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**China’s Economy and Financial Markets:
Reforms and Risks**

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Chairman Shea, Vice Chair Bartholomew, and honorable members of the Commission, thank you for the opportunity to share with you my views on the status of market-oriented economic reforms in China, with particular emphasis on financial market reforms and capital account liberalization, along with a discussion of the risks the economy faces. In this testimony, I will also discuss China’s efforts to expand the international use of its currency, the renminbi (RMB), and how this is tied in to the domestic reform agenda.

These developments have taken place against the backdrop of a challenging domestic environment. Over the past year, China’s GDP growth has slowed significantly, producer prices continue to fall, and various other indicators of economic activity have weakened, including growth in industrial production, investment, and imports. However, the most recent data on GDP growth as well as industrial and services sector activity suggest that the economy has stabilized. Still, some further macroeconomic stimulus might be necessary to hit the government’s growth target of 6.5 percent.

On a more positive note, there has been some progress over the last 2-3 years on growth rebalancing, an important objective of the 12th five-year plan. The consumption to GDP ratio has gone up slightly, the service sector’s share in the economy has risen to over 50 percent, and the household saving rate has declined. China’s current account and trade surpluses have declined from their levels in 2007, although the merchandise trade surplus has climbed back to nearly 6 percent of GDP in the last half of 2015.

¹ This testimony draws extensively on a report that I recently prepared for the Commission: “China’s Efforts to Expand the International Use of the Renminbi,” Brookings Institution, February 2016. Please see that report for more detailed analysis, data, and documentation of sources. I am grateful to Audrey Breitwieser, Karim Foda, and Tao Wang for excellent research assistance.

Capital Account Liberalization

China still has an extensive capital control regime in place, but it is selectively and cautiously dismantling these controls. In most cases, constraints on capital inflows and outflows have been loosened but not eliminated. Nevertheless, the country's capital account is becoming increasingly open in de facto terms.

China's government has created a number of schemes that allow for controlled and calibrated opening of the capital account to both inflows and outflows. These schemes have been designed to generate many of the indirect benefits of financial openness (such as domestic financial development and international portfolio diversification) while enabling freer movement of capital. Table 1 contains a summary of the main schemes that have been instituted in recent years to liberalize inflows, outflows, and two-way flows.

Rising foreign investments by Chinese households, corporations, and institutional investors have led to major changes in the pattern of China's overall exports of financial capital. The composition of gross outflows has shifted markedly from reserve accumulation to official and unofficial flows due to both the private and state sectors. This shift is consistent with the government's stated objective of shifting foreign exchange holdings from the central bank's balance sheet to those of households, corporations, and state-controlled entities such as the sovereign wealth fund.

The objective of "foreign exchange holdings by the people" (rather than the central bank) will have a significant impact on the composition of future capital outflows from China. While the government is providing channels for international portfolio diversification, which is a positive development, there is a risk that lack of effective oversight of domestic securities markets and institutional investors that enable such diversification could portend risks for household and corporate balance sheets.

