

Two-Way Street: 2020 Update US-China Investment Trends

Thilo Hanemann, Daniel H. Rosen, Cassie Gao and Adam Lysenko

With a Foreword by Stephen A. Orlins

A Report by the US-China Investment Project

May 2020



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MAY 2020

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

This report represents the 2020 issue of the annual update of the US-China Investment Project, a multi-year research initiative to provide greater transparency on investment flows between China and the United States.

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ABOUT THE US-CHINA INVESTMENT PROJECT

The US-China investment Project is a multi-year research initiative to provide greater transparency on investment flows between China and the United States.

LEAD ORGANIZATIONS

Rhodium Group

Rhodium Group (RHG) is an independent research firm dedicated to using policy experience, quantitative tools and on-the-ground research to analyze disruptive global trends. Our work supports leadership and other professionals in the financial, corporate, non-profit and government sectors. RHG analysis is used in commercial and investment management, strategic planning and policy analysis. Rhodium Group is headquartered in New York City, with offices in California, Hong Kong, and Paris. 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 investment in the United States, Europe, and other economies.



National Committee on US-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 trans-national 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 corporate and individual members represent many viewpoints, but share the belief that productive US-China relations require public education, face-to-face contact, and the forthright exchange of ideas.



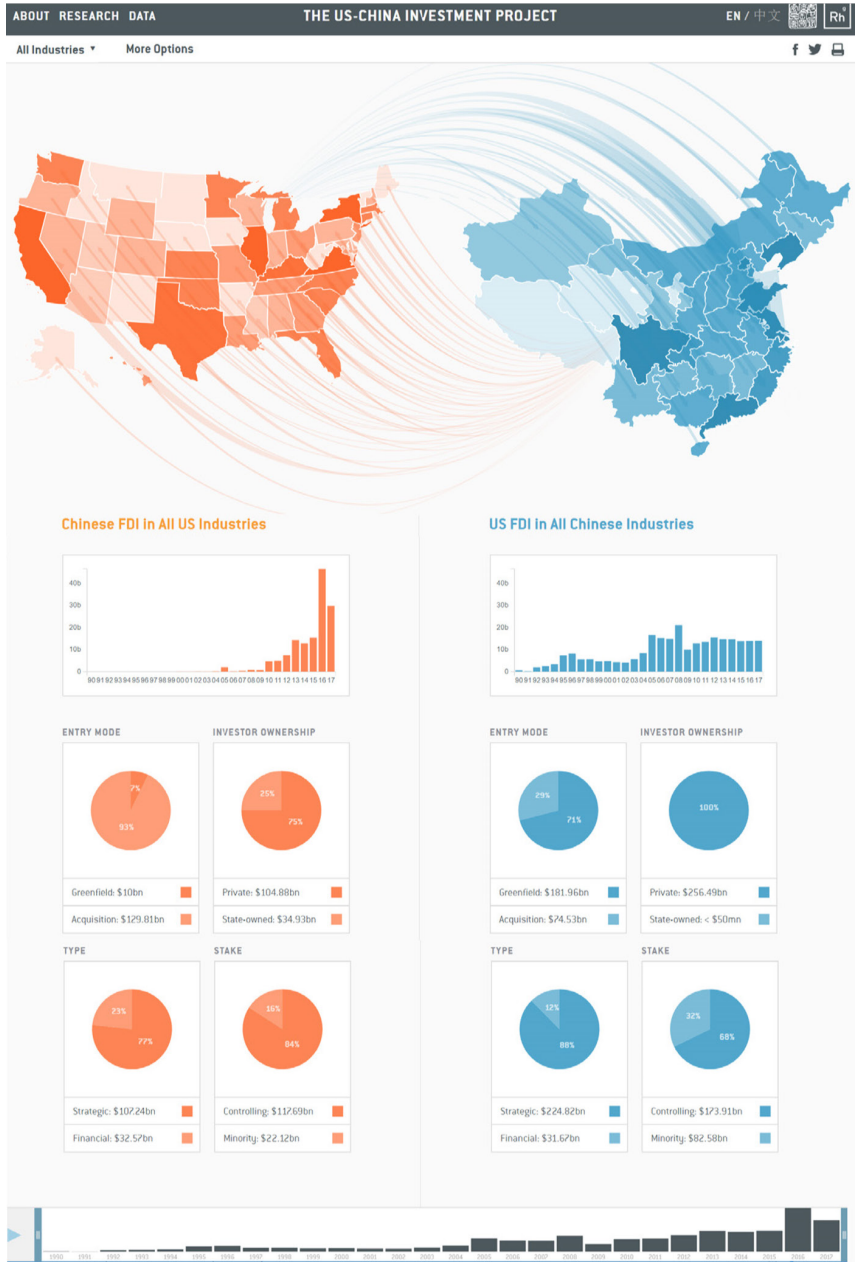
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An interactive web application with updated data through the end of 2019 is available at: www.us-china-investment.org

CONTENTS

Foreword	8
EXECUTIVE SUMMARY	9
INTRODUCTION	12
1 DIRECT INVESTMENT	13
1.1 US Direct Investment in China	13
Overview	14
Industry Trends	15
Outlook	18
1.2 Chinese Direct Investment in the US	18
Overview	19
Industry Trends	20
Outlook	23
2 VENTURE CAPITAL	24
2.1 US Venture Investment in China	24
Overview	24
Industry and Technology Trends	25
Outlook	27
2.2 Chinese Venture Investment in the US	27
Overview	28
Industry and Technology Trends	28
Outlook	30
3 OUTLOOK AND CONCLUSIONS	31
References	33
Appendix: Datasets and Compilation Methodology	34

FOREWORD

As I write, quarantined in my New York City apartment for the seventh straight week and fully aware that my friends in China went through a similar ordeal weeks earlier, I cannot help but think that a more constructive U.S.-China relationship would have been immensely helpful when confronting COVID-19. Instead, mismanagement in the relationship has led to economic instability and lives lost.

Similar mismanagement plays out in ways that have deteriorated the US-China investment environment: actions undertaken on both sides of the Pacific become wedge issues, driving us further apart at a time when we could be identifying common ends and working together, focusing on ways to increase the prosperity of our respective peoples.

At this moment, therefore, it seems especially timely for the National Committee on U.S.-China Relations to again partner with Rhodium Group to produce the fifth annual Two-Way Street report, a resource that provides data-driven analyses of two-way capital flows.

The 2020 update presents an opportunity for American and Chinese policymakers and the public to reassess opportunities for collaboration and growth, especially as we continue to see a flattening or, worse, decline in these capital flows. There is no question that national security needs to be taken into consideration when evaluating potential areas of investment. But even if our respective countries fence off these areas – and as the United States seeks to onshore more of its manufacturing – there still remains significant room for cross-border investments.

Much of the public's focus the past two years has been directed towards the trade dispute between the United States and China. But focusing on the investment relationship, with its significantly longer-term time horizons, may promote greater stability.

If we compare where we are today to where we were just a few years ago, much has changed – even before COVID-19 wreaked havoc with both countries. Within a harsher political climate that has produced FIRRMA and ECRA reforms, the United States has become less welcoming to Chinese investors, and discouraging to U.S. firms interested in investing in China; meanwhile, China has maintained a firm grip on outbound capital flows and continues to restrict foreign market access in many sectors through equity caps and other means. Our two countries are still far from decoupled, but the trend lines are not pointing in the right direction.

This pandemic is likely to cause a global recession and increase protectionist tendencies. Within this environment, it is my firm hope that the US and China will show leadership – not by giving in to voices calling for economic nationalism, but by drawing upon objective information and data to make sound decisions that serve our own respective national interests. Two-Way Street is a contribution towards that goal.

Stephen A. Orlins

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

EXECUTIVE SUMMARY

The US-China Investment Project clarifies trends and patterns in two-way investment flows between the world's two largest economies. This report updates the picture with full year 2019 data and describes the 2020 outlook in light of a complex tangle of new developments including January's Phase One US-China "Economic and Trade Agreement", the COVID-19 global pandemic and the start of a US presidential election year.

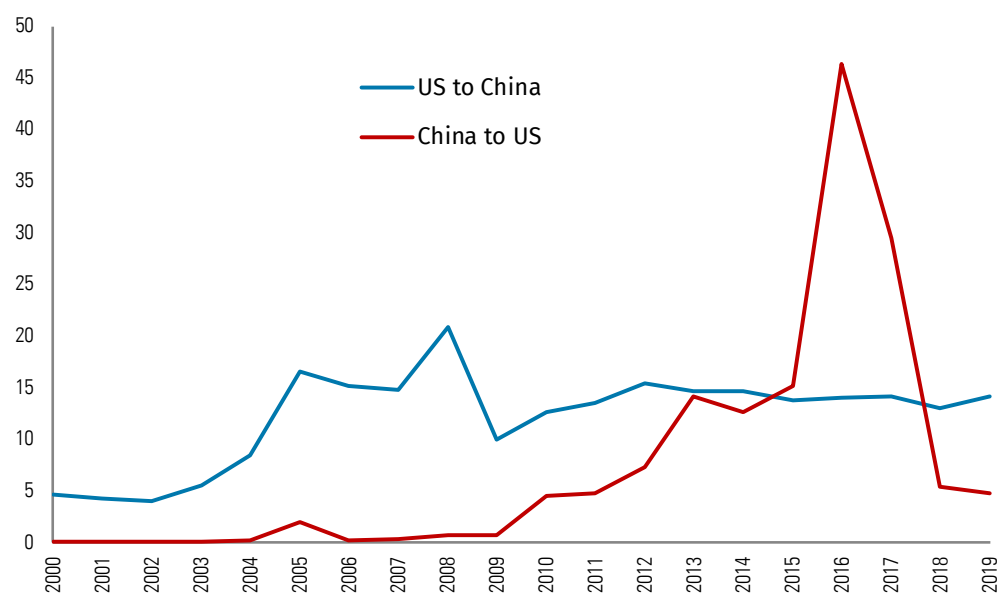
The key findings of the report are:

(1) After big declines in 2017 and 2018, two-way FDI flows between China and the US flattened out in 2019 as the bilateral relationship continued to sour:

- Chinese FDI in the US dropped to \$5 billion – a level not seen since the global financial crisis in 2009 – as Beijing's outbound policies, US regulatory scrutiny and an uncertain outlook for US-China relations continued to weigh on investor risk appetite. The drop affected acquisitions and greenfield projects alike and was felt broadly across industries. Sectors with low political and regulatory risk – consumer products and services and automotive – have been the most resilient.
- US FDI in China edged up slightly compared to previous years to \$14 billion as US firms continued to bet on Chinese consumer demand and seized opportunities from an easing of restrictions on foreign ownership in some sectors, including automotive and finance. Much of the stability of US investment into China was due to large multi-year greenfield projects geared towards meeting local demand in areas such as automotive and entertainment. At the same time, newly announced greenfield projects dropped, foreshadowing a slowdown in 2020 that was underway even before the COVID-19 pandemic disrupted the outlook.

