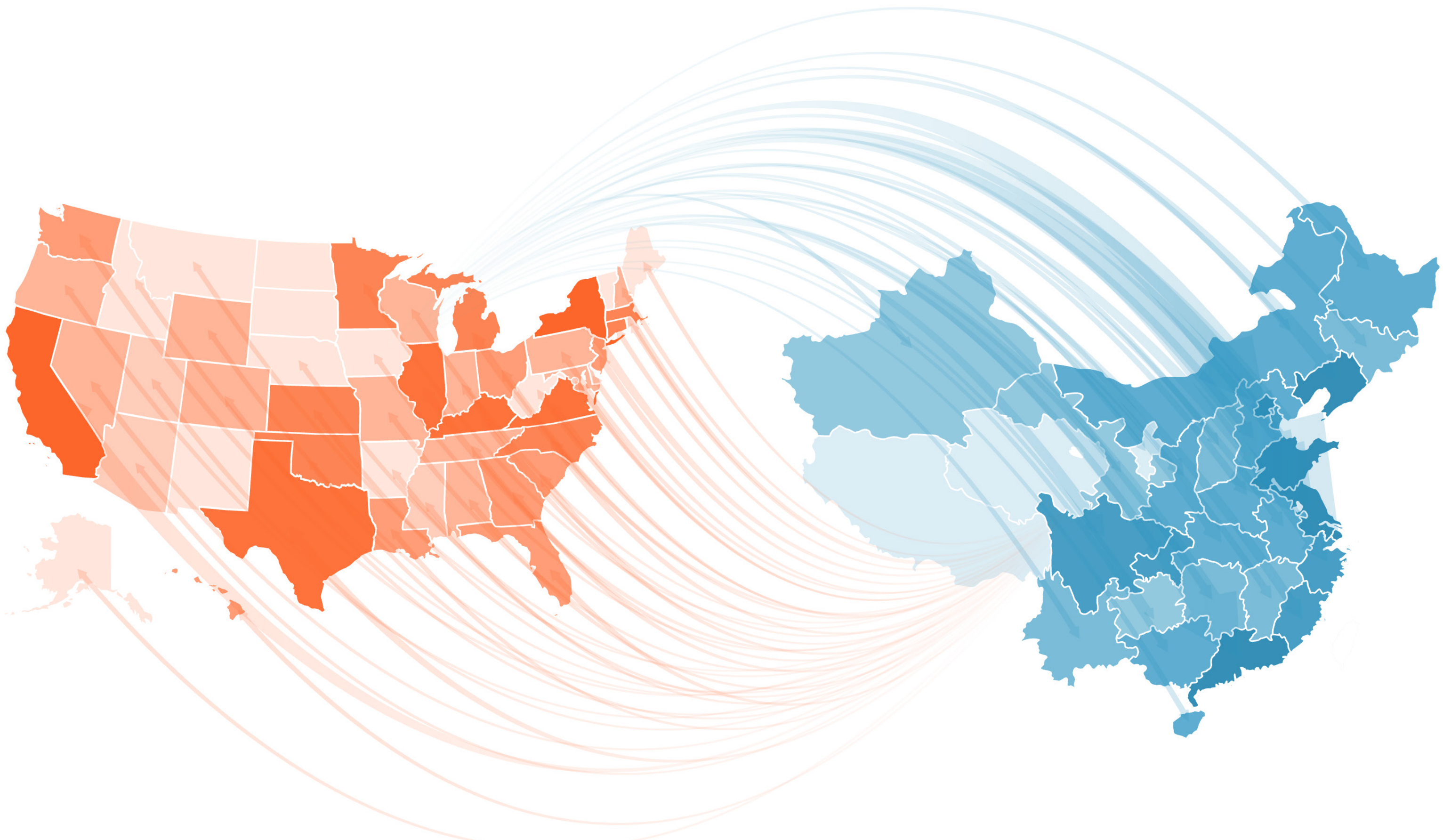
Two-Way Street: 2017 Update
US-China Direct Investment Trends

Thilo Hanemann, Daniel H. Rosen, and Cassie Gao



A report by Rhodium Group and the National Committee on U.S.-China Relations

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MAY 2017

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More background the US-China FDI Project and interactive visuals are available at:
www.us-china-fdi.com

ABOUT THIS REPORT

This report is the second deliverable of the US-China FDI Project, a multi-year research initiative to provide greater transparency on FDI flows between China and the United States. The US-China FDI Project is led by Rhodium Group and the National Committee on U.S.-China Relations, in partnership with the American Chamber of Commerce in Shanghai and the China General Chamber of Commerce USA.

LEAD ORGANIZATIONS

National Committee on U.S.-China Relations

The National Committee on United States-China Relations is an American nonprofit, nonpartisan educational organization that encourages understanding and cooperation between the United States and Greater China in the belief that constructive Sino-American relations serve the interests of both countries and the global community. Since 1966, the National Committee has conducted programs on politics and security, governance and civil society, economics and finance, education, and transnational issues such as energy and environment. It carries out its mission via conferences and forums, public education programs, professional exchanges, and collaborative projects. The National Committee's membership of more than 800 Americans and 100 corporations and professional firms represent many viewpoints, but share the belief that productive U.S.-China relations require public education, face-to-face contact, and the forthright exchange of ideas.

Rhodium Group

Rhodium Group (RHG) is an economic research firm that combines policy experience, quantitative economic tools and on-the-ground research to analyze disruptive global trends. It supports the investment management, strategic planning and policy needs of clients in the financial, corporate, non-profit, and government sectors. RHG has offices in New York, California, and Hong Kong, and associates in Washington and New Delhi. RHG's cross-border investment practice analyzes the rise of China and other emerging markets as trans-national investors. RHG senior staff publish frequently on the growth and impact of Chinese outbound FDI in the United States, Europe, and other economies.

ABOUT THE AUTHORS

Thilo Hanemann

Thilo Hanemann is director of Rhodium Group's cross-border investment practice. His research assesses new trends in global trade and capital flows, related policy developments, and the political and commercial dynamics of specific transactions. Mr. Hanemann's most recent work focuses on the evolution of China's international investment position, and the economic and policy implications of this new trend. He is a frequent speaker and commentator on China's outward investment and has published numerous reports and articles on the topic. He is also a Senior Policy Fellow at the Mercator Institute for China Studies, Europe's biggest China think tank, located in Berlin.

Daniel H. Rosen

Daniel H. Rosen is a founding partner of Rhodium Group and leads the firm's work on China. Mr. Rosen has more than two decades of experience analyzing China's economy, corporate sector and US-China economic and commercial relations. He is affiliated with a number of American think tanks focused on international economics, and is an Adjunct Associate Professor at Columbia University. From 2000–2001, Mr. Rosen was Senior Adviser for International Economic Policy at the White House National Economic Council and National Security Council. He is a member of the Council on Foreign Relations, and board member of the National Committee on US-China Relations.

Cassie Gao

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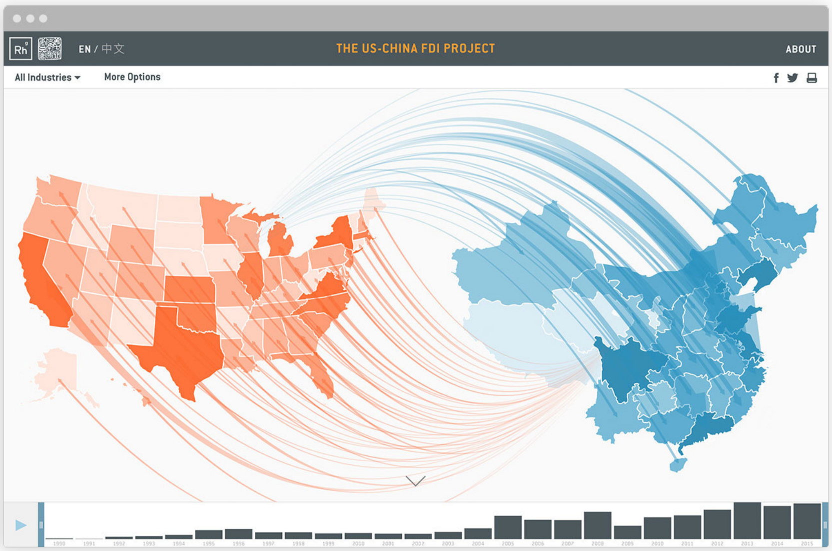
The American Chamber of Commerce in Shanghai, known as the "Voice of American Business" in China, is the largest American Chamber in the Asia Pacific region. Founded in 1915, AmCham Shanghai was the third American Chamber established outside the United States. As a non-profit, non-partisan business organization, AmCham Shanghai is committed to the principles of free trade, open markets, private enterprise and the unrestricted flow of information.

China General Chamber of Commerce USA and CGCC Foundation

Founded in 2005, the China General Chamber of Commerce – U.S.A. (CGCC) is the largest nonprofit organization representing Chinese enterprises in the United States. Its mission is to promote Chinese investment in the U.S., support the legal rights and interests of our members, and enhance cooperation between Chinese and U.S. business communities.

The CGCC Foundation is an IRS 501(c)(3) charitable organization affiliated with the China General Chamber of Commerce – U.S.A. It is dedicated to fulfilling social responsibilities by giving back to local communities and enhancing mutual understanding between the people of China and the United States.

SUPPORTERS



An interactive web application with updated data through the end of 2016 is available at: www.us-china-fdi.com

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FOREWORD

For over 50 years, the National Committee on US-China Relations has pioneered new channels of Sino-American interaction and cooperation. We are proud to be at the forefront of the relationship once again with our US-China FDI Project, which provides unique and highly relevant data on cross-border investment. We expect this report to be a source of accurate and timely information for the policy community as well as for citizens and businesses. Our aim is to promote policies that will maximize the benefits of foreign direct investment for the people of both our nations.

Bilateral investment is a cultural as well as economic bridge between countries because it makes commerce a platform for the exchange of ideas. More than $60 billion in direct investment flowed between the United States and China last year. This flow is important to both countries, and it is vital to have accurate and complete details as investment grows. The first installment of the Two-Way Street series, published in 2016, provided a history of the flows and balances between the US and China over 25 years. This latest update expands on that foundation, adding another twelve months of data, in which annual investment flows more than doubled, and examines the outlook for 2017.

Foreign direct investment between the United States and China has a storied history, and I had the privilege of being right in the middle of it. As a young lawyer, I represented the first wave of American investors when China opened its economy to the world in the 1980s. Later, as an investment banker and investor, I negotiated deals ranging from Hong Kong's Eastern Harbor crossing to a micro finance company in Shenzhen. By developing critical infrastructure and tripling the take-home pay of Chinese workers, these investments helped transform China's economy and played a part in lifting hundreds of millions of people out of poverty.

Three decades ago, when Japanese companies began investing heavily in the United States, they encountered plenty of skepticism. However, the American public soon warmed to the notion of Japanese investment because of the hundreds of thousands of jobs it created. Rapidly growing Chinese investment in the United States over the last few years suggests Chinese capital may be poised to play a similarly influential role today. On the other hand, US investment in China has moderated, at least in part because badly needed structural and regulatory reforms in China have not gained traction. While the stock of US investment in China is still more than double Chinese investment in the United States, the gap is narrowing fast.

We are now approaching an inflection point, and policy makers in Beijing and Washington will have an opportunity to re-examine and reshape policies in the interest of both economic prosperity and national security. There is a possibility that new policies could reduce the flow of funds or even turn off the spigot of inward or outward investment.

We do not advocate any specific policy option. The research contained in this report is, however, inspired by the belief that before government enacts policy it must assess benefits to citizens and communities and to the nation's future, as well as evaluating the potential security risks that often attract outsized attention. Finding the right balance between these considerations is a challenging and crucial job. We believe the data provided in this report will help policy makers reach more informed conclusions and act with dispatch and wisdom.

Stephen A. Orlins
President, National Committee on U.S.-China Relations

EXECUTIVE SUMMARY

The US-China FDI project seeks to clarify trends and patterns in bilateral foreign direct investment (FDI) flows between the world's two largest economies. This report updates the picture with full year 2016 data – the biggest year for bilateral investment on record, and the most remarkable politically – and describes the outlook for 2017.

Our key findings are:

(1) US-China two-way FDI reached an all-time high in 2016, elevating the importance of this facet of the bilateral economic relationship, and generating a new level of debate about the consequences.

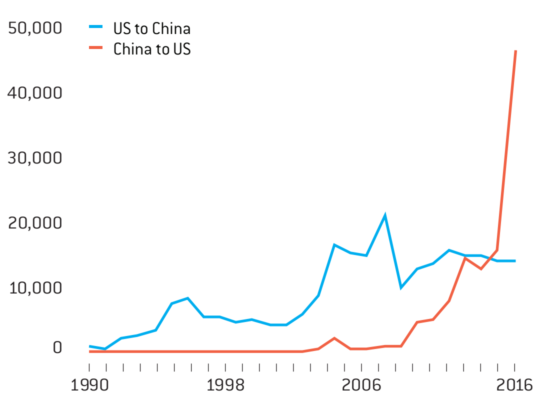
- Two-way flows passed $60 billion in 2016, more than any other year in history.
- The deepening of FDI ties is even more meaningful in light of slower growth in other long-standing elements of the bilateral relationship including trade and Chinese purchases of US government securities.
- The growth in two-way flows was driven entirely by rapid expansion of China's outbound investment: US FDI in China was essentially flat.

