

Two-Way Street: 2018 Update

US-China Direct Investment Trends

Thilo Hanemann, Daniel H. Rosen and Cassie Gao

APRIL 2018

A report by



In partnership with



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More background on the US-China FDI Project and interactive visuals are available at:
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ABOUT THIS REPORT

This report is the third 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



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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 80 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.



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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.

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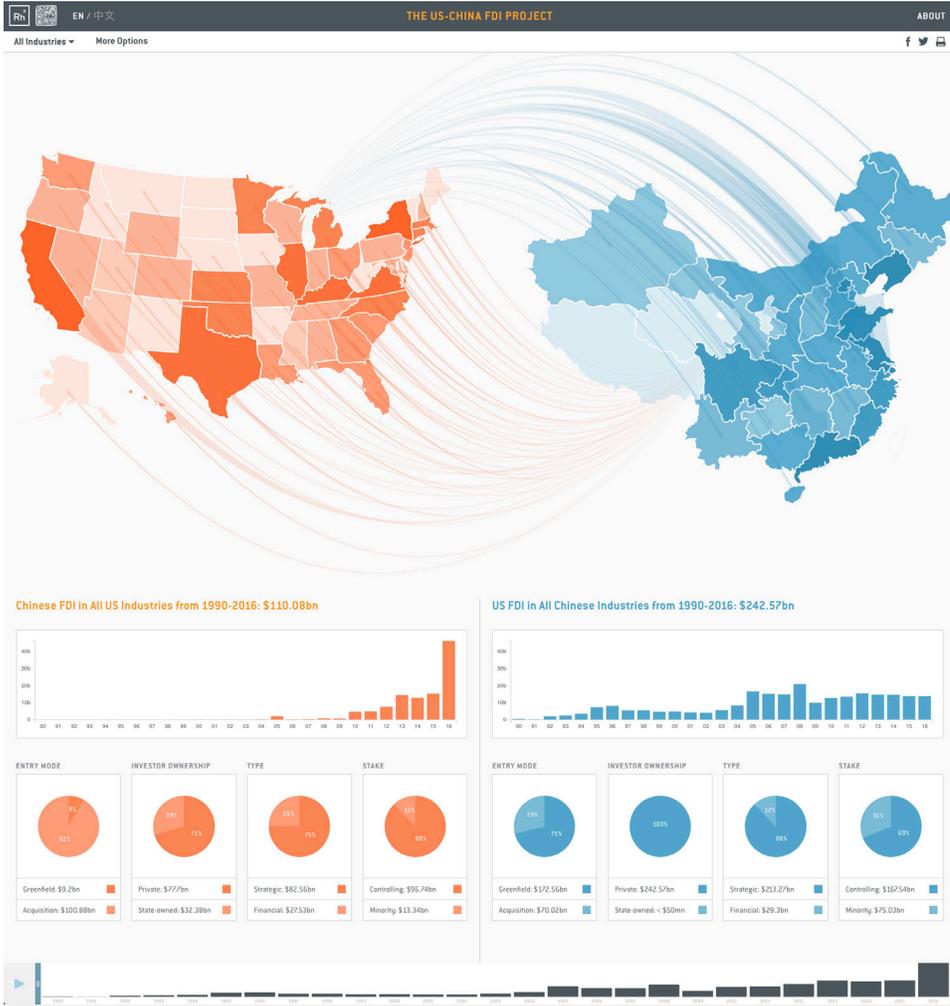


The CGCC Foundation is an IRS 501(c)(3) charitable organization affiliated with the China General Chamber of Commerce – U.S.A. It is dedicated to fulfilling social responsibilities by giving back to local communities and enhancing mutual understanding between the people of China and the United States.



SUPPORTERS





An interactive web application with updated data through the end of 2017 is available at: www.us-china-fdi.com

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FOREWORD

Three years ago, the National Committee on U.S.-China Relations partnered with Rhodium Group to produce the first report in its Two-Way Street series, examining and quantifying foreign direct investment from the US into China and vice versa. We embarked on this project in the belief that data should inform public discourse about Sino-American relations and that data, rather than politics, ought to serve as the foundation for policymaking on both sides of the Pacific.

It is our hope that this report will be treated as a public good, relied upon by a wide swath of constituencies in both countries as they make decisions that affect not only the global investment environment but also the day-to-day lives of ordinary citizens.

This year's update provides much for American and Chinese audiences to contemplate, especially as the past year has seen a ratcheting up of negative attitudes toward investment.

There is no question that, where appropriate, policy makers in the United States should consider national security when evaluating potential investments. Still, it is critically important that the United States remains an open market for investment. The US is the world's largest recipient of inbound FDI; when investments are denied, there are very real trade-offs with asset valuations, as well as job and economic growth. Over 150,000 American jobs are now supported by Chinese investment.

By the same token, it is in China's interest to encourage investment abroad and further open its borders, and to create a policy environment that makes this possible. To date, even as hundreds of thousands Chinese receive paychecks from U.S. companies, numerous sectors in China remain closed or restricted to foreign investment. These restrictions do a disservice to the overwhelming majority of China's people, as they not only drive up prices but also limit consumer choices. These restrictions contribute to a view in the US that China does not play fair.

A clear-eyed analysis shows that both the United States and China have an economic interest in maintaining strong investment ties. Both have communities that have experienced tremendous job creation and economic growth as a direct result of two-way FDI flows. During a multi-decade career as an international lawyer and investor, I witnessed these benefits firsthand.

There is a larger context to consider, too. In contrast to trade, where the deficit has been a point of tension, two-way FDI has played a largely constructive role. At its heart, investment requires long-term commitment in a way that trade does not, creating productive business relationships and driving people-to-people connections. As president of the National Committee on U.S.-China Relations, I support initiatives that promote greater understanding between the United States and

China. Bilateral investment is truly “win-win” when allowed to thrive, providing needed ballast to the relationship in both good and challenging times.

Stephen A. Orlins

President, National Committee on U.S.-China Relations

EXECUTIVE SUMMARY

The US-China FDI Project clarifies trends and patterns in foreign direct investment (FDI) flows between the world's two largest economies. This report updates the picture with full year 2017 data and describes the outlook for 2018. The key findings are:

(1) Two-way US-China FDI declined by almost one-third in 2017 compared to 2016, due to a drop in Chinese investment in the US.

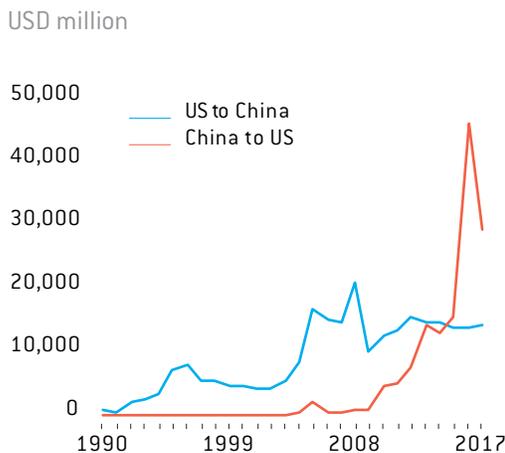
- Consummated 2017 FDI transactions between China and the US reached \$43.4 billion. This represents a 28% drop from the \$60 billion we recorded for 2016, but is still the second highest year on record.
- The reason for this drop was a decline in Chinese investment in the US to \$29 billion in 2017 from \$46 billion in 2016. This decline would have been much steeper without the \$18 billion of Chinese acquisitions that were announced in 2016 but completed in 2017. American investment into China was almost unchanged over the previous year, at \$14 billion (compared to \$13.8 billion in 2016).
- Flows remained unbalanced with Chinese FDI in the US at twice the level of US investment in

China (\$29 billion vs. \$14 billion). In terms of stock, US companies still have significantly more historical investment in China (\$256 billion) than their Chinese counterparts have in the US (\$140 billion).

2) Policy and politics in China and the US – rather than commercial forces – are mostly to blame for the two-way investment decline.

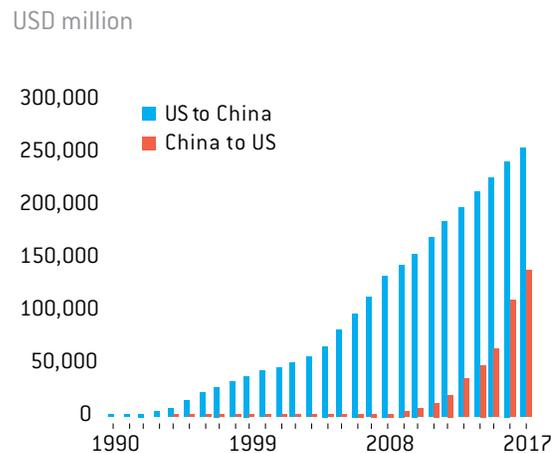
- Chinese investment in the US was curtailed by Beijing tightening controls over outbound investment and a crackdown on leveraged private investors, which caused China's global outbound FDI (OFDI) to decline for the first time in more than a decade.
- Chinese acquisitions in the United States were also pruned by increased investment screening by the Committee on Foreign Investment in the United States (CFIUS), a result of both changing threat assessments and a longer than usual leadership vacuum during the transition to a new administration. We estimate that deals worth more than \$8 billion were abandoned in 2017 due to unresolvable CFIUS concerns.
- US FDI to China remained largely flat in 2017 as

Figure ES-1: Annual Value of FDI Transactions between the US and China, 1990-2017



Source: Rhodium Group.

Figure ES-2: Cumulative Value of FDI Transactions between the US and China, 1990-2017



Source: Rhodium Group.

Beijing delayed market reforms and meaningful liberalization of market access for foreign investors. Investment momentum was strong in unpenetrated consumer-related industries (such as entertainment parks) and sectors promoted by industrial and localization policies (such as electric vehicles, semiconductors and information and telecommunications (ICT) services).

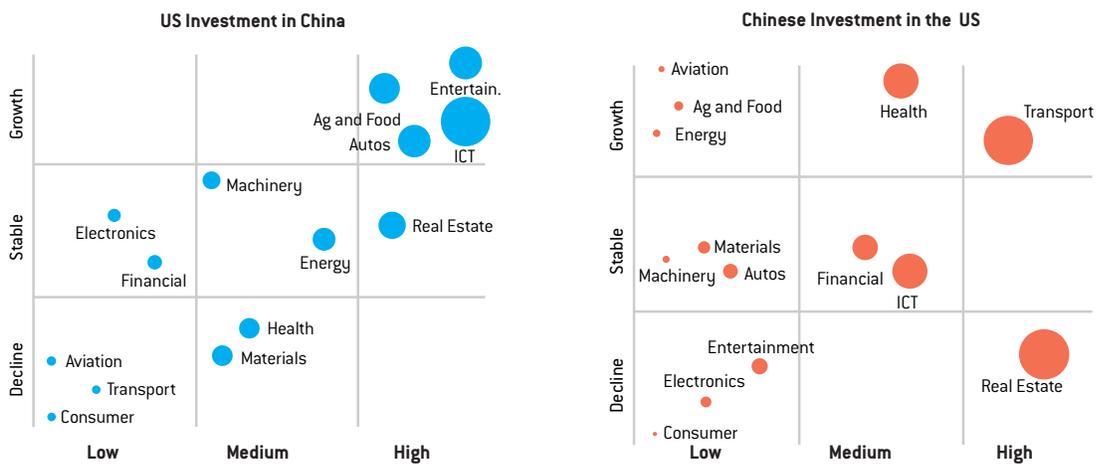
(3) Policy interventions impacted the industry composition of investment, in both directions.

- The 2017 industry mix for Chinese FDI in the US was impacted by deals carried over from 2016, but deal-making in the second half of the year showed a clear shift toward sectors supported by policy. The big losers from China’s new outbound investment rules were entertainment, real estate and hospitality, and consumer products and services. Investment remained stable or grew in many high-tech sectors (health and biotech, ICT) and industries related to China’s global infrastructure push (transport and infrastructure).

