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CHAPTER 1

# Economic Truths Towards Resolving China-US Trade Conflict

**Ha Jiming and Adam S. Posen**

All of us, empirical reality-based economists, whether working in China or the United States, believe that outright trade war between the world's two largest economies would be devastating to the working people of both countries, as well as destructive to the future of the entire world economy. We would not say economic peace at any price, but we would say that at present the costs of conflict far outweigh the current causes of dispute in the China-US economic relationship. Those costs would be both direct, in terms of short-term losses of growth and employment, and indirect, in terms of long-term damage to the world trading system, diminishing investment and efficiency going forward. We all repudiate the view associated with the Trump administration that the international economic order—which the United States built and has led—is skewed to exploit the US economy. We all believe that China-US trade has on net been clearly win-win, and will continue to be so, if it is conducted by the rules of that order—and if those rules are consensually adapted to economic change. In fact, given the degree to which China has developed, the two economies have more fundamental economic interests in common now than before, including in safeguarding and abiding by that system.

Clearly, our beliefs, though justified by objective economic assessments, are not widely shared in the American body politic, or even in policymaking circles throughout the advanced economies. Some of this resistance to reality is an ideologically driven feeling of threat on the part of the Trump administration, but not all of it. There are points of genuine dispute between the United States and China over their economic interaction. Even if their economic significance is often exaggerated, these are legitimate points of contention, which have to be addressed in a constructive manner. That is why many of these points of dispute pre-date the Trump administration's unilateral actions against Chinese exports, why there is support well beyond the White House for some demands that China change behavior, and why even some multinational companies that have long invested in China are lining up with rather than against these measures. Meanwhile, China has its own popular suspicions of and complaints about American economic behavior, some of

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which are legitimate and some of which are baseless. Politically, many Chinese citizens are understandably offended by the confrontational and demanding tone that the Trump administration has publicly taken towards another sovereign country.

This is not to say simply, "both sides have a point," and throw up our hands. As policy economists, we do not assume that all complaints are equally valid. In keeping with that, we do not agree amongst ourselves on all the particulars regarding each government's complaints—there are some consistent differences between the CF40 and PIIE authors' points of view, perhaps reflecting their respective home biases and loyalties.[1] In this summary, we put forward what we do agree on, starting with the mutually beneficial priority of stopping short of a trade war, which no one could win. We hope that this will contribute to a more reality-based consideration of both countries' enlightened self-interests, which would yield progress on points of dispute in a manner consistent with keeping the world economy open for business.

**Slowing economic growth is likely to be a persistent reality for both China and the United States, so international trade must be seen as helping against not causing the slowdown.** There is a productivity growth slowdown across the advanced economies pre-dating the 2008–09 financial crisis, and US workforce expansion has also downshifted for the medium term. China's medium-term growth rate is slowing less sharply and from a much higher rate but just as lastingly (given demographics and diminishing room for catch-up urbanization). In both countries, this can feed political desires to scapegoat foreign competition or cheating as a cause of the slowdown. In fact, the opposite is the case—both China and the United States need the expanding markets and efficiency gains from global production and trade when internal growth engines slow. Policymakers must make this case rather than fan the flames of domestic opposition.

**The Trump administration's unilateral approach to trade disputes is counterproductive.** Whatever the merits of US economic complaints regarding trade with China, the use of unilateral tariff threats as a means to achieve economic ends is a mistake. In pure economic terms, tariffs will hurt downstream producers and global supply chains, as well as American consumers, far more than they will achieve (or cost China initially). In negotiating terms, this approach increases the risk of a tit-for-tat reaction, which could escalate uncontrollably between China and the United States. In diplomatic terms, it harms advanced economies (all US allies) in a host of ways as well as bystander emerging markets. And systemically, it breaks down the norms and rules of international economic conduct, which have led to greater prosperity and stability for all. This approach is even more counterproductive when conveyed in a confrontational manner with an arrogant tone to another sovereign country, as the Trump administration has chosen to use both in public and private. While the Trump administration has treated many of its important trading partners, such as Germany and Mexico, in this manner, not just China, it is particularly ill-advised here, given the geopolitical and historical background of the China-US relationship.

**The economic disputes that can be addressed using the World Trade Organization (WTO) and other multilateral mechanisms should be addressed using those mechanisms.** China has complied with the overwhelming majority of WTO decisions, including those against it in particular disputes. The United States has won the overwhelming majority of WTO cases in which it has been involved. The disagreement over market economy status for China has no effect on the utility and basic fairness of WTO dispute adjudication. Clear decisions with legal status prevent tit-for-tat escalation by delinking issues.

1. The papers by CF40 authors will be published in a separate PIIE Briefing later in summer 2018.

**Some current disputes, notably over technology transfer, cannot be resolved in the WTO, so new agreements must be made.** The WTO was designed to deal with clearly trade-related issues, and its capabilities reflect those that were most salient when the transition from the General Agreement on Tariffs and Trade (GATT) took place. In the intervening decades, many new aspects of economics, and thus many new aspects of trade, have become important. Most of the issues having to do with technology, including intellectual property rights, internet and data privacy, and social concerns about trade, need new forms of agreement. This will not be easy, and it will require a start in bilateral or plurilateral negotiations, but there are models out there. These can be pursued with an eye towards eventual adaptation of WTO frameworks to include these issues. False issues, such as claiming national security exceptions with regard to normal commercial disputes like on steel overcapacity, however, must not be used as excuses to go around the WTO.

**Bilateral trade deficits are not a reasonable or useful goal for trade policy to target.** There are no good economic reasons for the Trump administration to make reduction of the bilateral current account imbalance between the United States and China a policy goal. Global imbalances do matter, but China is not running a persistent large global surplus the way it was in the early 2000s. Meanwhile, the surest and best way for the United States to reduce its own global trade deficit is to increase net national saving through domestic policy changes. The unfunded large-scale procyclical fiscal expansion now under way in the United States will make matters worse. It will increase the bilateral trade deficit with China as well, assuming that China's share of total US imports does not shrink (not that it matters). Chinese leaders should not resort to managed trade offers to attempt to placate the Trump administration on this point—so doing would legitimate this mistaken pursuit, would fail to change the net bilateral imbalance anyway (given the US fiscal stance and likely tightening of the Federal Reserve's monetary policy), and would induce significant economic distortions.

**Agreements should be about commercial and government behaviors, not about economic outcomes (also known as managed trade).** Many factors go into economic outcomes in any given industrial sector, let alone for large national economies. It is folly to have trade agreements target economic variables that cannot be controlled. Circumstances may quickly shift, making even once desirable outcomes suboptimal, even if they were achievable. In contrast, there clearly are behaviors—by companies or state-owned enterprises, or by governments—that are prima facie unfair to trading partners. Behaviors can be verifiably observed and controlled through policy and enforcement of laws. And behaviors that are harmful due to unfairness or distortionary are likely to remain harmful even as economic circumstances change. Hence the subject of China-US negotiations should be what behaviors to restrict, not what industries to protect.

**Where China and the United States can agree on economic opening in China, subject to verifiable rules, it will benefit both economies.** The bulk of China's astonishing growth has come through the liberalization of its private sector. A key part of this private-sector-led growth was profitable commercial agreements for American and other multinationals to transfer production and some technology to Chinese partners and investments. Just as in every economy, part of the benefit of opening also comes from the competitive pressures that foreign entrants put on domestic incumbents. There are substantial gains to be had for Chinese households and the overall economy were China to truly liberalize parts of its service sector. All of this requires agreement on enforceable rules of conduct for Chinese and American companies. It does not comprise an attack on Chinese approaches to state-owned enterprises per se nor seek to impose an "American model" on the Chinese economy. It does, however, require that in sectors where foreign firms are to compete, they truly be allowed to compete and take market share.

**Chinese companies have a right to compete with US companies and succeed in any sector, including in high-tech, but they do not have a right to transfer of US technology.** The same holds true for the United States with respect to Chinese competition. Where Chinese private-sector firms fairly compete, they must be allowed to take market share they earn, even in high-tech sectors. While much has been made of Made in China 2025 and the earlier "indigenous innovation" programs, Chinese government' aspirations to make China a technological leader in some fields should not be considered a threat to the United States. Even some government subsidization of relevant R&D or technical education in this pursuit should not be inherently contentious, as the US, European, and Japanese governments also indulge in such general support policies (though some frictions over specific measures, as in Airbus vs. Boeing, are inevitable). But any technology transfer from the United States must come through open source or voluntary commercial agreements, and this must be true in fact, not just lip service. The United States not only has the right but also is justified in pressing the Chinese government on enforcement of intellectual property rights, if it documents specific cases of illegal appropriation. US decisions to restrict what technologies are exported to China (or to any other country not a US treaty ally) may be frustrating, and can be argued with, but ultimately must be accepted, not gotten around.

**The United States should not be vetoing or trying to block China's increasing role in international economic governance, and it should not withdraw from the international institutions it led in creating.** The rules-based international economic system, which the United States led in building, is in everyone's interest, and it remains so. There are rules, norms, and responsibilities that go with membership, which China must comply with like any other member of the system. But on those terms, there is nothing to fear from China's participation. In fact, it is in the interest of the United States and the world that China shoulder a share of the leadership burden and of contributions to support public goods commensurate with its global economic weight. Failure to give China that voice and vote not only overburdens the United States but also diminishes the legitimacy and reach of the international institutions, unnecessarily restricts the views expressed in decision-making, leading to blind spots, and encourages China and others to go outside the system. By engaging further in the system China will not displace the United States from global leadership anytime soon and will not undermine the liberal values built into the rules-based system. If anything, the opposite would happen: The United States choosing to withdraw from its role as chair of the system, whether before or after China gets expanded voice, is the only thing that could displace it from leadership. That would be truly self-defeating, as well as a loss for China and the world.

**Expanded two-way cross-border direct investment should play a role in improving China-US economic relations in the long term.** The previous window for concluding a bilateral investment treaty between China and the United States has closed. At present, there is widespread support in both parties in the US Congress to expand the powers of the Committee on Foreign Investment in the United States (CFIUS) and significantly restrict Chinese foreign direct investment (FDI) into the United States. Limits on foreign ownership in China are tipped to be increased but not removed. Ultimately, however, both countries need more rather than less FDI from each other, with clearer ownership rights. The efficiency and employment gains from such economic integration would be substantial. As Japan's experience in the United States shows, such an expansion would also help defuse economic tensions both at the popular level (by creating tangible jobs associated with the other country) and among policymakers (by leading to an "exchange of hostages" to keep the relationship on track).

CHAPTER 2

# The Accumulating Self-Inflicted Wounds from Trump's Unilateral Trade Policy

**Chad P. Bown**

China's integration into the world trading system has not been smooth for existing World Trade Organization (WTO) members. The most vocal among them has been the United States—one of the chief architects of the WTO and the General Agreement on Tariffs and Trade (GATT) before it.

There is nothing new in 2018 with the US government being concerned with China's policies or choosing to act on them. On the multilateral front, after a five-year grace period following China's WTO accession in 2001, the United States and other countries began challenging Beijing's policies in significant numbers through formal dispute settlement. Roughly 20 percent of all disputes brought to the WTO between 2006 and 2018 were filed against China, and the United States was involved in most as a complaining country. Bilaterally, Washington has conducted high-level dialogues with Beijing dating back to the second term of the George W. Bush administration to directly address its unease. And systemically, the United States established a long-term strategy of writing new trading rules through megaregional agreements like the Trans-Pacific Partnership to address many of the limitations of current trade agreements. These rules were written with China in mind, anticipating that economic incentives would entice Beijing to seek accession to the agreement at some point down the line.[1]

In 2017, the incoming US administration thus inherited longstanding American apprehension with China's policies, as well as several institutionalized, ongoing procedures designed to tackle those concerns.

President Trump has thrown those approaches out the window. As promised during the 2016 campaign, he withdrew the United States from the TPP agreement. He has mostly disbanded the high-level, institutionalized bilateral talks undertaken by the previous two administrations. There are few indications that

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1. China was obviously never a party to the TPP negotiations but the TPP does include an accession clause and several provisions—e.g., state-owned enterprises, transparency, electronic commerce, labor, and environment—that address some of the major concerns with China.

the Trump administration seeks engagement of the WTO dispute settlement system; to the contrary, there are worrying signs that it is taking deliberate steps to weaken it (Payosova, Hufbauer, and Schott 2018).

Instead, the Trump administration's approach toward China has been to create new areas of conflict. Trump has invoked US trade laws that afford the Executive branch of the US government tremendous discretion to impose new trade restrictions (Hufbauer 2016). This paper provides more detail on the Trump administration's deliberate instigation of trade conflicts and describes some of the political-economic consequences of adopting such an approach.

Thus far, Trump's conflicts fall into three categories. The first includes the national security tariffs on steel and aluminum. The second covers tariffs and other remedies to address China's potential misuse of American intellectual property, forced technology transfer, and cybertheft. The third involves tariffs and other trade restrictions arising under the historically-used US trade laws of antidumping and countervailing duties, as well as renewed use of safeguard protection, on products like solar panels and washing machines.

While Trump's conflicts have begun, it is still too early to say how they will be resolved. After cataloguing the conflicts, the paper identifies some of the consequences facing the United States of these protectionist actions. American consumers and downstream US industries, as well as those caught up in Beijing's retaliation, will all lose. The Trump administration's alienation of trading partners that had previously shared common grievances will weaken international cooperation, leaving the United States to go it largely alone vis-à-vis China. This cost will be increasingly difficult to reverse as other countries start to benefit from discriminatory access to the Chinese market that US commercial interests are being forced to vacate due to Trump's unilateralism.

## TRUMP'S STEEL AND ALUMINUM TARIFFS

In April 2017, the Trump administration self-initiated two investigations under Section 232 of the Trade Expansion Act of 1962. The administration's subsequent inquiries took place over a nine-month period and were centered on the controversial legal justification that imports of steel and aluminum threaten American national security.

Unlike typical investigations under US trade laws such as antidumping, countervailing duties, or safeguards, the Section 232 investigations were highly secretive. The products under review were not revealed to the public until the White House released the reports of the investigations on February 16, 2018. It turns out, they covered US imports in 2017 of $31 billion of steel and $17 billion of aluminum.

On March 1, Trump announced he would impose tariffs of 25 percent on steel and 10 percent on aluminum on all countries and products covered in the reports, or on $48 billion of trade. On March 8, he proclaimed the tariffs would go into effect on March 23 but exempted Canada and Mexico, excluding about one-third—or $15.3 billion—of imports he had announced would be hit just a week earlier (White House 2018b,c). On March 22, he further exempted the European Union, Australia, Argentina, South Korea, and Brazil, albeit seemingly only through May 1, 2018.[2] Suddenly, roughly 63 percent of imports were exempt from the tariffs.

2. On March 26, 2018, USTR and the Korean trade minister released a joint statement on an agreement in principle that South Korea would be permanently exempted from Trump's steel tariffs in exchange for modifications to the Korea-US Free Trade Agreement, which address "issues related to investment, tariffs, trade in automobiles, and trade remedies. Additional progress was made in the areas of pharmaceuticals, customs, and textiles to smoothly implement the KORUS FTA" (USTR 2018a). Korea was exempted from US

Figure 1 illustrates the major trading partners that were hit—and that were exempted—by the March 23 tariffs. Overall, Trump's national security tariffs of March 23 applied to the sources of only one-third of steel and 45 percent of aluminum imports.

As described in more detail below, the law under which Trump is imposing these tariffs allows him wide discretion to modify the terms of the protection, seemingly with little notice. He can add or subtract countries and products, change the tariff levels, or switch to imposing quantitative limits on imports. The trade restrictions in place as of March 23—or even May 1—may reasonably be viewed as temporary or highly uncertain.[3]

## How Trump's Steel and Aluminum Tariffs Affect China

Trump's steel and aluminum tariffs of March 23 did not exempt China. Yet China's exports of steel and aluminum to the United States totaled only $2.9 billion in 2017 (figure 1). Put differently, China accounted for only 6 percent of the $48 billion of US imports in 2017 of products ultimately covered by Trump's national security investigations. And it accounted for only 16 percent of the $18 billion of US steel and aluminum imports over which Trump imposed tariffs on March 23.

China's exports of steel and aluminum to the United States are relatively small because more than 90 percent of these exports are already subject to special tariffs (safeguards, antidumping, and countervailing duties), most of which were imposed long before Trump assumed office in 2017 (figure 2). His new tariffs now make it so 100 percent of China's steel and aluminum exports to the United States are covered by special trade restrictions.

## China's $3 Billion Response to Trump's Steel and Aluminum Tariffs

On April 2, Beijing retaliated with new tariffs on US exports worth some $3 billion in 2017: 25 percent tariffs on $2 billion of imports of products such as recycled aluminum and pork and 15 percent tariffs on $1 billion of imports of products such as fresh fruit, dried fruit and nuts, wine, ethanol, ginseng, and seamless steel pipes.[4]

Beijing's tariffs are deployed in a manner similar to the "rebalancing" approach that the European Union had originally developed in early March to respond to President Trump's threatened tariffs on its exports before receiving an exemption.[5]

China's legal argument may be that Trump applied steel and aluminum tariffs for economic (as opposed to national security) reasons. Thus, if one reinterprets these tariffs as being imposed under the safeguards law, trading partners can seek immediate compensation (retaliation) under the WTO's Agreement

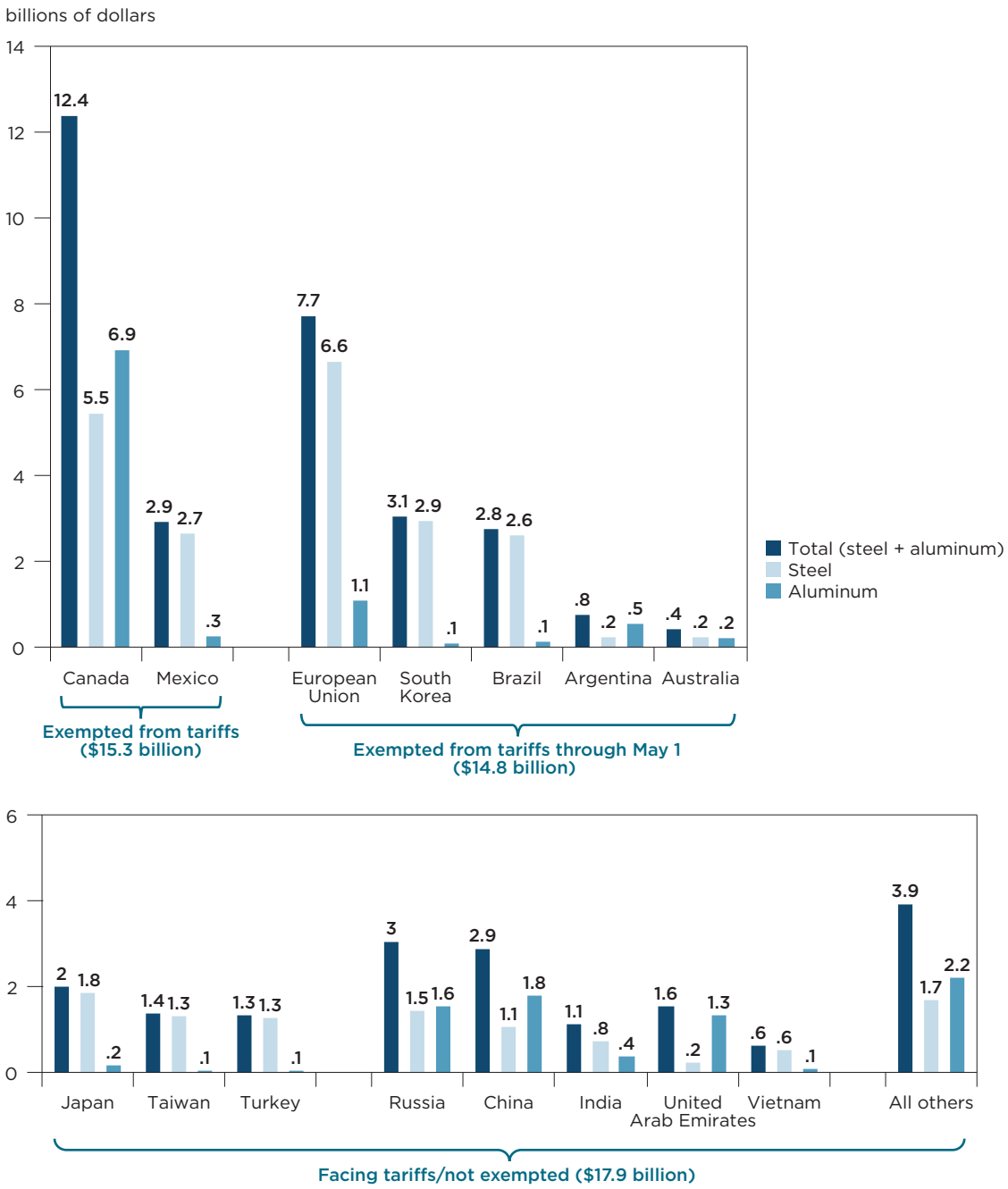
steel tariffs also because it reportedly agreed to a quantitative limit on its steel exports to the United States of 70 percent of its average steel exports to the US market in the 2015–17 period. It is unclear whether it will be administered as a quota or voluntary export restraint. See Government of Korea (2018) and Schott and Lu (2018b).

3. President Trump directed the USTR to negotiate country-level exemptions and Commerce Secretary Wilbur Ross to set up a procedure to process requests for product-specific exclusions.

4. For the product-level trade subject to China's retaliation, see Schott and Lu (2018a).

5. See the explanation in Bown (2018d).

**Figure 1 US imports of steel and aluminum in 2017, by selected trading partner and tariff/exemption status**




*Sources:* Bown (2018a). Author's calculations of imports ($31 billion of steel and $17 billion of aluminum) are based on matching the Harmonized Tariff Schedule product codes in the two Section 232 reports (Department Commerce 2018a, 2018b) to 2017 import values from the US International Trade Commission Dataweb (aluminum) and Commerce Department's Import Monitor (steel). Totals may not sum due to rounding. Tariffs/exemptions as of March 22, 2018 proclamations (White House 2018d, 2018e).

**Figure 2a US steel imports subject to special tariffs, 1995–2017**

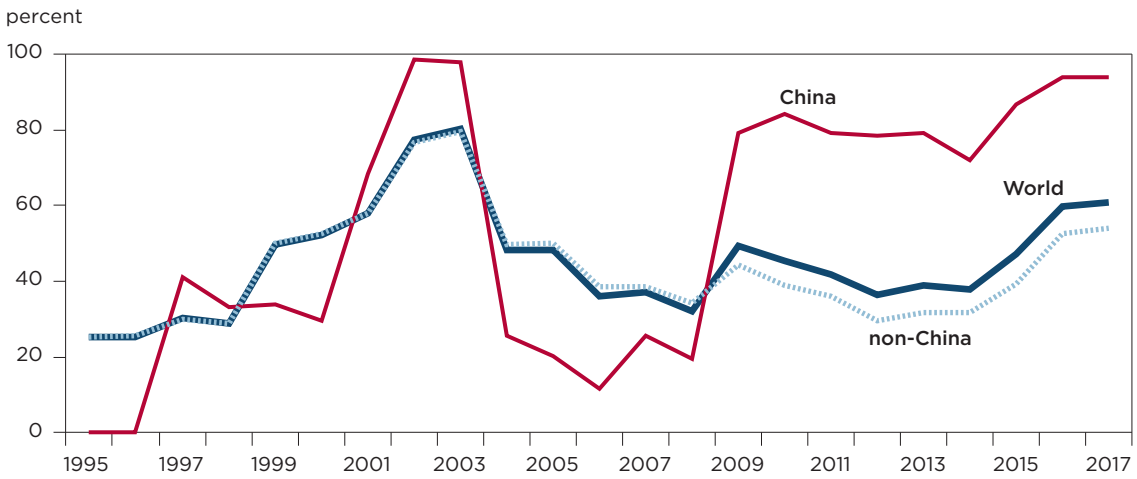
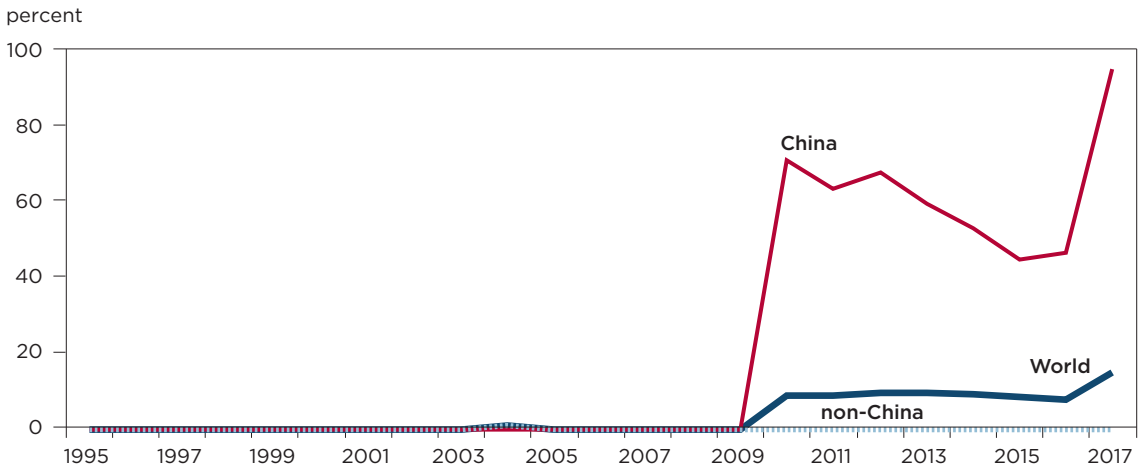



**Figure 2b US aluminum imports subject to special tariffs, 1995–2017**




Note: Special tariffs are antidumping duties, countervailing duties, or safeguards.

*Source:* Bown (2018b). Constructed by the author following the methodology described in Bown (2016a) with antidumping and countervailing duty data from Bown (2016b), which have been updated from the Federal Register. Steel and aluminum products as defined by the scope of Harmonized Tariff Schedule codes in Department of Commerce (2018a) and (2018b), respectively.

on Safeguards Article 8, if exports of the products subject to the new tariffs had not been increasing in absolute terms. The retaliation, however, is supposed to equal the amount of trade affected by Trump's tariffs.

China's view is that since Trump's tariffs hit roughly $3 billion of Chinese exports of steel and aluminum, which had not been increasing in absolute terms, China was within its rights to demand compensation (retaliation) by imposing its own tariffs on roughly $3 billion of US exports.[6]

On April 5, China filed a formal dispute at the WTO challenging Trump's national security tariffs on steel and aluminum (WTO 2018).

6. Legal scholars debate the questionable WTO-legality of this sort of retaliation. For a discussion, see Lester (2018) and Charnovitz (2018).

## TRUMP'S SECTION 301 TARIFFS

On August 14, 2017, President Trump instructed the US Trade Representative (USTR) to self-initiate an investigation into Chinese unfair trade practices under Section 301 of the Trade Act of 1974.

On March 22, 2018, USTR issued its report (USTR 2018b), and President Trump announced "with China, we're going to be doing a Section 301 trade action. It could be about $60 billion but that's really just a fraction of what we're talking about."

The Section 301 report made four main allegations. The first involved the various ways that Chinese policy explicitly or implicitly created incentives for US companies to form joint ventures (with local Chinese firms) and transfer their technology to those firms to gain access to the Chinese market. Second, the investigation described a set of Chinese laws and regulations that force American companies seeking to license their technologies to Chinese counterparts to do so on unfavorable, nonmarket terms. Third, the Chinese government's outbound investment policy is part of its broader industrial policy that also allows for the unfair acquisition of American technology. Fourth, the Chinese government has supported a policy of cyber-intrusion into the commercial operations of American companies, which has allowed it to steal trade secrets and other proprietary business information.

USTR described three actions that the United States would take in response to the Section 301 report. First was a formal WTO dispute that would challenge the second issue of China' laws and regulations on licensing, which USTR alleges do not conform to China's WTO obligations. Second, the United States would consider additional measures to deal with Chinese investment potentially beyond that arising via the process of screening inbound investment through the Committee on Foreign Investment in the United States (CFIUS).[7] The third action was to impose new US tariffs, presumably referring to President Trump's "$60 billion."

### US Imports from China Subject to Trump's Section 301 Tariffs of 25 percent

After the US markets closed on April 3, 2018, the Trump administration published a list of 1,333 products that were being considered for the proposed 25 percent tariffs (USTR 2018c). However, from the August 14 announcement through April 3, the investigation did not reveal any public information about the products that were being considered for new Trump tariffs.

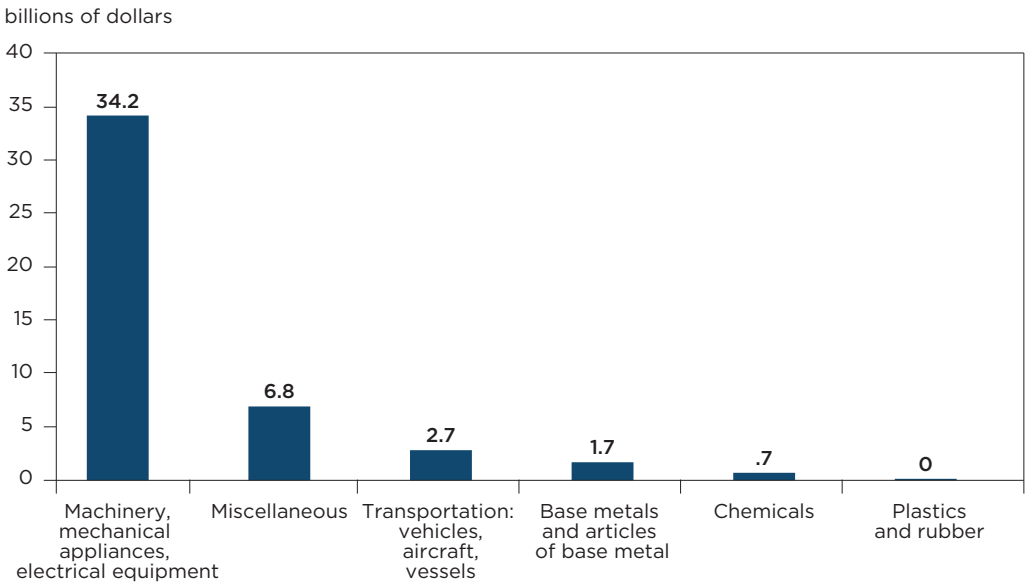
It turns out that Trump's proposed 25 percent tariffs would cover an estimated $46.2 billion of US imports from China in 2017—somewhat less than the $60 billion he had suggested on March 22. All told, nearly 85 percent of the imports covered by the tariffs are intermediate inputs or capital goods.

Figure 3 illustrates the top sectors hit by Trump's proposed tariffs. The standout is machinery, mechanical appliances, and electrical equipment at $34.2 billion. The tariffs would also impact miscellaneous manufactured products ($6.8 billion) and transportation equipment ($2.7 billion). Interestingly, the tariffs would also be applied to $1.7 billion of metal products, including a number of the same steel and aluminum imports that were already subject to Trump administration tariffs under Section 232 of the Trade Expansion Act of 1962 that went into effect on March 23 (Department of Commerce 2018a, 2018b).

Of the 1,333 products on the proposed tariffs list, the largest imports (defined at the Harmonized System 8-digit level) include varieties of televisions ($3.9 billion), automobiles ($1.5 billion), printing machine parts/accessories ($1.4 billion), and aluminum ($1.1 billion).

7. Proposed legislation in Congress would substantially widen the scope of CFIUS to also potentially screen outbound foreign investment. See Hufbauer (2017).

**Figure 3 US imports from China in 2017 subject to Trump's proposed Section 301 tariffs of April 3, 2018**




*Source:* Bown (2018c). Constructed by the author using US import data from US International Trade Commission Dataweb. Industry categories are defined use Harmonized System 2-digit sections as follows: Machinery, mechanical appliances, electrical equipment (84–85); Miscellaneous (90–97); Transportation: vehicles, aircraft, vessels (86–89); Base metals and articles of base metal (72–83); Chemicals (28–38); and Plastics and rubber (39–40).

## US Exports to China Subject to Beijing's 25 Percent Tariffs in Retaliation to Trump's Section 301 Tariffs

On April 4, 2018, less than 11 hours after the Trump administration published its Section 301 product list for new tariffs on China, the Chinese government announced a list of US products over which it proposed to impose 25 percent tariffs (MOFCOM 2018a). Beijing's tariffs would cover an estimated $49.8 billion of US exports to China in 2017.[8]

Figure 4 illustrates the top sectors hit by China's proposed retaliatory tariffs. The two standout US export sectors are transportation: vehicles, aircraft, and vessels ($27.6 billion);[9] and vegetable products ($13.7 billion). Other sectors that would be hit include plastics and rubber ($3.5 billion), chemicals ($2.1 billion), and mineral fuels ($1.7 billion).

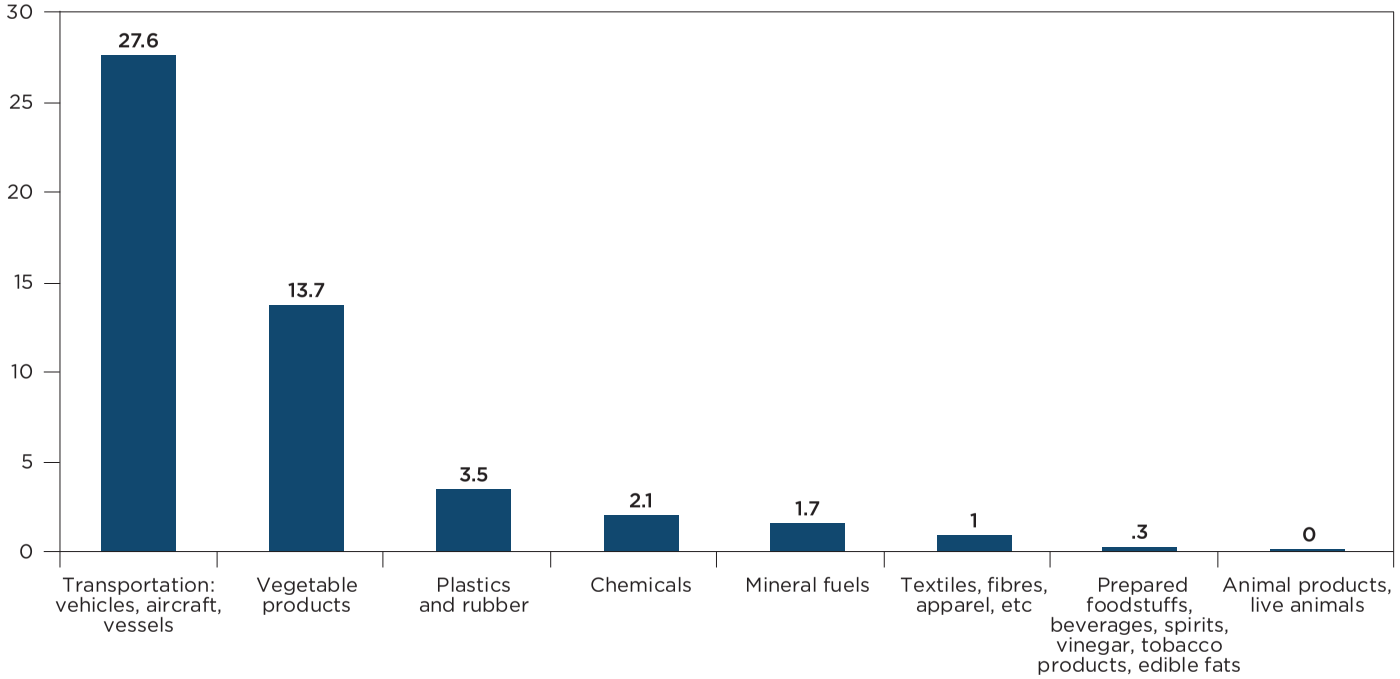
The largest US exported "products" (as defined at the 6-digit level) include varieties of airplanes ($16.2 billion), soybeans ($12.4 billion), and motor vehicles ($10.0 billion).

