



Institute for
New Economic Thinking

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A PAYMENTS PERSPECTIVE

SPECIAL REPORT



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Thomas A. Bernes, Paul Jenkins, Perry Mehrling and Daniel H. Neilson



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EXECUTIVE SUMMARY

The global financial crisis of 2008 and its aftermath vividly demonstrated the interconnectedness and evolving nature of today's financial markets. In considering China's engagement with the international monetary system (IMS), it is important to take account of the nature of the system into which China is integrating and potential consequences of further integration for both China and the world. In this report, the authors develop an alternative perspective to examine this issue, starting from the idea that the IMS is fundamentally a payments system.

A central feature of this perspective is the hierarchy of "international money" that extends top-down from the dominant role currently played by the US dollar as the system's reserve currency, to central bank swap lines, to the issuance of national money and expansion of national credit. The payments approach has two additional distinguishing features: the importance of both public and private sources of liquidity to settle obligations between debtors and creditors; and the importance of gross flows and balance sheets (stocks) in assessing financial risks and vulnerabilities.

In the financially developed part of the world, private money markets in normal times are able to absorb fluctuations in the net settlement of payments, providing liquidity by expanding and contracting short-term international credits. In this way, each of the globally integrated money markets has its own point of contact with a national money. The Eurodollar, for example, is essentially a promise to pay privately issued US bank money, but US bank money is ultimately a promise to pay the publicly issued US currency. During the recent financial crisis when money markets seized up, advanced economy central banks had to assume this role by expanding their balance sheets. This is, however, seen as an exception.

In the less financially developed part of the world, where there are no deep and liquid markets, this same task of absorbing fluctuations in payments more normally falls on the central bank, which must use its own balance sheet. A key dimension of engagement and integration into today's IMS, therefore, concerns the development of money markets that allow the central bank to step back to focus on supporting the private market rather than making it. Indeed, in considering the future of the IMS, one must consider the future of this interlinked set of money markets.

In this context, although the US dollar is the dominant reserve currency (and at the top of the hierarchy of international money), it is now well appreciated that the Federal Reserve is, first and foremost, a national central bank, with a focus to decide its policy-setting based on national conditions. What that has meant, therefore, is that international monetary management involves

informal cooperation among the major central banks in ways considered appropriate for any given set of global conditions. Put differently, each national central bank takes responsibility for lender-of-last-resort backstop in its own national money market, knowing that it can call on support from other central banks as needed to provide liquidity through a swap arrangement. At present, the most important swap lines are those linking the "G6" — the Federal Reserve, Bank of England, European Central Bank (ECB), Swiss National Bank, Bank of Japan and Bank of Canada. These central bank swap lines help knit the system together at the global level.

For the Chinese, one consequence of the global financial crisis was the policy decision to move further along the path of internationalization of the renminbi (RMB). Given the underdeveloped character of domestic money markets, as well as that of the domestic banking system, the decision was made first to concentrate on developing an offshore market in Hong Kong. To a significant extent, the urgency of this internationalization effort has been driven by the enormous and growing dollar exposure of the People's Bank of China (PBoC). The PBoC has on its balance sheet an over US\$4 trillion foreign exchange swap exposure, long dollars and short RMB. From this perspective, the ultimate objective of RMB internationalization would seem to be about creating a robust private market with the capacity to absorb some of this exposure. In the absence of an RMB-denominated capital market, however, offshore money markets are probably not enough.

It follows from this perspective that internationalization of the RMB will critically involve a shift in the position of the RMB both in terms of its place in the network of international private money markets, and in terms of its place in the international central bank backstop system of swaps.

The challenge for China is to figure out how exactly it wishes to manage its engagement with this emerging IMS. At present, the PBoC acts more or less as lender of first resort, absorbing all fluctuations in net international settlement on its own balance sheet. Current efforts to support development of the offshore RMB market can be understood, in this context, as the first step toward developing a deep and liquid money market that could take some of the burden off the PBoC, at least in normal times. This will require development of onshore money markets and then integration of offshore and onshore, with consequent equalization of forward rates. Without a deep forward market, where forward rates can move to provide incentive to absorb shocks, the only shock absorber is the balance sheet of the central bank.

