packaging	1	0	1	12.5	0.0	12.5
14	Financial Services and Insurance	1	4	5	10.0	0.0	10.0
15	Engines and Turbines	0	1	1	0.0	9.3	9.3
16	Aerospace, Space and Defense	3	0	3	8.3	0.0	8.3
17	Business Services	7	2	9	7.3	0.0	7.3
18	Transportation Services	6	0	6	7.0	0.0	7.0
19	Automotive OEM and Components	2	1	3	6.0	0.0	6.0
20	Chemicals, Plastics and Rubber	5	0	5	6.0	0.0	6.0
21	Real Estate	0	1	1	0.0	5.7	5.7
22	Pharmaceuticals	5	0	5	5.0	0.0	5.0
23	Consumer Products and Services	3	0	3	3.0	0.0	3.0
24	Healthcare and Medical Devices	2	1	3	2.3	0.0	2.3
25	Industrial Machinery, Equipment and Tools	2	0	2	2.0	0.0	2.0
26	Textiles and Apparel	2	1	3	2.0	0.0	2.0
27	Minerals Mining and Processing	1	0	1	1.0	0.0	1.0
28	Construction Services	0	0	0	0.0	0.0	0.0
29	Other Transport Equipment	0	0	0	0.0	0.0	0.0
30	Utility and Sanitary Services	0	0	0	0.0	0.0	0.0
	TOTAL	**109**	**47**	**156**	**247.5**	**1,080.9**	**1,328.4**

Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.
* Rankings are based on number of deals.

(Santa Clara), and handset application software provider Techfaith (San Diego). Software sector acquisitions to strengthen competitiveness in the Chinese home market are widespread (Table 3). Online gaming has been particularly popular, with notable acquisitions of Riot Games by Tencent in 2011, Mochi Media by Shanda Games in 2010, Cryptic Studios by Perfect World in 2011, and Red 5 Studios by The9. E-commerce is another highly active area. Alibaba's dual acquisitions of Auctiva and Vendio Services in the summer of 2010 to boost its online payment platform are two examples of this. Business applications and other software are also notable, exemplified by HiSoft's acquisitions of Envisage Solutions (2007) and Echo Lane (2010).

Table 3: Top Chinese Acquisitions of California-Based Software and IT Firms, 2000–2011

Rank	Acquiror	Target	Location	Year	Stake	Millions USD
1	Tencent Holdings Ltd	Riot Games Inc	Los Angeles	2011	93	250
2	Shanda Games Ltd	Mochi Media Inc	San Francisco	2010	100	80
3	Perfect World Co Ltd	Cryptic Studios Inc	Los Gatos	2011	100	50
4	Alibaba	Auctiva, Vendio Services	Chico, San Mateo	2010	Majority	37
5	HiSoft Tech Intl Ltd	Envisage Solutions	Irvine	2007	100	25
6	The9 Ltd	Red 5 Studios Inc	Aliso Viejo	2010	87	20
7	MEMSIC Semiconductor	Crossbow Technology, Inc.	Milpitas	2010	100	18
8	HiSoft Tech Intl Ltd.	Echo Lane Inc	San Francisco	2010	100	N/A

Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.

Electronics and communication equipment are two other areas of great interest for Chinese firms. With 19 investments and the third-highest cumulative deal value ($132 million), communications equipment and services is a key sector for Chinese firms, mostly in the Los Angeles, San Diego, and San Jose areas. Major Chinese suppliers of telecommunications equipment, including Huawei, ZTE, and TP-Link, run sales and after-sales service operations in California. The Bay Area has also attracted greenfield investment in R&D centers by Chinese firms. ZTE has had operations in San Diego since 1998, and Huawei celebrated the opening of its new R&D center in Santa Clara in 2011. Providers of telecommunications services such as China Unicom and China Telecom Americas run offices in California and have invested significant amounts in physical infrastructure such as points of presence and data centers. Chinese communications equipment firms also have significant interest in upgrading their technology through acquisitions. In 2010, Huawei tried to acquire the assets of bankrupt start-up firm 3Leaf but was rebuffed by the Committee on Foreign Investment in the United States. Spreadtrum Communication's 2011 acquisition of WCDMA solutions provider MobilePeak, meanwhile, makes clear that successful takeovers in the communications technology sector are entirely possible.

Electronic equipment and components comes in fourth place with 16 investments, and another five investments in consumer electronics operations further emphasize the importance of this industry

in California. Electronics-related investments are found in both central and Southern California, concentrated most heavily in the Los Angeles, San Jose, and San Francisco areas. Most of these investments are smaller greenfield projects that facilitate exports to the U.S. market, which explains the relatively low value of these deals. However, more sophisticated operations have been established as well: TCL Corporation's TTE Technology runs after-sales and customer service operations for its flat-screen televisions out of Corona; Chint Group, one of China's largest manufacturers of electronic components, built its North American headquarters in Irvine; and China WLCSP, a provider of electronic components for mobile handsets, opened an R&D center in Sunnyvale in 2011. Manufacturers of consumer electronics are increasingly establishing operations that help them get closer to the U.S. consumer. Appliance maker Gree Electronics is an excellent example. Gree started out as an outsourcing contractor for foreign white good brands but now operates from the City of Industry to serve clients under its own brand name, following the examples of Haier and Lenovo. The acquisition of trademarks and patents to strengthen competitiveness is another driver of investment, for example, TCL's 2005 purchase of Opta Systems, the owner of the GoVideo brand and several related patents.

Renewable energy is another natural target for Chinese firms. California generates more electricity from non-hydroelectric renewable sources than any other state. As a leading producer of power from photovoltaic (PV) and concentrated solar power installations (Table 4), California is particularly attractive for Chinese solar PV producers interested in setting up sales offices and, increasingly, downstream operations, including installations and research and development facilities. Many of China's big solar PV producers have their headquarters or West Coast offices in the Bay Area, which is home to all of the most valuable greenfield investments in the clean energy sector in California. Among these firms are Trina Solar, Jinko Solar, Suntech, GCLPoly, China Sunergy, and Yingli Green Energy. Some are also expanding their offices into research and testing facilities, as Yingli Solar did by opening an R&D lab in South San Francisco in 2011. Along with a flurry of greenfield investments, Chinese solar exporters have also started to expand in California through acquisitions, mainly to move into downstream segments of the solar business. LDK Solar did this with its $33 million acquisition of Solar Power Inc. in 2011, thus creating an opportunity for quick downstream vertical integration in an important

Table 4: California's Cumulative Capacity of Solar Installations, 2010

PHOTOVOLTAIC SOLAR (PV)

		Installed Capacity (MW)	% of National Total
1	California	1,022	47.5%
2	New Jersey	260	12.1%
3	Colorado	121	5.6%
4	Arizona	110	5.1%
5	Nevada	104	4.8%

CONCENTRATED SOLAR POWER (CSP)

		Installed Capacity (MW)	% of National Total
1	California	364	71.8%
2	Florida	75	14.8%
3	Nevada	64	12.6%
4	Arizona	2	0.4%
5	Hawaii	1	0.2%

Source: National Renewable Energy Laboratory.

market. The momentum behind new energy investments also draws other sectors to California—hence BYD's decision to open its North American headquarters in Los Angeles; many suppliers of electronic components for solar and wind power installations have set up shop here, too.

The biotechnology and medical devices sectors have also drawn Chinese investment, motivated by the innovative capacity and human resources available in California. In 2011, WuXi PharmaTech acquired San Diego–based biotechnology research firm Abgent, a transaction that highlights Chinese interest in the research capabilities of California's health sciences firms. Andon Health's U.S. subsidiary iHealth is another example of Chinese investors taking advantage of proximity to high-tech Silicon Valley and California's innovative health technology atmosphere, developing multiple digital health care devices designed to interface and run with Apple products.

California's geographic location has made it a hub for U.S.–China trade, drawing Chinese investments in shipping and logistics services. Figure 9 shows that more than 36% of total U.S. imports from China and 32% of total U.S. exports to China go through California, most via ports on the Pacific Coast. The total value of FDI from 2000 to 2011 in this sector is nonetheless comparably low and understates the impact that China's shipping companies have had on California's economy. This is because our database is missing early-stage investments before 2000 by firms such as the China Ocean Shipping Company (COSCO), which has operated at the port of Long Beach since 1981. In addition, our data set does not include operational leases worth hundreds of millions of dollars, as they are not considered direct investments.[23] The major Chinese shipping firms in California are COSCO, with operations at the ports of Los Angeles, Long Beach, and Oakland, and China Shipping, at the Port of Los Angeles. Some smaller logistics companies have also set up shop in California, including Goldyard International and Amass Group, as well as related suppliers and service providers, such as Direct Cassis LLC, a subsidiary of China International Marine Containers Group, that imports and repairs container chassis.

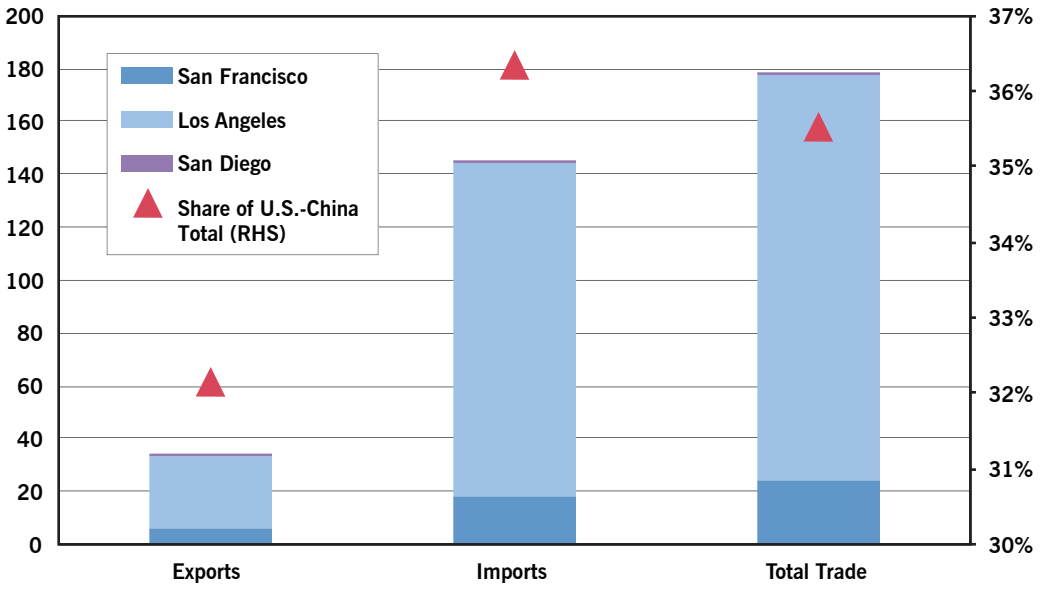
California is also favored by China's front-runners in higher-value added services. Along with East Coast operations in New York City, these firms are establishing regional headquarters or operations in Los Angeles and San Francisco. Chinese banks have long had a presence in California's retail banking sector in order to serve the local ethnic Chinese population, and some of China's large state banks have also set up shop on the West Coast (Table 5). Rising Chinese law firms with global ambitions have also opened West Coast offices—Dacheng Law opened in Los Angeles in 2009, and Jun He Law opened its Silicon Valley offices in Palo Alto in 2010. Other service providers that have made the move to California include those engaged in business services, exhibitions, and media services.

In another notable trend, Chinese investors have taken an interest in California's vineyards and wineries over the last few years, making the food and beverages industry a relatively important one in California for attracting Chinese investment. This has occurred in tandem with a rising demand

[23] For details on our methodology, see appendix.