Table 1. A Summary of Recent Schemes to Liberalize Cross-Border Capital Flows

<p>Channels for Inflows</p> <p><i>Qualified Foreign Institutional Investor (QFII) Scheme:</i> Launched in 2002. Allows qualified foreign institutions to convert foreign currency into RMB and invest in Chinese equities (both A shares and B shares) and a range of other RMB-denominated financial instruments. As of October 2015, a total quota of \$78.9 billion had been granted to 277 foreign institutions, including 8 central banks and 10 sovereign wealth funds.</p> <p><i>Renminbi Qualified Foreign Institutional Investor (RQFII) Scheme:</i> Launched in 2011. Allows qualified institutions to use offshore RMB funds to invest in Chinese equities and other RMB-denominated financial instruments. As of July 2015, a total quota of \$68.4 billion had been granted to 135 financial institutions.</p> <p>Channels for Outflows</p> <p><i>Qualified Domestic Institutional Investor (QDII) Scheme:</i> Launched in 2006. Allows Chinese domestic financial institutions—commercial banks, securities companies, fund management companies, and insurance companies—to invest in offshore financial products such as securities and bonds. As of November 2015, a total quota of \$90 billion had been granted to 132 financial institutions.</p> <p><i>Qualified Domestic Individual Investor (QDII2) Scheme:</i> Proposed in 2013; not yet launched. Will permit individual retail investors with at least RMB 1 million (\$160,000) in assets to invest in certain offshore financial products.</p> <p>Channels for Two-Way Flows</p> <p><i>Free Trade Zones (FTZs):</i> Shanghai FTZ launched in September 2013. Three new FTZs in Guangdong, Tianjin, and Fujian launched in April 2015. The FTZs use a “negative list” approach to regulate foreign investment—there are few restrictions on foreign investment in industries not on the list. Cross-border capital transactions and establishment of financial institutions within the zones have been liberalized.</p> <p><i>Shanghai-Hong Kong Stock Connect:</i> Launched in 2014. Allows mainland Chinese investors to purchase shares of select Hong Kong and Chinese companies listed in Hong Kong, and lets foreigners buy Chinese A shares listed in Shanghai. HK-to-Shanghai annual quota: RMB 300 billion (\$47 billion); daily quota RMB 13 billion (\$2 billion). Shanghai-to-HK annual quota: RMB 250 billion (\$39 billion); daily quota: RMB 10.5 billion (\$1.6 billion).</p> <p><i>Mutual Fund Connect:</i> Launched in July 2015. Allows eligible mainland and Hong Kong funds to be distributed in each other’s markets through a</p>
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streamlined vetting process. Initial aggregate investment quota: RMB 300 billion (\$47 billion) each for inward and outward fund flows.

The Exchange Rate Regime

China has continued to move gradually—and at least in principle—towards a more flexible market-determined exchange rate. On August 11, 2015 the People’s Bank of China (PBC) changed the reference pricing mechanism for the onshore CNY-dollar exchange rate, whereby the PBC sets the opening price for trading on the Shanghai China Foreign Exchange Trading System (CFETS) each morning. The reference price is no longer delinked from the previous day’s closing price although, with RMB trading now taking place in markets such as London that are in other time zones, the two prices need not necessarily be the same. The key point is that the RMB exchange rate relative to the dollar is now more subject to market forces. This policy change was combined with a 1.9 percent devaluation of the RMB relative to the dollar

It appeared that the PBC had combined a move to weaken the RMB with a shift to a more market-determined exchange rate. China’s currency move could be interpreted as a relatively modest and defensive one, aimed at signaling that the PBC would not persist in supporting the RMB’s value relative to the dollar if the dollar were to keep rising against other major currencies. Indeed, in the year before this move, the trade-weighted effective exchange rates of the RMB had appreciated by about 13 percent. However, the shift in currency policy set off a negative reaction in financial markets that were already nervous because of fears over a sharp slowdown in growth in China and the sharp drop in the Chinese the stock market since June 2015.

On December 11, 2015, the PBC indirectly hinted at another change in policy, posting on its website an article indicating that the CFETS would begin publishing a set of trade-weighted exchange rate indexes. This approach appears to reflect a change in the PBC’s strategy regarding both practice and communications. First, by finally putting into practice a policy that had in principle been in operation since 2005, this move would make it easier for the PBC to delink the RMB from the dollar. Second, the PBC may be preparing the market for further RMB depreciation relative to the dollar in the short run—if the dollar were to strengthen further—and focusing attention on a more suitable benchmark for future movements in the currency. However, the PBC has not revealed what currencies will be in the basket that the RMB’s value is managed against and what the weights on those currencies will be.

From August 2015 until January 2016, there was substantial downward pressure on the RMB. China’s foreign exchange reserves, which peaked at nearly \$4 trillion in June 2014, fell to about \$3.2 trillion by January 2016. Since then, the pressure appears to have eased and the stock of foreign exchange reserves has stabilized. However, there is still a lack of clarity about the precise nature of China’s exchange rate policy, with PBC officials stating only that the value of the RMB is determined by supply and demand, with the PBC also striving to manage the currency’s value

“with reference to” a basket of currencies.