8. Because Chinese import data are not publicly available, these data are based on matching Beijing's published product codes to data on 2017 US exports to China. However, this exercise required the data to be matched at a higher level of aggregation than what China had published, as publicly available US export data concords to Chinese import product codes only at the 6-digit level of the Harmonized System. This approach therefore reduces the 106 8-digit Harmonized System products published by China to 83 6-digit products.

9. There is one concordance issue regarding aircraft on China's retaliation list, which was coded as 88024010. The United States recorded zero exports of the 6-digit product 880240 in 2017 but $16.2 billion of exports of product 880000 in 2017. I have assigned the $16.2 billion of US exports to Chinese import code 880240 in 2017. In years for which Chinese import data are available (e.g., 2015) its imports of US aircraft enter as an import of product 880240 even though the US export data is coded as 880000. The maintained assumption is thus that China intended to put US exports of large civil aircraft on its retaliation list.

**Figure 4 US exports to China in 2017 subject to China's tariff retaliation of April 4, 2018**

billions of dollars




*Source:* Bown (2018c). Constructed by the author using US import data from the US International Trade Commission Dataweb. Industry categories are defined use Harmonized System 2-digit sections as follows: Transportation: vehicles, aircraft, vessels (86–89); Vegetable products (06–15); Plastics and rubber (39–40); Chemicals (28–38); Mineral fuels (27); Textiles, fibres, apparel, etc. (50–63); Prepared foodstuffs, beverages, spirits, vinegar, tobacco products, edible fats (16–24); and Animal products, live animals (01–05).

### Subsequent Steps on the Section 301 Action

In response to China's escalation and threat of tariffs, on April 5 President Trump issued another demand relating to the Section 301 investigation. In particular, he indicated that

> "In light of China's unfair retaliation, I have instructed the USTR to consider whether $100 billion of additional tariffs would be appropriate under section 301 and, if so, to identify the products upon which to impose such tariffs. I have also instructed the Secretary of Agriculture, with the support of other members of my Cabinet, to use his broad authority to implement a plan to protect our farmers and agricultural interests." (White House 2018a)

This statement suggests that another round of products with additional tariffs is likely forthcoming. It also suggests that the president may seek to subsidize American farmers suffering losses due to China's retaliation over agricultural products.

If new US agricultural subsidies are provided, the US-China spat could spill over and adversely affect agriculture interests in other countries—e.g., Argentina, Australia, Brazil, Canada, and the European Union. Farmers in these countries, who would be adversely affected by US subsidies, would likely demand their own remedy—potentially subsidies from their governments or tariff retaliation against the United States.

In a press briefing on April 6, China's Ministry of Commerce stated, "If the US announces a list of an additional 100 billion taxation products, China has made full preparations. It will not hesitate to immediately and vigorously counterattack" (MOFCOM 2018b).

At the time of writing, neither the United States nor China had actually implemented the tariffs in the Section 301 dispute. In the case of the United States, the April 3 notice provides a multiweek period for public comment before the tariffs are imposed, including a public hearing on May 15, 2018 (USTR 2018c).

## OTHER US TRADE LAWS: ANTIDUMPING, COUNTERVAILING DUTIES, AND GLOBAL SAFEGUARDS

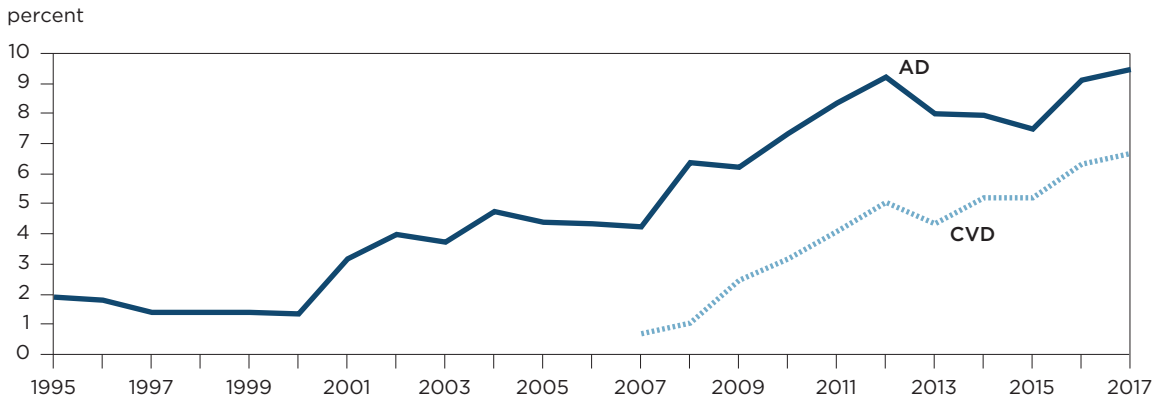
In the 25 years prior to the Trump administration, the United States administered import protection under trade laws such as antidumping and countervailing duties, and less frequently global safeguards. China's exports to the United States have been a prime target of import restrictions under antidumping, especially since its 2001 WTO accession. Import protection under antidumping and countervailing duties is thus not new to the Trump administration.

Figure 5 illustrates the share of US imports from China subject to imposed antidumping and countervailing duties in effect each year over 1995–2017. (This figure updates information recently described in a study of the US-China "nonmarket economy" dispute (Bown 2016a) with newly available data through 2017.)

The United States continued to treat China as a nonmarket economy in its antidumping investigations through 2017. As of 2017, 9.4 percent of US imports from China were subject to antidumping duties, up from 9.1 percent in 2016. Furthermore, 6.7 percent of US imports from China were also subject to imposed countervailing duties, up from 6.3 percent in 2016.[10]

10. To clarify, virtually all US imported products from China subject to imposed countervailing duties were also subject to simultaneously imposed antidumping duties. This implies that, in 2017, 9.4 percent of US imports from China were subject to special tariffs, and not 16.1 percent (= 9.4 percent + 6.7 percent).

**Figure 5 US share of bilateral imports from China subject to imposed antidumping and countervailing duties, 1995–2017**




AD = antidumping, CVD = countervailing duty

*Sources:* Author's calculations relying on COMTRADE import data via World Integrated Trade Solution and Bown (2016b) and updates.

Figure 5 does not show the Trump administration's two global safeguard investigations involving solar panels and washing machines, which covered US imports worth about $10 billion in 2017 (Bown and Joseph 2017, Bown 2018f). The last previous global safeguards case to result in import restrictions was initiated in 2001.

In January 2018, the Trump administration imposed new global safeguard trade restrictions on imports of solar panels and washing machines from almost all sources, not only China. However, much like steel and aluminum (see figure 2), the United States has already imposed antidumping duties on imports of both products from China (captured in figure 5). January's tariffs therefore imposed another level of tariffs on the same imports from China that were already subject to special import restrictions. Most of the US imports of solar panels and washing machines in 2017 were not from China but from other trading partners.

Nevertheless, shortly thereafter, Beijing retaliated by announcing a new antidumping and countervailing duty investigation of roughly $1 billion of sorghum imports from the United States (Bown 2018e).

One final point on figure 5 is in order. As of 2017, the United States already imposed special tariffs through these laws on more than 9 percent of US imports from China. An important question is thus what share of imports from China that President Trump's newly proposed Section 301 tariffs cover—whether $50 billion, $150 billion, or more—are already covered by special tariffs, in which case President Trump's additional tariffs on those products may be largely redundant.

## SELF-INFLICTED WOUNDS FROM TRUMP'S ACTIONS

The costs to the United States of its own trade policy actions are accumulating and provide several useful, albeit painful, lessons.

Furthermore, the Trump administration has not clearly defined its long-term trade strategy with China—beyond instigating conflict. But under the assumption that the Trump administration recognizes the repeated-game nature of the trade relationship, and this period of high tariffs is part of a longer-term strategy to get China to further adhere to a rules-based and market-oriented system in the future, alongside lowering future trade barriers, which would provide bigger benefits for all. To assess the current approach, it is

important to understand the size and scope of the costs that are being experienced during the current period of higher tariffs.

### Economic Costs to the United States of Its Own Tariffs

Broadly speaking, the Trump administration is imposing higher tariffs on two kinds of products—intermediate inputs and consumer goods. In general, tariffs impose costs on consumers of such products—higher prices, lower volume, reduced access to foreign varieties—that outweigh the limited gains to local producers who face less import competition.

For consumer products such as washing machines—or others that may end up on the final product list in the Section 301 case—American households will suffer. Such an import tax may also turn out to be regressive, if it reduces the purchasing power of lower-income Americans who spend a greater share of their household budget on consumer goods, including imports.

Trump's tariffs on inputs like steel, aluminum, or the hundreds of "parts" on the Section 301 list feed into US production, frequently through cross-border supply chains. Raising the prices of intermediate inputs raises the costs to downstream US industries and makes American firms less competitive both in the North American and global markets. Their peers in the rest of the world can access similar inputs at lower prices because they do not face tariffs.

### Economic Costs to the United States of China's Retaliatory Tariffs

China's retaliation will add another layer of costs to the Trump administration's actions.

New Chinese tariffs on US exports of sorghum, fruits and nuts, pork, beef, and potentially soybeans will jeopardize the competitiveness of American agricultural products in China. American farmers and ranchers will lose market access not only to Chinese agricultural products but also to farm products from countries like Brazil, Argentina, Australia, and Canada, which not subject to the new Chinese tariffs.

Similarly, Chinese tariffs on US manufacturing exports will make it harder for many American companies and their workers to maintain their access to the Chinese market. Most do not benefit at all from Trump's tariffs on steel, aluminum, solar panels, washing machines, or the 1,333 products on the Section 301 list.

Finally, China's tariffs on $1 billion of US aluminum scrap exports—on Beijing's April 2 product list in response to Trump's Section 232 tariffs—are also likely to reduce the effectiveness of Trump's original aluminum tariffs in promoting additional US production. Shutting US aluminum scrap out of the Chinese market may imply more is retained in the US market, and a lower price of scrap creates disincentives to smelt aluminum from bauxite.[11]

### Costs to International Cooperation of Trump's Trade Policy

Major WTO members share many US concerns with China's integration into the world trading system. The Trump administration itself has recognized this—albeit to a limited extent—issuing joint statements with the European Union and Japan to this effect, both at the WTO Ministerial meeting in Buenos Aires in December 2017 and more recently in Brussels on March 10, 2018 (USTR 2017, 2018d).

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11. For an example of the economic channels through which higher tariffs in one country affect local production, prices, and trade flows in third countries, see Bown and Crowley (2007).

Yet, the Trump administration has provoked historical allies with its trade policy actions so frequently during its first 15 months in office that long-run cooperation has been increasingly called into question. To highlight some of the actions, Trump pulling out of the TPP was a slight to other signatories such as Canada, Japan, and Australia. Trump's contentious and belligerent attempt to renegotiate NAFTA has put two major trading partners and allies—Canada and Mexico—continuously on edge.[12] Furthermore, the Trump administration's handling of relatively routine trade policy actions—such as the antidumping cases on softwood lumber and Bombardier jets—became so contentious that Canadian and British leaders were forced to weigh in and threaten retaliation. In the highly problematic national security investigations, which has resulted in Trump imposing tariffs on steel and aluminum, EU leaders have repeatedly had to publicly detail their own explicit threats of retaliation against US exports if they are caught up in the actions.[13] And Trump's March 23 steel and aluminum tariffs cover $2 billion of imports from Japan.

At the very least, Trump's actions have made it more difficult for foreign leaders to muster the political will to work with his administration on areas of potential common concern, including with respect to China's policies. One of these areas is excess global capacity in steel and aluminum and the failure to fully embrace the approach of the OECD's Global Forum on Steel Excess Capacity. But Trump's actions may also affect how willingly partners engage with the United States on the broader concerns raised by the Section 301 investigation on intellectual property, subsidies, and China's industrial policy.[14]

### Costs to the WTO of Trump's Trade Policy Conduct

With the cooperation of Western Europe and other countries, the United States built the rules-based trading system from the ashes of World War II. Establishing the GATT in 1947 and transforming it into the World Trade Organization in 1995 was one of the historic achievements of international economic policy cooperation.

The Trump administration has deliberately weakened the rules-based, multilateral trading system. Three examples stand out.

First, the United States has diminished the provenance of WTO dispute settlement in two respects. First, it has been blocking the appointment of Appellate Body members, thus slowing the resolution of ongoing disputes and impeding the process of an important function of the rules-based system (Payosova, Hufbauer, and Schott 2018). Furthermore, its politically charged claims that WTO rulings are biased against the United States chip away at the independence of the institution.

Second, Trump's use of the national security exception under Section 232 to impose a haphazard set of import restrictions on steel and aluminum blatantly disregards the rules. WTO countries are technically allowed to take trade policy actions to protect national security under GATT Article XXI, but they historically have avoided triggering protection under this exception, especially when so many other WTO-consistent avenues for equivalent levels of protection are readily available. It opens a Pandora's box for any country

12. See, for example, Bown (2018g).

13. See, for example, Bown (2017a, 2017b, 2018d). The European Union's threats in the steel tariff case first materialized publicly in July 2017 with bourbon from Kentucky as a starting point (Donnan 2017).

14. The European Union and Japan have filed requests for consultations at the WTO with China and are thus engaging in the element of the Section 301 investigation that has turned into a formal WTO dispute. The role that such partners play in the broader set of policy issues remains to be seen.

to invoke trade protection. Furthermore, as already noted, Trump's steel and aluminum tariffs have forced countries to attempt to "rebalance" bilateral trade relations with legally dubious approaches of their own.[15]

Third, Trump's use of Section 301 is still in flux and it is unclear how it will evolve. One part of the investigation does involve bringing a formal challenge to the WTO. However, if other parts result in unilateral US tariffs on China, it will further weaken the rules-based system. Trump stipulating that China's policies—which somehow constitute unfair trade—do not violate any WTO provisions is an indictment of the multilateral system. It is an endorsement of the idea that the WTO cannot address this conflict, even though it has not even been summoned to try.

If the Section 301 case indeed escalates so that the United States imposes tariffs and China imposes countertariffs—all taking place along the sidelines of the WTO system—it will imply that the system has largely failed and that Trump will have effectively rendered it meaningless. Whether or not the WTO continues to function and guide the behavior of the rest of its members would remain to be seen.

## CONCLUSION

Thus far, the Trump administration has only created conflict and turmoil. President Trump's approach appears to be one of imposing costs—some on other countries, but largely also on the United States—perhaps as a bargaining tactic.

His administration has been relatively tight-lipped about its long-run intentions. One big question is whether it is really committed to protectionism as a permanent solution. Many signs suggest yes, including President Trump's inaugural speech of January 20, 2017. If so, his end-goal may be a permanently less-open American economy, suffering the costs of being closer to autarky. Alternatively, Trump's self-inflicted wounds may be an intermediate step toward some longer-term, albeit still unspecified, goal.

China may benefit in the immediate term from a potential US trade policy self-implosion under the Trump administration. But Beijing should also be concerned about the costs of bringing down with it a multilateral, stable, rules-based, and market-oriented trading system. China has benefited tremendously from the WTO during its period of economic development, and it behooves China to adopt the reforms necessary to sustain it.

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CHAPER 3

# US-China Trade Frictions and the Global Trading System

Robert Z. Lawrence

Recent trade frictions between the United States and China have violated several rules and practices of the rules-based multilateral trading system established under the General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO). President Donald Trump's preoccupation with trade balances in goods, both bilateral and total, has led to protectionist trade policies at home—primarily to minimize imports and offshoring by US firms—and aggressive demands for more market opening abroad. President Trump appears to view trade not as an activity from which all nations can gain but rather as a zero-sum game in which some win and some lose. Needless to say, his views on trade and investment are completely at odds with the understanding held by previous US administrations as well as most economists. While he has antagonized many countries, China has commanded Trump's attention, and his behavior toward China represents a serious threat to the trading order that has been highly beneficial to the global economy.

After China's accession to the WTO, until 2016, trade frictions between the two countries took place within the frameworks that had been established by China's accession protocols and WTO rules. These frictions were generally managed using quiet diplomacy, bilateral dialogues, the WTO dispute settlement system, and domestic trade remedies. But China's economic system has a unique and complex blend of private and public institutions, with major roles played by the government, the Communist Party, and the private sector, which makes it quite opaque and hard to distinguish between the actions of the state and the private sector and thus to apply the WTO rules for fair trade. This has especially been the case with China's emphasis on developing indigenous technology, which began with the 11th Five-Year Plan around 2006. These problematic features of the Chinese system were to some degree temporarily finessed by the treatment of China as a nonmarket economy in antidumping and countervailing duty cases, but whether China can continue to be treated as a nonmarket economy has now become a matter of considerable controversy.

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Although beneficial to US consumers, Chinese export growth after its accession to the WTO caused considerable dislocation in the US labor market. However, the negative political reactions to these exports and China's large trade surplus were contained because many US firms benefited from being able to assemble their products in China and export to its large market. More recently, though, frictions between China and other advanced economies have increased as China sought to use state-centered industrial policies and state-owned enterprises to move into more advanced industrial activities in which foreign firms were not allowed to participate fully.

The Obama administration sought to use regional trade agreements such as the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) to write trading rules to, in principle, deal with the problems presented by China that could not be handled under WTO rules. The idea was that if a critical mass of Asian and other major trading countries would sign on to the rules, China could be pressured either to follow them or at least to negotiate with the United States and other TPP and TTIP signatories. Trump, however, has dismissed these approaches, preferring to use access to the US market as leverage to renegotiate the terms of US engagement bilaterally with other countries, even when this approach involved blatantly disregarding WTO rules.

The basic principle of the multilateral trading system has been most favored nation (MFN) treatment, which means that since they are all treated equally at the border, exporters can make sales not on the basis of their political influence but on their market performance. In addition to MFN treatment, a number of other WTO rules are important in maintaining the system, and these are currently under threat. First, though they may provide special treatment to developing countries, members commit to providing equal treatment to other members. Second, they commit not to raise their tariffs above bound levels. Third, they agree not to provide export subsidies or subsidies that favor the use of domestic over foreign products. Fourth, they agree to protect the intellectual property of other members. Fifth, if they believe other members have violated the agreement, they agree not to take unilateral actions but to bring their disputes to the WTO Dispute Settlement Body (DSB). In the event that they win a case and the losing party fails to comply (or provide compensation by reducing other barriers), the winning party can suspend concessions on that party by an amount "equal to the nullification and impairment." Although retaliation may be permitted, the DSB must authorize both the nature and value of the retaliation. Finally, only under special circumstances can countries impose tariffs or duties on foreign products. These include safeguard measures when imports cause or threaten to cause substantial injury; antidumping duties when products are sold at less than normal value and cause injury; countervailing duties when imports have received government subsidies and cause injury; and measures that are necessary for national defense.

This chapter explains how almost all these provisions have or could be violated in the course of recent US-China trade frictions and how the global trading system might evolve from these conflicts. If both countries remain at loggerheads, and other countries follow in their footsteps, the system could lose its legitimacy, weakening adherence to the rules and norms and undermining the dispute settlement system that contributed to the system's success. But there may also be reason to be more optimistic: While Trump may be trying to retreat from the rules-based system, many other countries continue to see the system as being in their interest. Indeed Trump's actions may actually make other countries work even harder to build an even stronger rules-based system and eventually, America finding that its deviations from the system are proving to be counterproductive, could return to the fold.

## HOW RECENT TRADE MEASURES UNDERMINE THE WTO

Despite their questionable basis, Trump's views have provided the framework for the various trade initiatives the administration has undertaken.

**Safeguards.** In early 2018, on the recommendation of the US International Trade Commission, President Trump granted safeguard tariff protection to the US solar panel and washing machine industries. The WTO permits safeguard tariffs when a country faces serious injury due to a surge in imports of a particular product. However, unless special conditions are met, the country implementing the safeguards must compensate its trading partners in other areas or face retaliation. The European Union, South Korea, Taiwan, and China have sought consultations on the US tariffs in WTO filings.

In practice it has been hard for countries to meet the exacting requirements to impose safeguards. For example, it has to be shown that the increase in imports was due to "unforeseen circumstances." The last time the United States used safeguard tariffs was in 2002, when President George W. Bush imposed them on steel imports, but these had to be removed, when the WTO ruled they had not met the requirements for their imposition. This time, too, the WTO could find the safeguard tariffs illegal. The European Union has asserted in its WTO filing that EU solar imports were not causing any injury to US industries, and in its WTO filing, South Korea already asked for authorization to impose its own sanctions on the United States in response to US tariffs on washing machines.

Even if the WTO deems the safeguard measures illegal, because obtaining findings through the WTO takes time, the administration will have been able to "get away" with several years of protection. Moreover, a finding that the US measures are illegal would provide further ammunition to those who claim the WTO does not have a viable procedure that allows members to undertake safeguard measures when they are really needed. Thus Trump's misuse of this important trade remedy poses risks for the sustainability of the system because it could advance the arguments of those who claim the WTO rules are not effective.

**Section 232.** Even more illustrative of the Trump approach has been the use of GATT Article XXI. This provision provides an exception for measures taken to protect national security. In April 2017 the Trump administration undertook an investigation under Section 232 of the Trade Expansion Act of 1962 and ten months later announced its intention to impose tariffs of 25 percent on US steel imports and 10 percent on imports of aluminum.

The wording of GATT Article XXI gives countries great scope in deciding for themselves whether such measures are warranted, which makes it difficult for such actions to be challenged in dispute settlement. However, precisely because of this great latitude given to members, it has always been understood that they will undertake such measures only in rare circumstances. But the Trump administration has ignored this tradition, adopted a very broad definition of national security, and identified national security not as requiring the capacity to generate a certain quantity of steel but rather as having an 80 percent capacity utilization rate so the industry can be profitable. In addition, instead of imposing the tariffs uniformly on all imports, or imposing only on countries that are not US allies, the administration has used the tariffs as a bargaining chip in some cases with a view to obtaining quota protection It has temporarily exempted some countries from the tariffs but maintained them on countries such as Japan and China with whom the United States has trade deficits that Trump deems too large. [1]

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1. On March 22, Trump exempted a number of countries including Argentina, Australia, Brazil, Canada, Mexico, all member countries of the European Union, and South Korea. Japan was not exempted from the tariffs,

In the case of Korea, the administration used the tariff threats to facilitate the renegotiation of the Korea-US Free Trade Agreement. Aside from a few cosmetic changes (and some additional concessions in automobiles and trucks) the new agreement looks very much like the previous one.[2] Despite complaining that the earlier agreement was responsible for larger US bilateral trade deficits with Korea, the administration did not place a lot of weight on the bilateral trade deficit in the new agreement. This outcome suggests that Trump is more interested in wanting to claim credit for a new agreement than in its substance.

While some might find it comforting that this administration's approach is not radically different from previous US approaches to free trade agreements, the new agreement raises additional concerns about US adherence to WTO rules. In addition to other concessions, in the new Korea-US agreement, Korea agreed to impose a quota and limit its steel exports to the United States to 70 percent of the average of its exports to the United States in the 2015–17 period. This limit essentially represents a new "voluntary restraint agreement"—an approach that was outlawed in the Uruguay Round of multilateral trade negotiations. Thus while Korea is unlikely to challenge it, the administration has been willing to cut a bilateral deal that violates WTO rules. The agreement with Korea could also be a precursor of other similar quota arrangements with other steel producers.

On April 2, 2018, China retaliated against Trump's national security tariffs on steel and aluminum by imposing safeguard tariffs on about $3billion worth of US exports.[3] The Chinese government's position is that the US tariffs constitute safeguard (as opposed to national security) measures and that trading partners can seek immediate compensation under certain conditions in the WTO's Agreement on Safeguards. The European Union shared the Chinese view that retaliation was justified as a safeguard, although it did not retaliate because of the temporary exemptions it received. But not all legal scholars accept this view. If such retaliation becomes accepted practice, it would reduce the freedom countries currently have to use a national defense exception.

Thus, in just one measure, several WTO rules and practices have been undermined. First, the United States has provided such a liberal interpretation of national security that the exception could now be used to undermine the value of market access concessions in almost any product. What is to stop a country from arguing that it is in its national defense interest to protect its footwear industry since its army needs boots when it marches or its tuna industry since its army eats fish?[4] Second, the US action undermines a norm of restraint when applying the national defense exception. Russia and Ukraine could emulate US behavior, and China might also increasingly justify its restrictions on internet data transmission on national security grounds. Third, the WTO is supposed to negotiate through reciprocal concessions not threats, but the Trump administration has explicitly used the national security measure to enhance US bargaining power in bilateral trade negotiations. Fourth, the selective nature of the action appears to violate the MFN principle of the multilateral system, which ensures equal rather than exclusive trading privileges between two partners.

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which took effect on March 23 ("White House suspends 232 tariffs on several countries until May," *Inside US Trade*, March 30, 2018).

2. The new agreement increases the quota of cars that the United States can sell in the South Korean market.

3. China imposed tariffs of 15 percent on 120 US products, including fruit, and a 25 percent tariff on eight products including pork. However, these may be lifted in return for the United States relaxing the sanctions it imposed against the Chinese electronics company ZTE.

4. Sweden temporarily used Article XXI between 1975 and 1977 to protect its footwear industry with a quota (Macroy, Appleton, and Plummer 2005).

Fifth, US actions have provoked other members to retaliate without obtaining permission from the WTO. Finally, even though they have been granted temporary exemptions, the fact remains that the administration took measures against its own allies, such as Europe, on whom it has to rely in many other areas.

**Section 301.** The most substantial action taken by the administration has been brought under Section 301 of the US Trade Act of 1974 against China. The United States has found that Chinese innovation policies are "unreasonable or discriminatory" and "burden or restrict U.S. commerce." The administration has four major complaints. The first is that China has been depriving US firms of the ability to set market-based terms in licensing, thereby undermining the firms' legal rights to be paid on market terms for their technologies. Part of this claim is that China has imposed different requirements on foreign and domestic firms. The second is the use of foreign ownership restrictions such as opaque and discretionary administrative approvals and requirements for joint ventures to pressure the transfer of technologies and intellectual property to Chinese companies. The third is that China has been facilitating the acquisition by Chinese companies of US companies in the United States to obtain strategically important technologies, and the fourth is that the Chinese government has encouraged illegal intrusions into US computer networks to steal intellectual property and trade secrets.

In March 2018, the United States announced that if China does not change these practices, it would impose tariffs of 25 percent on up to $60 billion of Chinese exports to the United States. In April, the administration published a list of over 1,300 product categories that it was considering for the proposed tariffs, after allowing for a period for public comment. The list emphasizes products such a robots, aircraft engines, and electric vehicles, which are being given priority in China's Made in China 2025 program—a program that has raised concerns in Europe, Japan, as well as the United States. China in turn announced its intention to retaliate with its own tariffs on a similar value of US products such as aircraft, soybeans, and automobiles.[5] President Trump then reacted by saying he would increase the scope of US tariffs to cover an additional $100 billion worth of Chinese products. However, after several rounds of negotiations, the administration announced it would not impose these tariffs if China honors its pledge to increase its imports from the United States and makes progress in enforcing intellectual property rights and opening its market to foreign firms and products.

The administration has also announced its intention to bring a case to the WTO on the first of these concerns—Chinese interference with contracts relating to technology transfers—on the grounds that such behavior violates the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which prevent different rules being placed on foreign and domestic firms.[6] However, it believes that the other three types of Chinese actions, although "burdensome on US commerce" and thus qualifying for action under US trade laws (Section 301), cannot be resolved under the WTO rules.

Is there merit to these concerns? As indicated in USTR's Section 301 report, Chinese officials have made many statements over the years that it is Chinese policy to enforce intellectual property rights and to provide equal treatment to foreign investment in general and under the policies relating to Made in China

5. Many of the other goods on the list—including sorghum and beef—intentionally affect the US Farm Belt, where voters supported Trump.

6. The European Union and Japan have asked to join the Trump administration's WTO case over China's alleged discriminatory technology licensing. Both said they have a "substantial trade interest" in the US-China dispute proceeding.

2025.[7] When President Obama showed evidence that the Chinese government was assisting in the illegal activity of stealing trade secrets, President Xi Jinping reportedly ordered the government to stop the practice (the fourth concern).[8] In other words, the Chinese government officially acknowledges that it is wrong to fail to fully enforce the intellectual property rights of foreign firms; to require technology transfer as a condition for investment; and to encourage cyberespionage of foreign corporations. But the positions of the US administration and the Chinese government in these cases seem to differ not on principle but on whether the Chinese government should be held responsible for the behavior of entities that are not part of the government that do participate in such activities.

It is certainly clear that foreign firms increasingly believe that China's actions under its new industrial policy program, Made in China 2025, are unfair to them. Their concerns have been expressed in recent reports by the US Chamber of Commerce (2017) as well as the European Union Chamber of Commerce in China (2017). According to the *New York Times*, "The plan's mechanism is simple: It would provide large, low-interest loans from state-owned investment funds and development banks; assistance in buying foreign competitors; and extensive research subsidies, all with the goal of making China largely self-sufficient in the targeted industries."[9]

One apparent difference of opinion is about whether an agreement between a foreign company and a Chinese company that requires the foreign company to transfer technology in order to invest is simply a market-based transaction or unwarranted government intervention. One viewpoint is the foreign firm is acting freely and not being forced to act. But another is that the context of the bargaining over the deal needs to be taken into account. In a genuinely free market, the foreign firm would have the choice of (a) exporting the product to China, (b) setting up its own operation and producing in China, or (c) engaging in a joint venture. If all three options were available, it would be unreasonable to challenge such an arrangement. But if the options of exporting to China and investing in a fully owned subsidiary are excluded, then market entry *can* be used as leverage over the foreign firm to transfer its technology if it wishes to participate in the Chinese market.

The ultimate solution to this problem from the US perspective would not be to try to prevent such negotiations but rather to open the Chinese market to imports and to majority-owned foreign investment. It is therefore unfortunate that the Trump administration has not used the negotiations over a US-China bilateral investment treaty, which were launched by the Obama administration, to advance the latter goal. It is also unfortunate that the United States did not challenge the subsidies being given to domestic firms under the WTO subsidies code, which prohibits such subsidies.

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7. At the World Economic Forum in Davos, and the State Council in January 2017, President Xi Jinping made commitments to encourage investment in advanced manufacturing by foreign-invested enterprises and to ensure that these companies receive equal treatment under strategic policies and measures related to Made in China 2025.

8. The United States and China reached an agreement in 2015 to curb cyber-enabled theft of intellectual property and committed to common efforts to promote norms of state behavior in cyberspace (White House, "Fact Sheet: US-China Economic Relations," September 25, 2015, https://obamawhitehouse.archives.gov/the-press-office/2015/09/25/fact-sheet-us-china-economic-relations). Partly due to the agreement, cyberattacks appear to have diminished. See David Sanger, "Chinese Curb Cyber Attacks on US Interests," *New York Times*, June 21, 2016, www.nytimes.com/2016/06/21/us/politics/china-us-cyber-spying.html.

9. Keith Bradsher and Paul Mozur, "China's Plan to Build Its Own High-Tech Industries Worries Western Businesses," *Financial Times*, March 7, 2017, www.nytimes.com/2017/03/07/business/china-trade-manufacturing-europe.html?_r=0.

Other questions can be raised about the way the administration is trying to achieve its objectives. In particular, it has tried to gain leverage by threatening to use tariffs and failing to exhaust the options that are available to it under the WTO rules. In particular the administration *can* deal with the first concern within the rules since in addition to the tariff threats it is bringing a case on this matter to the WTO. Moreover, in the Section 301 document issued by USTR, the administration notes that China agreed in its accession protocol to the WTO that the rights of foreign investors would not be conditioned on performance requirements such as local content, transfer of technology, or conduct of research and development in China.[10] So, in fact, the second issue could also be dealt with through the WTO's dispute settlement system. Since WTO rules do not cover investment, the United States could also legally prohibit China from buying technology through acquisition using its procedures for approving foreign investment through the *Committee on Foreign Investment in the United States (*CFIUS) administered by the Treasury. [11]Finally, dealing with threats of stealing trade secrets requires security actions rather than trade measures. Thus the administration clearly did have options to use approaches using traditional approaches and negotiations and WTO rules.

Instead, however, it chose to threaten suspension of concessions, which clearly breaches WTO rules. The WTO allows suspension of concessions only when a violation has been proven and when the amount and nature of the retaliation has been authorized. Given US actions, China has felt obliged to respond with threats of its own, and as a result the two largest members of the trading system are no longer respecting the rules.

## HOW THESE FRICTIONS MIGHT BE RESOLVED

At this stage, it is impossible to predict how these issues will be fully resolved. But the most likely outcomes might erode the rules-based trading system. As they proved to be in the 232 case with steel and aluminum, the threat to raise tariffs in the Section 301case was clearly used as a bargaining ploy designed to extract concessions. But even though agreement was apparently reached, concerns about the impact on the trading system are warranted.

In implementing its agreement to reduce its trade surplus with the United States, China will inevitably reduce its purchases from other countries. For example, China could buy more aircraft from the United States rather than Europe, more agricultural products from the United States rather than Brazil or Australia, and more natural gas from the United States rather than the Middle East. If China combines this offer with additional market opening (in finance, autos, and other sectors) and increased domestic enforcement efforts to protect intellectual property, President Trump can claim victory, and China could win some peace. However, such an agreement moves the system towards a trading system based on political deals rather than market forces. This development would clearly undermine the WTO's goal of avoiding discriminatory practices.

Even though agreement has been reached with respect to the trade balance, several of Trump's advisors are reportedly still not satisfied with Chinese pledges of more market opening and changes in China's pur-

10. Section 7(3) of the Protocol on the Accession of the People's Republic of China states that "China shall ensure that the…the right of investment by national and sub-national authorities is not conditioned on: whether domestic suppliers of such products exist; or performance requirements of any kind, such as local content, transfer of technology, export performance, or the conduct of research and development in China" (attributed to Julia Qin and quoted by Simon Lester at http://worldtradelaw.typepad.com). See also USTR (2017, 19).