In accommodating all inflows on its balance sheet, the PBoC has given up control over the size of its balance sheet. But it is not just this exchange rate exposure of the PBoC where one sees sectoral balance sheet risks and

vulnerabilities, with concern that these other risks too could potentially end up on the balance sheet of the PBoC as the backstop for the entire Chinese financial system. As measured by the evolution of total social financing, credit as a percentage of GDP has expanded very rapidly since 2008, with most of the growth occurring outside the formal banking sector to fund state-sponsored property developers and purchases of commercial and residential real estate. This concentration of investment in real estate property has produced a chronic oversupply in that market, representative of the worrisome trend evident now over several decades of investment flowing to low-productivity and high-risk projects.

The upshot of these sectoral imbalances is the need for a three-pronged shift in China's growth strategy: a shift in the composition of aggregate demand growth toward more reliance on domestic demand; a shift within domestic demand from investment to consumption; and a redirection of investment to the higher-productivity, non-state sectors, with a growing emphasis on services investment.

To bring about the magnitude of reform suggested in this report will require political will and leadership. All systems, be they economic or governmental, give rise to vested interest that makes the challenge of reform all the more difficult. Reform requires a vision of the ultimate objective and the will to identify and utilize the necessary instruments. In China, the lack of transparency in the political decision-making processes makes it difficult to gauge the likelihood of a particular outcome. This is what perplexes many observers. While the Third Plenum set out a broad vision with the objective to have a more market-driven economy, its translation into concrete policy actions remains obscure and subject to a political system that most observers do not understand.

At the national level, improved governance requires an integrated, long-term strategy built upon cooperation between government(s) and citizens. It involves both participation and institutions. The rule of law, accountability and transparency are technical and legal issues at some levels, but also constitute fundamental principles that interact to produce government that is legitimate, effective and widely supported. These are principles that should apply in different political systems.

An important unanswered question, however, is whether a one-party governance structure can successfully bridge to a more decentralized economic management structure that puts more emphasis on market outcomes. The answer this report offers is, yes, by putting in place a strong institutional foundation, where institutions in China have clear remits consistent with the government's objectives for market-based outcomes, and operate at arm's length from government, but have strong direct lines of accountability to government for achieving those objectives.

At the international level the challenge of governance reform is perhaps even greater. A number of studies have documented the views of China and other emerging market economies on the current Bretton Woods organizations' lack of legitimacy. The establishment of the Group of Twenty (G20) was an attempt to achieve reform and to provide political leadership to the global economy. Yet, this is currently widely regarded as faltering. The global challenge we face is to reform or create strong, accountable and transparent institutions that can help establish the "rules of the game," and provide a framework where intersecting interests can be addressed in a manner consistent with a broader vision serving the global economy. Failure to achieve the necessary institution building, at either the national level in China or at the global level, will leave the system more vulnerable to shocks and subpar outcomes.

The core of this report is to lay out in practical terms the critical issues China must consider in managing its engagement with the evolving IMS. There are both opportunities and pitfalls, and the hope is that the payments approach used will highlight why, and how, China and the IMS should "talk to one another." This must be a two-way dialogue. While the pace, direction and ultimate goals of reform are for the Chinese to decide, what they decide will have implications going both ways — for them and for the functioning of the IMS. Avenues must be found to discuss and assess these implications from a system-wide, cooperative perspective.

INTRODUCTION

China's integration into the IMS has been a complex, evolving story with many angles and aspects. Some are specific to steps that China has taken, or has planned, involving reforms both domestically and internationally. Others are specific to the overall functioning of the IMS, where the policies of all major economies have a bearing on the manner and efficiency of adjustment in the international flow of goods, services and portfolio investments. Much has been written on all of this.

The approach taken in this report is of a different slant — one that looks at these issues from the perspective of the IMS as a payments system. Moreover, it is an approach that is meant to help frame the issues conceptually. What does that mean?

A payments approach has two distinguishing features, which provide a new perspective on how to think about the practical and policy issues facing China, and are central to the functioning of today's IMS.

The first feature is explicit recognition of the importance and availability of liquidity through money markets to settle obligations between debtors and creditors. The terminology used describes the ability to meet these obligations as a "settlement constraint," and the provision of liquidity as being "elastic," in that a credit agent can offer temporary relaxation of that constraint.

Liquidity can be provided through both public and private means (Committee on the Global Financial System 2011). Central banks can create liquidity in their domestic currency, and official access to foreign currency liquidity can be made available through reserves, swap lines and special drawing rights (SDRs). Private liquidity, in contrast, refers to the willingness of financial institutions to provide funding or market liquidity through market-making activity or interbank lending. Liquidity thus has a strong endogenous component that can lead to both liquidity excesses and shortages, something that was seen vividly during the global financial crisis when private liquidity sources dried up and public sources were called upon in extraordinary ways.

