

Instituting Economic Cooperation in a Noncooperative World

Can the G-20 Rebalance the Global Economy?

By Adam S. Hersh July 2013



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Introduction and summary

In the words of Nobel Prize-winning economist Elinor Ostrom, a community is a group "with a common set of problems." The Group of 20 nations, or G-20, is one such community.

Founded in 1999, the G-20 was convened in November 2008 to tackle the unfolding financial crises in the United States and the United Kingdom. Not least of the common problems the G-20 shares are the challenges of strengthening and stabilizing economic growth and making it more sustainable for long-term welfare. With G-20 member countries together comprising some 86 percent of the global economy, they are the *de facto* governors of the global economy.²

Beginning with this crisis summit, leaders of the G-20 nations instituted regular engagement on global economic-governance issues: coordination and cooperation on financial regulation and supervision, on macroeconomic policies, and on other initiatives designed to help steer the world economy toward a stronger, more stable and sustainable path. G-20 leaders directed their finance and central-bank officials and their representatives—along with the International Monetary Fund, or IMF, the World Bank, and a host of other international institutions—to work in concert toward common global economic goals.

At the September 2009 Pittsburgh Summit, G-20 leaders pledged, "We cannot rest until the global economy is restored to full health, and hard-working families the world over can find decent jobs." Toward this goal, the G-20 made early progress in cooperating on macroeconomic stimulus and stabilization policies to stem the fallout caused by the global financial crisis. But the larger goal has yet to be achieved.

Today the global economy risks slipping back on its growth: Some 197 million people around the world remain unemployed—28 million more than in 2007, the last year before the crisis. Amidst substantial fiscal contractions, the U.S. economy grew a mere 0.4 percent on an annual basis in the last quarter of 2012, while

the European Union shrank 2.4 percent.⁵ Japan's economy shrank 0.4 percent on an annual basis in the fourth quarter of 2012, after growing on average less than 1 percent annually for the past two decades.⁶ China's growth slowed to 7.8 percent in 2012, and the IMF projects overall world economic growth to be 3.3 percent in 2013, compared to 5.4 percent in 2007 before the crisis.⁷

Large, destabilizing international economic imbalances clearly still exist, such as trade and financial imbalances between countries. Despite narrowing in part due to the crisis, structural factors in member-country economies point to international imbalances resuming, and growing, in the medium-term economic outlook. What's more, these economic imbalances are intertwined with an increasing social imbalance that is tipping ever more toward income and wealth inequality, and an increasing environmental imbalance that sees growth depleting the world's natural assets faster than nature can restore them.

As stewards of the global economic commons, G-20 leaders realized that deeper actions would be needed to tackle these persistent and growing global challenges. Leaders also realized that in order to sustain growth and achieve longer-term stability they needed to address the underlying contributors to the unfolding economic crisis. But is the G-20, an institution for global economic governance, up to the task?

The structure of the world economy is evolving, with the flow of goods, money, people, and ideas integrating at remarkable speed, and with growth and investment coming increasingly from large and lower-income countries. There is a new geo-economic reality that presents a wealth of opportunities for global growth, but also a wealth of risks to economic well-being now and for the long term. Global economic institutions must evolve as well. The G-20 is leading this charge, but the institution-building has some way to go.

One challenge to the institution is international rebalancing, which is the effective elimination of trade and current account surpluses and deficits between countries. Within the G-20 there is a fundamental tension over how to distribute the costs of adjustment for rebalancing. Should the deficit country adjust through austerity, constraining its living standards in order to pay off the financial assets sold abroad? Or should the surplus country, growing through exports in part at the expense of other economies, adjust to refocus its growth more intensively on domestic demand?

Unsurprisingly, one's answer depends a lot on where one stands in the world and how one views the history of these international economic institutions. Aside from different historical perceptions, leaders also face a complex web of competing domestic and transnational interest groups. For these groups, any policy adjustments can result in profound changes in how economic costs and benefits are distributed between and within countries.

As an institution, the G-20 draws its strength from the sense of community fostered among member countries' leaders and officials. Though all parties have "skin in the game," coordination to achieve well-known potential welfare gains for the world through stronger, more balanced growth is elusive in this noncooperative world.8 The central question is: What does the G-20 need to do institutionally to be capable of sustaining cooperation among member countries over the long term?

Efforts to build institutions for international economic governance, such as the G-20, are a recent development in the history of international trade and finance. These efforts at institutionalization were formalized only in the post-World War II Bretton Woods system of fixed exchange rates and adjustments balanced between surplus and deficit countries. But as the international financial system began evolving and liberalizing after 1973—when power shifted more toward financial credi-

tors—the onus of adjustment shifted in favor of austerity policies. Skepticism about these institutions has led many countries in effect to opt out of the present system. A number of countries—most notably across Asia and Latin America—have voted with their feet by pursuing policies of currency undervaluation and trade expansion to insure themselves against the real risks of international financial crises by amassing large holdings of official reserves.

Elinor Ostrom describes seven principles commonly observed in institutions that are successful at sustaining cooperative governance of the economic commons. (see box to the right) A generous assessment finds that while the G-20 is making significant progress toward these seven principles, it gets right only four out of the seven. The three it lacks—providing a credible system

Ostrom's Principles for Managing the Commons

- Define clear group boundaries.
- Match rules governing use of common goods to local needs and conditions.
- Ensure that those affected by the rules can participate in modifying the rules.
- 4. Make sure the rule-making rights of community members are respected by outside authorities.
- Develop a system, carried out by community members, for monitoring members' behavior.
- 6. Use graduated sanctions for rule violators.
- 7. Provide accessible, low-cost means for dispute resolution.

Sources: Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action (New York: Cambridge University Press, 1990); Elinor Ostrom, "8 Keys to a Successful Commons,"YES! Magazine, February 26, 2010, available at http://www.yesmagazine.org/issues/ america-the-remix/8-keys-to-a-successful-commons.

for monitoring, sanctioning, and providing effective dispute resolution (numbers five, six, and seven)—unfortunately are essential to enabling enforcement of cooperative norms of successful global governance, and for avoiding the "tragedy of the commons," or the path back to yet more financial fragility and economic imbalances.⁹

The gains from coordinated rebalancing present the opportunity for a positive sum outcome that can substantially boost growth, incomes, and employment throughout the world. The default norm of contesting rebalancing, however, often characterizes international economic relations between countries, hence the large and sustained international imbalances persisting over such a long time. (see box on page 7) Achieving a stronger, more sustainable global economy requires cooperation among G-20 leaders; that cooperation hinges on whether leaders can build an institution capable of enforcing cooperative community norms.

The path toward cooperation and success in these areas should begin with recognition of the structural causes of international imbalances and its roots and inertia in rising inequality. G-20 leaders then should focus on employment- and income-targeted policies that grow their economies from the "middle-out"—recognizing that to sustain these policies, the global economy must grow by empowering those in or aspiring to be in the middle class with the financial security and economic opportunity to move up. Working together as a community of states to provide coordination in this way enables the world economy to grow more sustainably as a whole.

In the short term, progress toward G-20 cooperation will be seen in fits and starts, but there are steps President Barack Obama's administration can take today to seize the opportunity of the G-20: First, by strengthening the bilateral relationship with China, and second, by using this relationship to strengthen the G-20's effectiveness as a multilateral-governance institution. In this report we recommend the following steps.

Recommit community members to the Mutual Assessment Process

G-20 leaders delegated to the IMF a set of economic analyses called the Mutual Assessment Process, or MAP, to assist in a country-to-country peer-review process. (Technical details of the process and its results are described in Appendix 1.) The MAP established economic criteria for evaluating the extent and causes of international imbalances and to simulate the effects of economic rebalancing

versus continuing on with business as usual. The IMF in turn delivered a stream of valuable and informative economic research on the G-20 nations. ¹⁰ In fact, in many instances IMF economists proffered fresh rethinking of principles and policies of international integration and liberalization of financial trading. But the MAP does not solve the G-20's institutional shortcomings; the technical analyses alone do nothing to spur action to change the noncooperative norm. Part of mutual assessment must be a follow-up process, where leaders discuss the analyses and possible reforms of the international economic architecture. The United States should therefore hold member countries to the expectation of full cooperation in the MAP, including supplying requisite forecasts and information on national economic policies needed for the analyses, as a step toward broadening the G-20 leaders' dialogue.

Housekeeping on outstanding commitments

To preserve credibility, the G-20 still has work to do on prior commitments. The United States should work to ensure that the G-20 makes good on these, including implementation of the 2010 International Financial Institution, or IFI, reforms, which shifted ownership and voting shares of the IMF and World Bank toward developing countries, including China. The United States should also work to advance more governance and quota reforms of Bretton Woods institutions so that other member countries participate more broadly in the costs and governance of the IFIs.

Define the community

To strengthen the effectiveness of the G-20, the United States should urge G-20 members to revisit and clearly establish membership criteria. Current membership of the G-20 is not ideal in terms of it comprising the world's actual largest economies or in equitable geographic distribution of representation in the multilateral process. ¹² Since under current rules, the annual G-20 host country has the authority to invite guest-country representatives, the United States should express support for the informal convention of a "permanent" guest status for representatives of the African Union, the Association of Southeast Asian Nations, and others as appropriate.

China's emergent voice and responsibility

To further draw China into the system of multilateral governance, the United States should support China serving as host country at the earliest opportunity. At present, the agreed-upon schedule of rotating G-20 leadership will transition from Russia in 2013 to Australia in 2014 to Turkey in 2015. The next opening for China to serve as host would be in 2016, and the United States should encourage such an assignment.

Finish the work on financial regulation reform

From the get-go, G-20 members established a core mandate for national implementation of internationally coordinated financial reforms. 13 These are needed to secure volatile, speculative capital markets around the world. As literally thousands of rules prescribed by the 2010 Dodd-Frank Act—the United States's most significant financial regulatory reform in more than a decade—are yet to be written, let alone implemented, by U.S. supervisory authorities, the United States first should lead by example and finish the work of getting its own financial house in order. 14 The United States must finish erecting a robust system of financial supervision before the next financial crisis hits.