(2) The gap between Chinese FDI in the US and US FDI in China widened dramatically last year, fueling debate about the asymmetry in two-way flows and reciprocity in investment market access.

- In 2016, Chinese FDI in the US tripled from the previous year to $46 billion; US FDI in China, by contrast, was flat at just a quarter of that level. In nine of 14 industries Chinese FDI in the US was larger than flows the other way, up from seven in 2015.
- At the same time, the US corporate footprint in China remains larger than that of Chinese companies in the US. The cumulative value of US FDI transactions in China since 1990 now exceeds $240 billion, while Chinese companies had invested $110 billion in the US by the end of 2016.
- However, the growing gap in annual flows is the focus of attention. The painful legacy of asymmetric trade market access is still a major irritant in the relationship, and frictions related to trade imbalances should serve as a warning signal to legislators and leaders to make all efforts to reduce an analogous gap in investment market access now before it festers.

FIG ES-1: Annual Value of FDI Transactions between the US and China, 1990-2016

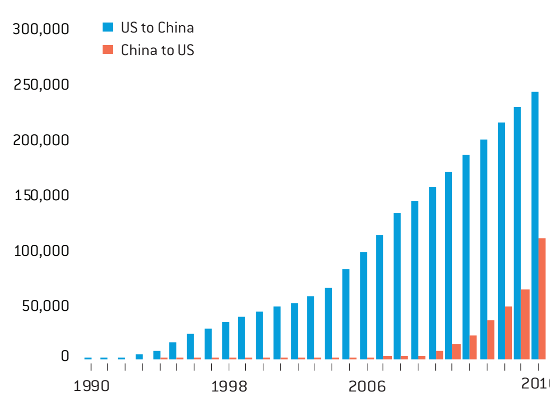
USD million



Source: Rhodium Group.

FIG ES-2: Cumulative Value of FDI Transactions between the US and China, 1990-2016

USD million



Source: Rhodium Group.

(3) The variety of investors and target industries in two-way flows has expanded, reshaping policy debates and amplifying security concerns that will persist and demand attention.

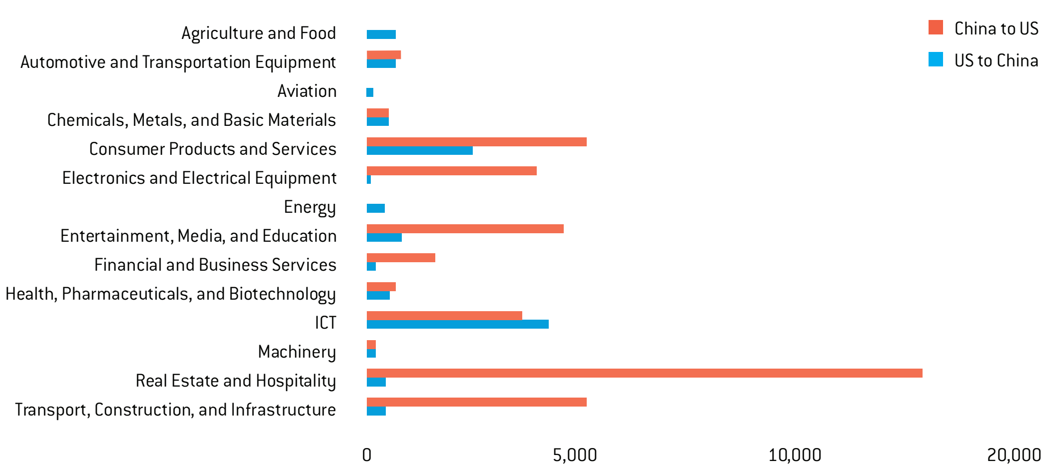
- In five of 14 industries we record more than $5 billion in two-way deals in 2016. Another five industries witnessed more than $1 billion worth of two-way transactions.
- Real estate was the number one industry for two-way FDI, driven by a super-sized Chinese appetite for commercial real estate. Consumer products and services, information and communications technology (ICT), transport and infrastructure, and entertainment, media, and education were the next biggest.
- Investment growth in both directions was strong in politically charged industries including ICT and entertainment. Evolving commercial patterns call for better defined boundaries for security-related investment measures – preferably common standards rather than a patchwork of unilateral ones.
- The security fears resulting from broader two-way investment reflect overarching geo-strategic tensions, and they cannot be resolved simply with better investment policy. Commercial entities can add ballast to the relationship, but they cannot resolve the fundamental security dilemma that is eroding the relationship. Similarly, government officials tasked with screening investments cannot resolve fundamental national security questions – these are questions for leaders and need to be tackled at the highest level.

(4) Two-way FDI flows may be lower in 2017 compared to 2016, but they will remain a major component of the US-China economic relationship.

- Investment in 2017 is unlikely to reach the same levels as in 2016. We expect a moderate increase in US flows to China but a notable moderation in the other direction due to Chinese capital controls and other short-term factors.

FIG ES-3: Two-Way FDI between China and the US by Industry, 2016

USD million



Source: Rhodium Group.

- Our analysis suggests that there is huge room for expanding FDI flows in both directions, even with stepped-up national security screening on both sides.
- While a moderation in investment flows may shift some political attention away from the topic this year, we recommend immediate attention to the fundamental challenges behind tensions in the FDI relationship, and care in modifying existing investment regimes to address evolving realities.

INTRODUCTION

Foreign direct investment between China and the United States has become an increasingly important channel of bilateral economic interaction in the past five years. What used to be a one-way street – with money flowing predominantly from the United States to China – is now a two-way highway with tens of billions of dollars in annual FDI flowing in each direction. And yet, there is now great uncertainty about the future of US-China FDI flows in light of political and economic changes in both countries.

In China leaders and government have been slow to implement needed economic reforms. Partially as a result of these delays China experienced significant capital outflows during the past eighteen months, prompting Beijing to tighten administrative controls on capital outflows including outbound FDI. These controls have called the future of China's capital flows into question. On the inbound side, Beijing has pledged to expand China's openness to foreign investors and level the playing field for foreign companies, partially in response to a 30% drop in FDI inflows in the 2016 balance of payments.

In the United States the Trump Presidency has also introduced uncertainty. During the campaign and since, President Trump struck a nationalistic tone and promised a confrontational approach to China. The brashest threats have been deferred and the tough talk mixed with optimism since the inauguration, but the President continues to emphasize a new bottom-line commitment to changing imbalances in the US-China economic relationship.

The Trump administration's focus to date has been on reducing trade deficits, but FDI is closely related to this goal. Restrictions on foreign investment in services are an important factor in the US-China trade picture. American services exports to China must be facilitated with investment on the ground. The US business community is also concerned about a lack of reciprocal market access as many Chinese sectors remain closed or significantly limited to foreign investment, even absent national security considerations. For higher-value goods as well, it is often fruitless trying to export without forward deployed sales, marketing, service and other customer support operations in the target country (which helps explains why many Chinese firms are impatient to invest overseas).

Beyond the reciprocity debate, the growth in Chinese acquisitions of US technology assets has spurred talk of overhauling US investment screening regimes. While the outcome of this nascent debate is uncertain, it is safe to assume that some strengthening of scrutiny for Chinese acquirers is in the cards, certainly in the higher-technology space.

In short, Chinese and American policymakers will face a host of important decisions in the months and years ahead that will shape the future of US-China FDI flows. These include not only amending to national regimes including the Committee on Foreign Investment in the United States (CFIUS) but also fostering bilateral arrangements, such as a bilateral investment treaty, which are specific to the US-China context.

Against this backdrop, it is more urgent than ever to have transparent and objective FDI data to help in resolving disputes and informing decision-making. China and the United States can best identify areas for cooperation if decisions are made based on correct and complete information. To meet this need we launched the US-China FDI Project in 2015 to provide a public, granular assessment of two-way FDI dynamics between the two nations.

This update summarizes the most important two-way trends in 2016 and puts them in the current policy context. The first part of the report reviews the pattern of US companies investing in China in 2016. The second part analyzes the sharp increase of Chinese FDI in the US. We then conclude with key findings, analysis of the near-term outlook for flows in both directions, and a brief discussion of the policy agenda.

1 US FDI IN CHINA

Methodological challenges in measurement complicate the task of assessing US FDI in China using official statistics. FDI flow values are masked by intra-company transfers, tax optimization and other financial incentives. Moreover, investments cannot always be attributed to the correct country of ultimate origin. These and other factors cloud the picture. The 2016 data readily illustrate these official source problems.

China's balance of payments (BOP) data, compiled by the State Administration of Foreign Exchange (SAFE), show global FDI flows into China (incurrence of FDI liabilities) dropping 30% in 2016 (from $240 billion to $170 billion). Alternative data compiled by China's Ministry of Commerce (MOFCOM), which capture foreign funds put into FDI projects during a given time period ("utilized FDI") show a more stable picture, registering a modest drop of 0.2% in 2016 compared to 2015 levels. For the United States, MOFCOM reports $2.4 billion of utilized FDI, a 14.2% increase compared to 2015. A second MOFCOM data series that tries to capture FDI through offshore centers puts utilized FDI from US companies at $3.8 billion, an increase of 47.9% from the previous year. Both data series suggest recovery of US FDI from the declining trend of recent years. And both of these are misleading.

In the United States the Bureau of Economic Analysis (BEA), an agency under the Department of Commerce, is responsible for compiling statistics on foreign direct investment abroad and the overseas operations of US multinational enterprises. The BEA's "international transactions" dataset captures annual financial flows to China based on BOP methodologies. Flows are recorded on a net basis, which means that divestitures and reverse flows such as intra-company lending are subtracted from gross flows. BEA's dataset suggests that US FDI flows to China have remained fairly stable between $6 and 8 billion since 2013. For 2016, BEA records $6.4 billion of US FDI financial outflows to China, a slight decline from the $7.3 billion in 2015. Other data points for 2016 are not yet available as of May 2017.

In short, available official statistics give very different accounts of US FDI in China in 2016, and the lack of granularity makes understanding the reasons for those differences impossible. In order to provide a coherent and consistent apples-to-apples comparison of two-way FDI flows, Rhodium Group (RHG) has built a database that captures US-China FDI based on identifying, valuing and aggregating individual FDI transactions. It covers the establishment of subsidiaries, factories, research and development (R&D) centers, and offices (greenfield investments), as well as the acquisition of existing companies (mergers and acquisitions, or M&A). This bottom-up compilation methodology allows us to capture transactions that would be excluded for a variety of purely technical reasons in the official data. A detailed explanation of our methodologies and the database is available in the appendix. The following analysis of US FDI trends in China in 2016 is based on the RHG data.

1.1 FLOWS AND STOCK

After absence from 1941 to 1979, US companies recommenced investment in China in the 1980s. Annual flows initially grew only modestly and remained well under $1 billion, but they accelerated following Beijing's re-embrace of reform in 1992. After a pause related to the Asian financial crisis in 1997 to 2000, annual flows recovered in the early 2000s and took off to over $10 billion annually after China joined the World Trade Organization (WTO) in 2001, reaching a peak of $20 billion in 2008. Since then US FDI in China has remained generally stable at around $13 billion annually on average. This continued in 2016 with US investment in China reaching $13.8 billion, roughly the same amount witnessed in 2015 (Figure 1). The cumulative value of US FDI transactions in China passed $240 billion by the end of 2016.

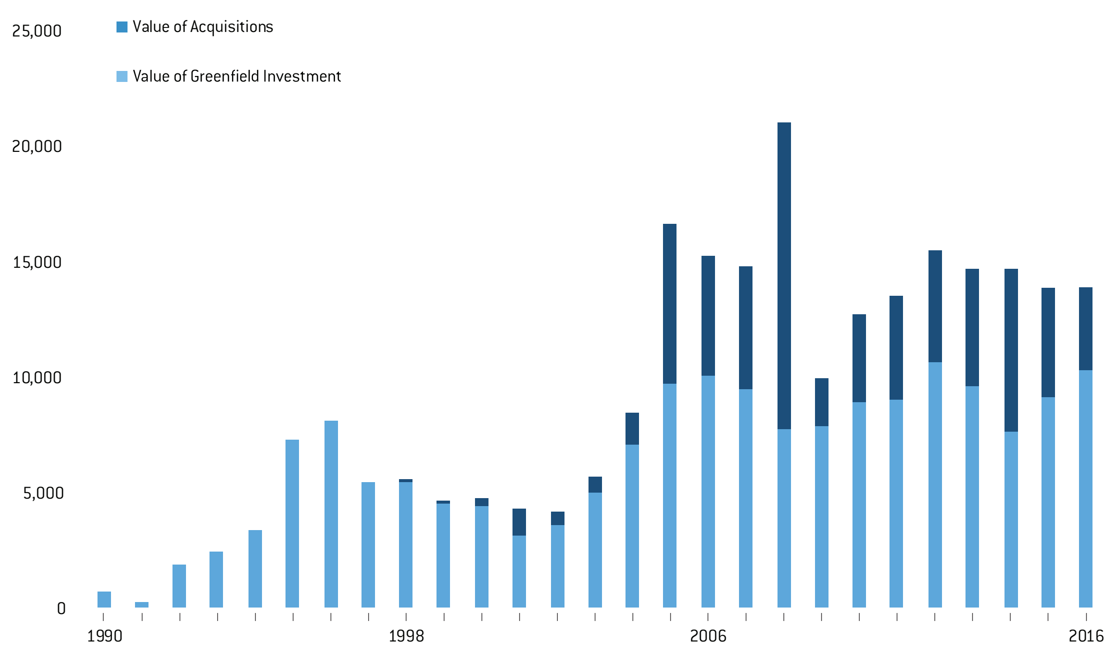
One of the clearest characteristics of US FDI in China has been a strong preference for greenfield projects, which have outpaced M&A activity every year since 1990 with the exception of 2008. In 2016, greenfield investment remained strong at $10.1 billion, while M&A activity declined for the second straight year. US investors continue to prefer establishing new operations in China rather than acquiring existing firms.