- While endorsed by Beijing, Chinese acquisitions in high-tech sectors were increasingly scrutinized by CFIUS, especially in areas seen as relevant to current defense capabilities (semiconductors) or future defense applications (“emerging critical technologies”). The safety and integrity of personal data of US citizens has also taken a greater role in CFIUS assessments of Chinese acquisitions.
- China made some progress on improving investment market access for foreign investors in 2017, but these changes were not substantial enough to materially impact foreign investment patterns. US companies and other foreign investors remain focused on existing consumer-related opportunities (food and theme parks). Investment appears to be increasingly driven by industrial policy (such as the push for electric vehicles, the desire to nurture a domestic semiconductor industry and localization requirements for ICT firms).

FIG ES-3: Two-Way FDI between China and the US by Industry, 2017

Stylized display of growth momentum (y axis) and investment value in 2017 (x axis, bubble size)



Source: Rhodium Group.

(4) Policy developments are reshaping the investor mix in both directions.

- New outbound restrictions reduced overseas activities by large, heavily leveraged private Chinese conglomerates that had been major drivers of Chinese investment in the US over the past three years. While these players retreated in 2017, small- and medium-sized investments by real economy firms remained resilient. Private equity funds and other established financial investors were less impacted by capital controls, especially those with offshore funds. Sovereign and certain state-owned players have also proved better able to navigate the new regulatory environment, though their investments in the US remain small.
- For US FDI in China, private equity firms and other financial players remain important, but they continue to focus on small- and medium-sized transactions. The big-ticket investments in 2017 were all made by major multinationals in the automotive, ICT and consumer sectors, often driven by industrial policies (semiconductors) or localization requirements (cloud computing).

(5) Venture capital and other non-FDI investment grew rapidly in recent years but also slowed in 2017.

- Direct investment has traditionally dominated two-way US-China flows, but other types of investment – and particularly venture capital (VC) – are becoming important.
- US firms were early investors in many Chinese startups and have participated in more than 1,500 funding rounds over the past 15 years. However, activity peaked in 2015 and has slowed since, partially because Chinese firms became a more viable alternative. One interesting trend in 2017 was that American and other foreign private equity firms geared up to invest in Chinese distressed assets.
- Chinese venture capital was barely existent in the US just a few years ago but has swelled

rapidly in Silicon Valley and other US technology clusters in the past three years. This activity also slowed in 2017, but not nearly as sharply as FDI flows.

(6) The outlook for two-way investment is fragile as Washington and Beijing re-assess the foundations of the economic and political relationship.

- China is signaling it will take a more relaxed view on outbound investment as capital outflow concerns have subsided. However, temporary restrictions were formalized into new OFDI rules permitting intervention in transactions at any time, a step backwards from 2014 liberalization.
- On the inbound side, China's commitment to further market reforms is less certain than it was in the years after the 2013 Third Plenum initiative was announced, leaving potential foreign investors with doubts about Beijing's seriousness about leveling the playing field for non-native businesses.
- In the US, Congress plans to overhaul the US investment screening regime, the White House plans action against Chinese FDI as part of its Section 301 case on Chinese intellectual property threats, and traditional advocates of moderation including the business community are less willing to push back. While there is room for continued two-way investment growth even with heightened security screening, risks of strategic conflict are threatening that growth prospect.

(7) There is still room for two-way investment flows in non-sensitive areas if current concerns are managed properly.

- In the US, the extent of strategic re-orientation will make a huge difference for future two-way flows. If it were just a matter of narrowly defined national security, the US could redouble its diligence screening for risks and still enjoy a great expansion of Chinese investment: today's levels

are not high in proportion to the size of our two economies. But a draconian effort to push back on China's economic footprint in America in ways that transcends discreet national security concerns will forfeit these opportunities.

- China's preference for convergence or divergence with advanced economy norms is the other essential determinant of future US-China two-way investment potential. Economic interaction – in FDI, trade and other areas – is dependent on like-mindedness about the future. In 2017 Beijing stressed the non-convergent aspects of its policy plans, triggering new debate about the prospects for investment under different assumptions. Past FDI volumes, and even existing deals, cannot be taken for granted in either direction if convergence is off the table.

(8) The US-China investment relationship will be an important determinant for how other countries handle investment relations with China.

- While many of the Trump administration's threats to be tougher on China are loathsome to US allies, many of the direct investment considerations under review in the US are in line with consideration of other advanced economies.
- As other advanced economies look at their bilateral investment relationships with China through the same lens as Washington, it is possible that shared approaches to managing security concerns will emerge. Ultimately, a multilateral framework for managing concerns about cross border direct investment is likely to be the most effective approach.

INTRODUCTION

Two-way foreign direct investment (FDI) has emerged as an important component of US-China economic relations. Since 2016, the US-China FDI Project has provided a public dataset describing two-way FDI dynamics between the world's largest economies.

Following a blockbuster 2016 with more than \$60 billion in two-way deals, US-China investment flows declined in 2017 because of policy developments in both countries.

After a decade of continuous growth, China's global outbound FDI declined for the first time since 2006. The most important driver of this decline was China's decisions to tighten administrative controls on outward FDI and other capital outflows, and a campaign to discipline over-leveraged private investors putting big money into overseas deals. Policy changes in the US also contributed to the decline. The Trump administration continued the tougher stance on Chinese semiconductor and other technology acquisitions started under President Obama.

Flows in the other direction – FDI by American firms in China – have been stable, but Beijing's efforts to level the playing field for foreign companies has not yet led to a significant boost in American and other foreign investment. China has rolled out a new negative list system for investment and committed to unilaterally liberalize certain sectors, including some that were high on the US wish list (financial services). However, implementation has been slow, and other policies like new IT security laws have created additional headaches for US firms operating in China.

Going forward, policy will continue to be a major factor driving two-way investment, with plenty of downside potential to match the upside prospect of policy opening.

In China a new outbound FDI regime implemented in summer 2017 restored the regulatory wiggle room to interfere in outbound activity that had been largely eliminated three years earlier. Given the likely persistence of the macroeconomic anxieties that provoked this step, re-liberalization does not seem imminent.

China's commitment to deepening economic reforms and market access for foreign firms remains an open question at this juncture. This ambiguity and the limited space for open discussion about China's reform direction present challenges for sustaining and further expanding foreign investment flows.

In the United States, legislation introduced to expand the scope and reach of the Committee on Foreign Investment in the United States (CFIUS) is attracting rare bipartisan and bicameral support. The proposed modifications would put investment from China and other non-allied nations under special scrutiny, swell the types of commercial interaction subject to review and rescind the crucial "safe-haven" provision which is a linchpin of investor confidence today.

More broadly, the Trump administration is redefining the US-China relationship by declaring China a "rival power" and taking a more confrontative approach to trade and investment relations. The new US strategy toward China seems to integrate economic interaction – including FDI – into the definition of national security more holistically than before. This new approach indicates that more confrontational measures in trade and direct investment are likely.

This altered policy environment has already changed patterns of two-way FDI and will continue to reshape investment levels and composition in the future. To understand these shifts – and the costs of further deterioration of investment relations – it is important to have transparent and objective data.

This report summarizes the most important trends in US-China two-way FDI in 2017 and puts them in context. The first part of the report reviews US investment in China. The second part analyzes Chinese investment in the US. We then conclude with a summary of key findings and analysis of the near-term outlook for flows in both directions.

An interactive web application with updated data through the end of 2017 is available on our project website (www.us-china-fdi.com).

1 US FDI IN CHINA

Long-standing methodological challenges complicate the task of assessing direct investment by American companies in China using official government statistics. Most government statistics measure financial flows, which are greatly distorted by complex global financing structures, tax optimization, intra-company transfers and other factors. Moreover, most government agencies collect FDI data based on the immediate source or destination country and do not trace flows back to the country of ultimate origin or the ultimate destination. Available official data show very different and incoherent trajectories for 2017 US FDI in China, illustrating these problems.

Chinese government statistics show conflicting data points on global inward FDI and American investment in China. Balance of payments (BOP) data compiled by the State Administration of Foreign Exchange (SAFE) show global FDI flows into China dropping 4% in 2017 (from \$175 billion to \$168 billion). Alternative data compiled by China's Ministry of Commerce (MOFCOM), which capture foreign funds put into FDI projects during a given period ("utilized FDI"), registers a 4% increase in dollar terms (\$131 billion) in 2017. For the United States, MOFCOM reports \$2.6 billion of utilized FDI, an 11% increase compared to 2016. However, a second Chinese data series that tries to include FDI through offshore financial centers puts utilized FDI from US companies at \$3.1 billion, which is a decrease of 18% from the previous year.

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. Preliminary BEA statistics show that US direct investment flows to China increased from \$9.5 billion in 2016 to \$10.4 billion in 2017.

In short, government statistics paint an incoherent picture of US FDI in China in 2017. To provide a

consistent apples-to-apples comparison of two-way FDI flows, the US-China FDI Project relies on a database by Rhodium Group (RHG) that captures US-China investment 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. The following analysis of US FDI trends in China in 2017 is based on transactions data. A detailed explanation of the database and underlying methodologies is available in the appendix.

1.1 FLOWS AND STOCK

From World War II to 1979, China was largely closed to US firms. Only starting in the 1980s did American companies once again have the ability and commercial motivation to invest in China. Annual flows were modest (less than \$1 billion) at first, but they accelerated following Beijing's re-embrace of reform in 1992. The Asian financial crisis in 1997-2000 saw a brief period of retrenchment, but annual flows took off rapidly to over \$10 billion following China's accession to the World Trade Organization (WTO) in 2001, peaking at around \$20 billion in 2008. Annual flows have yet to match this pre-financial crisis level but have remained generally stable at around \$13 billion on average since 2008.

Since 2016 the Chinese government has announced various initiatives to promote FDI inflows by further liberalizing market access. However, those efforts had only limited impacts so far on the investment appetite of American firms. In 2017, US firms invested \$14 billion in China, a slight increase from \$13.8 in 2016 (Figure 1). The cumulative value of US FDI transactions in China passed \$256 billion by the end of 2017.

Over the last three decades US firms have shown a strong preference for greenfield investment in China; 2008 was the only year on record in which US firms invested more through M&A. This trend continued in 2017 with greenfield FDI of more than \$9.5 billion from new projects as well as ongoing multiyear projects.

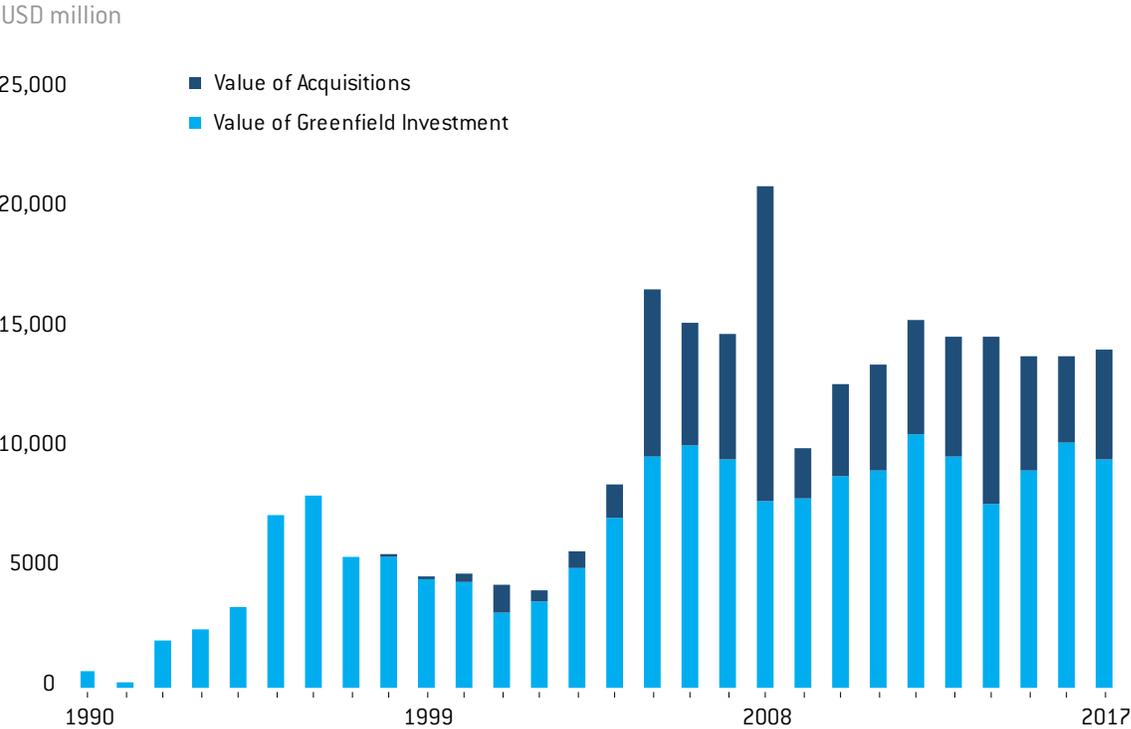
New greenfield investments increased to \$3.5 billion, up from \$2.3 billion in 2016. Major new projects were announced in traditionally important sectors such as energy (Air Products' \$1.3 billion joint venture with Lu'An Clean Energy) or automotive (Ford's electric vehicle joint venture), as well as new areas such as ICT (Apple's new data centers) and entertainment (Six Flag theme parks).