Financial Sector Development and Reforms

China's financial system remains bank-dominated, with the state directly controlling most of the banking system. Recognizing the importance of a better financial system for an improved allocation of resources within the economy, the Chinese government has instituted a number of reforms in recent years.

Bank deposit and lending rates have now been fully liberalized. Commercial banks can now set these rates freely, although the PBC still sets reference rates to guide banks. An explicit bank deposit insurance program has been in operation since May 2015. This program is intended to expose banks to some degree of market discipline by replacing the implicit full insurance of all deposits by the government. The system also allows for early intervention by the banking regulator and has an improved resolution mechanism for failing banks. Since the system is relatively new, there have been no test cases as yet.

These reforms are important steps in the right direction. Future reforms and development of the banking system will have significant implications for the development of China's more nascent financial markets, including the corporate bond market and also for economic development more broadly.

In particular, China's aspirations to make the RMB a global reserve currency rest in large part on the pace of development of its fixed-income markets. Reserve currency economies are expected to issue high-quality and creditworthy government debt or government-backed debt instruments that can serve to hedge against foreign investors' domestic currency depreciation during a global downturn.

China's fixed income markets, especially for corporate debt, have developed considerably in the last few years. The stock of government bonds stands at about \$3.5 trillion. Nonfinancial corporate debt was practically nonexistent a decade ago, but the outstanding stock has now risen to about \$1.5 trillion. Turnover, a measure of trading volume, remains quite low in both markets, however. China has recently lifted restrictions on foreign investors' participation in its bond markets, which should improve both the depth and liquidity of these markets over time.

China's financial markets have improved in some respects during the last decade, but there are still significant gaps, especially in terms of achieving sufficiently large and liquid debt markets. More importantly, the structure and quality of debt markets will also need to be improved to fully prepare for a currency used widely in international financial transactions and reserve holdings. With relatively low external and government debt positions, China's debt markets can in principle expand rapidly without serious threat to inflation credibility or vulnerability to external risks. Effective regulation of corporate debt markets is an important priority, so these markets can expand without generating financial instability. As discussed in the next section, the financial system features prominently among the major risks that the Chinese economy faces.

Economic and Financial Risks

The Chinese economy faces risks in several categories. The first is related to capital account liberalization and the possibility of a surge of capital outflows, which could destabilize the financial system as well as the overall economy. The second is a set of concerns specifically about China's financial system, including the stability of the banking system, wild swings in the stock market, and a large shadow banking system. The third set of risks is related to more fundamental aspects of China's policymaking. These include the possibility of policy missteps in the process of the difficult and risky transition from a largely command-driven economy to a more market-oriented one. Indeed, many of the reforms and measures taken to promote the RMB's international role have created their own risks for the economy.

The Capital Account

Allowing for the free flow of financial capital has been an important element of the plan for increasing the RMB's international stature. However, many developing economies have faced crises when they opened up their capital accounts without having a market-determined exchange rate and a well-functioning financial system.

An analysis of China's external balance sheet, i.e., its international investment position, suggests that the economy faces only modest direct risks from a more open capital account. Foreign direct investment and portfolio equity together account for 70 percent of China's external liabilities. This structure of liabilities is safer than one dominated by foreign currency debt.

China has traditionally had a low level of foreign currency external debt, which amounted to about \$800 billion or 7 percent of GDP in 2015, a lower ratio than virtually any other major emerging market (total external debt, including debt denominated in RMB, was \$1.5 trillion). The stock of foreign exchange reserves, which was \$3.2 trillion in February 2016, is sufficient to meet all of these debt obligations. Moreover, China's net foreign assets amounted to \$1.6 trillion at the end of 2015, implying that it has enough foreign assets to more than cover all of its foreign liabilities. In short, China is not subject to the traditional risks associated with opening up the capital account in advance of increasing exchange rate flexibility.

China's approach to capital account liberalization has allowed it to retain some control over capital flows. The schemes the government has put in place allow it to control the volume of flows in both directions and, to a significant extent, the composition of flows as well. However, trying to maintain a gradual approach to freeing up the exchange rate while opening up the capital account can create tensions that show up in large and volatile movements of capital.