Figure 9: California's Role in U.S.–China Trade, 2011

Trade by California customs district (billions of U.S. dollars, percentage of total)



Sources: U.S. Census Bureau; Rhodium Group.

Table 5: U.S. Operations by Chinese Banks, September 2011

Assets, millions of U.S. dollars

Foreign Parent	Type	Location	Assets
Agricultural Bank of China (ABC)	Representative office	New York, NY	$0
Bank of China (BOC)	Insured federal branch	New York, NY	$0
Bank of China (BOC)	Uninsured federal branch	Los Angeles, CA	$702
Bank of China (BOC)	Insured federal branch	New York, NY	$13,502
Bank of Communications (BOCOM)	Uninsured federal branch	New York, NY	$2,091
Bank of Communications (BOCOM)	Uninsured federal branch	San Francisco, CA	$0
China Construction Bank (CCB)	Uninsured state branch	New York, NY	$1,289
China Merchants Bank (CMB)	Uninsured state branch	New York, NY	$742
China Merchants Bank (CMB)	Representative office	New York, NY	$0
Industrial and Commercial Bank of China (ICBC)	Uninsured state branch	New York, NY	$1,230
Citic Bank International (CITIC)	Uninsured federal branch	Alhambra, CA	$50
Citic Bank International (CITIC)	Uninsured federal branch	New York, NY	$153
Nanyang Commercial Bank	Uninsured federal branch	San Francisco, CA	$208
Wing Lung Bank	Uninsured federal branch	Alhambra, CA	$271
		TOTAL	**$20,238**

Sources: Federal Reserve Board; Rhodium Group.

among Chinese consumers for California wines. California and U.S. wine exports beat international sales records in 2011, thanks in part to growing demand for California wines in China.[24] Californians are keen to capitalize on this growing interest. For example, recognizing that 90% of California's wine exports leave through the Port of Oakland, Oakland Mayor Jean Quan made California wines one focus of her 2011 trade and investment mission to China.[25] And as Chinese interest in California wines grows, so does interest among Chinese investors in California's wineries. To date, at least three multimillion-dollar acquisitions of California wineries and vineyards by Chinese investors have been recorded.

Finally, California has begun attracting significant real estate investment from China, which has recently picked up as a result of a combination of fear about domestic political and economic conditions and a sluggish domestic real estate market. However, property ownership by mainland Chinese firms and especially by individuals in the United States is difficult to track because there is no central registry for such transactions. In addition, Chinese citizens have an incentive to keep a low profile when purchasing real estate, as they are legally banned from bringing significant funds offshore for property investments. That said, several data points suggest that the pace of property investment has increased in recent years and that California is among the most attractive U.S. locations among Chinese buyers.

First, the number of publicized Chinese investments in U.S. real estate has increased from virtually zero five years ago to a handful of cases every year, including many large-scale purchases. Most of these deals are concentrated in prime U.S. locations—for example, the $569 million purchase of a stake in New York's Park Avenue Plaza by property billionaire Zhang Xin. Investments in the rest of the country have also been picking up, such as Dashing Pacific Group's recent purchases in Toledo, Ohio. Larger publicized Chinese real estate plays in California thus far have concentrated on hospitality, including Shenzhen New World Group's dual acquisitions of the Marriott Downtown and Sheraton Universal hotels in Los Angeles in 2010 and 2011, respectively. This reflects the strength of the California tourism industry and the attractiveness of the Golden State for many Chinese tourists.

Another piece of evidence for increasing real estate investments is the annual survey by the National Association of Realtors, which shows a significant jump in Chinese home-buying activity in the United States over the past five years. In 2012, Chinese nationals were the second-largest group of foreign buyers behind Canadians, accounting for 11% of all deals, up from just 5% in 2007 (Figure 10). With a total transaction value of $83 billion from March 2011 to March 2012, this would mean an additional $9 billion in inflows for the United States in this period. At the same time, California ranks as the second-most-attractive state for foreign buyers, accounting for 11% of total foreign investment in U.S. property. This would imply additional flows of around $1 billion

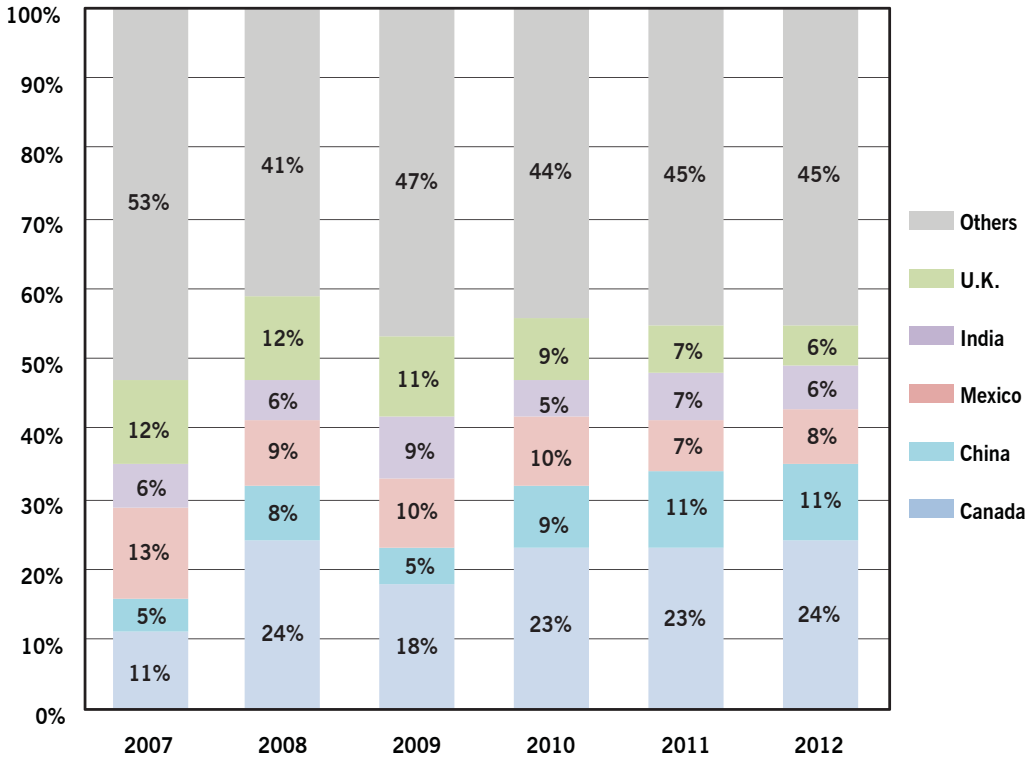
[24] See Tracie Cone, "California Wine in China: Vintners Work to Crack Asian Market," *Huffington Post*, February 16, 2012, http://www.huffingtonpost.com/2012/02/16/california-wine-china_n_1283261.html.
[25] See Cecily Burt, "Oakland Wines Travel to China with Mayor Jean Quan," *Oakland Tribune*, May 17, 2011, http://www.eastbayvintners.com/pages/news/oakland-wines-travel-to-china/.

per year or even more, if one assumes that California attracts more investment from China because of its large ethnic Chinese population and proximity.

Comparing investment patterns with the rest of the United States further highlights California's relative strengths in certain industries. Figure 11 provides a graphical representation of how each of the 30 industries listed earlier compares to the rest of the country in terms of attracting Chinese investment, comparing California and national rankings by both number of investments (x-axis) and total investment value (y-axis). This analysis reinforces the importance to California of many of the industries mentioned here—software and IT services, consumer electronics, transportation services, and leisure and entertainment. It also reveals other industries that receive fewer Chinese investment dollars in California than the industries mentioned here but receive more Chinese investment deals and dollars relative to the rest of the United States. These industries include semiconductors, food and beverages, and high-tech sectors, including health science industries such as biotechnology and pharmaceuticals. Meanwhile, the most underweight sectors are sectors in which other parts of the country have strong clusters—industrial machinery or autos—and capital-intensive industries such as fossil fuels or utilities.

Figure 10: International Home Purchases in the United States, 2007–2012

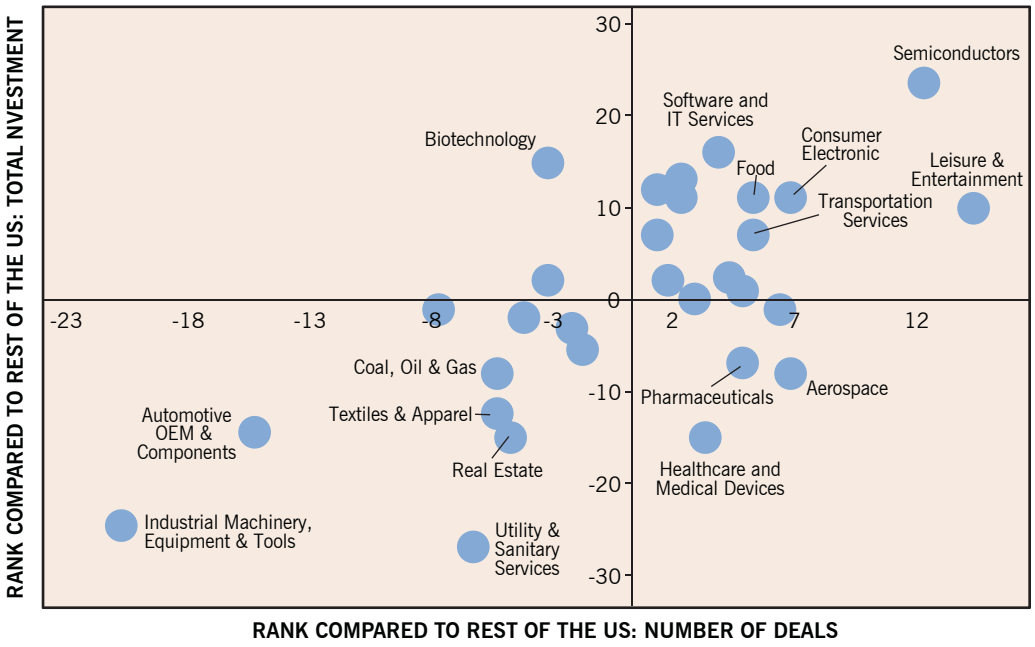
Share of international sales by country



Sources: National Association of Realtors; Rhodium Group.

Figure 11: Chinese Direct Investment in California versus the Rest of the United States, 2000–2011

Rank compared to the rest of the U.S. in number of deals (x-axis) and total investment value (y-axis)



Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.

V. Investors and Entry Modes

For decades, California has been at the forefront of U.S. states in terms of innovative capacity and entrepreneurial environment. An analysis of the Chinese investor base speaks to the strengths and weaknesses of California. California attracts the most experienced and most sophisticated Chinese investors from the most advanced provinces and entrepreneurial hubs on the east coast of China. The overwhelming majority of Chinese firms invested in California are privately owned, the share of greenfield investments is higher than usual, and investments are, on average, smaller in size than in the rest of the country.

Many people mistakenly assume that all Chinese firms are tied to the government. The reality is that ownership in China is diverse, and this is reflected in Chinese investment patterns in the United States. Investors run the gambit from state-controlled institutional investors (such as China Investment Corporation, the sovereign wealth fund), to state-owned enterprises (e.g., China Ocean Shipping Group), firms with hybrid ownership structures (e.g., Lenovo), and wholly private firms and wealthy Chinese individuals. However, the group of Chinese investors in California is unique and shows several differences compared to the complete sample of Chinese investors in the United States.