11. Senator John Cornyn has proposed a bill that would reform CFIUS to ensure that Chinese companies receive reciprocal treatment when looking to invest in the US.

chasing patterns but instead will continue to try to get China to retreat from its industrial policy initiatives in Made in China 2025. Since this program lies at the heart of its development strategy China would be very unlikely to comply. China's unwillingness would therefore result in an impasse, and in the future, if the bilateral trade deficit remains high, these advisors could seek to implement the tariff threats. The resulting trade war between the two largest trading nations would mark a historic erosion of the rules-based trading system as well as inflict immense economic damage to global supply chains.

A third possibility is that US actions could actually end up convincing the Chinese that they need to be self-reliant and cannot depend on others as reliable suppliers. This could actually strengthen the positions of those who are advocating Made in China 2025.

Finally, the only really satisfactory outcome for the United States that would be compatible with the rules would be for it to bring more WTO cases together with the European Union and Japan, and for China to genuinely open up the sectors targeted under Made in China 2025 to increased foreign participation, allowing fully owned foreign investment production, and imports.

Moreover, even if the Section 301 case is settled, the issue of China's nonmarket economy status still looms large. As Mark Wu (2016) has convincingly argued, the WTO rules are not especially well-suited to deal with the Chinese system. There is a danger that the rules are interpreted in a way that either loses Chinese support because their market economy status is rejected or if China is given such status, loses the support of other WTO members because many Chinese practices that discriminate against foreign firms continue.[12]

## FUTURE OF THE GLOBAL TRADING SYSTEM

There is considerable uncertainty about how the trading system is likely to evolve as a result of these frictions. A pessimistic scenario is plausible. It would have two basic causes. First, Donald Trump's problematic behavior, which has both used and violated the trade rules in order to maximize his negotiating leverage, and second, China's problematic economic system in which state, party, and the private sector are closely intertwined and foreign firms are increasingly discriminated against in high-tech projects. Together, this combination could ultimately undermine the trading system by weakening adherence to the rules and norms that have contributed to the system's success. Trade wars and increased protection could become the order the day. The economic costs to the global economy in both the short and long runs could be considerable because those engaged in international trade would lose their confidence in the enforcement of trade rules, and political support could be further eroded. If the system is based on power relations, it could lose its legitimacy.

However, it is also possible to be more optimistic. Even though it is still world's largest economy, the United States is only one country in the global trading system. While the Trump administration may be try-

12. Wu discusses the challenge to the WTO presented by the complex Chinese system, where (a) the State-Owned Assets Supervision and Administration Commission of the State Council controls all state-owned enterprises; the Central Huijin Investment Co. controls lending by financial institutions and is owned by the government through the China Investment Corporation; the *National Development and Reform Commission* sets prices for certain inputs, such as electricity, oil, natural gas, and water, and gives final approval, where required, on all investment projects by state-owned, private, and foreign companies and enforces monopoly laws and coordinates industrial policies; (b) corporate group structures are characteristically Chinese, i.e., they tend to be vertically integrated, narrowly focused on a particular sector, and built around a national champion; and (c) the members of the Communist Party actively participate in the management of state-owned enterprises.

ing to move away from the rules-based system that America played a large role in constructing, many other countries continue to see the system as being in their interest. Indeed US actions may actually convince them to increase their efforts to sustain and build an even stronger rules-based system that achieves deeper integration. One example of such a response was the agreement negotiated by the 11 other Asia-Pacific countries that implemented the TPP without the United States but that the United States could eventually join. New plurilateral agreements at the WTO could also emerge that emulate the Information Technology Agreement (ITA) and the proposed Trade in Services Agreement (TiSA), in which participants are willing to deepen their relationships.

Similarly, US behavior is likely to reinforce the Chinese conviction in the value of a rules-based trading system, and China could try to separate its bilateral responses to the United States in which it is being forced to violate some of the rules from its more general policies aimed at strengthening the system by following the rules more diligently. China could respond by negotiating deeper trade and investment agreements with its other trading partners and, as promised by President Xi, by liberalizing its domestic economy.

Chinese officials claim that the Made in China 2025 program does not discriminate against foreign firms or force technology transfer. But that has not been the experience of foreign firms. In addition, the program explicitly uses subsidies that favor domestic over foreign production, a clear violation of the WTO *Agreement* on *Subsidies* and Countervailing Measures, which "expressly prohibits" such subsidies. But if China opens its strategic sectors to foreign investment and refrains from both official policies and unofficial practices that discriminate against foreign firms, it will be in a much better position to become a credible leader of the rules-based trading system.

Moreover, many Americans agree with the administration's concerns about current Chinese practices with respect to intellectual property transfers and theft, but there is considerable domestic opposition to the policies the administration has adopted to try to change these practices. Specifically, many American firms and farmers are worried about the damaging impact of Trump's policies on supply chains at home and on their access to foreign markets. If other countries continue to open their markets to each other, as they have done in the TPP, the discrimination US exporters will face will only enhance these concerns. Similarly, Trump's protectionist measures will raise input costs, costing jobs in the United States. Ironically, therefore, Trump's trade policies could ultimately reinforce the rules-based trading system by convincing both the rest of the world and the United States of its value.

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CHAPTER 4

# Foreign Direct Investment in China's High-Technology Manufacturing Industries

Mary E. Lovely and Zixuan Huang

## INTRODUCTION

Since 1990, inward foreign direct investment (FDI) has been a key driver of China's export expansion. The share of China's total exports accounted for by wholly foreign-owned enterprises operating in China and Sino-foreign joint ventures has risen steadily over time, from about 31 percent in 1995 to 58 percent in 2005 (Wang and Wei 2010). By 2015, the share of Chinese exports originating from foreign-invested enterprises had fallen somewhat but remained high at 46 percent, with wide variation across sectors.[1] While noting that the contribution of exports and FDI to growth can be overstated, Branstetter and Lardy (2008) argue that "there is no question that expanding trade and FDI have contributed to Chinese living standards…. China has been able to alter its pattern of trade to conform to its comparative advantage" (p. 648).

Over the past two decades, however, foreign investment into China has perhaps clouded our understanding of how much and how rapidly China's comparative advantage has changed. Shifts toward more technologically sophisticated and higher value products suggest that Chinese indigenous innovation capabilities have progressed rapidly.[2] Given the extent of foreign engagement in China's high-technology sectors, however, shifts in export composition may be misleading indicators of domestic development.

This paper provides a survey of foreign investment activity in China's high-tech manufacturing. It begins with an overview of foreign investment trends and their relationship to China's involvement in global

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1. *Source:* Authors' analysis of Chinese Customs data.

2. See Wang and Wei (2010) for an extensive decomposition of Chinese trade patterns and the role of foreign investment, processing trade, human capital development, and high-technology zones.

value chains. Next, for high-tech manufacturing industries, it examines trends in the share of assets and profits held by foreign-invested enterprises compared to Chinese domestic firms in the sector to assess the latter's progress. Exports reveal productive capabilities as well as global connections, so the share of exports originating in foreign-invested enterprises is examined in some detail. This paper finds that while the value of foreign investment in high-tech manufacturing in China has grown, the share of assets in foreign-invested firms in the sector declined between 2011 and 2016. Nevertheless, foreign-funded enterprises remain the source of most high-tech manufactured exports, primarily from wholly foreign-owned firms. In sum, despite indigenous development, Chinese high-tech manufacturing and exports remain deeply tied to foreign investment.

## FDI AND THE GROWTH IN CHINESE HIGH-TECH EXPORTS

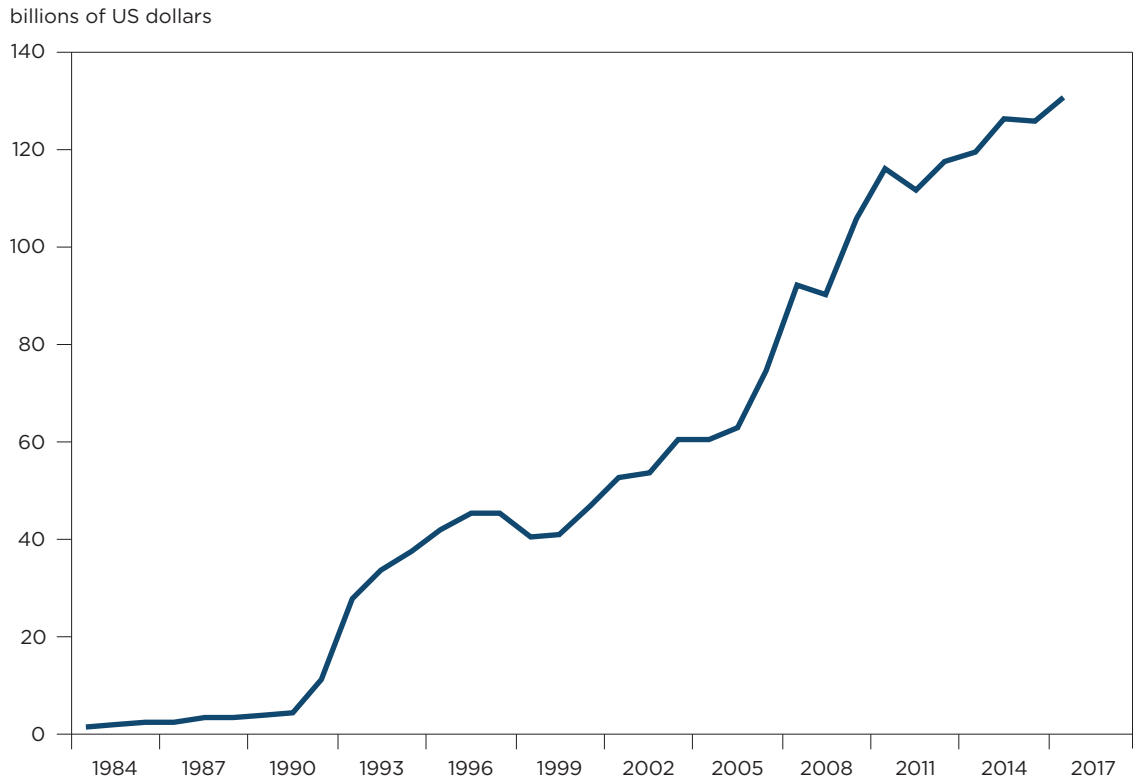
Inward foreign investment benefits the Chinese economy in many ways. Foreign investors provide access to innovative technology, advanced management practices, connections to global supply chains, and employment. Chinese industrial policies reflect a clear understanding of these advantages. From the "22 Regulations" in the late 1980s—a major regulatory change in FDI applied throughout China (Branstetter and Lardy 2006)—to the current reduced negative list of sectors off limits to foreign investors, China has progressively eased restrictions on inward foreign investment. Most recently, at the 2018 Boao Forum, Chinese president Xi Jinping promised foreign companies greater access to China's market, in particular announcing that a 50 percent foreign investment cap on automotive joint ventures would be lifted by 2022.

The evolution of China's manufacturing exports clearly illustrates the relationship between inward investment flows and China's comparative advantage. Between 1997 and 2007, the share of Chinese exports tied to labor-intensive activities, such as apparel and footwear, fell rapidly, while the export shares of computers and telecommunications devices rose dramatically. These shifts led observers to wonder if changing export shares signaled extraordinary technological progress. Schott (2006) finds that by 2001 China's export structure increasingly resembled that of high-income countries. Rodrik (2006) argues that by 2002 China's exports exhibited an unusually high degree of technical sophistication for its level of development. A researcher for the Manufacturers Alliance, looking at similar data, concludes that China's changing export pattern signaled a new challenge to American commercial and security interests (Preeg 2004), an early indication of current conflict over Chinese high-tech industrial policy.

A fuller picture of Chinese trade patterns, however, shows more gradual change in Chinese indigenous technical capabilities. Domestic value added in Chinese exports changed less rapidly than gross export shares, consistent with the country's location in global supply chains. As shown in figure 1, uninterrupted rising inflows of foreign investment characterized the period following China's accession to the World Trade Organization (WTO) in 2001. In 2017, China absorbed $131 billion of new foreign investment. As shown in table 1, which provides the top 15 FDI investors in China as of 2015, the official source of 48 percent of FDI stock is Hong Kong, China.[3] The third largest source of investment is Japan, accounting

3. Zhang (2005) explores the reason why China's foreign direct investment primarily comes from Hong Kong. He argues that China's export-promotion FDI strategy, the large pool of cheap labor, Hong Kong's specific advantages in export-oriented FDI, and its unique links with China determine its dominant role. Other observers, however, suggest that the flows represent significant "round-tripping" of investment from the mainland through this offshore location.

**Figure 1 Chinese foreign direct investment inflows, 1984–2017**




*Source:* National Bureau of Statistics of China, data.stats.gov.cn.

for about 6 percent of the stock. The United States was the fifth largest investor, accounting for about 4.5 percent of total FDI stock.

Some independent analysts believe the US share is larger than official records indicate. According to a report by the Rhodium Group and the National Committee on United States–China Relations, between 1990 and 2017, US entities invested more than $250 billion in China. Flows remain unbalanced with Chinese FDI stock in the United States at twice the level of US investment in China ($29 billion versus $14 billion).[4]

Dean and Lovely (2010) note that this inflow of investment coincided with "fragments" of production moving to China, particularly into high-tech sectors. Shifts in China's import and export shares between 1995 and 2004 reflected these trends, further evidence of the country's deepening involvement in complex global value chains. In particular, the export share of office and computing machinery grew by more than a factor of four (from 3.5 to 15.1 percent), while the import share of these products more than doubled (from 2.4 to 6.2 percent). These shifts in trade shares were accompanied by an increase in the average share of trade treated as "processing trade," trade that occurs as a result of the favorable tax treatment of imports destined entirely for reexport.

4. US-China investment trends reported by the Rhodium Group, April 2018, available at https://rhg.com/research/two-way-street-2018-update-us-china-direct-investment-trends/ (accessed May 21, 2018).

**Table 1 Top 15 investors in China, 2015**

| Country/Region | Share of total FDI stock (percent) |
|---|---|
| Hong Kong, China | 47.87 |
| British Virgin Islands | 8.57 |
| Japan | 5.85 |
| Singapore | 4.55 |
| United States | 4.45 |
| Republic of Korea | 3.67 |
| Taiwan Province of China | 3.60 |
| Cayman Islands | 1.73 |
| Germany | 1.46 |
| Samoa | 1.46 |
| United Kingdom | 1.13 |
| Netherlands | 0.89 |
| France | 0.85 |
| Mauritius | 0.76 |
| Macao, China | 0.73 |
| Others | 12.41 |

FDI = foreign direct investment

*Source:* Chinese Ministry of Commerce (2016a).

Yet the domestic content, and technical sophistication, of Chinese value added embodied in exports evolved less quickly than trade shares alone indicate. Koopman, Wei, and Wang (2012) estimate the domestic value added in Chinese exports and find that the share of domestic content in its manufactured exports was about 50 percent before China's WTO membership and rose to nearly 60 percent by 2007. However, they also find that those sectors considered relatively sophisticated have low domestic content (about 30 percent or less in 2007), largely due to the prevalence of foreign-invested enterprises and processing trade in these industries. The most recent data on the domestic value-added share of gross exports are available for 2011 from the Organization for Economic Cooperation and Development's (OECD) Trade in Value Added project. For all Chinese exports, domestic value added comprises only 68 percent of gross exports. For electronics and optical equipment manufacturing (the sector that most closely matches those examined by other researchers), the domestic share of gross exports is significantly lower, 46 percent. An important goal of China's economic development strategy is raising the share of domestic value added produced by its own high-tech sectors.

## THE DEFINITION OF HIGH-TECH MANUFACTURING IN CHINA

The term "high-technology manufacturing" means different things at different times. China Statistics Catalogue of High-technology Industry Statistical Classifications (2002) defines five manufacturing sectors as the high-tech sector: medicine, aircrafts and spacecrafts, electronic equipment and communication equipment, computers and office equipment, and medical equipment and measuring instruments. Identification of key sectors was expanded in 2013, and renamed High-technology Industry Classifications. The classification has two components: one for high-tech manufacturing, the other for high-tech services. This paper focuses on high-tech manufacturing, so details for the coverage of high-tech services are not articulated here. The 2013 version of high-tech manufacturing industry classifications adds the manufacture of electronic chemicals to the five aforementioned sectors.

The 2013 revisions also included some specific changes in several subsectors. For example, for computer manufacturing, the manufacture of computer external equipment in the 2002 document was subdivided into the manufacture of computer components and parts and the manufacture of computer peripheral equipment. For manufacturing of aircrafts and spacecrafts and related equipment, one subcategory—repair of aircrafts and spacecrafts—was added in the 2013 classification. In general, the 2013 classification is more detailed and more comprehensive.

## FOREIGN INVESTMENT REMAINS IMPORTANT IN CHINA'S HIGH-TECH MANUFACTURING

The Thirteenth Congress of the Communist Party of China in 1987 adopted the first proposal to "develop high-technology industries and emerging technological industries" (Zhao 1987). In 1992, the State Council released the "Outline for the National Medium and Long-Term Development of Science and Technology," articulating the role of high technology in China's development. This document also highlighted several high-tech industries where China should pursue breakthroughs: microelectronics and computer technology, biological technology, new materials, aerospace, etc. (State Council 1992). Later the same year, the Fourteenth Congress of the Communist Party of China placed priority on constructing economic and technology development zones as well as high-tech and emerging industry development zones (Jiang 1992). Hu and Ren (2016) argue that these developments were key to promoting the active absorption of foreign investment into China's high-tech industries.

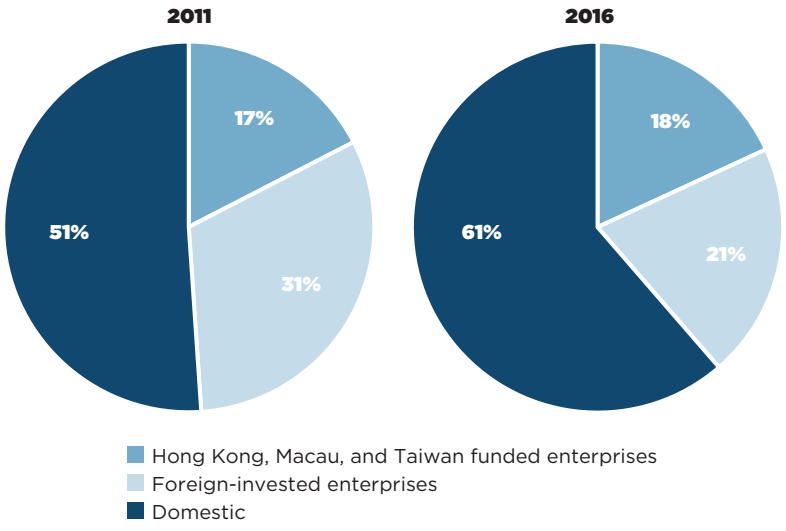
The 1993 Law of the People's Republic of China on Science and Technology Progress further encouraged high-tech research and manufacturing, as it implemented a variety of supports for these industries (Standing Committee of the Eighth National People's Congress 1993). The law provided further impetus to establish high-tech industry development zones.

Following a decade of reforms and rapid growth, China faced rising wages, the need to control pollution emissions, and demand for skilled employment for an increasingly educated labor force. In response, the central government recognized the need to rebalance the economy and transition to higher value-added manufacturing and services. In manufacturing, the government called for innovation and technological advancement as the main route for enhancing manufacturing capabilities. In 2006, the State Council released "The Plan for the National Mid- and Long-Term Development of Science and Technology 2006-2020" (State Council 2006), identifying 402 core technologies for prioritized development (Lai and Deng 2017). The 12th Five-year Plan on the Development of the National Strategic Emerging Industries (Ministry of Industry and Information Technology 2012) expressed concern about a lack of major technologies and limited innovatory abilities, urging greater policy support for innovation and the development of emerging industries. High-tech manufacturing is a focus of the plan, including the manufacture of high quality integrated circuits and biological medicine.

Recent data shows Chinese companies expanded their presence in high-tech manufacturing, relative to foreign investors, perhaps in response to the changing policy focus. Figures 2 and 3 show the assets and profits shares, respectively, of foreign-invested companies; Hong Kong, Macau, and Taiwan (HMT) funded companies; and domestic companies in high-tech sectors. The figures illustrate a declining role for foreign investors but the steady presence of HMT investors. In 2011, for both profits and assets held by foreign-invested and HMT-funded enterprises, the shares were nearly 50 percent. In 2016, their combined share declined to less than 40 percent, for both the share of profits and the share of assets.

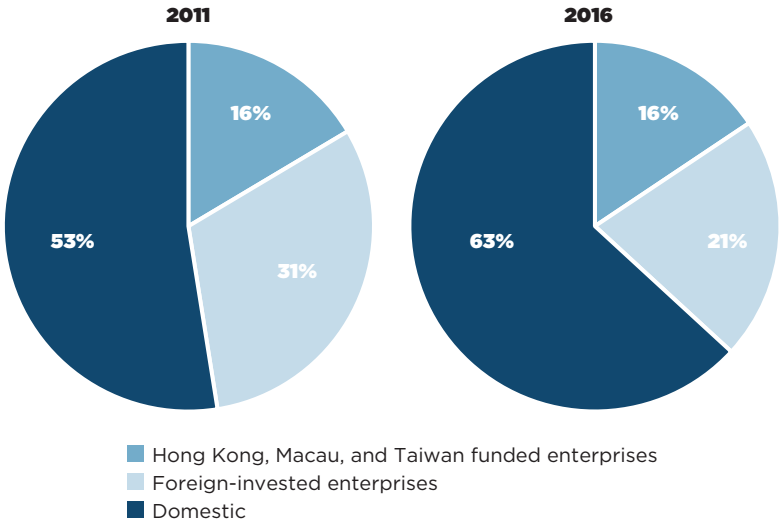
Interestingly, most of this decline did not come from the share of HMT-funded enterprises, which barely changed. The big decline of 10 percent came primarily from the weakening role of foreign-invested enterprises. Assets of foreign-invested enterprises accounted for 31 percent of total assets in high-tech manufacturing in 2011 but declined to 21 percent by 2016. Similarly, the profits of foreign-invested enterprises, as a share of total profits in high-tech manufacturing, decreased from 31 percent to 21 percent during the

**Figure 2 Share of assets of high-tech companies by ownership, 2011 and 2016**



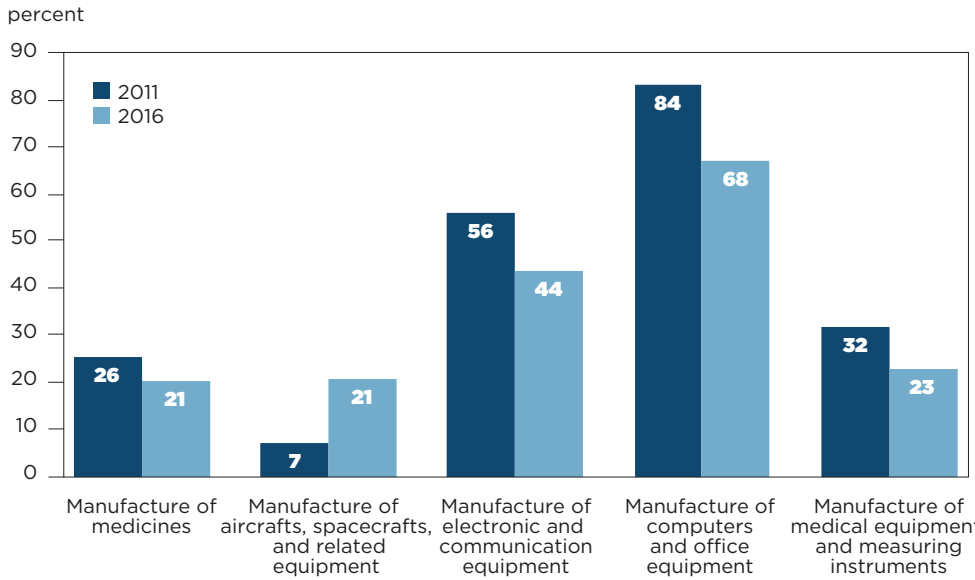

*Sources:* National Bureau of Statistics of China, National Development and Reform Commission, and Ministry of Science and Technology (2012); Department of Social Technology and Cultural Industry Statistics of National Bureau of Statistics (2017).

**Figure 3 Share of profits of high-tech companies by ownership, 2011 and 2016**




*Sources:* National Bureau of Statistics of China, National Development and Reform Commission, and Ministry of Science and Technology (2012); Department of Social Technology and Cultural Industry Statistics of National Bureau of Statistics (2017).

**Figure 4 Share of assets of foreign-invested and HMT-funded enterprises across high-tech manufacturing sectors, 2011 and 2016**




HMT = Hong Kong, Macau, and Taiwan

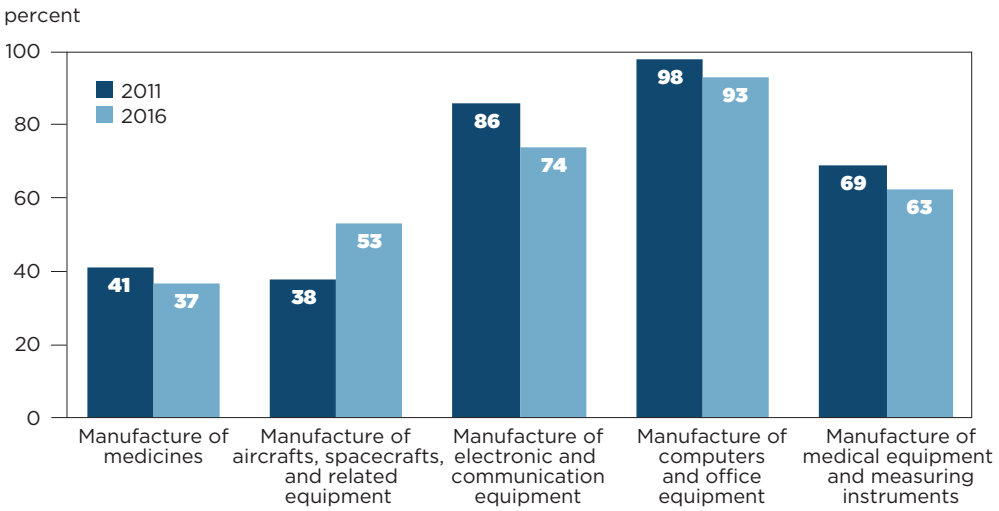
*Sources:* National Bureau of Statistics of China, National Development and Reform Commission, and Ministry of Science and Technology (2012); Department of Social Technology and Cultural Industry Statistics of National Bureau of Statistics (2017).

period of 2011–16. The decline in shares of assets belies the fact that, comparing 2016 and 2011, the absolute value of assets of foreign-invested companies in high-tech sectors went up about 40 percent, and the assets of HMT-funded firms more than doubled during this period. That their share of assets was nevertheless in decline illustrates how much more rapidly the value of assets of domestic companies in high-tech manufacturing was growing. The value of assets of domestic high-tech firms in 2016 was about 2.5 times as much as in 2011, leading the share of assets in domestic high-tech companies to increase from 51 percent to 61 percent.

Although overall high-tech manufacturing in China has become less dependent on foreign investment, the situation varies across industries. Combining the effects of granting foreign investors market access and the development of domestic firms, some sectors are dominated by domestic firms, while only one sector—the manufacture of aircrafts and spacecrafts and related equipment—has seen the role of foreign investors expand from a very low base (figure 4).[5] In 2011, foreign and HMT firms owned only 7 percent of the total assets in this sector. The foreign share increased by about four times, rising to 21 percent as a share of total assets in 2016. This increase is consistent with the Chinese gradually opening up this industry, and the trend is ongoing. In June 2017, the State Council released a new negative list, in which the Chinese government further opened up this sector by reducing the number of items regulated by the special management measurements (特别管理措施) in the manufacture of spacecrafts (State Council 2015, 2017).

5. Due to the change of classification, 2011 data on high-tech manufacturing do not include the manufacture of electronic chemicals, which is covered in 2016 data. Therefore, only the five sectors covered in both in 2011 and 2016 statistics are compared.

**Figure 5 Share of exports of foreign-invested and HMT-funded enterprises across high-tech sectors, 2011 and 2016**




HMT = Hong Kong, Macau, and Taiwan

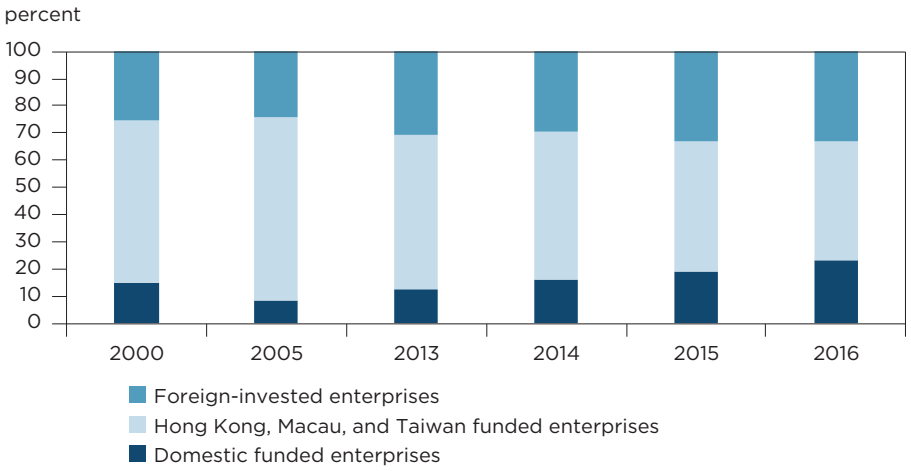
*Sources:* National Bureau of Statistics of China, National Development and Reform Commission, and Ministry of Science and Technology (2012); Department of Social Technology and Cultural Industry Statistics of National Bureau of Statistics (2017).

Export data show the same story. As shown in figure 5, with the exception of the manufacture of aircrafts and spacecrafts and related equipment again, the share of exports of enterprises funded by foreign and HMT investors declined in all other high-tech sectors. Although their role has declined, foreign-invested and HMT-funded enterprise shares remain very high, especially in the manufacture of computers and office equipment, where foreign and HMT invested firms accounted for 48 percent and 45 percent, respectively, of total exports in 2016.

## FOREIGN-INVESTED ENTERPRISES LEAD HIGH-TECH EXPORTS

As in the case of assets and profits, the share of exports from foreign firms reflects two competing forces. First, with the government opening up the economy and offering foreign investors preferential policies that are different from rules set for domestic companies, foreign direct investment flowed into high-tech industries, which account for a large share of exports. Much of this investment is vertical FDI, the main purpose of which is to locate production according to comparative costs, resulting in production that is mostly intended for sale in the source country or third-country markets (Gu, Awokuse, and Yuan 2008). Second, foreign investment may offer positive productive spillovers: Local firms may increase their exports by observing the export behaviors of foreign-funded enterprises (Haddad and Harrison 1993). These spillovers may be due to foreign firms' advanced production technologies or management and marketing competence, for example (Gu, Awokuse, and Yuan 2008). In addition, foreign investment may also improve local companies' abilities through the transfer and diffusion of technologies, management know-how, entrepreneurial skills, and employee training from foreign-funded enterprises (Sun 2001, Zhang and Song 2001). Foreign investment spillovers help local companies become more competitive, which in turn means the share of exports by foreign-invested firms may shrink.

**Figure 6 Share of exports in high-tech manufacturing by ownership, 2000, 2005, and 2013–16**




*Source:* Department of Social Technology and Cultural Industry Statistics of National Bureau of Statistics (2017).

In recent years, the share of exports by domestic firms in high-tech manufacturing has risen rapidly. The share almost doubled in the period of 2013 to 2016, as shown in figure 6. However, even though domestic enterprises play an increasing role in China's high-tech manufactured exports, foreign-funded enterprises still dominate. In 2016, 77 percent of high-tech exports were manufactured by foreign-invested or HMT-funded enterprises.

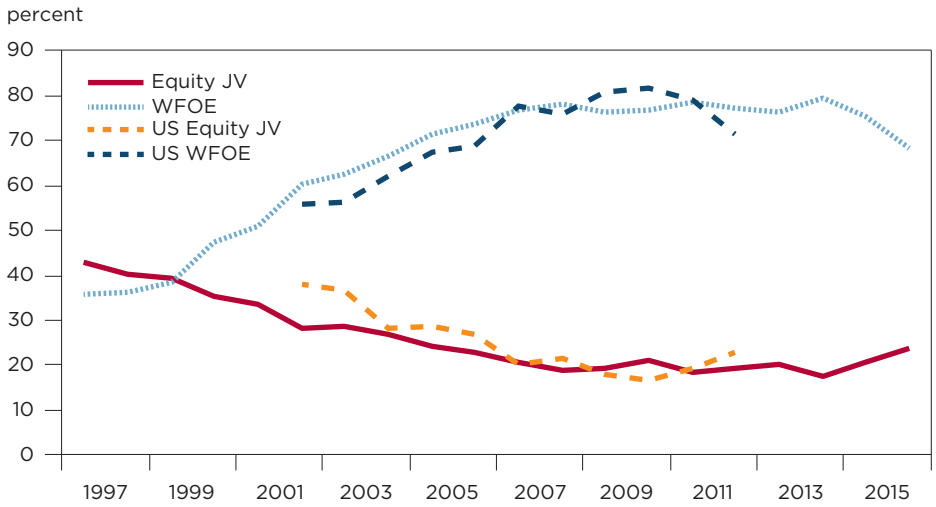
The decline in the share of exports by high-tech foreign manufacturers resulted solely from those manufacturers funded through Hong Kong, Macau, and Taiwan firms. In 2016, the exports of HMT-funded enterprises in high-tech manufacturing accounted for 44 percent of total exports, declining from 57 percent in 2013. However, the share of exports conducted by other foreign-invested enterprises increased slightly from 31 percent in 2013 to 33 percent in 2016.

## WHOLLY FOREIGN-OWNED ENTERPRISES VERSUS EQUITY JOINT VENTURES

Chinese foreign direct investment can be divided into six categories by form: equity joint venture (JV), contractual joint venture, wholly foreign-owned enterprises (WFOE), shareholding enterprises, joint exploration, and others. Equity joint ventures and wholly foreign-owned enterprises account for the lion's share of activity, with other firm types contributing a small share of total Chinese FDI. Foreign firms have preferred investment in the form of a wholly foreign-owned enterprise as a mode of entry into China since 2000, reversing previous trends in relative WFOE/JV shares. According to the most recently available data, WFOE FDI was 68 percent of total FDI in 2016, while equity JV FDI accounted for 24 percent.