Figure ES-1: Annual Value of FDI Transactions between the US and China, 1990-2019*

USD billion



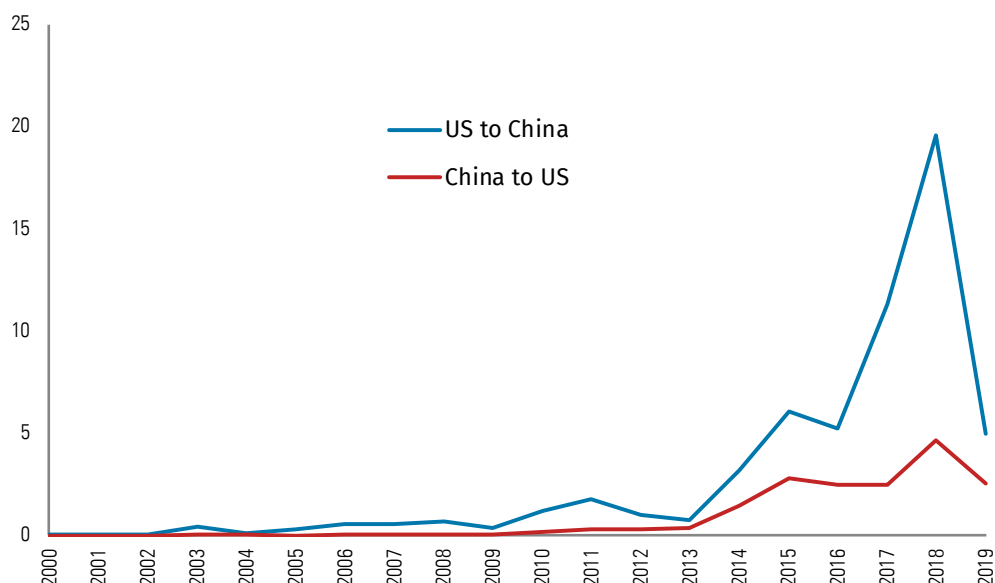
Source: Rhodium Group. *See Appendix for data description.

2) Two-way venture capital saw a steep drop in 2019 as China's overheated technology market corrected sharply and US regulators got a mandate to scrutinize early-stage high tech deals:

- Chinese venture capital investment (VC) in the US fell to \$2.6 billion in 2019, after an uptick of \$4.7 billion in 2018. This downturn partly reflects technology market turbulence in China, which required local investors to scale back overseas ambitions. US-China political tensions and regulatory moves, including the passage of FIRRMA and ECRA, were also important factors. The contraction in 2019 affected all fund-raising stages, target industries and investor types.
- In 2019, US-owned venture firms invested an estimated \$5 billion in Chinese startups, a dramatic drop from the record \$19.6 billion in 2018. The 2017-2018 boom in US venture capital investment into China was in line with a broader expansion and growth of the Chinese technology market and especially later-stage technology firms. In 2019, there was a slowdown in the Chinese VC market as investors became more selective in the face of increasing economic uncertainty and the view took hold that parts of China's tech ecosystem had become overheated after years of rapid growth.

Figure ES-2: Annual Pro-Rata Value of VC Transactions between the US and China, 2000-2019*

USD billion



Source: Rhodium Group based on Bloomberg, Pitchbook and other databases. *Pro-rata value determined as US or Chinese proportional share of each funding round's value based on the number of participating investors. 2019 data are preliminary only. See Appendix for data description.

(3) After dropping to a seven-year low in 2019, the US-China "Phase One" agreement set the scene for a positive 2020 outlook for bilateral capital flows but the global COVID-19 outbreak has changed the near-term outlook and could set in motion dynamics that alter the long-term picture:

- The immediate measures to contain the spread of the virus are impacting deal making: The global pandemic is bringing local economies to a halt, including in deal making. As a result of these real economy closures and physical restrictions on mobility, China's outbound FDI to the US came to an almost complete stop in 1Q 2020. A recovery is likely in the second half of the year but full-year numbers will show the impact of the virus.

- The crisis is changing the outlook both for certain sectors and for economic growth as a whole, reducing investor risk appetite: China's GDP growth will be close to zero this year compared to an average of 7.6% for the previous decade, and that slowdown is even more pronounced in certain sectors (for example, automotive). Company capital expenditures, including for foreign firms, are expected to fall, and the weight of China's economy in global investment allocation models is under review. The short-term outlook for the US economy is similarly gloomy (with 2020 US GDP projected to see a contraction) and many sectors targeted by Chinese investors in the past could see heavy contractions, including tourism, energy and commercial real estate.
- COVID-19 will spur debate about global supply chain reorganization: The scramble around medical supplies has further inflamed concerns around the globe about dependence on foreign supplies of certain materials and triggered a serious debate about re-shoring and risk diversification. China is at the center of that debate, and supply chain diversification could lead US companies to move more manufacturing capacity out of China. At the same time, pressure to de-globalize supply chains could also mean higher levels of FDI going forward as multinationals are forced to localize operations and source from a greater number of suppliers.
- Crisis creates opportunity: Equity and credit markets have lost value due to the pandemic, which could generate buying opportunities. In the US, Chinese investors could look at brands and consumer-related assets in entertainment, food or other impacted areas. In China, the deflation of the technology sector bubble has already piqued the interest of foreign investors. Since stimulus options are limited, letting markets pull in distressed asset buyers is even more important.
- The trajectory of broader bilateral relations remains important: Coming off the "Phase One" agreement, the COVID-19 crisis presented an opportunity for the US and China to work together on crisis mitigation and scientific solutions to end the virus spread. However, intensifying economic competition and a systemic battle of political systems continue to weigh on the relationship as governments engage in blame games. That has further soured the views of businesspeople on both sides of the Pacific. The start of the US presidential campaign cycle could further amplify these risks in coming months.

INTRODUCTION

US-China capital flow dynamics have seen major shifts in the past five years. Bilateral investment levels grew rapidly after 2010 and reached a peak of over \$70 billion in 2016, driven by a rapid expansion of Chinese outbound investments. Since 2017, however, Chinese investment in the US has slowed down dramatically due to domestic restrictions imposed by the Chinese government as well as regulatory pushback from the US side. US investment into China has remained flat in recent years as China's growth and economic reform momentum slowed.

Just as both nations seemed to have put the relationship on a more stable footing by clinching a "Phase One" agreement in January 2020, the COVID-19 pandemic erupted, triggering the first contraction in the Chinese economy in decades in 1Q 2020 and hammering the US and global economies as well. To make matters worse, the pandemic seems to have accelerated the deterioration in US-China relations, as governments blame each other for the outbreak instead of working together. The economic impact and volatility from the global pandemic as well as growing tensions in the US-China relationship will further impact the trajectory of capital flows between the two nations in 2020 and beyond.

As policymakers and the public try to navigate these volatile times, it is more important than ever to be guided by objective information and data.

The US-China Investment Project fulfills this need by providing clear and objective data on US-China investment flows through the traditional direct investment lens as well as on new types of capital flows that reflect the growing complexities of US-China investment dynamics. While direct investment flows have dominated China's global capital footprint to date, indirect flows, including venture capital and other private equity investments, are likely to account for a larger share of two-way flows in the future.

This report summarizes the most important trends in US-China two-way investment in 2019. The first part of the report reviews US-China trends in direct investment. The second part analyzes trends in bilateral venture capital investment. The report concludes with a summary of key findings and outlook for businesses and policymakers. An interactive data visualization with detailed industry profiles and additional research is available on our project website (www.us-china-investment.org).

1. DIRECT INVESTMENT

Two-way foreign direct investment (FDI) has been an important component of the US-China economic relations. Direct investment transactions give foreign investors control and long-term influence over local businesses. These transactions typically include investments resulting in at least 10% ownership of a company's voting shares. This contrasts with portfolio investment, which involves shorter-term, financially motivated transactions that generally result in smaller ownership stakes (usually less than 10% of voting rights) and no meaningful control.

Long-standing methodological challenges complicate the task of assessing direct investment flows between China and the United States using official statistics. Most government statistics measure financial flows based on Balance of Payments (BOP) principles, which are greatly distorted by complex global financing structures, tax optimization, intra-company transfers and other factors. Government statistics based on BOP principles 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. Finally, there is often a significant time lag in most official statistics for bilateral FDI.

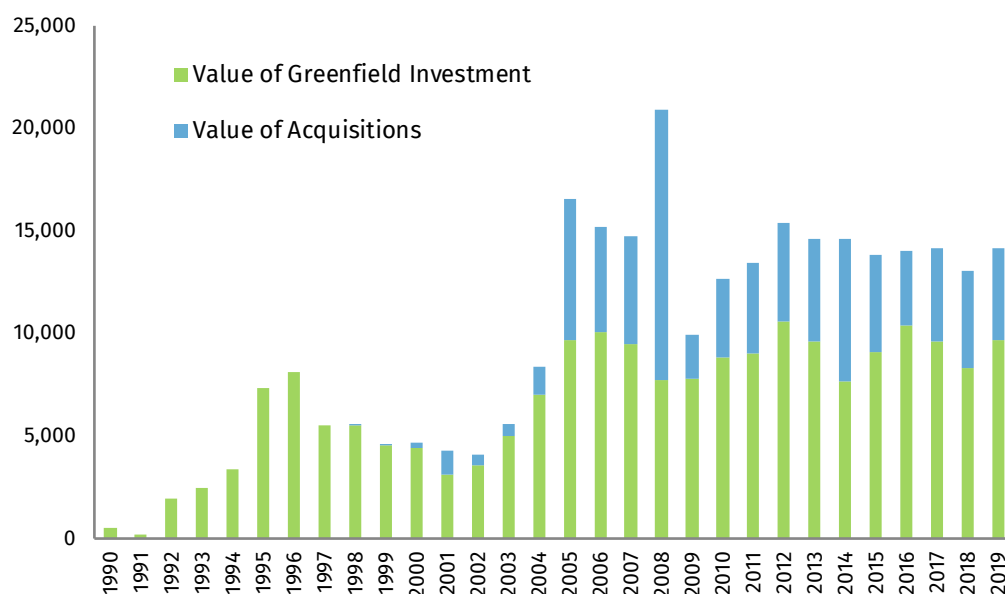
This section presents an analysis of US-China bilateral FDI trends based on an alternative Rhodium Group dataset that identifies, values and aggregates individual FDI transactions. The database covers direct investment transactions including the establishment of subsidiaries, factories, research and development (R&D) centers, and offices (greenfield investments), the expansion of existing facilities, and the acquisition of existing companies (mergers and acquisitions, or M&A). This bottom-up dataset is not comparable to BOP data but offers a valuable and real-time perspective on two-way flows without some of the distortions in official statistics. A detailed explanation of the database and underlying methodologies is available in the appendix.