The bulk of greenfield activity during the year was accounted for by large projects started before 2016 with construction periods stretching over multiple years. Prominent examples include Intel's expansion of its Dalian semiconductor plant, Chevron's gas project in Sichuan, the General Motors (GM) Wuling engine plant expansion in Guangxi, Walt Disney's theme park in Shanghai, and Eli Lilly's pharmaceutical plant expansion in Jiangsu. On the other hand, the value of newly announced greenfield investment dropped by about $1 billion in 2016 to $2.2 billion, with notable investments including Six Flags' theme parks in Zhejiang and Chongqing, Fluor's $1 billion joint venture (JV) with China National Offshore Oil Corporation (CNOOC), Pfizer's $350 million facility in Zhejiang, Huntsman's chemical plant expansions in Shanghai and Jiangsu, Qualcomm's semiconductor JV, Alpha & Omega's semiconductor JV, Apple's first R&D center in China, and Honeywell's R&D and manufacturing facility in Shaanxi.

M&A activity by US companies in China continued to slow in 2016. The value of completed acquisitions decreased from $4.7 billion in 2015 to $3.6 billion, the lowest level since 2009. The number and value of private equity investments continued to climb in 2016, with a particular focus on ICT, pharmaceuticals and biotech. However, private equity deals often did not exceed the 10% ownership threshold to be included in our database. The largest M&A transaction in 2016 was Walmart's acquisition of a 10.8% stake in online retailer JD.com.

FIG 1: Value of US FDI Transactions in China, 1990-2016

USD million



Source: Rhodium Group.

1.2 INDUSTRY TRENDS

Since 1990, US FDI in China has been distributed across a broad spectrum of industries. Investments in manufacturing and consumer-related assets have remained fairly stable over the past decade, particularly in sectors like food and autos. In recent years, light manufacturing such as electronics as well as consumer sectors have received less investment while high-tech and advanced services sectors have attracted increasing attention.

In 2016, US FDI in China further shifted toward advanced manufacturing and modern services, while traditional manufacturing sectors saw another drop. The three sectors attracting the largest US capital inflows in 2016 were ICT, entertainment, and consumer products and services. Meanwhile, investment in traditional manufacturing sectors declined compared to 2015, with particularly sharp drops in automotive, basic materials, and industrial machinery. This partially reflects the end of multi-year expansion projects (automotive), but mostly results from US companies' hesitation to expand investment further in sectors already suffering from overcapacity.

One reason US FDI in China held up well in 2016 compared to FDI from other high-income economies (and other nations) is that US companies are strongly positioned in sectors expected to see continuing growth under a more consumer- and innovation-oriented Chinese growth model. The expansion of investment in those sectors has helped to offset a drop in traditional industries like chemicals, basic materials, energy, and machinery.

On the following pages we review the most important developments in each of our 14 industries. More detailed industry snapshots, updated with 2016 developments, are available on the project website (www.us-china-fdi.com).

AGRICULTURE AND FOOD

China's agriculture and food sector has been one of the most stable attractors of US investment since 1990 as US companies have bet on increasing demand from the growing Chinese middle class. In recent years, investment activity has slowed as existing market opportunities became saturated and growth in the appeal of western foods moderated after decades of strong growth. New investments are mostly expansions of existing facilities and attempts to introduce novel concepts, for example a Starbucks tasting room, a reintroduced Taco Bell concept with a locally-inspired menu, and a Cargill innovation center to develop food products and flavors amenable to Chinese tastes, all in Shanghai. In addition to slowing investment, the pace of divestitures and restructurings (which our numbers do not capture) has also picked up: Yum Brands spun off its more than 5,000 KFCs and 2,000 Pizza Huts into a separate company; Coca-Cola reached an agreement to sell its bottling operations in China to China National Cereals, Oils and Foodstuffs Corporation, and Swire; and McDonald's announced plans to sell a majority stake in its Chinese business to a consortium led by CITIC Group .

AUTOMOTIVE

US investment in the Chinese automotive sector has also been consistent over the past quarter century. In 2016, US investment in the sector decreased, but this was more related to the completion of several large GM plants in 2015 than a new secular trend. A number of significant projects remained under construction at the end of the year, including Goodyear's expansion of its Liaoning plant and Johnson Control's new plant in Shandong. Apart from the traditional automotive value chain, US investors are showing great interest in electrification in response to a push of China's government to prioritize electric vehicles. For example, Ford recently announced that it will start to produce electric vehicles in China.

AVIATION

US FDI in the Chinese aviation sector has been historically small and remained so in 2016. However, investment is poised to increase over the next few years as demand for large commercial and general aviation aircrafts swells. Boeing anticipates there will be demand for nearly 7,000 new airplanes in China over the next 20 years at a combined value of more than $1 trillion. Several US companies have announced plans for manufacturing and assembly operations in China: in late 2016 Bell Helicopter signed an agreement to establish a $770 million assembly plant in Shaanxi, and Boeing announced to break ground on its first plane finishing facility outside the US in Zhejiang in early 2017.

CHEMICALS, METALS, AND BASIC MATERIALS

Chemicals, metals, and basic materials have been a key sector for US investors in China since the mid-1990s. As China built out its vast infrastructure and housing stock during the last two decades, soaring demand for raw materials made this market attractive. Investment demand was propped up from 2009 to 2013 by a huge infrastructure stimulus, but has declined since. In 2016 investment in this space dropped to the lowest level since 2002. Greenfield investments still under construction or commenced in 2016 included Invista's chemical plant in Shanghai and Air Products' plant in Jiangsu. The process of rationalizing output and efficiency in these industries may open up M&A opportunities for US and other foreign firms in coming years.

CONSUMER PRODUCTS AND SERVICES

The consumer products and services sector has seen two notable waves of US investment—first in Chinese manufacturing operations to produce consumer products for export to other, mostly advanced economies; and more recently in leaner operations leveraging US brands to market goods and services to Chinese consumers directly. Investment in 2016 remained steady compared to 2015 levels. The most notable investments during the year included Apple's continued expansion of retail operations into many second- and third-tier cities, brick and mortar stores by Walmart and Costco, and an additional investment by Walmart in Chinese e-commerce company JD.com, pushing its stake over the 10% FDI threshold.

ENERGY

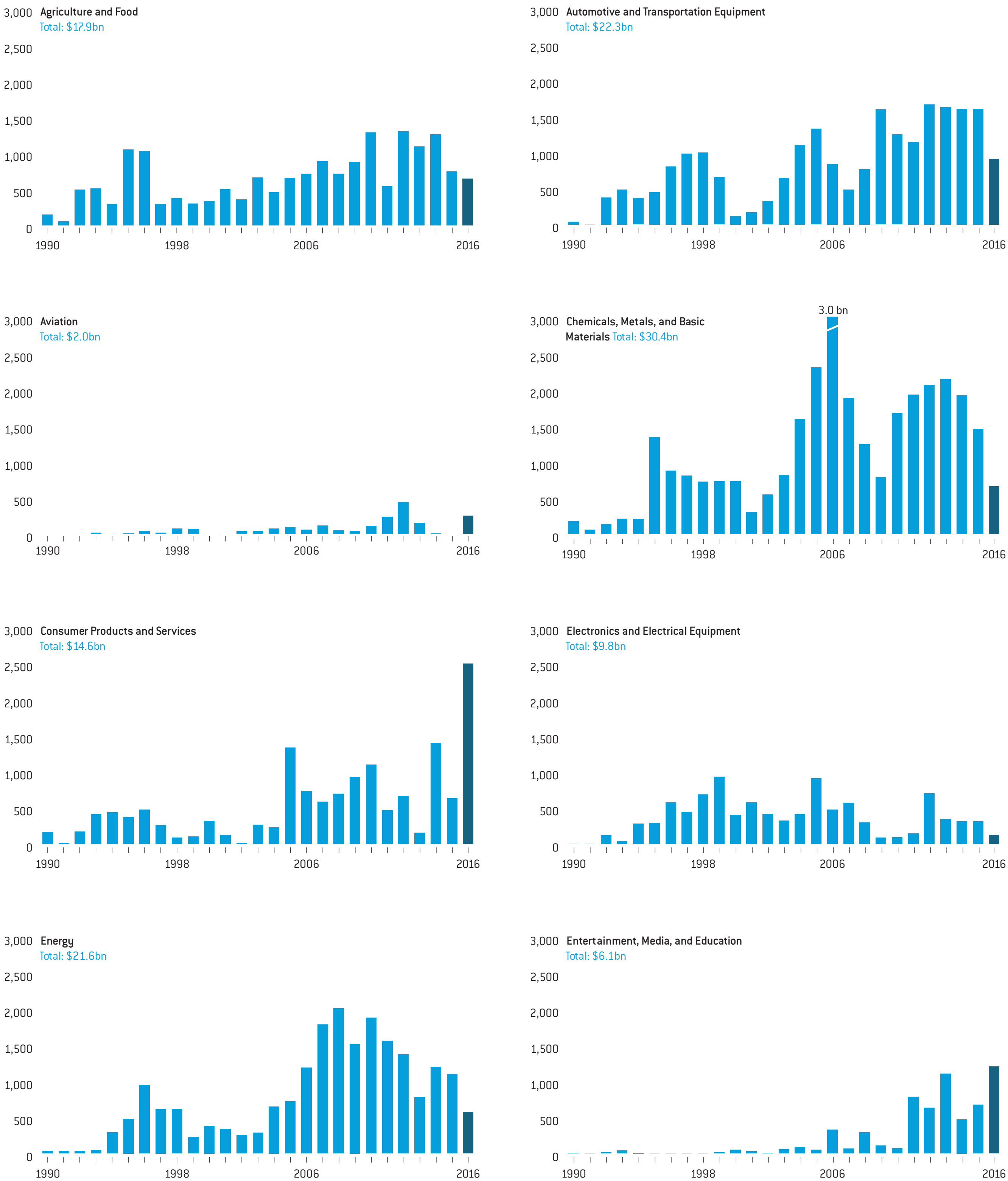
Through joint ventures in exploration and extraction, US firms have invested significantly in the Chinese energy sector over two decades. However this investment has slowed over the past ten years. No major new US-backed projects were announced in 2016, and a handful of US oil companies announced plans to divest Chinese assets. Chevron announced in August its intent to unload $5 billion of mostly upstream Asian oil assets, including offshore oilfields in China. While China has considerable onshore shale gas and oil these reserves are difficult and costly to extract and the current oil price trajectory (driven to a great extent by the softening Chinese demand outlook) makes investment to prospect them unattractive in the near term.

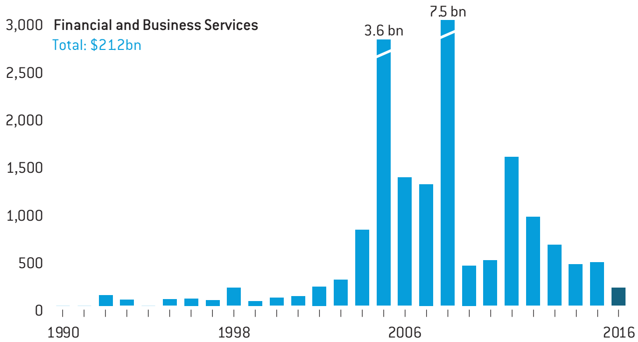
ENTERTAINMENT

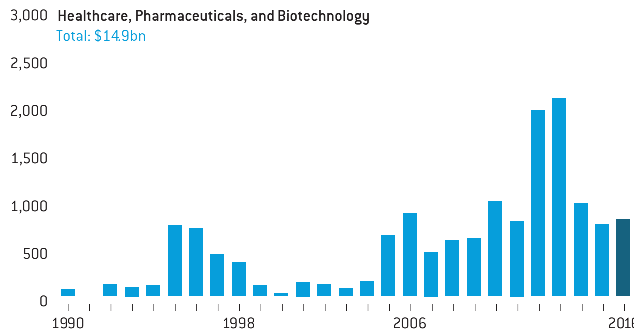
China's entertainment, media, and education sector has grown rapidly in the past twenty years, but US investment has been slow due to policies limiting foreign investors to minority stakes in joint ventures. In recent years, investment has picked up as American companies venture into capital-intensive theme parks. Disney opened its $5.5 billion resort in Shanghai last year and is in the process of expanding it. Six Flags broke ground on its first Chinese theme park in Zhejiang in 2016 and in early 2017 announced plans for a second park in Chongqing. Universal Studios began construction on a large Beijing theme park in October, and Viacom International broke ground on a Nickelodeon theme park in Guangdong at the beginning of 2017. Notably all of these projects are joint ventures in which US investors have minority stakes, demonstrating the policy barriers that remain an impediment to greater foreign participation and investment levels in this sector.