The second feature is the importance of gross flows and balance sheets (or stocks) on a sectoral basis in assessing financial risks and vulnerabilities. As became only too clear, the focus on net flows in the lead up to the financial crisis did not reveal the vulnerabilities that had built up, for example, on bank balance sheets, both inside and outside the United States, as a result of positions these banks had taken as a funding source for the US mortgage market. The risks and vulnerabilities that the PBoC has taken on through accumulation of gross flows onto its balance sheet will figure prominently in the analysis of China in this report.

In using a payments approach, however, one must also be very cognizant of the fact that macroeconomic conditions have a critical bearing on the availability and price of liquidity, as well as on the sources and nature of financial vulnerabilities. The stance of monetary policy, as gauged by the level of short-term interest rates, determines the basis on which interbank lending rates are set. Similarly, exchange rate regimes can either facilitate, or exacerbate, adjustment to balance sheet positions that have built up, or been taken on. Allowing exchange rates to adjust can help mitigate spillover effects, whereas commitment to a pegged exchange rate can lead to unhedged foreign currency borrowing and lending positions. In looking at the IMS from a payments perspective, the macroeconomic context must also be factored in.

What insights then does this approach offer? The core of this report's analysis is to lay out, in practical terms, the critical issues China must consider in managing its engagement with an evolving IMS. This is not to say that China does not have choice — far from it. There is always room for domestic policy discretion and for an economy the size of China's to influence importantly the evolution of the IMS. However, there are also pitfalls, and the hope is that the payments approach will highlight why, and how, China and the IMS should "talk to one another."

This must be a two-way dialogue. While the pace, direction and ultimate goals of reform are for the Chinese authorities to decide, what they decide will have implications going both ways — for them and for the functioning of the IMS. Avenues must be found to discuss and assess these implications from a system-wide, cooperative perspective.

With this focus, the report is organized as follows.¹ The first section presents the authors' view of the IMS as a payments system. The hierarchical nature of money within the IMS, running from national money and credit to the US dollar as the dominant reserve currency, is discussed. Within this hierarchical system, the respective roles of private markets and central bank backstops in providing liquidity to the global financial system are highlighted. For China, this perspective points to the need for the country to address what it sees as the position of the RMB in terms of both its place in the international private money market and its place in the international central bank backstop system.

The second section extends the payments system perspective by examining the domestic financial consequences of China's pattern of payments. In particular, it looks at the balance sheet items of the central bank and

¹ An initial workshop was held in Hong Kong in April 2013, where a number of Asian scholars were invited to share their views. A second workshop was held in June 2013 at Chatham House, London, UK, where a number of financial experts were invited to share their views. The authors are grateful to Chatham House for hosting the London workshop and for their encouragement for this project.

the banking sector. The conclusion of this section is that the PBoC is a potential counterparty to many of the risks embedded within the Chinese financial system. This underscores one of the implications of the analysis of the first section that, in the absence of deeper and more liquid private markets, especially forward markets, the main financial shock absorber in China is the balance sheet of the central bank.

In the third section, the political economy issues associated with the further financial integration of China with the rest of the world are addressed. Given a prerequisite of sustained economic growth for China, the evident tensions between a one-party rule and the objective of having a more market-driven economy are discussed. Paramount is the need for a coalition of the willing within China to articulate a vision and provide the necessary momentum to the reform process. Going hand in hand with this is the importance of having strong domestic and global institutions, and clear rules of the game that provide a level playing field for pursuing international policy cooperation.

THE EVOLVING IMS AND CHINA

In considering the question of internationalization of the RMB, as well as the larger question of the integration of China into world financial markets, it is important to take account of the nature of the system into which China is proposing to integrate. As many authors have recently pointed out (for example, McKinnon 2013; Prasad 2014), the present organization of the IMS is not well captured by economists' standard theoretical apparatus. One consequence is that policy advice based on that standard apparatus risks missing both potential opportunities and potential pitfalls presented by the current system. In what follows, an alternative apparatus is developed that starts from the idea that the IMS is fundamentally a payments system, from which it follows that international money is the ultimate means of payment for settling debts.