1.1 US DIRECT INVESTMENT IN CHINA

The People's Republic of China remained largely closed to US direct investment in the three decades following its creation in 1949, and only began to open up again in the 1980s. Investment flows were modest at first (less than \$1 billion per year) but grew to several billion dollars per year in the 1990s and early 2000s. Following China's accession to the World Trade Organization (WTO) in 2001, US FDI in China jumped to over \$20 billion in 2008 before dropping during the global financial crisis in 2009. Since then, annual US direct investment in China has climbed back, hovering between \$13 billion and \$16 billion per year.

Figure 1: Value of US FDI Transactions in China, 1990-2019

USD million



Source: Rhodium Group.

OVERVIEW

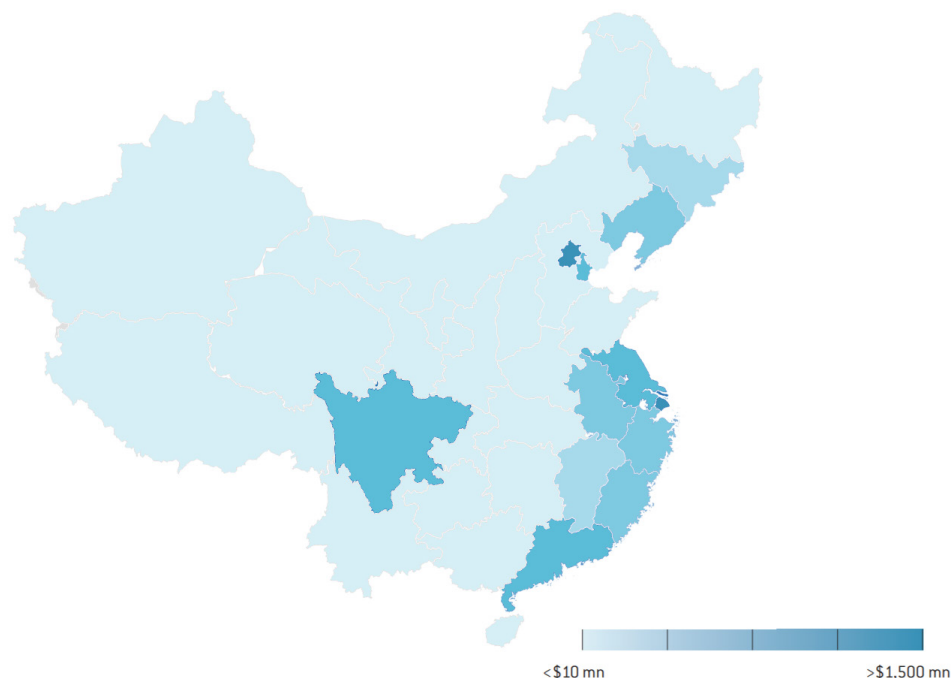
In 2019, US firms invested \$14 billion in China, slightly up from \$13 billion in 2018 (Figure 1). The cumulative value of US FDI transactions in China (at historical value) was \$284 billion at the end of 2019.

The small increase in total investment was mostly driven by strong investment from ongoing greenfield constructions that were started earlier in 2019 or in previous years (\$8.3 billion). For instance, the biggest greenfield construction in 2019 was in the automotive sector - Tesla's Gigafactory in Shanghai, which broke ground at the beginning of 2019 and began production in 4Q. There were a number of large projects similar to this one under construction in 2019, such as in the entertainment (Universal Studios), basic materials (ExxonMobil), and consumer products and services (Costco) sectors.

New greenfield investments (newly commenced projects), on the other hand, dropped compared to 2018 (from \$2.4 billion in 2018 to \$1.4 billion in 2019). The biggest new expansion was GM's Chinese venture joint, which aims to invest \$4.3 billion over the next five years in electric vehicles. M&A activity was stable at \$4.4 billion. However, this was almost entirely due to one large deal, Amgen's \$2.7 billion acquisition of BeiGene.

The bulk of US direct investment in China continues to be located in large cities near China's east coast. Shanghai received the most investment with a strong boost from Tesla's \$5 billion factory.

Figure 2: Geographic Distribution of US FDI in China, 2019



Source: Rhodium Group.

INDUSTRY TRENDS

The industry mix of US FDI in China has shifted over the past three decades along with the maturation of China's economy. Whereas the earliest investments focused on labor-intensive manufacturing, interest in the 2000s and early 2010s shifted towards Chinese consumer-oriented sectors like food and autos. Over the past five years, American investors have also increasingly targeted high-tech and advanced services sectors.

In 2019, we saw additional shifts in the industry make-up of US FDI in China: While some industries were caught in the turmoil of deteriorating US-China relations (such as ICT), others continued to boom (such as automotive and health and biotech).

Key 2019 industry trends include:

- The top sectors for US investment in China in 2019 were automotive (\$4 billion) and health and biotech (\$3 billion). Both exhibited significant growth from 2018. Automotive accounted for nearly one-third of the total investment in 2019. The vast majority of investment projects were in electric vehicles (Tesla's factory in Shanghai, General Motor's EV expansion with SAIC). Health and biotech received a big boost from one single deal this year: Amgen's acquisition of BeiGene for \$2.7 billion.
- The next two top sectors for US investment in China saw a decline in 2019: ICT (\$2 billion) and entertainment (\$1.96 bn). Both sectors received numerous new investments in 2019, but their total value dropped compared to previous years. Prominent 2019 investments included Photronics' new manufacturing facility and Bain Capital's acquisition of Xiamen Qinhuai Technology (ICT), and Universal Studio's Beijing park (entertainment), which is slated to open in early 2021.

- Several other sectors also received sizable US investment in 2019: electronics (\$0.8 billion), real estate and hospitality (\$0.6 billion), agriculture (\$0.5 billion), basic materials (\$0.4 billion) and financial and business services (\$0.2 billion). Investment into electronics jumped up this year mainly due to one large deal, KKR's acquisition of a majority stake in NVC Lighting's China business. Real estate and agriculture and food continued to host new US investments (for example, in 2019 Prologis announced it will develop properties in China valued at \$3.5 billion, and Cargill plans an expansion at its Jilin corn processing facility). However, both sectors saw a relative decline in total value compared to in 2018. The basic materials and chemicals sector also continued to attract US investors interested in serving China's growing market. In 2019, the biggest newly commenced project was ExxonMobil's multi-billion-dollar petrochemical complex in Huizhou. Financial and business services saw the highest number of newly announced transactions in 2019, following China's commitment to further open up its banking, securities and insurance sectors. These new deals have not yet translated into large investment values since many were approved only in the past year and are still in progress: for instance, JPMorgan won approval to establish a majority-owned securities business in China; Chubb received green light to further increase its share in Huatai Insurance; PayPal became the first foreign company to get an online payments license in China after acquiring a majority stake in a Chinese payments group; and following the US-China "Phase One" agreement in early 2020, Mastercard announced it received approval to start to set up a bank card clearing institution in China.

Table 1: Change in US Direct Investment Transaction Value, 2019 Compared to Previous Years