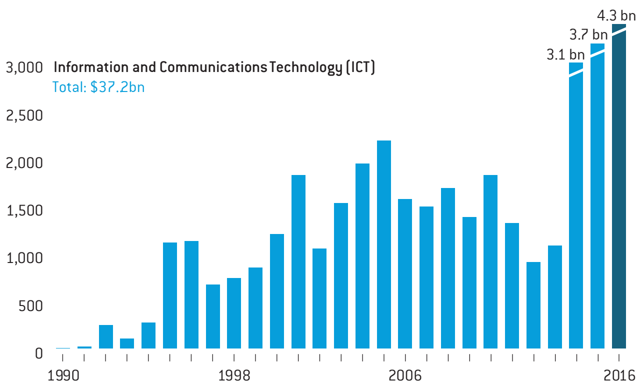
FIG 2: US FDI Transactions in China by Industry, 1990-2016

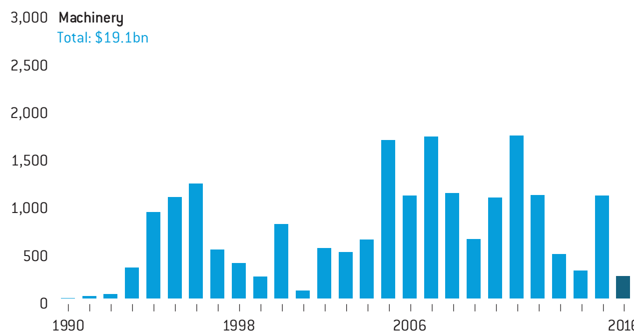
USD million

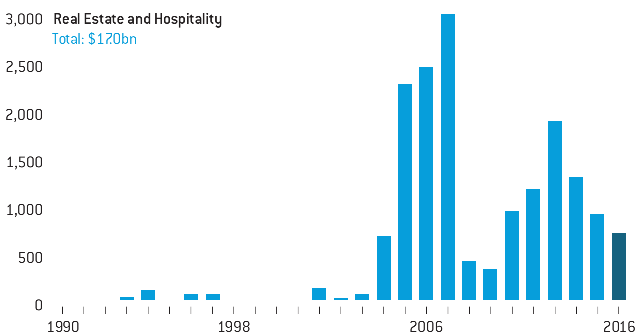


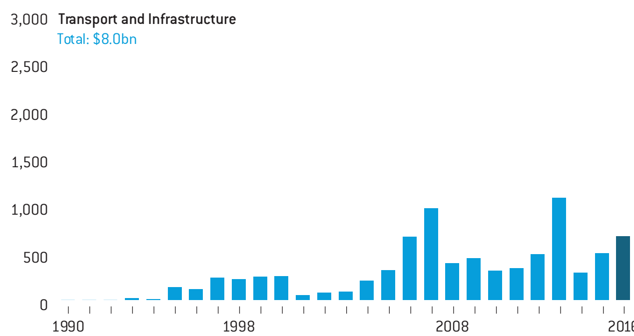












Source: Rhodium Group.

ELECTRONICS

The Chinese electronics sector has historically been an important target for US firms, but the bulk of investment entered the country from the late 1990s to early 2000s as US manufacturers aimed to take advantage of China's low-cost labor for assembling electronic goods. As wages and manufacturing costs in China continue to increase, foreign firms have downsized those operations in China and moved to other locations. Others are pursuing greater automation, which has resulted in continued investment with fewer jobs. For example, Florida-based Jabal Circuit has automated several processes at its manufacturing facility in Guangzhou, including circuit board assembly and quality control. Investment in this industry will likely remain subdued and focus on automation rather than new labor-intensive greenfield projects.

FINANCIAL AND BUSINESS SERVICES

US companies invested heavily in China's financial services industries in the run-up to the global financial crisis, particularly from 2005 to 2008. However, hopes that restrictions on foreign ownership would be gradually lifted have largely not materialized, and many US banks have sold off strategic stakes in Chinese banks in recent years (at a significant profit). Investment in recent years has remained small compared to the levels in the mid-2000s as restrictions on foreign ownership persist and general risk in the Chinese banking system has increased. Securities trading and wealth management are two big areas for US companies. In 2016, JP Morgan decided to sell its 33% stake to its joint venture partner in order to seek a new partnership in which the firm could exert greater control. Morgan Stanley announced plans in early 2017 to raise its stake in its joint venture to 49%, the current maximum. In early 2017, the State Council released plans to relax restrictions on foreign investment in a number of segments including banking, securities, investment management, futures, insurance and credit ratings. If those reforms materialize, we will likely see a large increase of US FDI in China's financial sector.

HEALTH, PHARMACEUTICALS, AND BIOTECHNOLOGY

Driven by the modernization of China's healthcare system, the healthcare, pharmaceutical and biotechnology sector has emerged as an important target for US investment during the last decade. 2016 was another strong year, driven by Pfizer's $350 million biotech facility in Zhejiang and manufacturing facilities by Johnson & Johnson and Eli Lilly in Shaanxi and Jiangsu, respectively. Hospital operators such as Columbia Pacific and Chindex also expanded their presences in China during 2016 in response to growing demand for private hospitals. And while M&A slowed down in most sectors, US investors continued to increase their exposure to Chinese biotechnology companies and start-ups in 2016.

INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

China's ICT sector has attracted major US investment since the 1990s. In 2015 ICT became the number one sector for US FDI in China, and the sector retained that top position in 2016. This investment is driven by strong demand for ICT goods and services, as well as government regulations that mandate local content and joint ventures, along with industrial policies promoting ICT clusters. A number of US semiconductor companies expanded their footprint in China in 2016, including Intel, Qualcomm, Alpha & Omega, and Fairchild. Intel completed an expansion of its Dalian plant and a testing center in Chengdu ahead of schedule. China also attracted investment from US companies in research and development (Apple's R&D centers in Beijing and Shenzhen) and early stage technology companies. Cloud computing was another growth area, with major US companies announcing joint ventures to enter the market (such as VMware's JV with Sugon and more recently IBM's JV with Wanda) while complying with regulations that restrict foreign majority ownership in this industry. With billions in capital outlays announced, ICT is likely to remain a major sector for US investment in the coming years. GlobalFoundries alone is planning to spend $10 billion on a semiconductor plant in Chengdu.

MACHINERY

Machinery has been a major sector for US investment in China, particularly in construction and other industrial machinery, although investment patterns have been cyclical. These cycles are related to areas of infrastructure and industrial capacity buildouts. In recent years investment levels have declined, reaching a 15-year low in 2016 as the expansion of manufacturing, infrastructure and real estate have slowed and overcapacity plagues the machinery sector. Looking ahead rapid automation in machinery is creating opportunities, but US companies do not have a strong presence in this area relative to other advanced economies.

REAL ESTATE AND HOSPITALITY

Since in the mid-2000s US investors have poured considerable money into Chinese commercial real estate. Investment levels dropped in 2009 and 2010 following the global financial crisis, but rebounded again in 2011. The post-crisis cycle peaked in 2013, and annual investment has declined since then, hitting a six-year low in 2016. US investors continue to acquire assets and develop greenfield projects, but uncertainty surrounding the Chinese real estate market has dampened appetites.

TRANSPORT AND INFRASTRUCTURE

China's transport and infrastructure sector has seen fairly consistent if modest investment from the US over the past two decades. Investment has primarily been in logistics and transportation services, and most has come since 2000 with peaks in 2007 and 2013. In 2016, investment increased compared to the previous two years. Major recent investments include Microsoft's transpacific telecom cable joint venture (the New Cross-Pacific Cable System) and Fluor Corporation's new fabrication joint venture with CNOOC in Guangdong. Investments in logistics also held strong with numerous new centers by Prologis, UPS and XPO Logistics.

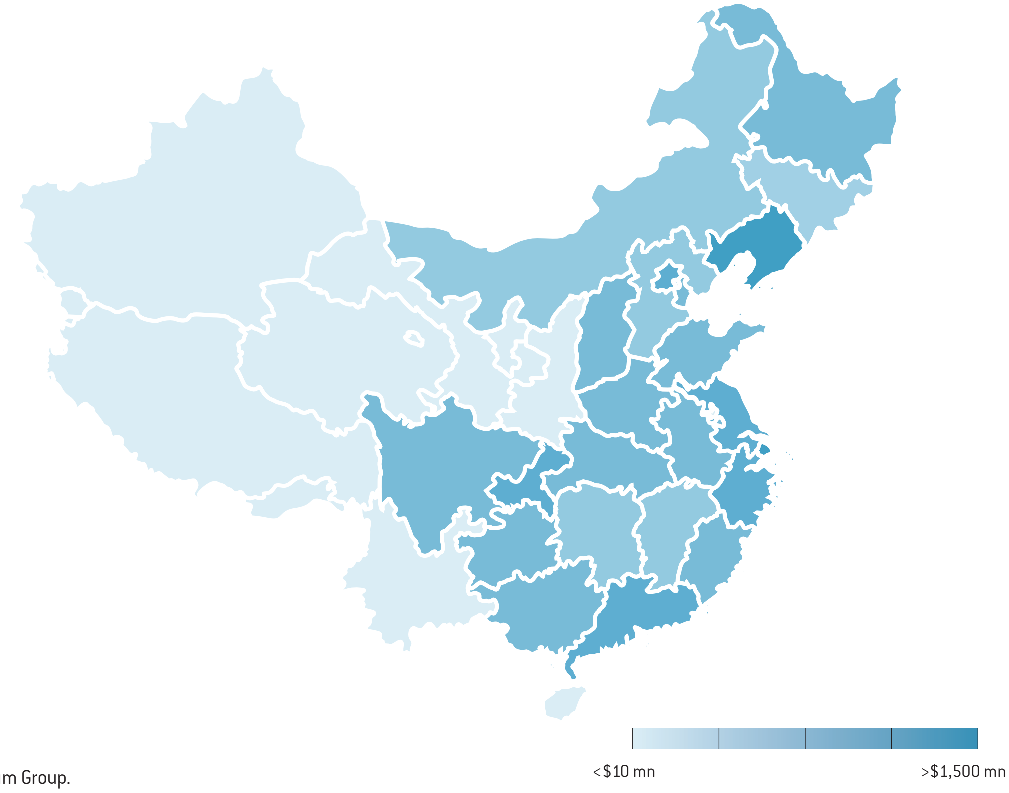
1.3 GEOGRAPHY

In earlier years US FDI was heavily concentrated in coastal areas that were designated for foreign-invested enterprises as free trade zones and manufacturing hubs, including Guangdong and Shandong. After China's WTO accession, US companies deepened their foothold in higher-income coastal economies including the cities of Beijing and Shanghai and expanded into second tier cities in provinces such as Zhejiang and Sichuan. In more recent years, American firms shifted some of their interest to the rust belt in the north and inland cities in the west, such as Liaoning and Chongqing respectively.

In 2016, large coastal cities remained the main investment destinations for US companies. Driven by Intel's multibillion-dollar expansion at its Dalian plant, Liaoning received the most investment. Other top recipient provinces included the traditional top destinations of Shanghai, Beijing, and Chongqing.

Inland provinces received noticeably more interest in 2016 compared to previous years. Major projects included large facilities by US semiconductor companies in Chongqing (Qualcomm), Guizhou (Alpha & Omega), and Sichuan (GlobalFoundries). Inland provinces also received notable service sector investments, including logistic centers by Prologis in Sichuan and Six Flags' theme park in Chongqing.

FIG 3: Geographic Distribution of US FDI in China, 2016



Source: Rhodium Group.

1.4 INVESTOR CHARACTERISTICS

Over the last 26 years the US investor mix in China has evolved significantly from mostly trading and manufacturing firms prior to the 1990s to a diverse mix consisting of large multinational corporations as well as small- and medium-sized companies today.

By the end of 2016, our database included more than 6,800 individual transactions originating from a group of almost 1,400 US companies. Of those, 437 had invested more than $50 million each in the Chinese market. 311 had investments of more than $100 million, and 60 had investments exceeding $1 billion.

While the bulk of US investment in China has been strategic in nature (meaning companies investing in their primary areas of business), during the past few years private equity firms and other financial investors have also become active players. These entities have contributed an average of $2 billion per year in the past five years to the US FDI total. In 2016, we recorded a drop in investment by financial investors due to a decline in the number and value of private equity investments that qualify as FDI (requiring a greater than 10% stake).

US investments resulting in controlling stakes (greater than 50%) also remained dominant in 2016, accounting for 64% of the annual investment total. Investments with US investors taking minority stakes were concentrated in a few industries, including entertainment (theme parks), semiconductors and cloud computing.

US investors in 2016 came mostly from the same states as they have historically: California, Texas, Michigan, New York, and Florida were the top US sources of FDI in China during the year.

1.5 OUTLOOK

The 2016 patterns of US FDI in China show that investment in modern services and technology will be critical to make up for the ongoing decline in FDI in traditional sectors such as light manufacturing, basic materials and consumer goods. More than ever before, the future trajectory of US FDI in China will depend on Chinese policy reform and efforts to level the playing field for foreign investors in these industries.