According to statistics from China's Ministry of Commerce, state-owned enterprises account for more than 70% of China's global OFDI stock, reflecting the head start that these firms had in getting capital and approval for overseas investment in the past decade.[26] Because state-owned firms dominate capital-intensive sectors, their share of overseas deals tends to be far larger than that of private firms. These natural resource investors are less dominant in China's U.S. investment footprint than elsewhere—say, Brazil or Australia. Hence, in the United States, privately held Chinese businesses represent a greater share of the deals made. Around three-quarters of Chinese investment deals in the United States between 2000 and 2011 originated from private firms, which we define as having 80% or greater nongovernment ownership. However, in terms of total deal value, the picture is reversed: state-owned firms, which make more big-ticket investments, account for more than 60% of the total.[27]

[26] According to the Ministry of Commerce's 2009 report on outward foreign direct investment, state-owned enterprises accounted for around 70% of total Chinese OFDI stock in 2009. The authors' interviews with economists and researchers at China's State-Owned Assets Supervision and Administration Commission suggest that the share of state-owned enterprises in total OFDI stock could be even higher.

[27] Examples include China Investment Corporation's stake in AES ($2.5 billion), Huaneng's acquisition of Intergen ($1.3 billion), Tianjin Pipe's steel plant in Texas ($1 billion), CNOOC's stake in the Ford Eagle Shale project ($1 billion), and Pacific Century's acquisition of Nexteer Automotive ($450 million).

In comparison to the rest of the United States, the share of private sector investors is even greater in California (Table 6). In all, 80% of deals involve private or publicly listed Chinese enterprises, compared to 72% in the rest of the United States. California is more alluring to small and medium Chinese enterprises and entrepreneurs, which are much less likely to be government owned. Private sector investors also account for 91% of the total investment value in California, compared to only 35% in all other states combined—mostly because private sector firms account for almost all (96%) acquisition dollars in California, compared to just 34% in the rest of the United States. Notably, there were no large-scale M&A deals by government-controlled entities in California from 2000 to 2011. Of course, this does not reflect a lack of interest in California on the part of Chinese state-owned firms—had it been completed, CNOOC's $18.5 billion bid for California-based Unocal in 2005 would have been worth more than the combined value of all other Chinese investment activities in America through 2011.

Table 6: Chinese FDI by Ownership of Investing Firm, 2000–2011

NUMBER OF DEALS

	Rest of the United States						California					
	Greenfield Projects	% Share	Acquisitions	% Share	Total	% Share	Greenfield Projects	% Share	Acquisitions	% Share	Total	% Share
Government Controlled	80	32%	30	21%	110	**28%**	26	24%	5	11%	31	**20%**
Private and Public*	170	68%	111	79%	280	**72%**	83	76%	42	89%	125	**80%**

TOTAL INVESTMENT (MILLIONS OF U.S. DOLLARS)

	Rest of the United States						California					
	Greenfield Projects	% Share	Acquisitions	% Share	Total	% Share	Greenfield Projects	% Share	Acquisitions	% Share	Total	% Share
Government Controlled	1,837	64%	7,978	66%	9,816	**65%**	84	34%	38	4%	123	**9%**
Private and Public*	1,032	36%	4,174	34%	5,206	**35%**	163	66%	1,042	96%	1,206	**91%**

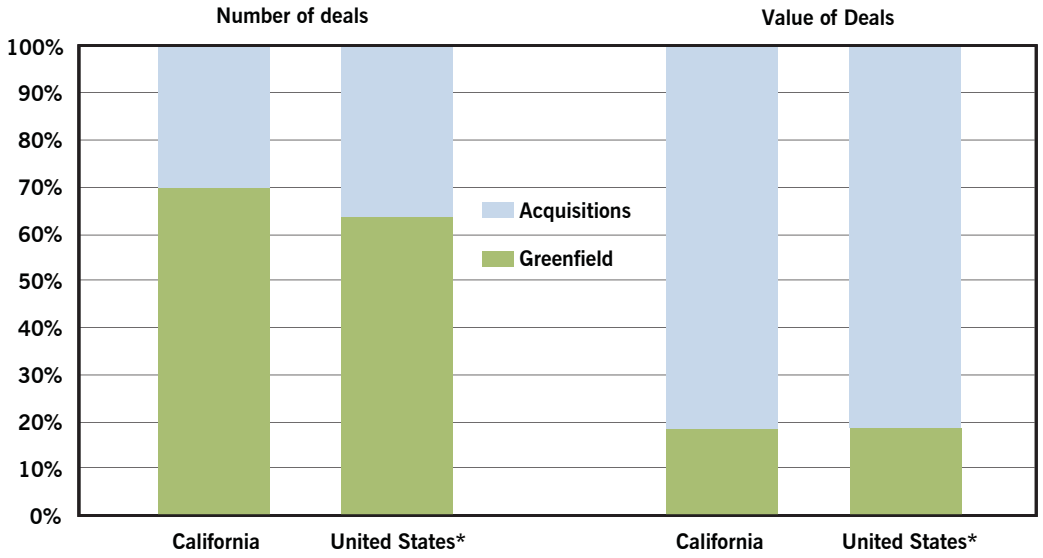
Source: Rhodium Group.
* Private and public might include listed firms with minority stakes by government-owned firms or related entities (less than 20% as of July 2012).

An analysis of the entry mode and size of Chinese investment deals in California underscores the attraction of the state for China's private firms. Compared to the rest of the country, in California, the share of greenfield projects in total Chinese investment is the same in terms of investment value

(19%) but slightly bigger in terms of number of deals (70% versus 64%) (Figure 12). The more prominent role of greenfield projects highlights the attractiveness of California's vibrant consumer-driven economy for small-scale Chinese greenfield investments in sales, marketing, and support capacities— California attracts more deals in these areas than any other state.

Figure 12: Chinese FDI by Entry Mode, California versus United States, 2000–2011

Number of deals, value of deals in U.S. dollars



Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.
* Excluding California.

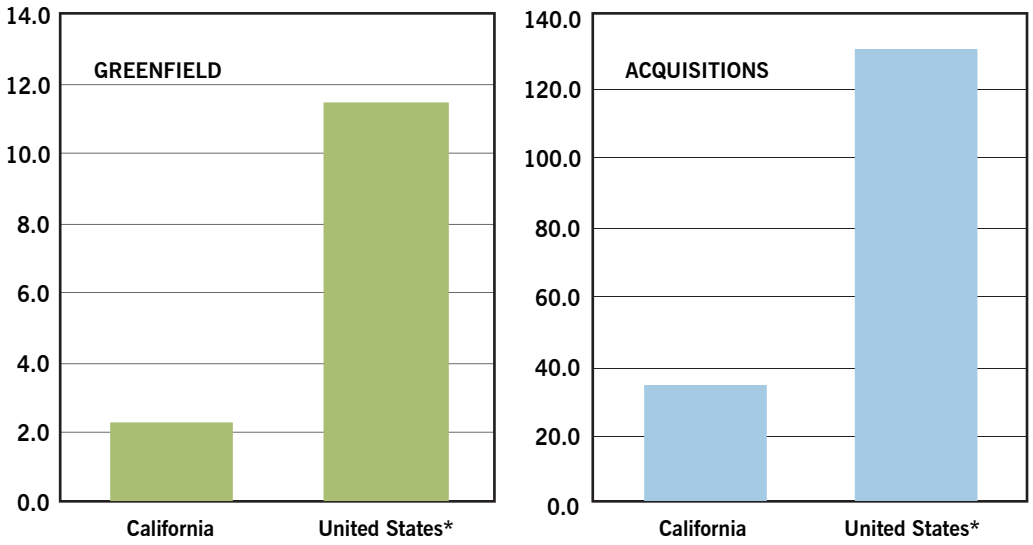
Investment deals in California are also smaller in value than the national average; greenfield projects in the state average about $2.3 million in value, while acquisition deals are valued at $23 million on average, around one-third of the average deal size in the rest of the United States for M&A transactions and one-sixth the average greenfield deal size (Figure 13). This is partly explained by the abundance of smaller sales operations and fledgling start-up information technology firms. From 2000 to 2011, at least 21 information electronics and information technology–related M&A transactions with an average value close to the $40 million average California acquisition value took place in Los Angeles, San Diego, San Jose, and San Francisco, accounting for more than two-thirds of all Chinese M&A value in California during that period.

Another eye-catching difference is that California is host to the most internationally experienced and technologically sophisticated Chinese companies. While some states in the United States have attracted larger-scale projects by Chinese firms that are newcomers to international business, such operations are very rare in California. This can be explained by the challenging market entry and operating conditions in California.[28]

[28] The California Chamber of Commerce documents many of these difficulties in annual business climate studies; see CalChamber (2012).

Figure 13: Average Size of Chinese Investments, California versus United States,** 2000–2011

Millions of U.S. dollars



Source: Rhodium Group. For sources and methodology, see appendix and http://rhgroup.net/interactive/china-investment-monitor.
* Excluding California.
** Transactions with missing values were omitted for calculations.

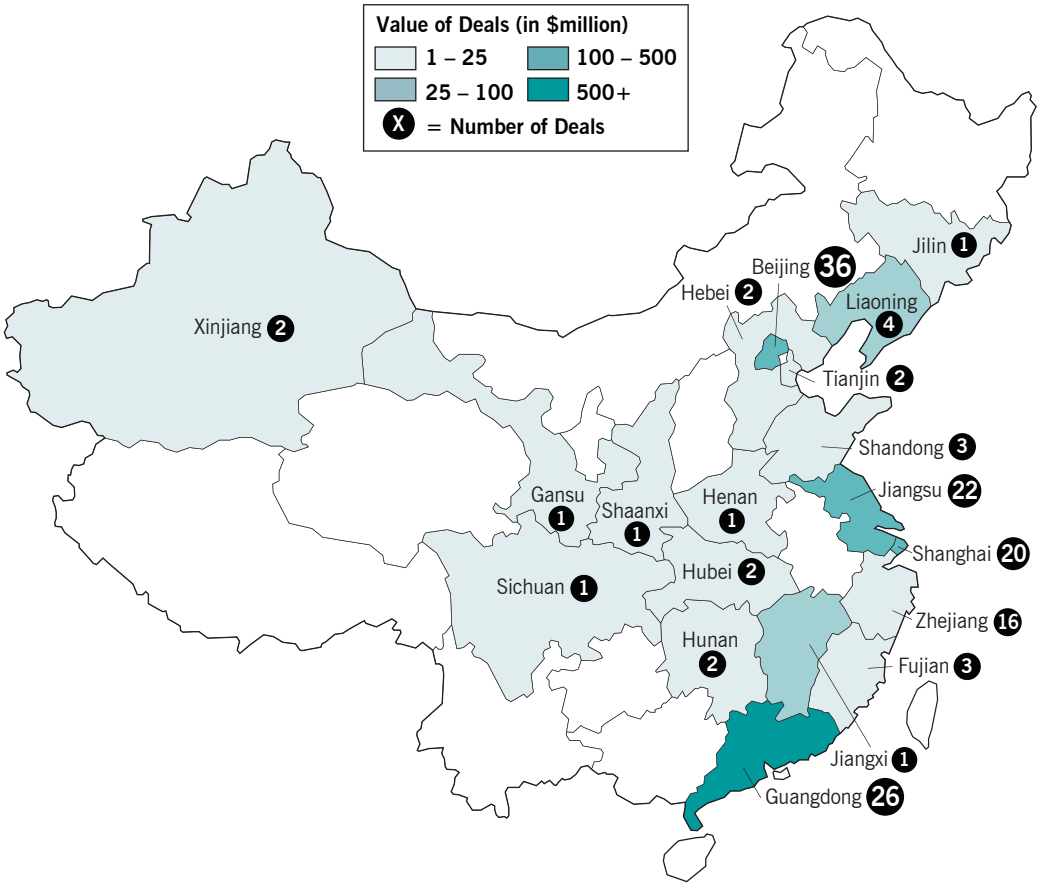
The state-owned Chinese firms operating in California are the most internationally experienced state-owned enterprises and have been in California for the longest time. State-owned enterprises are mostly operating in shipping (China Shipping, COSCO), aviation (Air China, China Southern Airlines, China Eastern), banking (Bank of China, Bank of Communications, CITIC Bank International), and telecommunications services (China Telecom, China Unicom, China Mobile). Many of these firms were pioneers of Chinese outward investment and have been operating on the West Coast for a long time, in some cases for more than two decades. For example, COSCO has been servicing California ports since the early 1980s.