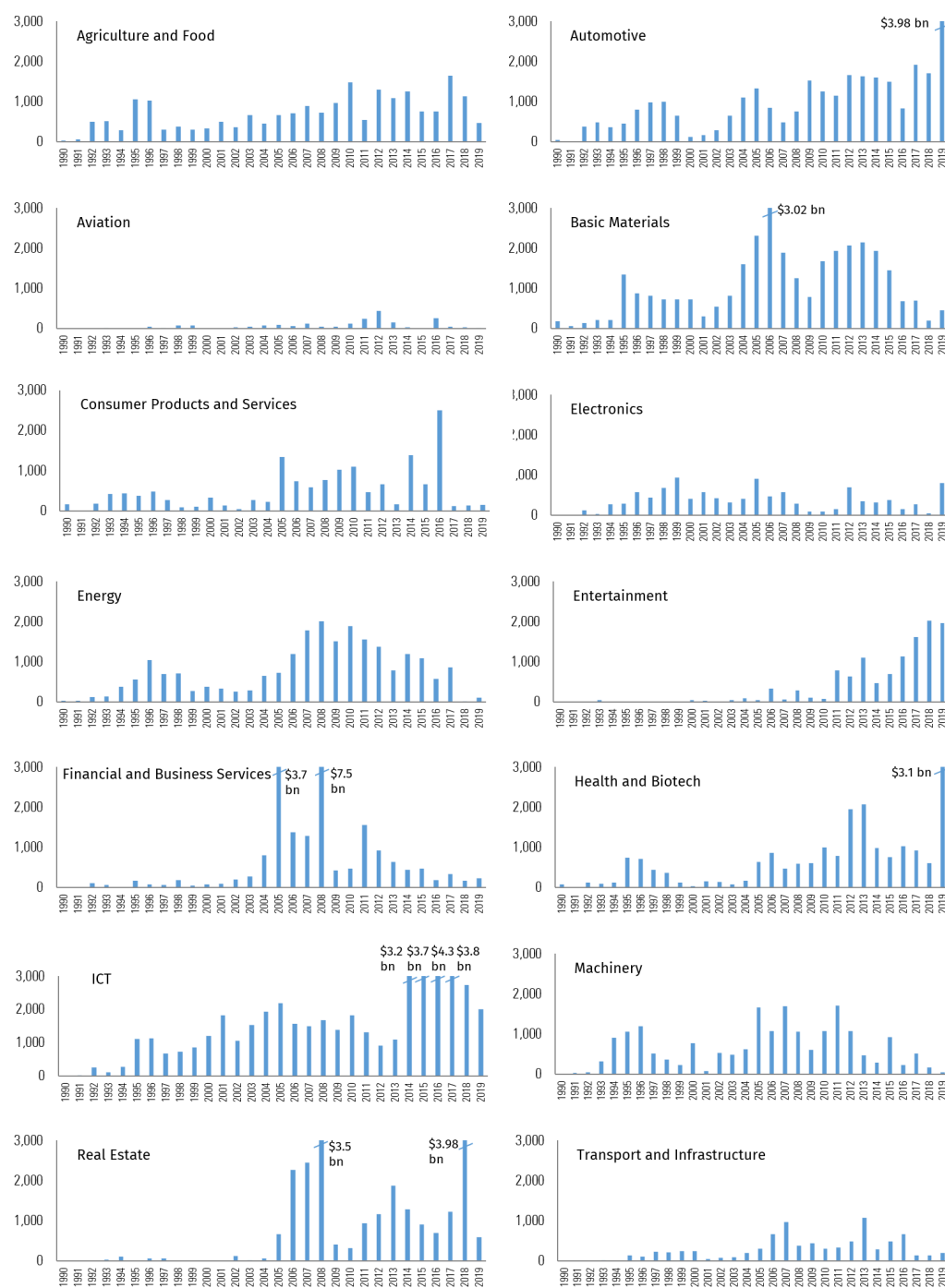
USD billion, percent change

	2019 (USD bn)	VS. 2018	VS. Avg 2016-2017
Agriculture and Food	0.5	-59%	-61%
Automotive	4.0	134%	190%
Aviation	<0.05	-34%	-87%
Basic Materials, Metals and Minerals	0.5	136%	-34%
Consumer Products and Services	0.1	15%	-89%
Electronics and Electrical Equipment	0.8	1504%	278%
Energy	0.1	441%	-84%
Entertainment, Media and Education	2.0	-3%	43%
Financial and Business Services	0.2	44%	-11%
Health, Pharmaceuticals and Biotechnology	3.1	406%	217%
Information and Communications Technology (ICT)	2.0	-26%	-51%
Machinery	0.05	-71%	-87%
Real Estate and Hospitality	0.6	-85%	-38%
Transport, Construction, and Infrastructure	0.2	-51%	-50%

Source: Rhodium Group.

Figure 3: US FDI Transactions in China by Industry, 1990-2019

USD million



Source: Rhodium Group.

OUTLOOK

The COVID-19 pandemic is putting additional pressure on US companies in China. First, the lockdown of the economy has hurt the Chinese economy and consumer demand, directly affecting the outlook for US firms in the Chinese market. Second, the need to consolidate cash at home (similar to in 2008/09) in order to weather the storm could further impact firms' capex planning for investment in the next few years. Finally, COVID-19 has fueled concerns around the globe about dependence on foreign manufacturing for certain materials and triggered a debate about supply chain diversification, which could lead US companies to move manufacturing capacity out of China.

At the same time, China appears to be one of the first countries to emerge from the acute phase of the crisis, making the Chinese market more important than before in terms of 2020 demand. Moreover, pressure to de-globalize supply chains could also mean higher overall levels of FDI going forward as multinationals are forced to localize operations and seek inputs from a greater number of suppliers. Finally, Beijing has accelerated the pace of market liberalization that was underway before the pandemic. It is now doubling down on policy support for inbound FDI and promises further opening. These steps could incentivize firms to expand their China operations in new industries if they are implemented in a meaningful way.

Initial 2020 data points are mixed and suggest that firms are reconsidering their investment trajectory but are not thinking about radically downsizing their China footprint. In 1Q 2020, our preliminary data show that despite disruptions from the COVID-19 outbreak, US companies announced \$2.3 billion new direct investment projects in China, which is only slightly down compared to a quarterly average of \$2.8 billion in 2019. Recent survey data on US business sentiment in China supports these findings. The American Chamber of Commerce's 2020 Business Climate Survey and flash survey in April showed that most US businesses in China are not yet considering major changes to their operations in China. Over 70% of respondents say they have no plans yet to move production and supply chains out of China due to COVID-19. Around 40% of respondents say that their long-term supply chain strategy for China will remain the same regardless of the impact of COVID-19, while 52% percent of companies believe it is too soon to tell.

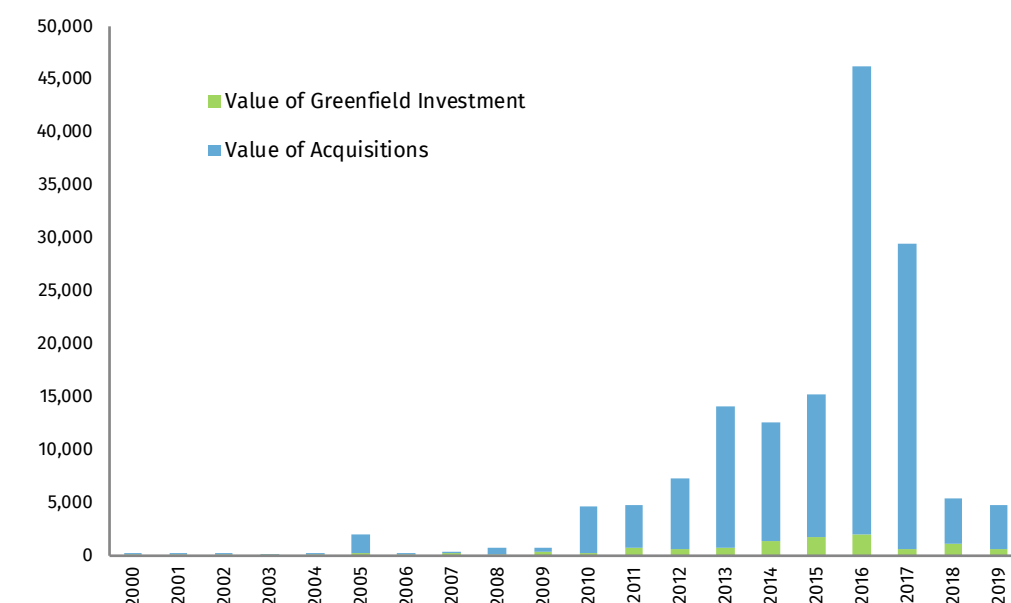
1.2 CHINESE DIRECT INVESTMENT IN THE US

Chinese investment in the US was modest before 2010, totaling well below \$1 billion annually in every year except 2005 when Lenovo's \$1.75 billion acquisition of IBM's personal computer division – the first major Chinese acquisition in the United States in the modern era – pushed flows above the billion-dollar mark.

Annual investment accelerated quickly thereafter, reaching nearly \$5 billion in 2010 and \$14 billion in 2013 on the back of Shuanghui's acquisition of Smithfield Foods. Chinese investment in the US reached a peak of \$45 billion in 2016 thanks to several multi-billion-dollar acquisitions, before sliding to \$29 billion in 2017 and \$5.4 billion in 2018.

Figure 4: Value of Chinese FDI Transactions in the US, 1990-2019

USD million



Source: Rhodium Group.

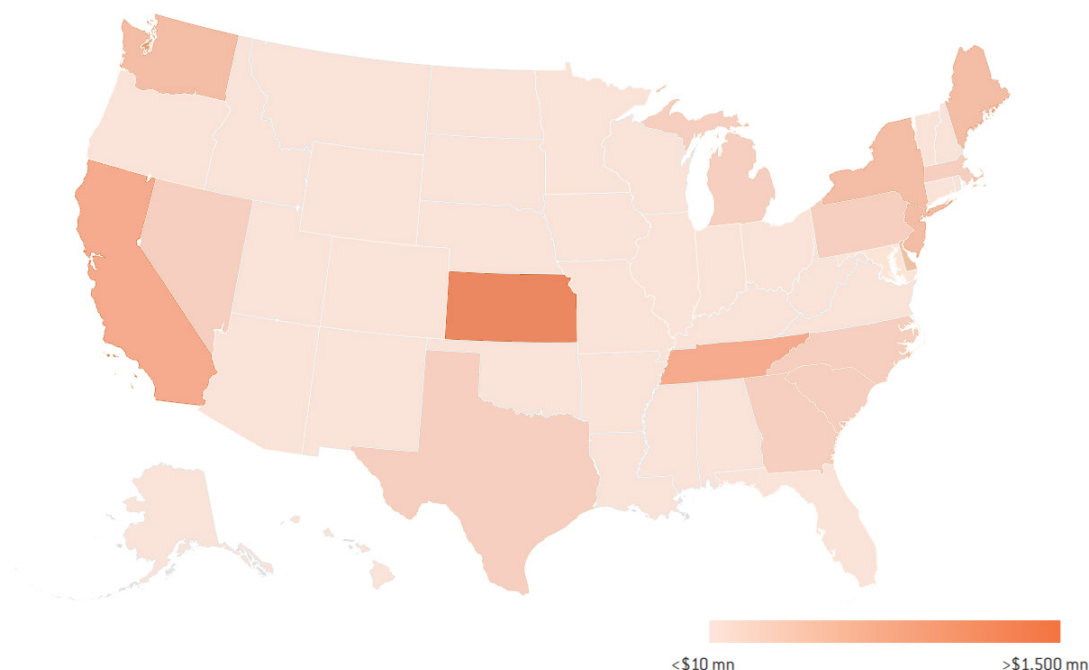
OVERVIEW

In 2019, Chinese investment in the US continued to be weighed down by a number of factors, including restrictions on outbound investment from Beijing, more robust regulatory reviews in the US, slowing growth and lower liquidity in the Chinese economy, and rising geopolitical tensions between the US and China.

In total, we recorded \$5 billion completed deals in the US last year, down from the \$5.4 billion registered in 2018. This is the lowest annual investment total since 2009.

Most of the investment into the US in 2019 came from just a handful of acquisitions. The top transactions were Shandong Ruyi's purchase of Invista's apparel and advanced textiles division for \$2 billion (Kansas), Envision Energy's acquisition of Automotive Energy Supply Corp's US manufacturing facilities (Tennessee), and Xtep International's acquisition of E-Land Footwear USA for \$260 million (California).

Figure 5: Geographic Distribution of Chinese FDI in US, 2019



Source: Rhodium Group.

INDUSTRY TRENDS

During the Chinese outbound FDI boom in 2016-2017, Chinese investments in the US were concentrated in just a few industries including real estate and hospitality, transport and infrastructure. This industry mix has changed dramatically in recent years. In 2019, Chinese FDI in the US was largely concentrated in three sectors: consumer products and services, automotive, and real estate and hospitality.