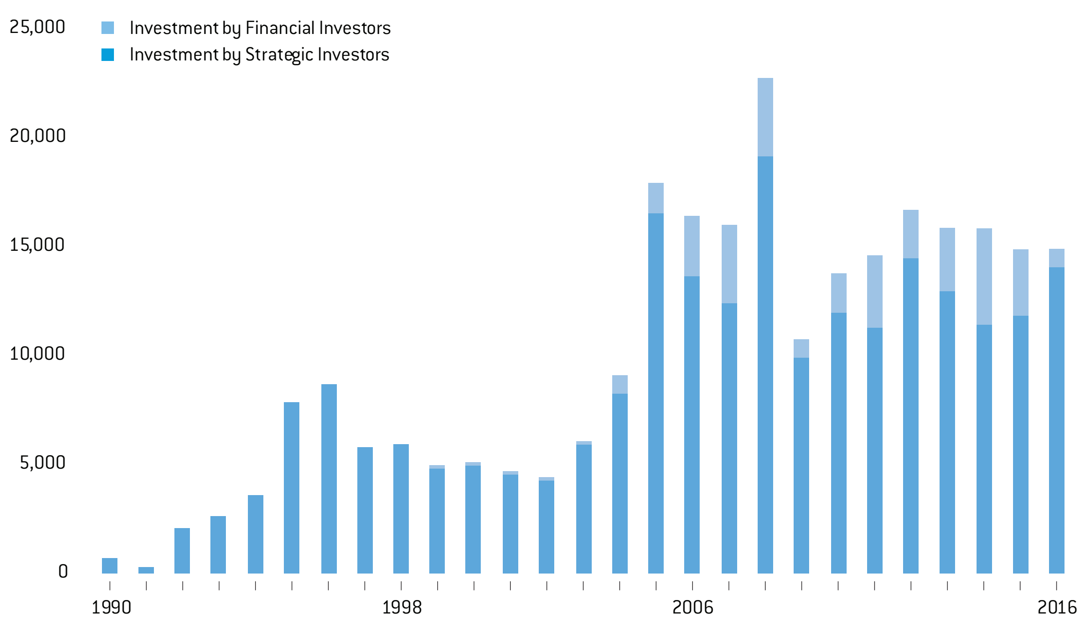
The drop in global FDI flows to China in 2016 provides a reminder for Beijing that accelerating reforms is a prerequisite for attracting more foreign investment in new areas. In late 2016, the Chinese government undertook a number of measures.

In September, the State Council moved to simplify the process by which foreign-invested enterprises (FIEs) seek approval to establish operations in China, abolishing the old examination and approval regime in favor of a simpler filing and recordal system. The State Council now maintains a "Negative List" indicating which specific industries are still subject to restrictions and a more stringent approval process. This step however only had a minimal impact on investment restrictions as the Negative List was largely based on the existing "Catalogue for the Guidance of Foreign Investment Industries." Nonetheless, the move represented a positive institutional change that paves the way for future progress.

In early December, the National Development and Reform Commission (NDRC) and MOFCOM jointly released a draft of the 2016 version of the Catalogue, which included the previously mentioned Negative List. The new draft Catalogue would open up certain sectors in services (passenger road transportation, ocean shipping tallying, credit investigation and

FIG 4: US FDI in China by Company Type, 1990-2016

USD million



Source: Rhodium Group.

rating, etc.), manufacturing (railway transportation equipment, vehicle electronics and electric vehicle batteries, motorcycles, edible oils, deep processing of corn, fuel ethanol, etc.), and mining (unconventional oil and gas, precious metals, lithium ore, etc.). However, as of May 2017, the new draft Catalogue has not been implemented.

In a January 2017 notice, the State Council laid out several additional FDI liberalization steps to be taken in the near future, including loosening restrictions for investment in financial companies and switching from an approval to a recordal process for oil and gas cooperation projects. These measures could present a major step forward for FDI liberalization, but the notice did not include an implementation timeline, and as of May 2017 the new measures were still pending.

Together, the loosening of administrative controls over FIEs and the opening up of new sectors to foreign investment could have a positive impact on US FDI in China, especially if the latter is gradually expanded and extended to sectors in which US companies are in a strong competitive position.

In addition to reforms of China's inward FDI policy, the direction Beijing takes with the recently implemented administrative controls on outbound capital flows is an important variable for inflows in 2017 and beyond. China has not enacted any new formal policies, but foreign firms have reported that informal capital controls made it more difficult to repatriate earnings overseas in 2016. While greater scrutiny on capital outflows may have been necessary to head off certain types of outflows, these controls inadvertently sour the interest in future foreign investment in China if they result in delays in repatriating earnings. The direction and persistence of outbound capital controls will therefore shape the future inward FDI picture.

2 CHINESE FDI IN THE UNITED STATES

While official FDI statistics are often subject to methodological problems and distortions, available official data points are in agreement that 2016 saw a large upward spike in Chinese direct investment in the US.

BEA's preliminary BOP data show a record inflow of FDI from China of $12.2 billion for the year, which represented an increase of 140% compared to 2015 and roughly equaled the sum of the four preceding years combined.

MOFCOM's preliminary non-financial outward foreign direct investment (OFDI) dataset also showed a big increase in Chinese global outbound FDI in 2016, reaching $170 billion, an increase of 44% compared to 2015. Although country-level data are not yet available for the full year, MOFCOM's November 2016 official release showed Chinese investment to the US had grown by 174% from January to October 2016 compared to the same period in 2015. As detailed below, our numbers are – as usual – higher still.

The rapid growth of Chinese outbound FDI to the US and globally in 2016 can be attributed to a combination of a secular catchup in outbound FDI driven by economic fundamentals and shorter-term motivations to diversify holdings globally against the backdrop of slowing Chinese growth and negative expectations for the value of the Chinese currency. Our granular transactions dataset allows us to describe the patterns of China's US investments in more detail.

2.1 FLOWS AND STOCK

From 1990 to 2005, Chinese investment in the US was negligible. In 2005, the first major modern Chinese investment was completed, Lenovo's $1.75 billion acquisition of IBM's personal computer division. Investment activity increased in subsequent years in terms of number of deals, but the combined value of annual investments remained below $1 billion through 2009. Chinese investment in the US began to accelerate in 2010 and the years that followed, reaching $14 billion in 2013 on the back of Shuanghui's acquisition of Smithfield Foods. Investment levels dipped to $12.8 billion in 2014, but reached a new record in 2015 of $15.5 billion.

2016 was a banner year for Chinese FDI in the United States. Chinese firms invested a record $46 billion in the US economy, triple the amount seen in 2015 and a tenfold increase compared to just five years ago.

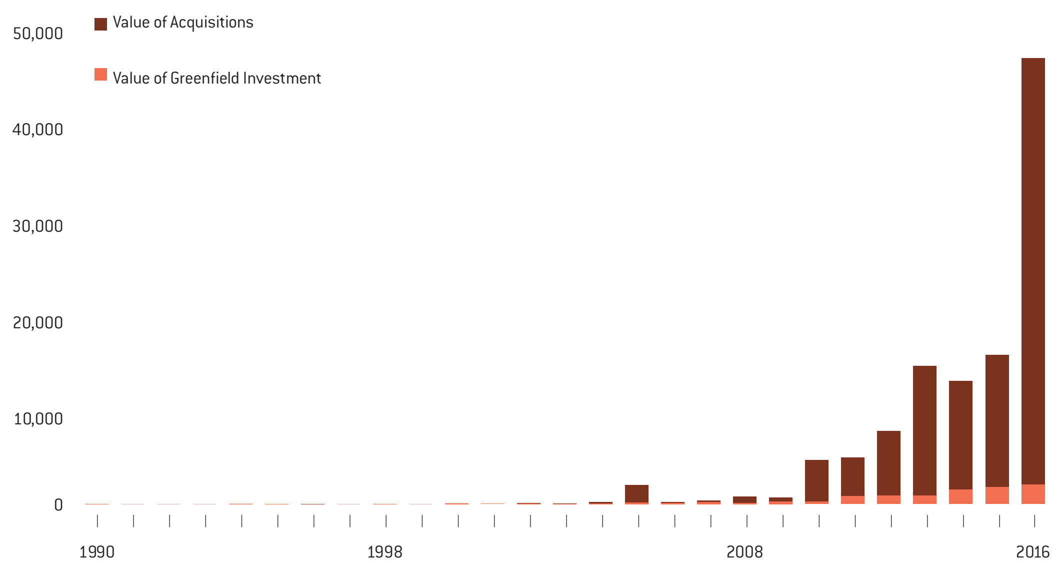
Unlike their American counterparts investing in China, Chinese investors in the US heavily favored acquisitions, making more than $44 billion in asset purchases. Chinese companies also continued to expand organically through greenfield projects, but the scale of these projects remained comparatively small.

The huge jump in total Chinese investment in 2016 is attributable to a greater number of mega deals. HNA's $6 billion acquisition of Ingram Micro, Qingdao Haier's $5.6 billion acquisition of the General Electric (GE) appliances business, Anbang's purchase of 15 properties from Strategic Hotels for $5.5 billion, Apex Technology's $3.6 billion acquisition of Lexmark and Wanda's $3.5 billion deal to buy Legendary Entertainment together accounted for more than half of the investment total during the year.

The record level of investment in 2016 pushed cumulative Chinese FDI in the US economy since 1990 to $110 billion.

FIG 5: Value of Chinese FDI Transactions in the US, 1990-2016

USD million



Source: Rhodium Group.

2.2 INDUSTRY TRENDS

Compared to the breadth of American FDI in China, Chinese FDI in the US has historically been more concentrated. Four industries – real estate and hospitality, ICT, energy, and agriculture and food – account for more than two thirds of total Chinese FDI from 1990 to 2015. Several industries including consumer goods and services, electronics, aviation, and industrial equipment received little investment over the same period. Moreover, compared to US FDI in China, the patterns of Chinese FDI in the US are more volatile and subject to one-off spikes due to large-scale M&A transactions. Examples include the agriculture and food, energy, and entertainment sectors.

In 2016, the mix of industries targeted by Chinese investors broadened. In contrast to the dominance of fossil fuel investments before 2013, more than 90% of Chinese FDI in 2016 focused on services and advanced manufacturing. Real estate and hospitality (Strategic Hotels, Carlson Hotels and numerous commercial real estate investments in urban coastal cities), information and communications technology (Omnivision), entertainment (Legendary Entertainment), transport and infrastructure (Ingram Micro), consumer products (GE Appliances), electronics (Lexmark), and financial services (AssetMark) stood out.

On the following pages we review the most important developments in each of our 14 industries. More detailed industry snapshots, updated with 2016 developments, are available on the project website (www.us-china-fdi.com).

AGRICULTURE AND FOOD

Chinese investment in US agriculture has historically been small with one major exception: WH Group's 2013 acquisition of Smithfield Foods, the largest pork producer in the United States. With only a handful of smaller investments since then, the Smithfield acquisition continues to account for the bulk of Chinese investment in the sector. For the most part, 2016 was a quiet year with only a small number of projects. Smithfield Foods was notably active again, agreeing to purchase the Farmer John and Saag's Specialty Meats brands plus a handful of processing facilities and farm operations from Hormel in late November 2016 (the transaction did not close until January 2017).

AUTOMOTIVE

The US automotive sector has received significant investment from Chinese firms over the past decade, but annual totals have not reached the same levels as in some other industries. China is now the world's largest market for automobiles, and Chinese companies continue to shop abroad for assets to boost their competitive positions at home and to establish footholds abroad. US investment in the sector increased modestly in 2016 to around $1 billion. The most significant deal was Ningbo Joyson Electronic's $920 million acquisition of Key Safety Systems. Chinese automotive companies also continued to expand in the US through greenfield facilities. Fuyao Glass, one of the largest Chinese greenfield investors in the US, continued work on large-scale plants in Ohio and Illinois. Chinese-owned Volvo continued construction of a plant in South Carolina that will ultimately produce vehicles for export to China. A number of Chinese companies are developing electric vehicles in the US, including Wanxiang-owned Fisker and Faraday Future.

AVIATION

Chinese investment in US aviation has been minimal over the years. China's goal of developing its own jet liners to compete with industry giants Boeing and Airbus has led the nation's mostly state-owned aircraft manufacturers to focus on domestic production capabilities. Concerns over competition and national security, as well as the lopsided nature of the Chinese industry, were factors for limited Chinese aviation FDI in the US. Most investments have been limited to firms that build small private planes and helicopters, which come with fewer dual-use technology and other security-related concerns. The 2011 purchases of Cirrus and Enstrom Helicopter constitute the most notable cases to date. 2016 was a quiet year in the sector, with no major investments recorded.