Capital Outflows and Capital Flight

Capital flow surges in one direction or another can be exacerbated if the exchange rate is not allowed to adjust freely, and speculative pressures on the currency start building up. The scale of outflows during 2015 indicate how sentiments about economic and financial market conditions can shift quickly. These outflows put pressure on the PBC to expend a significant portion of its reserves to keep the RMB's external value stable.

Many emerging market economies have faced balance of payments crises following a rapid rundown of foreign exchange reserves. In China's case, as noted earlier, the stock of reserves still remains high by traditional metrics such as coverage of imports or external debt. But if Chinese households and corporations were to withdraw bank deposits on a massive scale and transfer the money abroad, reserves would cover only about 15 percent of total deposits. To take account of such factors, the IMF calculates a composite metric of reserve adequacy that takes into consideration potential capital flow volatility. By this measure, China had one and a half times the adequate level of reserves at the end of 2014. Even with the fall in reserves since then, the stock remains above this metric.

A more worrisome aspect of capital outflows is related to capital flight through both illegitimate and legitimate channels. Capital flight is quite different from more conventional outflows that are driven by a desire for portfolio diversification or macroeconomic factors such as better interest rates in other countries. One possibility is that the anti-corruption drive has caused some ill-gotten wealth to leave the country to avoid expropriation during the crackdown process.

Illicit capital flows are a particular concern for financial stability as they bypass traditional channels that the government can control. One widely used proxy measure for such flows is net errors and omissions (NEOs), which is the residual in the balance of payments accounting and reflects unrecorded capital account or current account transactions. Negative NEOs typically reflect money leaving the country through unofficial channels. China's NEOs have been persistently negative since 2009. During 2014, such outflows amounted to \$140 billion and in 2015 they were \$132 billion.

Money laundering and capital flight also go hand in hand. Casino operations in Macau have long been seen as a major conduit for money laundering and illicit capital flows from the Mainland. Regulatory authorities on the Mainland have taken aggressive steps to combat these operations as capital flight has picked up. An alternative channel for capital flight is related to informal financial institutions that act as conduits for cross-border transfers. In 2015, China's Ministry of Public Security is reported to have cracked down on an illegal foreign-exchange network that it said handled up to \$64 billion in transactions. In September 2015, authorities discovered 37 underground banking dens accounting for deals totaling more than \$38 billion, according to a statement on the ministry's website.

Although a full-blown capital flight crisis seems unlikely, particularly given China's relatively strong external balance sheet characterized by a low level of external debt and a large stock of foreign exchange reserves, the government has certainly been concerned about illegitimate outflows and the fact that they may exacerbate overall capital outflows and add to financial and macroeconomic stresses the economy is already facing.

The Debt Burden

China's overall level of debt has raised considerable concerns about a looming crisis. The level of central government debt was only 17 percent of GDP in 2015. The IMF computes a measure of augmented public debt, which includes various types of local government borrowing, including off-budget borrowing by such Local Government Financing Vehicles (LGFVs) via bank loans, bonds, trust loans, and other funding sources. By this measure, China's public debt to GDP ratio is estimated to be 60 percent in 2015, which would still be below the public debt to GDP ratios of major advanced economies.

However, the broader picture of debt in China looks more worrisome. According to a recent McKinsey report, the level of gross debt in 2014 was 282 percent of GDP. This includes government debt (55 percent of GDP, similar to the IMF's estimate) and debt owed by financial institutions (65 percent of GDP), nonfinancial corporations (125 percent of GDP), and households (38 percent of GDP). More recent estimates suggest that corporate debt may have risen above 150 percent of GDP by early 2016.

The level of Chinese corporate debt is a major concern, especially since a substantial portion of outstanding bank loans has gone to large SOEs. The notion that such high debt levels heighten the risks of a financial meltdown is, however, overstated. The balance sheet of the government as a whole is healthier than an examination of just the gross debt figures would suggest. There are undoubtedly corporations that have borrowed too much and will suffer considerable financial stress, which could result in bankruptcy or painful restructuring. The government, on the other hand, has a large trove of assets—including its foreign exchange reserves, ownership stakes in the state enterprises, and foreign investments through the sovereign wealth fund.