As a further step, G-20 leaders should examine the benefits of creating other missing international institutions that can help facilitate stable, sustained growth and rebalancing. The steps for these entities to take should include a sovereign bankruptcy mechanism that provides rules for the orderly restructuring of debts that preserve the public investments in equitable growth, and an international clearing union such as that proposed by John Maynard Keynes. This would provide a central clearing mechanism, much like on a stock or commodity exchange, by automatically adjusting respective international trade and financial surpluses and deficits among imbalanced countries. Such a mechanism would allow for orderly adjustment of accumulated reserve surpluses in order to maintain appropriate exchange rates.¹⁵

Revisit governance issues

The United States should use the opportunity of the G-20 to encourage community members to revisit governance issues in the World Trade Organization, or WTO, and other international economic institutions. In particular, the United States should encourage members to revisit the effectiveness of the WTO disputesettlement mechanism for adjudicating the rules of the trading system. A transparent, balanced, and efficient dispute-settlement process would benefit all member nations, smoothing frictions in international economic relations.

This report explores the structural factors of the G-20 in detail, with specific focus on the role of imbalances within and between the United States and China. These two countries reside at the core of international imbalance issues and warrant specific attention. As the world's two largest economies and primary contributors to these key imbalances, China and the United States share a special responsibility for marshaling member countries to strengthen the G-20 community and the coordination it engenders. Both countries hold responsibility for 38 percent of the total G-20 current account imbalances. ¹⁶ In both countries, the economies that are developing from rising income and wealth inequalities create a foundation for persistent imbalances. This disequalizing growth lies at the root of the U.S. trade and financial deficits, as well as China's and others' surpluses.

Global benefits of G-20 collective action

In 2012 IMF staff developed forecasts of the economic effects from continued lack of cooperation on international rebalancing relative to the status quo, as well as the potential general welfare benefits of rebalancing. The staff report titled, "Group of Twenty: Towards Lasting Stability And Growth," describes the potential benefits of broad international collaboration. In the upside scenario of cooperation and policy coherence, the IMF forecasts an additional 2.5 percent growth of world gross domestic product in 2017 relative to the "World Economic Outlook" baseline.17

Furthermore, the report estimates that if the proposed policy recommendations are enacted there could be almost 36 million additional

jobs across the G-20 nations than would have otherwise been possible. These policies would reduce global imbalances by three-quarters of 1 percent of world GDP by 2017, a relatively important amount, especially for advanced deficit and emerging surplus economies.

The report also assessed potential gains relative to a downside baseline scenario where international cooperation degrades and fiscalcontraction policies undermine the recovery of worldwide economic growth. The report concludes, "The gains in the upside compared against the downside (relative to baseline) amount to 4 percent of GDP and 58 million jobs in 2017. Cumulative output gains over five years between 2012 and 2017 would be 3.5 times larger." 18

The unmaking of Bretton Woods's International Balancing Act

As G-20 countries continue to navigate the path to global recovery from the most recent episode of financial crisis beginning in 2008, it is useful to consider the roots of the present international trade and financial order. What is the international monetary order we have now and why is it not working to resolve the fundamental tensions leading to persistent imbalances, as well as the economic risks they entail?

Before the advent of the modern international monetary system, global imbalances in trade and financial flows were more often resolved with gunboats than with efforts at multilateral cooperation through international institutions.¹⁹ Governance of the global trade and financial system has progressed a great deal, but governance institutions were constructed to resolve fundamental conflicts that remain: Who should adjust when imbalances arise, the surplus country or the deficit country? Should "beggar-thy-neighbor" surplus countries back off from policies producing surpluses, slowing down and enabling the faster expansion of deficit countries? Or should deficit countries tighten their belts and muddle through austerity and stagnating living standards? Depending upon just how rebalancing proceeds, the potential costs and benefits to countries and to interest groups within and across countries can vary substantially.

As initially conceived in the 1944 Bretton Woods system, the International Monetary Fund would serve to resolve this key political-economy tension. It would mediate a balance between the competing interests for balanced adjustment in the interest of the global economic system overall.²⁰ This system established a clearly defined set of rules and norms of behavior to provide a level and stable international playing field. Member countries bought into the system by posting capital to the IMF. In exchange, they committed to uphold a system of exchange rates managed to promote international balance, and could receive reasonable financing in times of economic duress in order to smooth and maintain the balance of international trade and financial flows. Countries that upheld the rules could expect that the IMF would be there at their time of need, acting as an international "lender of last resort" just as central banks do in the domestic financial system. In principle, the IMF served to ensure an even-handed approach to adjustment.

Beginning with the 1980s Latin American debt crisis, however, this balance began tipping the burden of adjustment toward deficit countries. When oil-price shocks in the 1970s sent torrents of so-called "petrodollars" into the U.S. and international financial systems, those dollars needed to find a better return on investment than could be found in financially underdeveloped oil-exporting countries. And financial institutions in the United States and Europe began redirecting that money south in a lending boom to Latin American and other governments.

Sovereign lending was, as former Citibank CEO Sanford Weill famously observed, a safe investment because "countries don't go out of business." Struggling economies can always restart growth and still possess valuable assets: natural resources, capital assets, and, most importantly, the labor power of a country's workforce. Structural adjustment—as a condition of accessing "lender-of-last-resort" services from the IMF and other monetary authorities—could adjust a country's political, financial, and social institutions as a way to ensure that an economy could create the conditions to repay external creditors.

Accumulation of often "odious" sovereign debts in countries receiving the petro-dollar inflows from U.S. financial institutions set the stage for unsustainable financial balances throughout Latin America and other developing countries. ²³ But a crisis was only triggered when Paul Volcker's Federal Reserve engineered a U.S. monetary policy-induced interest-rate spike in 1981–taming elevated domestic inflation by inducing a sharp recession and unemployment. As a knock-on effect, the U.S. interest-rate spike also effectively burst the lending boom from Wall Street to Latin America. Rising interest rates made new and outstanding debts too costly, and in August 1982, the Mexican government notified its creditors and the U.S. Department of the Treasury that it would default on its debts. Similar defaults soon cascaded across the region, putting advanced country banks at risk of great financial loss. To resolve the problem, the IMF played a role in facilitating the "structural adjustment" of these economies in order to generate export earnings of hard currencies needed to pay back foreign investors for rescheduled debts of crisis-stricken governments.

Structural adjustment entailed devaluing the exchange rate; making regulatory conditions favorable for capital relative to labor; liberalizing trade and capital flows; and restructuring public expenditures on health, education, and other social spending, while often bringing regressive shifts in the distribution of tax burdens. This complex set of policies came to be known as the "Washington Consensus." ²⁴

This policy strategy of adjustment, articulated in a series of IMF and World Bank statements in the early 1980s, worked by lowering the average standard of living in order to direct more of the social product of an economy toward servicing the external financial obligations.²⁵

The effect of such policy changes actually often made countries more financially unstable. In an influential study, George Washington University economist Graciela Kaminsky and University of Maryland economist Carmen Reinhart found that "financial liberalization often precedes banking crises," as capital inflows fuel a credit boom at the same time that increased competition and relaxed regulation encourage financial institutions to take on higher leverage and risk.²⁶ Perversely, over the long term, policy changes for structural adjustment promoted in many countries led to a decreased supply of credit to the economy as a result of liberalization, even as banks became more financially fragile.²⁷ After broad moves to financial liberalization around the world, income accruing to capital owners in the United States grew to more than 10 percent of GDP in the 1990s from less than 2 percent of GDP in the 1970s.²⁸ The share of income redistributed to capital owners in the United Kingdom increased by nearly 13 percentage points over the same period; in Organisation for Economic Co-operation and Development, or OECD, countries, capital owners on average increased their share of income by more than 4 percentage points of GDP.

Economists refer to what resulted from structural adjustment in Latin America as a "lost decade" of economic growth, but ground was lost across a range of indicators of human welfare: health and environment, education, and opportunities for women.²⁹ But over the decades that followed, this process unfolded in a majority of developing countries, guided by the IMF, World Bank, and other international financial institutions. While the world became more financially liberalized under such reform efforts in the years since 1980, deconstructing the original Bretton Woods system of managed exchange rates and financial flows has been associated with increasing financial instability around the world. International economists Barry Eichengreen and Michael Bordo show that since the end of Bretton Woods' fixed-exchange-rate system, the frequency and scale at which financial crises are occurring have been accelerating, often with widespread international contagion.³⁰

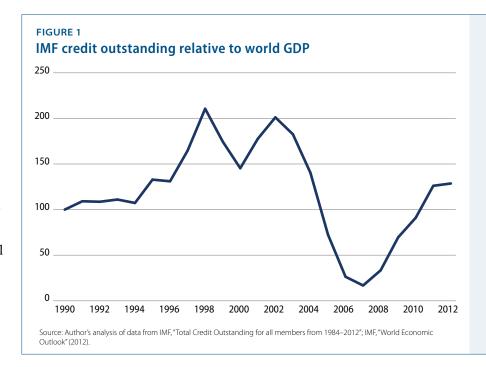
Global economic order: From the 1980s debt crises to the Asian financial crisis

While many countries around the world experienced financial crises as liberalization unfolded in the 1990s, most crises remained relatively contained. For example, Mexico's post-NAFTA peso crisis of 1994–1995, though with global financial implications, was largely resolved bilaterally with the United States and carried cooperation of the IMF and other external creditors. The 1997-1998 (and beyond) Asian financial crisis, however, threatened to unhinge much of the global financial system. The contours of today's economic-governance system are etched in the outcomes of this crisis, as are the strategic responses adopted by economic policymakers in reaction to the evolving system.

Having undergone rapid liberalization, Thailand, followed by other East and Southeast Asian countries, fell prey to international speculative attacks after accumulating unsustainable international borrowing. The financial collapse that ensued eventually ensnared other developing countries, toppled the behemoth U.S. hedge-fund Long-Term Capital Management, and nearly rendered a number of major Wall Street investment banks insolvent.³¹

Broader international efforts to coordinate economic-policy responses focused on harmonization toward developed-country regulatory standards for financial and labor-market institutions.³² Many in the countries affected by the Asian financial crisis, as well as observers across the region, saw the structural adjustment conditions negotiated in exchange for emergency lending as draconian. The affront and perceived threat to sovereignty even led Japan and other Asian countries to explore creating an Asian Monetary Fund that could operate independently from the IMF.³³ While the Asian Monetary Fund idea was eventually scuttled, regional monetary cooperation since that time among Southeast Asian countries has succeeded in creating an institution to provide "swap" arrangements of official reserves among the region's monetary authorities in the Chiang Mai Initiative. Similar efforts for independent regional monetary cooperation are underway in Latin America, as well as in the Latin American Reserve Fund, or FLAR.34

Chinese officials in particular drew a number of policy lessons from what they saw unfolding on their doorstep as a result of liberalization to foreign finance. Most importantly, they learned they could not—or would not—rely on the aid of the IMF in the event of financial duress: They would need to self-insure against mounting international financial risks to their economies, and many countries followed suit.