The same is true for most of the bigger private Chinese firms operating in California. They operate in technologically sophisticated industries, have a comparably international workforce and leadership with overseas education, and receive a substantial share of revenue from abroad. Examples include Huawei, ZTE, and Alibaba. Many firms are also at least partially listed on the NASDAQ and other foreign stock exchanges or have important strategic foreign shareholders. Yingli Energy, Techfaith Wireless, Sohu, and BYD are prominent examples.

The geographic distribution of Chinese investors by home province supports the view that California attracts the most advanced Chinese firms (Figure 14). Chinese OFDI to California overwhelmingly originates from China's developed east coast, especially in the wealthiest cities, where per capita GDP surpasses the $10,000 mark. Beijing and Shanghai are key Chinese cities with investors look-

ing toward California. Private sector hubs such as Zhejiang and Guangdong are also particularly important; according to our data set, Guangdong is the greatest provincial source of Chinese investment to California.

Figure 14: Chinese OFDI in California by Chinese Province of Origin, 2000–2011
Number of deals



Source: Rhodium Group.

VI. The Potential for Future Growth

Looking forward, the United States as a whole and California in particular can attract a significant amount of investment dollars and related benefits. Despite rapid growth in recent years, the Chinese investment boom is still in its early stages, and its impact on California's economy is still relatively small. The $1.6 billion of Chinese investment from 2000 to 2011 is miniscule compared to the size of California's economy and total investment from other sources, and Chinese companies presently employ only a small share of California's 18.5 million workers. In 2010, although China accounted for 20% of the global population and 10% of global GDP, it contributed a mere 1.5% to global FDI stocks (Figure 15).

China's foreign investment stature remains dwarfed by the magnitude of its impressive domestic modernization and economic development. But China is catching up. If it follows the typical development trajectory of other nations, the world can expect to see hundreds of billions of dollars in Chinese overseas investment in the coming decade poured into resource-rich nations and highly developed economies. There is a tremendous opportunity to capture additional Chinese investment dollars in the coming years as this wave approaches.

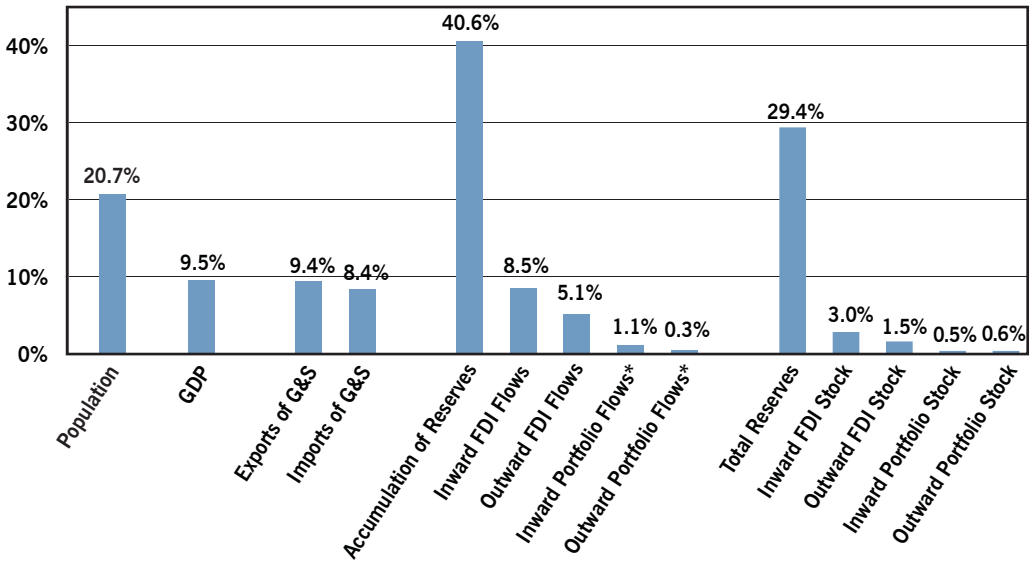
China's Ministry of Commerce expects China to become a net exporter of FDI by around 2015.[29] By 2020, China's GDP likely will have surpassed $20 trillion, equivalent to GDP per capita of around $14,000. If the traditional relationship between GDP growth and FDI flow holds, outward investment over these 10 years will grow quickly, even under conservative assumptions. The current low OFDI-to-GDP ratio of 5% would yield $1 trillion in new OFDI through 2020 ($100 billion per year, on average). If China's ratio rises to the transitional economy average of 15%, outflows would amount to roughly $3 trillion, or approximately $300 billion annually. Based on those projections, we place our bet between these two figures, at $1 trillion to $2 trillion by 2020.

Given the shifting motives and necessities of Chinese firms, investment flows from China to developed economies will grow strongly in the coming years. Developed economies can expect to receive a substantial share of the $1 trillion to $2 trillion in direct investment that China will place around the world over the next decade. A precise estimate of the amount of Chinese investment flowing to the United States is impossible, but historical data offer a rough guideline of the potential magnitude. In the past decade, the United States received about 17%, on average, of global FDI flows. If this

[29] See Ding Qingfen, "Overseas Direct Investment to Grow," *China Daily*, December 24, 2010, http://www.chinadaily.com.cn/bizchina/2010-12/24/content_11749290.htm.

Figure 15: China in the Global Economy, 2010

China's share of global total



Sources: World Bank; International Monetary Fund; United Nations Conference on Trade and Development; UN Comtrade; Economist Intelligence Unit; Rhodium Group.

percentage (10%–20%) holds steady for FDI from China, the United States will see $100 billion to $400 billion of investment between 2010 and 2020. Based on jobs figures from foreign enterprises (Table 1), we assume that California will receive around 10% of total FDI in the United States. Our assessment of Chinese investment patterns from 2000 to 2011 shows that California is home to about 30% of all deals, but it gets only about 10% of total investment dollars, indicating that there is room for growth in terms of value. If California maintains its 10% share, this would translate into $10 billion to $20 billion in Chinese investment by 2020 (assuming mid-range American performance overall). If California increases its share to 30%, it would increase state inflows from China to some $50 billion to $60 billion by 2020. These are hardly unreachable figures: leading Chinese provinces sometimes land that value of contracted investment in a year!

California can earn a bigger piece of the pie by promoting the complementarities between what Chinese investors want and what California has to offer. China's economy and its firms are undergoing a comprehensive structural overhaul, and overseas investment in California offers three notable opportunities: moving down the distribution chain closer to the customer; moving up the value chain in manufacturing and services by upgrading technology, know-how, and staff base; and finding new ways to diversify sovereign, corporate, or private funds from low-yield asset classes to higher-return direct investments.

The earliest of China's overseas investments were made to facilitate trade—imports of commodities and exports of manufactured goods—and the same motive is woven throughout the history of Chinese investment in California. Firms such as China Shipping have invested heavily in physical logistics infrastructure, and many manufacturing firms are running offices to expand their exports

to the United States. Investment interests in this area will continue to be strong, but these patterns will gradually evolve. Shrinking profit margins in the manufacturing sector at home are increasingly strong-arming Chinese manufacturers to move closer to the customer in order to capture more of the value added—an activity that they previously conceded to foreign brands and big retailers such as Walmart. This move down the value chain involves the establishment of brands, more sophisticated sales and distribution channels, and customer service.

California is a global leader in providing services such as market research, advertising, marketing, distribution and logistics, and customer fulfillment. With 37 million potential customers and a per capita income of $45,000, California is a naturally appealing market to Chinese firms. In addition, the "Designed in California" or "Made in California" branding is attractive for expansion in other markets. Some examples of Chinese firms producing their goods in California are consumer electronics producer TCL, consumer appliances maker Gree, electric vehicle producer BYD, and communications equipment maker Huawei.

Table 7: California's Top 20 Imports from China, 2011

Billions of U.S. dollars

	Commodity (HS)	Total Imports from China, 2011 (billions of U.S. dollars)	Growth Rates (2008–2011 average)
1	Machinery (84)	36.50	16.03%
2	Electric Equipment (85)	32.02	4.74%
3	Toys and Sport Equipment (95)	6.12	-10.41%
4	Footwear and Gaiters (64)	5.98	12.04%
5	Furniture, Bedding and Lamps (94)	5.02	4.30%
6	Knit or Crochet Apparel (61)	4.50	9.96%
7	Non-knit Apparel (62)	4.45	3.77%
8	Plastics (39)	2.68	8.40%
9	Motor Vehicles (87)	2.36	9.28%
10	Leather Goods (42)	2.13	5.04%
11	Textile and Needlecraft Articles (63)	1.66	8.63%
12	Photo and Medical Tools (90)	1.65	9.48%
13	Iron and Steel Articles (73)	1.51	-7.48%
14	Rubber Articles (40)	.90	-7.98%
15	Misc Base Metal Articles (83)	.82	2.96%
16	Wood Articles (44)	.76	3.03%
17	Tool and Cutlery (82)	.62	2.82%
18	Paper and Paperboard and Articles (48)	.61	-8.31%
19	Organic Chemicals (29)	.56	5.43%
20	Misc. Manufactured Articles (96)	.50	7.07%

Source: Rhodium Group, http://tse.export.gov.

Moving up the value chain is another priority for many Chinese firms. China can no longer compete in low-value-added light manufacturing industries based solely on cheap labor and scale. Firms are being forced to move into new products in order to maintain export growth and to compete for domestic market share against foreign multinationals. These measures require technology upgrades, better-trained staff, and a greater range of manufacturing-related service activities such as R&D and quality control. With its innovative capacity, unique human resources, and vast experience, California offers unrivaled opportunities for investors looking to move up the value chain.

Firms drawn to California to upgrade manufacturing value chains are likely to deal in sectors in which California has been traditionally strong, such as communications equipment, consumer electronics, renewable energy, and information technology. Chinese firms have begun acquiring assets, investing in R&D operations, and hiring qualified staff in these industries in recent years. More important than actual hard technology is human talent and the experience of the local workforce in higher-value-added activities. This is a key value proposition for Chinese firms coming to California. Huawei's expansion through significant local hiring and acquisitions is an example. Chinese firms will be most interested in investing in sectors in which California has a strong advantage over global competition. Table 8 lists sectors in which California leads in traded goods. Firms in high-tech sectors designated as strategic by the Chinese government have a particular interest in investing in sectors such as energy-saving technologies, environmental remediation, biotechnology, and new energy vehicles, which define the leading edge of California's high-tech economy.[30]

Along with electronics, optical instruments, and other high-tech goods, California is particularly strong in agriculture. California not only has a large agricultural sector, but also has learned to create value beyond land and labor intensity. Facing a land shortage, rising rural wages, and widespread quality control problems, China could greatly benefit from moving up the value chain in California, and we have seen the first ventures begin in the past two years.