Investment related to multiyear greenfield projects announced in previous years accounted for the bulk of greenfield activity during the year (\$6 billion). Most of these projects are at the beginning of their life cycle so much of their announced capital expenditures will

be attributable to later years. The largest ongoing projects are Global Foundries' Chengdu plant and theme parks by Universal Studios, Six Flags, and Nickelodeon.

M&A activity increased for the first time in three years, reaching \$4.5 billion from \$3.6 billion in 2016. The focus was on strategic transactions, with the biggest transaction being Starbucks' buyout of its East China joint venture partner. Financially-motivated transactions continued to be an important part of US FDI in China, driven by private equity deals in consumer-oriented technology and services. One notable trend is that a handful of American financial investors have invested in ventures eyeing distressed assets in China.

FIG 1: Value of US FDI Transactions in China, 1990-2017



Source: Rhodium Group.

1.2 INDUSTRY TRENDS

US FDI in China has targeted a broad group of industries since 1990. Manufacturing and consumer-related assets have remained attractive to US buyers over the past decade, particularly in sectors like food and autos. In recent years, US firms have shifted their focus from consumer sectors and light manufacturing areas to high-tech and advanced services sectors.

In 2017, US FDI in China continued that shift towards high-tech and services sectors. Information and communications technology (ICT), agriculture and food, and entertainment attracted the most US investment of all sectors. US firms also made significant investments in the automotive, real estate and hospitality, health and biotech, and financial and business services sectors. Traditional sectors such as energy and basic materials also saw newly announced deals in 2017, but these are multi-year projects that will take time to ramp up.

In the following pages we review the most important developments in each of our 14 industries through 2017. More detailed industry snapshots, updated with 2017 developments, are available on the project website (www.us-china-fdi.com).

AGRICULTURE AND FOOD

Driven by increasing demand from the growing Chinese middle class, China's agriculture and food sector has been one of the most stable attractors of US investment since 1990. In recent years investment activity has plateaued due to market saturation, particularly in demand for western foods after years of strong growth. Most new investments are now expansions of existing facilities. In addition, the pace of divestitures and restructurings (which our numbers do not capture) has also picked up in recent years: 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. In 2017, US investment in China's agriculture and food sector was supported by a big M&A deal – Starbucks' buyout of its joint venture partner's share in its East China operations (\$1.3 billion). The coffee chain is growing rapidly in China and benefiting from increased spending from the growing Chinese middle class. The firm opened its largest store to date in Shanghai in 2017 and aims to have 5,000 stores in China by 2021. Other traditional agriculture and food investments in 2017 included Anheuser-Busch's Putian brewery, and Cargill's new soybean and oilseed plants.

AUTOMOTIVE

US investment in the Chinese automotive sector has also been notably consistent over the past quarter century. In 2017, US FDI in the industry increased to \$1.7 billion thanks to new investment projects in both traditional automobile as well as electric vehicle production. In response to the Chinese government's policy push towards electrification Ford established a new joint venture to exclusively produce electric vehicles in China. In addition, Ford is expanding its Chongqing technology center and a Nanjing test center. In 2017 GM also increased investment in its SAIC joint venture, which is opening a new battery assembly plant in Shanghai in 2018, and Digit Group formed a joint venture with Foton to develop next generation electric and autonomous vehicles for mass transportation. Several significant projects from previous years were also under construction in 2017 including Goodyear's expansion of its Liaoning plant and Johnson Controls' new plant in Shandong. Furthermore, Tesla is reportedly in talks with the Shanghai government to build a wholly-owned electric vehicle plant in the Shanghai Free Trade Zone, which could provide a significant boost to US investment in the sector in coming years.

AVIATION

US FDI in the Chinese aviation sector has historically been small, but there have been a handful of notable deals in recent years. As interest in Chinese commercial and general aviation 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. To that end, in 2017 Boeing established a joint venture with COMAC to oversee a new 737 assembly plant in Zhejiang. Other major ongoing constructions include Bell Helicopter's assembly plant in Shaanxi.

CHEMICALS, METALS, AND BASIC MATERIALS

Chemicals, metals, and basic materials have been a key sector for US investors in China since the mid-1990s. China's vast infrastructure and housing stock buildout stoked considerable demand for raw materials through the 2000s and made this sector attractive. Investment demand was propped up from 2009 to 2013 by a huge infrastructure stimulus but has declined since. In 2016 US investment in the space dropped to the lowest level since 2002. 2017 saw a clear shift towards M&A deals as the industry reforms to rationalize excess capacity, output and efficiency. Examples include Albemarle's acquisition of Jiangxi Jiangli New Materials, PPG Industries' acquisition of auto refinish coating company Futian Xinshi and Eastman Chemical's acquisition of the remaining 50% stake in Te An Ling Tian Nanjing Fine Chemical from its Japanese joint venture partners. One notable development in the sector in 2017 was WL Ross & Co forming a fund with China Baowu Steel Group to target distressed Chinese steel assets, a signal that additional industry restructuring is likely.

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 2017 dropped compared to last year, because 2016 was exceptionally high due to Walmart's investment in JD.com. In 2017, we saw continued greenfield expansions by various US companies, including Gap, which just opened its largest flagship store in Greater China in Shanghai, and Nike, which is testing out experience stores in Beijing.

ELECTRONICS

The bulk of US investment in the Chinese electronics sector 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. More recently, foreign firms have downsized their operations in China and moved to other locations as Chinese labor costs have increased. Other US investors are pursuing greater automation within China, resulting in continued investment with fewer jobs. One such on-going investment is Florida-based Jabal Circuit, which has automated several processes at its manufacturing facility in Guangzhou. US investment in the Chinese electronics industry will likely focus on automation instead of new labor-intensive greenfield projects going forward, and total investment levels are unlikely to surpass peaks set in earlier years.

ENERGY

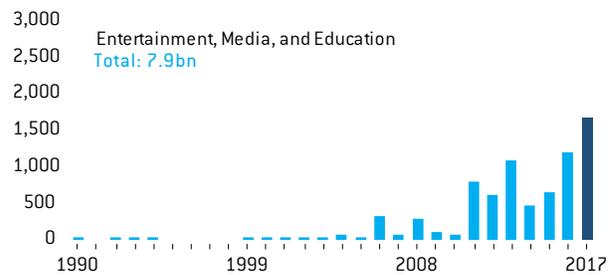
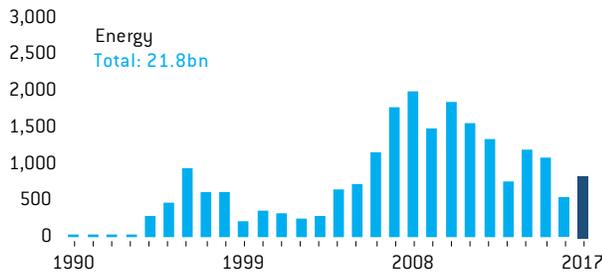
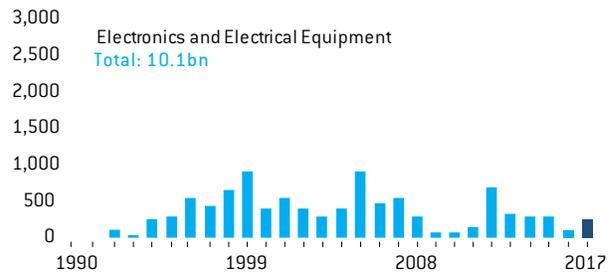
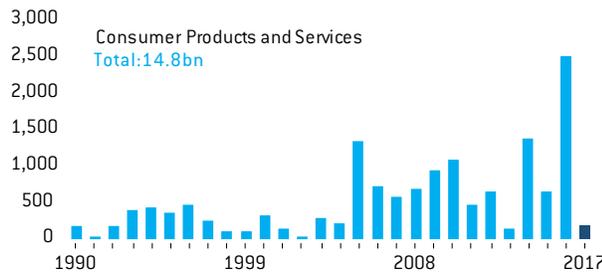
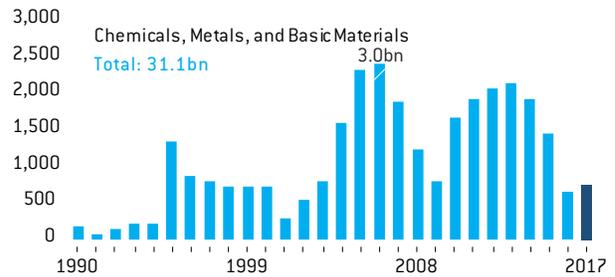
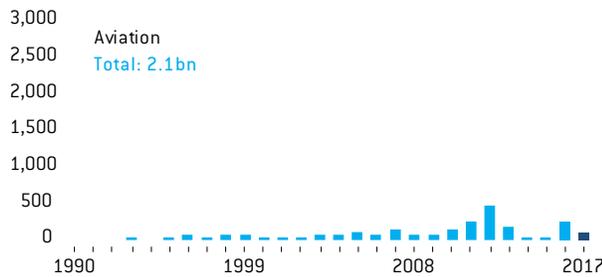
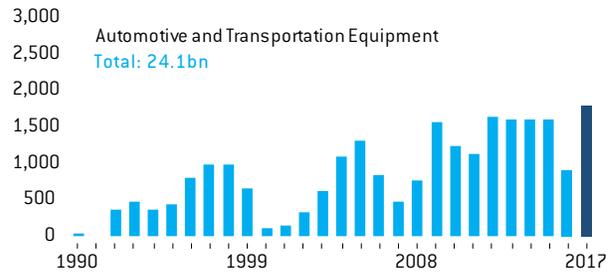
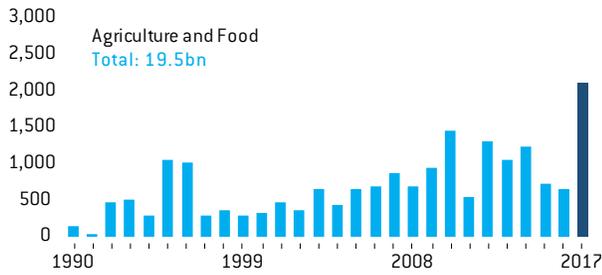
US firms have invested significantly in the Chinese energy sector over two decades, mostly via joint ventures in exploration and extraction. However, there has been a notable down trend over the last ten years. China's pushes for transition and research into new forms of clean energy have shaped recent US investment in this sector. In 2017 Air Products formed a \$1.3 billion joint venture with Lu'An Clean Energy to expand capacity to supply syngas to Lu'An Mining, I Squared Capital's Asia Cube Solar acquired five solar power plants in Shandong, Synthesis Energy System's Yima coal-to-methanol facility came on line, and Bill Gates' TerraPower expanded their joint venture agreement with China National Nuclear Corporation to develop a world-first nuclear reactor. ExxonMobil also has plans to build a multi-billion dollar petrochemical complex in Huizhou, but the project has yet to enter the execution phase.