Few parties escaped the Asian financial crisis looking good,

but the IMF lost credibility as an arbiter of balanced adjustment.³⁵ So strong was the aversion to the fund that IMF lending fell to less than \$17 billion in 2007 before the current crisis from more than \$134 billion in 2003.³⁶ Even after G-20 members committed an additional \$750 billion in new lending resources to the IMF in response to a more severe crisis affecting more systemically important countries, IMF lending expanded little and could not match that of the late 1990s crisis. (see Figure 1) Due to perceived high political and economic costs, many policymakers around the world were loath to borrow from the IMF. Instead, they endeavored to self-insure against any such national financial eventualities through an economic strategy of building large reserves of official foreign assets. This goal was achieved by directing complementary economic policies at generating sustained trade surpluses.³⁷

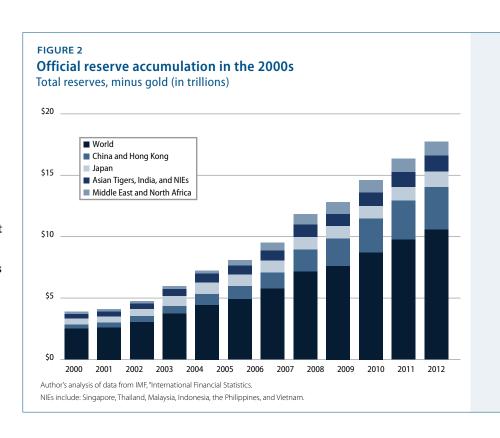
Since this time, in fact, much research indicates the policies often recommended by the IMF and other international institutions through structural adjustment as sharing culpability in increased international financial instability and imbalances. In a comprehensive review of the empirical research, Maurice Obstfeld wrote that there is "meager direct evidence that developing countries gain from financial globalization," though ultimately still arguing for the policies.³⁸

To its credit, the IMF is also rethinking many policy precepts, and in 2012 IMF economists authored a Staff Discussion Note explaining the positive value of policies to manage international capital flows, or so-called capital controls. Such policies that regulate the inflows and outflows of financial portfolio capital were eliminated in virtually all countries in the world in the 1980s and 1990s, and some leaders sought to amend the IMF institutional charter to prohibit regulations on international capital flows altogether.³⁹ IMF officials and researchers understand how increased volatility in the world economy has driven many countries to pursue precautionary strategies to ensure their individual economic security.⁴⁰ And the increasing inequality occurring within most countries since the 1980s is associated with slower and more volatile economic growth over the long run.⁴¹

Official reserve accumulation reflects efforts to undervalue and sustain surpluses

In the rush from the IMF, many developing countries instead pursued economic strategies intended to create surpluses in their international accounts. With steady surpluses, monetary authorities could accumulate reserve assets sufficient to intervene in and manage the stability of their foreign-exchange markets—sometimes so stable as to be effectively pegged to a fixed level against the U.S. dollar or other hard currencies. Successful implementation was a mutually reinforcing policy strategy: The more reserves that can be accumulated, the better monetary authorities can manage financial stability and the level of the exchange rate for mercantilist export-led growth. Export-led growth strategies in turn generate the trade surpluses that can buy more official reserves.

Total official reserve holdings, minus gold, more than doubled as a share of world GDP from 2000 to 2009.42 According to University of California, Berkeley, international economist Maurice Obstfeld and co-authors, one half to two-thirds of all central-bank reserves are held on a "precautionary" basis against increasing international financial risks.⁴³ This result suggests a number of countries hold a substantial excess of foreign reserves—much more than what is needed to be safe, and that's not including the holdings of rapidly growing sovereign wealth-fund investments.



Globally, official reserve accumulation by monetary authorities accelerated dramatically in the post-Asian crisis world. (see Figure 2) Japan's substantial official reserves held fairly constant across the period, but China's grew 21 percent to \$3.5 trillion in 2011 from less than \$400 billion in 2000—the year before China entered the World Trade Organization. On a global basis, China's share of official reserves accounted for one-third of world totals by 2011, from 14 percent of the total in 2000. Other East and Southeast Asian countries and India, to a greater or lesser extent with policies endeavoring to generate current account surpluses, and Middle East and North African countries, driven by surpluses of oil-exporting countries as groups, both expanded reserves and their share of global importance at roughly the same pace.

How China manages its exchange-rate peg

Mechanically speaking, a hard currency "peg" is achieved by monetary authorities being able to manage the volume of buying and selling of their currency in foreign-exchange markets and having sufficient resources to be able to out-buy or out-sell—or at least out-bluff—all other traders on the market. These two things allow monetary authorities to maintain a stable market price for the exchange rate.⁴⁴

Monetary authorities endeavor to own a portfolio of assets of different currencies, or official foreign-exchange reserves. In China's case, an estimated 64 percent of the \$3.3 trillion in official reserves are cash dollars and U.S. dollar-denominated financial assets, primarily U.S. Treasury and other U.S. government-agency bonds. 45 The more reserves a country accumulates, the more leeway to manage the exchange rate. China's monetary authority is party to more than 90 percent of trades in its foreign-exchange markets.⁴⁶

In June 2005 China began what is often called an exchange-rate reform. Although the authorities allowed its currency, the Renminbi, to trade in a marginally wider band, the real result of reform was not to change the degree of intervention to manage the exchange rate, but rather a policy decision to gradually ratchet it up against the U.S. dollar. Since this time, the Renminbi has appreciated by 40 percent relative to the U.S. dollar in real terms.⁴⁷ But the appreciation had nothing to do with a shift in China's exchange-rate mechanism to a market float. In fact, reforms strengthened Renminbi's peg to the dollar. Harvard economist Jeffrey Frankel shows the degree to which Chinese policy pegs the Renminbi exchange rate to the dollar: The share pegged to the dollar jumped from 80 percent immediately after reform to more than 99 percent of the peg by the start of the September 2008 financial crisis.⁴⁸

Whether a country's motives for amassing such a large holding of reserves flow from mercantilism or from a cautious response to an increasingly risky international financial system, economic strategies to boost reserves rely on policies that build sustained trade surpluses with the rest of the world—currency undervaluation and industrial strategies to promote production and export of "tradable goods," primarily of manufactures. 49 The positive feedback effects from investment and growth of tradable-goods industries mean that, if effectively implemented, strategies to target industrial development can successfully achieve rapid expansion into global-export markets and displace foreign competitors from the home market.

Much recent economic research points to the key role that development of tradables industries plays in sustained economic-growth accelerations. Harvard economists Ricardo Hausmann, Lant Pritchett, and Dani Rodrik show that not only do countries with a larger share of their economy in tradables experience faster growth, but also growth accelerations are associated with structural changes toward more production in those sectors of the economy.⁵⁰

IMF economists Simon Johnson, Jonathan Ostry, and Arvind Subramanian found that nearly all sustained economic-growth accelerations were associated with a rapid increase in the share of manufactures in exports. 51 A broad diversity of production of tradables within an economy seems to create a self-reinforcing ecosystem for growth and expansion into new activities. Just getting into manufacturing industries, no matter the means, can lead to rapid, sustained productivity growth in industries that quickly converge on world-market levels of efficiency.⁵² Harvard economist Riccardo Hausmann and World Bank economist Bailey Klinger demonstrate that the potential for this dynamic of productivity rapidly converging on world-class levels is greatest in manufacturing industries.⁵³

Translation: Economic-growth takeoffs occur when investment and job creation is crowded into high-productivity, high-positive spillover industries. The competition and the nature of learning through production in such industries help firms quickly achieve high levels of productivity. While it is natural that such production will compete increasingly on international markets, export growth is not a necessary condition to harness the growth potential from an economic strategy focused on growing production of tradables. Were domestic demand to grow apace through middle-out economic policies, domestic consumption and investment would provide a larger outlet for things produced on the home market. This would help ease the zero-sum conflict over slices of the pie in order to focus on broadening and sustaining growth.

By no means is there a guarantee that industrial strategies can be successful, but the roster of historical cases shows that in many countries—including in the United States and other advanced-economy countries—thoughtful and bold policies can succeed.⁵⁴ But the lesson is that relatively modest targeted investments and subsidies for key industries can in short order yield globally competitive enterprises. Though they need not to achieve these growth results, policies to promote such development often amount to a gaming of the system of international trade and finance; this is part of a viable, if uncertain, strategy to acquire an increasing share of the world market, often at the expense of established players the so-called beggar-thy-neighbor problem.

Internal and external costs of China's export-driven policies

The complementary strategy of reserve accumulation and development of tradables industries has proved an erstwhile successful growth strategy for China and other developing countries. But their economic-policy choices also contribute to the destabilization of the global economy. A number of economists have pointed to the conflict among different national policies as not only the cause of international imbalances, but also as a leading cause of the recent financial crisis. 55 Less often identified as a cause, however, is the pernicious social imbalance of increasing income and wealth inequality in the United States, China, and most countries of the world where these policies have been created and reinforced.⁵⁶

Such a policy choice for an export-oriented growth strategy, of course, presents tradeoffs and costs. While growth has been rapid in China and many other places, countries following reserve accumulation and industrial-development strategies create some tangible negative economic effects on their own economies. First, accumulating and holding reserves is extremely wasteful in terms of the opportunity cost—the potential alternative social uses of investment capital. That is, the countries would be well-served to invest in real fixed investments, rather than low-return financial assets.