Figure 7 provides the share of total Chinese FDI by entry mode and the shares for US investment in China alone. In 2014, 79 percent of all inward investment took the form of wholly foreign-owned subsidiaries, up dramatically from its 47 percent share in 2001. Although data for Chinese FDI from the United States by type of enterprise are not available for recent years, wholly foreign-owned enterprises are clearly also a major conduit of US investment in China.

**Figure 7 Chinese foreign direct investment inflows by wholly foreign-owned enterprises (WFOE) and equity joint ventures (JV), 1997–2016**




Note: The data on the United States is from the 2013 Report on Chinese Foreign Investment, the source of time series data from 2002 to 2012 shown for all investment sources. A full time series for US investment is not provided in the report.

*Sources:* Ministry of Commerce (2013, 37), National Bureau of Statistics of China (2017, 369) and National Bureau of Statistics of China, data.stats.gov.cn.

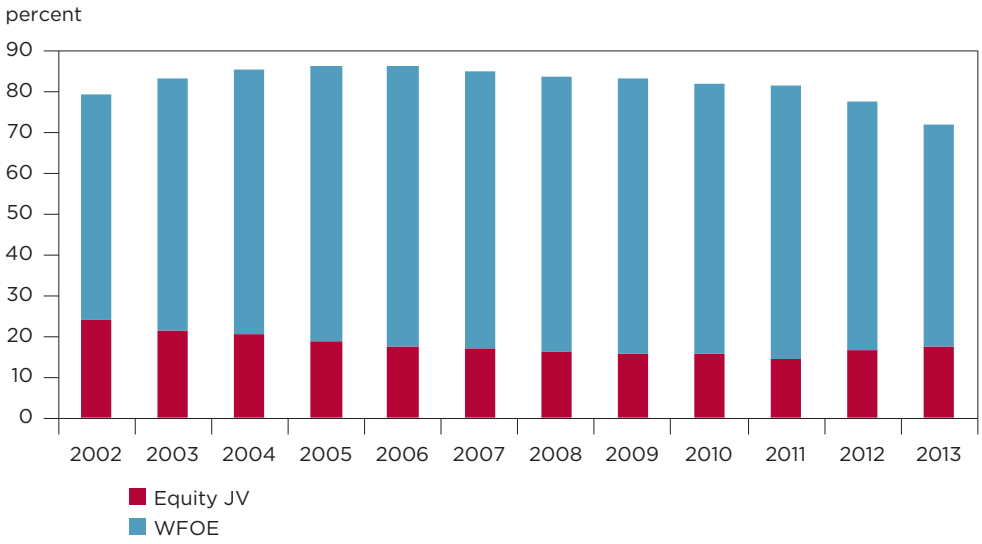
In some specific sectors, the Chinese government restricts the form of foreign direct investment by not permitting foreign investors to enter the Chinese market as wholly foreign-owned enterprises. Investment can occur only in cooperation with domestic companies, as equity joint ventures, contractual joint ventures, or other forms of cooperative relationships, and the Chinese domestic company is required to be the controlling partner. These restrictions have raised concerns in source countries about inappropriate technology transfers. In this light, it is noteworthy that the share of total FDI through wholly foreign-owned investment vehicles fell relative to FDI entering through joint ventures in 2015 and 2016. Indeed, this inflection point appears earlier in the data for flows from just the United States: The WFOE share of American investment begins to decline in 2010. The cause of this changing trend deserves further consideration.

Looking at export shares by firm type provides a bit more insight into how these changing ownership trends affect external sales. As mentioned above, foreign-funded enterprises play a crucial role in Chinese exports in high-tech manufacturing. When it comes to the type of enterprises exporting high-tech goods, exports by wholly foreign-owned enterprises exceed exports by equity joint venture, as shown in figure 8. Of particular relevance is the stability of the WFOE share of exports, which was 55 percent in 2002 and remains close to 55 percent in 2013. In contrast, the share of exports originating from Sino-foreign joint ventures fell over the 10 years shown in the figure.

## CONCLUSION

To the extent that Chinese high-technology exports reflect foreign research and development and design, they complement innovation in high-income countries. Notwithstanding the potential for trade conflict stemming from China's rapid entry into particular segments of global high-tech value chains, the mutual and cooperative development of high-tech products benefits consumers worldwide. The deep integration of

**Figure 8 Share of exports by wholly foreign-owned enterprises (WFOE) and equity joint venture (JV) in high-tech manufacturing, 2002–13**




*Source:* Ministry of Commerce (2016, 47).

China into global production, as evidenced by the continuing high shares of exports from foreign-invested enterprises, especially wholly foreign-owned firms, suggests that this complementarity remains strong.

China's efforts to raise the productivity and innovative capacity of indigenous enterprises is consistent with rising domestic shares of high-tech assets and profits. However, the latest data show that exports are still primarily originating in foreign invested enterprises. Their presence indicates that even in key growth markets—computer equipment, electronics, and electrical machinery—the foreign content of goods assembled and reexported from China is still high. Indeed, information from the Trade in Value Added project of the OECD indicates that in 2011 for computer and electronic equipment, Chinese domestic content embodied in exports was slightly below 50 percent. The interconnected nature of these trade and investment flows bears repeating at a time when high-tech conflict threatens to sever relationships built with China over the past 20 years.

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CHAPTER 5

# China and the United States: The Contest for Systemic Leadership

C. Fred Bergsten

## THE ISSUE

The current trade conflict between China and the United States obscures a more fundamental and much more important issue between them: the long-term systemic contest for leadership of the world economy (although, as explained in this paper, what they do in the short run will help shape long-run outcomes). That contest has numerous dimensions. The economic policy, and to an important extent ideological, dimension will determine whether the Washington Consensus of market economics or the Beijing Consensus centered on state capitalism turns out to be more successful and more likely to be adopted by others. The values dimension will influence the ongoing struggle between democratic and autocratic systems of governance. The power dimension will determine which country is more able to assert its influence, or even impose its will, on the rest of the world or at least block developments that it does not like.

Traditionally there have been important differences between China and the United States on all these variables. The United States has sought to lead the world economy toward open markets, relatively free trade and investment, trade agreements that expand those norms, flexible exchange rates (since the early 1970s), and robust international rules and economic institutions that seek to influence national behavior and feature governance structures that give voice to at least the other significant economies. It did so partly from a sense of global responsibility, particularly in the early days of the Bretton Woods negotiations and the Marshall Plan, but always with a consensus view that international prosperity and stability were crucially important for the national economic and security interests of the United States itself and were enhanced by such rules and institutions.

China has always emphasized the role of the state, direct and indirect government intervention in key sectors and markets, fixing of most key prices (interest rates, exchange rates, energy prices), domestic political controls, and rejection of external intervention in domestic decisions. The traditional differences can be

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proxied by contrasting the leading international economic initiatives by each of these countries in recent years: China's Belt and Road Initiative (BRI) and the Trans-Pacific Partnership (TPP) as originally negotiated under the leadership of the United States (and modeled on its free trade agreement [FTA] with Korea). The BRI is a transactions-based program with barely any rules and dispute settlement mechanisms (DSMs) that is largely funded, and implicitly dictated, by the Chinese government. The TPP is a rules-based initiative that liberalizes trade and some behind-the-border policies with a standard DSM that is equally available to all members.

China appeared to be moving toward the market and globalization, including its primary institutions like the World Trade Organization (WTO) and International Monetary Fund (IMF), and thus the environment promoted by the United States, from the outset of its economic reforms in the late 1970s until the global financial crisis of 2008. It seems to have reversed course over the last decade, however, apparently convinced that the global financial crisis represented a watershed that undermined US credibility and greatly strengthened its own standing. This shift seems to have accelerated since the ascendance of President Xi Jinping in 2012, especially in the last few years with the Made in China 2025 initiative, which emphasizes national industrial policies in rising high-tech sectors and new national champions.

In recent years, moreover, even before but especially since the election of President Donald Trump, the United States appears to be moving away from some of its own traditional norms in the international arena. Both political parties and their leaders rejected the TPP and, to some extent, globalization more broadly during the presidential campaigns of 2016. Overtly protectionist steps have been threatened in a number of contexts and actually applied in several (with more likely to come). Managed trade has been openly espoused in some cases. Skepticism has been expressed toward international economic institutions. The United States has echoed China's obsession with national sovereignty and rejection of outside "interference" with internal decisions—and President Trump has expressed great admiration for President Xi (and Vladimir Putin of Russia).

Hence the pro-market convergence of the previous three decades (1978–2008) seems to have been replaced, at least on international economic issues for now, by a pro-statist convergence. China's weight is clearly pulling other countries, including the United States, in its direction. Many are signing on to China's international initiatives, notably the BRI and the Asian Infrastructure Investment Bank (AIIB). They are adopting interventionist policies to counter China's own state intervention, as indicated by Trump's latest trade moves. Even more telling systemically are the actions already taken against Chinese investments by both the Obama and Trump administrations and, if carried through, the legislation proposed by Senator John Cornyn (R-TX), which would vastly expand the powers of the Committee on Foreign Investment in the United States (CFIUS) to limit direct investment and technology transfers at least to China if not more generally.

The contest for economic power remains and was already apparent before the election of President Trump. The Obama administration rejected China's invitation to join its AIIB and even lobbied vigorously against it, though that entity met a clearly defined need and was committed from the outset to adopting internationally established best practices (and has done so to date). It gave a cold shoulder to China's invitation to participate in the BRI. It grudgingly accepted the inclusion of the renminbi in the IMF's special drawing rights (SDR) basket, a formal acceptance of the renminbi as a reserve currency. Congress rejected for five years (despite Obama's advocacy) the reforms of the IMF agreed in 2010 (under US leadership) that expanded China's governance role in that institution.

Trump's recent actions against Chinese trade and investment policies, in an effort to promote his "America First" agenda, have intensified the contest. US "leadership," if one can call it that, now focuses on confronting China rather than promoting the traditionally positive American goals—even when the latter would have counseled an opposite strategy, as in all four cases cited. Team Trump would apparently acknowledge, and indeed proudly defend, this radical reversal of US priorities, although they would presumably claim that they are just trying to level the playing field (and thus restore market-determined outcomes) by calling out China's own protectionism.

As a result, other countries have been drifting away from their traditional reliance on the United States. The world is proceeding with the Paris agreement on climate change without the United States. The 11 TPP countries are moving ahead without the United States. The European Union (and Japan, to a lesser degree) has reacted forcefully to US threats of protectionist trade measures. Canada and Mexico (and Korea, to a lesser degree) have rejected most of the US proposals to alter their FTAs in its favor. Both the OECD and G-7 have explicitly rebuked the United States. None of these countries appear to have sought China's leadership instead, but several have evinced openness to it, e.g., by joining its new initiatives (AIIB and BRI) and perhaps by inviting it to replace the United States in the TPP.

This pattern of events over the last several years, greatly intensified by the advent of Presidents Trump and Xi, raises three fundamental questions. Does the United States still care about leadership of the world economy or has it grown tired, and perhaps even skeptical of the desirability, of maintaining that role? Does rising China, despite its frequent denials and stated intent to continue focusing on domestic economic progress, want to fill the vacuum left by the United States, perhaps sooner rather than later? Will the relative capabilities of the two countries permit, or even perhaps promote, a leadership shift any time in the near future?

## THE ECONOMIC BACKDROP

There has been no generalized decline of the United States in absolute or even relative terms. Indeed the US economy has grown faster than any other main industrialized economy since the end of the Cold War, and the US margin over both Europe and Japan (measured by total GDP and per capita incomes) is considerably greater than at that time. US military superiority remains overwhelming. Any deterioration in the US potential for global economic leadership stems from a decline in its will rather than in its capability.

The main reason for any US decline in relative terms is the dramatic rise in China's capability. China and the United States are now broadly equal on several key metrics, including GDP in purchasing power parity (PPP) terms and levels of trade (table 1). China is likely to continue growing (4 to 7 percent) at double or triple the US rate (2 to 3 percent) for at least the next decade or two, as its much lower per capita

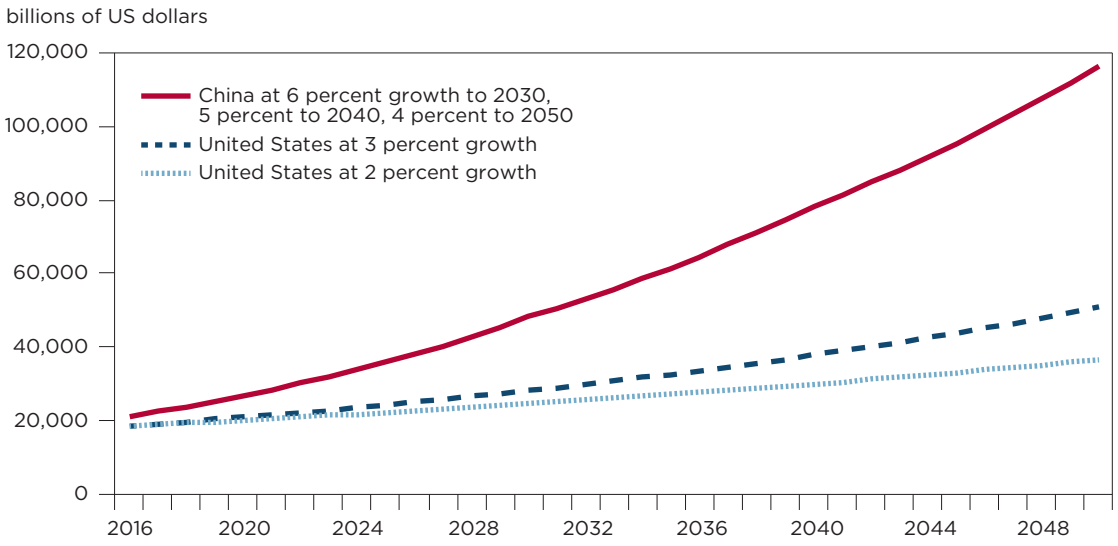
**Table 1 Selected economic metrics for China and the United States, 2016**

| Metric | China | United States |
|---|---|---|
| GDP (market exchange rates; trillions of dollars) | 11.2 | 18.6 |
| GDP (PPP exchange rates; trillions of dollars) | 21.3 | 18.6 |
| GDP per capita (PPP exchange rates; thousands of dollars) | 15.4 | 57.6 |
| Trade (trillions of dollars) | 3.7 | 3.6 |

PPP = purchasing power parity

*Sources:* IMF *World Economic Outlook Database*, October 2017; IMF *Direction of Trade Statistics*.

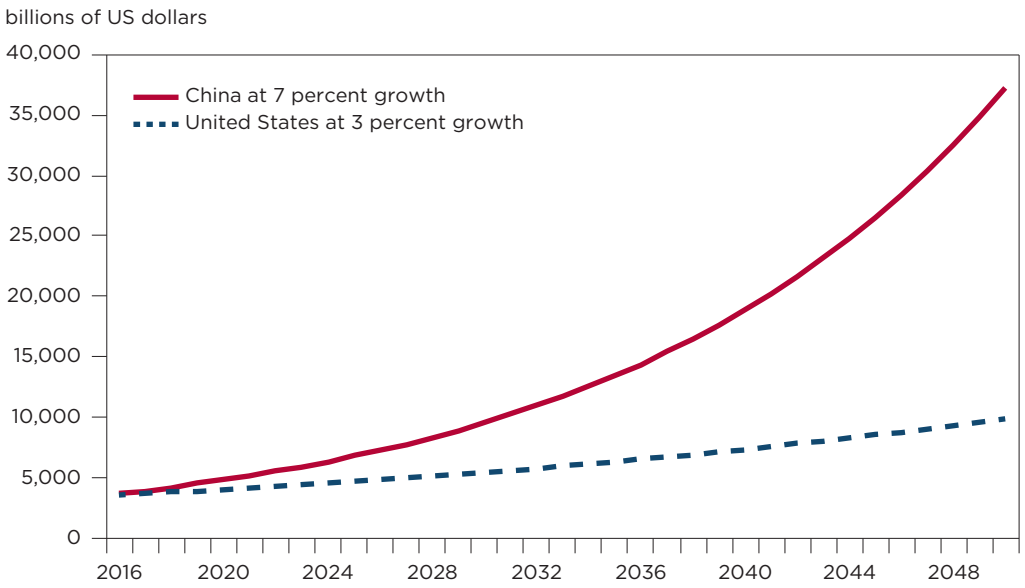
**Figure 1 GDP growth at PPP exchange rates, 2016–50**




PPP = purchasing power parity

*Sources:* IMF *World Economic Outlook* Database, October 2017; author's calculations.

**Figure 2 Trade growth, 2016–50**

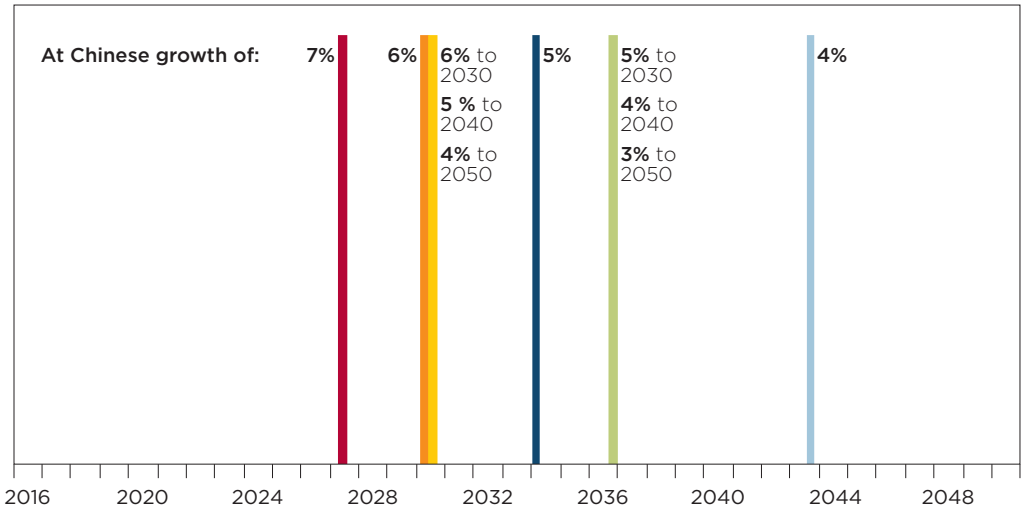



*Source:* IMF *Direction of Trade Statistics*; author's calculations.

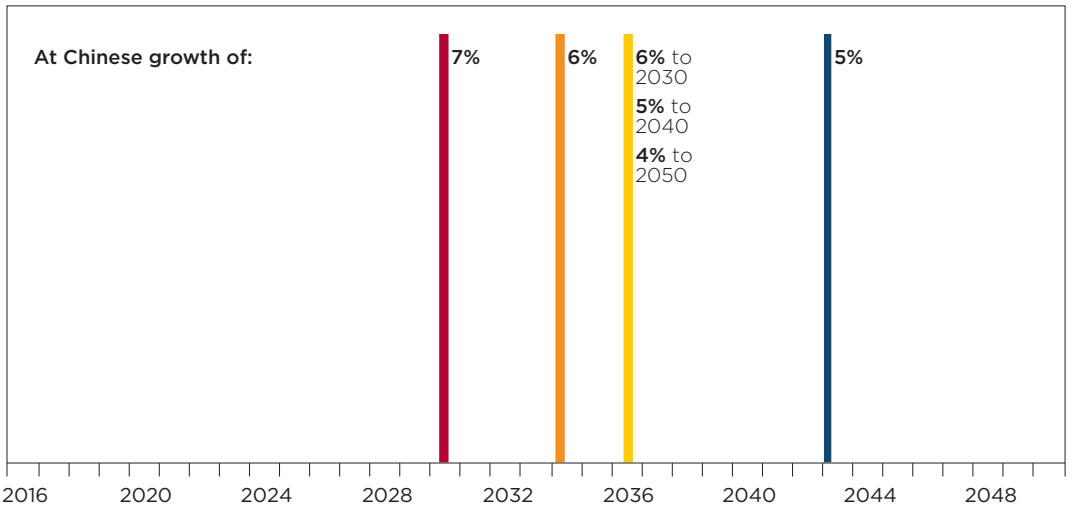
income offers sizable scope for further convergence to the US frontier. Its GDP, measured in PPP terms, passed the United States in 2010 and will probably double that of the United States by 2030 and triple it by 2040–50 (figure 1). China's trade level will probably also double the US level by 2030 and triple it by 2040 (figure 2). China's GDP at market exchange rates will probably exceed US GDP by 2030 and do so by 50 percent by 2040 (figure 3).

**Figure 3 When does China exceed US GDP at market exchange rates?**

a. United States at 2 percent growth




b. United States at 3 percent growth




Note: Light blue and green lines not shown in panel b because if Chinese GDP grows at those rates, it will not exceed US GDP (assuming 3 percent growth) by 2050.

*Source:* IMF *World Economic Outlook Database*, October 2017; author's calculations.

Greater size does not of course automatically confer greater (let alone dominant) leadership. The United States will remain a very large economy, with very large trade and international investment levels, and as noted it has experienced no generalized decline vis-à-vis the rest of the world. Inertia is a powerful force in global economics, and the United States has been the undisputed world leader for over 70 years, without any plausible rival. Over that period, it built a formidable array of alliances and international institutions grounded in its own norms.

But China's prospective growth, to levels that may well be multiples of the United States on several key variables over the next few decades, clearly provides it with the wherewithal to exercise much greater international clout—especially if it seeks to do so while the United States retreats to the sidelines. And President Trump seems to vastly overestimate the international economic power of the United States in present circumstances, as indicated both by the resolute opposition of his main trade targets (notably including China) and the ability of the rest of the world to proceed without "the indispensable nation."

## POTENTIAL SCENARIOS

Against this backdrop, there are three potential scenarios for the evolution of global economic leadership over the next decade or so. Shaping this outcome is far more important for China and the United States, and certainly for the world as a whole, than whether they can correct their current international imbalances or even avoid a trade war. Even with the distractions of the immediate problems, they should therefore be addressing these fundamental systemic questions—and making sure that whatever they do in the short run will support constructive outcomes for the longer haul.

The first and most likely outcome is a systemic stalemate that emerges without effective leadership from either China or the United States (or anybody else). This "G-0" world could have deleterious consequences. The classic model is the "Kindleberger trap" of the 1930s, which deepened the Great Depression when the declining United Kingdom no longer had the capability to lead and the rising United States did not yet have the will to do so. No one provided the open markets, lending, and liquidity needed to avoid international economic conflict and downward spiral. The parallel questions today are whether China will be able to translate its growing capability and apparent will into an effective and accepted leadership posture or, if not, whether the United States will regain its will to do so.

On the other hand, a "G-0" may be sustainable and prove able to avoid the "Kindleberger trap." The norms of the postwar international economic order are strongly imbedded and could prevail even without their traditional leadership. The institutions that were created at Bretton Woods have proved resilient to date and could evolve further to maintain their legitimacy and authority. The multipolar world of today could find new leaders on specific issues as has already been the case to a degree: the European Union on climate change, Japan on the TPP, Germany to preserve the euro and thus the European Union itself, and Norway on the management of huge monetary reserves via sovereign wealth funds.

The second scenario envisages a rise of China to lead a new "G-1" system. The combination of China's rising capabilities, the ambition of President Xi, and especially the abdication of US leadership (most notably by President Trump but reinforced by broader political attitudes in the United States) suggest that such an outcome is possible. But it also faces huge obstacles, especially China's increasingly autocratic political system and antidemocratic values.

There are two critical variables under this heading. One is timing. Many believe that a gradual assumption of global leadership by China over a decade or so, as its economic clout continues to grow, is inevitable. The "China dream" envisages China's return to a central global position, perhaps by the 100th anniversary of the Communist Party's takeover of the country in 1949–30 years from now. Vice Premier Liu He reiterated China's ambitious plans to achieve a "great modern socialist country by 2050" in his address at Davos earlier in 2018.

But the unexpected US abdication—its loss of leadership will—could sharply accelerate this timetable. The Chinese leadership must be sorely tempted to exploit the new opening. If a leaderless G-0 world turns

out to be unsustainable, there may indeed be increasing calls from around the world for China to move much more aggressively.

Several steps in that direction could be envisaged. China could pursue the invitations to join the (now US-less) TPP, perhaps converting it into a Free Trade Area of the Asia Pacific (FTAAP) in the process, and use the negotiation to do so to begin changing the global trading rules in its direction. It could initiate a new round of liberalization negotiations in the WTO, putting its own restrictive practices on the table, to reinvigorate the multilateral trading system. Conversely, or in addition, it could threaten to leave the WTO if it were not immediately accorded market economy status by the full membership. It could insist that the new round of IMF quota negotiations, already scheduled for the next year or two, bring it to full parity with the United States and the European Union. More immediately, it could offer a new agreement to the United States that would resolve the current confrontation and avoid a trade war.

The second key variable is directly related: Would the United States accept China's rise more or less gracefully or would it fight to avoid losing its traditional top position? A gradual ascendency would seem more likely to be met by acquiescence, whereas a dash to dominance by China, even though prompted in large part by a US leadership abdication and with the substantive differences muted by the recent US adoption of atypically restrictive policies itself, would be much more likely to induce a hostile and confrontational reaction. Whatever the timing, the attitude and behavior of both the second Obama administration and, much more dramatically, the Trump administration suggest that the United States will not give way quietly.

It is indeed quite possible that the United States will seek to block any further assertion of global economic leadership by China. The Trump administration has already taken the position that it was a mistake to let China join the WTO. They could veto any further increase in China's share of the IMF. They, and many in Congress, may take new action to further limit Chinese investment in the United States and future US investment in China. These "tough" steps could produce fruitful negotiations, if oriented in that direction, but are more likely to lead to new conflict and confrontations.

It is thus possible that there is a "Thucydides trap" for the global economic order. History suggests such a possibility, though the economic and security dimensions of the past episodes are largely inextricable. When incumbent Great Britain resisted rising Germany in the late 19th century, the first era of globalization ended and war resulted. The newly powerful United States resisted assuming leadership in the 1930s and the Great Depression ensued, and then the United States economically confronted rising Japan and war resulted again. There may be an inherent dynamic through which clashes between the (relatively) declining hegemon and the rising power become inevitable during the transition period—with the latter induced to move prematurely and the former unready to accept demotion.

This potentially disastrous outcome points the way toward a third, and probably most desirable, scenario: a restoration of US will to lead, which, accompanied by its continued or even reinvigorated economic dynamism, provides the foundation for a cooperative "G-2," at least for a prolonged transition period, between China and the United States. The present period, when China and the United States are roughly equal on some of the key economic metrics as shown in table 1, might be a propitious time to pursue that alternative.

Despite the "hegemonic stability" theories of Kindleberger and a number of more recent political scientists, Barry Eichengreen and others have demonstrated that multipolar leadership has proved successful in several historical periods. Examples include the late 19th century and the early interwar period, during much of which some combination among the United Kingdom, France, and the United States provided the

basis for a reasonable degree of global economic stability and prosperity. Some would argue that the postwar era also provides at least partial support for the idea, with the European Union and United States functioning as an effective "G-2" in managing the trading system for a prolonged period and the various "Gs" doing so on the monetary front (e.g., the Plaza Agreement and the response to the Asian financial crisis).

In the contemporary context, such a G-2 would function within a broader multipolar and institutional framework. It would attempt to lead other countries and the relevant organizations in two complementary directions: maintaining an orderly world economy within the existing norms and modifying those norms in a deliberate manner to reflect the changing balance of power among the key actors—mainly the G-2 themselves.

The latter part of that equation would be extremely difficult. It would clearly require changes in the mindset of the United States, based on a major alteration in the domestic political landscape, to resume international economic cooperation and take several tangible steps as well: joining the AIIB, participating in the BRI through both public institutions and private firms and supporting truly proportional representation for China (and other rapidly emerging markets) in the IMF and other international institutions. All these steps would seek the right combination of reinforcing traditional norms and institutions, where they can be widely endorsed, and creating new norms and institutions to more accurately reflect the preferences of China and perhaps other ascending economic powers. Domestic economic policy or institutions presumably would need no significant changes.

China would of course have to adapt its mindset as well. It has learned that it can achieve the best of both worlds by exploiting the current rules and institutions, where it gains so substantially from doing so, and flouting them when that seems desirable (as with currency manipulation during 2003–13 and intellectual property theft to this day). It will have to forego or at least modify some of its rejections of the current system to win acceptance of the changes that it views as most important, especially to head off the conflict with the United States (and probably other defenders of the traditional order) that could otherwise emerge all too easily.

The most promising avenues toward a functioning "G-2" probably lie in the relatively new issue areas where no international compacts exist or older topics on which agreement has proven unreachable to date. The best examples of the former are cyberespionage and climate change, where there is still no formal agreement (if the United States can come to its senses on that topic). Examples of the latter include international investment (a "GATT for Investment"?), state-owned enterprises, and technology transfer. Enumeration of these topics underlines the importance both of reaching new international accords to defuse incipient systemic conflict and of the essentiality of agreement between China and the United States, i.e., an effective "G-2," to do so.

A dramatic way to address these issues, and to establish a G-2 with its systemic implications, would be for China and the United States to launch negotiations for an FTA between them. A less risky, but functionally equivalent and more politically correct, approach on trade and investment topics would be for both to enter negotiations to join the TPP or an FTAAP together. On the monetary side both countries could use the upcoming renegotiation of IMF quotas to start establishing a G-2 or create a new SDR Council to bring together the five designated reserve currency issuers (the United States, eurozone, the United Kingdom, Japan, and China) to do so.

The current trade confrontation between the United States and China may provide an opportunity to start fashioning a functioning G-2. If they can put aside the rhetoric and posturing, and work out a practical

new agreement that averts a trade war, they will have exercised positive systemic leadership, which could be the start of something lasting. China and the United States have already set up more than 100 working groups and task forces, so many channels of potential "G-2" consultation exist, and the leaders of the two countries have met virtually every quarter for the past 10 years.

## THE RECORD TO DATE

Actual leadership steps by the two countries over the past decade or so help reveal which scenario is most likely. China has already made a number of constructive moves. It resisted devaluation in the face of the Asian financial crisis, which could have greatly exacerbated that disruption. It joined the WTO and used its rules to promote domestic reforms. It moved faster and more forcefully than anyone else in response to the global financial crisis in 2008–09. It has provided generous loans to the IMF in recent years and has created the AIIB and BRI. It has generated almost one-third of total global growth since the crisis.

On the other hand, it has flouted international rules and norms in major instances as well. Its massive currency manipulation stole huge amounts of output and jobs from other countries. Its forced technology transfers and intellectual property piracy move in the same directions. Its "Made in China 2025" strategy promises even greater emphasis on industrial policies and national champions. Its abolition of term limits for President Xi provides the political authority to carry out such an approach and underlines its authoritarian prospects.

Moreover, China has frequently let its security concerns dictate economic policy. It boycotted Korean products, companies, and even tourist sites over Korean deployment of the Terminal High Altitude Area Defense (THAAD), an American anti–ballistic missile system. It embargoed rare earth exports to Japan when the Japanese government took control of the Senkaku islands. It blocked Norwegian salmon when Norway gave the Nobel Peace Prize to a Chinese dissident and fruit from the Philippines when that country challenged it on the South China Sea.

Three tentative conclusions can be gleaned from China's performance. First, it clearly values the current system enough to take steps to preserve it when systemic stability is threatened, as in the cases of the Asian crisis and especially the global financial crisis of a decade ago. Second, it has concluded that it can get away with substantial cheating within the system to promote its narrower national goals—presumably because its size has deterred other countries, including the United States, from taking effective steps to counter it. Third, China will thus be content—at least for a while—to continue getting the best of both worlds under the current regime. The risk of course is that it could at some point miscalculate and trigger a backlash, presumably led by the United States, against its free-riding, which could threaten the sustainability of the system and risk plunging the world into the "G-0" leaderless context. Such a result could be approaching now with the aggressive moves against China by the Trump administration.

The United States has a similarly checkered record. It has sustained a solid, if tepid, economic expansion since the global financial crisis and strengthened its financial system. It enacted Trade Promotion Authority and successfully negotiated the TPP (before Trump's arrival). Trump's tax cuts and deregulation agenda move in traditional (if controversial) US directions.

But the United States has failed to adequately respond to the domestic disruptions of globalization and has thus lost political support for an open international economic policy. It failed to conclude the Transatlantic Trade and Investment Partnership and took five years to approve increased IMF quotas for China and other underrepresented countries. It has been unwilling to lend to the IMF. Trump of course has withdrawn

from the Paris agreement on climate change and the TPP, threatened to vacate both the North American Free Trade Agreement (NAFTA) and the Korea-US Free Trade Agreement (KORUS), and is in the process of applying new restrictions to Chinese trade and investment. At the cyclical level, its fiscal stimulus of an already fully employed US economy is irresponsible in macroeconomic terms.

The main message from US behavior seems to be that it has lost interest in providing leadership to the global economy, at least of the traditional type that has commanded widespread support both domestically and around the world. Under Trump, it has instead set a course that threatens to disrupt the global order and propel the world toward either a "G-0" or "G-1"/China outcome.

The paradoxical inference for the system is that China may have to assume global leadership, at least on the trade side but perhaps in some monetary arenas as well, to preserve the architecture that has provided it with such valuable assistance and that it appears to value so greatly. The United States in general, and Trump in particular, may thus be pushing China to supplement or even supplant its own global role—in the same way that the United States was pushed to replace the United Kingdom in the interwar period, and in ways that would benefit the United States itself as well as the rest of the world. President Xi may have to make good on his pronounced willingness to keep globalization flourishing. Many Americans might feel that such a shift of responsibility, with its burdens of leadership, is justified at the same time they may regret the loss of traditional hegemony.

The most logical way for China to proceed down this new leadership path, as noted above, would be to stimulate the launch of a new round of liberalization negotiations at the WTO. More realistically, it could initially choose to join the TPP and convert it into an FTAAP—thus generating pressure on the Europeans and other nonregional countries to support a new global initiative. Most immediately, it could work out a package with the United States to head off the incipient trade war. China might well seek US partnership in some or all parts of such a strategy, promoting the "G-2" systemic outcome though probably without ever calling it that.

## CONCLUSION

Conflict between China and the United States may be inevitable over these systemic issues as well as over the more immediate flashpoints that have triggered the current confrontation. The outcome of the present hostilities may go far to determine the relative positions of the two countries and even the results on some of the broader issues (e.g., the role of state enterprises and government control of foreign investment).

More likely, however, the governments will temporarily resolve their current disputes, which are so difficult and some perhaps even irreconcilable, and once again avoid addressing the fundamental questions that underlie their fraught interaction. Repeatedly deferring those fundamentals is dangerous, however, because it risks triggering confrontations such as those we are seeing now—or even more severe conflicts as China's power continues to grow, even if the United States gets its act together but especially if it fails to do so. Hence China and the United States must begin to address the systemic, and underlying, economic issues between them as soon as possible—for the good of the world as well as for themselves. The path toward new systemic leadership for China and a de facto "G-2" with the United States, perhaps launched with a negotiated solution to the current confrontation, commends itself as a possible resolution of the impasse that could plausibly be pursued over the next few years.