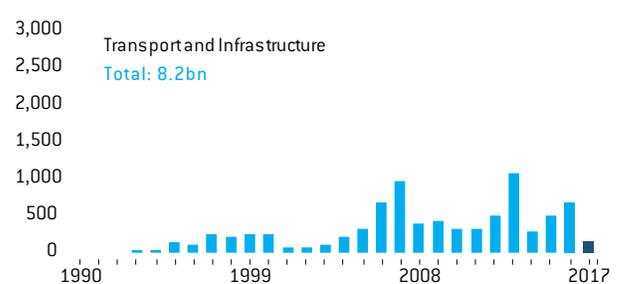
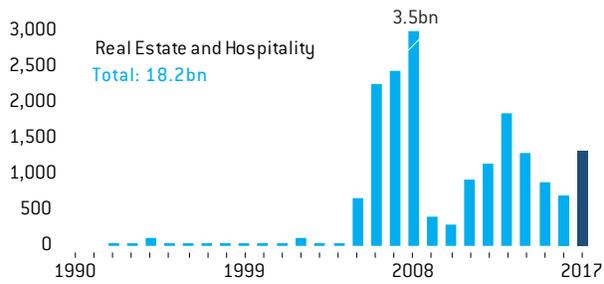
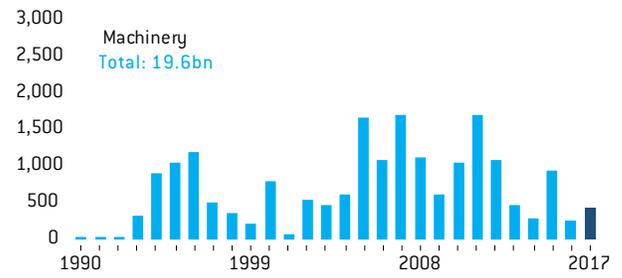
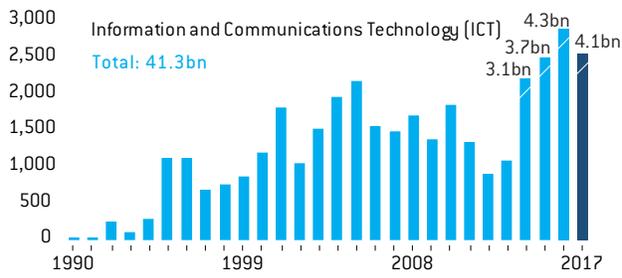
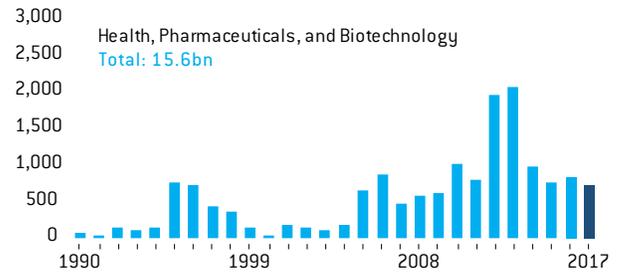
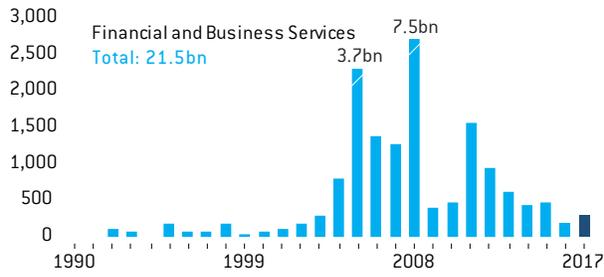
ENTERTAINMENT

China's entertainment, media and education sector has grown rapidly in the past twenty years, but US investment has been limited due to policies prohibiting and restricting foreign investment in media

FIG 2: US FDI Transactions in China by Industry, 1990-2017

USD million





Source: Rhodium Group.

and entertainment. In recent years, investment has picked up driven by capital-intensive theme parks. Disney opened its \$5.5 billion resort in Shanghai in 2016 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. Later in the year Six Flags further announced three more Chinese theme parks, expanding the existing grounds in Zhejiang and Chongqing. Universal Studios began construction on a large Beijing theme park in October 2016, and Viacom International broke ground on a Nickelodeon theme park in Guangdong at the beginning of 2017. Notably, all these projects are joint ventures in which US investors have minority stakes, demonstrating the policy barriers that remain an impediment to greater foreign participation in this sector. Smaller greenfield investments also continued in 2017, for example, Warner Music's new office in Beijing.

FINANCIAL AND BUSINESS SERVICES

US companies invested heavily in Chinese financial services in the run-up to the global financial crisis. Since then, US investment has moderated and many US banks have sold off their strategic stakes in Chinese banks (often at a significant profit). Investment in recent years has remained small compared to the levels seen in the mid-2000s as restrictions on foreign ownership persist and general risk in the Chinese banking system has increased. In 2017 US investment in the sector saw a modest uptick from 2016. Notable investments included Warburg Pincus' 49% stake in Fortune SG, a leading asset management company in China. Though not an FDI transaction, Bain Capital's purchase of a portfolio of non-performing loans from a Chinese asset management company was another notable development. Additional investment growth may be on the horizon; in November China announced it would relax foreign ownership restrictions in the financial services sector (banking and securities firms). If these reforms materialize, we will likely see US FDI in China's financial sector increase significantly.

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 over the last decade. 2017 investment levels were similar to the last few years. The most prominent new investments were Kite Pharma's joint venture with Fosun Pharmaceutical, Medtronic's bio-prosthetic heart valve manufacturing facility in Shanghai and GE's joint development of Asia's largest oligonucleotide facility with Guangzhou Robbio. 2017 also saw notable M&A transactions such as C-Bridge Capital's investment in Anrei Medical.

INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

A historically important target for US investors since the 1990s, ICT has emerged as the biggest sector for US FDI in China since 2015. This is driven by strong demand for ICT goods and services, as well as government regulations that mandate local content and joint ventures and industrial policies promoting ICT clusters. In 2017 US software and semiconductor companies continued investing in greenfield operations in China, including IBM (new joint venture with Wanda Internet Technology Group) and Qualcomm (joint venture with JLQ Technology to design and sell smartphone chipsets). 2017 also saw a notable jump in ICT research and development investment, including two Apple R&D centers in Shanghai and Suzhou, and a Google artificial intelligence research center in Beijing. Some 2017 investments were direct responses to Chinese security regulations. For example, Apple is constructing new data centers in Guizhou and Inner Mongolia as it moves data storage operations to China. Other 2017 investments were part of massive multi-year projects such as GlobalFoundries' \$10 billion semiconductor plant in Chengdu. And while most of them did not meet the 10% FDI threshold, US private equity and venture capital investments in Chinese ICT start-ups held up well in 2017.

MACHINERY

Construction and industrial machinery in particular has been a major sector for US investment in China, although investment patterns have been notably cyclical. These cycles have related to periods of infrastructure and industrial capacity buildouts in China. Investment levels slightly increased in 2017 from 2016 but remained low compared to previous peaks as the outlook for manufacturing, infrastructure and real estate buildout in China remains murky. Looking ahead rapid automation in machinery is creating new opportunities, but US companies do not have as strong a presence in this area as firms from 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 in 2011. The post-crisis cycle peaked in 2013, with annual investment declining each year through 2016. 2017 saw the first year-over-year increase in US investment in Chinese real estate since 2013. Two of the most prominent 2017 investments were AEW Capital Management's purchase of the Innov Tower in Shanghai and Warburg Pincus' increased investment in Nova Property, a real estate developer and asset manager targeting aged and distressed properties.

TRANSPORT AND INFRASTRUCTURE

US investment in China's transport and infrastructure sector over the last two decades has been modest but consistent. Investors have mostly targeted logistics and transportation services. 2017 patterns were similar to previous years. The largest investment was UPS Parcel Delivery's joint venture with Chinese delivery company SF Holding.

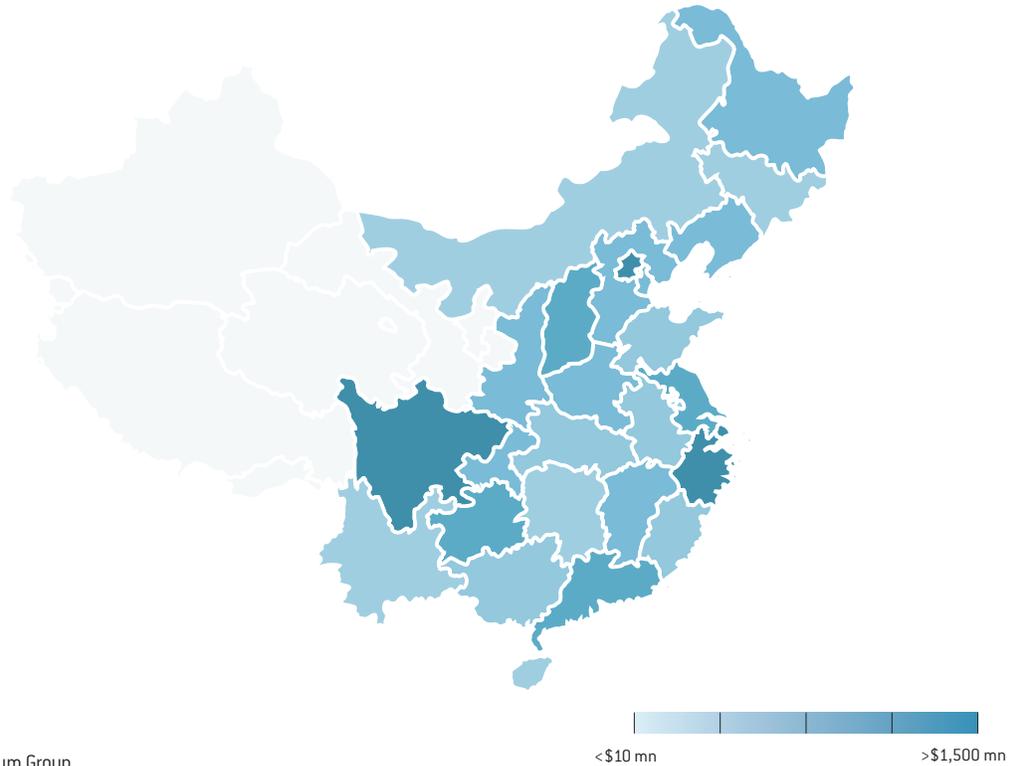
1.3 GEOGRAPHY

The first waves of US FDI in China were focused in coastal areas designated as free trade zones and manufacturing hubs for foreign-invested enterprises, including in Guangdong and Shandong. After China's WTO accession, US companies expanded into higher-income coastal cities including Beijing and Shanghai and moved into second tier cities in Zhejiang, Sichuan and other provinces. In recent years, American firms have shifted some of their interest to the Chinese rust belt in the north (e.g. Liaoning) and western inland cities like Chongqing.

In 2017, large coastal cities remained the main investment destinations for US companies. Shanghai received the most investment of any Chinese region, getting a strong boost from Starbucks' buyout of its Shanghai joint venture partner. Other top recipient provinces were Beijing and Zhejiang.

Inland provinces are poised to receive an increasing share of US investment thanks to ongoing projects including semiconductor fabrication plants by Qualcomm in Chongqing and GlobalFoundries in Sichuan as well as new investments such as Apple's data centers in Guizhou and Inner Mongolia. Six Flags is also expanding its Chinese footprint with two more theme parks at its Chongqing site.

FIG 3: Geographic Distribution of 2017 US FDI Transactions in China



Source: Rhodium Group.

1.4 INVESTOR CHARACTERISTICS

The US investor mix in China has evolved significantly over the past three decades. While trading and manufacturing firms led the initial wave into China prior to the 1990s, today a host of different US companies have investments in China, from large multinational corporations to small- and medium-sized firms.

By the end of 2017, our database included more than 7,000 individual investment transactions involving almost 1,400 US companies. Of those, more than 400 firms had invested more than \$50 million each in the Chinese market. More than 300 had investments of more than \$100 million, and 65 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), private equity firms and other financial investors have also

become active players since the mid-2000s. In 2017, these financial players accounted for 17% of total investment (\$2.4 billion), mostly driven by private equity investors.