Key 2019 industry trends include:

- The top two sectors for Chinese FDI in the US in 2019 were consumer products and services (\$2 billion) and automotive (\$0.6 billion). Despite the drop in overall Chinese FDI, each of these sectors received significant investment in 2019 due to a large deal: Shandong Ruyi's takeover of INVISTA's textile unit (consumer products) and Envision Energy's acquisition of Automotive Energy Supply Corp's US manufacturing facilities (automotive).
- Beyond the top two, real estate also registered growth this year, recovering from the low point in 2018. Major deals included Gemini Rosemont's acquisition of the Central Technology Park of Santa Clara, City Century's acquisition of a lot in Los Angeles, and Hopson Development's acquisition of a lot in New York City.
- Still, Chinese restrictions on certain OFDI projects and the tightening of US regulations continued to have an impact on specific sectors. Investments in entertainment, ICT, and transport and infrastructure have all fallen by nearly 100% since 2016. We did not record any major investment activities in these sectors in 2019.

Table 2: Change in Chinese Direct Investment Transaction Value, 2019 Compared to Previous Years

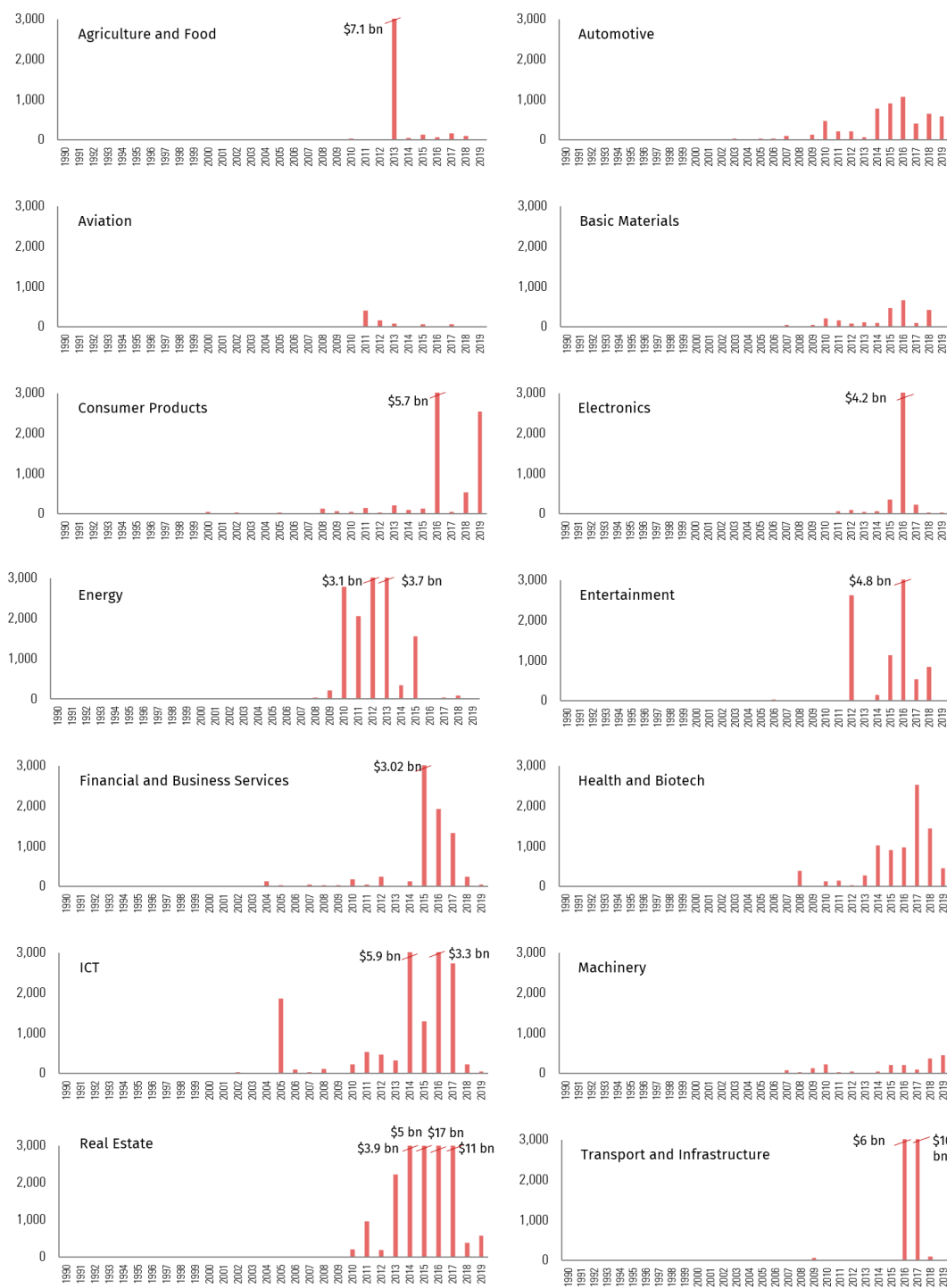
USD billion, percent change

	2019 (USD bn)	VS. 2018	VS. Avg 2016-2017
Agriculture and Food	<0.05	-89%	-91%
Automotive	0.6	-9%	-21%
Aviation	<0.05	0%	-68%
Basic Materials	<0.05	-96%	-96%
Consumer Products and Services	2.5	383%	-11%
Electronics	<0.05	16%	-98%
Energy	<0.05	-89%	-62%
Entertainment	<0.05	-99%	-100%
Financial and Business Services	0.05	-77%	-97%
Health and Biotech	0.4	-69%	-75%
ICT	0.05	-78%	-98%
Industrial Machinery and Equipment	0.5	26%	211%
Real Estate and Hospitality	0.6	53%	-96%
Transport and Infrastructure	<0.05	-90%	-100%

Source: Rhodium Group.

Figure 6: Chinese FDI Transactions in the US by Industry, 1990-2019

USD million



Source: Rhodium Group.

OUTLOOK

Initial data points suggest that there was a significant decline of Chinese FDI into the US in the early months of 2020, when the Chinese economy was under lockdown. In recent years, we have already seen substantial falls in newly announced Chinese FDI projects in the US. These have fallen from \$8 billion per quarter in 2016-2017 to \$2.7 billion in 2018 and \$2 billion in 2019. In 1Q 2020, we record just \$200 million of newly announced Chinese direct investments in the US.

Going forward, market turmoil tied to the coronavirus outbreak could provide buying opportunities for Chinese firms. In 1Q 2020, US stock markets dropped significantly, and many companies in non-essential industries remain in dire financial straits. This could provide opportunities for Chinese buyers in certain areas, such as brands and consumer-related assets in entertainment, food or other impacted areas.

However, China's restrictive policies remain a key obstacle to outbound investment in 2020: Beijing's policy stance has not changed over the past 12 months, and restrictions on "irrational" OFDI are still officially in place. The US regulatory environment remains difficult as well. CFIUS now has expanded jurisdiction to scrutinize foreign investments and policymakers are concerned about "opportunistic" buying, in particular the possibility that foreign investors target small businesses in the defense industrial base that are reeling from coronavirus disruptions.

The political relationship between the US and China has also deteriorated further. Coming off the "Phase One" agreement, the COVID-19 crisis presented an opportunity for both countries to work together on crisis mitigation and scientific solutions to end the spread of the virus. Instead, both Washington and Beijing have blamed each other for failing to adequately respond to the virus, deepening the political and economic tensions that already existed in the relationship. This has further soured the mood of businesspeople on both sides of the Pacific. The worsening bilateral relationship and a growing public backlash against China in the US make it likely that Chinese buyers will also face significant political opposition to any big acquisition attempts outside of the regulatory CFIUS process. The US presidential campaign, in which relations with China seem likely to play an outsized role, could further amplify these risks in the coming months.

2. VENTURE CAPITAL

Direct investment has been the most prominent channel of US-China investment flows over most of the past three decades, but various types of shorter-term portfolio investments merit a closer look. One of the non-FDI investment channels that has received more public attention in recent years is venture capital (VC).

A subset of private equity, VC refers to early-stage equity investment in nascent enterprises with growth potential. In the vast majority of cases these are small, minority stakes. VC investments typically occur in successive funding rounds comprised of multiple investors. Venture-backed startups often operate in cutting-edge industries with novel technologies. In some cases, this can raise concerns about foreign ownership. Rising Chinese venture interest in the US was one of the key drivers behind passage of the Foreign Investment Risk Review Modernization Act (FIRRMA), which expanded the US investment screening regime to cover foreign investment stakes below the traditional 10% threshold.

This section presents a summary of US-China venture capital investment trends. It is based on a proprietary Rhodium Group dataset that tracks the cross-border investment activities of corporations and their dedicated venture subsidiaries, the general partners of professional venture funds, and angel investors. We assign VC investor nationality on an ultimate ownership basis. This is determined by the domicile of the ultimate owner of corporate venture organizations; by the domicile of the ultimate corporate owner or the nationality and home country of the ultimate shareholder for general partners; and by nationality and home country for angel investors. We do not count the full value of each investment round with Chinese participants, but estimate the pro-rata share of total fundraising round values attributable to the Chinese investor(s). More details on the dataset and methodology can be found in the appendix.

2.1 US VENTURE INVESTMENT IN CHINA

Venture capital has a much shorter history in China than it does in the United States. The first modern government-backed domestic Chinese venture funds were not established until the 1980s, and before the 2000s, China lacked the institutions and financial development needed to foster a thriving private venture capital ecosystem. US venture investors have been active in the Chinese VC ecosystem for most of its comparatively short life, with the first US venture firms entering the Chinese market by the early 2000s. Experienced US venture investors have since played key roles in the development of China's modern technology sector, participating in funding rounds for at least one third of all Chinese venture-backed startups. Total investment took off after 2014, reaching a peak of \$19.6 billion in 2018.