CHAPTER 6

# Prospects for Economic Reform and Medium-Term Growth in China

Nicholas Lardy

China has grown faster for longer than any other country on record as a result of gradual economic reform over 40 years. Nonetheless, both commentators and serious economists have predicted at various times that China would have a hard landing soon, which would reduce China's growth to the low single digits. To date these predictions have not been borne out. Even though China's growth rate has declined since the global financial crisis, it has continued to make a disproportionately large contribution to the pace of global expansion.

This paper explains in broad terms why China has grown so fast for so long and argues that its growth rate has slowed since the global financial crisis because of a decline in the pace of exports from the earlier boom years; an expansion of state-owned enterprises, which perform less well that private enterprises; and a slowdown in private investment. China's current growth rate is below potential and likely to remain so in the absence of further market reforms.

## WHY SO FAST FOR SO LONG?

I continue to believe that China's long-term growth record has been stellar primarily because market forces have increased in importance since reforms began in the late 1970s. The long-term rise of market forces has been very gradual and not without some setbacks, most of which eventually proved temporary. But there is no denying that the state has continued to attempt to shape the pattern of China's growth. Some of these attempts, however, have not contributed to China's economic success, which has come despite these attempts.

The critical importance of market forces is clearly reflected in their increasing role in price formation and in the growing contribution of private business to GDP and employment. On the eve of reform in 1978, the State Price Commission fixed the prices of all important goods—farmgate prices, consumer goods prices, producer goods prices, and prices for most services as well. After the reform began, the state's control of agricultural and consumer goods prices eroded most rapidly, with about half of the transactions

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in these goods taking place at market prices by the mid-1980s. The state gave up control of producer goods prices more slowly; market prices did not dominate transactions in these goods until the 1990s. By 2001 the government fixed prices of only 13 commodities, 9 services, and 5 types of public utilities, so 95 percent of all transactions involving both consumer and agricultural products and 87 percent of all transactions in producer goods were at market-determined prices (Lardy 2014, 14).

On the eve of reform in 1978 state-owned enterprises and collective firms, the latter closely affiliated with local governments, dominated the economy. Along with agricultural collectives they produced close to 100 percent of output and employed all but 150,000 members of the labor force. Thirty-five years later private agriculture and private firms in industry, construction, and services accounted for about 70 percent of GDP (Lardy 2014, 94). Private firms were equally important in generating employment: By 2011 privately controlled firms employed an estimated 253 million workers, or 70 percent of the urban labor force, up from 0.2 percent in 1978, meaning that private firms accounted for about 95 percent of the growth in urban employment over that period (Lardy 2014, 83-85).

## WHY HAS CHINA'S GROWTH SLOWED SINCE THE GLOBAL FINANCIAL CRISIS?

Perhaps the most frequently heard explanation of China's slowdown is that it is the natural result of the maturing of an economy that has experienced super-rapid economic growth for an unprecedented period and one should expect further slowing in the years ahead—more in line with the median global historical rate of 2 percent per capita, according to Pritchett and Summers (2014). But this explanation is not convincing. China has already expanded at a super-rapid pace for longer than any other country, and the empirical analysis on which this explanation is based cannot say when and, more importantly, why a slowdown to 2 percent per capita might occur.

### Moderating Global Trade Surplus

China's economic slowdown since the global financial crisis does not appear to be the inevitable result of the maturing of an economy that had already enjoyed three decades of super-rapid economic growth by the time of the crisis. An almost always overlooked factor contributing to China's slowdown is the role of foreign trade. In the years before the global financial crisis, between 2005 and 2008, China's currency was undervalued and its global goods and services trade surplus rose rapidly, reaching a peak of 8.7 percent in 2007, an all-time record for any large trading economy (State Administration of Foreign Exchange Balance of Payments Small Group 2008, 9). This growing trade surplus added an average of 1.3 percentage points to China's economic growth (National Bureau of Statistics 2017, 79). But this surplus distorted China's domestic economic growth in favor of tradables and led to substantial friction with China's trading partners. As early as mid-2005 China gradually allowed its currency to appreciate. By year-end 2016 the cumulative appreciation, on a real effective basis, exceeded 45 percent.[1] As a result the goods and services trade surplus declined to only 2.2 percent of GDP by 2016 (State Administration of Foreign Exchange Balance of Payments Small Group 2017, 17). The shrinking surplus reduced China's economic growth by an average of 0.8 percentage points in 2009–16 (National Bureau of Statistics of China 2017, 79).

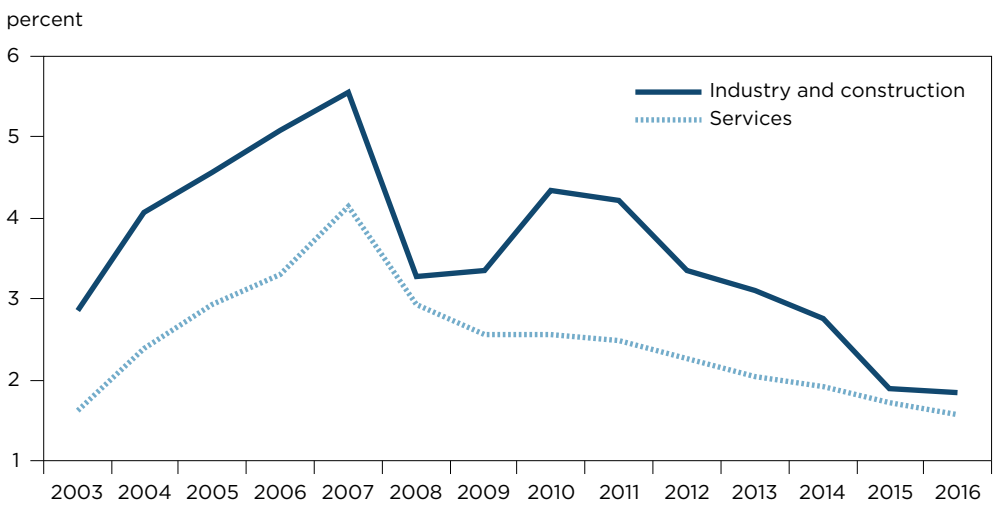
1. The Bank for International Settlements (BIS) real effective exchange rate index (2010 = 100) rose from 83.5 in June 2007 to 122.9 in December 2016, a cumulative appreciation of 47 percent. Available at www.bis.org/statistics/eer.htm (accessed on March 29, 2018).

China's economy expanded by an average of 8.2 percent in 2009–16, compared with 12 percent in 2005–08. Thus, a bit more than half the slowdown of 3.8 percentage points between the two periods arose because rapidly rising, but ultimately unsustainable, surpluses in its trade in goods and services with the rest of the world pushed economic growth in the years before the global financial crisis substantially above potential. The shrinkage of its trade surplus to a much more modest, sustainable level since the global financial crisis is the single most important cause of China's slowing growth. But this negative factor has run its course, suggesting that, other things being equal, China's growth might pick up slightly in coming years.

## Deteriorating Performance of State-Owned Enterprises

The second most important factor dragging down China's growth since the global financial crisis is the deteriorating financial performance of China's state-owned firms. The financial losses of money-losing state firms more than quadrupled, from RMB378 billion in 2007 to RMB1,950 billion in 2016 (Ministry of Finance 2017, 369). Over this decade 45 to 50 percent of state-owned firms consistently did not earn enough to fully cover interest and principal payments on their bank loans. More importantly, as reflected in figure 1, the return on assets of all state-owned enterprises in industry (including construction) and services fell by two-thirds and two-fifths, respectively, between 2007 and 2016. In industry alone, returns of state-owned companies were only 3.0 percent in 2016, less than half the 6.8 percent returns these firms earned in 2007, just prior to the global financial crisis. In 2016 private industrial firms' returns were 10.6 percent, slightly

**Figure 1 Return on assets of state-owned enterprises by sector, 2003–2016**




*Sources:* Ministry of Finance (2017, 379, 383); Wind Information.

higher than the 9.5 percent level of 2007 and an astounding three-and-a-half times the returns of state-owned industrial firms in 2016 (National Bureau of Statistics of China 2008, 496–99, 506–09; National Bureau of Statistics of China 2017, 420–23, 426–29).

Although the contribution of state firms to China's GDP has fallen dramatically since 1978, these firms still control a massive amount of underperforming assets. In a reversal of the trend in earlier years, starting gradually in 2012 bank lending to nonfinancial corporations went increasingly to state-owned firms, while

**Table 1 Financial preformance of central SASAC enterprises, 2005–17**

| Year | Profits (billions of renminbi) | Assets (billions of renminbi) | Return on assets (percent) |
|---|---|---|---|
| 2005 | 641 | 10,630 | 6.0 |
| 2006 | 765 | 12,192 | 6.3 |
| 2007 | 997 | 14,927 | 6.7 |
| 2008 | 696 | 17,629 | 3.9 |
| 2009 | 815 | 21,058 | 3.9 |
| 2010 | 1,143 | 24,427 | 4.7 |
| 2011 | 1,266 | 28,036 | 4.5 |
| 2012 | 1,300 | 31,457 | 4.1 |
| 2013 | 1,300 | 35,078 | 3.7 |
| 2014 | 1,400 | 38,964 | 3.6 |
| 2015 | 1,167 | 47,647 | 2.4 |
| 2016 | 1,233 | 50,500 | 2.4 |
| 2017 | 1,423 | 54,500 | 2.6 |

*Source:* State-Owned Assets Supervision and Administration Commission, sasac.gov.cn (accessed on March 14, 2018).

private firms were crowded out. In earlier years, private firms accounted for an increasing share of bank loans. According to data published by the People's Bank of China, between 2011 and 2015 the share of loans to nonfinancial corporations that went to private firms fell from 54 to 19 percent, while the share flowing to state firms rose from 28 to 69 percent (China Banking Society 2012, 369; China Banking Society 2016, 357–58).[2] Over roughly the same period state firms raised an increasing share of funds on domestic stock markets through initial public offerings and secondary offerings.[3]

The expanded claim of state companies on China's financial resources, despite their deteriorating financial performance, is demonstrated most clearly in table 1, which shows the financial results of very large state-owned group companies administered at the central level by the State-Owned Assets Supervision and Administration Commission (SASAC). These firms and their numerous subsidiaries account for about one-fifth of all state-owned nonfinancial enterprises. The return on assets of these firms fell from 6–7 percent in the years before the global financial crisis to a low of 2.4 percent in both 2015 and 2016, before recovering slightly to 2.6 percent in 2017. Despite this rapid deterioration in the financial performance of these firms, they accessed increasing bank loans and proceeds from stock issuance, which allowed them to more than quintuple their assets between 2005 and 2017. The increase in their assets was RMB45 trillion, four times the cumulative after-tax profits of these firms over this period.[4]

2. The increase in the share of loans to state companies in only four years is so large that one wonders whether there has been some change in the coverage of the data. However, the source table with data on lending by ownership contains no explanatory notes.

3. Private firms in very recent years have accounted for a large share of the funds raised through initial public offerings (IPOs). In 2017, for example, private firms received about three-quarters of IPO proceeds. However, state firms dominate secondary offerings, which account for a large share of funds raised on China's domestic stock markets. Taking these factors into account, the share of total equity fundraising flowing to state firms increased from 35 percent in 2011 to 44 percent in 2017. Calculated based on data from Wind Information.

4. Cumulative after-tax profits calculated assuming that these firms paid the standard 25 percent corporate income tax on the pre-tax profits shown in the table. No allowance is made for dividend payments made by some listed subsidiaries of SASAC group companies, so the calculation overstates the share of assets that could have been acquired with after-tax profits.

### Slowing Private Investment

The third factor contributing to China's slowdown since the global financial crisis is the slowing pace of private relative to state investment in recent years. From 2006 through 2011 the pace of private investment was 2.6 times that of state investment; from 2012 through 2015 the pace moderated to 1.3 times; and in 2016, and apparently in 2017 also, private investment collapsed, growing only at about a fifth the pace of state investment. If sustained, this trend will further drag down China's economic growth.

The much faster pace of investment by more productive private firms had previously boosted China's growth. But the resumption of state-led investment, in which a growing share of resources is flowing into relatively less productive state firms, is contributing to China's growth slowdown.

In addition to crowding out private investment, the resurgence of the state, starting in 2015, appears to have chilled the enthusiasm of private entrepreneurs to invest. The seriousness of abuses of the property rights of private businessmen was underscored in a document issued jointly by the Chinese Communist Party Central Committee and the State Council (2016), which specifically acknowledged that the state had illegally seized and frozen the assets of private enterprises. The issue also received considerable attention at the 13th National People's Congress in the spring of 2018. The report of the National Development and Reform Commission (2018) contains a long paragraph pledging "to ensure equal protection of the property rights of economic entities under all forms of ownership in accordance with the law." These efforts, the report goes on, "will help to ensure private enterprises can develop in a supportive and positive atmosphere." The difficulty the regime faces in guaranteeing property rights also was reflected in the response of Premier Li Keqiang to a query on the slowing pace of private investment at his press conference marking the closing of the National People's Congress in March 2018. He acknowledged that private investment was weak and explained it was due to "weak protection of property rights and some other factors."[5]

## WHY MIGHT CHINA CONTINUE TO OUTPERFORM?

Despite the challenges outlined above, China's medium-term potential growth is higher than the 6 to 7 percent pace recorded in 2015–17. This judgment rests on two simple observations. First, from an international perspective China is an extreme outlier in terms of the magnitude of state-owned nonfinancial assets relative to GDP, primarily because of the large assets of state-owned nonfinancial firms (IMF 2013). In 2016 the value of assets of state nonfinancial companies alone (i.e., excluding the value of state-owned land and other assets) was about RMB155 trillion, or twice the GDP in the same year and 4.5 times the value in 2007, the year before the global financial crisis erupted. Assets of state industrial firms in 2016 were RMB40 trillion (Ministry of Finance 2017, 366).

Second, the returns on these state assets have fallen dramatically, as reflected in figure 1, and are now a fraction of the returns of private companies. If state industrial firms had been able to achieve the same returns as private industrial firms, value-added in 2016 would have been RMB3.04 trillion more than was achieved, boosting GDP growth in 2016 from the reported 6.7 percent to 8.2 percent. State service sector assets at RMB103.6 trillion are even larger, but without an average productivity figure for private service firms, the boost to economic growth from the convergence of state service firms to the level of productivity of private service firms can only be roughly estimated. If state service firms had closed an estimated

5. "Premier Li Keqiang meets the media after the NPC's annual session closes," *China Daily*, March 21, 2018, p. 6.

4-percentage-point gap in return on assets with private service firms, GDP growth in 2016 would have been boosted to 11.7 percent. The combined effect of the postulated convergence of the returns of state companies to those of private firms in both industry and services would have boosted GDP growth in 2016 to more than 13 percent, roughly twice the pace actually recorded.

Obviously, the productivity gap between state and private firms can't be closed in a year, but the right mix of economic reforms could reduce the gap substantially over a period of years, significantly boosting China's GDP growth. The required reform package to capture the gains from convergence involves some combination of policies that would (1) raise the productivity of the assets already in the hands of state companies, (2) transfer underperforming state assets to more productive private firms, and (3) more efficiently allocate bank loans and bond and equity issuance.

Policies to achieve the first aim include those that would increase competition. The state should reduce barriers to entry by private firms, which are particularly high in many service industries as well as in upstream oil and gas and in utilities. Competition from private firms would increase pressure on underperforming state companies.

To achieve the second aim, the government should adopt policies that would facilitate increased market-driven merger and acquisition activity, i.e., bottom up activity initiated by more efficient individual firms bidding to acquire some or all of the underperforming assets controlled by other firms.

In addition, the state should adopt policies that would enable bankruptcy and exit of firms that are persistently unprofitable, so-called zombie firms. The liquidation of these bankrupt firms would provide another opportunity, in addition to merger and acquisition activity, for more productive firms to acquire underperforming state assets. What we observe instead is a sclerotic bankruptcy system in which only 3,602 cases were adjudicated in 2016, when well over 100,000 state firms were unprofitable, a large subset of which had been losing money for years.

Finally, the government should promote additional reforms in the financial sector to more efficiently allocate capital by banks and capital markets. In the current environment, massive quantities of funds are flowing to underperforming state-owned companies.

In comparison to the program just outlined, China's reform program for state-owned firms falls short. The first component of the reform program is corporatization, in which traditional state-owned companies are converted to limited liability companies or joint stock companies. But corporatization of state companies has been an ongoing program since the Company Law took effect in 1995. By 2007, on the eve of the global financial crisis, corporatized firms accounted for about half of all state-owned industrial firms. Nine years later this share had risen to almost 90 percent. A renewed push for corporatization was approved at the Central Economic Work Conference in December 2016 and confirmed by Premier Li Keqiang (2017) in his March speech to the National People's Congress. This was followed shortly, in July 2017, by a formal State Council (2017) notice calling for the completion of corporatization of all central state firms, except those in the finance and cultural sectors, by the end of 2017.

There is no reason to expect that further corporatization of state firms will be transformative. The financial performance of state industrial companies continued to decline even as they switched to the corporate form of ownership after 2007. So corporatizing the relatively small number of noncorporatized state-owned firms is not likely to make any difference.

Similarly, China's merger program, the government's second policy initiative to improve the performance of state firms, falls short. Almost all mergers and acquisitions in the last decade have been top-down, state-orchestrated activities organized by SASAC. SASAC began with about 200 group companies and carried out a sustained merger program that reduced the number of companies to under 100 by the summer of 2017. As shown in table 1, the total assets of SASAC firms have more than quintupled, with average assets controlled by each of these group companies increasing about ten-fold since 2005, reaching RMB5.5 trillion. SASAC's program of top-down mergers has not improved corporate governance but created new monopolies. It has led to a precipitous decline in the return on assets of these firms, and the resulting reduction in competition has predictably decreased innovation and productivity in this universe of firms. There is little reason to expect that more mergers will change this pattern.

The third component of the program of state enterprise reform is mixed ownership, which seeks to introduce collective or nonpublic capital into state firms. This program too is not new but was initially promoted by Party General Secretary Jiang Zemin (1997) in a speech to the 15th Party Congress in September 1997. The Central Committee of the Chinese Communist Party further endorsed mixed ownership in 2013. And the State Council (2015) reiterated its support for mixed ownership reform two years later. By mid-2017 over two-thirds of all central state firms and over half of their subsidiaries had introduced mixed ownership.[6] Again, the financial performance of state firms has continued to decline markedly since 2007 despite widespread adoption of mixed ownership.

It is not clear why the authorities expect that introducing mixed ownership in additional state firms will be transformative. An example helps to explain the limits of the campaign to promote mixed ownership. In mid-2017 four large private technology companies—Alibaba, Tencent, Baidu, and JD.com—invested in China United Network Communications Company, the Shanghai-listed subsidiary of the China Unicom Group, China's second largest telecom company. The Chinese press hailed the transaction as a "milestone in SOE reform," but little seems to have changed. The listed company was a mixed ownership company even prior to the transaction, leading some to characterize the mixed ownership campaign as simply a way of forcing private companies to invest in underperforming state firms.

It is not surprising that the government's corporatization, mergers, and mixed ownership programs have thus far failed to improve the performance of state-owned companies. All three programs appear to involve more form than substance. Many of the state firms that are corporatized and adopt mixed ownership and most of the firms that are merged under SASAC guidance remain 100 percent state-owned and the vast majority remains state-controlled, meaning that the state continues to be the majority or at least the dominant controlling shareholder. The Organization Department of the Chinese Communist Party in many cases continues to appoint the top management; the Party Committee within each firm retains a central role in major corporate decisions; and there is little or no increase in transparency.

Corporatized state-owned firms that are listed on the Shanghai or Shenzhen Stock Exchanges have become slightly more transparent since they are subject to stricter disclosure requirements. But, it is important to keep in mind that this group of firms is a tiny subset of corporatized state firms. For example, of

6. "Reform of State-Owned Enterprises Has Achieved Great Success Since the 18th Party Congress," July 27, 2017. Available at www.sasac.gov.cn (accessed on July 28, 2017).

the almost 120,000 corporatized state-owned firms in 2012 only 980 were listed on either the Shanghai or Shenzhen Stock Exchange.[7]

While the State Council (2017) advises strengthening the role of the board of directors in state companies converting to corporate ownership, these boards appear to be largely window dressing. In market economies, the key function of any corporate board is the selection and removal of top management, decisions that are only nominally controlled by the boards in Chinese state companies. Technically the Party's Organization Department nominates and the boards confirm candidates to the top three management positions in the largest state companies. But there are no known cases where a board of a state-controlled company has failed to confirm the nominees chosen by the Organization Department.

## CONCLUSION

The central conclusion is that China's growth is currently below potential. The prospects for bringing growth closer to potential are uncertain. China's current reform program for state-owned firms consists primarily of elements dating back a decade or more, a period in which the performance of these firms has deteriorated persistently. There is little or no reason to expect that continuing to pursue these policies will miraculously turn around the performance of state-owned firms. The speech of Premier Li Keqiang (2018) at the National People's Congress in the spring of 2018 does not suggest that the trajectory of reform of state firms will change in the short run. He referred briefly to the need to strengthen work on the liquidation and reorganization of zombie enterprises but offered no specifics on how this would be achieved. Similarly, Premier Li used familiar language on the need to support the development of private enterprise but did not outline specific policies that might reverse the recent erosion of the earlier substantial contribution of private firms to China's growth. Absent a more far-reaching reform of state-owned firms China is likely to struggle to maintain growth in the 6 to 7 percent range.

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CHAPTER 7

# Prospects for Economic Reform and Medium-Term Growth in the United States

Jacob Funk Kirkegaard

Comparative economic analyses have traditionally considered the United States as representing the production frontier, the most advanced economic status to which other countries aspire to "catch up." This analytical framework frequently suggests that only other countries should undertake structural reforms—often narrowly defined as liberalization of product and labor markets—to achieve economies more like the flexible and competitive US economy. The excessively domestic-oriented policy debates in the United States, where the policies of other countries are rarely considered, aggravate this tendency.

This paper argues that the United States itself would greatly benefit from undertaking structural economic reforms in several important areas, notably fiscal policy, healthcare, and education, to boost the economy's long-term sustainability, growth potential, and adjustment capacity. However, due to historically unprecedented levels of political polarization and resulting gridlock, the prospects for economic reforms in the United States in the short to medium term are poor.

## NEED FOR STRUCTURAL ECONOMIC REFORMS

The United States has arguably been the most economically successful country in the history of the global economy, enjoying (almost) uninterrupted rapid economic growth and political stability since its foundation. As the US population ages, however, the growth of the labor force has rapidly slowed, with baby boomers retiring in large numbers since 2008.[1] This slowdown has coincided with a dramatic drop in

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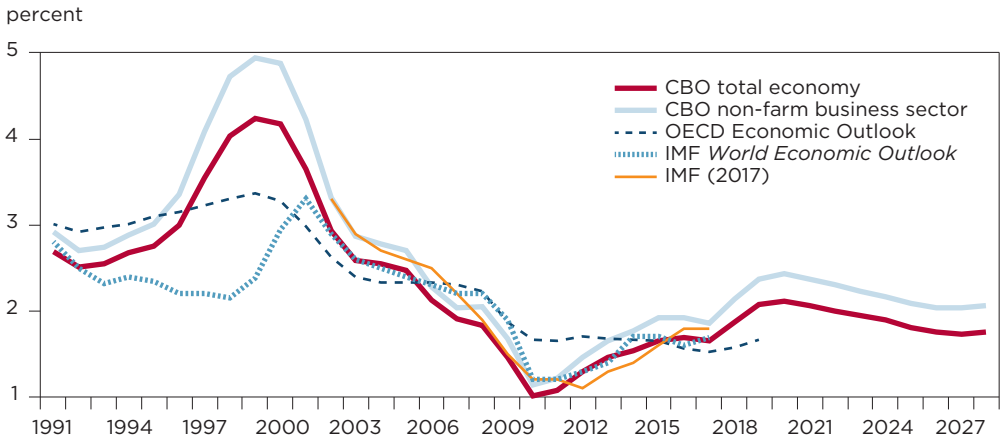
1. 2008 was the year when the first baby boomers born in 1946 could retire early at age 62, receiving an early (reduced) Social Security pension.

**Figure 1 US potential growth rate, annual forecasts, 1991–2027**




*Sources:* CBO (2018b); OECD *Economic Outlook*, www.oecd.org/economy/outlook/economic-outlook-annex-tables.htm; IMF (2017); IMF, *World Economic Outlook 2016* database, www.imf.org/external/pubs/ft/weo/2016/01/weodata/index.aspx.

productivity in the nonfarm business sector,[2] which has reduced US potential growth rate forecasts for the entire economy to less than 2 percent a year (figure 1)—a historic low.

Population projections are among the most accurate elements in any long-term economic forecast, so there is little chance that future revisions in these projections will materially change this component of the potential US growth outlook.[3] The current charged US political climate surrounding immigration reform also rules out any significant increase in population via inward migration in the future.[4]

Significant uncertainty, meanwhile, surrounds the future path of US productivity. To restore America's potential growth rates to those of an earlier era, US productivity would have to rebound in the face of several persistent policy failures by the US federal government. In at least three major policy areas long-standing inefficiencies left unaddressed and other recent changes could make it more difficult to achieve reforms to boost the economy's long-term growth potential and adjustment capacity. These are US fiscal policy, US healthcare costs, and US educational costs and worker retraining.

## US Fiscal Policy

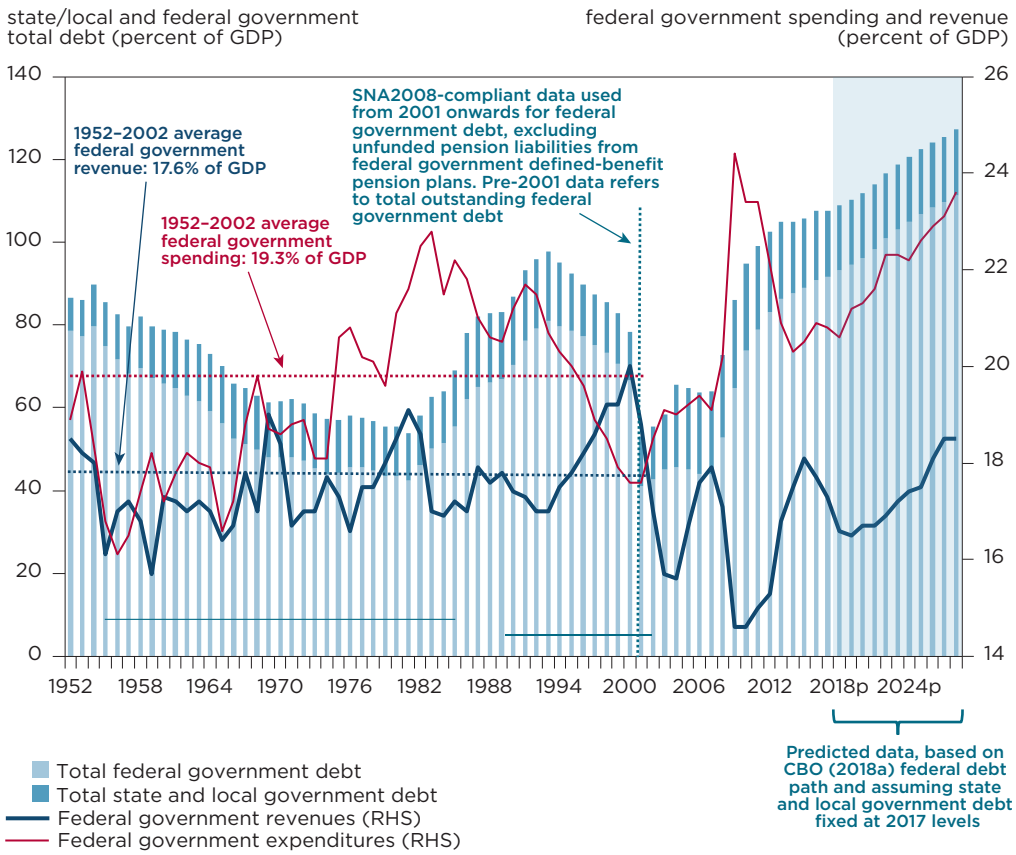
The US federal government has gradually adopted an increasingly unsustainable fiscal policy stance in recent years (figure 2). During the 50 years from 1952 to 2002, the US federal government ran an increas-

2. Bureau of Labor Statistics (BLS) data show the 2007–17 average annual increase for the nonfarm business sector at just 1.2 percent, a level as low as in the mid-1970s. See BLS Labor Productivity and Costs data at www.bls.gov/lpc/prodybar.htm.

3. Population forecasts in the United States and elsewhere typically assume that total (legal and illegal) immigration will simply remain at historical levels. The reportedly significant decline in illegal immigration into the United States since 2009 suggests that current US population forecasts may be biased slightly upwards.

4. The bipartisan immigration reform bill (S-744), which passed the Senate in 2013 but was never taken up by the House of Representatives, would have led to an increase in the US population of approximately 9.6 million from 2013 to 2023, or roughly 1 million a year during the first years after passage (CBO 2013). This would have amounted to a material increase in inward immigration to the United States, though not of a magnitude to impact the overall ageing of the US population.

**Figure 2 Federal and state government total outstanding debt and federal government revenues and spending**




SNA2008 = System of National Accounts 2008; p = projected

*Sources:* CBO (2018a); US Treasury, Historical Debt Outstanding Database, www.treasurydirect.gov/govt/reports/pd/histdebt/histdebt.htm; IMF *World Economic Outlook* database; Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED), https://fred.stlouisfed.org/.

ing—though still quite manageable (for an economy with potential growth rate of around 3 percent during this period; see figure 1)—average fiscal deficit of 1.7 percent (average federal revenues of 17.6 percent of GDP and expenditure of 19.3 percent). However, after 2002, several issues pushed US federal and general government debt to record levels. First, the passage of the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA, or the second Bush tax cuts) led to a decline in federal government revenues to near record lows of just 16 percent. Second, the onslaught of the Great Recession of 2007–09 temporarily pushed spending up and revenues down, dramatically increasing deficits. Third, the passage of the Tax Cuts and Jobs Act of 2017 once again is projected to cut federal revenues by over $1 trillion over the 10-year period from 2017 to 2027. And fourth, US population ageing is exerting an accelerating upward pressure on US federal government expenditures after the effects of the Great Recession receded.

As a result, US general government debt—under conservative estimates of state and local government debt fixed at 2017 levels—is now projected to rise to an unprecedented almost 130 percent of GDP by 2028. Within 25 years, starting in 2002, a combination of "bad luck" from the Great Recession, irrespon-

sibly low government revenue collection, and congressional failure to address rising government spending associated with population ageing will have turned the United States from being fiscally similar to Germany[5] to being essentially Italy.[6]

This dramatic projected change in the long-term fiscal outlook for the United States seems certain to increasingly occupy policymakers and potentially lead to higher overall US interest rates. The federal government's ability to launch significant new investments and other spending initiatives will be constrained, likely eroding the traditionally strong position of the United States in publicly funded research and development, education, and other areas that are considered important for long-term productivity growth.

## US Healthcare Costs[7]

Healthcare is among the most contentious public policy areas in the United States. It is the largest economic sector in the country with total expenditure in 2017 amounting to 17.2 percent of GDP. Since the passage of the major Obamacare reform in 2010, the Republican Party has been relentlessly trying to repeal it. Healthcare costs have been a major driver of federal government expenditures in recent years (figure 2) and an increasing cost factor for many American firms that provide healthcare coverage for their employees and dependents. When measured by healthcare outcomes, the US healthcare system is the most wasteful among healthcare systems of advanced economies. If healthcare costs are not controlled, the fiscal outlook for both the federal and many state and local governments and profit prospects for many US businesses will remain in jeopardy.

Figures 3a and 3b illustrate the efficiency of total healthcare spending per capita in advanced economies using a broad indicator of health outcomes. "Potential years of life lost (PYLL)" is the broadest available summary indicator of premature mortality, which explicitly measures deaths occurring at a younger age (below 70 years) that are preventable.[8] Figure 3a shows PYLL for men and figure 3b shows PYLL for women.

The two figures show a strong relationship between per capita healthcare expenditure and PYLL levels for almost all OECD economies. A simple declining power function[9] explains almost half of the variation between OECD-country women and over 60 percent of variation among men, if the United States is excluded from the sample. Countries such as Mexico that spend less have higher PYLL levels, while Norway and Switzerland, at around $5,000 per capita in healthcare spending, have much lower PYLL levels. Furthermore, PYLL levels decline only gradually at higher levels of healthcare spending. The large difference

5. German general government debt in 2002 was 59 percent, while US general government debt was 55 percent (figure 2) using SNA2008 statistics.

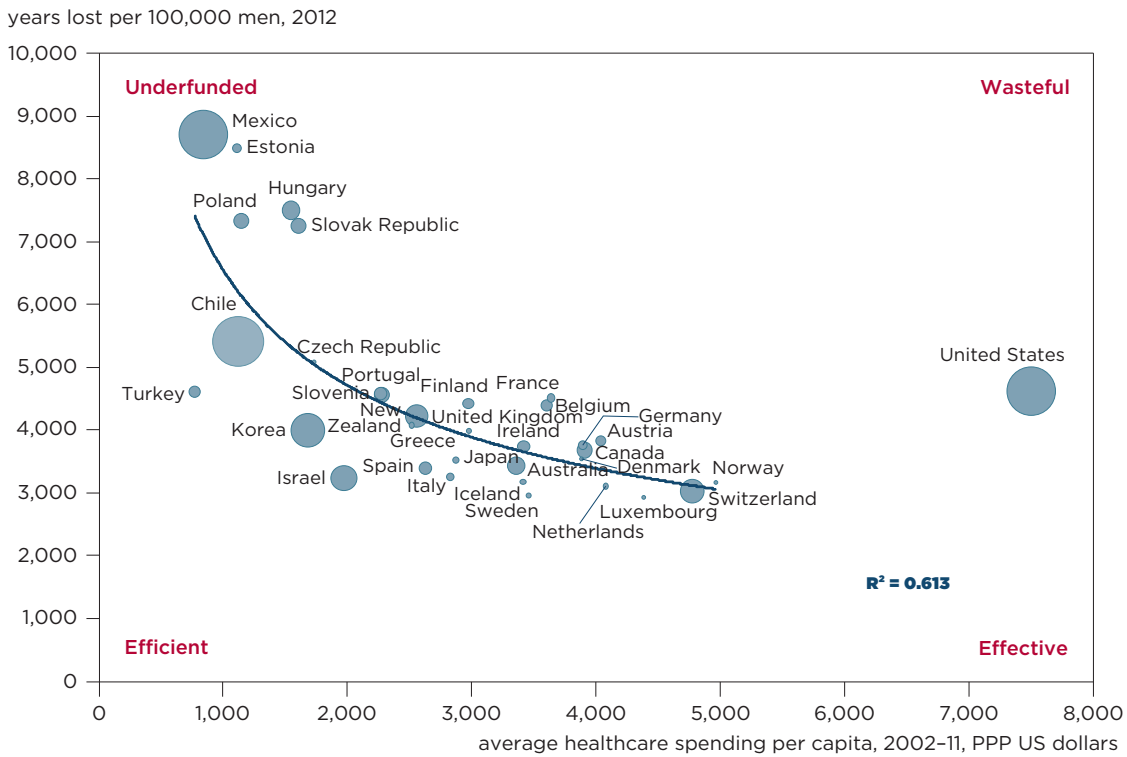
6. In figure 2 US general government debt is projected to reach 132 percent of GDP by 2028, equal to Italy's level in 2017.