A legitimate concern, however, is that many of the problems with debt in China will ultimately cause a collapse of the banking system, which has financed much of the debt accumulation.

Banking System

The average ratio of nonperforming assets (NPA)—loans that are unlikely to be paid back—to total bank loans outstanding is around 2 percent. But this is widely seen, even by the government itself, as an understatement of the true extent of the

problem. Adding in the category of “special mention” loans, those which are not yet in default but have a high probability of becoming so, even the official data put the NPA ratio at about 5 percent. Banks have kept NPAs off their books by “evergreening” their loans, i.e., giving even weak and unprofitable companies new loans to pay off their old loans.

Private analyst estimates of the actual ratio of NPAs range from 6–7 percent to as much as 20 percent, with even higher ratios of around 25 percent for some of the smaller banks. Still, Chinese banks do not face the potentially catastrophic problems that many Western banks faced during the financial crisis. Most of their funding comes from bank deposits, which tend to be stable, rather than from debt. Moreover, banks have about 17 percent of required reserves at the PBC.

Even if a banking crisis can be avoided, however, it will still be necessary to cover losses from loans made to companies that become insolvent or go bankrupt. This could involve a combination of two types of measures—sweeping nonperforming assets into asset management companies and infusing new capital into the banks. This will ultimately result in a fiscal cost. This cost would be reduced by partial loan recoveries, asset sales, and the use of loan loss provisions that banks maintain. Still, the fiscal cost will be substantial.

A bigger question the Chinese economy faces is whether the financial system, especially the banks, are being freed up from government directives and allowed to operate on a commercial basis to a greater extent. While there has been modest progress on banking reforms, at a minimum addressing the legacy problems created by state-directed lending and distorted incentives in the banking system will incur significant costs.

Shadow Banking

The government has also taken a more aggressive approach to rein in shadow banking, which involves credit intermediation through entities and activities outside the regular banking system. China’s shadow banking sector has expanded rapidly as a way around many of the regulations imposed on the formal banking system including (until recently) controlled interest rates, a high level of reserve requirements on bank deposits, and rising demand for financial intermediation services that are not satisfied by traditional institutions or conventional banking products (both for savings and credit).

Definitions of the shadow banking system vary, but the major categories of credit that fall under its rubric include (i) entrusted loans, which involve nonfinancial corporates as borrowers and lenders, with banks acting as intermediaries but bearing none of the credit risks; (ii) trust loans, which are financial transactions undertaken by trust companies that are regulated separately from banks and have some characteristics of banks and fund managers; and (iii) bank acceptances, instruments issued by banks that commit to pay a fixed amount in a given period

and that are backed by deposits of the party seeking these certificates. There is a range of other instruments included in definitions of the shadow banking system, including wealth management products (WMPs) that offer higher returns than traditional bank deposits and that can even be offered by banks themselves.

The shadow banking system is not large relative to that in many advanced economies, although its growth rate in China in recent years is certainly among the highest in the major economies. Based on data from Moody's, shadow banking assets amount to 65 percent of GDP in China, compared with 150 percent in the United States and a world average, weighted by country size, of about 120 percent.

Concerns about the financial stability risks posed by the growth of shadow banking have prompted the Chinese authorities to impose stricter regulation of shadow banking activities, both by banks and nonbank financial entities. Off-balance sheet activities by the commercial banks could affect their risk profiles. While trust companies and other nonbank financial entities are not backed by the government, their liabilities pose broader risks as the failure of any such institution could undermine confidence in the overall financial system.

In its present form and at current levels, it is unlikely that the shadow banking system by itself poses significant threats to overall financial stability. Nevertheless, the government has been concerned that risks in this sector could translate into vulnerabilities in the formal banking system (given the connections between the two sectors through products such as WMPs).

With rising concerns about the financial stability implications of the shadow banking sector, various regulatory agencies have stepped up their oversight of this sector. This has resulted in a decline in shadow banking. In recent months, the flow of credit associated with shadow banking has been small or even negative.