Even before the rapid acceleration over the past decade of reserve accumulation in the East Asia, Middle East, and North Africa regions, economists Dean Baker and Karl Walentin estimated in 2001 that the cost of such excessive reserve holdings amounted to 1 percent to 2 percent of GDP—forgone returns on investment from a modestly riskier portfolio of assets. More recently, Larry Summers estimated the opportunity cost to China at 6 percent of GDP.⁵⁷ Since that time, China's official reserve accumulation has only accelerated. It is clear that holding more than \$3 trillion in low-yielding U.S. government securities—plus another \$482 billion of total assets held in the China Investment Corporation, the country's sovereignwealth fund—presents a high-opportunity cost in the form of potentially much more productive alternative uses of the country's resources. A substantial increase in living standards could occur for most Chinese people if officials abated the pace of accumulation and allowed appreciation of the Renminbi to accelerate, a prospect that would improve the purchasing power of Chinese consumers and allow them to earn higher interest on savings.

The imperative to maintain monetary balances while diverting social surplus into official reserve investments results in price-inflation pressures and can contribute to financial and real-estate-asset bubbles. For China in particular, these costs from pursuing a reserve accumulation strategy occupy much of the attention of authorities for the increased inequality and social pressures on housing and living expenses that result from such policies. With an expectation of steadily rising real-estate prices, among many other economic risks shifted onto individuals as China's economic reforms introduced more market institutions without yet revamping social safety-net institutions necessary to complement the new economic environment. As economic risks and costs are shifted ever more onto individual Chinese families, people have every incentive to save in order to afford their own piece of "paradise"—China's version of the American Dream.⁵⁸

As local authorities have struggled to keep up with the infrastructural demands of modernization and China's massive urban and eastern migrations, they have leaned heavily—and often illegally—on leveraging the value of real-estate assets officially and informally under their control. These authorities borrow from quasi-bank "local government-finance platforms"—pools of funds raised from China's "private" capital markets via wealth-management financial services—investing the wealth accumulated by those at the top of China's economic development food chain.

Because monetary authorities routinely hold the interest rates paid on bank deposits near zero in nominal terms, savers have every incentive to store their wealth in inflation-averse assets such as real estate or investments through lending to family, friends, and other relations in informal credit markets. In fact, this scarcity of saving options is one reason why, if China allowed greater financial liberalization, the exchange rate might actually move in the "wrong" direction, while exacerbating inequality and the structural causes of China's external imbalances.⁵⁹ The details of this nontrivial possibility will be explained in a subsequent Center for American Progress report.

Along a number of dimensions—economic, social, and environmental—imbalances resulting from this relationship of increasing integration and inequality are costly and unsustainable. Strong, effective institutions of international economic governance are critical to finding the path forward for the world economy. And leaders should choose a path to economic growth that builds a foundation for broadly shared economic opportunities, forging a growing and economically secure middle class.60

The structural nature of U.S.-China imbalances

As the world's two largest economies and those party to the key imbalance in the global economy, China and the United States share a special responsibility for marshaling member countries to strengthen the G-20 community and the benefits of policy coordination it can promise. Here, both countries hold responsibility for 38 percent of the total G-20 imbalances. China's bilateral current account surplus with the United States rose exponentially to 64 percent of the U.S. deficit in 2009 from just 4 percent in 2001—the year China joined the WTO.⁶¹

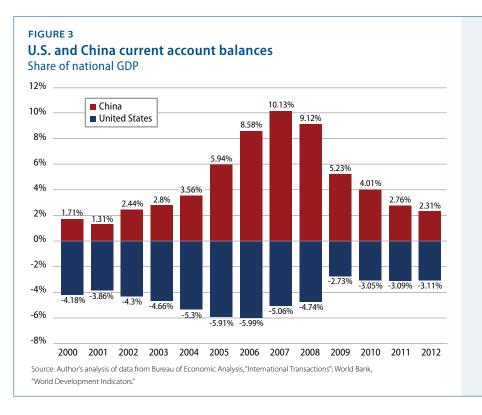
In the period since 2009, when the G-20 began discussing global imbalances, China's external surpluses shrank considerably. (see Figure 3) China's current account surplus fell from 10 percent of GDP in 2007 to just more than a forecasted 2 percent of its GDP in 2012. The current U.S. account deficit showed considerable narrowing as well in the years after the real-estate bubble burst, and after the financial crisis and recession, with the deficit roughly halving as a share of U.S. GDP.

Is such rebalancing sustainable? Or is it an anomalous result flowing from the timely convergence of some short-term set of economic factors? In fact, much evidence suggests that the short-term rebalancing we've seen in China is unlikely to be sustained over the long term due to structural socioeconomic factors and the nature of China's growth in high-productivity tradables industries.

Following the start of the financial crisis in September 2008, trade fell off as capital markets for trade credit and other short-term working capital dried up, and as growth and demand shifted much of the global economy into reverse. Short-term rebalancing of China's external position likely will be short-lived as substantial investments continue delivering high returns, and structural factors underlying the external surplus once again wash over cyclical deviations from the trend.

During the same period, China's terms of trade—the price of the goods and services it exports relative to the price of those it imports—moved against China's favor. The 2009-2011 fiscal stimulus China implemented in coordination with other G-20 member countries touched off a rapid acceleration in infrastructure-construction investment, on top of an ongoing real-estate construction boom that China's monetary authorities still struggle to constrain.⁶²

The construction and investment booms that accompanied the stimulus in the



late 2000s drove up China's import demand at the same time as it drove up global commodity prices. China's growth grew increasingly import-dependent through the need throughthto secure the raw inputs of industrialization and development—iron and steel, concrete, energy, food staples, and other primary commodity goods—which Chinese policymakers struggled to secure by vastly expanding China's trade relationships and foreign direct investment footprint around the world.

As an example of how extensive China's international economic cooperation grew, in 2011 Chinese and Colombian leaders engaged in discussions to build a "dry canal" as an alternative to the Panama Canal. 63 But the demand from China's rapid growth overwhelmed the pace at which China could build the global supply chains needed to fuel its development. The investment boom fueled rapid increases in prices of commodities that China needed to import, along with increased costs and risks of energy relating to the Arab Spring and the Japanese earthquake and tsunami in 2010 and 2011, respectively.

Rising real prices and demand for imports, even as China's exchange rate appreciated, combined with slowing external demand for China's exports due to stunted recoveries in the United States and Europe, shrunk China's external balances. An improved competitiveness for U.S. exports, as the international value of the U.S. dollar moved to a more sustainable level, led to some manufacturing export revival in the United States. China's demand for the raw inputs of growth, however, resulted in scrap metal and other scrap materials becoming 4 of the top 10 leading export commodities from the United States to China in 2011.⁶⁴

But the observed shrinkage of China's surplus reflects more the slowing of such investment—as monetary and fiscal stimuli have drawn down, and as foreign income flows from low-interest rate U.S. government assets in China's portfolio have slowed—rather than structural changes that would alter the fundamental causes of China's persistent surpluses for two reasons.

First, as a result of the rapid pace of accumulation of physical, IT, and human capital in China, Chinese industry is rapidly moving up the technology ladder across a number of fronts. As manufacturing developed and became more advanced, spillovers helped grow the development of key ancillary knowledge-based service industries as well. As evidence, China's pace of investment in IT capital more than doubled from the early 1990s through 2010.65 This investment, along with public investments in infrastructure that reduced the costs of doing business, meant the efficiency of Chinese enterprises progressed in leaps and bounds. Research from IMF economist Ashvin Ahuja and co-authors notes specific policy pushes and achievements in developing China's wind turbines, solar panels, automobiles, and semiconductor-device industries.66

The economic-policy approach is working, and is likely to once again expand China's external surpluses—at least on a bilateral basis with the United States and other advanced-economy countries—as global recovery from the Great Recession continues. Much of China's investment in this period was steered into increasingly technologically advanced manufacturing of goods that China previously imported. This means that in the near future, Chinese producers will increasingly supply not only more of the domestic demand previously satisfied by imports, but also compete with established producers for a greater share of the world markets as well.

Economists Hiau Looi Kee of the World Bank and Heiwai Tang of Tufts University find that the domestic value-added content of China's imports increased to 60 percent of exports in 2006 from 52 percent in 2000, as domestic manufacturing continued expanding capacity and quality.⁶⁷ On an accelerating

trajectory, however, the trade in value-added data shows that China's economy still has a ways to go to catch up to the competitive level of many advanced countries' technology-intensive industries. In the electronics industry, China's domestic value-added comprises only 40 percent of the total value of its exports.⁶⁸ Nonetheless, China's production shows a trend of rising domestic value-added. With the pace of investments in physical and human capital underway in China, and with the extent to which China now exists some distance from the world's frontier of "production possibilities," China's economy has the capacity to find ample opportunities for high-return investments in its infrastructure and productive enterprises that can propel supply-side growth into the foreseeable future.

The second structural factor presaging China's resumption of growing external surpluses entails the country's evolving socioeconomic structure. Economic reforms shifted an increasing share of economic and financial risks to Chinese households, while at the same time suppressing the development of civil-society institutions, which, in other countries, play a central role in voicing acceptable terms for a social contract. The resulting imperative to save for education and care of children, health care costs, rising housing prices, and requirements for retirement saving—made all the more difficult by China's one-child policy—create near-dire incentives for Chinese households to save all they can.

Pressures to save and bear economic risk, where social safety-net institutions could do a more efficient job, not only constrain the development of domestic demand through rising household consumption, but also undermine what little bargaining power for rising wages and fair working conditions that Chinese workers have. Chinese workers have little voice, either directly with their employers or collectively as citizens with the state for social reform. Without development of post-"Iron Rice Bowl" safety-net institutions, China's desired transition to more domestic demand-led economic growth will be stunted by its political repression and the unequal accumulation of wealth and power it engenders.