Along with upgrading the manufacturing sector, there are tremendous benefits to above-trend service sector growth in China in the coming years. The focus on light manufacturing and infrastructure build-out has left China with one of the smallest service sectors in the world relative to its GDP (Figure 16). Higher-value-added services in particular are in the very early stages of development. The macroeconomic rebalancing process that China will go through in the coming years is expected to shift huge amounts of capital from manufacturing, real estate, and infrastructure into service sector activity. This will lead to a breakup of traditional service sector monopolies, as is currently happening in the Chinese banking sector. For firms looking for a competitive edge in the coming service sector boom, California is a natural target as a leader in creating services value added. Its investment history highlights that California is already a preferred investment target in specific service clusters such as software development and biotechnology. Other traditionally strong service industries that are underdeveloped in China, such as entertainment or education, have received more interest from Chinese investors in the past two years, and there remains a huge potential to expand Chinese investment in modern service sector activities.

[30] See Lan Lan, "Nation Seeks Strategic Industries' Development," *China Daily*, July 24, 2012, http://www.chinadaily.com.cn/china/2012-07/24/content_15610285.htm.

Table 8: California's Revealed Comparative Advantage (RCA) in Traded Goods

RCA ratio, billions of U.S. dollars, percent growth

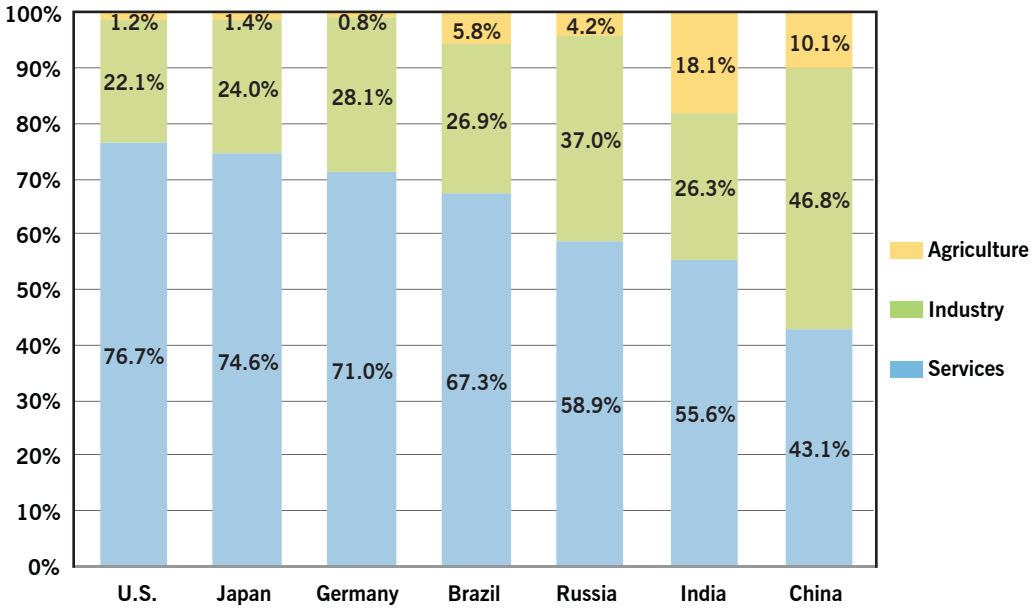
Commodity (HS Code)	Revealed Comparative Advantage*	Total Exports 2011 ($ billion)	Export Growth (2003-2011 Average)
Fruits and nuts (8)	8.63	8.00	12.6%
Musical Instruments (92)	4.13	0.26	5.7%
Arms and ammunition (93)	3.84	0.35	-0.3%
Optic and medical Tools (90)	3.41	16.67	6.8%
Aerospace (88)	3.41	6.67	3.9%
Pulp and waste paper (47)	3.19	1.40	13.5%
Misc edible preparations (21)	2.78	1.39	5.1%
Edible vegetables (7)	2.52	1.30	6.6%
Art and antiques (97)	2.41	0.37	12.4%
Photo and film goods (37)	2.37	0.21	3.5%
Prep vegetables (20)	1.76	0.97	9.8%
Chemical products (38)	1.67	2.21	7.3%
Cotton products (52)	1.66	1.04	2.6%
Toys and sport equipment (95)	1.65	1.45	4.0%
Base metals and cements (81)	1.58	0.36	17.8%
Electric equipment (85)	1.55	28.35	2.5%
Misc animal products (5)	1.49	0.16	5.9%
Misc plant products (12)	1.45	1.01	7.8%
Explosives and pyrotechnics (36)	1.38	0.04	1.4%
Beverages and spirits (22)	1.33	1.53	9.5%
Dairy products and honey (4)	1.24	1.39	26.2%
Nuclear machinery (84)	1.24	27.45	4.0%
Egg and starch products (35)	1.23	0.32	16.0%
Precious metals and jewels (71)	1.22	6.88	26.5%
Vegetable plaiting materials (14)	1.15	0.01	5.4%
Cosmetic perfumes and oils (33)	1.12	1.09	9.5%
Knitted or crocheted fabrics (60)	1.08	0.22	0.9%
Aluminum articles (76)	1.02	1.66	12.3%
Printed items (49)	1.02	0.40	-1.9%

Sources: USATrade; UN Comtrade; World Bank; Rhodium Group.

Revealed comparative advantage (RCA) is an index used for calculating the relative strength of a specific region in producing certain goods from trade figures. It is calculated by dividing the proportion of the region's total exports composed of a certain class of goods or services by the proportion of total global exports composed of the same class of goods or services. Our RCA values are an average of California's annual RCA statistics from 2007 to 2009 based on data from the United Nations' Comtrade database and the U.S. Census Bureau.

Figure 16: China's GDP by Expenditure in Global Comparison, 2011

Share of total



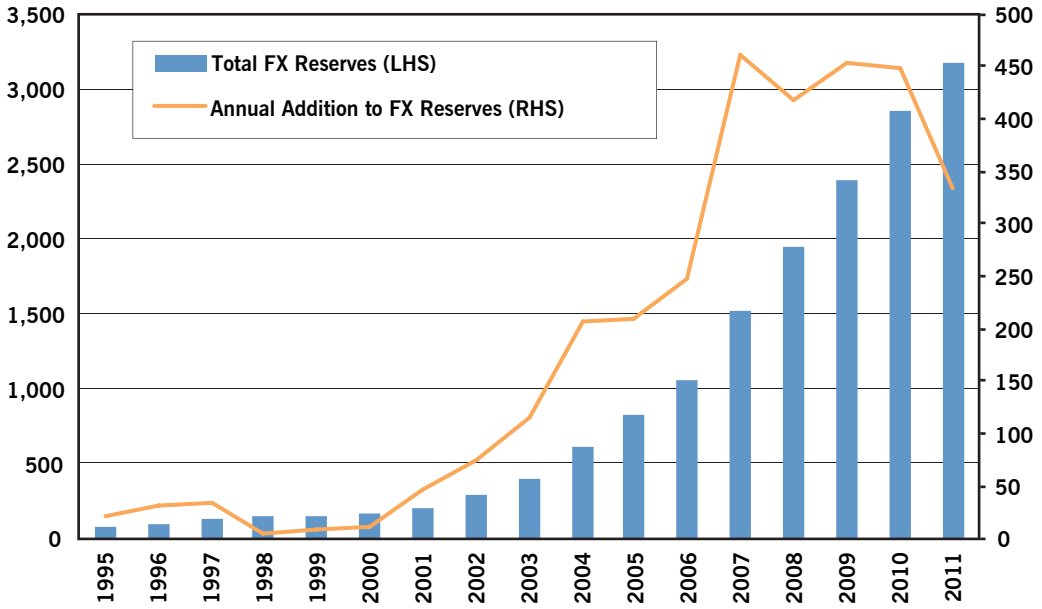
Sources: International Monetary Fund; national statistical agencies; Rhodium Group.

Another trend in Chinese outward investment that California can profit from is overseas investment for wealth management purposes. China's government, corporations, and wealthy individuals have accumulated plenty of wealth that they want to put to work abroad. China's central bank manages some $3.2 trillion in various foreign reserves as of this writing, held mostly in low-yield government securities (Figure 17). Some of these funds are handed to China's sovereign wealth fund—the China Investment Corporation—and other investment entities, which direct funds into higher-yield assets such as equities or direct investment stakes.[31]

In addition to sovereign players, private investment funds, firms, and high net-wealth individuals are increasingly looking to deploy their capital abroad. At the end of 2011, Chinese households and enterprises were holding around $5.5 trillion in domestic RMB deposits in Chinese banks. The top 1% of urban households alone are estimated to hold around $3 trillion to $5 trillion in wealth (Figure 18). Because of strict capital account controls, these funds are currently mostly invested at home, a large share of them in low-yield savings deposits. However, quality investment opportunities to put that capital to work inside China are increasingly hard to find, which has led to overinvestment in already "bubbly" classes of assets, including property developments. Furthermore, prospects for economic rebalancing could lead to new uncertainty in the domestic economy, so overseas investment may become more attractive as a hedge. Gradual capital account liberalization is creating more opportunities for such funds to leave the country, and a portion of it may flow into real estate and FDI projects

[31] China Investment Corporation started to take direct investment stakes in 2009, and other funds such as the National Social Security Fund are expected to take a similar route once they have built up the necessary capacity.

Figure 17: China's Foreign Exchange Reserves, 1995–2011
Billions of U.S. dollars



Sources: People's Bank of China; Rhodium Group.

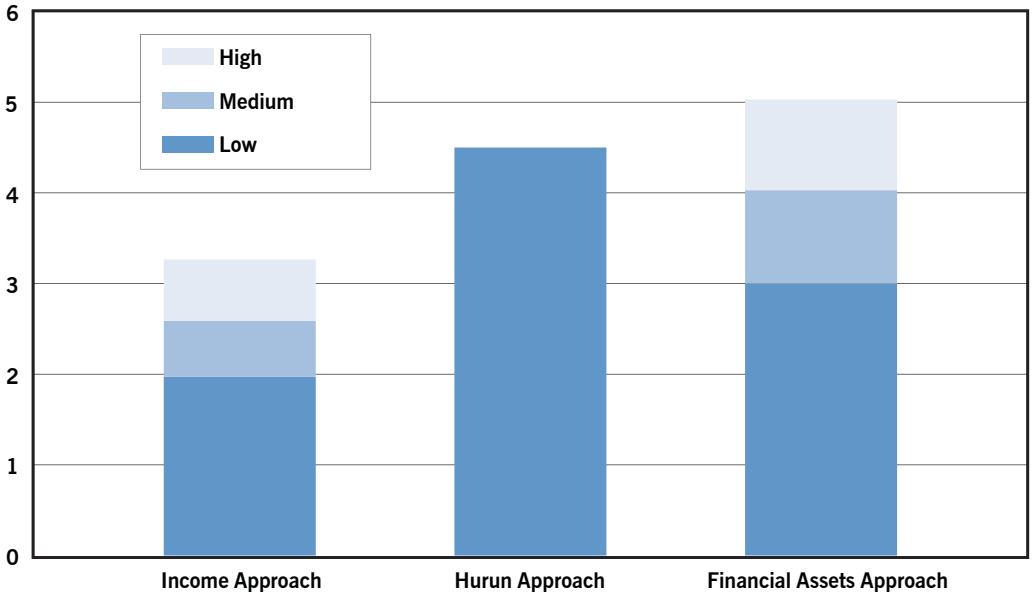
abroad. The city of Wenzhou, for example, started a trial program in 2012 to allow individuals to engage in outward FDI for the first time in the history of the People's Republic of China.[32]