Investments resulting in a controlling stake (more than 50%) continued to account for the majority of deals in 2017, constituting 60% of the annual investment total. However, US minority investors dominated in a few fast-growth industries such as automotive (e.g. Ford's new electric vehicle joint venture), semiconductors (e.g. Qualcomm's joint venture with JLQ) and entertainment (e.g. Six Flags theme parks) in 2017.

US investors hailed mostly from the same states as they have historically in 2017: California and New York were the top US sources of FDI in China during the year.

1.5 OUTLOOK

The near-term outlook for American FDI in China is positive, but policy developments will play a critical role in determining whether flows swing up, remain stable or decline.

US firms launched a flurry of large greenfield projects in 2016 and 2017 that have locked in multi-year capital expenditures. The 10 biggest greenfield projects alone are projected to generate \$15 billion of investment. This provides a solid floor in the next few years. Moreover, US companies are well-positioned in a range of new growth sectors within the Chinese economy, including technology, financial services and consumer-facing services.

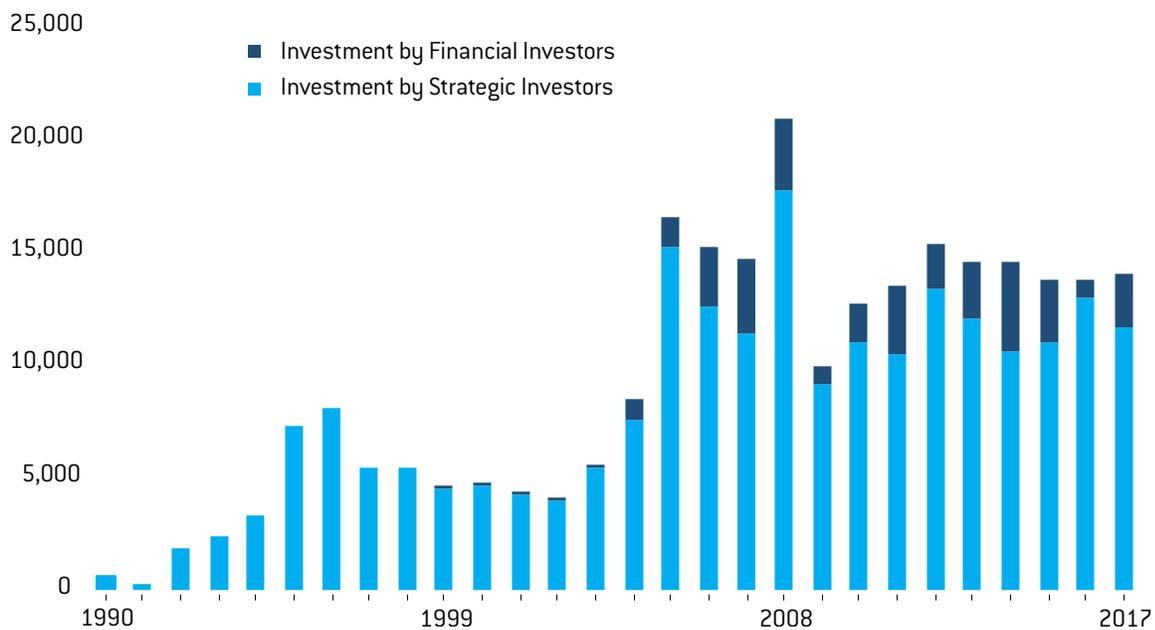
However, the future trajectory of US investment in China will depend on whether China's efforts to level the playing field for foreign investors will create a material improvement in market access for US firms in these growth sectors.

China has made big changes to its inward FDI regime in recent years and made additional progress in 2017. After lifting its approvals-only regime and implementing a negative-list-based system in 2016, Chinese regulators released new negative lists in June 2017 (one national list and one for free trade zones) that liberalized formal market access in several sectors, including electric vehicle battery manufacturing, unconventional oil and gas mining and railway transportation equipment manufacturing. In August 2017, the State Council promised to open an additional 12 sectors including electric vehicles and financial services. During President Trump's visit in November 2017, China further announced it would relax foreign ownership restrictions in the financial services sector, lifting ownership caps for banking and securities firms within the next few years.

In addition to abolishing entry barriers, Beijing has also pledged to address discriminatory treatment

Figure 4: US FDI in China by Company Type, 1990-2017

USD million



Source: Rhodium Group.

of foreign companies. In summer 2017, President Xi stated that “after entry, [foreign and domestic companies] should be equal in law and consistent in policy and have national treatment.” In July, MOFCOM updated regulations on the recordal process for foreign invested enterprise (FIE) establishment, formally eliminating approvals for foreign acquisitions in China. The document also promised a range of policies aimed at tackling informal discrimination facing FIEs, including in taxation, personnel and visa, foreign exchange, intellectual property and participation in new industrial policy initiatives such as “Made in China 2025”. In early 2018, Liu He announced that China would “surprise the world” in 2018 with far-reaching inward FDI liberalization.

These steps are positive and meaningful, and they demonstrate China’s intent to address existing barriers for US and other foreign companies. At the same time, gradual changes implemented in the past two years did not materially boost US firms’ investment appetite. Bolder moves – such as a significantly slimmer negative list and equal treatment of foreign and domestic private firms in *practice* – will be necessary to meaningfully change sentiment. If China takes such steps, there is significant upside for US investment from current levels as American firms will play catch-up in previously unpenetrated sectors.

In addition to China’s inward FDI regime, US policy developments will be another important variable for US FDI in China in coming years. Concerns about the transfer of technology to China have grown acute in the United States, and legislators are pondering how they can control and limit the proliferation of potentially dual-use technology to China. One such effort is the expansion of US investment screening under the proposed Foreign Investment Risk Review Modernization Act (FIRRMA), which would allow CFIUS to review overseas joint ventures of US companies that involve the transfer of technology. If passed, this provision would likely diminish the appetite of US companies to invest in technology sectors in China, particularly in joint ventures with Chinese partners.

If the restrictions are harsh, we could even see significant divestitures by US companies operating in impacted industries.

2 CHINESE FDI IN THE UNITED STATES

Official data on Chinese investment in the US suffers from similar distortions and problems as data on direct investment flows from the US to China – they are not coherent, distorted by several methodological problems and only available with a significant time lag.

Official Chinese government statistics from MOFCOM show that 2017 was a disruptive year for Chinese outbound investment, with OFDI declining 29% compared to 2016. BOP data from SAFE, which measure financial flows related to outbound investment, record an even sharper drop of 53% in China's annual global outbound FDI. However, neither MOFCOM nor SAFE provided detailed figures on Chinese FDI in the US as of mid-March 2018.

Preliminary US government data on Chinese FDI in the US during 2017 showed a huge drop from \$10.3 billion in 2016 to \$884 million in 2017.

Rhodium Group's granular transactions dataset for the US-China FDI Project provides a real-time perspective on two-way flows, allowing for a timely look at the level and patterns of China's US investments in more detail.

2.1 FLOWS AND STOCK

Chinese investment in the US was negligible before 2005. In that year, Lenovo completed its \$1.75 billion acquisition of IBM's personal computer division, marking the first major modern Chinese investment in the United States. The number of investment transactions continued growing in subsequent years, but the combined value of these investments remained below \$1 billion per year through 2009. Chinese investment in the US entered a new phase of rapid acceleration starting in 2010, reaching \$14 billion in 2013 on the back of Shuanghui's acquisition of Smithfield Foods. Investment levels moderated slightly to just under \$13 billion in 2014 but reached new records of \$15 billion in 2015 and more than \$46 billion in 2016 on the back of several multi-billion

dollar acquisitions.

2017 saw a 35% year-over-year drop in Chinese investment in the United States, although the \$29 billion of completed transactions was still enough to make it the second-highest year on record. However, 60% of this total was associated with acquisitions that had been announced in 2016; without this boost, 2017 would have seen a 74% drop in total Chinese investment in the US to around \$12 billion.

The average deal value also dropped precipitously in 2017 from \$356 million to \$215 million, showing the extent that political and regulatory forces on both sides of the Pacific discouraged mega-deals during the year. And without the major acquisitions announced before 2017, the average deal value in 2017 would only have been around \$90 million.

The biggest completed deals in 2017 included HNA's \$10.4 billion acquisition of CIT's aircraft leasing unit, HNA's \$6.5 billion purchase of a 25% stake in Hilton Hotels, Tencent's estimated \$1.7 billion minority stake in SNAP, HNA's investment in 245 Park Avenue in New York and China Life Insurance's \$950 million acquisition of 48 US commercial properties.

The \$250 billion of bilateral 'deals' agreed to during President Trump's visit to China in November 2017 did not have any impact on the annual total since most transactions were not FDI, and those that fell into this category were mostly letters of intent that may or may not translate into actual investments in the future.

2.2 INDUSTRY TRENDS

Chinese FDI in the US has historically been more concentrated than US FDI in China. Chinese investors have disproportionately targeted four industries – real estate and hospitality, ICT, energy, and agriculture and food. Together these four sectors account for more than two thirds of all Chinese FDI in the US from 1990 to 2017. Chinese investment in the US is also more volatile and subject to one-off spikes due to

sizeable M&A transactions. The agriculture and food, consumer products and services, and entertainment sectors demonstrate this type of pattern.

In 2017, flows were impacted significantly by Beijing’s tighter outbound controls. The biggest losers were financially motivated investments in real estate, entertainment and other sectors blacklisted by Beijing. The real estate and hospitality industry appears resilient based on the 2017 investment total, but that motly reflects the completion of deals announced before Beijing’s regulatory clamp-down (most importantly HNA’s \$6.5 billion stake in Hilton).

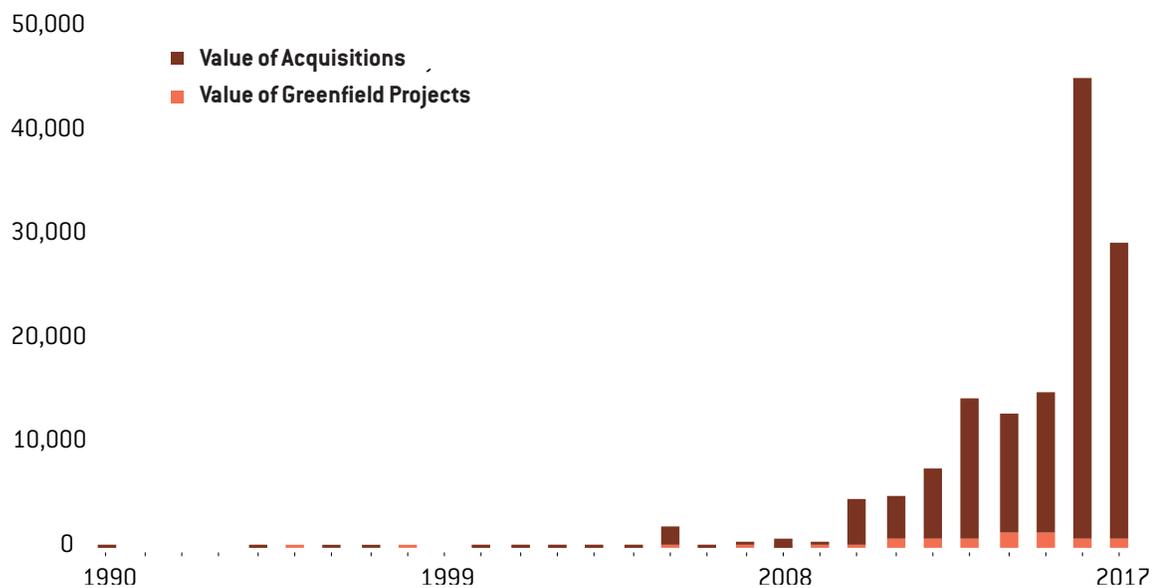
Strategic investment in real economy sectors on the other hand held up well or even increased in 2017. For example, the ICT (SNAP, Analogix Semiconductor and Flipagram) and health and biotech (Dendreon Pharmaceuticals, SciClone Pharmaceuticals and Obagi Medical Products) sectors received significant Chinese investment dollars.