At the same time that Chinese households strain to save in order to provide themselves with necessary self-insurance against the increased share of economic risk laden upon them by market reforms, inequality in China has increased astonishingly and along a number of dimensions. Throughout China, the vast majority of gains from China's world-record economic growth are being concentrated in the hands of a dwindling few. Official statistics show China's Gini index—a measure of inequality where a score of 0 is perfectly equal and a score of 1 means one person takes all of the income—as rising to 0.47 in 2012, up from 0.38 in 1988, the

earliest year for which quality data are available for all of China.⁶⁹ Though officially down from .49 in 2008, unofficial estimates based on extensive household surveys put China's Gini coefficient as high as 0.61, in league with notoriously unequal countries such as Brazil and South Africa.⁷⁰

While China's economy overall grew by roughly 10 percent annually on average in real terms since the beginning of reforms, growth since the early-1990s and the shift to China's export-led development has occurred much more unevenly. Since 1993 growth in thoughannual income in lower quintiles of the income distribution ranged only from 3 percent to 5 percent after inflation. According to analysis from the IMF, even as income growth has slowed and China's total wage bill has been decreasing as a share of GDP, the imperative to save means that households must, in some cases, practice impoverishing self-deprivation in order to self-insure against a mounting range of economic risks.⁷¹

China's investment rate reflects a remarkable ability to mobilize savings. Between 2000 and 2011, Chinese investment rose to 49 percent of GDP, up from 35 percent.⁷² Investment is facilitated by saving—the ability to direct today's resources toward the potential future payoffs from investment endeavors undertaken now. But despite this unprecedented pace of investment, with a gross saving rate of 51 percent of GDP, in aggregate the Chinese economy still saves more than it can possibly invest, resulting in capital outflows to the world market.⁷³

Thus, high and rising inequality in China—itself a product of the path of economic reform and integration with global trade and investment—along with broad productivity growth and a shifting import basket due to the nature of much industrial, infrastructure, and R&D investments, are conspiring to create structural tendencies for China's external surplus with the United States to expand again on the businessas-usual path. This rising inequality and a political economy that deters resolution of distributional issues present a structural challenge to sustainably address China's persistent imbalances. In other words, were China to achieve a more equal internal balance, this would go a long way to improving its external balance.

What makes a community?: Principles for G-20 economic governance

The G-20, as an institution for cooperative global governance, comprises membership accounting for 86 percent of the world economy. The institution draws its strength from the sense of community fostered among member-country leaders and officials. Though all parties have "skin in the game," coordination to achieve wellknown potential welfare gains for the world is elusive in a noncooperative world.⁷⁴

The term noncooperative here simply means, in economic-speak, that participants in such social interactions act independently and make strategic choices that take account of the likeliness that other participants will choose a particular strategy. Skeptics of efforts at multilateral governance often implicitly see the prospects for cooperation as a "prisoners' dilemma" game. In a prisoner's dilemma, two people will be best off if they cooperate, but the incentive structure makes it likely that both will defect from cooperation and make each other worse off.⁷⁵ Although international economic relations may seem like a prisoners' dilemma, in reality we know that the situation is actually an "assurance game," much akin to the famous stag-hunt parable told by Jean-Jacques Rousseau: A better outcome for all is possible through cooperation and coordination.⁷⁶

With international economic relations among G-20 members, clearly we have a situation where cooperation can yield a general gain. But uncertain that other members will commit to policy coordination for rebalancing, countries are pursuing self-interested strategies that make the community worse off overall. The challenge for G-20 leaders is to find the clever institutional innovations that can ultimately unlock this path toward sustained cooperation for broader prosperity.

Cooperation through the G-20 prevailed in the early stages of the global economic crisis, particularly in leaders' efforts to coordinate policy responses to cascading financial instability and damages wrought on real economic growth and employment. But now, international cooperation risks giving way to contention over how to adjust problematic trade and financial imbalances, how to maintain and develop new sources of economic growth, and how that growth is to be

distributed across and within countries. Growing contention comes at a time when the shifting balance of power within the global economy is steadily moving production, investment, and growth away from advanced-economy countries and toward developing countries.

As discussed above, international institutions—the routinized cooperation among leaders and officials of G-20 member countries and the complex of global governance organizations—play a critical role in helping transform contention to cooperation. The question for the G-20 is how can such cooperation be sustained in the inherently noncooperative *real politik* of the international system?

The reasons why cooperation might fail are of course well known. Nonetheless, analysts of international economic relations too readily focus on the dimensions of conflict rather than the institutions associated with successful cooperative governance. A community, in the words of Nobel Prize-winning economist Elinor Ostrom, is a group "with a common set of problems." By interacting, informally or through formalized structures such as the G-20, members can "try to work out a contract with the other[s], or find the ones most likely to cooperate, or agree on rules for punishing cheaters, or artificially change the incentive ratios," and by doing so, can create an institution for collective action that benefits all of the group.

In other words, to function effectively in a noncooperative world, the G-20 must forge a community with benefits and responsibilities for membership. Ostrom further provides a set of seven "design principles" for community institutions successful at sustaining cooperative governance.⁷⁸ (See box on page 7) Ostrom, among others, is quick to point out that such principles are not all necessary conditions for success, nor do they share an equal weighting of importance. But these design principles are regularly observed in some combination in successful institutions.

The G-20 succeeds on a number of these key principles: a clearly defined group of members (Ostrom's first principle), consensus decision-making processes (3), and a mechanism for self-determination of the community (4). In particular, the G-20 took a step toward community building by expanding from the original G-7 countries in recognition of the need to integrate the large populations and fast-growing regions of the world that have been converging economically on the advanced economy countries. The advanced countries also agreed to a rebalancing of capital stakes and voting shares in the international financial institutions, the case for which developing countries in general have been pressing since before the launch of the 2001 Doha Round of trade talks.

The table below shows the change in the voting shares of IMF in particular. The United States diluted its voting share by half a percentage point, while the 27 countries of the European Union conceded 3.1 percent of their voting share. Japan's voting share remained essentially unchanged. Overall, developing countries as a group gained a 5.5 percent share, of which China's and Korea's shares more than doubled, and India's share increased by more than one-third. In total, Japan, China, Korea, and India together now control 16.5 percent of the IMF—equal to the United States. This should by no means suggest that these four countries form some kind of governance alliance but is indicative of how much governing authority has shifted toward Asia as a result of these reforms.⁸⁰

Distribution of IMF voting shares

	Current share	Pre-reform share	Change
United States	16.5%	17.0%	-0.5
European Union	29.4	32.5	-3.1
China	6.1	2.9	3.2
Japan	6.1	6.1	0
Korea	1.7	0.8	0.9
India	2.6	1.9	0.7
Developing countries	37.2	31.7	5.5

Source: International Monetary Fund, "Quota and Voting Shares Before and After Implementation of Reforms Agreed in 2008 and 2010 (In percentage shares of total IMF quota)" (2011), available at http://www.imf.org/external/np/sec/pr/2011/pdfs/quota_tbl.pdf.

The rebalancing of voting shares in the international institutions makes good sense for a number of reasons. The developing world is much larger in population and is continuously delivering a larger relative share of global economic growth. Greater representation democratizes and enhances the credibility of these institutions. In Ostrom's words, it helps "ensure that those affected by the rules can participate in modifying the rules." This underwrites the institution's legitimacy, and thus the social capital that members are willing to invest in it.

A greater representative stake in multilateral-governance institutions also calls upon co-equal partners to shoulder commensurate responsibility to contribute to the group's public goods. As Center for American Progress Senior Fellow Nina Hachigian and political scientist David Shorr of the Stanley Foundation argue, viable international-governance institutions reflecting the rise of "pivotal powers" don't "[require] the United States to step back, but others to step up."81 The

Mutual Assessment Process, or MAP, is, in effect, an attempt to institute an effective system of peer monitoring so that all countries "step up" to their responsibilities. This includes community members mutually holding each other accountable to the standards and responsibilities of the community (Ostrom's fifth principle).

In order to do so requires that members be willing to socially sanction errant members willingly violating the community norms (Ostrom's sixth principle). Much research suggests the powerful efficacy of social monitoring and disciplining to produce more cooperative governance conducive to higher levels of investment and economic growth, particularly by solving credit-market failures that constrain profitable investments from taking place owing to a lack of assets. 82 But the principle applies equally to the community of G-20 members as it does to members of a "curb-market" credit association: shaming, coordinated punishments, and other communitywide enforcement actions.

The willingness of members to monitor and sanction one another to uphold community standards, even when doing so imposes a cost, is an essential principle to an effective institution for multilateral governance over macroeconomic policy. In fact, unlike community mechanisms that can impose order from the outside, such as the WTO, 83 only community-based mechanisms are feasible to enforce agreements among members in the community of sovereign member states. Where states have the authority and discretion in choosing an independent, albeit interdependent, economic-policy course only what economists call endogenous enforcement mechanisms can successfully uphold the rules of the community: The community must provide a system of rewards and punishments to police itself.

Absent effective endogenous enforcement, the community lacks a mechanism for dispute resolution (Ostrom's sixth and seventh principles), and countries find it enticing to default to individually advantageous policies, even though defecting means giving up the higher welfare position of coordinated economic policies to fight for a larger slice of the pie. In other words, without credible enforcement mechanisms, it is difficult to resolve how cooperation can tailor coordinated policy responses to local conditions (Ostrom's second principle). This design principle is attained only through the long march of ongoing investment in diplomatic engagement to build trust and social capital among leaders and their official representatives to the G-20. The conclusion suggests some milestones along this path at which G-20 leaders should aim.

Community relies on multilateral enforcement—socially sanctioning members who stray from the community standards and shirk common responsibility for the overall health of the global economic system. The process calls on the community of G-20 member countries to hold each other accountable for the consequences that each member's national economic policies have on others' economies, and calling to the greater economic good—as one calls to a principle as motivation that can be found through coordination and cooperation. But the willingness to cooperate depends on a mutual stake in the outcomes and the mutual perception of the fairness of the terms of an agreement.

Conclusion: How can we change the dynamics of G-20 governance?

In March 2010 President Barack Obama and the leaders of Canada, Korea, the United Kingdom, and France wrote jointly to leaders of other member countries, imploring them to maintain the resolve for efforts at economic-policy coordination and to continue to strive for the global economic good: "Without cooperative action to make the necessary adjustments to achieve that outcome, the risk of future crises and low growth will remain."84

The path toward cooperation and success in these areas should begin with recognition of the structural causes of international imbalances and its roots and inertia in rising inequality. G-20 leaders then should focus on employment- and income-targeted policies that grow their economies from the middle out. Working together as a community of states to provide coordination in this way enables the world economy to grow more sustainably as a whole.