Stock Market Swings

After a sharp run-up during 2014 and the first half of 2015, Chinese stock market indexes have fallen sharply. This prompted a series of measures by the government to limit the stock market turmoil. Some of these measures were heavily interventionist and, although described as emergency measures, they have hurt the credibility of the government and created doubts about its attitude toward market-oriented reforms. The measures included propping up stock prices and also limiting activity that could push down prices.

The key measures to mitigate downward pressures on stock prices include:

- Limitations on short selling, with the China Securities Regulatory Commission threatening to arrest those engaged in "malicious short selling"
- A ban on initial public offerings for four months starting in July
- Suspension of trading in the shares of over a thousand firms

- A six-month ban on stock sales by stockholders with a 5 percent or higher equity stake in a given company

Measures to prop up prices through direct intervention include:

- New rules allowing pension funds to invest up to 30 percent of their net assets in equities (previously, pension funds could not invest in equities)
- Relaxation of rules on margin financing
- Giving banks permission to make corporate loans using equity as collateral
- A PBC pledge to lend RMB 250 billion (\$40 billion) to major brokerage firms through the China Securities Finance Corporation to help them cope with liquidity shortages
- State-owned funds and institutions encouraged to buy stocks

Other propaganda measures included news articles in official media blaming “foreign forces” for the stock market turbulence. In addition, nearly 200 people were arrested for allegedly spreading false information that caused the market crash. Those arrested included financial practitioners, regulatory officials, and also financial journalists.

The government’s other actions to stabilize the market have not inspired confidence either. On January 4, 2016, the CSRC introduced a circuit breaker mechanism in the Chinese stock market. This led to a negative reaction in markets, with the main indexes plunging by about 14 percent over the next three days. The circuit breakers were activated multiple times during that period, worsening the sell-off as many market participants tried to sell their holdings before the circuit breakers were activated. The circuit breaker was deactivated three days after its introduction.

Chinese stock markets have been prone to concerns about weak corporate governance, limited transparency, weak auditing standards, and shoddy accounting practices. In the absence of broad institutional and regulatory reforms that are necessary to support effective price discovery and the overall efficient functioning of stock markets, these markets could remain unstable. The recent volatility in the stock market and the manner in which the government has addressed it has heightened many of these concerns.

Policy Instability

There are two reasons to be concerned about the path that China is taking towards market-oriented reforms. The first is the unbalanced nature of the reforms. The second is the government’s ambivalent approach towards economic liberalization and the operation of free markets.

Reforms on the real side of the economy have not kept pace with financial liberalization. The 13th five year plan echoes many items from the previous plan, including further restructuring of state enterprises, liberalization of the services sector so new firms can more easily enter this sector and operate with fewer

restrictions, streamlining of the tax and public expenditure systems, and easing of restrictions on labor mobility within and across provinces. China's economy and the RMB's rise have also been impeded by the lack of a robust institutional framework—including transparency in the policy-making process, sound corporate governance and accounting standards, and operational independence for the central bank and regulatory authorities—that ought to supplement financial and other market-oriented reforms.

The turmoil in equity and currency markets during 2015 and 2016 appears to have shaken confidence in the economic management skills of the leadership. Such volatility, and the heavy-handed intervention it has sometimes provoked, could erode political support and economic space even for the reforms to which the technocrats are committed. A more fundamental concern is that the government seems to be caught in a deep internal conflict between its stated objective of letting markets operate freely and its desire to maintain stability and control above all else. The tension between these two perspectives could cause a number of missteps even in the implementation of reforms, especially in terms of promoting the RMB's role in international financial markets.

The RMB's Role in Global Finance

China has taken a number of measures to promote the RMB's use as an international currency, one that is used as a medium of exchange for trade and finance transactions. These include:

- Permitting the settlement of trade transactions with RMB. In 2015, RMB trade settlement amounted to roughly one quarter of China's annual trade volume.
- Allowing issuance of RMB-denominated bonds in Hong Kong (with an outstanding stock of bonds worth nearly \$400 billion in 2015) and other financial centers.
- Permitting selected banks to offer offshore RMB deposit accounts.
- Setting up 15 offshore RMB clearing centers, including in Frankfurt, Paris, and London.
- Creating a payment system for easier settlement of cross-border RMB transactions.