OVERVIEW

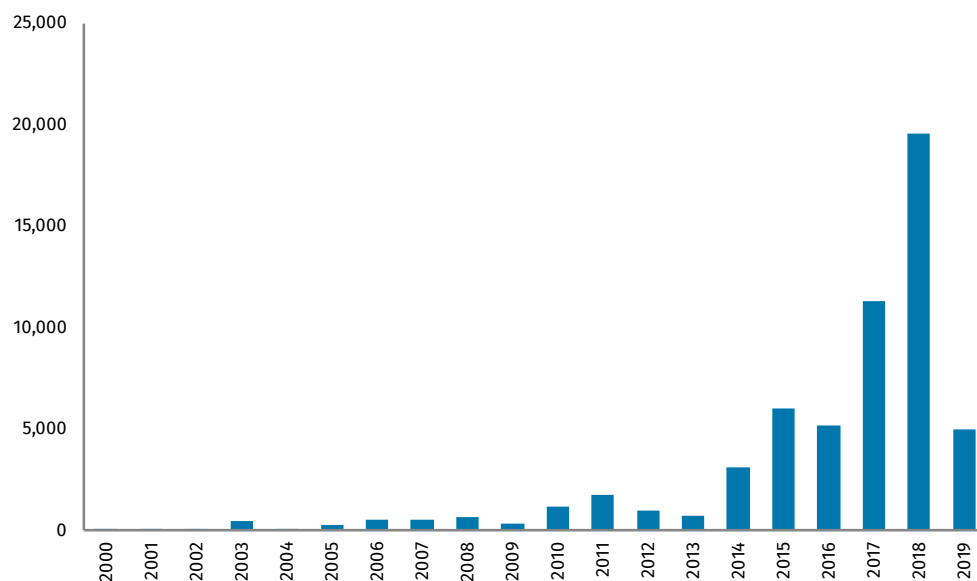
In 2019, US-owned venture investors participated in 293 unique venture funding rounds for Chinese startups, investing an estimated \$5 billion. This is a dramatic drop from the record \$19.6 billion in 2018 and largely on par with investment levels in 2014-2015.

The boom in US venture capital investment in China during 2017-2018 was largely driven by US participation in massive later-stage venture fundraising rounds for Chinese technology firms like Ant Financial (\$14 billion Series C round), Pinduoduo (\$3 billion Series C round) and Bytedance (\$3 billion Series D round). The sharp drop back to 2014-2015 levels (\$5 billion) in 2019 was in line with a broader slowdown in China's technology and

venture capital markets: investors became more selective in the face of increasing economic uncertainty and a growing perception that parts of China's tech ecosystem had become overheated after years of rapid growth. A string of disappointing Chinese IPOs and venture capital “down rounds” (fundraising rounds with company valuations below those of previous fundraising rounds) further weighed on private equity investor sentiment. To a lesser extent, this also reflects growing political scrutiny of US firms' exposure and activity in the Chinese tech sector.

Figure 7: Annual US Venture Capital Investment in China, 2000 to 2019*

USD million



Source: Rhodium Group based on Bloomberg, Pitchbook and other databases. *Includes China-headquartered venture capital fundraising transactions involving at least one investor ultimately owned by a US entity. Pro-rata value determined as US proportional share of each funding round's value based on the number of participating investors. 2019 data are preliminary only.

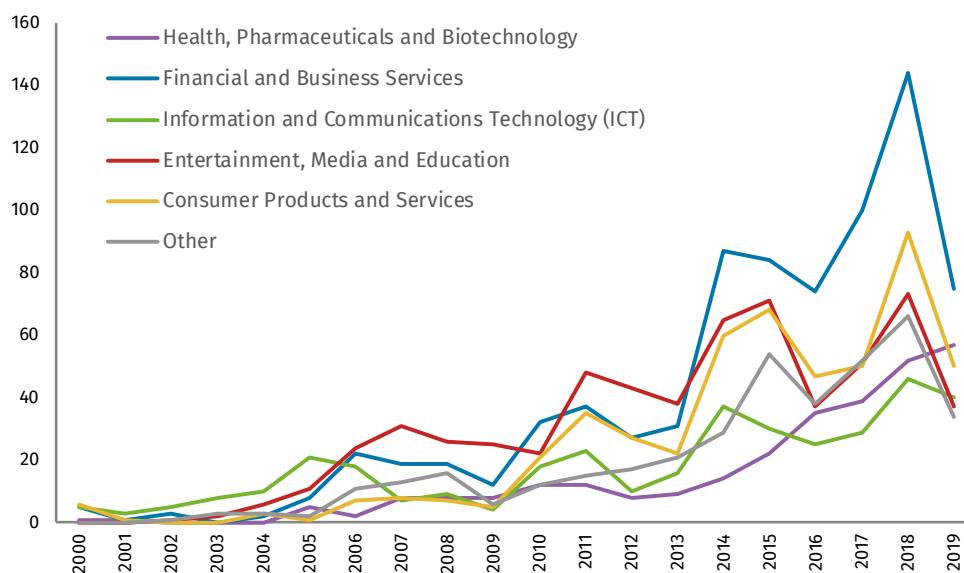
INDUSTRY AND TECHNOLOGY TRENDS

We break down our venture investment transactions data by separate industry and technology schemes. For industries, we assign mutually exclusive sector classifications to each investment target based on which Rhodium Group industry category, out of a total of 14, the company operates in. These industries are generally assigned based on the use case of a startup's product or technology, not simply the product or technology itself. For example, a firm developing a software tool for managing human resources processes is coded with Financial and Business Services as the primary industry instead of Information and Communications Technology, which might be suggested by the firm's activities in software development.

Consistent with the overall drop, the number of US VC investments into all major sectors declined last year with the exception of Health, Pharmaceuticals and Biotechnology. The top sector for US venture investment in China in 2019 was again Financial and Business Services with 75 unique funding rounds (Figure 8). Health, Pharmaceuticals and Biotechnology climbed up to be the second highest sector receiving US VC investment (57 unique funding rounds). Consumer Products and Services; Information and Communications Technology (ICT); and Entertainment, Media and Education were the next most important Chinese sectors for US venture investment, drawing around 50, 37, and 34 unique investments respectively in 2019.

Figure 8: Annual US Venture Capital Investment in China by Target Sector*

Number of transactions



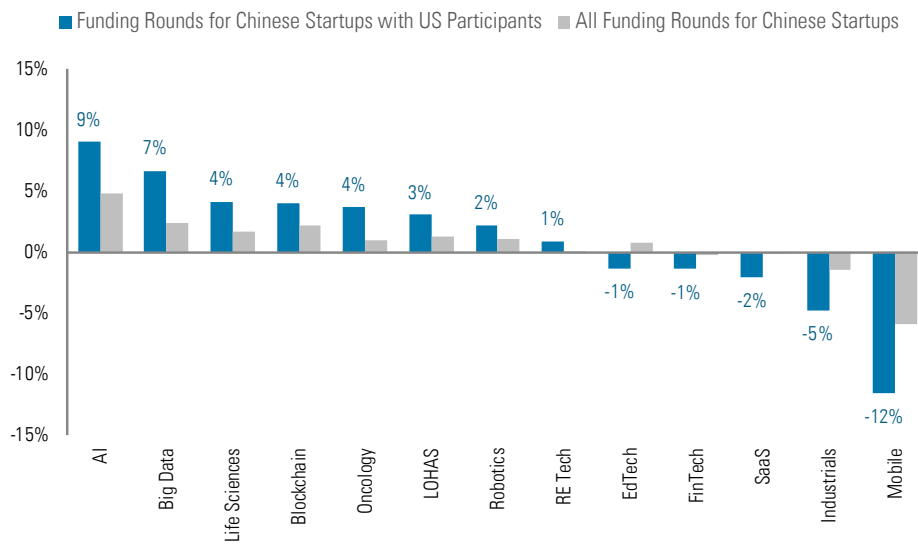
Source: Rhodium Group based on Bloomberg, Pitchbook and other databases. *Includes China-headquartered venture capital fundraising transactions involving at least one investor ultimately owned by a US entity. 2019 data are preliminary only.

In addition to mutually exclusive industry categories, we also code for around 50 unique technologies in connection with each transaction. These technologies are based on the specific methods and tools powering a firm's products and services. Unlike industries that depend on mutually exclusive use cases, these technologies are not mutually exclusive, and firms may employ multiple technologies simultaneously. For example, a startup developing autonomous driving technology may be coded both as a developer of Autonomous Vehicles and of Artificial Intelligence technologies. Moreover, individual technologies commonly span multiple industries. For example, Artificial Intelligence has broad applications in sectors like automotive (e.g. self-driving technology), pharmaceuticals (e.g. drug discovery) and logistics (e.g. logistics network and route management), to name just a few. This coding offers a unique perspective on which trans-industry technology areas US venture investors in China are disproportionately targeting or avoiding.

Figure 9 shows the changing focus in technology areas for US venture investment in China. Comparing data from the 2018-2019 period to that of 2014-2015, the shares of US investors targeting Chinese startups involving Artificial Intelligence (AI) and Big Data technology have significantly increased. At the same time, interest in Mobile and Industrials has dropped in the past two years. Most of the technologies that saw significant changes in US venture investor interest over the period saw similar changes of interest within the broader Chinese startup market.

Figure 9: Change in Technology Focus Areas for US VC Investment in China, 2014-2015 to 2018-2019

Change in percent of total funding rounds for Chinese startups involving each technology



Source: Rhodium Group based on Pitchbook, Crunchbase, Bloomberg and proprietary research. US transactions include all funding rounds with at least one participating US-controlled venture fund (usually determined by general partner nationality) or other entity. 2019 data are preliminary only.

OUTLOOK

China's technology sector was hit hard in 1Q 2020 due to the COVID-19 outbreak. Start-ups were among the most affected businesses as many investors were unable to conduct due diligence and forced to freeze investment activities. In March, however, domestic venture financing recovered and bounced back to the same level seen in 2019. We estimate that the first quarter of 2020 saw \$600 million in new US venture investment in China, which is half the quarterly average from 2019 (\$1.2 billion) and a sharp drop from the peak in 2018 (\$4.9 billion).

Looking forward, the outlook for US venture capital investment in China is cautiously optimistic. The market correction since mid-2018 has brought down valuations for start-ups, creating opportunity for long-term investors from the US and elsewhere. Despite deteriorating US-China relations, there continues to be strong interest in the Chinese market from US investors. At the same time, the recovery remains fragile and uneven across the economy, which could translate into a lower appetite for certain ventures. The uptick in March activity was driven by a combination of pandemic-related plays (biotechnology, online education and e-commerce) and a catch-up on deals that were delayed due to the outbreak. It remains to be seen if the recovery in China's technology sector continues throughout 2020.

2.2 CHINESE VENTURE INVESTMENT IN THE US

Chinese venture investment abroad was limited until the late 2000s by the same structural issues hampering the development of China's domestic venture capital ecosystem. A lack of experienced homegrown Chinese venture capital investors as well as capital controls and other impediments to overseas investment further suppressed activity. However, since the late 2000s Chinese venture investment abroad has increased substantially from a very low base. Chinese VC investment in the US took off after 2014, climbing above the \$1 billion per year mark and hitting a peak of \$4.7 billion in 2018.