7. This section builds on Kirkegaard (2015, section IV).

8. The calculation of PYLL involves summing up deaths occurring at each age and multiplying this sum with the number of remaining years to live up to a selected age limit. According to the OECD (2003, 16) premature mortality measured in terms of potential years of life lost focuses on deaths among the younger age groups of the population. Values are by definition heavily influenced by infant mortality and deaths from diseases and injuries affecting children and younger adults. A full list of causes of deaths included by the OECD is available for download as an Excel file at http://stats.oecd.org/wbos/fileview2.aspx?IDFile=9506bbe9-c549-4951-8410-757676477e2c (accessed on April 6, 2018).

9. This type of function is written as $y = ax^z$ (where $z$ is a negative constant) and is chosen here to capture the presumption that the marginal impact of additional healthcare spending on outcomes declines.

**Figure 3a Healthcare spending and health outcomes: Potential years of life lost for men, ages 0–69**




PPP = purchasing power parity
Note: Size of bubbles indicates relative share of total spending that is private.
*Source:* Kirkegaard (2015).

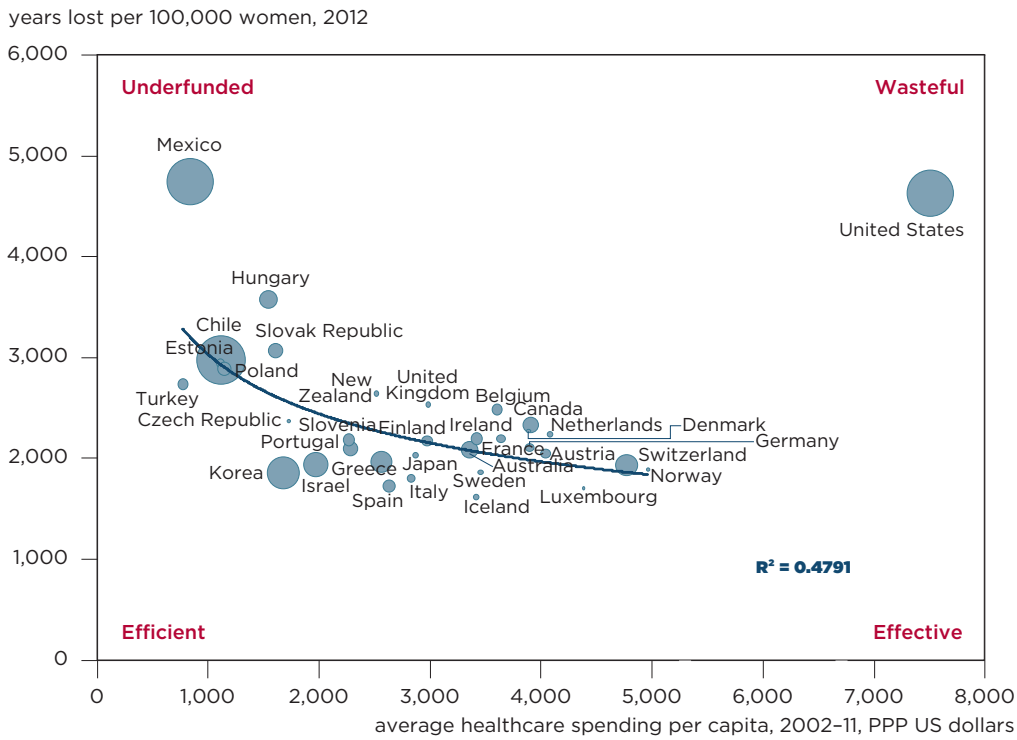
in male and female PYLL levels across advanced economies—male PYLL is on average 87 percent higher than for women—is related to the large gender differences in preventable mortality due to external causes, including accidents and violence.

It is evident that the United States has far poorer healthcare outcomes relative to its spending than other advanced economies. America's much higher healthcare spending at around $7,500 per capita does not translate into fewer preventable deaths. The return on healthcare spending for US women is appalling, at PYLL levels that are 45 percent above the OECD average and on par with Mexico, which spends just $858 on healthcare per capita. US men are relatively better off at PYLL levels 31 percent above the OECD average.[10] The size of the bubbles in figures 3a and 3b, moreover, makes it clear that greater private sector spending provides no obvious efficiency gains in health care.

In other words, a broad measure shows a reasonably clear tradeoff in non-US advanced economies between expenditures and outcomes in health care, and relative value for money is reasonably comparable: A given level of per capita expenditure saves a given level of life years. Other advanced economies are far

10. The fact that US female PYLL levels are worse than male PYLL levels relative to the OECD average, moreover, suggests that the poor US PYLL scores are not influenced by the comparatively higher levels of deadly violence in US society.

**Figure 3b Healthcare spending and health outcomes: Potential years of life lost for women, ages 0–69**




PPP = purchasing power parity
Note: Size of bubbles indicates relative share of total spending that is private.
*Source:* Kirkegaard (2015).

better at avoiding preventable deaths with the money they spend than the United States. The higher share of private spending on healthcare in the United States[11] fails to produce better healthcare outcomes for Americans.

The 2010 Obamacare reform was not primarily intended to solve the cost and inefficiency problem in American healthcare but rather to address the moral failure of an incredibly expensive system still leaving millions of Americans without health insurance. The Obamacare reform has been reasonably successful in achieving this objective, as the number of uninsured Americans dropped by about 20 million from 2010 to 2015, reducing the share of Americans without health insurance to a record low of just 9 percent of the population under 65.[12] By 2017, however, the estimated share of uninsured Americans was beginning to creep back up again.[13]

11. At least when compared with the more advanced OECD countries outside Latin America, as low-spending Mexico and Chile also have substantial shares of private healthcare spending.

12. The federal government provides healthcare under the Medicare programs to all Americans over the age of 65.

13. Coverage data from *Centers for Disease Control* and Prevention, National Health Interview Survey, https://www.cdc.gov/nchs/nhis/index.htm.

President Trump and the Republican-led Congress failed to repeal the Obamacare reform in late 2017 but did manage to eliminate the so-called individual mandate as part of the Tax Cuts and Jobs Act of 2017. The mandate required most Americans (other than those who qualify for a hardship exemption) to carry a minimum level of health coverage. According to the CBO (2017), about 13 million Americans are now unlikely to have health insurance by 2027 because they either refused to purchase insurance or could not afford coverage due to rising healthcare premiums. The majority of Obamacare's gains in healthcare coverage hence could be lost in the coming years.

On other metrics, however, Obamacare failed to increase productivity and cost efficiency in the US healthcare system or even reduce rising total per capita healthcare costs. Any flattening of the cost curve registered after 2010 was temporary and actually less than that witnessed in other advanced economies also affected by the Great Recession.[14] US healthcare costs continue to rise faster than both US GDP and costs in other comparable OECD countries, reaching a staggering $8,985/capita in 2016, or more than double the per capita average in other G-7 and OECD countries and more than 12 times the per capita level in China.[15]

This continuing failure of the United States to improve the efficiency of its largest economic sector remains a growing burden on the fiscal sustainability of the general government, the profitability of American firms, and the health of millions of Americans.

### US Educational Costs and Worker Retraining Opportunities

There is no disputing the United States has the world's best universities and in the early 20th century led the world in broad-based educational attainment. However, access to education now has become so costly—costs have been rising twice as fast as even healthcare costs in the last 25 years (figure 4)—that the share of Americans graduating with an upper secondary or tertiary degree today is in the lower half of OECD countries and below the upper secondary graduation rate in China (figure 5).

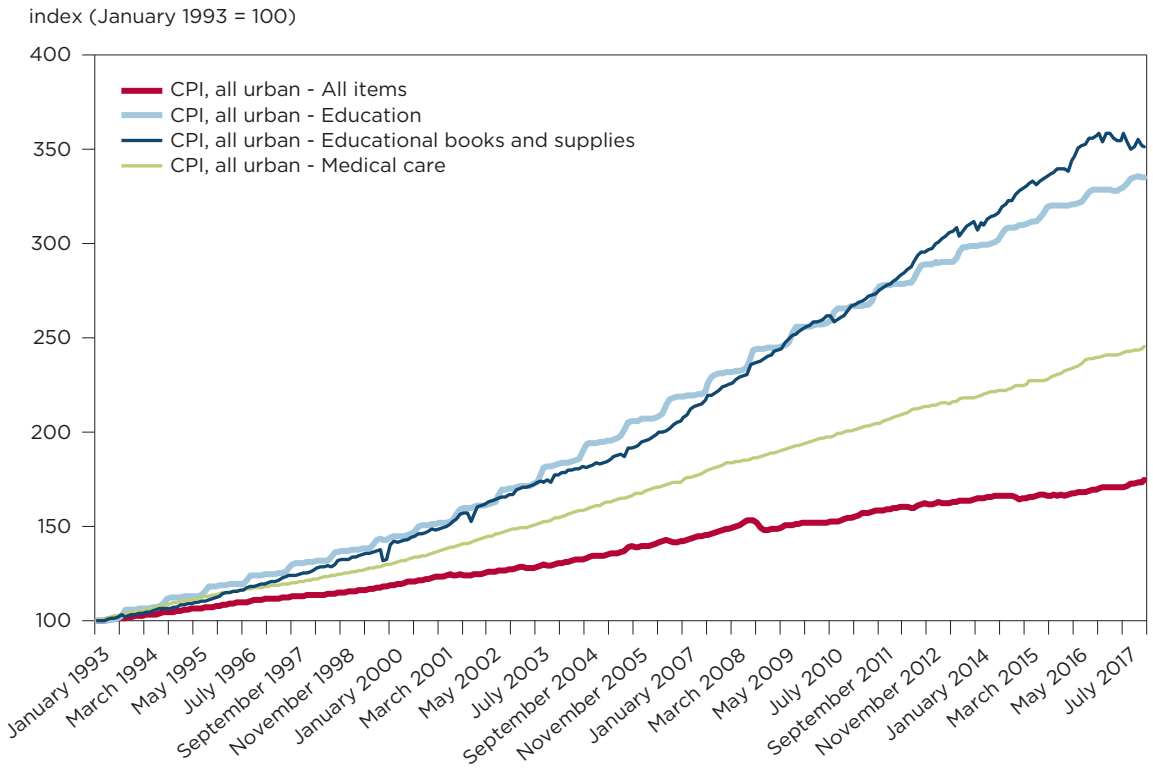
Only 83 percent of Americans in 2015 expected to graduate from upper secondary education during their lifetime (figure 5),[16] which is lower than in other G-7 nations, Germany, Canada, Italy, and Japan, and also noticeably below both China and Russia. US graduation rates for different tertiary degrees meanwhile have become average in the OECD (figure 5). This stands in stark contrast to the educational attainment among retiring baby boomers—age group 55–64 years today—who, together with their counterparts in Canada, led the OECD in educational attainment when they entered the labor market.

14. Comparative empirical data suggest that the Great Recession slowed the growth rate of healthcare expenditure across almost all advanced economies and that other countries with a more government-centric healthcare provision were better at slowing expenditure growth than the United States. See OECD healthcare cost data at http://stats.oecd.org/Index.aspx?DataSetCode=SHA#.

15. Data covering the combined spending by both public and private sources measured per capita, in constant prices with constant purchasing power parity (PPP) and an OECD base year. Data for China refers to 2014.

16. Graduation rates, when calculated for all ages, represent the estimated percentage of people from a given age cohort who are expected to graduate within the country at some point during their lifetime. This estimate is based on the number of graduates in 2015 and the age distribution of this group. Graduation rates are based on both the population and the current pattern of graduation and are thus sensitive to any changes in the education system.

**Figure 4 Cost of living, medical care, and education in the United States, 1993–2017**




CPI = consumer price index
*Source:* Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED), https://fred.stlouisfed.org/.

In addition, the United States spends meager resources, compared with other OECD countries, on active labor market policies (ALMPs[17]) to help the unemployed retrain, upskill, and find new employment. At just 0.1 percent of GDP, the United States spends only a fifth of the OECD average and far below the levels in Western Europe—where domestic politics also revolves around fear of job loss.

The high cost of education and limited public support for active labor market policies, combined with rapid technological change and increased trade intensity in recent decades, risks denying many Americans the economic opportunities to advance. Thus, as the compositional improvement of the US labor force slowly stagnates, prospects for another acceleration in productivity will gradually dim.

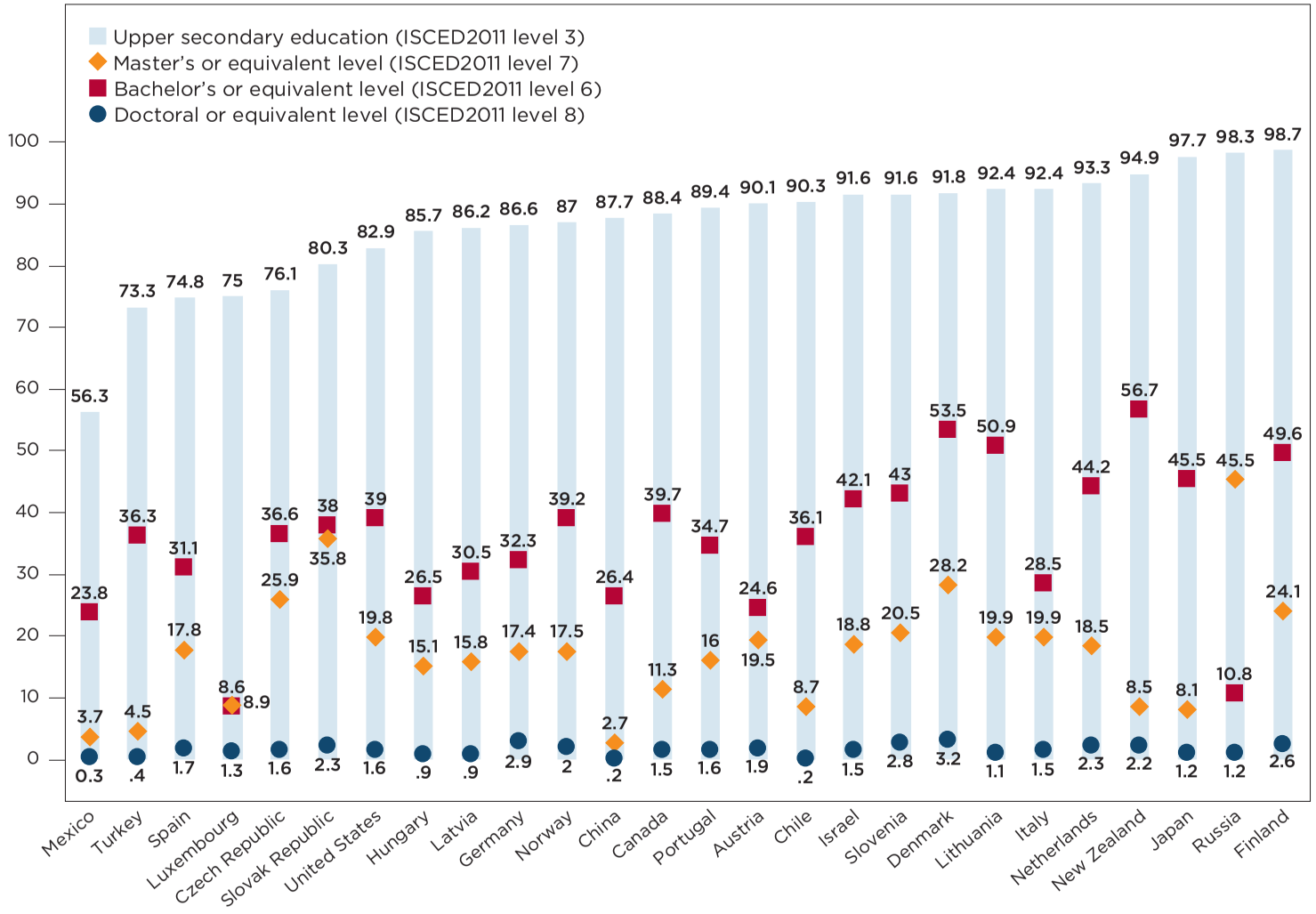
## US Income Inequality and Social Mobility

Together, the increasingly dire US fiscal forecast, intractable problems in reforming the US healthcare system, and an increasingly inaccessible education system are widening the economic opportunity gap in the United States. Income inequality is high, and the US government does not seem to be doing much about it. Figure 6 illustrates how high US income inequality is essentially an American policy choice.

17. These include public expenditures on training, start-up incentives, and employment incentives, in contrast to passive labor market policies such as unemployment benefits and early retirement expenses.

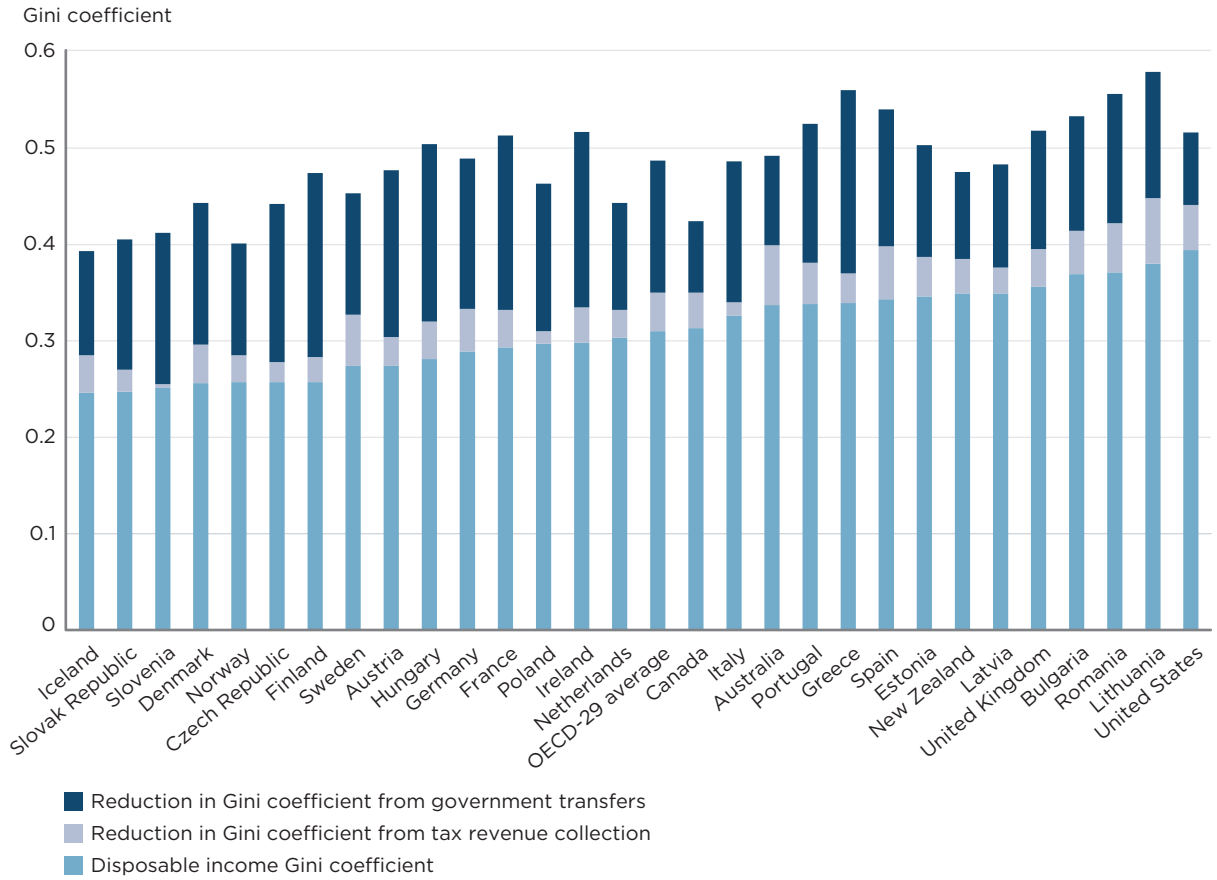
**Figure 5 First-time graduation rates, by educational attainment, 2015**

percent of total entered




*Source:* OECD Statistics, Graduation rates and entry rates, http://stats.oecd.org.

**Figure 6 Reduction in Gini coefficients from tax and transfer system, latest available data**



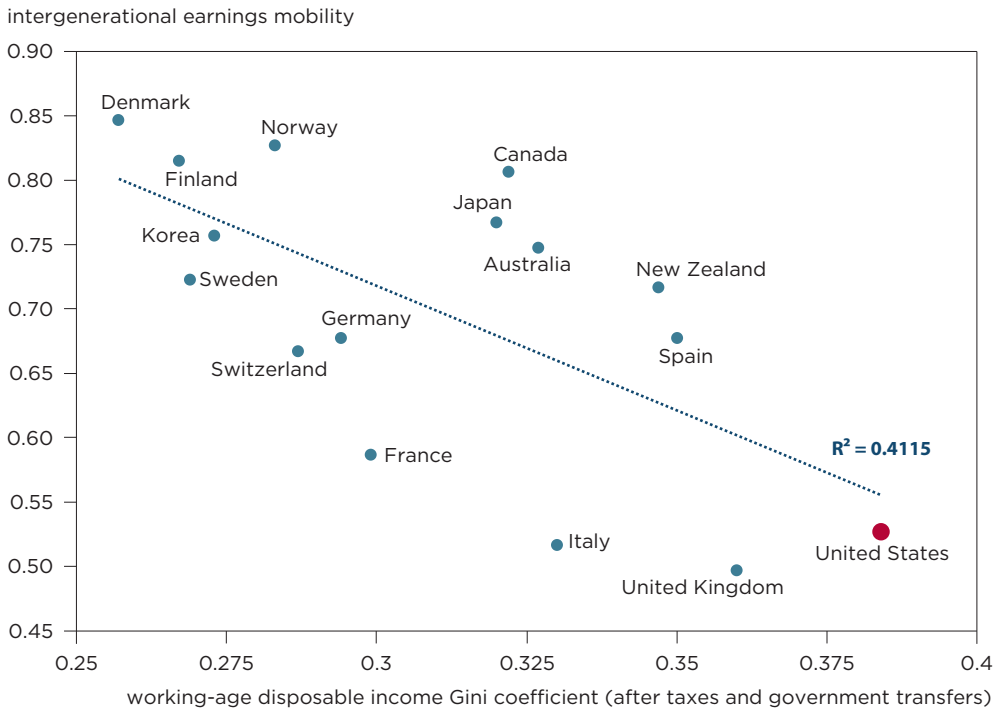

Note: Combined height of stacked bar = market income Gini coefficient.
*Source:* Kirkegaard (2017; revised 2021).

The United States has the highest disposable income Gini coefficient in the OECD (light blue bars), because the US tax system (grey bars) and government transfers (dark blue bars) have the smallest inequality-reducing effect among all OECD countries. The US government reduces market income inequality in the United States only by 22 percent, or just a little over half of the OECD average of 37 percent and far below more progressive governments in many European countries. This is a political choice, however, as figure 6 also makes it clear that US market income inequality is no higher than in many other OECD countries. In other words it is not the normative acceptance of higher CEO wages or other market impulses in the United States that are elevating US income inequality but the government's unwillingness to redistribute through government taxes and transfers.

Persistent high income inequality, combined with expensive education (and healthcare) services, has led to very low intergenerational earnings mobility[18] in the United States. Children's education and income

18. The intergenerational earnings mobility is quantified as 1 – the intergenerational earnings elasticity. A higher number means more mobility. A high mobility value of say 0.85 (1 – 0.15) means that if an individual earns $10,000 less income than the average, his or her children can expect to earn $1,500 less than the average. This is opposed to $5,000 less than the average in a country with a lower intergenerational earnings mobility of 0.5.

**Figure 7 Income inequality and intergenerational earnings mobility, early 2010s**




Note: x axis shows 0 = perfect income equality/1 = perfect income inequality. y axis is defined as 1 – intergenerational earnings elasticity.

*Source:* OECD (2017).

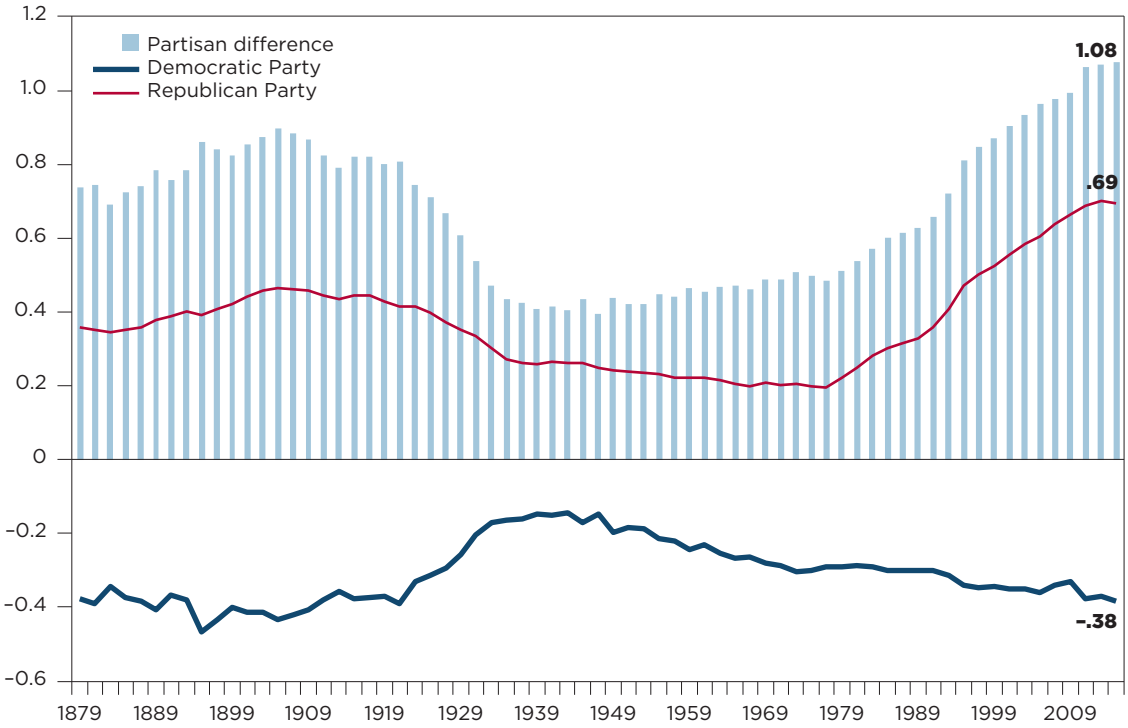
depends heavily on their parents' education and income. This, and the effect of overall inequality, is illustrated in figure 7.

The United States, together with the United Kingdom and Italy, has the lowest intergenerational earnings mobility in the OECD at only around 0.5, whereas three of the four Scandinavian countries and—strikingly—Canada have earnings mobility above 0.8. Overall, income inequality and intergenerational earnings mobility are strongly correlated (figure 7).

Figure 7 quantifies a general sense that the "American Dream"—i.e., the fair chance for everyone in America to become rich if they work hard and play by the rules—risks becoming a myth, when compared with the economic opportunities for children in many other OECD countries. This situation has important political implications and has arguably already helped create the populist backlash in the United States against globalization, which culminated in the election of Donald Trump as president in 2016. To resolve the current political situation, some or all of the underlying structural economic problems will have to be addressed.

**Figure 8a Party polarization in US House of Representatives, 1879–2015**

index from –1 Liberal to +1 Conservative and partisan difference (which may exceed [1]) on economic/Redistributive axis




*Source:* Jeff Lewis, "Polarization in Congress," Voteview.com, March 11, 2018, www.voteview.com/articles/party_polarization.

## PROSPECTS FOR NECESSARY ECONOMIC REFORMS

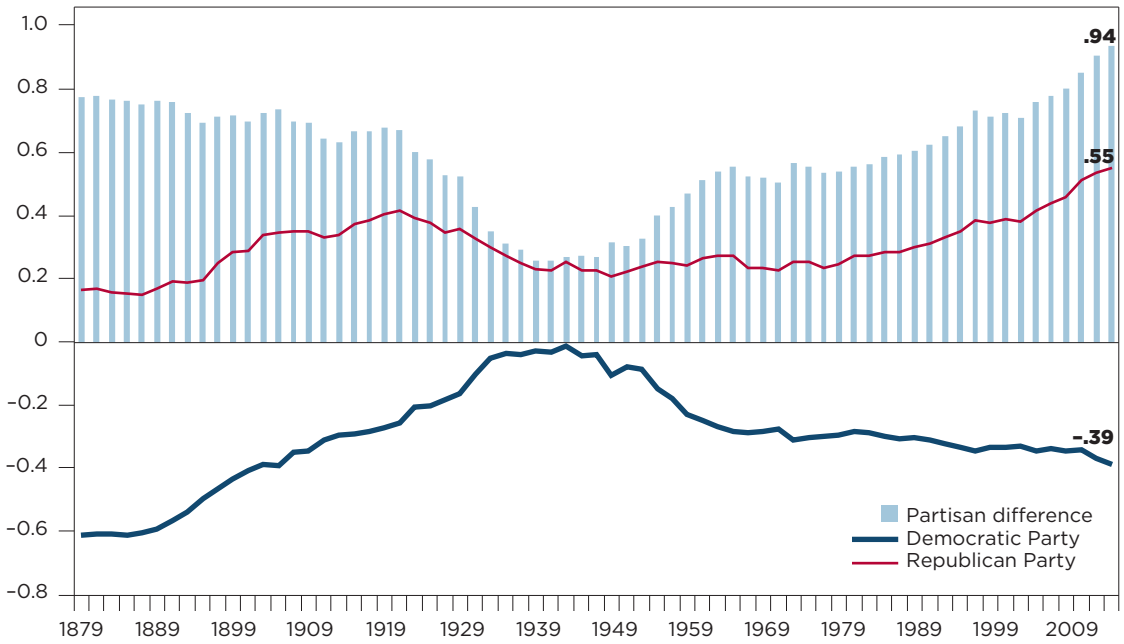
Addressing the fundamental problems with government finances, healthcare costs, and access to education will both be highly politically contentious and require sustained effort over multiple US election cycles. In a two-party system, designed with numerous institutional checks and balances and where the battle for political control over Congress and the presidency has for decades been close, any future reforms will have to be supported by large parts of both the Republican and Democratic Parties to have any chance of being successfully implemented. The fate of the Democratic Obamacare reform, which has been considerably undermined by the specter of future repeal, defunding, and willful neglect by a Republican president, highlights the futility of seeking to fundamentally change some of the basic functions of the US government in a partisan manner.

The political framing and implementation of structural reforms require meaningful bipartisanship. But the current prospects for such reforms are very poor because the US federal system is arguably more polarized today than at any moment since the Civil War in the late 19th century. Figures 8a and 8b highlight this situation for the US House of Representatives and US Senate.[19]

19. Jeff Lewis, "Polarization in Congress," Voteview.com, March 11, 2018, www.voteview.com/articles/party_polarization. Voteview relies on every congressional roll call vote in American history to create a

**Figure 8b Party polarization in the US Senate, 1879–2015**

index from –1 Liberal to +1 Conservative and partisan difference (which may exceed [1]) on economic/Redistributive axis




*Source:* Jeff Lewis, "Polarization in Congress," Voteview.com, March 11, 2018, www.voteview.com/articles/party_polarization.

The partisan difference between Republicans and Democrats is at record levels, primarily due to a historically unprecedented ideological divergence towards rightwing conservatism in the Republican Party since the late 1970s. This difference will make broad compromises to address the structural problems facing the United States very hard to reach in the foreseeable future.

The US political system is hyperpolarized for several reasons, making a quick change unlikely. One is the role of money in US politics. Historically, money has always been an important factor in securing political power in the United States (and in many other countries), but the combination of the 2010 Supreme Court case *Citizens United v. Federal Election Commission* and the permissive and often unenforced rules on disclosure of political donations to causes and campaigns in the United States has meant that "anonymous contributions" can frequently be decisive, particularly in local and less high-profile races.

Internet-driven fundraising has further enabled ideologically extreme candidates (on the left and but to date especially the right) to raise any required financing for their campaigns outside the traditional, more centralized, and hence moderating national party frameworks. As new campaign finance rules with teeth seem highly unlikely in the current political climate, only a future reversal of Supreme Court jurisprudence can materially reduce the role especially of anonymous money in American politics. This, however, will require that at least one of the five justices who voted for Citizens United in 2010 be replaced with someone

liberal-conservative ideological map with information about the ideological positions of voting every Senator and Representative. The primary dimension through most of American history has been "liberal" vs. "conservative" (also referred to as "left" vs. "right") on economic/redistributive causes.

opposed to it. In practice, this likely means someone nominated by a Democratic president and possibly even confirmed by a Democratic Senate majority. It is unclear when such a sequence of events might occur.

The second issue is gerrymandering, i.e., elected politicians at the US state level redrawing boundaries of electoral districts every 10 years to numerically favor their own party. This practice frequently renders general elections at the state level and for the US House of Representatives a formality, due to the partisan support engineered inside individual districts. It makes party primary elections, where ideologically more extreme party members and activists play an outsized role, the real political competition pulling the two parties in opposite ideological directions. Movements have begun in several states to reform the redistricting process and put it in the hands of nonpartisan bodies, and the Supreme Court recently took up cases potentially enabling it to limit the degree of political partisanship permissible. A comprehensive reform of American redistricting practices, however, is likely to be a drawn-out affair.

The third issue is the increasing polarization among Americans themselves. Whatever the roles of money and gerrymandering, it is clear that to a very large extent the composition of democratic US political institutions reflects the will of the American electorate. The fact that polarization in the US Senate, where gerrymandering by definition is impossible, is almost as high today as in the House of Representatives makes this abundantly clear. In other words, unless the US electorate itself changes, its elected representatives will not—and should not—change.

The most promising source of the necessary political renewal for passage of required structural economic reforms in the United States may therefore be the change in the composition of the American electorate associated with the relative numerical rise and fall of individual American generations. Particular defining national events, such as the Great Depression, World War II, or the affluence and economic opportunities in 1946–73 America, often can lastingly shape the opinions of the generations that lived through them during their formative years. If this is true, then the arguably harder economic conditions facing younger Americans—typically termed the millennial generation born after 1982[20]—entering the workforce in the aftermath of the dot.com bubble and especially the Great Recession may push their political views to diverge from their baby boomer parents on important economic issues. This, combined with the change in the ethnic composition of the American electorate, may help reduce political partisanship in future US elections.