Transport, logistics and infrastructure became the number one sector for Chinese FDI in the US in 2017 thanks to the completion of the acquisitions of CIT’s aircraft leasing business and Interpark. This development is reflective of a global trend of Chinese investors riding the “Belt and Road” wave to continue making overseas investments despite increased regulatory scrutiny in China.

On the following pages we review the most important developments in each of our 14 industries. More detailed industry snapshots, updated with 2017 developments, are available on the project website (www.us-china-fdi.com).

Figure 5: Chinese FDI Transactions in the US, 1990-2017

USD million



Source: Rhodium Group.

AGRICULTURE AND FOOD

WH Group's 2013 acquisition of Smithfield Foods, the largest pork producer in the United States, is by far the largest Chinese investment in the US agriculture and food sector to date. And with only a handful of smaller investments since 2013, the Smithfield transaction still accounts for the bulk of cumulative Chinese investment in the industry. In 2017, WH Group continued its overseas expansion by acquiring Clougherty Packing. Feihe International's acquisition of Vitamin World Corp. was another notable acquisition. There were also a number of pending investments at the end of 2017 including JD.com's plan to build two slaughterhouses and feeding facilities in Montana (signed during President Trump's visit to China).

AUTOMOTIVE

While significant, Chinese annual investment totals in the US automotive industry have not reached the same levels as in some other sectors. Chinese companies continue to shop abroad for assets to boost their competitive positions at home in the world's largest automobile market and to establish footholds abroad. Chinese investment in the sector dropped to \$0.5 billion in 2017 without any major acquisitions. LeEco-backed Faraday Future also officially scrapped plans to build an electric vehicle plant in the US during the year. However, other Chinese greenfield investment in the US auto sector demonstrated resilience in the face of Chinese capital controls. In 2017 Volvo raised its total investment in its South Carolina assembly plant, Triangle Tyre announced a new \$580 million North Carolina plant and BeijingWest Industries announced a new \$80 million facility in Indiana. In addition to traditional auto markets, Chinese investors also poured money into research and development operations and other greenfield projects in the electric vehicle space including NIO, Haval Motor and TuSimple.

AVIATION

Compared to other sectors, Chinese investment in US aviation has historically been minimal. 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 national security as well as the lopsided nature of the Chinese industry are factors behind the limited US aviation footprint. Investments have been confined to firms that build small private planes and helicopters, which come with fewer dual-use technologies and other security-related concerns. The 2011 purchases of Cirrus and Enstrom Helicopter still constitute the most notable cases to date. In 2017 Chinese companies made a handful of minor investments in the US aviation industry through both M&A deals (China Aircraft Leasing Group's acquisition of aviation service provider Universal Asset Management) and greenfield investments (Top Cub Aircraft's plane facility in Washington).

CHEMICALS, METALS, AND BASIC MATERIALS

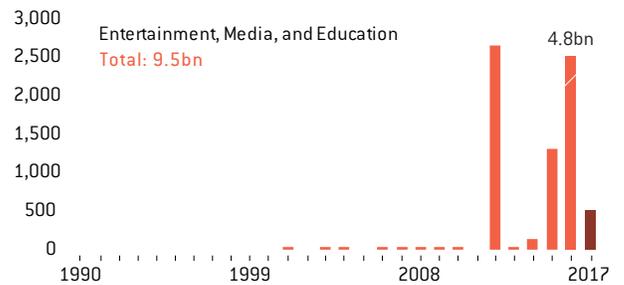
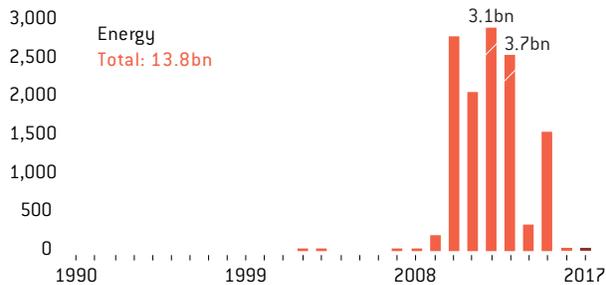
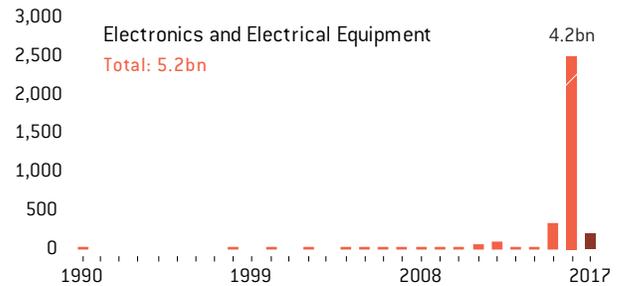
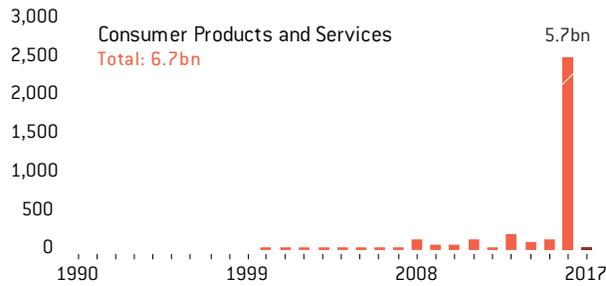
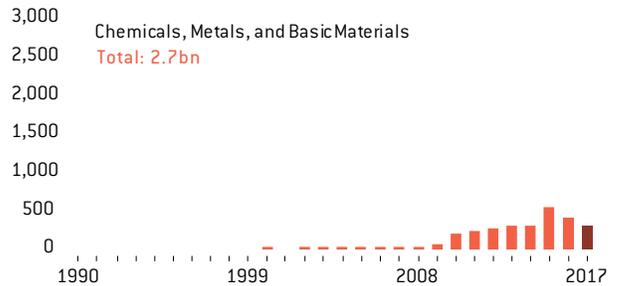
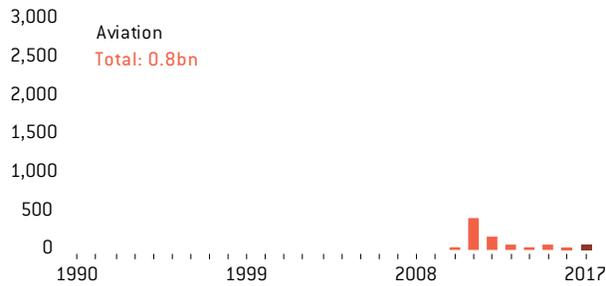
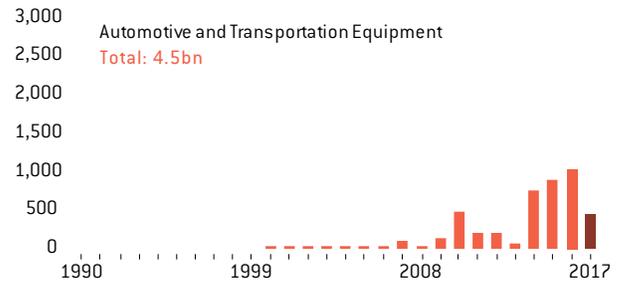
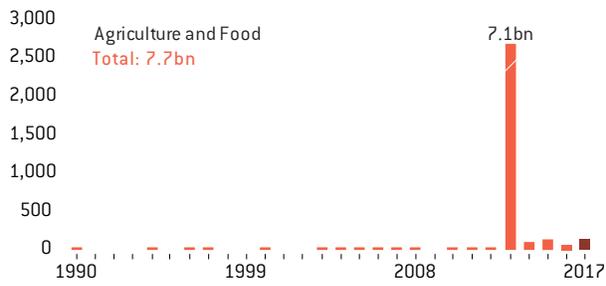
Most Chinese investment dollars in the Chemical, Metals and Basic Materials sector have gone to resource-rich emerging and developing economies instead of developed nations like the United States. The US has received \$2.7 billion in Chinese capital from 2000 to 2016. 2017 was characterized by a couple of notable expansions in the sector like Golden Dragon Copper's additional investment in its Alabama plant. However, there were no major new projects announced, and other large pending greenfield projects are progressing slowly (e.g. Yuhuang's \$1.85 billion methanol plant, Wanhua Chemical's \$1.12 billion methanol plant and NWIW's two pending methanol plants).

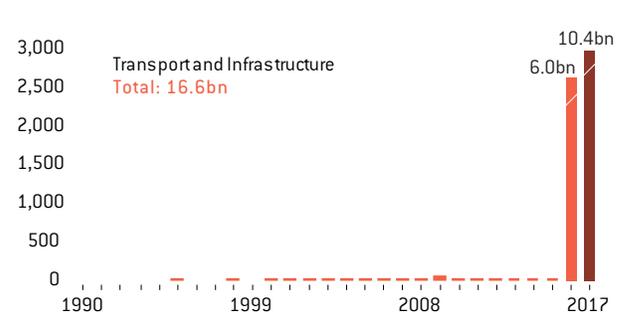
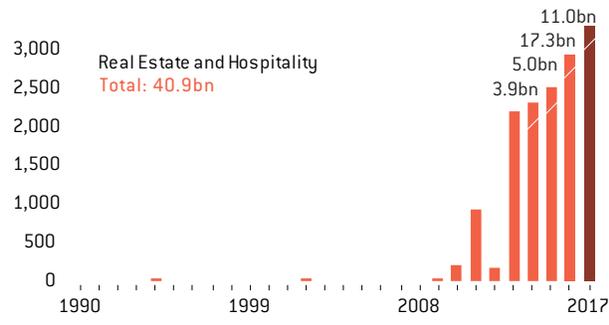
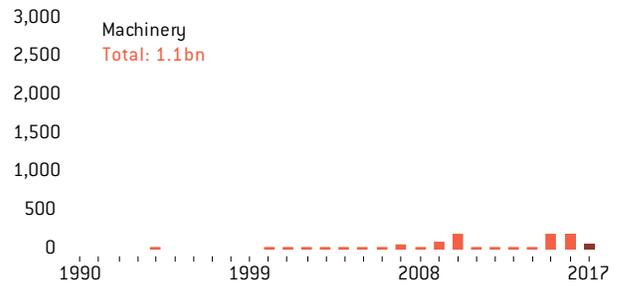
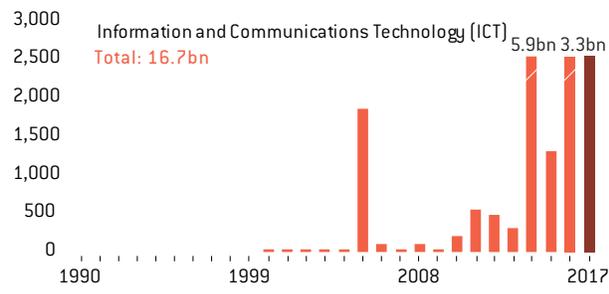
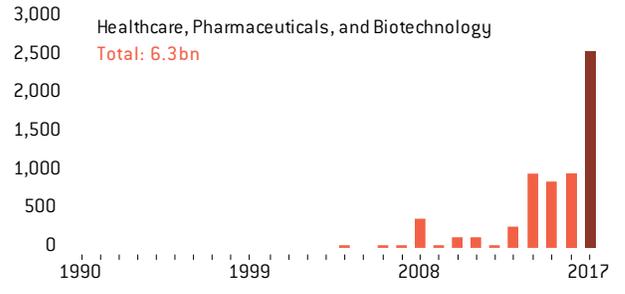
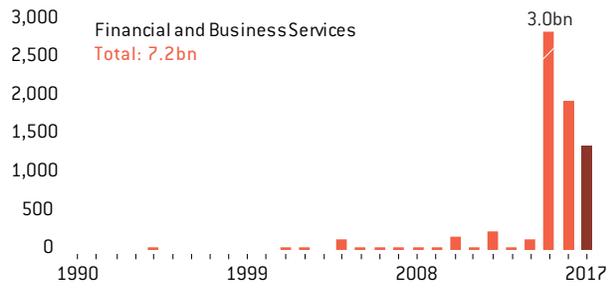
CONSUMER PRODUCTS AND SERVICES

Before 2016 there was limited Chinese investment in the US consumer products and services sector. Many Chinese firms are still principally focused on manufacturing consumer goods and chasing domestic consumers, and few Chinese investors have looked abroad to new markets. This trend changed in 2016 when appliance maker (and early US investor) Haier acquired GE Appliances for \$5.6 billion. It remains to be seen whether other Chinese companies will follow

FIG 6: Chinese FDI Transactions in the US by Industry, 1990-2017

USD million





Source: Rhodium Group.

a similar course to acquire established overseas consumer brands as the Chinese market matures; in 2017 there was minimal Chinese investment in the sector once again.