OVERVIEW

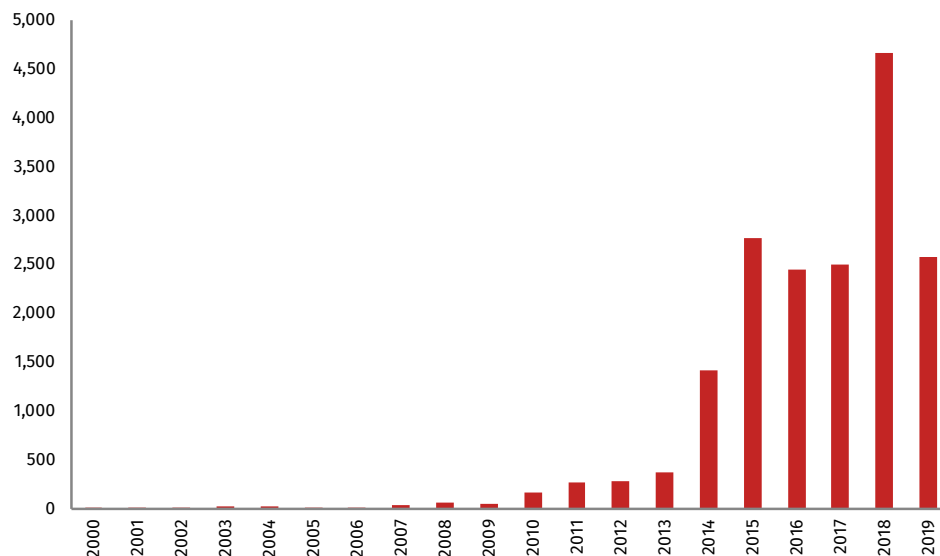
In 2019, Chinese venture investors participated in 261 unique funding rounds for US startups, investing an estimated \$2.6 billion. This represents a drop from \$4.7 billion in 2018, but is on a par with 2015-2017 levels.

Part of this downturn can be explained by technology market turbulence in China and that created fundraising challenges for some Chinese venture investors. Political tensions and regulatory changes, such as the passage of FIRRMA and ECRA, are also important factors. The contraction in 2019 extends across fundraising stages, target industries and investor types. The broad impacts suggest systemic headwinds to Chinese venture activity, reflecting tighter investment screening and a deterioration in investor sentiment as US-China tensions increase.

It's also interesting to note that this drop is distinctively Chinese – overall venture fundraising in the United States remained close to peak 2018 levels in 2019.

Figure 10: Annual Chinese Venture Capital Investment in the United States, 2000 to 2019*

USD million



Source: Rhodium Group based on Bloomberg, Pitchbook and other databases. *Includes US-headquartered venture capital fundraising transactions involving at least one investor ultimately owned by a mainland Chinese entity. Pro-rata value determined as Chinese proportional share of each funding round's value based on the number of participating investors. 2019 data are preliminary only.

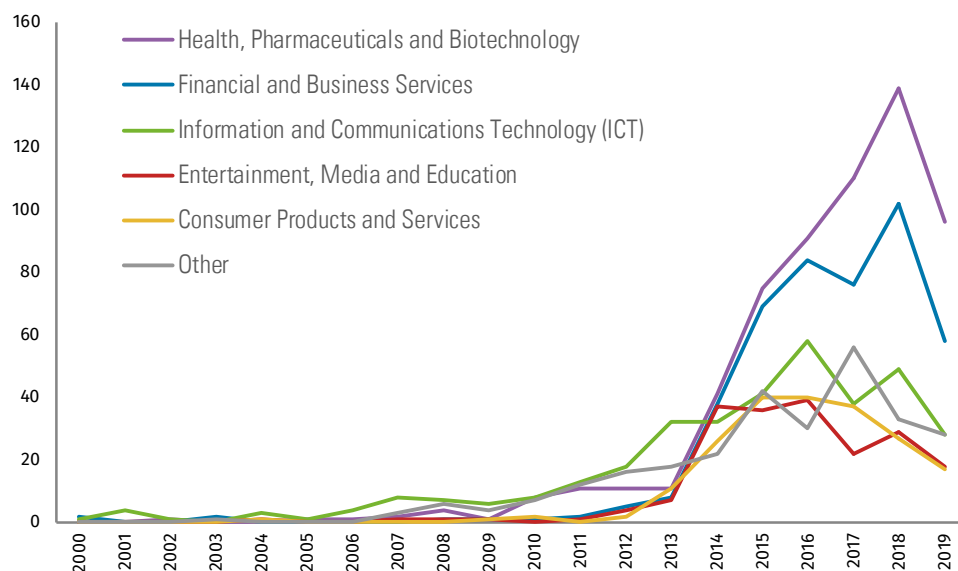
INDUSTRY AND TECHNOLOGY TRENDS

As described in Section 2.1, we assign mutually exclusive industry classifications to each investment target based on which of the 14 Rhodium Group industry categories the company primarily services or operates in.

Consistent with the drop in overall investment value, the number of deals in which Chinese entities participated also decreased across all industry sectors in 2019. Health, Pharmaceuticals and Biotechnology was the top target for Chinese venture capital in the US by the number of venture capital transactions (96 individual rounds) and Financial and Business Services came in second (58 rounds). The ranking of other top sectors remained broadly the same as in previous years: Information and Communications Technology (28 rounds) and Entertainment, Media and Education and Consumer Products and Services (both under 20 rounds) were the next two highest.

Figure 11: Annual Chinese Venture Capital Investment in the US by Target Sector*

Number of transactions



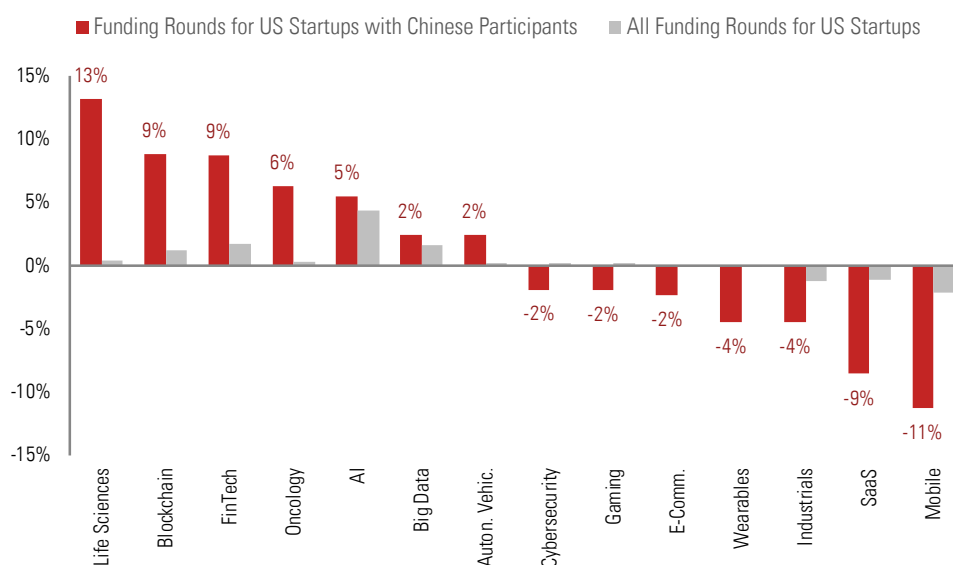
Source: Rhodium Group based on Bloomberg, Pitchbook and other databases. *Includes US-headquartered venture capital fundraising transactions involving at least one investor ultimately owned by a mainland Chinese entity. 2019 data are preliminary only.

As with US venture investment in China, we track Chinese venture capital investment activity in the United States across more than 50 non-mutually exclusive technology areas. This coding offers unique views into which trans-industry technology areas Chinese venture investors in the US are disproportionately targeting or avoiding.

Figure 12 shows the technology areas that saw the greatest change in targeted frequency by Chinese venture capital investors in the United States from 2014-2015 to 2018-2019. The technology areas that saw the greatest increase in Chinese VC investor interest were Life Sciences, Blockchain, Fintech, and Oncology. This is in contrast to trends in the broader US VC scene, where there was much smaller change in interest in these areas over the past two years. Technologies that Chinese venture investors in the United States pivoted away from most drastically over the period include Mobile, SaaS, Industrials, Wearables (consumer-tracking wearable devices) and E-Commerce.

Figure 12: Change in Technology Focus Areas for Chinese VC Investment in the US, 2014-2015 to 2018-2019

Change in percent of total funding rounds for US startups involving each technology



Source: Rhodium Group based on Pitchbook, Crunchbase, Bloomberg and proprietary research. Chinese transactions include all funding rounds with at least one participating Chinese-controlled venture fund (usually determined by general partner nationality) or other entity. 2019 data are preliminary only.

OUTLOOK

Preliminary data show a drop in Chinese VC activity in the US in the first quarter of 2020. We estimate new Chinese venture investment in the US reached \$400 million in 1Q 2020, down from \$640 million in 1Q 2019 and \$1 billion in 1Q 2018. Despite this drop, Chinese VC investment in the US held up better than flows in the other direction (US VC investment in China) and it outpaced newly announced Chinese FDI in the US in the same period. Big new deals in 1Q 2020 included Alibaba's participation in a \$750 million funding round for Quibi and Beijing Kunlun Technology's participation in Series B funding for Pony.ai.

Looking forward, we see additional headwinds for Chinese VC investors in the US. Aside from financial shocks resulting from the COVID-19 pandemic, Chinese venture investors will likely face a greater risk of CFIUS enforcement action under the new FIRRMA statutes (i.e. CFIUS will review VC transactions that were not submitted for review), new restrictions emerging from the US government's review of the "Emerging and Foundational" Technologies" list and other steps taken to bring about US-China technology decoupling.

3. CONCLUSIONS AND OUTLOOK

The numbers presented in this report show how a combination of political friction, regulatory tightening and market dynamics have driven two-way capital flows between China and the US to the lowest level in seven years.

The “Phase One” agreement between China and the US, struck in January 2020, had raised the prospect of a brighter outlook. While it did not address contentious structural issues in the US-China relationship, it promised to defuse tensions and reduce the risk of both nations entering a phase of more aggressive economic decoupling. This could have helped investors regain their appetite for low risk investments in non-sensitive industries and projects, leading to a modest rebound in two-way investments from depressed 2019 levels. However, the outbreak and global spread of COVID-19 in early 2020 has changed that trajectory in many ways, and the outlook is now more uncertain than ever before.