These steps are gaining traction, although they are still modest in scale. The RMB has become the fifth-most important payment currency but still accounts for less than 3 percent of worldwide payments for cross-border trade and financial transactions. The RMB also accounts for less than 2 percent of turnover in global foreign exchange markets. The shares of other major emerging markets' currencies are all below 2 percent.

China has set up a new payment system—the China International Payment System—that is organized more in line with internationally accepted standards, which is essential for facilitating cross-border RMB transactions, including trade and

investment flows. The payment system provides a central platform that helps clear interbank financial transactions in a standardized manner both domestically and internationally. The adoption of international standards makes the new payment system a meaningful move in facilitating the international use of the RMB.

A stock-taking exercise, based on a traditional set of criteria for a reserve currency, show the progress the RMB has made towards attaining that status as well:

- *Economic size:* A country's size and its shares of global trade and finance are important determinants of the status of its reserve currency. China now accounts for 16 percent of world gross domestic product (17 percent if measured by purchasing power parity rather than market exchange rates) and 10 percent of world trade in goods and services. In 2014-2015, it is estimated to have accounted for about one-third of world GDP growth.
- *Open capital account:* Reserves must be acceptable as payments to a country's trade and financial partners, which requires that the currency be easily tradable in global financial markets. China is gradually and selectively easing restrictions on both inflows and outflows. The capital account has become increasingly open in de facto terms, but there are a number of capital controls still in place.
- *Flexible exchange rate:* Reserve currencies are typically traded freely and their external value is mostly market determined. China has over time increased the flexibility of the exchange rate and, in principle, permitted market forces to play a bigger role in foreign exchange markets. Despite these changes, China still has a closely managed exchange rate, which will become increasingly hard to control as the capital account becomes more open.
- *Macroeconomic policies:* Investors in a country's sovereign assets must have faith in its commitment to low inflation and sustainable levels of public debt, so the value of the currency is not in danger of being eroded. China has a lower ratio of explicit public debt to GDP than most major reserve currency economies and has maintained moderate inflation in recent years.
- *Financial market development:* A country must have broad, deep, and liquid financial markets so that international investors will have access to a wide array of financial assets denominated in its currency. China's financial markets have become large but are highly volatile, poorly regulated, and lack a supporting institutional framework.

While China measures up favorably in the first four areas, financial market development and stability could be the crucial determinant of how the RMB measures up against the other reserve currencies. Despite concerns about China's financial markets, the RMB is already making its presence felt on the international stage, in part as the result of policy actions by the Chinese government and in part because of the sheer size and growing role of China in international trade and finance.

Since 2009, the PBC has moved aggressively to establish bilateral local currency swap arrangements with other central banks in order to facilitate and expand the use of the RMB in international trade and financial transactions. So far, 34 central banks have signed such bilateral arrangements with the PBC. The total amount that could be drawn through these arrangements amounts to the equivalent of roughly half a trillion dollars.

Moreover, despite its lack of convertibility, the RMB is already becoming part of international reserve portfolios. A number of central banks have added or are considering adding RMB-denominated assets to their reserves. The list includes Austria, Australia, Chile, Malaysia, Nigeria, Pakistan, South Africa, Switzerland, Tanzania, Russia, and the United Kingdom. The IMF estimates that in 2014, about 1.1 percent of official foreign currency assets were held in RMB, up from 0.7 percent in 2013. This puts the RMB in the seventh spot in terms of the identified composition of official foreign currency assets.

On November 30, 2015, the IMF executive board voted to expand the Special Drawing Rights (SDR) basket to include the RMB. The new basket will become effective in October 2016. The RMB's inclusion in the SDR basket (with a weight of 10.9 percent) is an important symbol of the currency's ascendancy in global finance as it thus attains the IMF's imprimatur as an official reserve currency.

The IMF's decision is an important validation of China's efforts over the past year to liberalize financial markets, open up its capital account, and allow the RMB's value to be determined to a greater extent by market forces. However, developments in both equity and currency markets since the IMF made its decision point to the challenges that persist in financial market liberalization. Domestic opposition to further financial sector reforms and market-oriented liberalization measures remains fierce, and the IMF decision by itself is unlikely to shift the balance substantially.