California has the potential to attract a significant portion of these new flows. It is home to some of the country's most innovative companies and offers unique structures for private equity and venture financing. California is also one of the biggest real estate markets in the country, offering a plethora of opportunities for firms, funds, and individuals alike. The state's funding gap in public infrastructure could also offer interesting opportunities for Chinese investors, who are increasingly interested in infrastructure projects abroad. According to the American Society of Civil Engineers, California's total annual unfunded infrastructure investment is estimated at around $65 billion.[33] As congressional funding for local infrastructure projects has become increasingly hard to secure, California could benefit greatly from additional Chinese financing. There is interest on the Chinese side as well, as such projects could be one way to direct a greater portion of Beijing's massive pool of foreign exchange reserves into projects with potentially higher returns.[34] The final statement of the 2012 U.S.–China Strategic and Economic Dialogue highlighted both countries' interests in exploring such opportunities in infrastructure financing.[35]

[32] See Gao Changxin, "Wenzhou to Pilot Private Investment Overseas," *China Daily*, March 29, 2012, http://www.chinadaily.com.cn/china/2012-03/29/content_14935672.htm.
[33] See "California's Infrastructure Needs $65 Billion in Major Improvements: State's Infrastructure Earns an Overall Grade of 'C' from Local Civil Engineers," American Society of Civil Engineers, news release, February 29, 2012, http://www.ascecareportcard.org/data_specific/CA_Report_Card_News_Release. pdf.
[34] See "China Keen to Invest in U.S. Infrastructure: Commerce Minister Chen Deming," *Economic Times*, December 4, 2011, http://articles.economictimes.indiatimes.com/2011-12-04/news/30474465_1_clean-energy-commerce-minister-chen-deming-government-debt.
[35] The Joint Fact Sheet can be found at http://www.treasury.gov/press-center/press-releases/Pages/tg1567.aspx.

Figure 18: Estimated Wealth of China's Top 1% Urban Households, 2010

Trillions of U.S. dollars



Source: Rhodium Group, based on data from Shi (2011). Victor Shi estimates the wealth of the top 1% urban households in China based on data on household income ("Income Approach"), the Hurun Report ("Hurun Approach") and official statistics on financial assets such as bank deposits and bond and equity holdings ("Financial Assets Approach").

Conclusions: Working Together to Maximize Benefits

For more than a century, the United States has been the premier global destination for direct investment, with little need for self-promotion.[36] However, maintaining this premier status requires tremendous effort. The United States is still the world's largest economy, but it is no longer the unparalleled destination for investment that it once was. Household consumption growth—the biggest attraction of the past 100 years—is moderating, and America's technological lead, while still considerable, is narrowing.

California needs to redouble its efforts, too. The Golden State is at the forefront of the Chinese investment boom in the United States, and it attracts more deals than any other state with its unrivalled market size, geographic position, ethnic diversity, and advanced industry mix. But with smaller average investments, California is only fifth among U.S. states for Chinese investment by value—respectable, but far from impressive for an economy that is 60% bigger than the next-largest state (Texas). California will be increasingly attractive as Chinese investors become more sophisticated, but competition from other states is intensifying at least as quickly. It is clear that in order for California to maintain its position—let alone move up the ranks—a wide group of stakeholders will have to work together to build a long-term strategy and implement it effectively.

The stakes are significant. If California can marshal its assets and sustain current investor interest, we estimate that it can land $20 billion in new Chinese inflows by 2020; if strategy and execution elevate state performance to its full potential, inflows could reach as high as $60 billion. Creating that strategy will require coordination and teamwork. Private sector business leaders, investment facilitators, value chain partners, the research and academic communities, and nongovernmental organizations need to work together with leadership from Sacramento. That foundation of stakeholder collaboration is irreplaceable. From an analysis of California's share in 547 Chinese investments in the United States since 2000, this study provides the data and perspective to formulate a coherent strategy. We identify the following four initial steps toward a long-term strategy to sustain investment from China in California.

1. Understand China's needs and California's value.

Amid tough competition for Chinese capital, a thorough understanding of both Chinese motives and what California has to offer is the cornerstone of a strategy to promote Chinese investment. This report lays out the push and pull factors compelling Chinese firms to consider a U.S. presence.[37]

[36] See Wilkins (1989).

[37] For a more extensive analysis, see Rosen and Hanemann (2011) and Hanemann and Rosen (2012).

Firms are seeking to grow profits, defend existing market shares, and enhance operations to combat eroding profit margins back home. They will take advantage of state support when available, but they will not cross the ocean unless the market opportunity is clear. Understanding these characteristics is vital to developing a relationship with Chinese investors. Though not all considerations apply to any one Chinese potential investor, based on our extensive research on the motives for Chinese overseas investment and an analysis of more than 500 U.S. deals, we believe that California should focus on five value propositions to market the state to Chinese investors:

First, Chinese firms, especially those in higher-value segments, need access to large, sophisticated foreign markets. California has the *largest state market in the country*, and it is the principal gateway to the rest of the U.S. marketplace. These market opportunities apply to all of the firms currently serving the United States through the export model. But there are also massive long-term investment opportunities for China's institutional investors and infrastructure services firms. The United States needs investment in infrastructure and long-term projects, and California in particular, with its strong economy, is ideal for long-term investors from China.

Second, China's storied manufacturers are under heavy pressure to advance their process and production methods or else risk bankruptcy, takeover, or a drawn-out hemorrhage of money. California is world beating in high-value-added manufacturing, and it is a *national leader in many of the high-technology industries* Chinese policy and firms target. The state has a clear comparative advantage in aircraft, medical devices and instruments, as well as high-end foodstuffs and other agriculture. With its clusters of capital, higher education, hard and soft intellectual property, and production facilities, California is the place for Chinese firms to learn how to manage quality-intensive manufacturing processes that will distinguish them from their competition at home and abroad. China-based exporters to the United States are increasingly aware that competitors closer to American customers can provide better value, for the same reasons that U.S. firms with operations in China typically do better than those that stay at home.

Third, a similar urgency exists in the *services sector*, where California is also in a globally strong position. There are two components of service sector deepening that are important to China. As newcomers to the era of consumption-heavy economic growth, China's firms are playing catch-up in producing high-value services for final consumption by middle-income and higher households—services ranging from health care to entertainment to hospitality. Second, driven by the intensifying competition of domestic markets, firms are belatedly rushing to absorb intermediate services capabilities into their traditional primary and secondary sector (agriculture and manufacturing) activities. More advanced advertising, marketing, customer relations, design, engineering, and myriad other business service inputs are as underdeveloped in most of China as they are abundant and world-class in California, and this is a major potential draw for Chinese interest.

A fourth driver is the weakness of human resources at home and the need to recruit talented and experienced staff overseas. California possesses a *deep endowment of human talent* available to join with foreign ventures and, moreover, a legacy of cultural familiarity and diversity. With the nation's

largest ethnic Chinese population and the largest number of successful Chinese investments to date, California has a trove of valuable experience to tap into to help new entrants feel more comfortable with an unfamiliar investment environment. These precursor flows of people and deals are powerful evidence of the value proposition which California presents to China.

Fifth and finally, California's *quality of life* is a significant attraction to Chinese investors. The Golden State has a reputation for its lifestyle, environmental quality, great public and private education, reliable legal protections, and due process for property, as well as many other intangible assets. More than being just the biggest marketplace among American states, California can proudly proclaim itself the most welcoming U.S. destination for China's private and entrepreneurial businesses, the most dynamic engine of growth for China's future. That is part of the branding of California as a place of opportunity. Understanding this value proposition leads directly to the right marketing strategy for China.

It is also critical to consider several downside *liabilities* of California from the perspective of potential Chinese investors. There is a glaring disconnect between California's high ranking in technology and innovation and access to capital and its cost of doing business and perceived business friendliness. On the latter criteria, California routinely ranks near the absolute bottom in independent surveys.[38] Coming from very cost-conscious origins, firms from China may be particularly put off by the high operating costs prevalent on the West Coast. Looking ahead, California's looming fiscal instability is another serious concern, and one not missed by potential Chinese investors, who must wonder whether the public component of public–private partnerships can be fulfilled, whether tax assessments are likely to surge, or whether partners in the production chain will be tempted by other states to decamp in pursuit of better operating environments.

2. Target the right Chinese firms.

The analytics developed in this study provide the starting point for segmenting and prioritizing prospects in a nation of almost 5 million businesses.[39] Not all of the investors coming out of China will be interested in California or serve the state's long-term objectives. A proactive effort to reach firms that are better suited to California's conditions can be built based on evidence of previous successful investments.

For starters, California is the place to go for China's *private firms*. Entrepreneurs and small and medium-sized enterprises value California for its advanced legal structures, openness to new products and partners, worldliness toward non-Americans, and strong business facilitation services, among other advantages. Efforts to recruit Chinese investors therefore should emphasize Shanghai, Zhejiang, Guangdong, and other bastions of Chinese entrepreneurialism.

Within China's nascent private sector, there is a considerable range of capabilities and sophistication. California is not the easiest or the cheapest state in which to run a business, and the firms that see the value proposition will, by necessity, be more advanced. More mature firms with some

[38] See, for example, CNBC's "Top States" rankings, 2012, at http://www.cnbc.com/id/46414924.
[39] Figure based on data from the 2008 National Economic Census, National Bureau of Statistics of China.

international exposure are far less likely to be put off by California's high costs. Higher-technology but lower-maturity start-ups and innovative industry investors may be an exception, as they tend to possess international exposure and familiarity with advanced economy operating costs at an early stage of development.

California's economy is larger than all but eight nations globally,[40] and it has ample room for all industries, but there are nonetheless clear *sectoral patterns* in Chinese investment. Table 2 in Section 3 of this report summarizes the top sectors for Chinese presence in California by value and number of deals. In each of these sectors, state investment officials should be capitalizing on past successes to make the case to the next generation of Chinese outbound investors; nothing motivates like the knowledge that your competitor is already doing something.

At the same time, while working-level teams market based on past successes, California's leaders must not forget that we are at the earliest stage of Chinese OFDI in the United States, and at this low baseline, one deal—such as the Unocal case—could rewrite expectations of what success looks like overnight. China is dominated by large *institutional investors*, including wealth funds and industrial conglomerates, and while investment promotion officials pursue a targeted approach, state leaders should systematically maintain an open line to these investment giants regardless of industrial sector. A personal outreach to China's 100 largest firms is well within the capacity of the governor's office.

3. Overhaul the institutional setup for investment promotion.

A successful outreach to promote foreign investment will require California (and the United States as a whole) to adjust. The traditional hands-off approach to investment promotion is outdated, as officials from the President to local mayors now agree. Not only is the United States no longer unrivaled as a destination for FDI, but also the landscape of investors is changing. A new generation of investors from China and other emerging markets needs local partners and facilitators more urgently than the traditional investors from Europe and developed Asia. Chinese investors are less familiar with Western culture and business practices, they are rooted in a different regulatory environment ("capitalism with Chinese characteristics"), and they have relatively little experience operating abroad. Active investment promotion can help overcome negative preconceptions of the U.S. investment environment stemming from a handful of politicized past deals.