THE HIERARCHY OF INTERNATIONAL MONEY

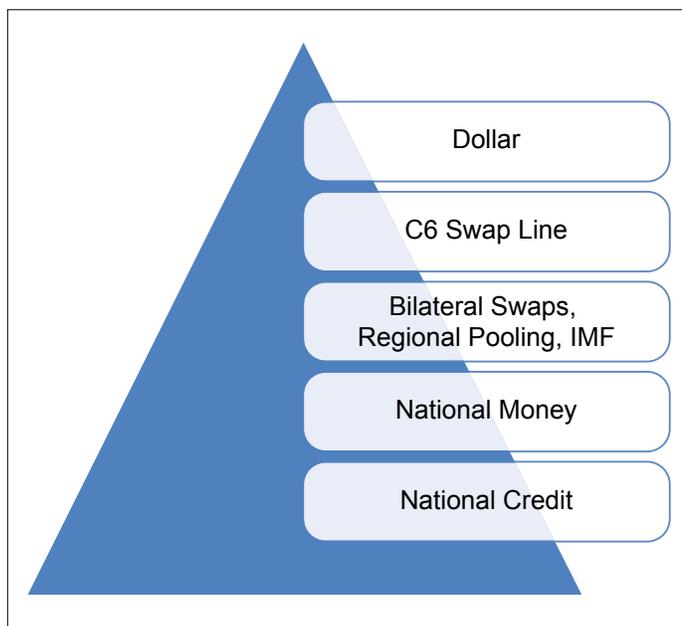
Modern history has known two fully-fledged international monetary systems, the sterling system that ended with World War I and the dollar system that eventually replaced it. (Canonical descriptions of the two systems are de Cecco 1974 and Eichengreen 2011, respectively.) An overarching theme across the entire modern period has been the replacement of a commodity (gold)-based system with a credit system (Despres 1973, 226). The important point to appreciate is that — in modern historical experience — international money has typically been a promise to pay some national money, the issue of a specific reserve currency nation state. The key institutional mechanism for extending national into international money has been the growth of international financial centres (in London for sterling, in New York for dollars) to support

the emerging globalization of trade, production and finance (Kindleberger 1985). In present circumstances, the international money is the Eurodollar, a dollar-denominated term liability of non-US banks that is held as a liquid asset by non-US customers and used by the bank issuer to finance dollar loans and securities issued by other non-US customers (He and McCauley 2012).

In retrospect, a key dimension of the global financial crisis of 2007–2009 was its stress test of the IMS centred on the Eurodollar. As everyone knows, the underlying problem was questionable mortgage lending in the United States, but for the purposes of this report the more important point is that these mortgages were securitized and then funded in global dollar money markets. “Money market funding of capital market lending,” otherwise known as shadow banking, had become the characteristic institutional form of credit for the world of financial globalization that grew up after the collapse of the Bretton Woods system (Mehrling et al. 2014). When the mortgages came into question, global dollar funding markets broke down, and central banks intervened to put a floor on the collapse. Key to that support was the liquidity swaps provided by the Federal Reserve in the United States to central bank counterparties around the world, which allowed foreign central banks to provide last resort support for foreign banks seeking dollar funding.

Today, a subset of those swap lines has been made permanent, and with that move the lines of an emergent new IMS are becoming clear. At present the most important swap lines are those linking the C6. These central bank swap lines knit the system together at a global level, and everyone else can gain access to the global liquidity backstop by means of a bilateral swap line with one of the C6, or through one of the regional liquidity pooling arrangements such as Chiang Mai or the European Monetary Union, or possibly by activating a credit line with the International Monetary Fund (IMF). Anyone left out of this backstop system has no choice but to simply create its own backstop by hoarding dollar reserves (see Figure 1).

This hierarchical system of backstops provides emergency access to international dollar liquidity, which is to say the means of international settlement. But it is intended as an emergency backstop only. In normal times, the Eurodollar market itself provides international dollar liquidity.

Figure 1: The International Hierarchy of Money

Source: Perry Mehrling.

EURODOLLAR MARKET AS A PAYMENTS SYSTEM

As in any payments system, the central organizing principle is the obligation of deficit agents (those whose payments exceed their receipts) to settle with surplus agents (those whose receipts exceed their payments) in a form acceptable to the surplus agents. The asymmetric character of the settlement constraint, which binds the deficit agent but not the surplus agent, is a source of discipline that forces individual agents to adapt their behaviour to the larger economic system as a whole. This discipline is, however, tempered by credit, which operates as a source of elasticity to allow deficit agents to push off the day of reckoning into the future.