One of the consequences of population ageing has been the electoral demise of the baby boomer generation as the most numerous and hence democratically dominant generation in the United States. The upcoming 2018 mid-term elections will be the first US election where the millennial and postmillennial generations outnumber baby boomers.[21] Baby boomers' propensity to vote, though, remains substantially higher than that of millennials and postmillennials,[22] so they are likely to remain the largest voting block for some time to come. But their political dominance in America is coming to an end, and with it—perhaps—the political gridlock that their historically unprecedented partisanship has created.

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20. The demarcation of millennials as born after 1982 is generally attributed to Neill Howe and William Strauss's book *Millennials Rising*.

21. The Pew Research Center (2018) defines millennial and postmillennial voters as 18–35 years in 2016.

22. In 2016, 69 percent of baby boomers voted, while only 51 percent of millennials and postmillennials did, according to the Pew Research Center.

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CHAPTER 8

# Market Discipline in Chinese Finance: Getting the Sequence Right

Martin Chorzempa and Nicolas Véron

In November 2013, the Third Plenum of China's 18th Communist Party Congress affirmed the need for the "market to play a decisive role in allocating resources." Previously, the market was to play only a "basic" role. In no area of the economy is this pledge potentially more transformational, and more difficult to operationalize, than in finance, which allocates financial resources such as capital and credit. This paper discusses the possible sequencing of China's next steps along the arduous path of that transition towards a market-based financial system, taking insight from past and present experiences in Europe and the United States.[1]

## 1. A FRAMEWORK FOR ASSESSING FINANCIAL MARKET DISCIPLINE

"Market discipline" is a loose term, but it can help analyze how China needs to transform its financial system. The term refers to the operation of decentralized market forces, which by balancing supply and demand with a degree of informational efficiency, determines economic actors' access to financial resources such as capital and credit, which in turn creates market-based incentives for these economic actors to maximize their access to financial resources.

Market discipline does not exist in a policy vacuum, and it is never absolute. Government intervention is always needed to frame the operation of markets and to set the incentives right: Markets, and especially financial markets, typically function poorly if at all in failing states. For example, and as explained further below, strong government institutions are needed to properly enforce disclosure requirements, rule on bankruptcies, and supervise certain financial firms such as banks. And even with the best policy framework, market discipline is never complete, and all jurisdictions can improve their financial market discipline through appropriate policies and reforms. The US financial system has arguably the most advanced financial market discipline, but the crisis of 2007–09 exposed major failures and distortions of market discipline in that system.

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1. Observations on Europe are largely based on Véron and Zettelmeyer (2017).

Nor is market discipline exclusive of other kinds of discipline. In all jurisdictions, access to financial resources is partly based on relationships and thus embedded in the surrounding social and cultural environment, even where providers of capital make their best efforts to maximize open access. In the United States, venture capital in the San Francisco Bay Area (or Silicon Valley) is a prominent example of a subset of the financial system that is highly open to new entrants as well as intensely dependent on relationships and reputations. Furthermore, some parts of the system are subject to administrative discipline in the form of public regulation and supervision by specialized authorities, such as securities regulators and prudential supervisors. In China, the party-based institutional setting adds a specific kind of discipline, party discipline, with its own enforcement mechanisms.

## Financial Market Disciplining Mechanisms

Market discipline is generally correlated with the predictability of the business environment, measured by factors such as the protection of private property rights, the justice system, and the taxation framework. This brief review focuses on three mechanisms: financial transparency, apportionment of losses from corporate failures, and public guarantees on banks.

Financial transparency refers primarily to the relevance, reliability, and comparability of corporate financial statements, typically encompassing a company or group's balance sheet, income statement, cash flow statement, statement of shareholders' equity, and disclosures notes. These are shaped by the applicable accounting (or financial reporting) standards, the company's corporate governance and its impact on corporate accounting quality, the quality of external audit processes, and the enforcement of financial disclosure requirements by public authorities (typically securities regulators for publicly listed companies). Financial disclosures are particularly crucial to the price-setting mechanism for listed shares, and thus for the allocation of equity capital through the public stock markets. They are also a major determinant of credit risk assessment, and thus of the price-setting mechanism for debt securities and also (though to a somewhat lesser extent) for bank lending. Put simply, better financial reporting (from the perspective of users of financial statements, primarily investors in tradable corporate securities) contributes to greater financial market discipline.

Another key disciplining mechanism is the predictability of loss distribution for corporate failures. This concerns not only (or even principally) corporate insolvency law but also bankruptcy courts, administration and liquidation processes, out-of-court restructuring frameworks and practices, and crucially the public authorities' willingness (or lack thereof) to intervene financially in cases of corporate failure to protect specific claimants. The loss apportionment in the event of failure is central to how markets price bonds and also bank credit (though less directly).

As for bank credit specifically, its availability and pricing depend not only on the features of the borrower, such as its business prospects and risks, but also on those of the bank itself—unlike for bond pricing, where many arm's-length investors can be presumed to participate in the demand side of the price-setting process. This in turn implies that the governance of banks and the (implicit or explicit) guarantees they receive from public authorities have a major impact on market discipline in that crucial segment of the system—in China as in many other jurisdictions, most of the external financing of companies takes the form of bank credit. In the Chinese authorities' own account, banks provide 80 percent of financing in China, dwarfing financing through bonds and equities (Jin, Ping, and Jing 2017), and the share has since risen to

over 90 percent as of the end of 2017.[2] As a consequence, the bank policy framework, and especially the pattern of public guarantees, is fundamental to credit market discipline, even though it can be fiendishly difficult to analyze because of the implicit nature of many public guarantees.

## 2. FINANCIAL MARKET DISCIPLINE IN CHINA: TAKING STOCK

In line with the previous section, China's economic environment is described here along the three highlighted dimensions of financial market discipline.

### Financial Transparency

Since the 2000s, China has moved towards but not completed converging its national accounting standards with International Financial Reporting Standards (IFRS), widely viewed as international best practices. The IFRS Foundation, which oversees IFRS standard setting, notes that, while Chinese standards have "substantially converged" with international standards, there is no timetable to complete the application of IFRS to domestic firms.[3] Other observers have highlighted the persistence of significant deviations between Chinese standards and IFRS.[4] Many major Chinese companies, however, are listed outside of the mainland (e.g. in Hong Kong, London, or the United States) and thus have to comply with IFRS standards. Beyond IFRS compliance, the common practice of listing shares abroad, despite the abundant capital pools available in China, may indicate that Chinese firms feel the need to signal their quality by binding themselves to higher standards of disclosure and corporate governance.

The picture on audit quality in China is similarly mixed. Evidence-based comparative research on audit quality is generally scarce, making robust assessment difficult. Audit quality in China was widely considered very low in the 1990s and early 2000s and is generally seen as to having improved in more recent years but not to the level of international best practices. A persistent sore point is the refusal by Chinese accounting regulators (i.e. the Ministry of Finance, and the China Securities Regulatory Commission or CSRC) to respond to requests for detailed audit papers of Chinese firms whose equity trades abroad, particularly from the US Public Company Accounting Oversight Board (PCAOB). Some foreign-quoted Chinese firms have failed after fraudulent accounting practices came to light.

The ecosystem of financial analysis has grown in China over the years but remains partly constrained by China's institutional structures. As of early 2015, all but one of the top 10 securities brokerages were state-owned.[5] Financial media have developed, with the emergence in the last decade of respected players like Caixin and Yicai. A significant recent development is the decision to open the domestic credit ratings

2. Shen Hong, "China firms ditch bonds for banks in search of funds," *Wall Street Journal*, December 14, 2017, https://www.wsj.com/articles/china-firms-ditch-bonds-for-banks-in-search-for-funds-1513234676 (accessed on April 16, 2018).

3. See the IFRS Foundation's review of IFRS adoption in individual jurisdictions: http://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/china/.

4. See for example Ball (2016), section 12.

5. See Sun Chengdong, "Top 10 Chinese Brokerage Firms in H1 of 2015," *China Daily*, July 8, 2015, http://www.chinadaily.com.cn/bizchina/2015-07/08/content_21205734_10.htm (accessed on April 19, 2018). We have not come across a more recent ranking but suspect the overall picture has not changed markedly in the last three years.

market to global credit ratings agencies.[6] The dynamics of the domestic ratings market can be expected to change, especially as domestic ratings agencies have tended to give uniformly high ratings to domestic bonds.

### Apportionment of Losses from Failure

Assumptions of guarantees from various levels of government pervade China's financial system. Recent years, however, have witnessed some progress in fostering predictability in how losses are apportioned in the event of failure.

Local government bonds tend to trade at low yields, despite their highly varied financial health that should imply much larger spreads over central government bonds for weaker issuers. In recent years, the Chinese authorities have initiated a process of moving local government borrowing into bond markets instead of through (mostly local) banks. One major motivation for this initiative was to force better market discipline on local governments. The previous system severely restricted local governments' ability to borrow money directly, so many borrowed instead through quasi-governmental entities dubbed "local government financing vehicles" or LGFVs (地方政府融资平台). Local governments benefited from lower financing costs, thanks to the widespread perception of a guarantee on LGFV debt and that of locally owned state companies, but this perception in turn created serious problems of "soft budget constraints"[7] and overborrowing. Local government debt in China rose 50 percent in 4.5 years, totaling RMB 16.5 trillion ($2.6 trillion) at the end of 2017. This number implies the debt grew just under 10 percent per year, and is now over 21 percent of GDP.[8] In this period, changes in the budget law (预算法) effective at the beginning of 2015 and many other measures have attempted to harden budget constraints by forcing local governments to clarify which debt they will take responsibility for, namely bonds they issue directly, and that the rest is not guaranteed. However, this distinction does not seem to have been fully operationalized. It appears that not a single LGFV has failed yet, despite severe overindebtedness in some cases, which suggests that local governments refuse to let them fail. One recent example is Yunnan Capital, which racked up RMB 42 billion in debt but turned a profit of only a few hundred million renminbi. It missed payments of around RMB 1 billion in December 2017 but was rescued in an opaque operation by the provincial asset supervisory commission that injected cash and made its loan payments.[9] Ad hoc bailouts of LGFVs by local governments prevent investors and courts from gaining the necessary experience with restructuring or bankruptcy procedures to learn to price local government credit effectively.

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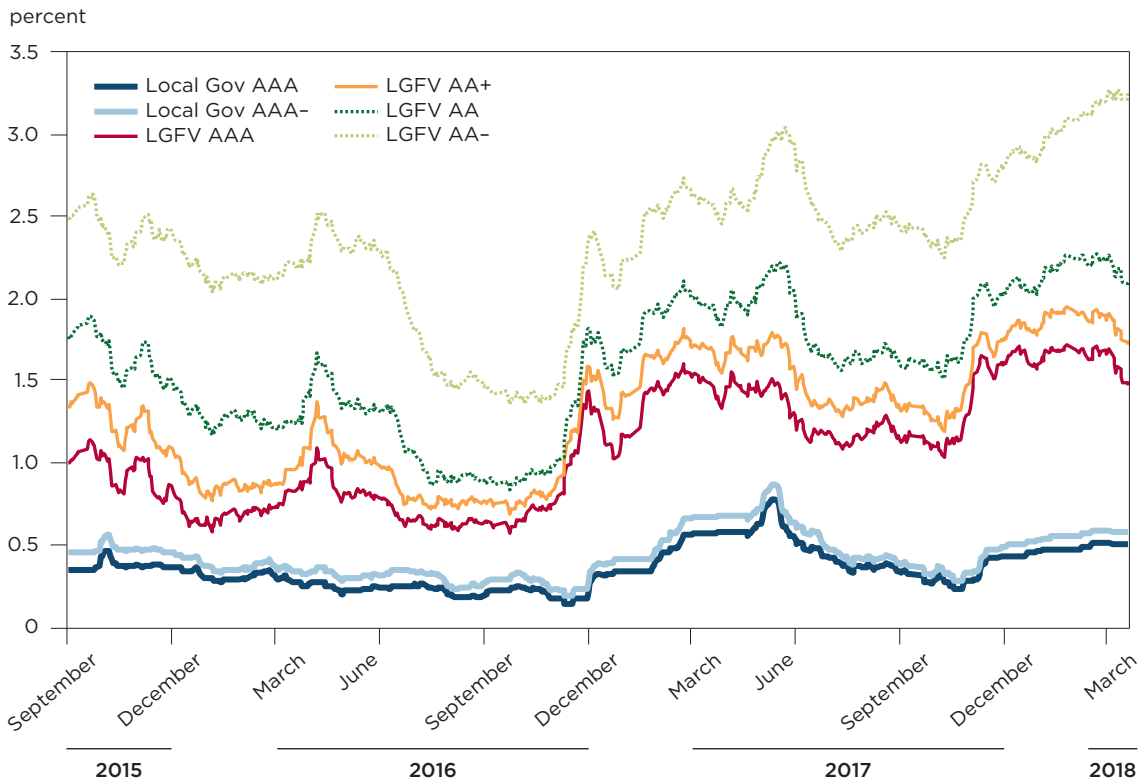
6. See Reuters Staff, "China opens local bond ratings to global agencies," *Reuters*, July 4, 2017: https://www.reuters.com/article/china-bonds-ratings/update-1-china-opens-local-bond-ratings-to-global-agencies-idUSL-3N1JV2SM (accessed on April 19, 2018).

7. The concept of soft budget constraint was articulated by Kornai (1992) and is reviewed extensively in Maskin (1994).

8. See "China local gov'ts debt balance within targeted ceiling in 2017," *Xinhua*, January 17, 2017, http://www.xinhuanet.com/english/2018-01/17/c_136903081.htm (accessed on April 19, 2018), and "The auditor's footnotes," the *Economist*, January 3, 2014, https://www.economist.com/blogs/freeexchange/2014/01/chinas-debt (accessed on April 19, 2019).

9. See Yang Qiaoling and Leng Cheng, "Yunnan Capital averts trust loan default," *Caixin Global*, January 16, 2018, https://www.caixinglobal.com/2018-01-16/yunnan-capital-averts-trust-loan-default-101198620.html (accessed on April 19, 2018).

**Figure 1 Spreads on local-government debt have widened recently, 2015–18**

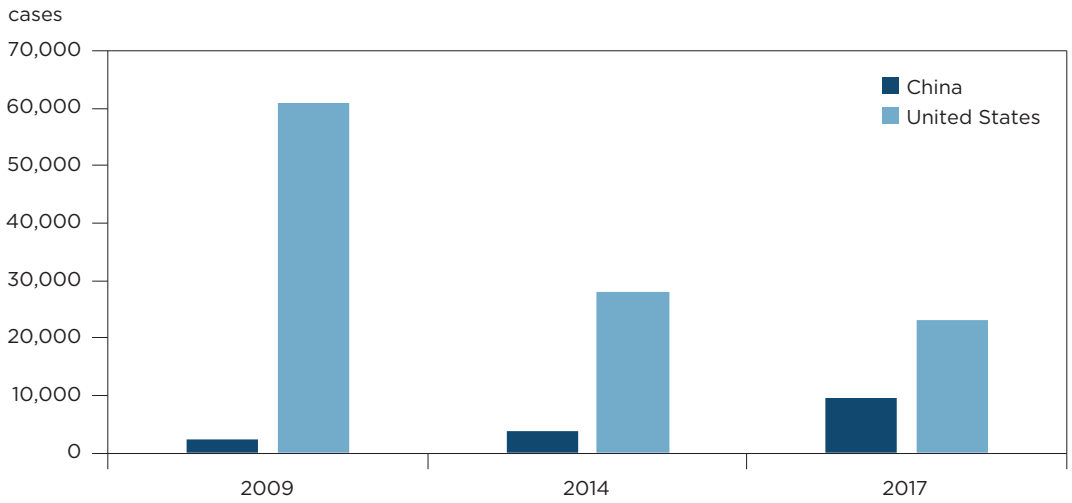



Note: Spreads are defined as the difference in yield between the various local government/LGFV bonds and central government bonds, for 5-year maturities.
*Sources:* Wind, Chinabond.

Figure 1 depicts the spreads, defined as the difference in yield between the various local government/LGFV bonds and central government bonds, for 5-year maturities. The two bottom lines reflect the spreads on local government bonds, which have been mostly flat at around a half percentage point for the last year. The higher four series are different ratings of LGFV bonds, whose spreads have risen significantly over the past two years. AAA rated LGFV bonds yielded less than half of a percentage point more than a AAA rated local government bond for much of 2016, but as of March 2018 this gap more than doubled to over a full percentage point. This rise potentially indicates less presumption of government guarantees, both local and central, for these bonds. This trend of higher spreads (which indicate higher default risk) is particularly pronounced for the top series that represents the lowest rated LGFV bonds.

The legal framework for corporate bankruptcies in China stems from the 2006 Enterprise Bankruptcy Law (中华人民共和国企业破产法), which created procedures to restructure companies rather than force a fire sale of their assets. However, the law has been rarely used until recently. Figure 2 compares the number of bankruptcy cases commenced in the United States to those accepted in Chinese courts. Cases in the United States have declined significantly, because of the continued economic recovery after the financial crisis, but cases in China have been rising, albeit from a miniscule base. This rise is a result of many reforms in the Chinese judicial system. The Supreme People's Court has forced lower courts to accept bankruptcy

**Figure 2 Enterprise bankruptcy cases in China and the United States, 2009, 2014, and 2017**




*Sources: Xinhua News*, Uscourts.gov, International Monetary Fund.

cases filed with them, and many courts have established special tribunals for bankruptcy restructuring and liquidation.[10] Even so, the 2017 number of 9,542 cases is less than one tenth of 1 percent of all firms in China, less than a fourth of the rate of bankruptcy cases per firm in the United States.[11] Research from the International Monetary Fund (IMF) estimated in 2016 that 100 to 250 enterprises fail for every one that ends up in bankruptcy (Maliszewski et al. 2016, 16). Some of these are certainly small firms that may not have significant creditors, but others appear to involve local governments finding backdoor methods like public private partnerships or suasion with creditors to avoid a real reorganization or liquidation.

It is hard to know exactly how many failures and bankruptcies involve state-owned enterprises (SOEs), though the Chinese government has reported increases in its numbers of central and local SOEs in its consultation with the IMF in 2017. The IMF assessed that "[l]ack of resolution details … makes it difficult to assess progress. … [Z]ombies are about 30 percent more likely to remain so if they are state-owned" (IMF 2017b). If the IMF, after extensive consultation and access to the Chinese authorities, is unable to obtain the details of loss apportionment, then most potential creditors needing to price risk are even more in the dark.

Once bankruptcy cases are begun in China, courts have considerable power and discretion over the process and government agencies are often appointed as administrators (Jiang 2014). Lack of juridical independence and local government intervention inject local political objectives into loss apportionment and restructuring cases. Our general assessment is that local creditors are often treated better in bankruptcy, even

10. See e.g. Mu Xuequan, "Chinese courts accept more corporate bankruptcy cases in 2017," *Xinhua News* Agency, March 6, 2018, http://www.xinhuanet.com/english/2018-03/06/c_137020474.htm (accessed on April 19, 2018).

11. This analysis is based on approximately 10.6 million enterprises in China as of 2014, according to the National Bureau of Statistics, compared to around 5.9 million in the United States in 2015, according to the US Census Bureau. These should be considered very rough estimates, because the methodologies for defining and counting firms between the United States and China differ, and bankruptcy cases can involve multiple enterprises.

when their loans are secured by collateral, than other Chinese creditors, which in turn are treated better than any foreign creditors—keeping in mind the massive heterogeneity in the treatment of individual cases.[12] The resulting unpredictability of losses given default significantly impedes credit market discipline.

## Banking Policy Framework

The transformation of China's banking system over the four decades since Reform and Opening Up began in 1978 has been nothing short of extraordinary.[13] Even so, the banking system bears the legacy of the previous era of central planning and remains far from primarily market based.

The five largest state-owned banks once dominated lending in China with virtually all financial assets as late as the 1980s, but their share has now declined to 35.4 percent of banking system assets at the end of February 2018. New types of financial institutions, including local players, play increasingly important roles. Joint stock banks held 18 percent of assets in February 2018, while smaller city commercial banks, often associated with municipal governments and rural financial institutions, each held just under 13 percent of banking sector assets (China Banking Regulatory Commission 2018). New privately-owned banks, some of which are affiliated with China's leading technology companies, hold a tiny portion of total banking assets but the policy initiative that allowed their creation signals the authorities' willingness to open up the banking system to institutions not owned by governments at any level.[14]

There is a widespread perception of extensive government guarantees on the banking system. The last systemic banking crisis China faced, in the late 1990s and early 2000s, was resolved with the aid of financial engineering that proved effective, given the high GDP growth rates experienced in the ensuing years, but the aid was not rendered on a principle of transparency of bank losses. The four largest banks, which held more than half of total financial assets in China at the end of 1995, were insolvent in 1998 (Lardy 1998, 199). The road to restructuring was long, expensive, and not overly transparent. First, regulators cut the required reserve ratio, freeing up lending capital that the banks used to purchase Chinese government bonds. The government then injected these bond proceeds back into the banks as an infusion of capital, doubling their capital on paper without devoting any external funds to the banks. Around 20 percent of the banks' loan books were then sold to state asset management companies (AMCs) created explicitly to purchase nonperforming loans for par value, though the assets were clearly worth far less because of their nonperforming status (Ma 2006). In addition, around $60 billion in foreign exchange reserves were used to recapitalize the banks from 2003 to 2006.

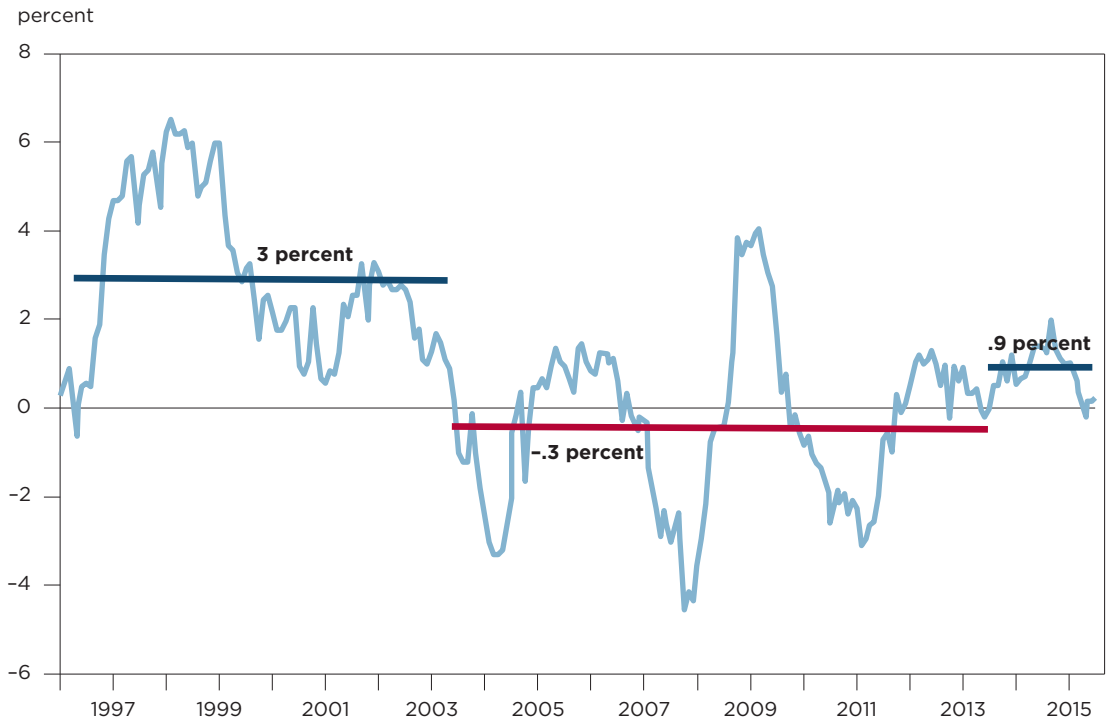
Banks further profited through costs imposed on Chinese savers, as their bank deposits earned them negative real interest rates while the banks were guaranteed a large spread between the interest they paid on deposits and that they received from loans. The central bank directly set lending and deposit interest rates, though it gradually granted banks some flexibility around its reference rates. From 1997 to 2004, a 1-year deposit yielded an average 3 percent real return, but from 2004 to 2013, the People's Bank of China

12. This assessment is partly based on numerous interviews conducted by one of the authors in China during the years 2013–16.

13. See Okazaki (2007) for a synthetic overview of the early phases of this process.

14. Gabriel Wildau, "China's private banks struggle to upend state-owned incumbents," December 12, 2016, *Financial Times,* https://www.ft.com/content/a2dfa8fe-bdfd-11e6-8b45-b8b81dd5d080 (accessed on April 19, 2018).

**Figure 3 Past costs of financial repression borne by Chinese savers; real rate of interest on 1-year deposits**




*Sources:* Wind, People's Bank of China, and National Bureau of Statistics. Updated from Lardy (2014).

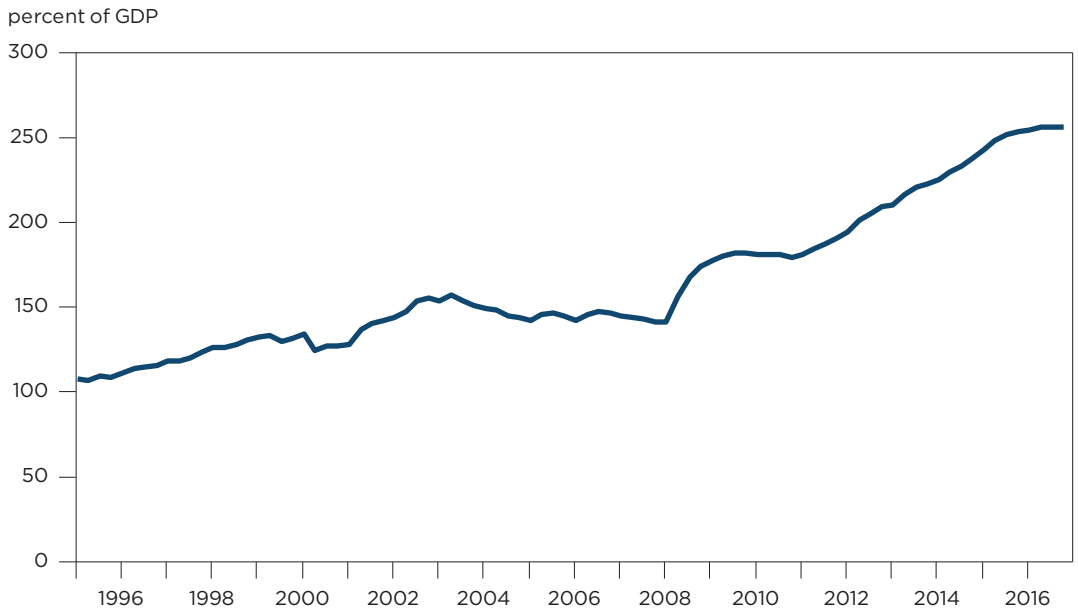
(PBOC) depressed deposit rates despite rising inflation (figure 3). Deposits over this period would yield on average –0.3 percent per year, eroding depositors' purchasing power. Through this process of financial repression (Lardy 2014), depositors' wealth was transferred into bank earnings. This strategy worked, because capital controls kept Chinese savers from seeking a better deal abroad, and other restrictions on financial products funneled their funds into deposits by making it difficult to find better yielding financial instruments. Memories from this experience have shaped expectations about how future banking crises in China may be managed and resolved.

In recent years, the authorities have introduced elements of a framework for market discipline in the Chinese banking system, which could eventually allow banks to fail—something that has never happened in China for banks of any significance since 1949.[15] Important developments include the national deposit insurance scheme introduced in May 2015 and, more recently, the Financial Stability Board's framework for Total Loss-Absorbing Capacity (TLAC) that China has started to implement for the largest banks.[16] Even

15. The only case we are aware of is Hainan Development Bank, a bank that failed in 1998 but only had 0.06 percent of Chinese outstanding deposits at the time. See Ryan Rutkowski, "Too big to fail: deposit insurance and Chinese state banks," July 2, 2013, *Peterson Economics China Economic Watch*, https://piie.com/blogs/china-economic-watch/too-big-fail-deposit-insurance-and-chinese-state-banks (accessed on April 18, 2018).

16. Nicolas Zhu, "China starts to build banks' total loss-absorbing capacity, a credit positive," March 5, 2018, *Moody's Investors Service*, and "China prepares to boost banks' capitalization, a credit positive," March 19, 2018, *Moody's Investors Service*.

**Figure 4 Credit to nonfinancial sector, 1995–2017**




*Source:* Bank for International Settlements, https://www.bis.org/statistics/totcredit.htm.

so, it remains far from clear that China is ready for the kind of bank crisis management in which losses are absorbed by creditors and uninsured depositors, as has been the case in the United States for decades and is expected to be the case in Europe in the future following the 2014 adoption of the EU Bank Recovery and Resolution Directive (BRRD).[17]

All the same, the previous crisis resolution approach cannot provide a template for the future. Today's environment differs greatly from the late 1990s. First, nominal growth is no longer significantly higher than nominal interest rates and has been declining, meaning the existing debt burden cannot be outgrown as in the past. Second, the debt burden is far larger as a share of GDP than before, as illustrated by figure 4. Third, the financial system is far more diversified, interest rates on deposits have been almost completely liberalized (the PBOC eliminated its longstanding cap near the end of 2015, and real returns on deposits have averaged just under 1 percent annually over the past few years), and the Chinese economy is more connected with the rest of the world. These factors combined imply that a return to financial repression to cover losses would have far greater costs today.

Beyond banks, past experience with investment trusts has involved more market discipline than elsewhere in the financial system. The experience with Guangdong International Trust & Investment Corp (GITIC), the second largest institution of its type when it failed in 1999, is one of the most important cases. It set a precedent that, at least in the short term, reduced the presumption of local guarantees for so-called International Trust and Investment Corporations (ITICs). Bondholders and bankers were surprised

17. The first few cases of significant bank failures under BRRD in 2017–18 have all been controversial, including Banco Popular in Spain, Banca Popolare di Vicenza, and Veneto Banca in Italy, and ABLV in Latvia. It can be expected, however, that European practice will stabilize over time and generally converge with the US experience of depository bank resolution in the last few decades.

when the central government, led by now Vice President Wang Qishan, barred the Guangdong provincial government from bailing out GITIC in line with customary practice, despite the fact that "comfort letters" had been sent to investors suggesting that Guangdong would do so. GITIC was forced into bankruptcy and liquidation, and investors recovered only around 12.5 percent of their recognized claims four years later.[18] Many of GITIC's liabilities were of dubious legal status, including illegal deposits and foreign borrowing apparently not registered with the State Administration of Foreign Exchange.[19] GITIC was not alone in its financial fragility and problematic practices, so a large-scale government-led restructuring of ITICs in China followed its bankruptcy. In 2003, only 60 out of 239 ITICs remained in operation under a much stricter regulatory regime that requires far more transparency and a narrower business scope (Kim, Ho, and St. Giles 2003, 24). Convoluted ownership structures and large debt loads made restructuring a drawn-out process. While trusts are better regulated now than they were in the late 1990s, it is unclear to what extent market discipline analogous to the GITIC case would be demanded if one of the large, centrally controlled trusts like CITIC ran into trouble, or how losses would be apportioned.

The key market of wealth management products (WMPs) has maintained an extremely low failure rate. Recent measures from regulators have aimed to force Chinese financial institutions to separate the WMPs they issue into separate categories: WMPs with guarantees must appear on the bank's balance sheet, while those that are not explicitly guaranteed can remain off-balance sheet. Hopefully, this reform will encourage banks to issue products without guarantees and help Chinese investors begin to understand the risk associated with higher-yielding financial products. It is far from certain, however, that banks will refrain from bailing out WMPs that do not carry explicit guarantees. Retail investors in failed WMPs have generally been bailed out on an ad hoc basis, either by local governments, third-party guarantee companies, or by the banks themselves (IMF 2017a, 32). While a bailout may be rational from the perspective of an individual bank that does not want to scare off investors used to virtually every investment being guaranteed, such behavior inhibits the long-term development of a financial sector that can price risk and an investing public that understands there is a relationship between risk and reward.

## 3. TOWARDS GREATER MARKET DISCIPLINE: THOUGHTS ABOUT POLICIES AND SEQUENCING

As illustrated by the above quote from the 2013 Third Plenum, the Chinese authorities have signaled their intent to foster greater market discipline in the allocation of financial resources, as in other parts of the economy. But priorities inevitably involve trade-offs. Two such conflicting priorities appear particularly prominent: the preservation of financial stability (which has links to social stability), and the promotion or protection of national corporate champions (of which many, though not all, are state-owned).[20]

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18. See "Gitic creditors left chasing millions," *South China Morning Post*, March 5, 2003, http://www.scmp.com/article/408215/gitic-creditors-left-chasing-millions (accessed on April 19, 2018).

19. Craig Smith and Eric Guyot, "China's move to liquidate Gitic sends mixed message to creditors," *Wall Street Journal*, January 12, 1999, https://www.wsj.com/articles/SB916079993207272500 (accessed on April 19, 2018).

20. We make a distinction between the pursuit of sector-specific industrial policies on the one hand, and the protection and/or promotion of specific corporate champions on the other hand. We see ample potential for successful industrial policies that preserve a corporate level playing field, even though the discussion of these is somewhat outside the scope of this paper.

The following thoughts are predicated on the hypothesis that the national-champions objective, while significant in the authorities' decision-making process, has overall lower salience than the market-discipline objective, which itself has lower salience than the stability objective. We believe that this hypothesis is broadly in line both with the Chinese authorities' choices since the beginning of reform and opening up, and with their more recent signaling.

### Separating Banking from (Other) Commerce

To introduce further market discipline, the Chinese authorities should establish a sharper separation between banking and other business activities. Simply put, systemic risk makes market discipline significantly more difficult to establish and enforce in banking than in other sectors of the economy. Thus, it makes sense for Chinese authorities to strengthen market discipline at differentiated paces for banks (slower) and for the rest of the business sector (faster). But to achieve that, the divide between banks and the rest first needs to be clarified and better understood and respected.

The "separation of banking and commerce" is the standard expression that refers to this divide, at least in the United States. The distinction occurred gradually in US financial history and is not absolute—nonbanking groups are allowed to establish in-house "industrial banks," albeit under tight constraints for these banks' operations.[21]

The first argument for separating banking and commerce addresses the level-playing field in the nonfinancial sector. If banks and nonfinancial companies are united in a single group, there is a high risk that the banking arm will give preferred financing—possibly in highly opaque ways such as preferential guarantees—to the nonbanking arm (or to its customers or other associates). History has shown time and again that this risk is impossible to eliminate when regulation falls short of complete ownership separation. A recent case in point is Banco Espirito Santo (BES) in Portugal, a country that for historical reasons had not introduced a strong banking-and-commerce separation. BES was used to support the nonbanking parts of the Espirito Santo family group in ways that appeared designed to escape the attention of Portuguese banking supervisors and that led to the bank's eventual failure in 2014.