CHEMICALS, METALS, AND BASIC MATERIALS

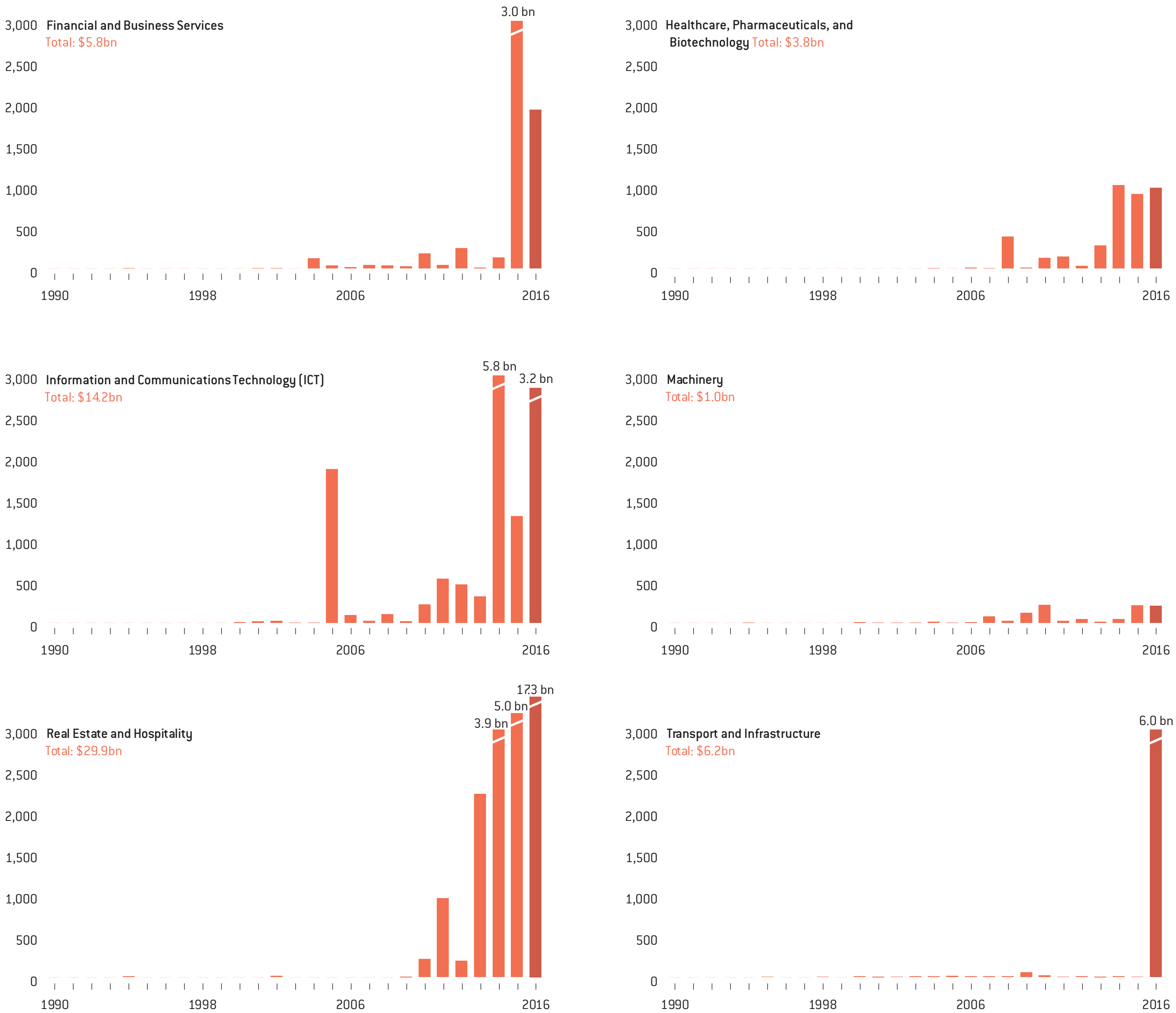
Chinese investment in US chemicals, metals, and basic mate rials has seen a small uptick over the last several years but remains modest. Most Chinese investment dollars in this sector have gone to resource-rich emerging economies instead of developed nations like the United States. In 2016, Chinese companies made smaller investments and a couple of medium-sized deals in the $100 million range. In August 2016, Chinese aluminum firm Zhongwang announced a bid for US-based Aleris for $2.3 billion, but the deal has yet to receive approval from CFIUS. Even if the Aleris deal fails to close, future investment in the sector should pick up thanks to a strong greenfield pipeline. Yuhuang's $1.85 billion Louisiana methanol plant began construction in January 2017, and Wanhua Chemical announced in April that it had picked the state for another billion-dollar chemical plant.

CONSUMER PRODUCTS AND SERVICES

Before 2016, Chinese investment in consumer products and services was small. With most Chinese firms still principally focused on manufacturing consumer goods and chasing domestic consumers, few Chinese investors had looked abroad to significantly expand their downstream presence or provision of services in the US. This situation has changed in recent years as Chinese companies are

FIG 6: Chinese FDI Transactions in the US by Industry, 1990-2016

USD million



Source: Rhodium Group.

putting a greater emphasis on consumer brands. In 2016, appliance maker (and early US investor) Haier acquired GE Appliances for $5.6 billion. The deal was worth more than five times the previous cumulative investment by Chinese firms in the sector. While megadeals of this scale are unlikely to become the norm, the GE Appliances transaction shows that moving closer to US and global customers through brands and local presence is an increasing commercial rationale for Chinese firms.

ELECTRONICS

The US electronics sector has historically not received much Chinese investment. For most of the last two decades, the major rationale for US electronics manufacturers investing in China – access to lower labor and production costs – has kept investment almost exclusively flowing towards China. But as with consumer products, the sector saw a major pickup in Chinese investment in 2016 thanks to large acquisitions. Apex Technology's acquisition of printer manufacturer Lexmark for $3.6 billion together with Suzhou Dongshan Precision's acquisition of Multi-Fineline Electronix for $610 million more than quadrupled cumulative Chinese investment in the sector. Both transactions offered the Chinese acquirers established US brands and technologies for capitalizing on growth in China.

ENERGY

The recovery in energy prices following the financial crisis and new opportunities in unconventional oil and gas development fueled a surge in Chinese investment in US energy assets from 2009 to 2013. Since then, Chinese FDI in the sector has declined rapidly due to falling energy prices, and lower risk appetite at state-owned enterprises due to China's anti-corruption campaign. There were no major Chinese energy deals in the United States in 2016. Changes to global energy supplies and a decline in the energy intensity of Chinese GDP growth have further dampened Chinese enthusiasm for overseas acquisitions in this sector. Renewable energy remains the exception, but investors are largely focused on upgrading technology and other capabilities as they capitalize on domestic Chinese opportunities stemming from government policies to significantly boost the share of renewables in China's energy supply.

ENTERTAINMENT

Before 2012, Chinese activity in the US entertainment industry was practically nonexistent, but major transactions from 2012 to 2015 made the sector a significant recipient of Chinese capital. 2016 was a record year, with a number of sizeable acquisitions. Investors targeted existing assets in Hollywood as they tried to connect the world's largest film production and distribution industry with its largest potential market. The biggest deals during the year included Wanda's $3.5 billion acquisition of Legendary Entertainment and its $1.1 billion purchase of Carmike Cinemas. While there remains a strong commercial rationale for continued Chinese investment in the sector, Chinese capital controls have complicated dealmaking; a number of deals fell apart in late 2016 and early 2017, including Anhui Xinke's $345 million acquisition of Voltage Pictures, and Wanda's $1 billion bid for Dick Clark Productions. Chinese companies are also eying other entertainment assets, as evidenced by Zhonghong Zhuoye's purchase of a stake in SeaWorld.

FINANCIAL AND BUSINESS SERVICES

Like other service sectors, Chinese investment in financial and business services was minimal until very recently. FDI in the sector skyrocketed in 2015 and posted another strong year in 2016 driven by deals including Huatai Securities' $768 million acquisition of AssetMark, HNA's $336 million purchase of Rocketspace, and Taikang Life Insurance's $200 million stake in Sotheby's. 2016 also witnessed the first major divestment, as Fosun sold Ironshore Insurance after holding it for only a year. Despite pressure from capital controls, the pipeline for investment in the sector remains strong and includes China Oceanwide's pending $2.7 billion acquisition of insurance company Genworth, HNA's pending $450 million stake in Old Mutual's US asset management unit, and HNA's pending acquisition of investment firm SkyBridge Capital.

HEALTHCARE, PHARMACEUTICALS, AND BIOTECHNOLOGY

Chinese investment in the healthcare, pharmaceuticals, and biotechnology sector has grown steadily since 2010 to a new record of $1 billion in 2016, but remains relatively modest relative to other sectors. Unlike other sectors, investment is driven by small startup investments and small-sized acquisitions in medical devices, pharmaceuticals and biotechnology. Chinese firms have increasingly strong incentives to go abroad and capture new healthcare models and technologies that can be adapted to the Chinese marketplace, where ongoing healthcare reform and rapid industry growth are creating significant opportunities. Healthcare and nursing home real estate are another area with growing interest from China (we account for these transactions under real estate).

INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT):

The ICT sector continues to attract considerable Chinese investment, mostly focused on information technology (IT) equipment and a smattering of small-scale investments in software and IT services. In 2016, investment totaled $3.3 billion. Semiconductors accounted for the biggest share of total investment, including Hua Capital and CITIC Capital's $1.9 billion acquisition of Omnivision Technologies, and Beijing E-Town Dragon's $300 million acquisition of Mattson Technology. The total would have been much higher if the US had not intervened in a number of transactions due to national security concerns. In addition to technology acquisitions, Chinese companies also continued to invest in R&D centers. Examples include Huawei's new R&D center in Seattle and LeEco's new headquarters in California. Baidu has plans to build a new R&D center in Silicon Valley in 2017, and Didi Chuxing announced plans for an artificial intelligence lab in California.

MACHINERY

Chinese FDI in US industrial machinery has been small over the last two decades with only $800 million in cumulative investment from 1990 to 2015. 2016 was no different, with only a handful of small deals in the sector. As the nation's competitive advantages relating to cheap labor costs continue to erode, Chinese companies have a strong rationale to upgrade technology through M&A, with a particular focus on automation. However, Chinese M&A activity has mostly been focused on other advanced economies, particularly in Europe, which hosts a diverse group of companies in this space.

REAL ESTATE AND HOSPITALITY

Before 2016, the real estate and hospitality sector was the second-largest recipient of Chinese FDI in the US. In 2016, investment tripled from 2015, reaching a new record high of $17 billion, more than doubling previous cumulative investment and making it the top sector by cumulative investment. The biggest deals in 2016 included Anbang's $5.5 billion acquisition of Strategic Hotels & Resorts properties, HNA's $2 billion acquisition of Carlson hotels, China Life Insurance's $2 billion stake in a portfolio of hotel properties, and China Investment Corporation's $1 billion purchase of a building at 1221 Sixth Avenue in New York City. Since China's tightening of capital controls in late 2016, the pace of real estate investment has slowed markedly but activity has not collapsed. The biggest pending real estate deals in the first quarter of 2017 include HNA's $6.5 billion stake in Hilton and its $2.2 billion purchase of 245 Park Avenue in New York.

TRANSPORT AND INFRASTRUCTURE

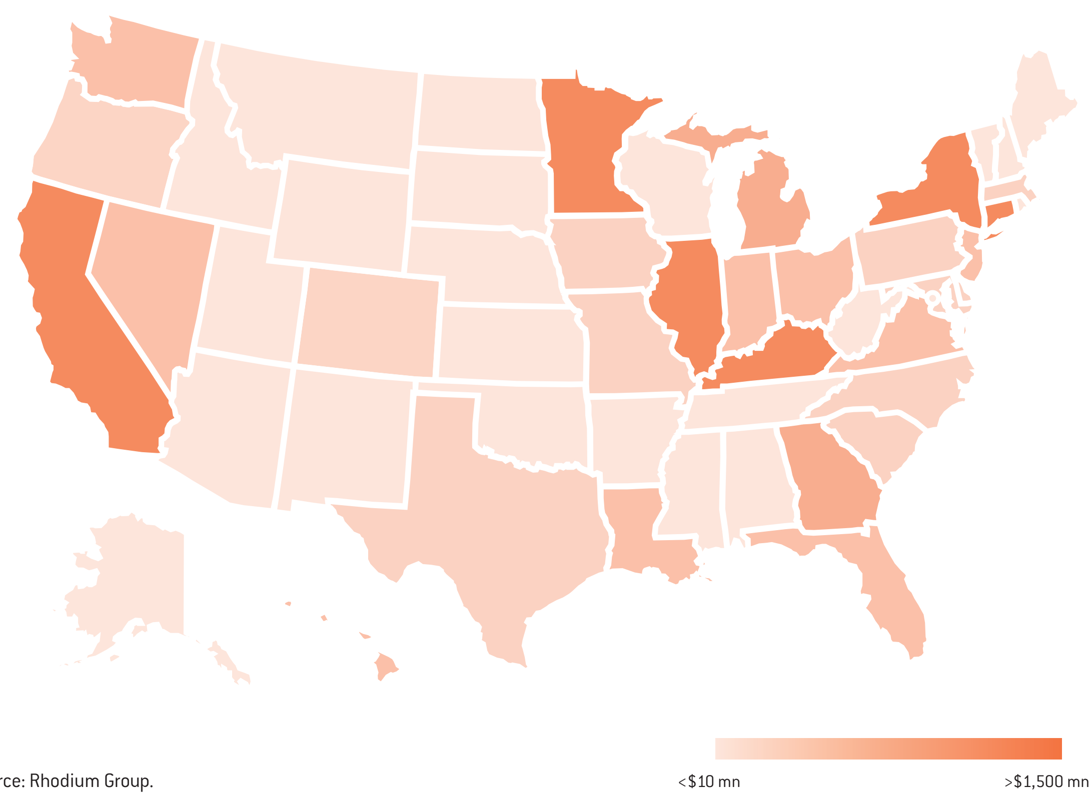
Transport and infrastructure received the least investment from China of all sectors from 2000 to 2015, with only around $200 million of cumulative-investment. In 2016, the sector became the second largest for Chinese investors thanks to a single transaction: HNA's $6 billion purchase of Ingram Micro, a US company that distributes ICT products and software with annual revenue of more than $43 billion as of 2015. Chinese investors have also put money into warehouses in the US (which we capture under real estate). Going forward, there may be more space for Chinese investment as President Trump pursues his campaign promise to renew America's infrastructure. Multiple Chinese construction firms already operate subsidiaries in the United States. State-related and private investors have also shown great appetite for conservative assets with a stable long-term return, making infrastructure a potential alternative to commercial real estate ventures. Though not included in our database as the investor is a European company with Chinese minority ownership, another interesting deal is the $2.1 billion acquisition of US warehouse automation and software provider Dematic by German forklift truck and warehouse equipment maker KION (which is 43% owned by China's Weichai Power).