From this perspective, banking can be understood as the business of facilitating payments by offering credit to deficit agents and means of payment to surplus agents, a feat that banks achieve by simultaneously expanding both loans and deposits. (In this regard, the lending business and the deposit business are two sides of exactly the same business.) In effect, banks relax the settlement constraint of their deficit clients by shifting that constraint to a higher level, onto their own balance sheets. The risk is that, if the surplus agent happens to prefer deposits in a different bank, then the lending bank faces its own asymmetric settlement constraint since it must deliver acceptable means of settlement to that other bank.

The Eurodollar market is the place where banks from all over the world manage this kind of settlement risk, by borrowing and lending among themselves, and the prices

formed in the Eurodollar market are, therefore, a sensitive barometer of that risk. But sometimes, price is not enough to equilibrate the market: what Hawtrey (1913) famously called the “fundamental instability of credit” is a feature of the international dollar funding market just as much as any other credit market. That is when central banks come into play.

From a payments perspective, central banking can be understood as nothing more than the business of facilitating payments by offering credit to deficit banks and means of payment to surplus banks, for example, through discount window lending. Central banks do for banks what banks do for their clients, but at a higher level in the system. The risk is that if the surplus bank happens to prefer a deposit in another central bank, then the lending central bank faces its own asymmetric settlement constraint since it must deliver acceptable means of settlement to the other central bank. A swap line that provides access to the international money backstops this risk, making it possible for national central banks to support their own domestically domiciled banks in time of settlement trouble.

THE SPECTRUM OF HYBRIDITY: PUBLIC AND PRIVATE MONEY

The point of contact between the Eurodollar and other currencies is the international private money market for short-term credit denominated in those other currencies, most importantly the private money markets for the major currencies — yen, pound, euro, Swiss franc (DeRosa 2013). It is this interlinked set of money markets that supports international trade in goods and services, and also international trade in financial assets of various and sundry sorts. When talking about the future of the IMS, one is thus also talking about the future of that interlinked set of money markets.

In the financially developed part of the world, these private money markets serve as the lenders of first resort, able to absorb fluctuations in net settlement on payment accounts, simply by expanding and contracting short-term international credits. In the less financially developed part of the world, however, where there are no deep and liquid money markets, this same task typically falls on the central bank, using its own balance sheet. A key dimension of integration into the IMS concerns the development of money markets that allow the central bank to step back — to focus on supporting the market rather than making it, at least in normal, non-crisis times.

In the financially developed world, each of the individual globally integrated money markets has its own point of contact with a particular national money. Just so, the Eurodollar is essentially a promise to pay privately issued US bank money, but US bank money is ultimately a promise to pay the publicly issued US currency. Similar arrangements link the international private version of other monies with their domestic public versions, which is to say with the particular national central bank that issues the particular domestic public currency. As lender of last resort in its own national currency, each central bank has an interest in the stability of its own private money system, and that interest extends to the international extension of that private money system by its own international financial centre.

LIQUIDITY VERSUS SOLVENCY

Financial globalization is not just about international integration of national money markets. It is also about international integration of national capital markets, and also about integration of international capital markets with international money markets. Central banks responded to the integration of money markets by mobilizing swap lines, but the integration of money markets with capital markets required more.

The global financial crisis of 2007–2009, as well as the subsequent more contained euro crisis, brought to attention the need for new mechanisms of crisis backstop for the emerging new system of market-based credit. In practice, national central banks intervened as dealer of last resort (Mehrling 2011) or market-maker of last resort (Buiter and Sibert 2007), to support the value of a specific class of capital asset collateral, household mortgages in the case of the Fed and peripheral sovereign bond debt in the case of the ECB. This backstop of capital assets during peacetime was a substantially new function for central banks, and one they are eager to ensure will only ever again happen as an absolute last resort.

A key issue is the separation of liquidity support and solvency support. Liquidity risk is inherently and legitimately international, hence, a matter for the international dollar system. But solvency risk is inherently local, or national. Individual central banks, with national responsibilities, may on occasion take on solvency risk, but cannot expect to be able to pass it along to their international counterparties, and any suspicion of such will quickly curtail access to the global liquidity system. Ideally, solvency risk belongs in private hands, or with the public fiscal authority, not the central bank. The new involvement of central banks in supporting capital markets requires new institutional measures for drawing and defending this boundary.