The decision will also not by itself be a game-changer in terms of generating a surge of capital inflows into China. SDRs currently account for less than 3 percent of reserve asset holdings worldwide, so the direct effect of including the RMB in the SDR basket will not be large. Ultimately, it is the availability of sufficient high-quality RMB-denominated financial assets and the ease of moving financial capital into and out of China that will determine the RMB's trajectory as a reserve currency.

There could be significant effects on the patterns of global capital flows if this decision does lead to further financial sector reforms, capital account liberalization, and exchange rate flexibility in China. These changes would open the doors for more capital inflows into China and also further tilt the composition of China's outflows away from foreign exchange reserve accumulation by the central bank, as it will spur more foreign investments by China's households, corporations, and institutional investors.

Implications for the U.S. Economy

China's capital account and financial market liberalization could have significant effects on the volume and, more importantly, the composition of its investments in the U.S. For nearly two decades, the major channel for capital flows to the U.S. has been the official accumulation of foreign exchange reserves. At present, Treasury and agency debt (issued by U.S. government-sponsored enterprises) continues to dominate Chinese investment in the U.S. Chinese portfolio investment in the U.S. has expanded rapidly, from \$29 billion in 2007 to nearly \$350 billion in 2015. Direct investment from China to the U.S. has been growing as well but, in absolute amounts, still remains relatively modest. In the first half of 2015, Chinese FDI flows into the U.S. were only about \$7 billion.

The U.S. Treasury International Capital (TIC) System data suggest that the absolute amount of Treasury securities held by China remained relatively stable during 2013-2015, even though China's foreign exchange reserves fell by nearly \$800 billion from June 2014 to February 2016. As of February 2016, China holds \$1.3 trillion of Treasury securities according to the TIC data. Thus, it does not appear that China has been selling U.S. Treasury securities while trying to prevent RMB depreciation. Meanwhile, China's declining share of U.S. government debt ownership (from 26 percent in 2010 to 20 percent in 2015) indicates that other investors, both domestic and foreign, are maintaining their strong demand for U.S. Treasuries.

As Chinese financial markets develop and private investors increase the international diversification of their portfolios, the shifts in China's outward investment patterns are likely to become more pronounced. Chinese investors' search for diversification and yield will result in rising flows into various asset markets in the United States, from equities to real estate.

Thus, the various policy reforms that are needed to support the international role of the RMB could also create significant changes in China's economy and the patterns of its capital inflows and outflows, both overall and also specifically from and to the U.S.

The Renminbi vs. the Dollar

While the RMB is likely to become a significant reserve currency over the next decade, it is unlikely to challenge the dollar's dominance. There is still a huge gulf between China and the U.S. regarding the availability of safe and liquid assets such as government bonds. The depth, breadth, and liquidity of U.S. financial markets will serve as a potent buffer against threats to the dollar's preeminent status.

Moreover, the RMB will not contest the dollar's supremacy unless China's leaders align the country's political and legal institutions with its economic reforms. These changes are necessary to engender the trust of foreign investors. Global investors seeking a safe haven still automatically turn to U.S. Treasury securities in times of

global financial turmoil. Foreign investors now hold \$6.2 trillion of these low-yielding securities, not to mention large quantities of other dollar assets. The dollar's share in global foreign-exchange reserves has held steady since the crisis. Indeed, recent data from the IMF suggest that the dollar's share of global foreign exchange reserves increased slightly, to about 64 percent, in 2014 and 2015.

It is nevertheless likely that, as the RMB becomes a prominent international currency, and as the costs of transacting in the RMB and other emerging market currencies falls, the dollar's prominence as a unit of account (for denominating trade transactions) and as a medium of exchange (for settling cross-border financial trade and financial transactions) will decline. This could affect the use of the dollar in international financial markets, which by itself will not necessarily have a substantial impact on the U.S. economy. However, these developments, in tandem with measures taken by China to develop its own payment system, could diminish the primacy of U.S. financial institutions. This would affect the ability of the U.S. to continue wielding the financial clout that it currently has as a result of the dollar's dominance in international finance.