2.3 GEOGRAPHY

During the past decade, Chinese FDI in the US expanded quickly from coastal cities to the Pacific Northwest, the South, and parts of the Midwest.

Before 2008, Chinese investment was mainly concentrated in California, New York and a few other large states including North Carolina, Michigan, and Texas. After 2008, major urban areas especially along the northeast corridor and the Midwest began attracting Chinese investment, including resource-rich states such as Wyoming, Colorado, Oklahoma, and Texas. Since 2013, the geographic presence of Chinese companies has broadened further as their industry reach broadened.

FIG 7: Geographic Distribution of Chinese FDI in US, 2016



Source: Rhodium Group.

In 2016 Chinese investors further expanded and deepened their footprint in the US. Coastal states such as New York and California were still major beneficiaries, but South and Midwest states also received significant investments during the year. California received the most Chinese investment dollars in 2016 ($16.6 billion), followed by Kentucky ($9.2 billion), New York ($5.9 billion), Illinois ($5.5 billion), and Minnesota ($2.3 billion). Connecticut ($2 billion), Georgia ($1.1 billion), and Michigan ($1 billion) also posted strong investment totals.

By the end of 2016, 46 of 50 US states had received direct Chinese investment in the form of a newly established greenfield project or the acquisition of a company headquartered in that state. Another Rhodium Group dataset that breaks down acquired companies into individual operations (*New Neighbors*) shows that by the end of 2016 all 50 states and 98% of Congressional Districts hosted operations of Chinese-owned companies.

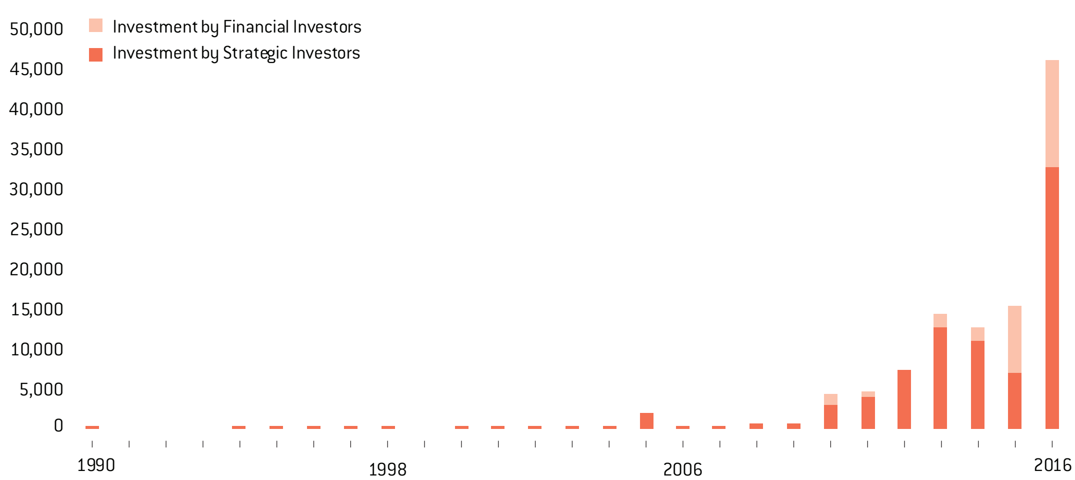
2.4 INVESTOR CHARACTERISTICS

Government-owned and -affiliated companies (which we define as having 20% or more government ownership) have historically played a significant role in China's US FDI. From 2009 to 2013, Chinese capital inflows were driven by state-owned enterprises (SOEs), as state-owned companies in energy and a handful of other sectors quickly expanded their US assets. By 2011, SOEs accounted for more than 65% of cumulative Chinese OFDI in the US. Since then SOE investment has continued, but growth has been largely driven by the private sector. By the end of 2015 the share of SOEs in cumulative investment had fallen to 35%. In terms of annual flows, the share of private companies averaged 77% from 2013-2015.

In 2016, private sector companies continued to drive the growth of Chinese FDI in the US, accounting for 79% of total investment during the year. This ratio

FIG 8: Chinese FDI in the US by Company Type, 1990-2016

USD million



Source: Rhodium Group.

was comparable to 2015, but with a significantly higher total investment amount. The majority of investments resulted in majority stakes for the Chinese investors, although several Chinese firms took minority stakes in US companies.

Financial investors (which invest primarily for financial returns) also continued to play an important role in China's US FDI in 2016. Financial FDI became a significant portion of total Chinese FDI in the US in 2015, accounting for roughly half of all flows during that year. The value of financial FDI further increased in 2016 to more than $13 billion, but faster growth of strategic investments resulted in a smaller total share for financial investment (less than 30%).

In terms of geographic origin, 2016 was similar to previous years in that the largest source of Chinese investment in the United States was Beijing. Many of China's largest multinationals and most active foreign investors are headquartered in the Chinese capital. While investment from Shanghai and Henan was notably muted compared to past years, in general most Chinese money continued coming from the nation's southern and eastern coastal provinces, China's most urban and developed areas. Shandong, Liaoning, Guangdong, Jiangsu, and Zhejiang were among the top sources of US FDI in 2016. One notable deviation from past years was a surge in investment from Hainan province, where HNA Group is headquartered. HNA spent more than $8 billion on FDI in the US in 2016, including the acquisitions of Ingram Micro and Carlson Hotels.

2.5 OUTLOOK

Economic fundamentals lead us to expect further expansion of Chinese FDI in the United States: the US has the world's largest economy and consumer end market, making it an attractive target for Chinese firms seeking to expand and diversify customer bases. The US also has a large base of attractive technology and brand assets, which are a draw to Chinese investors seeking to move into higher-value added segments or gain competitive advantages vis-à-vis domestic competitors. Finally, the outlook for growth and currency value are also currently stronger than in most other advanced economies.

At the same time, short- and intermediate-term headwinds are expected to moderate investment activity in 2017 from the record 2016 level. In reaction to heavy capital outflows and resulting downward pressure on the Chinese currency, Beijing tightened administrative controls on many types of transactions in 2016 while continuing to assert enthusiasm for "legitimate" outbound FDI. But Beijing has singled out some of the biggest sectors receiving Chinese capital in the US such as real estate and entertainment, and broadly discouraged financial FDI. These changes have already slowed down the pace of newly announced outbound M&A transactions in the US. In the first quarter of 2017, the volume of announced acquisitions fell by 20% compared to the fourth quarter of 2016. The combined value of announced deals fell by about half.

Chinese investors also face greater uncertainty and political deal risk in the United States. While President Trump has not taken formal steps to toughen the US approach to investment screening, a more confrontational attitude around trade and investment policy in general and China in particular could well lead to changes in the way that CFIUS reviews transactions.

Official American focus on China is not limited to the executive branch. The patterns illuminated in this report – especially the volume of Chinese FDI in the US and the asymmetry in American ability to invest in China – have prompted Members and staffs both in the Senate and House of Representative to reopen discussion of CFIUS modification and broader changes in US policy on inward investment.

These discussions include tightening national security (the traditional CFIUS concern), adding economic competitiveness objectives to investment screening, and even intertwining security with economics interventions that go beyond conventional definitions of security.

Many of the ideas now under consideration in some corners of the Congress, such as undertaking a "net benefits test," have been looked at and rejected in the past. But the scale, scope, and tone of China's global presence are unprecedented for the United States in the modern era, and ideas thought ill-suited in the past are getting a careful fresh look.

3 CONCLUSIONS AND POLICY AGENDA

The data compiled and analyzed in this report support a handful of clear conclusions. Because our methodology produces different and for policy purposes more useful measures of FDI than official sources, these conclusions are important. They are also novel. The patterns in two-way FDI prevailing today did not exist three years ago, and even one year ago the asymmetries we have identified were just prospective possibilities, not present realities. By describing real-time changes in the patterns of US-China economic interaction and anticipating future challenges, we have shortened the reaction time between economic developments and social, commercial, political and security responses.

The conclusions from our 2016 data update are relevant in both Washington, where debate about CFIUS modification has been expedited, and in Beijing, where leaders are grappling with the right mix of outbound investment restrictions and reforms to boost inflows. And given the importance of the FDI axis between the world's two largest economies, we believe our conclusions are relevant to the rest of the world as well.

The first finding from our data update is that **two-way FDI flows are at an all-time high**. Bilateral FDI transactions amounted to more than $60 billion in 2016, which is more than in any other year in history. The deepening of FDI ties is even more meaningful in light of slower growth in most other areas including trade and Chinese purchases of US government securities, both of which are long-standing elements of the bilateral relationship. This is relevant because marginal growth typically attracts the greatest public and policy interest in a relationship, whereas large but stable economic flows are often taken for granted. Certainly it is the case that the large two-way 2016 flows have garnered attention, and indeed – as discussed below – anxiety, due first of all to their sheer size.

The record aggregate value of 2016 flows is also important because it may not be a one-time event: fundamentals support a repeat of such an outcome, and indeed significant growth in it, for years to come. However, as discussed below, there are a range of short-term economic and long-term political and security factors which could well moderate growth in two-way investment flows in the near term.

Second, **the gap in flows to the US versus flows to China widened dramatically last year**. The growing asymmetry in two-way flows was due to Chinese FDI in the US tripling to $46 billion; US FDI in China, by contrast, was flat at just a quarter of that level. In nine of 14 industries Chinese FDI in the US was larger than flows the other way, compared to only seven industries in 2015.

If US firms lacked the appetite to expand their investment footprints in China or the wherewithal to do so, or if they were prevented by their own government from investing abroad (as most Chinese firms were until recently), then this gap would not be much of an issue. However, none of those conditions apply, and hence this growing asymmetry has attracted wide political and commercial concern.

Though many economists are satisfied to see Chinese money flowing to America even if reciprocal opportunities to export investment to China are not available, the painful legacy of asymmetric trade market access is still a festering problem in the relationship and one which President Trump's advisors describe as his "obsession". The analogous gap in investment market access, which showed up so starkly last year, is therefore a warning signal to legislators and policy analysts. Official data reflect this gap as well, but at such a small scale that it hardly bears worrying about today. Seen through our alternative lens, this evolving pattern requires attention immediately in the current policy context.

At the same time, our data offer a caution to those who would pull up the drawbridge to the US economy posthaste. The cumulative value of Chinese FDI in the US since 1990 now stands at $110 billion. This is a huge increase compared to just three years ago, but still less than half the $240 billion US companies have been allowed to invest in China over the past 26 years. This does not mean that Chinese investment in general deserves lax attention until the two-way stocks reach parity. It does mean that Americans should carefully consider the ledger of their corporate footprint in China before jumping to the conclusion that China is largely closed to US investors and they are entitled to mirror that stance.

Third, **the variety of investors and target industries in two-way flows has expanded, reshaping policy debates and amplifying security concerns that are here to stay and demand attention.** In five of 14 industries we record more than $5 billion in two-way deals in 2016. Another five industries witnessed more than $1 billion worth of two-way transactions.

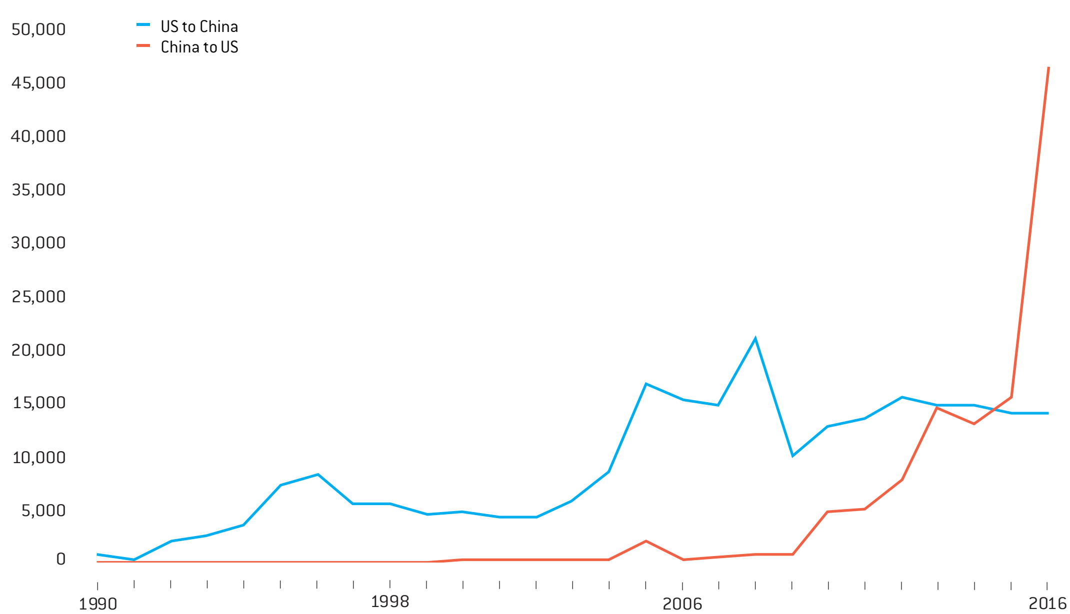
Real estate was the number one industry for two-way FDI, driven by a super-sized Chinese appetite for commercial real estate. Consumer products and services, information and communications technology (ICT), transport and infrastructure, and entertainment, media, and education were the next biggest.