Steps to improve investment promotion at the federal level are already under way. The Obama administration's SelectUSA initiative, launched in 2011, is one example. Other steps include efforts to streamline burdensome visa processing and better Treasury Department outreach to clarify misperceptions about national security screening. While Washington-based national security and immigration policies are systemic *impediments* to Chinese firms and businessmen, a positive set of *incentives* must come from state and local governments. Unlike China, in the United States, the central government does not designate special economic zones or hand out privileges for inbound foreign investors; those are state-level prerogatives. Therefore, the battle for China's investment dollars will be fought at the

[40] Based on 2011 GDP statistics from the World Bank and U.S. Bureau of Economic Analysis.

state and municipal levels, where local infrastructure, industry clusters orbiting public goods such as colleges, universities, and research laboratories, proximity to thriving markets, state and local tax holidays, human resource pools, local union and labor laws, and other subnational operating variables will define the landscape for Chinese investment.

Actively crafting an efficient mix of these variables (attractive enough to lure investors but not erosive to the tax base, environmental quality, or other aspects of welfare) will require state and local institutions to be proactive. Compared to other states, California has good institutions at the city level, but it lags far behind at the state level (for details, see Box 3). Given the needs of Chinese investors and other states' experience, the following changes are intuitive:

First, California should establish a *state-level agency* to coordinate local efforts to promote Chinese investment. A handful of California's local investment promotion institutions are among the best in the nation, and yet they lack a strong state institution to unify their efforts. This leaves considerable synergistic potential untapped. A state institution responsible for coordinating investment promotion efforts would expand California's investment promotion network and extend benefits to smaller municipalities that lack the means to engage in their own significant investment promotion efforts. Such an institution could serve as a one-stop shop for Chinese and other foreign investors, helping them identify investment opportunities across the state and directing them to local investment promotion agencies when appropriate. GO-Biz, created by Governor Jerry Brown's administration earlier this year, is a step in the right direction, but it needs to be given the necessary resources to take a leadership role.

Second, California should create a *local presence* in China. The most effective state- and municipal-level Chinese investment promotion efforts tend to include a physical presence in one of China's major international cities. These trade and investment offices help establish personal relationships with potential investors, who can explore investment opportunities without the inconvenience of lengthy travel. Successful trade offices tend not to be stand-alone institutions, but rather tools used by investment promotion agencies that are part of their comprehensive strategy. California should follow the example of other states that have staffed their China offices with representatives fluent in Chinese and knowledgeable about Chinese culture and business. These expenses are justified, as they will maximize efficiency and positive return on investment.

The best geographic locations for investment offices are Beijing, Shanghai, and Guangzhou. Our data show that these cities and the surrounding municipalities account for a large proportion of total Chinese investment in California. Shanghai is geographically close to Zhejiang and Jiangsu provinces; these three regions together account for more than one-third of all Chinese investment deals in California. Similarly, Beijing accounts for the most investment deals of any Chinese province or city, and an office there may foster greater investment from surrounding areas such as Tianjin and Liaoning. Guangzhou or another city in Guangdong Province would offer access to the Pearl River Delta and the manufacturing hubs of southeastern China.

Third, it makes sense to give local Chinese firms and other *stakeholders* a seat at the table. In many ways, it should not be the sole burden of the government of California to determine the best ways to facilitate greater Chinese investment. A multitude of Chinese firms and local investment promotion agencies already operating in California likely have many useful insights into how the investment promotion process might be most effectively facilitated. An advisory board and regular conference of foreign multinationals that have invested in the state present two possible methods of involving interested parties. These individuals and organizations could advise the state on local investment conditions and areas of special need among potential investors, providing the necessary information to build dynamic investment promotion institutions.

Box 3: Investment Promotion: How California Compares

California's largest municipalities and counties are among the most active in the United States in seeking Chinese investment, thanks to the efforts of regional economic development organizations, mayor's offices, private sector initiatives, and public–private organizations. A prime example of this is ChinaSF, a public–private partnership in the Bay Area that provides one-stop-shop services for inbound Chinese companies in Mandarin.[41] The Los Angeles County Economic Development Corporation promotes trade and investment with China through regular trips to China and other means.[42] The port of Oakland has partnered with city government to send delegations to China to encourage investment.[43] Mayors, including Los Angeles's Antonio Villaraigosa, Oakland's Jean Quan, and San Francisco's Ed Lee, have also been very active in promoting Chinese investment.

On the state level, however, California is a laggard in foreign investment promotion. In 2003, California eliminated its Trade and Commerce Agency and closed its 12 foreign offices. From then until 2011, the state lacked a proper investment promotion institution. The California Governor's Office of Business and Economic Development (GO-Biz) was created earlier this year to provide the missing government investment promotion functions. It is a fledgling organization with 28 employees and a total budget of $3.76 million for fiscal year 2012–2013.[44] In September 2012, Governor Jerry Brown signed legislation that established GO-Biz as a central office of contact for economic development and appointed a new executive team. The new law also paved the way for a partnership with the Bay Area Council to open a trade office in Shanghai with private sector funds.[45]

[41] See San Francisco Center for Economic Development (2009).
[42] See Sidhu (2011).
[43] See Laura Hautala, "Quan Plans Asia Trip to Encourage Oakland's Trade with China," *Oakland North*, February 17, 2011, http://oakland-north.net/2011/02/17/quan-plans-asia-trip-to-encourage-oaklands-trade-with-china/.
[44] California's fiscal year 2012 enacted budget for GO-Biz and other state agencies can be found at http://www.ebudget.ca.gov/Enacted/BudgetSummary/BSS/BSS.html.
[45] See "Governor Brown announces Appointments to GO-Biz Executive Team," *Imperial Valley News*, September 26, 2012, http://www.imperialvalleynews.com/index.php/news/california-news/1610-governor-brown-announces-appointments-to-go-biz-executive-team.html; and Marc Lifsher, "Gov. Jerry Brown announces trade office in China," *Los Angeles Times*, September 11, 2012, http://www.latimes.com/business/money/la-fi-mo-trade-office-china-20120911,0,1164743.story

Chinese investment promotion efforts in other states offer examples of how California might continue to improve. At least 30 states currently operate trade and investment offices in the People's Republic of China, and some states, such as Washington, Illinois, and Oregon, established such offices more than a decade ago.[46] Many states organize regular investment conferences and governor-led trade and investment promotion missions, which can foster business connections in a culture in which personal relationships are especially important. For example, the governor of Maryland's 2011 mission to China helped facilitate the largest direct investment to date by a Chinese company in Maryland.[47] Many states also participate in and coordinate local private and academic initiatives aimed at strengthening ties with China. For example, the state treasurer of North Carolina sits on the board of the North Carolina China Center, a private organization that seeks to strengthen ties between North Carolina and China, including fostering greater cross-border investment.[48] Other states have organized regional initiatives that aim to promote Chinese investment across states with similar interests in China. The Southern Governors' Association's American South–China Partnership Forum is an example of one such organization.[49] Many successful state-level investment promotion agencies also seek to provide assistance tailored to the needs of Chinese investors. For example, South Carolina's Department of Commerce has provided complimentary translation services for Chinese firms that it has recruited, allowing their Chinese-speaking employees to train American workers.[50] Another focus of state-level activity is information and education. Virginia's state economic development organization, the Virginia Economic Development Partnership, makes information available to Chinese investors on its Web site in Chinese. Both the South Carolina Department of Commerce[51] and the Virginia Economic Development Partnership[52] track the economic impact of Chinese investments and make this information publicly available to educate their own citizens and prospective investors.

4. Take a proactive stance on national anxieties.

Growth in China's U.S. direct investment has rekindled old arguments about foreign firms and the national interest. Narrowly defined security screenings for foreign investments are imperative: Chinese investment raises plenty of normal, legitimate concerns given the general considerations around foreign ownership and the special characteristics of China. However, security concerns can be misapplied in situations that present no real threat because of simple overreaction or—more worrying—as a back-door

[46] See Kristi E. Swartz, "Georgia to Open Second Trade Office in China," *Atlanta Journal-Constitution*, October 20, 2011, http://www.ajc.com/business/georgia-to-open-second-1205999.html.
[47] See "O'Malley Asia Trip Was Worth the Cost," *Baltimore Sun*, June 19, 2011, http://articles.baltimoresun.com/2011-06-19/news/bs-ed-omalley-asia-trip-20110618
[48] More information on the organization can be found at http://www.ncchinacenter.org/.
[49] See http://www.southerngovernors.org/MediaGallery/Events/AmericanSouthChinaPartnershipForum.aspx.
[50] See Trevor Williams, "Exploring China's Investment Frontier," *China Daily*, July 20, 2012, http://usa.chinadaily.com.cn/weekly/2012-07/20/content_15601771.htm.
[51] South Carolina Department of Commerce investment-related publications can be found at http://sccommerce.com/data-resources/publications.
[52] The Virginia Economic Development Partnership maintains an interactive online graphic tracking foreign investment activities in the state, including Chinese investment activities. This tool can be found at http://www.yesvirginia.org/international/foreign_direct_investment/default.aspx.

route to stifle competition.[53] The politicization of deals on national security grounds has already impacted the flow of Chinese capital into California, with the most prominent example being CNOOC's failed attempt to acquire California-based oil producer Unocal in 2005.

As a leader in attracting Chinese investors, California will suffer disproportionately in the future if deals are politicized and inflows are rejected arbitrarily. This is especially true given the sectoral mix of California's economy, which is weighted toward industries most likely to require particular scrutiny—for example, telecommunications equipment, information technology, and agriculture. In addition to lost FDI inflows, Californian firms could be exposed to retaliatory treatment in China if these issues are mishandled.

Rather than wait to see whether Washington strikes the right balance between caution and commerce, California should step forward and contribute to the solution. In no way does this mean papering over concerns that cannot be mitigated. But with firms in computing, telecommunications, energy, agriculture, and other sectors at the forefront of the security debate and a disproportionate number of politicized deals in the past decade, California has more experience than any state to build models for avoiding politicization. Exploring such options would demonstrate to Chinese suitors that California is willing to step up for them and press for sensible solutions. In the signature case of OFDI politicization to date, CNOOC's bid for Unocal, California politicians actually played the opposite role, actively rousing national anxiety by initiating an exceptional, drawn-out investigation of China's energy needs separate from the normal process of the Committee on Foreign Investment in the United States. Taking a positive stance on the issue today would go a long way towards fixing the state's reputation, and a strong public commitment to combating investment protectionism is aligned with California's image and its long-term economic interests.

The findings of our report and the policy recommendations presented here are far from comprehensive, but we hope that they will contribute to a better understanding of growing Chinese investment in California and help inform the policy debate on how to maximize the state's benefits from this new trend. Although the growth in recent years is impressive, many chapters in the story of Chinese overseas investment have yet to be written. Securing the appropriate policy response is crucial, given the potential for future investment flows and China's role as test case for a wider range of emerging market investors in the future.

[53] For an in-depth discussion of national security risks and the politics of Chinese investment, see Rosen and Hanemann (2011).

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Appendix: Data on Chinese FDI in The United States

For the analysis of direct investment flows from China to the United States, we rely on three sets of data: (1) official data from U.S. statistical authorities, (2) mirror data from the Chinese side, (3) and our own data set on Chinese investment in greenfield projects and acquisitions in the United States. The three data sets are not directly comparable, as they differ with regard to compilation methods, underlying definitions, quality, and timeliness. But each is helpful for describing different aspects of Chinese investment in the United States.