First, government efforts in both China and the US to contain the spread of the virus are having a serious impact on economic activity, including cross-border deal making. Real economy closures and policies restricting mobility depressed Chinese FDI to the US, which ground almost to a complete halt in 1Q 2020. A recovery is to be expected in the second half of the year but full-year numbers are likely to be materially impacted.

Second, the crisis is fundamentally altering the outlook for economic growth in China, the US and across the globe. This will reduce investors’ risk appetite. China’s GDP growth will be close to zero this year compared to an average of 7.6% in the previous decade, and that slowdown will be even more pronounced in certain sectors (for example, automotive). Company capital expenditures, including for foreign firms, will fall, and the weight of China’s economy in global investment allocation models is under review. The short-term outlook for the US economy is similarly gloomy (with 2020 US GDP projected to see a contraction) and many sectors targeted by Chinese investors in the past are likely to shrink, including tourism, energy and commercial real estate.

Third, the COVID-19 outbreak has spurred a debate about the risks of globalization and the need to reorganize global supply chains. The scramble for medical supplies has exacerbated concerns around the globe about an over-dependence on foreign supplies of certain materials. This has given rise to a consequential debate about re-shoring and risk diversification. China is at the center of this debate, and US companies could look to move manufacturing capacity out of China as part of a broader diversification push. At the same time, pressure to deglobalize supply chains could mean higher levels of FDI going forward as multinationals are forced to localize operations and source from a greater number of suppliers.

Fourth, crises also create opportunities and investors on both sides could seize them. Equity and credit markets have lost value due to the pandemic. This could generate buying opportunities. In the US, Chinese investors with a long-term horizon could target brands and consumer-related assets in entertainment, food or other impacted areas. In China, the deflation of the technology sector bubble has already piqued the interest of foreign investors. Since stimulus options are limited, allowing markets to pull in distressed asset buyers is even more important, opening up potential avenues for greater participation of US investors in certain industries.

Finally, the virus outbreak has altered the trajectory of the US-China relationship, which remains an important variable for the investment outlook. The COVID-19 crisis presented an opportunity for both countries to work together on crisis mitigation and scientific solutions to contain the spread of the virus. However, intensifying economic competition and a clash of political systems continues to damage the relationship as governments adopt an increasingly confrontational tone and engage in blame games. In both countries, these factors are giving rise to nationalism and anti-foreign impulses which is souring the mood and risk appetite of business-people on both sides of the Pacific. Despite current tensions, the economic argument for expanding two-way investment in non-sensitive sectors between the world's two largest economies remains valid. Whether these opportunities can be seized will depend in large part on political leadership on both sides.

REFERENCES

- American Enterprise Institute. *China Investment Tracker*. (Washington DC, 2020). <http://bit.ly/1LfXVbJ>.
- Bureau of Economic Analysis. *Activities of Multinational Enterprises*. (Washington DC, 1997-2017). <http://bit.ly/2aPKtgs>.
- Bureau of Economic Analysis. *Foreign Direct Investment in the United States*. (Washington DC, 2015-2016). <http://bit.ly/2aPKtgs>.
- Bureau of Economic Analysis. *New Foreign Direct Investment in the United States*. (Washington DC, 2014-2018). <http://bit.ly/2aPKtgs>.
- Bureau of Economic Analysis. *United States Direct Investment Abroad*. (Washington DC, 1982-2018). <http://bit.ly/2aPKtgs>.
- Enright, Michael J. Developing China. *The Remarkable Impact of Foreign Direct Investment* (Abingdon-on-Thames: Routledge, 2016).
- International Monetary Fund (IMF). *Balance of Payments and International Investment Position Manual*. (Washington, DC, 2009). <http://www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf>.
- Ministry of Commerce. 2018 年度中国对外直接投资统计公报 [2018 Chinese Outward Direct Investment Statistical Yearbook]. (Beijing: China Statistics Press, 2018).
- Moran, Theodore H., and Lindsay Oldenski. *Foreign Direct Investment in the United States: Benefits, Suspensions, and Risks with Special Attention to FDI from China*. (Washington, DC: Peterson Institute for International Economics, 2013).
- Organisation for Economic Co-operation and Development. *Benchmark Definition of Foreign Direct Investment—4th Edition*. (Paris, 2008). http://www.oecd.org/document/33/0,3343,en_2649_33763_33742497_1_1_1_1,00.html.
- Rhodium Group, National Committee on U.S.-China Relations. *New Neighbors: 2017 Update*. (New York, 2017). http://rhg.com/wp-content/uploads/2017/04/RHG_New-Neighbors_2017-Update_Reduced.pdf.
- Rhodium Group, National Committee on U.S.-China Relations. *Two-Way Street: 25 Years of US-China Direct Investment*. (New York, 2016). www.us-china-fdi.com.
- State Administration of Foreign Exchange. 中国国际收支平衡表 [China's Balance of Payments]. (Beijing, 2020). <http://www.safe.gov.cn/>.
- Stratford, Timothy P. *Measures and Practices Restraining Foreign Investment in China*. (Washington: Covington, 2014). <http://bit.ly/2aGneGI>.
- U.S.-China Economic and Security Review Commission, Rhodium Group. *Chinese Investment in the United States: Recent Trends and the Policy Agenda*. (Washington DC, 2016). <http://bit.ly/2gQozP0>.

APPENDIX: DATASETS AND COMPILATION METHODOLOGY

Direct Investment

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 Investment Project is based on proprietary datasets compiled by Rhodium Group based on such a transactional approach. The dataset includes FDI 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 Investment Project's data on direct investment 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.

Venture Capital

The venture capital data presented in this report come from a second proprietary Rhodium dataset on venture capital investments made by Chinese nationals, corporations and other entities in US-headquartered startups.

This dataset covers equity investments from the angel and seed stages through all later-stage, pre-IPO funding rounds. It includes direct transactions involving mainland Chinese investors as well as investments through mainland Chinese-owned subsidiary firms domiciled elsewhere. Where partnership structures are used as investment vehicles, investments are counted based on the ownership of the general partner, which is the entity with the decision-making authority over fund capital deployment.

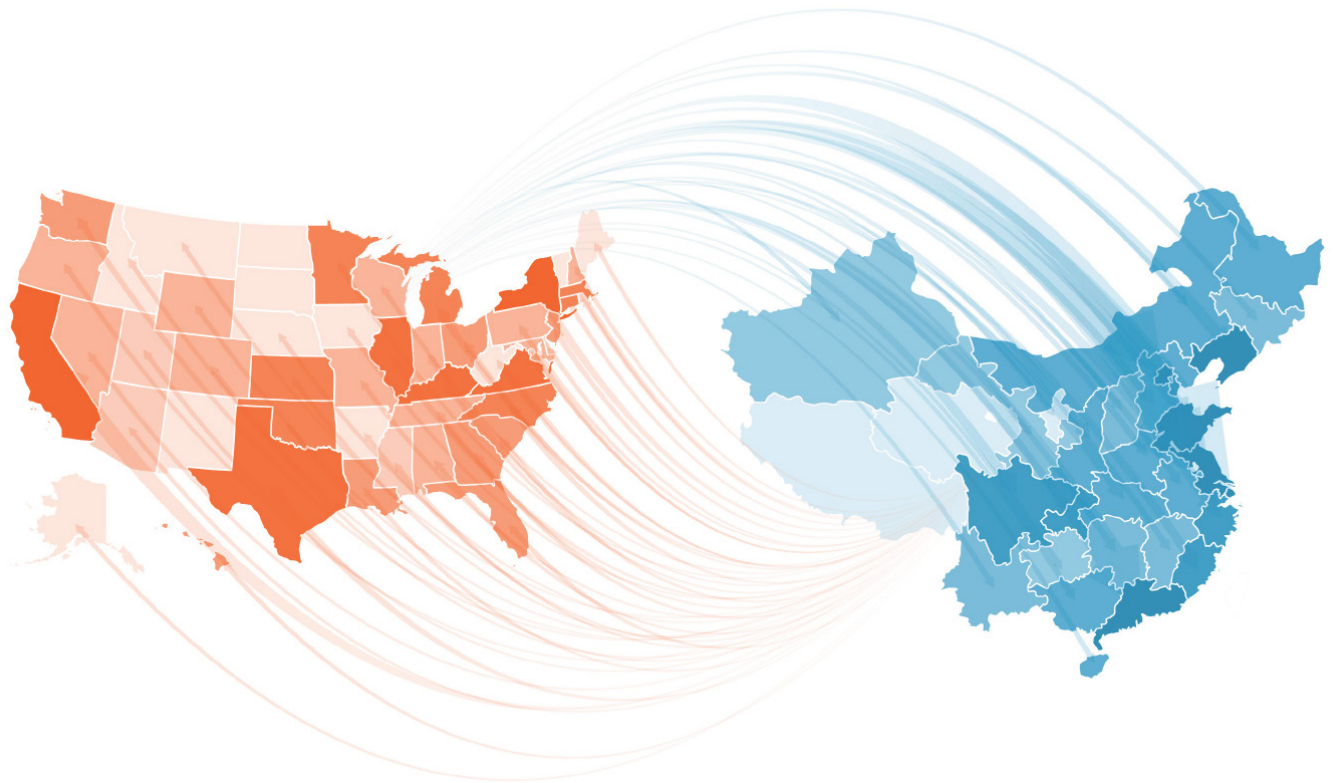
Venture capital investments are recorded at the closing date of the relevant investment or fundraising round, with each fundraising round comprising a single transaction having potentially multiple investors. Where only total fundraising round values are publicly disclosed and individual investment sizes are unknown, a Chinese investment total is estimated by assigning a pro-rata share of the total fundraising round value to all Chinese participants based on the total number of known fundraising round investors. Transactions with no known investment totals are included in the dataset at zero value.

The dataset does not include venture investments made by entities domiciled in mainland China that are ultimately non-Chinese owned. It does also not include investments in firms headquartered in other countries that have operations in the United States.

While venture investments sometimes include stakes of more than 10 percent in a target company and may therefore qualify as direct investments, to avoid double counting all venture capital investments are confined to this data set regardless of stake size.

Data Visualization

The US-China Investment Project database is constantly updated, even for previous time periods. More details on the data methodology, research reports and an interactive data visualization are available on the US-China Investment Project website (www.us-china-investment.org).



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