ELECTRONICS

The US electronics sector has not been a historical focus for Chinese investors; for decades the major commercial rationale for overseas investment in the sector – access to lower labor and production costs – has kept investment almost exclusively flowing from the US to China. 2016 saw the first major Chinese acquisitions in the sector including Apex Technology's \$3.6 billion purchase of printer manufacturer Lexmark and Suzhou Dongshan Precision's \$610 million purchase of Multi-Fineline Electronix. Chinese investment in the US electronics sector continued in 2017 at a much smaller scale. The biggest investment was Leyard Optoelectronic's acquisition of NaturalPoint for \$125 million.

ENERGY

Chinese investment in US energy assets surged from 2009 to 2013 following the post-financial crisis recovery in energy prices and the emergence of new opportunities in unconventional oil and gas development. Chinese FDI in the sector then entered a rapid decline as energy prices tumbled in subsequent years and China's anti-corruption campaign lowered the risk appetite of state-owned enterprises. Changes to global energy supplies and a decline in the energy intensity of Chinese GDP growth in recent years have further dampened Chinese enthusiasm for overseas acquisitions in this sector. While Chinese overseas investors remain interested in renewable energy, they are largely focused on upgrading technology and other capabilities to deploy in China where government policies to significantly boost the share of renewables in China's energy supply have created significant growth incentives. In 2017, Chinese companies started to announce greenfield assembly facilities to avoid new tariffs on the import on solar panels. The biggest newly announced transaction was China Sunergy's announced new plant in

California. At the beginning of 2018, Jinko Solar also announced a \$410 million solar plant in Florida.

ENTERTAINMENT

Major transactions from 2012 to 2015 made the US entertainment industry an important Chinese investment target. 2016 in particular saw several sizeable acquisitions including Wanda's \$3.5 billion acquisition of Legendary Entertainment and its \$1.1 billion purchase of Carmike Cinemas. Due to increased Chinese regulatory scrutiny, entertainment deal-making cooled significantly in 2017, with one medium-sized transaction accounting for most of the total investment (Zhonghong Zhuoye's \$429 million stake in theme park operator SeaWorld Entertainment). Several previously announced deals fell apart including Wanda's \$1 billion acquisition of Dick Clark Productions, Anhui Xinke New Material's \$350 million acquisition of an 80% stake in Voltage Pictures and Recon Holding's acquisition of a 51% stake in Millennium Films for \$100 million.

FINANCIAL AND BUSINESS SERVICES

Like other service sectors, Chinese investment in US 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. 2017 was another strong year. The biggest deals included HNA's \$446 million acquisition of Old Mutual's OM Asset Management and China Oceanwide's \$500 million acquisition of International Data Group. CFUS and other US regulators also held up several other prominent acquisitions in the sector worth at least \$4.5 billion. HNA's \$2.7 billion acquisition of U.S. insurer Genworth Financial, HNA's \$180 million stake in Skybridge Capital, Ant Financial's \$1.2 billion Moneygram acquisition and Chongqing Casin Enterprise Group's acquisition of the Chicago Stock Exchange all failed to gain US regulatory approval in 2017. US regulators expressed concerns about protecting private data

and the adequacy of regulatory supervision from Chinese regulators.

HEALTHCARE, PHARMACEUTICALS, AND BIOTECHNOLOGY

Chinese investment in the healthcare, pharmaceuticals and biotechnology sector has grown steadily since 2010. It reached \$1 billion in 2016 and an all-time high of more than \$2.5 billion in 2017. 2017 saw both a higher number of transactions in the sector as well as a higher average deal size compared to 2016 as investors bet on leveraging US health technologies in China's large and rapidly growing home healthcare market. The biggest deals included Sanpower's acquisition of Dendreon Pharmaceuticals; the acquisition of SciClone Pharmaceuticals by a Chinese investor group consisting of GL Capital, Bank of China Group Investment, CDH Investments, Ascendent Capital Partners and Boying; and the acquisition of Ritedose by Humanwell Healthcare and AGIC Capital. Chinese acquisitions in the healthcare and biotechnology space have so far avoided major issues with security screenings, but growing concerns about personal data integrity could weigh on future deal-making in this sector.

INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

Chinese investment in the US ICT sector is significant and emphasizes IT equipment targets and a smattering of smaller-scale investments in software and IT services. 2016 saw more than \$3 billion in investment in the sector, including notable semiconductor deals (e.g. 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). In 2017 ICT continued to be a top sector for Chinese investment in the US, but most large deals were in the software industry. Examples included Tencent's estimated \$1.7 billion stake in SNAP, Toutiao's acquisition of Flipagram and Tencent's additional investment in Pocket Gems. Investment in the hardware industry was suppressed by growing concerns about Chinese

acquisitions in high-tech manufacturing sectors, most importantly in the semiconductor value chain. Beijing Shanhai managed to secure CFIUS approval to acquire Analogix Semiconductor, but there were also several abandoned transactions in the space including Canyon Bridge Capital Partners' acquisition of Lattice Semiconductor, HNA's investment in Global Eagle Entertainment and TCL Communications' acquisition of Novatel Wireless.

MACHINERY

Chinese FDI in US industrial machinery has yet to breach \$1 billion in cumulative investment, standing at only \$900 million from 1990 to 2017. While Chinese companies have a strong rationale to upgrade machinery technology through M&A especially in automation and industrial robotics, these firms have mostly looked to other advanced economies like Europe, which hosts a diverse group of companies in this space. In 2017, there were only a handful of small Chinese investments in the US industrial machinery sector. The biggest deal was Weichai Power's acquisition of Powers Solutions International.

REAL ESTATE AND HOSPITALITY

The US real estate and hospitality sector was already the second-largest recipient of Chinese FDI in the US before tripling to a new record high of \$16.5 billion in 2016 and becoming the top sector for cumulative investment. In 2017, real estate and hospitality remained one of the biggest sectors for Chinese FDI in the US thanks to HNA's \$6.5 billion stake in Hilton Hotels. Other significant deals included HNA's acquisition of 245 Park Avenue in New York and China Life Insurance Group's acquisition of a 95% stake in a portfolio of 48 commercial properties across the US. However, Beijing's new outbound investment rules dampened announcements of US real estate transactions in 2017 and shifted the momentum toward sovereign and state-owned entities, which are better able to navigate the current environment. Restrictions on offshore investment also affected several Chinese greenfield real estate construction projects, resulting in delays or even in some cases

In 2017, Chinese investors further expanded and deepened their footprint in the US. Leading coastal states such as New York (ranked first at \$11.7 billion, including HNA's \$10.4 billion acquisition of CIT's aircraft leasing unit) and California (ranked third at \$4.7 billion) were major beneficiaries. Virginia came in second at \$6.5 billion supported by HNA's acquisition of 25% stake in Hilton. Washington state rose to the top five for the first time at \$900 million, bolstered by one big deal in pharmaceuticals – Sanpower's \$820 million acquisition of Dendreon.

By the end of 2017, 46 of 50 US states had received Chinese direct 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 operations and establishments shows that by the end of 2017 all 50 states hosted subsidiaries of Chinese-owned companies.

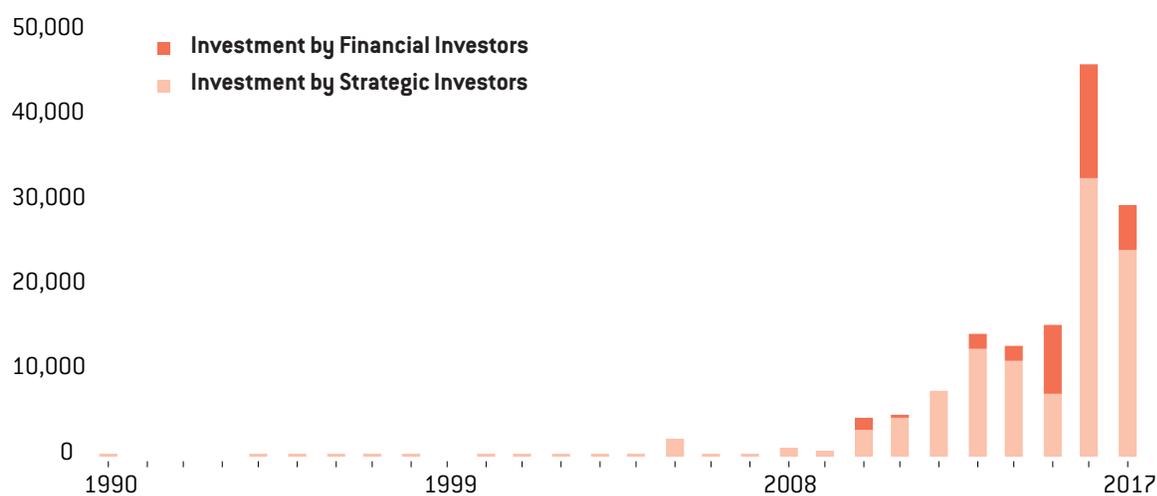
2.4 INVESTOR CHARACTERISTICS

The first wave of Chinese FDI in the US was driven by government-owned and -affiliated companies (i.e. firms with 20% or more government ownership). By 2011, state-owned enterprises (SOEs) accounted for more than 80% of cumulative Chinese FDI in the US. Since then Chinese investment growth has been largely driven by the private sector; by 2016 the share of SOEs in cumulative investment had fallen to 29% as private firms accounted for 71% of flows from 1990-2016.

In 2017, private firms accounted for 91% (\$27 billion) of total inflows. Within the group of private firms, strategic investors (real economy firms investing in their core areas of business) accounted for the majority of deal flow (\$23 billion, or 85%). The role of financial investors (making investments primarily for financial returns) decreased significantly (\$4 billion, or 15%).

FIG 8: Chinese FDI in the US by Company Type, 1990-2017

USD million



Source: Rhodium Group.

Investment by state-owned companies rebounded globally but remained modest in the US as CFIUS and other regulators were pushing back on deals in technology and financial services. In total Chinese SOEs only invested \$2.6 billion in the US in 2017 (9% of total). Around half of this was strategic investment (for example Beijing Shanhai in Analogix Semiconductor) while the other half was financial investment, dominated by sovereign entities and big insurance companies.

In terms of geographic origin, Hainan province became the top Chinese investment source in 2017 thanks to numerous large acquisitions by HNA including CIT's aircraft leasing unit for \$10.4 billion, a stake in Hilton hotels for \$6.5 billion and 245 Park Ave tower for \$1 billion. The second largest source of Chinese investment in the United States was Beijing, where many companies are headquartered. Significant investment continued to come from China's southern and eastern coastal provinces as well including Shandong, Liaoning, Guangdong, Jiangsu and Zhejiang.

2.5 OUTLOOK

The commercial appetite of Chinese firms for US investment expansion is stronger than ever, but regulatory hurdles are unlikely to fade in Beijing and will almost surely increase in the US, casting uncertainty over the near-term outlook.

In China, the greatest worries about capital flight have subsided as the Chinese currency has recovered and expectations of US dollar strength have faded. As a result, Beijing has started to gradually loosen the leash on corporate outbound investment and continues to reiterate support for legitimate outbound projects. However, the conditions that fueled larger-scale capital outflows in 2015 and 2016 could return given US growth and interest rates are

increasing and China will likely be unable to raise domestic rates significantly without causing corporate insolvencies. Chinese regulators are therefore likely to remain conservative and avoid returning to the liberal outbound investment regime seen from 2014 to 2016.