In the short term, progress toward G-20 cooperation will be seen in fits and starts, but there are steps the Obama administration can take today to seize the opportunity of the G-20: first, by strengthening the bilateral relationship with China, and second, by using this relationship to strengthen the G-20's effectiveness as a multilateral governance organization. In this report we recommend the following steps.

Recommit community members to the Mutual Assessment Process

G-20 leaders delegated to the IMF a set of economic analyses called the Mutual Assessment Process, or MAP, to assist in a country-to-country peer review process. (Technical details of the process and its results are described in Appendix 1.) The MAP itself does not solve the G-20's institutional shortcomings and the technical analyses alone do nothing to spur action to change the noncooperative norm. Part of mutual assessment must be a follow-up process, where leaders discuss the analyses and possible reforms of the international economic architecture. The United States should therefore hold member countries to the expectation of full cooperation in the MAP as a step toward broadening the G-20 leader's dialogue.

Housekeeping on outstanding commitments

The G-20 still has work to deliver on prior commitments in order to preserve its institutional credibility. The United States should work to ensure that the G-20 makes good on these, including implementation of the 2010 International Financial Institution reforms that shifted ownership and voting shares of the IMF and World Bank toward developing countries. 85 The United States should also work to advance more governance and quota reforms of Bretton Woods Institutions so that other member countries participate more broadly in the costs and governance of the IFIs.

Define the community

Current membership of the G-20 is not ideal in terms of it comprising the world's actual largest economies, or in equitable geographic distribution of representation in the multilateral process. 86 The United States should urge G-20 members to revisit and clearly establish membership criteria. Since under current rules the annual G-20 host country has the authority to invite guest country representatives, the United States should express support for the informal convention of a "permanent" guest status for representatives of the African Union, the Association of Southeast Asian Nations, and others as appropriate.

China's emergent voice and responsibility

To further draw China into the system of multilateral governance, the United States should support China serving as host country at the earliest opportunity: 2016.

Finish the work on financial regulation reform

From the get go, G-20 members established a core mandate for national implementation of internationally coordinated financial reforms.⁸⁷ Reforms are needed to secure volatile, speculative capital markets around the world. As literally hundreds of rules prescribed by the 2010 Dodd-Frank Act are yet to be written, the United States first should lead by example and finish the work of getting our own robust system of financial supervision in order before the next financial crisis hits.⁸⁸

As a further step, G-20 leaders should examine the benefits of creating other missing international institutions. These institutions would help facilitate stable, sustained economic growth and rebalancing and, among other possible options, should include:

- A sovereign bankruptcy mechanism that provides rules for the orderly restructuring of debts that preserve the public investments in equitable growth.
- An international clearing union, such as that proposed by John Maynard Keynes. This would provide a central clearing mechanism, much like on a stock or commodity exchange, by automatically adjusting respective international trade and financial surpluses and deficits among imbalanced countries. Such a mechanism would allow orderly adjustment of accumulated reserve surpluses in order to maintain appropriate exchange rates.89

Revisit governance issues

The United States should use the opportunity of the G-20 to encourage community members to revisit governance issues in international economic institutions, including the World Trade Organization, or WTO. In particular, the United States should encourage members to revisit the effectiveness of the WTO dispute-settlement mechanism for adjudicating the rules of the trading system, which is too slow and ineffective at holding member countries accountable to the agreed-upon rules of the international trading system. A transparent, balanced, and efficient dispute settlement process would benefit all member nations, smoothing frictions in economic and other aspects of international relations.

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Appendix 1: Mutual assessment of international imbalances

G-20 members and the International Monetary Fund designed the Mutual Assessment Process, or MAP, as a multilateral process for countries to identify and assess the causes of imbalances and set mutual objectives on policies that move countries toward international rebalancing. In G-20 parlance, the MAP has come to mean a narrow set of technical analyses and economic-modeling exercises conducted by the IMF at the G-20's behest in order to evaluate the extent of imbalances and to identify the economic outcomes under different adjustment scenarios—with and without cooperation.

Beyond this narrow technical exercise, the results of the MAP assessments provide a foundation for G-20 leaders and their representatives—the so-called sherpas and yaks that do the grunt work of diplomacy—to strike consensus on a plan for rebalancing. G-20 leaders have proposed their view on this plan's goal: shrinking and stabilizing the imbalances.

In order to evaluate the extent of G-20 member countries' economic imbalances, first one must identify what the economic balances should be—but what they should be is not so obvious. To start, the imbalances are multidimensional and interrelated. The underlying economic forces that drive imbalances are too complex to identify which set of factors are causal and which direction causality runs—particularly insofar as noncooperative national economic policies play a leading role. In a review of methods to evaluate the degree of unbalance of exchange rates, IMF economist Peter Isard concluded that "[D]ifferent methodologies sometimes generate markedly different quantitative estimates of equilibrium exchange rates. These facts suggest that the assessment of equilibrium exchange rates requires considerable judgment."90

Second, there is a question of how imbalanced the imbalances are. Fast-moving global capital markets, the world has seen, can pivot on a dime. Global trade in goods and services tends to change much more gradually—owing to business patterns, long-term contracts, and the lifecycle of real investments. What is too imbalanced, and which countries are moving toward or away from balance? And is this movement caused by changes to the underlying structural causes of imbalances or to short-term deviations from the trend?

The boundaries are admittedly fuzzy, so in order to establish benchmark against which to measure countries' imbalances, the IMF identifies six key indicators of different dimensions of economic imbalance. It collectively refers to the following as "indicative guidelines":

- 1. Level of private saving
- 2. Levels of private debt
- 3. Level of public budget deficits
- 4. Levels of public debt
- 5. International trade imbalance
- 6. International investment-income flows

In an accounting sense, these six categories encompass all of a country's basic financial balances in the private business and household sectors, the public sector, and the domestic economy's relation to the rest of the world.

These measures indicate how each sector borrows or saves—the flow of incomes and the accumulated stock of assets or liabilities resulting from each sector's past saving and borrowing decisions. These three broad sectors represent the microeconomic activities that comprise the macroeconomic national-level capital and current accounts of the international balance of payments. (see box below)

The international balance of payments

A country's international balance of payments is a recording of all of its economy's transactions with the rest of the world—for the purchase and sale of exports and imports, and real and financial assets; for international borrowing and lending; and for income payments stemming from these trading activities. Traditionally, the payments balance is divided into two accounts.

A capital account consists of the buying and selling of payments from the international buying and selling of capital—for financial portfolio investment or direct foreign investment.

A current account consists primarily of the buying and selling of traded goods and services, as well as the balance of some income flows—remuneration from work, as well as income and dividend payments to asset owners.91

Similar to a business ledger, the current and capital accounts represent the cash-flow position of the national economy with one account, by definition, balancing the other. In practice, this means that for a country to run a trade deficit in the current account—buying more from abroad than it sells—it must run a corresponding surplus in its capital account. In essence, it must "borrow" from abroad by selling its financial assets—stocks, bonds, and claims on real estate and companies—to offset importing beyond national means to export.

Sustained current account deficits, such as those experienced by the United States since 1982, can be symptomatic of financial fragilities building in the economy.92 Year after year of trade deficits lead to an

escalating transfer of U.S. assets to foreign ownership. This is not a bad thing per se, but overaccumulation of imbalances in the net sale of assets—the United States's net international investment position—is a key risk indicator for a cascading exchange rate and broader systemic financial crisis. The sale of assets abroad connotes future streams of income payments to those foreign asset owners. If the U.S. economy grows robustly, much of this income generated from foreign-owned assets in the United States may be reinvested in an expanding market.

But as the net investment deficit mounts, more and more income produced in the U.S. economy will flow outside the economy, and more and more foreign investors may grow skeptical of the real value of their assets and their ability to pay an expected revenue stream. Such conditions create financial fragility that evolves in a predictable pattern first described by economists Charles Kindleberger and Hyman Minsky.⁹³ As fragility mounts, this self-reinforcing trend raises the risk of a run of investment out of the economy, putting downward pressure on the exchange rate and making it harder to pay for imports and external debt payments.

With a net international investment position equivalent to 27 percent of GDP in 2011, the United States remains well within financial thresholds thought to indicate higher risk of a balance of payments and exchange-rate crisis.⁹⁴ What's more, as issuer of the primary "key currency" of the international financial system, comprising nearly twothirds of global reserve holdings, the United States enjoys more leeway in running current account deficits and net investment deficits than most countries.95

Next, the IMF explored four different methods for establishing benchmark "norms" and gradients against which to evaluate each country's degree of imbalance along the dimensions of the six indicative indicators: "structural norms" based on economic modeling; historical time series trends; assessment relative to a reference group of peer countries; and assessment relative to the G-20 median. If a country was seen to deviate significantly from baseline values established in at least two of these four methods—and in two of the three categories of financial balances—the IMF deemed the country to be "imbalanced" and in need of adjustment and reform.96

Both the United States and China were found to be out of balance—unanimously, by all four methods. While China is experiencing severe public and private saving surpluses, the United States is experiencing equally severe public and private saving deficits on balance. Japan, France, Germany, the United Kingdom, and India were found to be imbalanced, too, according to this exercise. According to one official representative to the G-20 interviewed for this research, this much—the extent and distribution of international imbalances—was already widely agreed upon by most parties. What remains the issue, however, is the fundamental question of international political economy: How will the surplus or deficit country share the costs of adjustment?