There are additional arguments for ring-fencing of the banking sector from other business activities in economies where market-based pricing of risk is still far from efficient, as is the case in China. In such environments, businesses with comparatively easy access to credit (such as large SOEs) can gain a positive interest margin by lending to less-favored borrowers (such as smaller private-sector companies) without being formally subject to the risk-management discipline that such leveraged activity should entail. This is inherently conducive to systemic risk.

Indeed, there is evidence of such behavior. Shipbuilders and state-owned aluminum companies have been among the suppliers of so-called entrusted loans, a method for companies to lend directly to one another, often at interest rates many times the reference rates published by the central bank.[22] Authorities seem to be making significant progress in curtailing this activity, which the China Banking Regulatory Commis-

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21. A summarized description is provided by George Sutton, "Here's what both sides in banking-and-commerce debate get wrong," *American Banker*, August 9, 2017, https://www.americanbanker.com/opinion/heres-what-both-sides-in-banking-and-commerce-debate-get-wrong (accessed on April 19, 2018).

22. Don Weinland, "China heavy industry taps Rmb 12.06tn entrusted lending market," *Financial Times*, August 15, 2016, https://www.ft.com/content/74594e9e-62c3-11e6-a08a-c7ac04ef00aa (accessed on April 19, 2018).

sion (CBRC) effectively banned in January 2018.[23] The outstanding stock of entrusted loans in China grew almost 20 percent in 2016 but only rose 5.9 percent in 2017. So far in 2018, entrusted loans have been shrinking with every month.

Conversely, there are of course counterarguments against a strong banking-and-commerce separation in China. One is that it may reduce economic efficiency by constraining the interplay of supply and demand, but this is not really convincing. A more serious counterargument is that separation may be detrimental to innovation, especially in the burgeoning area of internet finance.

Indeed, the integration of financial services and commercial activity has spurred leading Chinese internet companies to impressive innovations. Chinese regulators have allowed the likes of Alibaba and Tencent to create one-stop-shopping platforms for financial and other services that are extremely convenient for consumers and have in turn pushed the incumbent banks to improve their offerings to retail customers. These activities received light, even favorable regulatory treatment from 2002 to 2015, amounting to a de facto financial liberalization. This was the right approach to deal with an industry that grew rapidly from a very small base. Now, however, the financial operations of these firms have grown to a scale, interconnectedness, and importance that challenges competition policy and potentially financial stability. Regulators are tightening the applicable framework along various dimensions, from payments and clearing to credit and data privacy. Thus, we see no inherent contradiction between, on the one hand, acknowledging the significant benefits of finance-and-commerce bundling by China's internet giants until now, and, on the other hand, our advocacy of a stronger banking-and-commerce separation in the future. How the separation principle should eventually apply to internet businesses, and how to manage the inevitable transition, are difficult challenges for which we do not have ready recommendations at hand, however.

Recent promises from PBOC governor Yi Gang[24] to increase transparency and requirements for parent companies of financial institutions are a step towards a strong separation between banking and commerce in China. The United States created clear rules for owners of financial institutions going back to the Bank Holding Company Act of 1956, and it subjects financial holding companies that own more than just banks to Federal Reserve oversight. Meanwhile, China's regime "does not [yet] fully ensure that the regulators have comprehensive oversight and grip on the parent companies of [financial institutions]" (IMF 2017a, 67).

### Fostering Transparency and Predictability

Since the start of reform and opening up, the Chinese corporate sector has made immense progress towards better financial transparency and risk management. Much remains to be done, however, to ensure efficient financial market discipline.

First, the corporate financial disclosure framework can be further improved.[25] China should establish a time-bound process to fully converge its accounting framework with IFRS. It should build up its supervision

23. Don Weinland, "China shadow bank clampdown eyes $2tn of entrusted loans," *Financial Times,* January 8, 2018, https://www.ft.com/content/da246038-f43f-11e7-88f7-5465a6ce1a00 (accessed on April 19, 2018).

24. Chen Jia, "New PBOC chief intends to accelerate opening-up," *China Daily*, March 26, 2018, http://www.chinadaily.com.cn/a/201803/26/WS5ab832f1a3105cdcf6514222.html (accessed on April 19, 2018).

25. The observations that follow are all made in principle for publicly listed companies. Some of them may also be extended to companies that issue listed bonds, and to other "public-interest entities" such as unlisted banks.

of audit firms and place it entirely under the control of CSRC, instead of the current division of responsibilities between CSRC and the Ministry of Finance.

Second, the Chinese authorities should foster a vibrant ecosystem for the analysis of the information disclosed by companies for purposes of capital allocation. The recent decision to liberalize the operations of foreign-based credit rating agencies in China is a significant step in this direction. In the same vein, the authorities should remove any obstacles that may still limit the development of diverse and assertive financial media that are fully independent from corporate interests.

Third, and in line with our above description of the existing mechanisms for the allocation of losses from corporate failures, the authorities should continue their efforts to establish competent and independent courts to rule on business matters, including insolvency, and a properly overseen profession of specialist bankruptcy administrators.

Last but definitely not least, the authorities should create an environment in which companies other than banks suffer the consequences of business failure, and their capital providers incur losses accordingly. In other words, public bailouts should be phased out, including for state-owned enterprises if these are effectively unviable. Even leaving the banks aside, and as it has started in recent years, this process will inevitably happen in a managed way and at a managed pace—but it is time for its acceleration.

This will require not only restraint from the central government but also the central government's ability to impose similar restraint on local government and other local public-sector entities. We estimate the recently established State Market Regulatory Administration (SMRA) will have a major role to play in this area, and that it could in particular gain much insight from the experience of state aid control in the European Union and its enforcement by the European Commission. The United States is not the right benchmark for this, since its mostly market-based framework for fiscal discipline at the local-government level cannot be emulated by China any time soon, and unlike the European Union, the United States has no effective targeted policy to limit local-government financial support to commercial businesses.

### Strengthening the Nationwide Bank Support Framework

As argued above, in the short term, China's banks cannot and need not be allowed to fail in the same way as nonfinancial companies. The main reasons for this are the existence of systemic risk, and the implausibility of establishing efficient market-based risk pricing for bank credit if that discipline does not first exist in the rest of the economy.

This does not imply, however, that the policy framework for public support of failing banks does not require further reform beyond the important past steps, including the May 2015 introduction of explicit deposit insurance covering deposits up to RMB 500,000.[26] The guiding vision for such reform should be the long-term objective of submitting all banks to extensive market discipline, i.e. dismantling all formal and perceived informal public guarantee on bank liabilities other than deposits, at least for scenarios of idiosyncratic bank failures (as opposed to systemic crises) of all banks including the largest ones.

The United States is now arguably the closest jurisdiction to that long-term vision, which explains why US debates on public bank support focus on the so-called too-big-to-fail challenge: For small and medium-

26. Susan Desai, "A regional comparison of China's new deposit insurance system," Federal Reserve of San Francisco Pacific Exchange Blog, February 24, 2016, https://www.frbsf.org/banking/asia-program/pacific-exchange-blog/regional-comparison-chinas-new-deposit-insurance-system/ (accessed on April 19, 2018).

sized banks, market discipline is well established and worked even during the systemic crisis of 2008–09.[27] The European Union, following earlier reforms in some of its individual member states such as the United Kingdom, Ireland, and Denmark, has decided to adopt the same model with its landmark BRRD legislation of 2014, even though the implementation of this framework is still in an incipient phase. Switzerland is in a comparable (though not identical) situation to the European Union in this respect. Other jurisdictions such as Australia, Canada, India, and Japan are more ambiguous as to their commitment to letting banks fail in future crises. In this context, the European Union's situation is the most comparable to China's, since it starts from a position of very extensive public guarantees on banks (unlike the United States when it introduced federal deposit insurance in the 1930s), as was revealed by multiple (and in many case excessive) bank bailouts during the 2007–17 decade of crisis. China should aim not at repeating Europe's experience but at learning from it.

In a long-term sequence of streamlining public support of banks, China should aim at making this support more uniform, which means centralizing it at the national level. In other words, central government guarantees of all Chinese banks may remain extensive in the near term, but local government guarantees should be dismantled (irrespective of the banks' ownership structure). Here again, there is much to learn from the experience of EU state aid control as applied to the banking sector by the European Commission in the past two decades, starting with the landmark removal of subfederal-level (*Land*) guarantees of Germany's public regional banks (*Landesbanken*) in the early 2000s and including all the restrictions on member-state government bailouts in the past decade.

In the meantime, the measures suggested in the previous subsection, including full IFRS adoption, further improvements in audit quality, and better bankruptcy court processes, should also help prepare for the subsequent steps in the medium to long term, which should include a gradual removal of public guarantees on uninsured bank liabilities. The European Union also did this sequentially, with first a prohibition of junior creditor bailout implemented somewhat haphazardly from 2010 and comprehensively from 2013 on,[28] and later restrictions on senior debt bailout under BRRD coming into force in 2016.

One aspect not developed at length in this section is the specific boundary of financial institutions that should keep benefiting from public protection in the near future (referred to as "banks" as shorthand), within the broader Chinese financial system (as opposed to the separation from nonfinancial companies that should be allowed to fail under full market discipline in the near future). A specific discussion of this challenge is beyond the scope of this paper; however, the recent merger of the former CBRC and CIRC into an integrated prudential supervisor, the China Banking and Insurance Regulatory Commission (CBIRC), combined with a new division of responsibilities between CBIRC and the People's Bank of China, can be expected to help identify such financial institutions by eroding the artificial silos in China's financial supervisory architecture.

27. The US Federal Deposit Insurance Corporation closed or merged hundreds of banks during the last decade, including sizeable ones such as Washington Mutual in 2008, with "bail-in" (i.e. mandatory imposition of losses) of their junior and unsecured creditors to the extend needed in all cases where the losses could not be absorbed solely by equity holders.

28. European Commission Banking Communication of July 2013, available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC0730(01)&from=EN (accessed on April 19, 2018).

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CHAPTER 9

# A Stability-Oriented Exchange Rate Policy for China: 2018 Edition

Joseph E. Gagnon

From 1995 through 2014, China managed its exchange rate in terms of the US dollar, alternating between periods of extreme stability and periods of controlled but slightly variable appreciation (the light blue line in figure 1). Beginning in late 2015, China allowed its currency to depreciate against the dollar, which may reflect a new focus on a broader measure of the exchange rate. The JPMorgan real effective exchange rate (REER) for China (the dark blue line in figure 1) depreciated in 2016, but that may be viewed as reversing a sharp upward spike in 2014–15. In 2017 it returned to the upward trendline that had emerged in 2010–13.[1] In terms of the dollar, the renminbi has not regained its 2014 peak, but neither have most other currencies.

The REER is a better measure of the exchange rate for economic policy than the bilateral dollar rate. But it does not follow that stabilizing the REER is the best policy. A better policy for China would be to focus its external policy on the economically more important objective of stabilizing the current account balance, while keeping monetary policy focused on stabilizing inflation and employment.

## FOCUS ON IMBALANCES: A REFERENCE RATE APPROACH

China's REER exhibits a clear appreciation trend over the past 20 years. As long as China's productivity growth is faster than that in the rest of the world, continued appreciation is likely to be required. As China's productivity growth slows down, we would expect the trend pace of real appreciation to also decline, but it is difficult to estimate this relationship precisely. Also, it is possible that measures to open up the Chinese

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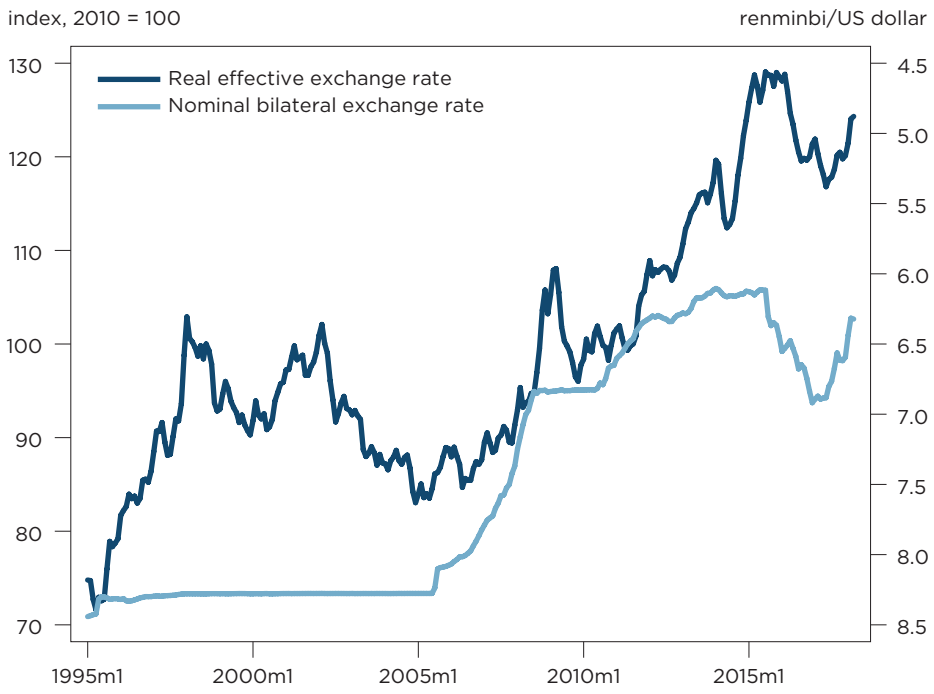
1. There are other measures of China's REER. Use of the JPMorgan REER in this chapter in no way implies that it is the preferred measure.

**Figure 1 Trend appreciation of China's exchange rate, January 1995 to March 2018**




*Source:* Haver Analytics.

economy, including by reducing barriers to imports of goods and services, would temporarily reverse the trend REER appreciation.[2]

Rather than focus on the exchange rate, per se, the People's Bank of China should focus on the ultimate goal of exchange rate policy, which is stability and sustainability of the current account balance. The exchange rate is uniquely salient in the eyes of the public, which is why it is often chosen as a policy target. But the reason people care about the exchange rate is because it influences their ability to buy and sell goods and services in global markets. The current account balance is a far better indicator of an overvalued or undervalued exchange rate than any comparison of the exchange rate to historic levels. A reasonable goal for China is a current account near zero, with temporary deviations allowed (for mainly cyclical reasons) of no more than +/–3 percent of GDP.[3]

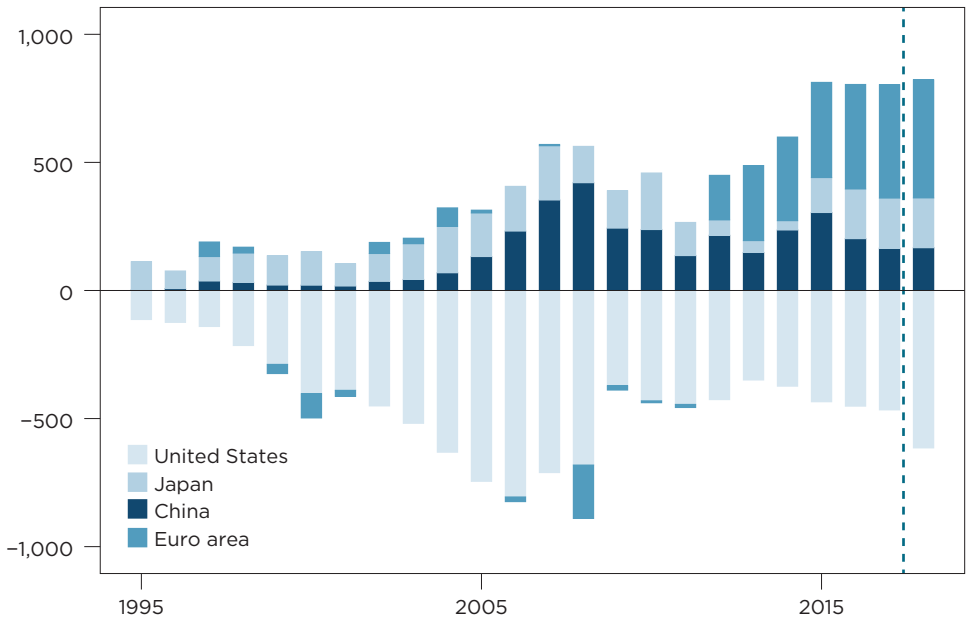
Current account imbalances matter both economically and politically. In economic terms, the current account determines whether a country is a net lender to, or borrower from, the rest of the world. Given China's stage of development, one might expect it to be a net borrower. However, factoring in China's high rate of private saving, a zero balance is a reasonable norm. In its 2017 *External Sector Report*, the International Monetary Fund (IMF) specified a current account norm of zero for China.

2. Standard economic theory argues that trade barriers cause a country's exchange rate to appreciate. Higher US tariffs on Chinese exports, if not matched by an equal rise in Chinese tariffs, would tend to depreciate the Chinese currency against the dollar.

3. This range was suggested for most countries by Cline and Williamson (2008).

**Figure 2 Current account imbalances widening again, 1995 to 2018**

billions of US dollars




Note: 2018 is IMF forecast.

*Sources:* IMF *Balance of Payments and World Economic Outlook* databases.

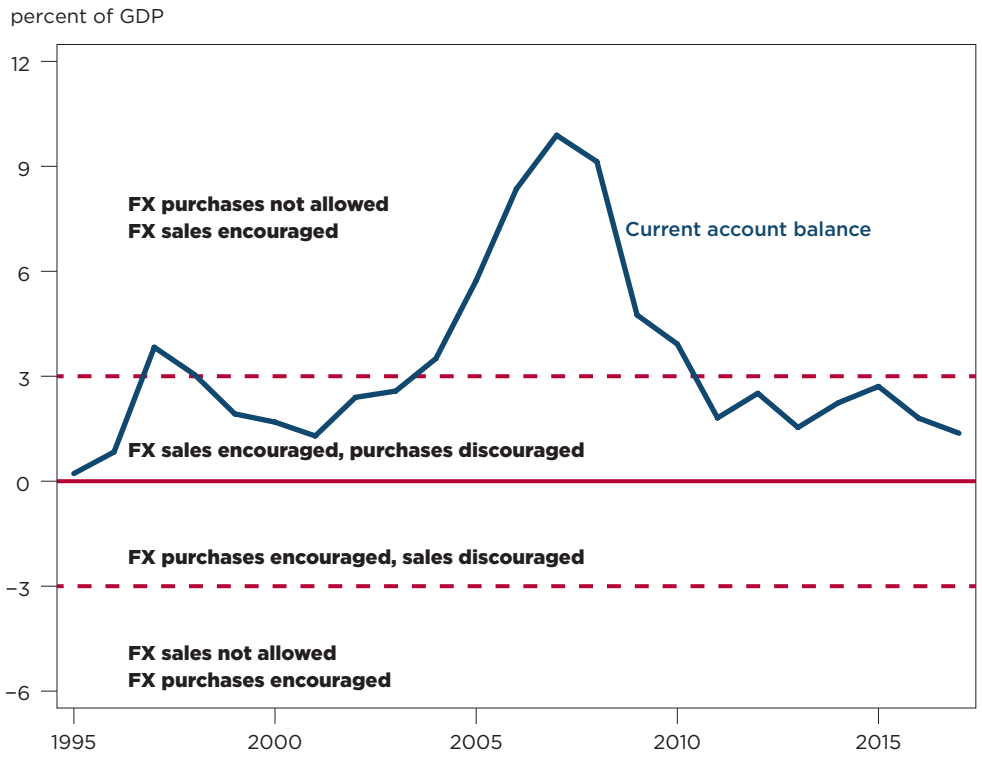
Current accounts have important political repercussions. The persistent large US current account deficit played an important role in the election of US President Donald Trump, as his message resonated more with workers who either lost their jobs because of imports or felt at risk from import competition. Even with balanced trade there are job losses from imports and calls for protection, but these pressures elicit greater support from the general populace when trade is in deficit as opposed to surplus.

Figure 2 shows that current account imbalances of the major economies peaked about 10 years ago and then narrowed sharply during the Great Recession. They were moderately large and stable for a few years but now appear to be widening again. If it were not for the sharp decline in oil prices, the widening of the US deficit in 2015 and 2016 would be even more apparent. The IMF projects a significant widening of the US deficit in 2018, reflecting the lagged effects of dollar appreciation in 2015 and the large US fiscal expansion this year. Despite the fall in commodity prices, which should have boosted its current account, China's surplus fell in 2016 and 2017.[4] Thus, China is not contributing to the re-widening of global imbalances. The euro area has been a more important factor in recent years.

The effect of the REER on China's current account is very clear, especially when one allows for the normal two-year lag. A trend rise in the REER from 1995 through 2002 was associated with a small and stable current account, as shown in figure 2 (the dark blue portion of the bars). The decline in the REER from 2002 through 2005 led to record current account surpluses in 2005–07. The appreciation since 2005

4. Brad Setser suggests that recent changes in statistical techniques overstate Chinese tourism imports. But even a generous correction would not put China's 2017 current account above 3 percent of GDP (http://blogs.cfr.org/setser/2017/04/04/chinas-confusing-trade-and-current-account-numbers/#more-8371).

**Figure 3 A reference rate strategy for China, 1995 to 2017**




Note: "FX" is foreign exchange reserves.
*Sources:* IMF *Balance of Payments* database and author's illustration.

has returned the current account below 3 percent of GDP, although the absolute dollar amounts shown in figure 2 did not decline as much because the size of China's GDP has grown so rapidly. Some have argued that increasingly integrated global supply chains, in which China is a key player, reduce the effect of exchange rates on trade imbalances. Recent research at the IMF finds little evidence of any change in the overall effects of exchange rates (Leigh et al. 2017).

As issuer of one of the world's reserve currencies, China should allow its exchange rate to float freely. However, that does not require accepting unlimited volatility in either the exchange rate or the current account balance. The right approach is the reference rate strategy first proposed by John Williamson (2007, 2016). Figure 3 displays how reference rates would operate, placed in the context of China's historical current account balance. The long-run target balance is 0, with cyclical deviations of as much as +/–3 percent of GDP allowed, as shown by the dashed lines. When the current account is above 3 percent of GDP, purchases of foreign exchange are not allowed and sales are encouraged.[5] When the current account is between 0 and 3 percent of GDP, purchases would be discouraged but not absolutely prohibited and sales would still be encouraged, albeit less strongly as the current account approaches 0. Symmetrical rules apply when the current account is below 0, as displayed in the figure. For simplicity, these rules have been specified in

5. Reserve sales would not be encouraged if a country's reserves were below a minimum adequate level. A minimum level for China is discussed in the next section.

terms of the contemporaneous current account, but ideally they should be cast in terms of the projection of the current account up to two years ahead.

It is important to stress that a reference rate system implies absolutely no restrictions on the level of the exchange rate. It is merely a set of guideposts for when and in what direction to conduct foreign exchange intervention. The key point is that intervention should always lean against excessive current account imbalances. In so doing, intervention helps to minimize imbalances. Recent research documents the important effect of foreign exchange intervention on the current account (Gagnon et al. 2017, Gagnon 2017).

To the extent that the reference rate strategy is clearly communicated to financial markets, it is likely to dampen excessive volatility in the exchange rate as well. Financial markets are prone to bouts of excessive optimism and pessimism, which drive unsustainably large flows of capital across borders and cause exchange rates to become misaligned. An official policy of leaning against these excessive swings in capital flows would not only help to reduce imbalances but should also mitigate misalignments of exchange rates. Many factors influence a country's exchange rate, and it is often difficult to know when an exchange rate is misaligned based solely on its historic behavior. The current account balance (and its near-term projected value) is the only useful indicator of exchange rate misalignment.

## TRANSITION TO THE NEW FRAMEWORK

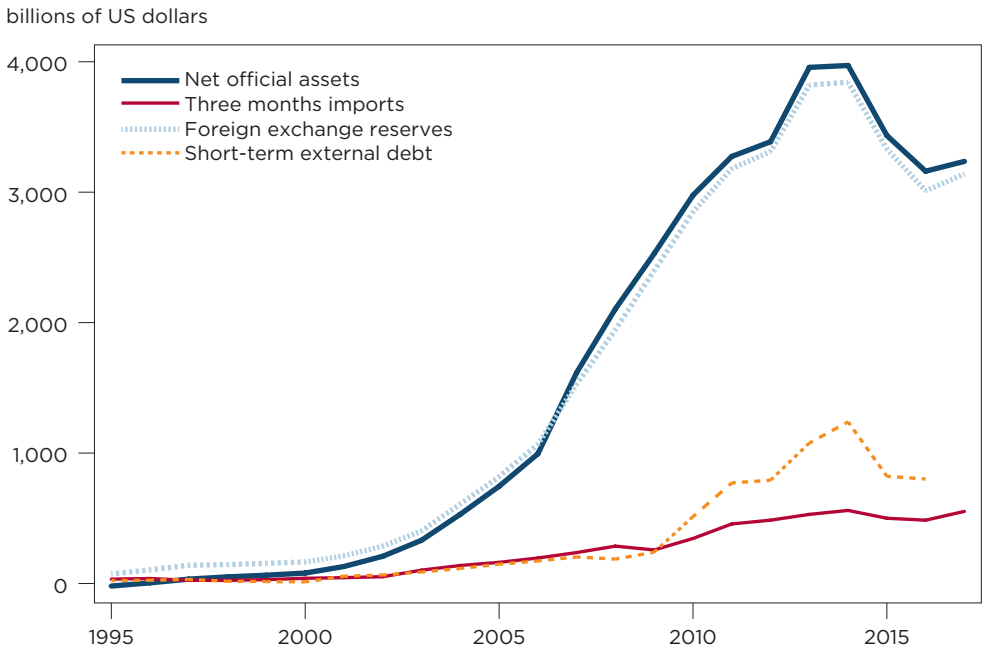
To operationalize the reference rate strategy for China, it is first necessary to determine a minimum level of foreign exchange reserves. Two common benchmarks are three months' equivalent of imports and 100 percent of short-term external debt in foreign currency.[6] Figure 4 displays these benchmarks along with China's foreign exchange reserves. The figure also displays an alternative definition of reserves, net official assets, which adds in nonreserve foreign assets of the central bank and foreign assets held by the sovereign wealth fund and subtracts public and publicly guaranteed external debt. Both of these reserves measures are far above the standard reserve adequacy benchmarks. Probably the best measure of minimum adequate reserves for China is short-term external debt, which is just below $1 trillion.

Going forward, China should resist downward pressure on the REER by selling foreign exchange reserves as long as reserves exceed about $1 trillion and the current account is projected to remain in surplus. As reserves approach $1 trillion, some combination of REER depreciation and reserve sales should be employed. Below $1 trillion, the REER should be allowed to depreciate freely. Any upward pressure on the REER should not be resisted, unless the current account is likely to become negative within two years or reserves are below $1 trillion. The trend of the REER is likely to remain upward as long as productivity grows faster in China than elsewhere.

It has been widely reported that Chinese authorities tightened restrictions on capital outflows, or at least enforced existing restrictions more vigorously, after August 2015. In the long run, China should open its capital markets. But it is best to move slowly, with a higher priority placed on improving financial supervision and regulation and liberalizing domestic markets. As long as the renminbi is part of the IMF's

6. In a recent paper, the IMF (2015) proposed an alternative reserve metric that is considerably higher than the common benchmarks for China because it is heavily influenced by the broad money supply. For a country with a flexible exchange rate, the domestic money stock should not be a major consideration in determining reserve adequacy.

**Figure 4 China reserve adequacy, 1995 to 2017**




*Sources:* IMF *Balance of Payments* database, World Bank *External Debt* database, and Gagnon and Morrison (2018).

special drawing rights (SDR) basket, reflecting China's desire to make the renminbi an international reserve currency, one step that should not be reversed is the opening of China's bond market to foreign investors.

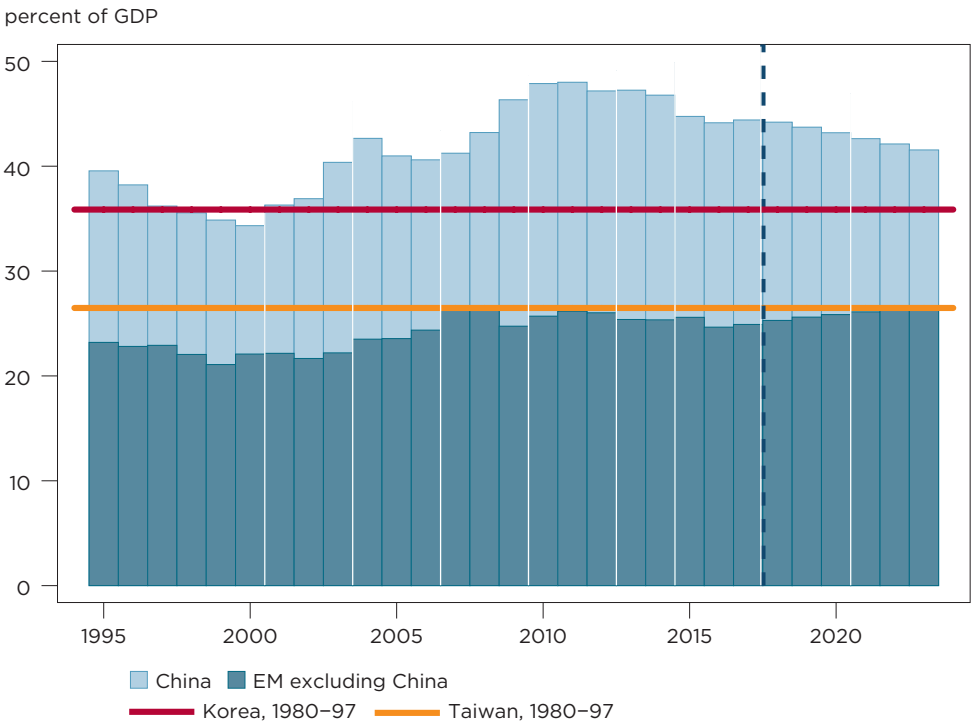
Some might argue that a reference rate strategy cannot work in an economy with independent monetary policy and open capital markets. This conclusion holds true in a model with efficient capital markets. In reality, however, financial markets are not efficient. Research shows that sterilized foreign exchange intervention is more powerful in the presence of capital account restrictions, but, even in economies with no legal restrictions on capital flows, intervention retains an important effect (Gagnon et al. 2017). For example, Switzerland, with a fully open capital account, has intervened massively in foreign exchange markets to retain a large current account surplus over the past eight years (Bergsten and Gagnon 2017).

In the context of the current global imbalances, China is the only major economy whose currency policy is actively consistent with a reference rate strategy. The euro area, Japan, the United Kingdom, and the United States are not actively intervening and thus are not in conflict with a reference rate strategy. But the surpluses of the euro area and Japan, at 3.5 and 4.0 percent of GDP, respectively, in 2017, are in a range where sales of foreign exchange would be strongly encouraged to support the value of the euro and the yen.[7] The United Kingdom and the United States, with current account deficits, would be encouraged to buy foreign exchange to weaken their currencies, respectively.[8]

7. Data are from the IMF's *World Economic Outlook* database.

8. The UK deficit is wider than –3 percent of GDP, but the IMF projects it will narrow to around –3 percent by 2021, in part because of the depreciation of the pound since June 2016.

**Figure 5 Investment in China and other emerging markets, 1995–2023**




Note: "EM" refers to all emerging and developing economies. 2018–23 are IMF forecasts (indicated by dotted line.)

*Source:* IMF *World Economic Outlook* database.

## A KEY MACROECONOMIC RISK

The very high rates of saving and investment in China pose a major risk for China and the global economy. Figure 5 displays investment in China and in the rest of the emerging and developing economies. China has consistently invested a higher share of its GDP than other emerging economies and this excess reached a peak in 2010. The gap has narrowed since then as China's investment rate has drifted down. The IMF projects a gradual further decline in China's investment rate over the next few years, but the gap is projected to remain very large through at least 2023. A higher investment rate might be justified by China's higher growth rate, but even after allowing for China's rapid growth, investment seems too high. For comparison, the figure displays the average investment rates of Korea and Taiwan during a period in which their average growth rates exceeded China's current and projected future growth rates of 6 to 7 percent.

Excess investment threatens to reduce the return on capital below China's already moderately low rate of interest. Such a development raises the risk of a sharp pullback by investors, causing a collapse of investment and a recession in China that would widen China's current account surplus. Korea's financial crisis and recession in 1997–98 is an example of the potential harm of years of excessive investment. The spillover of an abrupt collapse of Chinese investment to the rest of the world would be even greater if it were associated with a sharp depreciation of the exchange rate, as happened in Korea. It is worrisome that China's investment rate substantially exceeds Korea's investment rate before its crisis. The rebalancing of China's economy toward consumption and away from investment is proceeding too slowly.

Research shows that public spending on social safety nets (in pensions, health, and education) has an enormous positive effect on consumption—at least 50 cents and as much as a dollar per dollar spent—even when the spending is fully financed by tax increases (IMF 2012, 2017). Expanding household consumption by improving the social safety net is a win-win policy for the entire world. One way to reduce investment and increase consumption is to remit more profits of state-owned enterprises to the central and local governments to fund social safety nets. The IMF acknowledges considerable progress in expanding pensions and health coverage in China, but it also says much more can and should be done (IMF 2017). Private consumption would also be increased by making the tax system more progressive, even in a revenue-neutral manner, because consumption of low-income households would rise by more than consumption of high-income households would fall. Shifting faster toward consumption-led growth would reduce the buildup of risky investment in China, raise living standards in China, and reduce China's trade surplus with the rest of the world.

## CONCLUSION

China's policymakers clearly value economic stability. However, stability of the exchange rate—whether measured bilaterally against the US dollar or on a trade-weighted basis—will not deliver stability in China's external balance, which is fundamentally more important. A better policy for China would be to focus its external policy (foreign exchange intervention) on the objective of stabilizing the current account balance, while keeping monetary policy (interest rates and money supply) focused on stabilizing inflation and employment with some help from fiscal policy. Structural reforms to reduce excessive saving and investment are also essential. Liberalization of international capital flows is desirable in the long run, but should not take precedence over domestic financial reforms.

A reference rate strategy with a norm of zero for the current account balance is a good framework. Accordingly, China would not buy foreign exchange reserves when its current account balance exceeds 3 percent of GDP and it would not sell reserves when its current account falls below –3 percent of GDP. It would be encouraged to sell reserves when its current account balance is above 0 and buy them when the balance is below 0. Although not targeted at exchange rate stabilization per se, a reference rate strategy is likely to deliver a meaningful reduction in exchange rate volatility.

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