Even if domestic and global macroeconomic conditions permit Beijing to further loosen its grip on outbound investment, changes on the US side may stymie a recovery in Chinese investment flows to the US. A series of 2017 and early 2018 deal failures suggests that CFIUS concerns are already swelling, and that the new US administration is taking a more expansive stance on potential security threats from Chinese FDI. These uncertainties have already impacted deal appetite. At the end of the first quarter of 2018, we recorded less than \$5 billion of pending Chinese acquisitions, which is the lowest level in three years.

Looking forward, CFIUS reviews may become even more complicated. The Foreign Investment Risk Review Modernization Act (FIRRMA) is making progress on Capitol Hill and appears likely to come to a vote this year. China epitomizes the "countries of special concern" the bill is concerned with, and in expanding the types of transactions subject to screening, a significant share of the marginal growth in foreign investment in the US would be treated with suspicion.

The strategic re-assessment of the US-China economic relationship driven by the Trump administration could further impact US receptiveness to Chinese FDI. The new US government thinking is integrating FDI more holistically into the definition of national security than before. The greater emphasis of linking economic and security indicates more confrontational measures are likely, not least in direct investment.

US-CHINA VENTURE CAPITAL INVESTMENTS

Direct investment has traditionally dominated two-way US-China flows, but other types of capital investment have become more important in recent years.

One such channel is venture capital (VC), which is a subset of private equity that refers to early-stage, generally minority equity investment in nascent enterprises with growth potential. These startups often operate in cutting-edge industries with novel new technologies, which has made these flows in the spotlight of current debates about expanding US investment screenings to include investments that result in stakes of less than 10%.

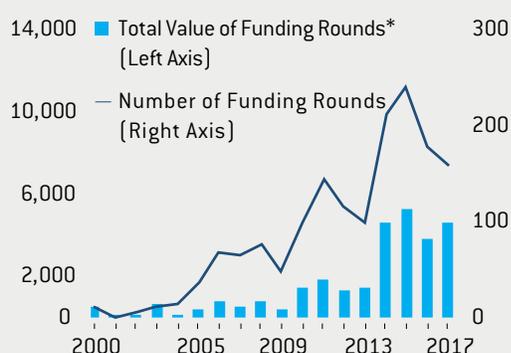
As global pioneers, US venture investors have been active in China for most of the last two decades. They have found increasing investment opportunities as China's economy has modernized and nurtured its home-grown technology giants. From 2000 to 2017

we count 1,600 US venture investments in China contributing to funding rounds together worth more than \$28 billion. Deal making was particularly strong since 2014 but has somewhat dropped in 2016 and 2017 (Figure B-1).

Chinese venture firms' foreign investments were very limited until the late 2000s. Since 2010, however, Chinese VC investment abroad has grown dramatically, with the United States being the principal recipient of new flows to date (Figure B-2). Since 2000 we count almost 1,200 Chinese VC investments in the United States contributing to funding rounds together worth more than \$36 billion. More than 70% of these deals happened from 2014 to 2017. Activity has peaked in 2015 and slightly declined in 2016 and 2017. However, the number of Chinese VC transactions in the US still exceeded flows in the other direction in 2017.

Figure B-1: US Venture Capital Investments in China, 2000-2017*

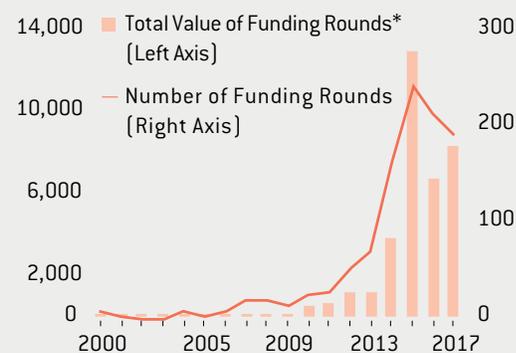
USD million, number of rounds



Source: Rhodium Group.

Figure B-2: Chinese Venture Capital Investments in the US, 2000-2017*

USD million, number of rounds



Source: Rhodium Group.

*Includes full value of funding round not just the portion of Chinese/US investors

3 CONCLUSIONS

Developments in 2017 on both sides of the Pacific rekindled old issues and introduced new uncertainties about the foundations for two-way direct investment flows. Transparent data and sound analytics are necessary to support an intelligent and rational debate about managing these uncertainties and finding the right solutions going forward.

The data and analysis presented in this report support several conclusions relevant to business and policymaking:

First, 2017 data show that **policy is pulling down the volume of two-way investment flows**. Market entry barriers and uncertainties about Beijing's policy reform mix are limiting American FDI in China. Chinese FDI in the US is being curtailed by both the reimposition of outbound capital controls due to balance of payments and other Chinese concerns, and, more recently, by an uptick in US investment screening intensity. Policy bellicosity especially from Washington is casting a generally dark shadow over the broader bilateral economic relationship.

Second, **this more problematic political environment is likely not just transient but rather the new normal**. Changing policy attitudes on both sides are deep-seated, not just tactical ploys – though there are plenty of elements of bluster. Firms already invested across borders and prospective investors will have to deal with these new realities.

Third, **the future investment mix will be different, and 2017 offers a first test of which types of deals will have staying power, and which will not**. Beijing is insistent on limiting large outbound financial transactions, especially by highly leveraged non-state entities. Washington committed to impeding transactions that lead to the transfer of potential dual-use technologies. Acquisitions of US companies that possess large troves of personal data have also become problematic. Both these Chinese and

US interventions are global in nature and not aimed solely at one another, but they especially affect bilateral flows.

Fourth, **there is plenty of room for growth in two-way investment flows in non-sensitive areas if current concerns are managed properly**. While a more confrontative and non-convergent US-China relationship is more bounded than the engagement-oriented one of the past, Washington and Beijing can preserve considerable room for complementary commercial activity through cross-border investment while simultaneously managing national security concerns. This is not an either-or choice.

Fifth, **the extent of US strategic re-orientation will have major consequences for the future value of two-way flows**. Under the traditional, narrowly-defined US conception of national security, Washington could redouble its screening diligence and still permit greatly expanded Chinese investment: today's levels are not high in proportion to the size of our two economies. But more all-encompassing, expansive ideas about expunging foreign participation in the US economy, particularly Chinese, would not only foreclose that growth but diminish existing investments. The welfare implications of such a course of action are uncharted.

Sixth, **China's preference for convergence or divergence with advanced economy norms is the other fundamental determinant of future US-China two-way investment potential**. Economic interaction – in FDI, trade and other areas – is dependent on like-mindedness about the future. In 2017 Beijing stressed a number of non-convergent aspects of its policy plans with regard to marketization and the role of the state. This triggered considerable western soul-searching, and a reminder that past FDI volumes, and even existing deals, cannot be taken for granted in either direction if convergence is off the table.

FIG 9: Annual Value of FDI Transactions between the US and China, 1990-2017

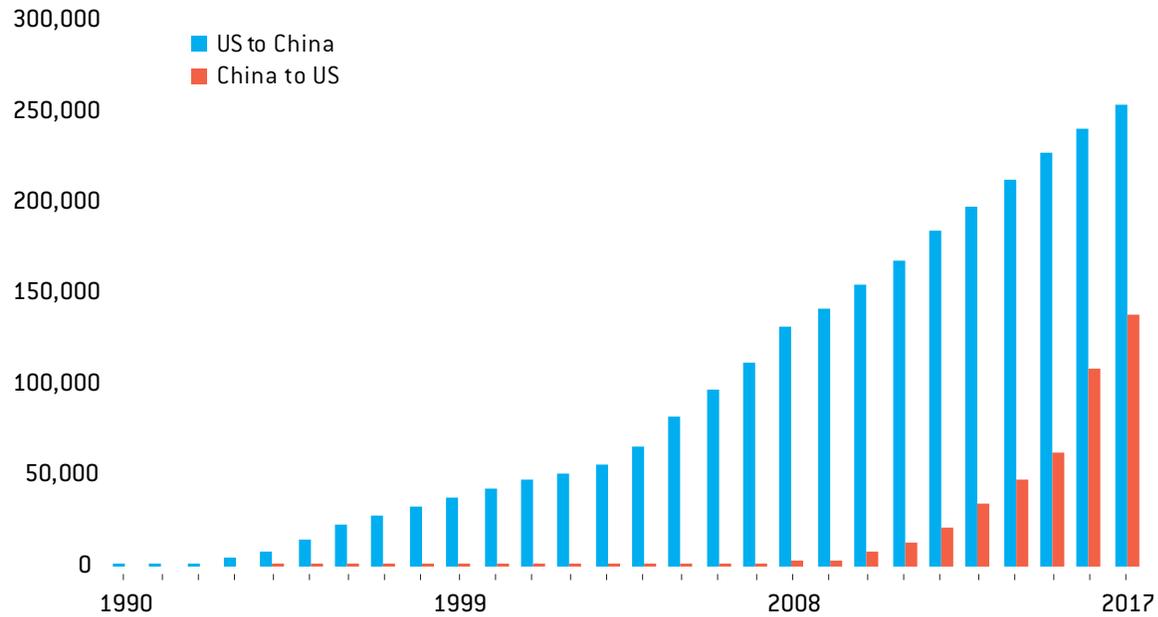
USD million



Source: Rhodium Group.

FIG 10: Cumulative Value of FDI Transactions between the US and China, 1990-2017

USD million



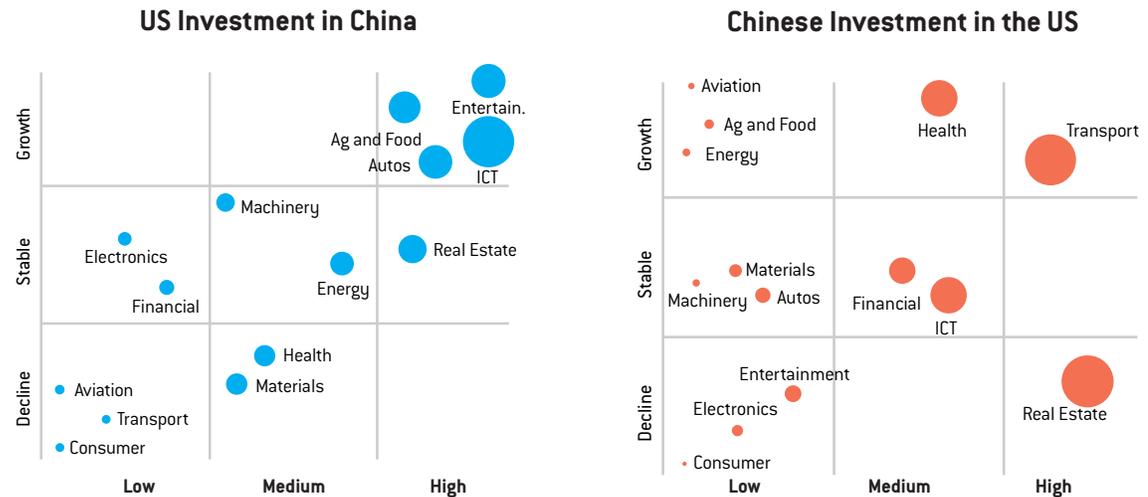
Source: Rhodium Group.

Seventh, **the enormous existing stock of two-way FDI illustrates what is at stake from a disorderly US-China divorce.** The existing stock of almost \$400 billion in cumulative two-way FDI is a reminder of how costly a needlessly unmanaged “trade war” – shorthand for a broader economic decoupling – would be.

Eighth, **the trajectory of US-China investment will be an important determinant for how other countries handle investment relations with China.** While many of the Trump administration’s threats to be tougher on China are loathsome to US allies, many of the direct investment considerations under review in the US are in line with concerns held by other advanced economies. US leadership can help identify a framework that addresses legitimate national security and economic issues while still allowing plain vanilla commercial investments in non-sensitive sectors. This would be a better solution for the US than forcing smaller countries to pick sides.

FIG 11: Two-Way FDI between China and the US by Industry, 2017

Stylized display of growth momentum (y axis) and investment value in 2017 (x axis, bubble size)



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 data 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