Endnotes

- 1 Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action (Cambridge: Cambridge University Press, 1990).
- 2 Technically, G-20 membership consists of 19 countries plus the European Union, and representatives from scores of international institutions and de facto permanent guest and observer status for other institutions and national governments. Share of world GDP calculated from International Monetary Fund, "World Economic Outlook Database" (2013), available at https://www.imf.org/external/pubs/ft/weo/2013/01/ weodata/index.aspx.
- 3 U.S. Department of the Treasury, "Leaders' Statement: The Pittsburgh Summit, September 24-25 2009," available at http://www.treasury.gov/resource-center/ international/g7-g20/Documents/pittsburgh_summit_leaders_statement_250909.pdf (last accessed June
- 4 International Labor Organization, "Global Employment Trends 2013: Recovering from a Second Jobs Dip" (2013), available at http://www.ilo.org/wcmsp5/ groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_202326.pdf.
- 5 Author's analysis of U.S. Bureau of Economic Analysis "National Income and Product Accounts" and Eurostat "Flash estimate for the fourth quarter of 2012." On fiscal contraction, see Adam S. Hersh, "Fiscal Austerity Threatens the U.S. Economy" (Washington: Center for American Progress, 2013) available at http:// www.americanprogress.org/issues/economy/report/2013/01/30/51146/fiscal-austerity-threatens-theu-s-economy/.
- 6 Policymakers in Japan, though, are embarking on expanded stimulus efforts. Author's analysis of International Monetary Fund, "World Economic Outlook Database" and Japan Bureau of Statistics, "Economic and Financial Data"; Jonathan Soble, "Japan Remains Mired in Recession," Financial Times, February 14, 2013, available at http://www.ft.com/intl/cms/s/0/e505f51e-7642-11e2-9891-00144feabdc0.html.
- 7 International Monetary Fund, "World Economic Outlook Database"
- 8 The term "noncooperative" here is used in the sense of theory of economic games, wherein participants in such social interactions act independently and make strategic choices that take account of the probabilistic strategies of other participants and where structural limitations in information and contracts can prohibit implementation of higher welfare outcomes.
- 9 Garrett Hardin, "The Tragedy of the Unmanaged Commons," Trends in Ecology & Evolution 9 (1994).
- 10 Olivier Blanchard, Giovanni Dell'Ariccia, and Paolo Mauro, "Rethinking Macroeconomic Policy" (Washington: International Monetary Fund, 2010), available at http:// www.imf.org/external/pubs/ft/spn/2010/spn1003.pdf.
- 11 The set of reforms are often referred to collectively as the "2010 International Financial Institution Reforms." See Nina Hachigian and Adam Hersh, "How the United States and China Can Strengthen the G-20, and Vice Versa," Center for American Progress, February 13, 2013. available at http://www.americanprogress.org/issues/ china/news/2013/02/13/52557/how-the-united-statesand-china-can-strengthen-the-g-20-and-vice-versa/.

- 12 The China Institutes of Contemporary International Relations, the Center for American Progress, and the Stanley Foundation, "US-China Study Group on G-20 Reform: Final Report" (2013), available at http://www.americanprogress.org/issues/china/ report/2013/02/13/52548/us-china-study-group-on-g-20-reform-final-report/.
- 13 Hachigian and Hersh, "How the United States and China Can Strengthen the G-20, and Vice Versa."
- 14 The Library of Congress, "Bill Summary & Status, 111th Congress (2009 - 2010) H.R.4173," available at http:// thomas.loc.gov/cgi-bin/bdquery/z?d111:H.R.4173: (last accessed June 2013).
- 15 Vijay Joshi and Robert Skidelsky, "Keynes, Global Imbalances, and International Monetary Reform, Today." In Stijn Claessens, Simon Evenett, and Bernard Hoekman, eds., Rebalancing the Global Economy: A Primer for Policymaking (London: Centre for Economic Policy Research, 2010).
- 16 Author's analysis of International Monetary Fund, "World Economic Outlook Database"; and Bureau of Economic Analysis, "International Transactions Data."
- 17 Staff of the International Monetary Fund, "Group of Twenty: Toward Lasting Stability and Growth" (Washington: International Monetary Fund, 2012), available at http://www.imf.org/external/np/g20/pdf/062012.pdf.
- 18 Ibid.
- 19 For example, on the history of the international gold standard and the Opium War, see Marcello De Cecco, Money and Empire: International Gold Standard, 1890-1914 (Oxford: Basil Blackwell, 1974).
- 20 The World Bank, the IMF's counterpart Bretton Woods institution, would provide technical resources and lending to promote economic development such that aggregate demand would grow broadly across the global economy, and provide a foundation for growing, balanced trade. See Robert Skidelsky, John Maynard Keynes Vol. 3: Fighting for Freedom, 1937-1946 (New York: Viking, 2001).
- 21 Robert Gilpin, Global Political Economy: Understanding the International Economic Order (Princeton: Princeton University Press, 2001).
- 22 W. Walter Wriston, "Banking Against Disaster" The New York Times, September 14, 1982.
- 23 Michael Kremer and Seema Jayachandran, "Odious Debt," American Economic Review 96 (1) (2006).
- 24 John Williamson, "What Washington Means by Policy Reform." In John Williamson, ed., Latin American Readjustment: How Much has Happened (Washington: Institute for International Economics, 1989); Dani Rodrik, "Goodbye Washington Consensus, Hello Washington Confusion?," Journal of Economic Literature 44 (2006).
- 25 William Easterly, "What did structural adjustment adjust? The association of policies and growth with repeated IMF and World Bank adjustment loans," Journal of Development Economics 76 (2005).

- 26 Graciela L. Kaminsky and Carmen M. Reinhart, "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems," The American Economic Review 89 (3) (1999).
- 27 Christian E. Weller and Adam Hersh, "The Long and Short of It: Global Liberalization and the Incomes of the Poor," Journal of Post Keynesian Economics 26 (3) (2004).
- 28 Carmen Reinhart and Kenneth Rogoff, This Time is Different (Princeton: Princeton University Press, 2009); Kaminsky and Reinhart, "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems"; Arjun Jayadev and Gerald Epstein, "The Correlates of Rentier Returns in OECD Countries." Working Paper 123 (University of Massachusetts Amherst, Political Economy Research Institute, 2007).
- 29 Luis F. López-Calva and Nora Lustig, "Explaining the Decline in Inequality in Latin America: Technological Change, Educational Upgrading, and Democracy." In Luis F. López-Calva and Nora Lustig, eds., Declining Inequality in Latin America: A Decade of Progress? (Washington: Brookings Institution Press, 2010).
- 30 Barry Eichengreen and Michael Bordo, "Crises Now And Then: What Lessons From The Last Era Of Financial Globalization?" Working Paper 8716 (National Bureau of Economic Research, 2002).
- 31 The President's Working Group on Financial Markets, "Report of The President's Working Group on Financial Markets: Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management" (1999), available at http://www.treasury.gov/resource-center/fin-mkts/ Documents/hedgfund.pdf.
- 32 These efforts progressed on a number of fronts, through the Financial Stability Forum—now Financial Stability Board—and included all aspects of capitalmarket governance, accounting standards, and microprudential financial regulation through international standard setting bodies such as the Basel Committee on Banking Supervision, the International Accounting Standards Board, and the International Organization of Securities Commissions, among others.
- 33 Pradumna B. Rana, "Asian Monetary Fund: Journey is Getting Shorter," VoxEU, May 20, 2011, available at http://www.voxeu.org/article/moving-towards-asianmonetary-fund.
- 34 Latin American Reserve Fund, "Andean Fund Tipped for Regional Reserve Role," available at https://www.flar. net/ingles/ (last accessed June 2013).
- 35 Federal Reserve Board economists John G. Fernald and Oliver Babson credit China with upholding recovery from the Asian financial crisis by not following its reeling neighbor countries in competitive exchange-rate devaluation, John G. Fernald and Oliver Babson, "Why Has China Survived the Asian Crisis So Well? What Risks Remain?" Working Paper 633 (Federal Reserve Board of Governors International Finance, 1999).
- 36 IMF lending in Sovereign Drawing Rights converted to U.S. dollars at 1.54 rate as of December 20, 2012. International Monetary Fund, "SDRs per Currency unit and Currency units per SDR last five days," available at http://www.imf.org/external/np/fin/data/rms_five.aspx (last accessed June 2013); Author's analysis of International Monetary Fund, "Total IMF Credit Outstanding for all members from 1984-2013," available at http:// www.imf.org/external/np/fin/tad/extcred1.aspx (last accessed June 2013).

- 37 The majority of IMF lending since the Great Recession has flown to still-stricken European countries that had taken a different approach to managing international financial risks: by forming monetary and trade unions with more stable core European countries. See full data: International Monetary Fund, "Total Credit Outstanding for all members from 1984-2013"; and International Monetary Fund, "World Economic Outlook Database."
- 38 Kaminsky and Reinhart, "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems"; Maurice Obstfeld, "International Finance and Growth in Developing Countries: What Have We Learned?" Working Paper 14691 (National Bureau of Economic Research, 2009).
- 39 Christian E. Weller and Adam Hersh, "The Long and Short of It: Global Liberalization and the Incomes of the Poor," Journal of Post Keynesian Economics 26 (3) (2004); Jonathan D. Ostry, Atish R. Ghosh, and Anton Korinek, "Multilateral Aspects of Managing the Capital Account" (Washington: International Monetary Fund. 2012) available at https://www.imf.org/external/pubs/ ft/sdn/2012/sdn1210.pdf; Joseph Stiglitz, "The IMF's Switch in Time," Project Syndicate, May 5, 2011 available at http://www.project-syndicate.org/commentary/theimf-s-switch-in-time.
- 40 International Monetary Fund, "Reserve Accumulation and International Monetary Stability" (2010). available at http://www.imf.org/external/np/pp/ eng/2010/041310.pdf.
- 41 Andrew Berg and Jonathan Ostry, "Inequality and Unsustainable Growth: Two Sides of the Same Coin?" (Washington: International Monetary Fund, 2011), available at http://www.imf.org/external/pubs/ft/ sdn/2011/sdn1108.pdf.
- 42 International Monetary Fund, "Assessing Reserve Adequacy" (2011), available at http://www.imf.org/ external/np/pp/eng/2011/021411b.pdf.
- 43 Maurice Obstfeld, Timothy J. Shambaugh, and Alan M. Taylor, "Financial Stability, the Trilemma and International Reserves." Working Paper 14217 (National Bureau of Economic Research, 2008).
- 44 Maurice Obstefeld, "Models of Currency Crises with Self-Fulfilling Features," European Economic Review 40 (1996); Paul Krugman, "A Model of Balance of Payments Crises," Journal of Money, Credit, and Banking 11 (3) (1979).
- 45 International Monetary Fund, "Reserve Accumulation and International Monetary Stability" (2010), available at http://www.imf.org/external/np/pp/ eng/2010/041310.pdf.
- 46 Hassanali Mehran, "Monetary and Exchange System Reforms in China: An experiment in gradualism" (Washington: International Monetary Fund, 1996).
- 47 Author's analysis of IMF "International Financial Statistics Online" data.
- 48 Jeffrey Frankel, "New Estimation of China's Exchange Rate Regime," Working Paper 14700 (National Bureau of Economic Research, 2009), available at http://www. nber.org/papers/w14700.
- 49 "Tradables" may also entail high value-added agriculture or service industries. See Dani Rodrik, "The Real Exchange Rate and Economic Growth" (Cambridge: Harvard University, 2008), available at http://online.wsj. com/public/resources/documents/rodrick.pdf.