Investment growth in both directions was strong in politically charged industries including ICT and entertainment. This is a complicated and important reality, though it should not be surprising. Evolving commercial patterns call for better defined boundaries for security-related investment measures – preferably common standards rather than a patchwork of unilateral ones.

The information and communications technology cluster remains the top industry for US investment in China, just as Chinese investment in ICT and in other high-innovation areas in the US (such as biotechnology) is similarly booming. Officials on both sides are still deeply confounded by the entanglement of civilian uses of ICT products and services that firms from both sides want to sell in each other's markets and the potential applications of these technologies to achieving offensive and defensive security goals.

FIG 9: Annual Value of FDI Transactions between the US and China, 1990-2016

USD million



Source: Rhodium Group.

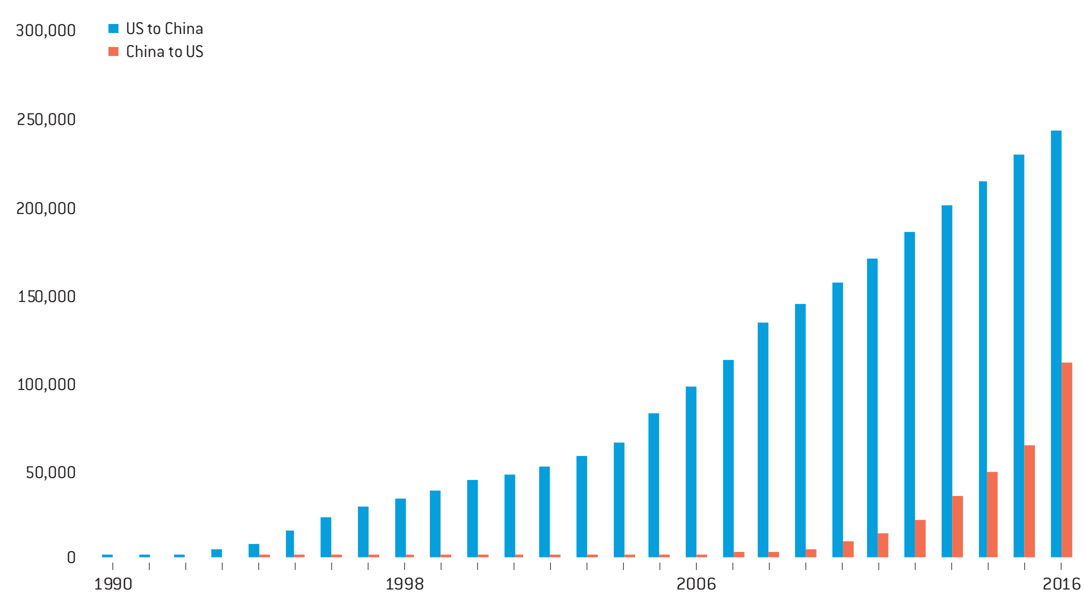
The complexity of this situation is compounded by different attitudes toward high technology in China and the United States. In the US there is a tradition of private innovation incentivized by protection of intellectual property rights, although state-authorized consortia and defense-industrial research partnerships have played a role. In China the role of industrial policies is much more pronounced relative to the role of the market. China's published *Made in China 2025* program lays out ambitious targets for nativizing industries including by acquiring competitors abroad to achieve greater Chinese dominance in numerous industries.

While CFIUS has turned down numerous high-tech overtures deemed security sensitive (mostly without public awareness), the limited American definition of national security is demonstrated by the notable spectrum of deals that are going through successfully, and the permissiveness of the US system toward early stage technology investing (which a growing number of people think should change). China has also set up a system that screens foreign acquisitions for security concerns, but it has thus far been little-utilized as the approval system and other FDI policies have given Beijing enough leeway to prevent acquisitions where deemed necessary. Often times those definitions are expansive and include catch-all criteria such as social stability. It would be timely for the US and China to work together in defining acceptable security-related restrictions to FDI flows, especially as both countries continue to discuss a bilateral investment treaty in which exceptions to the general principle of openness will need to be spelled out anyway.

Political sensitivity is not limited to sectors that are at the center of traditional security concerns. In any industry where cultural, informational or social interaction takes place, politicians are stepping forward to get involved.

FIG 10: Cumulative Value of FDI Transactions between the US and China, 1990-2016

USD million



Source: Rhodium Group.

For example, there was a marked increase in two-way FDI in the entertainment sector in 2016. For the most part US companies were building out their presence in China's theme park market, while Chinese investors set their eyes on movie production in the US. Yet commercial actors are faced with political obstacles. In China, US companies remain forbidden to hold majority stakes in entertainment businesses, even in mundane areas such as theme parks. That protectionism is often wrapped in a veneer of nationalism by, for instance, local partners seeking revenue or operating competing theme park businesses. In the US, growing Chinese investment in Hollywood has politicians worried about control over content and a decline in US soft power. This widening of political sensitivity is not just a US-China story —in many advanced economies national debates about the cultural influence of Chinese presence are taking place, just as mirror debates are common in China.

Still other sectors fall somewhere in between, neither as clearly overlapping with security vulnerabilities as semiconductors nor as obviously outside the traditional security boundaries as amusement parks. Food and agriculture stands out in this regard. Some American politicians are suggesting that Chinese investment in food and food technology could permit an adversarial China to interfere with food security, just as concerns about energy security have been raised on both sides in the past. At present, the extent of two-way involvement in these industries is far short of calling into question any notion of self-sufficiency, but unless expectations of inevitable rivalry between Beijing and Washington can be better managed than they have been to date such sensitivities are sure to grow more pronounced.

The tensions resulting from mushrooming and broadening two-way investment are deep-seated, and they will not be resolved with updated investment policies alone. The problem is not about investment in politically sensitive sectors per se, but mistrust about the future state of affairs in US-China relations generally. The buyers, sellers and dealmakers involved in these sectors are eager to find solutions to near term objections that do not ignore the legitimate security concerns of each side, and these players can play a role in finding a path forward. But they cannot solve deeper fears and concerns, or forestall the worst case scenarios which security hawks must contemplate in the absence of political and security convergence. Put another way, fundamental national security questions cannot be resolved by FDI screeners – these are questions for leaders.

Finally, **two-way FDI flows may well be lower in 2017 compared to 2016, but they will remain a major component of US-China economic interaction for years to come**.

Investment in 2017 is unlikely to reach the same levels as in 2016. Our best guess is a moderate increase in US flows to China but a notable moderation in the other direction due to Chinese capital controls and other short-term factors.

However, the broad-based increase of Chinese activity in the US and demonstrably strong interest of US companies to expand investments in Chinese growth sectors (both of which we have catalogued) shows that there is room for annual flows the size of China's 2016 outlays in the US, in both directions, even with stepped up national security screening on both sides. Neither nation must choose between national security and economic interests: expanded FDI can be consistent with and in fact supportive of both these imperatives.

If 2017 flows decline compared to the record levels seen in 2016, politicians may move on to other topics. However, given our confidence that investment activity will remain strong in the medium and long term, we recommend immediate attention to the fundamental challenges. As of mid-2017, concerns are falling into two buckets: national security, and economic interest arguments.

National security risks from FDI have fueled impassioned worries on both sides in recent years. We continue to believe that the questions for a nation to determine potential threats are actually fairly simple: does a transaction confer additional security capabilities on a potential adversary, does it diminish supply-base reliability at home, or does it facilitate espionage or sabotage? If the bottom line answer to these questions is no, then the US – or for that matter China – would be better off letting investments happen. The questions are whether the US will stick with this approach that has served it well for many decades, and whether China converges and adopts this model as it completes the transition to a modern FDI regime built on a negative list of sectors that are off limits to foreign investors, competition policy and security screenings.

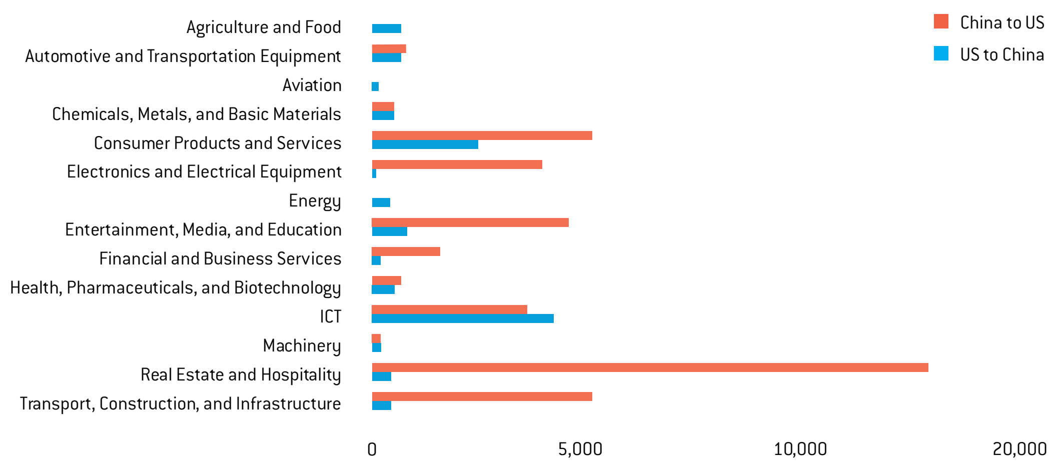
The other dimension is economic interests. Beijing's historical approach to FDI policy was explicitly based on guiding (allowing, prohibiting or conditioning) foreign investment to maximize national economic interests. The US has historically taken a different approach, with an open investment policy that encourages FDI in all but a handful of security and competition policy-related sectors.

With promises to establish a new FDI regime based on a nationwide negative list, China has in recent years moved toward the latter model, albeit incompletely, at a slow pace, and with countervailing regimes still at work. In Washington, proposals to review inbound acquisitions based on economic interests of US competitors are back on the table, in both the executive branch and in Congress. Based on evidence from other nations, approaches such as "net benefit tests" invite politics and politicization into deals and make prospects hugely uncertain for foreign investors, with no obvious service to the national interest in welfare terms.

While many uncertainties remain, the 2017 FDI agenda is not all negative. For the first time since summer 2016 the prospect of a US-China bilateral investment treaty (BIT) is getting attention again. Presidents Xi and Trump touched on this prospect at their April 2017 meeting, alongside steps to balance bilateral trade. The data on two-way investment in this study help make clear the potential for such an agreement to add to investment, jobs and dynamism in both nations, provided the growing raft of concerns about these trends can be managed.

FIG 11: Two-Way FDI Between China and the US by Industry, 2016

USD million



Source: Rhodium Group.

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DATA APPENDIX

Foreign Direct Investment (FDI) is a specific category of cross-border capital flows within the system of National Accounts, which is an internationally agreed upon standard set of principles for measuring economic activity used by the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), and other international organizations. By definition, FDI entails cross-border capital flows that achieve significant influence over the management of an invested entity and a long-term investment relationship. The common threshold for a direct investment is 10% of equity or voting shares. The other four categories of cross-border investment flows are portfolio investment, derivatives, other investments, and reserves.

Most countries maintain official statistics on both FDI flows (the value of cross-border investments made during a specific period) and stocks (the total value of aggregate direct investment at a given time adjusted for valuation changes and exchange rate movements). Several international organizations also compile FDI data, including the IMF, United Nations Conference on Trade and Development (UNCTAD), and the OECD.

Traditional FDI data are known to be subject to a number of distortions, which makes them problematic to use for policy analysis. FDI data are not only released with a significant time lag, they may also be distorted by companies' usage of holding companies, offshore vehicles, and other complex accounting structures to take advantage of favorable tax policies. The extent of "round-tripping" and "trans-shipping" investments through a third location makes it increasingly difficult to track flows accurately. Those practices and complicated deal structures with "indirect" holdings also make it difficult for statistical agencies to correctly separate FDI from portfolio investment stakes.

This situation has encouraged economists and other analysts to find ways of working around existing gaps and distortions. One way of doing so is to compile alternative datasets that are based on tracking FDI transactions for specific countries or industries. The US-China FDI Project is based on proprietary datasets compiled by Rhodium Group based on such a transactional approach. The dataset includes transactions that lead to significant ownership of assets of a long-term nature by US companies in Mainland China, and vice versa.

Specifically, the dataset captures three types of transactions: (1) acquisitions of existing assets that results in at least 10% ownership stakes; (2) greenfield projects with at least 10% ownership stake (newly built facilities such as factories, warehouses, offices and R&D centers); (3) the expansion of existing FDI operations. The general threshold for transactions to be included in the two-way databases is $1 million. The US-China FDI Project dataset only counts completed acquisitions and greenfield projects and expansions that have broken ground. Announced, rumored or pending transactions are not included. Similarly, we do not include portfolio investment transactions (debt or equity stakes of less than 10%). Reverse merger transactions, flows related to Chinese firms listing their assets in US securities markets, cooperation agreements and procurement contracts are not recorded.

More details on the data compilation process, industry categories, the difference between transactions data and traditional BOP data, and important notes regarding the use of the database are available in the Appendix of the 2016 "Two-Way Street" report, which is available for download on the website of the US-China FDI Project (www.us-china-fdi.com).

The US-China FDI Project database is constantly updated, even for previous time periods. An interactive web application with the latest data on two-way FDI between China and the United States is available on the project website as well.

WWW.US-CHINA-FDI.COM