Chinese authorities publish two data sets that include information on outward FDI flows and stocks: first, the balance of payments and international investment position statistics compiled by the People's Bank of China (China's central bank) and its foreign exchange regulator, the State Administration of Foreign Exchange; second, the annual statistical bulletin on outward FDI published by the Chinese Ministry of Commerce.[54] The balance of payments and international investment position statistics record annual outward FDI flows and stocks based on the principles outlined in the fifth edition of the IMF's *Balance of Payments and International Investment Position Manual.* However, comparable Chinese statistics only provide aggregate numbers for outward FDI to the world and do not contain any detailed breakdowns by country or industry. Such details can be found in the Ministry of Commerce's annual OFDI report, which has been published since 2004. The reports provide OFDI flows and stocks in current cost terms, including breakdowns by industry and geographic distribution.

Although the collection and dissemination of data on OFDI have improved markedly in recent years, there are still significant concerns about the accuracy and reliability of the data from China. Not surprisingly, Chinese authorities have very little experience in compiling statistics on outward investment flows. Furthermore, the Ministry of Commerce collects data based on information submitted by firms as part of the mandatory approval process instead of through surveys, which is the international standard. Firms often submit incomplete information or find ways to completely avoid bureaucratic screening, which distorts the statistics.[55] Because of this and other problems with data collection, the Ministry of Commerce's statistics on outward FDI are of questionable quality, with regard to both aggregate data and especially key metrics such as distribution by industry or country.

[54] China's balance of payments and international investment position statistics can be found at http://www.safe.gov.cn; the Ministry of Commerce's 2009 OFDI report can be found at http://hzs.mofcom.gov.cn/accessory/201009/1284339524515.pdf (in Mandarin, but an English summary can be found beginning on p. 73).

[55] For a detailed discussion of some of the shortcomings and problems, see Rosen and Hanemann (2009).

On the U.S. side, the Bureau of Economic Analysis is responsible for collecting and disseminating data on FDI.[56] Based on surveys that firms are required to submit by law, the BEA publishes three distinct data sets that include relevant information for the analysis of direct investment: (1) international transactions and investment position data, (2) data on new foreign direct investment in the United States, and (3) data on the operations of multinational enterprises.[57]

The international transactions and investment position data track FDI flows and stocks to the world on a balance of payments basis and to individual countries on a historical cost basis (meaning that the stock numbers might underestimate the current value of assets). Within this data set, the numbers for the geographic distribution of FDI are presented from two different perspectives: country of direct foreign parent, which attributes each investment to the direct parent company, and country of ultimate beneficiary owner (UBO), which tracks the investment to the country of the ultimate owner. The latter perspective generally is considered more accurate, as a large share of FDI transactions today are conducted through special-purpose vehicles in third countries for tax optimization and other reasons. The stark differences between the two measures for flows and stock of Chinese FDI in the United States illustrate that this is especially true for investment from places such as China, where investors still face extensive capital control and restricted access to legal and financial services. That said, it is very likely that even the UBO numbers do not fully capture the investment flows from certain regions, given the complicated deal structures and limited resources in tracking such deals. The data set on new direct investment captures the gross initial investment by foreigners for new greenfield establishments in the United States or the acquisition of existing U.S. companies. Compared to the international transactions data, this data set does not track flows on a balance of payments basis but rather in terms of actual investment outlays, regardless of the source of financing.[58] Unfortunately, this series was discontinued after 2008 and will not be replaced by a similar data set anytime soon. Finally, the data set on the operations of multinational enterprises provides the basic characteristics of foreign subsidiaries of U.S. firms and U.S. affiliates of foreign firms, including total assets, value added, jobs created, payroll, and exports and imports.

Given that the BEA has considerably more experience with compiling data on cross-border investment and that it relies on firm-level surveys to collect data, the BEA data must be considered generally superior in quality to the data from the Chinese side. However, there are also considerable weaknesses and shortcomings in the data provided by the BEA. First, the high-frequency data released every quarter are not compiled based on the UBO principle, so these data fail to capture flows from China that go through third countries (based on past patterns, those account for more than two-thirds of flows). And, as mentioned earlier, even the UBO data, which are published with a significant time lag, almost certainly do not catch all transactions. In addition, the BEA's transactions statistics record flows on a balance of payments basis, which means that capital that does not originate in China (i.e., loans from a bank in Hong Kong or the United States) is not counted as FDI from China, and reverse flows such as intracompany loans from U.S. affiliates to Chinese parents or disinvestments are netted against the inflows. This is technically correct, according to the principles outlined in the

[57] The data sets and documentation can be found at http://www.bea.gov/international/index.htm.
[58] See Anderson (2009) for a summary of data on new direct investment of foreign investors in 2008 and corresponding technical notes.

IMF's *Balance of Payments and International Investment Position Manual*, but it deflates the aggregate number and is not helpful for some of the analytical work (for an American worker employed by a U.S. affiliate of a mainland company, it does not matter too much whether the capital comes from Hong Kong or the mainland). The series that circumvents some of these problems—direct investment outlays for establishment and acquisitions in the United States—was discontinued after 2008.

Another more general problem with the BEA data is that the agency is required to hide data points for confidentiality reasons, and in the case of Chinese FDI, a lot of data points are suppressed to protect investors. Finally, the BEA data do not catch important metrics such as the distribution of FDI from single countries by state, the choice of entry mode between greenfield projects and acquisitions, and important attributes of the investing parent firm such as ownership and other characteristics. Thus, while the BEA data should be more reliable than those generated by China's Ministry of Commerce to describe aggregate patterns of Chinese FDI in the United States, neither side's data are ideally suited for an in-depth, real-time analysis of Chinese investment patterns.

Therefore, we compiled our own data set on Chinese direct investment in the United States based on a bottom-up collection of investment projects and deals to overcome some of the difficulties associated with the traditional process of collecting FDI data.[59] Our data set captures investment expenses by ultimately Chinese-owned firms for mergers and acquisitions and greenfield projects in the United States that qualify as direct investment (i.e., a greenfield FDI project or the acquisition of a stake in an existing company that exceeds 10% of voting rights), and therefore it is probably closest to the BEA's discontinued series on investment outlays for acquisitions and establishment.

Bloomberg data served as a starting point for compiling our data set, providing information on M&A transactions, and was supplemented by other sources. Information on greenfield projects was primarily gathered by means of a proprietary news monitoring system consisting of finely tuned search algorithms through news services such as Nexis, Factiva, and Google. Specialized financial data providers such as Bloomberg, Nexis, and Zoominfo offered additional information on Chinese companies' U.S. operations. Official documents such as Securities and Exchange Commission filings or annual reports, business registries, information from investment promotion agencies, and industry-specific lists of investment projects from business associations and industry research firms complemented our data collection strategy.

After collection, we refined our data set by excluding deals that were announced but never commenced or that did not qualify as direct investment. We applied a minimum investment threshold value of $1 million to exclude small-scale deals such as family restaurants or smaller businesses from the database. Qualifying M&A deals were counted at the date of completion, and greenfield projects at the date of announcement. Each deal was assigned a value based on the officially announced figure or the most convincing analyst estimate. If no estimate was available or possible, acquisitions were listed in the

[59] The authors are grateful to Jacob Funk Kirkegaard at the Peterson Institute for International Economics for valuable discussions regarding global FDI data and our alternative compilation methodology.

database with a zero value. We estimated the value of smaller-scale greenfield operations with missing investment figures based on similar projects in similar locations with known values.

As a final step, we added additional metrics not available in official data, such as the ownership of the ultimate parent of the investing company, and coded each of the deals accordingly. For publicly traded companies to qualify as "private," more than 80% of total outstanding shares had to be held by non-government-related investors. Each deal was also coded with the destination city, as well as industry categories based on Standard Industrial Classification (SIC) codes according to the main activity of the investment target. Table A-1 summarizes these categories and the associated SIC codes.

Our approach to FDI data collection has strengths and weaknesses. First, it does not comply with international balance of payments norms for compiling direct investment data. Unless specifically announced as a separate investment, our data set does not capture any follow-up flows, such as reinvested earnings or intracompany transfers. It also does not exclude investments of capital from non-Chinese sources, for example, financing from local U.S. banks. Hence, our data are not directly comparable with balance of payments data from official sources and cannot be used to analyze balance of payments–related questions. Second, the bottom-up approach does not capture all Chinese investments in California. Our database includes most deals with an investment value of $1 million or more, but there are many small-scale transactions every year that are impossible to accurately track down—for example, small trading offices or private investment in real estate and other assets. Finally, some of our figures are based on estimates. For a small number of deals, even estimates are not possible, so the data set includes a number of transactions with blank values.

However, the bottom-up method avoids common problems with balance of payments data. Official statistics on FDI and other cross-border capital flows are heavily distorted by transfer pricing and other tax optimization strategies and thus often do not reflect economic realities. By tracking gross investment expenses of firms based on sources outside of national statistics offices, RHG avoids such distortions. Furthermore, the China Investment Monitor data set offers more variables and a greater level of disaggregation, which makes it superior for analyzing certain aspects of Chinese investment that are pertinent to the current policy debate. Finally, this approach allows for a nearly real-time assessment of investment flows, bypassing the significant time lags with official data.

Table A-1: Rhodium Group Database Industries and Corresponding SIC Codes

Industry categories and SIC codes

Sector	Industry	SIC codes
Aerospace, automobiles, and transportation	Aerospace, space, and defense	372, 376, 3812
	Automotive OEM and components	3711, 3713, 3714, 551, 552, 553, 501, 75
	Other transport equipment	3715, 3716, 373, 374, 375, 379, 555, 556, 557, 558, 559, 5088
Consumer products	Consumer electronics	363, 365, 386, 5045, 5064
	Consumer products and services	387, 391, 393, 394, 395, 396, 399, 509, 523, 525, 526, 527, 53, 563, 569, 57, 59, 76
	Food, tobacco, and beverages	01, 02, 07, 08, 09, 201, 202, 203, 204, 205, 206, 207, 208, 209, 21, 54, 514, 515, 518
	Furniture and wood products	24, 25, 5031
	Textiles and apparel	22, 23, 31, 513, 561, 562, 564, 565, 566
Electronics and IT	Communications equipment and services	366, 481, 482, 483, 484, 489
	Electronic equipment and components	357, 362, 364, 3671, 3672, 3677, 3678, 3679, 369, 5063, 5065
	Semiconductors	3674, 3675, 3676
	Software and IT services	737
Financial, insurance, and business services	Business services	731, 732, 733, 734, 735, 736, 738, 81, 82, 86, 871, 872, 8732, 8733, 874, 89
	Financial services and insurance	60, 61, 62, 63, 64, 67
Fossil fuels and chemicals	Chemicals, plastics, and rubber	281, 282, 2833, 284, 285, 286, 287, 289, 30, 8731
	Coal, oil, and gas	12, 13, 29, 517, 554
	Utility and sanitary services	49
Health care, biotech, and pharmaceuticals	Biotechnology	2836, 8731
	Health care and medical devices	80, 83, 384, 385
	Pharmaceuticals	2834, 2835, 5122, 5047, 8731, 8734
Hospitality, entertainment, and real estate	Construction services	17
	Leisure and entertainment	58, 70, 78, 79, 84
	Real estate	15, 16, 65
Industrial machinery	Engines and turbines	351
	Industrial machinery, equipment and tools	352, 353, 354, 355, 356, 358, 359, 361, 382, 508 (except 5088)
	Paper, printing, and packaging	26, 27
Logistics	Transportation services	40, 41, 4212, 4213, 4214, 4215, 422, 423, 43, 44, 45, 46, 47
Metals and minerals	Metals mining and processing	10, 33, 34, 5051
	Minerals mining and processing	14, 321, 322, 323, 324, 325, 326, 327, 328, 329, 5032, 5033, 5039, 5211
Renewable energy	Alternative/renewable energy	2819, 2869

Source: Rhodium Group.

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