- 50 Ricardo Hausmann, Lant Pritchett, and Dani Rodrik, "Growth Accelerations," Journal of Economic Growth 10 (4) (2005), available at http://www.nber.org/papers/ w10566.pdf?new_window=1.
- 51 Johnson, Simon, Jonathan Ostry, and Arvind Subramanian, "The Prospects for Sustained Growth in Africa: Benchmarking the Constraints." Working Paper 13120 (National Bureau of Economic Research, 2007), available at http://www.nber.org/papers/w13120. pdf?new_window=1.
- 52 Ricardo Hausmann, Jason Hwang and Dani Rodrik. "What You Export Matters" Journal of Economic Growth 12 (1) (2005).
- 53 Ricardo Hausmann and Bailey Klinger, "The Structure of the Product Space and the Evolution of Comparative Advantage." Working Paper 146 (Center for International Development at Harvard University, 2007), available at http://www.cid.harvard.edu/cidwp/146.htm.
- 54 Ha-Joon Chang, Kicking Away the Ladder (London: Anthem Press, 2002); Alice Amsden, Asia's Next Giant (New York: Oxford University Press, 1992).
- 55 Maurice Obstfeld and Kenneth Rogoff, "Global Imbalances and the Financial Crisis: Products of Common Causes" (Santa Barbara, California: Federal Reserve Bank of San Francisco Asia Economic Policy Conference, 2009), available at http://www.frbsf.org/economics/ conferences/aepc/2009/09_Obstfeld.pdf.
- 56 A.B. Atkinson and Thomas Piketty, Top Incomes over the Twentieth Century: A Contrast between European and English-Speaking Countries (New York: Oxford University Press, 2007).
- 57 Dean Baker and Karl Walentin, "Money For Nothing: The Increasing Cost Of Foreign Reserve Holdings To Developing Nations" (Washington: Center for Economic and Policy Research, 2001), available at http://www. cepr.net/documents/publications/reserves.pdf; Ben Steil and Paul Swartz, "Dollar Reserves Cost Japan and China," Council on Foreign Relations, July 26, 2010, available at http://www.cfr.org/international-finance/ dollar-reserves-cost-japan-china/p22697.
- 58 Chinese refer to this paradise as le yuan, literally "happy
- 59 Yi Wen, "Making Sense of China's Excessive Foreign Reserves." Working Paper 2011-006A (Federal Reserve Bank of St. Louis, 2011), available at http://research. stlouisfed.org/wp/2011/2011-006.pdf; Bjorn Anders Gustafsson and Sai Ding, "New Light on China's Rural Elites." In Alice H. Amsden, Alisa DiCaprio, and James A. Robinson, eds., The Role of Elites in Economic Development (New York: Oxford University Press, 2012).
- 60 On the causal economic importance of low inequality and a strong middle class, see Heather Boushey and Adam Hersh, "The American Middle Class, Income Inequality, and the Strength of Our Economy: New Evidence in Economics," (Washington: Center For American Progress, 2012), available at http:// www.americanprogress.org/issues/economy/report/2012/05/17/11628/the-american-middle-classincome-inequality-and-the-strength-of-our-economy/.
- 61 Author's analysis of International Monetary Fund, "World Economic Outlook Database"; and Bureau of Economic Analysis, "International Transactions Data."
- 62 Relative to the size of each country's economy, China's stimulus amounted to 10 percent of GDP, while the U.S. American Recovery and Reinvestment Act amounted to approximately 6 percent of GDP.

- 63 BBC News, "China and Colombia announce 'alternative Panama Canal," February 14, 2011, available at http:// www.bbc.co.uk/news/business-12448580.
- 64 Author's analysis of U.S. International Trade Commission Dataweb data.
- 65 Dale Jorgenson and Khuong Vu, "Reviving Growth in the G7 and the G20," Presentation at the Allied Social Science Association Annual Conference, San Diego, California, January 2013.
- 66 Ashvin Ahuja and others, "An End To China's Imbalances?" Working Paper 12/100 (International Monetary Fund, 2012), available at http://www.imf.org/external/ pubs/ft/wp/2012/wp12100.pdf.
- 67 Hiau Looi Kee and Heiwai Tang, "Domestic Value Added in Chinese exports," Paper presented at the American Economic Association, Nashville, Tennessee, January 4, 2013.
- 68 Organisation for Economic Co-operation and Development and World Trade Organization, "Trade In Value-Added: Concepts, Methodologies And Challenges" (2013), available at http://www.oecd.org/sti/industryand globalisation/49894138.pdf.
- 69 Azizur Khan and Carl Riskin, Inequality and Poverty in China in the Age of Globalization (New York: Oxford University Press, 2001); Bloomberg News, "China's Income Gap Narrows to Level That Still Risks Unrest," January 18, 2013, available at http://www.bloomberg. com/news/2013-01-18/china-income-gap-narrowswhile-staying-at-levels-risking-unrest.html; Analysis of World Institute for Development Economics Research (UNU-WIDER), "World Income Inequality Database V2.0c May 2008" (2008), available at http://www.wider.unu. edu/research/Database/en_GB/database/.
- 70 Bloomberg News, "China's Income Gap Narrows to Level That Still Risks Unrest."
- 71 Ashvin Ahuja and others, "An End To China's Imbalances?"
- 72 International Monetary Fund, "World Economic Outlook Database."
- 73 Though China often ranks at the top of the list of destination countries for global foreign-direct investments—as does the United States—foreign sources of investment actually play a small role in financing investment overall in China: Foreign sources consistently account for less than 10 percent of China's aggregate investment. The remainder of China's investment is funded from domestic sources—the savings of households, businesses, and the public sector.
- 74 The term "noncooperative" here is used in the sense of theory of economic games, wherein participants in such social interactions act independently and make strategic choices that take account of the probabilistic strategies of other participants and where structural limitations in information and contracts can prohibit implementation of higher welfare outcomes.
- 75 Robert Axlerod, The Evolution of Cooperation (New York: Basic Books, 2006).
- 76 The "Stag Hunt" posits two hunters with an independent choice to cooperate in the group hunting of a stag, or to act individually and hunt a hare. The social welfare is maximized when the hunters cooperate as the value of the stag is worth more than two hare. In the description, the institution that commits each hunter to cooperation is a mutually respected social contract. Brian Skyrms. "The Stag Hunt," Proceedings and Addresses of the American Philosophical Association 75 (2) (2001).

- 77 Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action.
- 78 In Ostrom's words, these are design rules for "common pool resources," of which preserving the "economic commons" of economic stability and rules of the game is the common pool resource.
- 79 Technically, Japan's share increased and exceeds that of China, but the increase and the excess over China are little more than a rounding error.
- 80 Developing countries have posted similar capital and voting-share increases at the multilateral development banks as well.
- 81 Nina Hachigian and David Shorr, "The Responsibility Doctrine," Foreign Service Journal (2012).
- 82 Abhijit V Banerjee and Andrew F Newman, "Occupational Choice and the Process of Development." Journal of Political Economy 101 (2) (1993), available at http://www.econ.brown.edu/fac/glenn_loury/louryhomepage/teaching/Ec%20237/Banerjee%20and%20 Newman%20(JPE%201993).pdf; Timothy Besley and Stephen Coate,"Group lending, repayment incentives and social collateral," Journal of Development Economics 46 (1) (1995).
- 83 Technically, WTO findings authorize unilateral sanctioning from the affected parties, but not communitywide social sanctioning.
- 84 The White House, "Joint Letter From G20 Leaders," Press release, March 29, 2010, available at http://www.whitehouse.gov/the-press-office/joint-letter-g20-leaders.
- 85 The set of reforms are often referred to collectively as the "2010 International Financial Institution Reforms." See Hachigian and Hersh, "How the United States and China Can Strengthen the G-20, and Vice Versa."
- 86 The China Institutes of Contemporary International Relations, the Center for American Progress, and the Stanley Foundation, "US-China Study Group on G-20 Reform: Final Report."

- 87 Hachigian and Hersh, "How the United States and China Can Strengthen the G-20, and Vice Versa."
- 88 The Library of Congress, "Bill Summary & Status, 111th Congress (2009 - 2010) H.R.4173."
- 89 Robert Skidelsky and Vijay Joshi, "Keynes, Global Imbalances, and International Monetary Reform, Today." In Stijn Claessens, Simon Evenett and Bernard Hoekman, eds., Rebalancing the Global Economy: A Primer for Policymaking (2010).
- 90 Peter Isard, "Equilibrium Exchange Rates: Assessment Methodologies." Working Paper 07/296 (International Monetary Fund, 2007), available at http://www.imf.org/ external/pubs/ft/wp/2007/wp07296.pdf.
- 91 Current convention now divides the balance of payments into current, capital, and financial accounts in accordance with IMF Special Data Dissemination Standards. International Monetary Fund, "Special Data Dissemination Standard," available at http://dsbb.imf. org/Pages/SDDS/Home.aspx (last accessed June 2013).
- 92 Author's analysis of Bureau of Economic Analysis, "International Transactions Data."
- 93 Hyman Minsky, John Maynard Keynes (New York: McGraw-Hill, 2008); Charles Kindleberger, Manias, Panics, and Crashes (Hoboken: Wiley, 2000).
- 94 U.S. Bureau of Economic Analysis, "Net International Investment Position, Year end positions, 1976-2011" (2012), available at http://bea.gov/international/xls/ intinv11_t2.xls.
- 95 International Monetary Fund, "Reserve Accumulation and International Monetary Stability" (2010), available at http://www.imf.org/external/np/pp/ eng/2010/041310.pdf.
- 96 See Box 1 on page 12 for description. International Monetary Fund, "IMF Staff Reports For The G-20 Mutual Assessment Process: Global Economic Prospects and Policy Challenges" (2011), available at http://www.imf. org/external/np/g20/pdf/110411.pdf.

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