Here too the lines of an emergent new IMS can be seen to be taking shape. The Bank of England under Mark Carney

has recently taken the lead by offering explicit liquidity insurance (Carney 2013; Bank of England 2013). Given the key role of the London repurchase (“repo”) market and the UK banking system in financing the world shadow-banking system, this is a natural development. But the challenge will be to draw the line between liquidity support, where the Bank of England can rely on the global system of central bank swap lines, and solvency support, where the Bank of England inevitably relies on the national public purse.

MANAGING MONEY

The system that seems to be emerging can usefully be considered a modern adaptation of John Williams’ old idea of a key currency system (Williams 1945; 1953, chapter 3). Although the dollar remains the world reserve currency, everyone now appreciates that the Fed is a national central bank first and foremost, and that domestic priorities may sometimes trump global priorities. That means that the 1960s dream of a fixed exchange rate system linking the major world currencies, supported by unlimited swap lines between major central banks, is no longer on the agenda. But a system of completely flexible exchange rates is also not on the agenda. While academics were fighting among themselves over these false utopias, financial globalization has grown up and now has achieved a stage of maturity where it is possible to see the outlines of an emerging system of international monetary management.

Today, international monetary management involves more or less informal cooperation among the major central banks around the degree of overall elasticity or discipline that is appropriate for present global conditions. But each national central bank remains free to choose its own adaptation of the overall policy for present national conditions, as it sees fit. One consequence of the local adaptation is that national interest rates differ, and so exchange rates also fluctuate over time, perhaps even with a trend to the extent that national inflation rates differ. It is understood that swap lines between central banks are there to put bounds on this fluctuation, not to prevent it.

Meanwhile, each national central bank takes responsibility for lender-of-last-resort backstop in its own national money market, knowing that it can call on support from other central banks as needed. And each also takes responsibility for dealer-of-last-resort backstop of some segment of national capital markets, but this backstop remains national. Because of the risk of capital loss, dealer of last resort is, rather, backstopped at the national level by the national public purse.

The main danger in such a system is that the first-resort private money markets act not so much to absorb fluctuations in net payment between nations, and so to stabilize the system as a whole, but rather to amplify fluctuations, and so to destabilize the system. Domestic

monetary policy that lowers rates may seek merely to encourage a certain domestic carry trade, banks (and shadow banks) borrowing short and lending long, both in the domestic currency. However, in doing so, they also encourage a certain international carry trade, borrowing in domestic currency and lending in a higher-yielding foreign currency. The profit from this speculation is important incentive for private markets to absorb fluctuations in net payment between nations, and thus potentially a force for stability. But it can also become a force for instability, especially so when the low-yielding currency is one of the C6 and the high-yielding currency one of the emerging market currencies where there is no very deep money market to absorb the impact.

THE RMB

So where is the RMB in all of this? According to Yu (2014), one consequence of the global financial crisis was the policy decision to internationalize the RMB, beginning with the trade settlement scheme in 2009. Given the underdeveloped character of domestic money markets, as well as that of the domestic banking system, the decision was made to first develop an offshore RMB market in Hong Kong. Over the subsequent five years, much of the growth of that market has been driven by arbitrage, rather than fundamental demand by non-China borrowers for RMB loans and non-China lenders for RMB deposits. The offshore RMB market is a long way from anything resembling the offshore dollar market. But it is early days, and the modern Eurodollar market also had its origin in arbitrage (He and McCauley 2012).

The urgency of the internationalization effort seems to have been driven by the enormous and growing dollar exposure of the PBoC, an exposure that has ironically been made even larger in recent years by sterilization of arbitrage-driven recycled dollar borrowing by the corporate sector. The PBoC has on its balance sheet an over US\$4 trillion foreign exchange swap exposure, long dollars and short RMB, which it needs to manage and ultimately liquidate. At the moment, however, it is hard to see any alternative balance sheet that is able to absorb such a massive exposure.

From this perspective, the ultimate objective of internationalization would seem to be about creating a robust private market with the capacity to absorb some of this exposure. In the absence of an RMB-denominated capital market, however, offshore money markets are probably not enough. Currently, low yields on offshore RMB bond issues, by comparison with onshore, are being driven by a shortage of product compared to the surging offshore RMB money balances (bank liabilities) that are looking for a home (bank assets). Expansion of offshore RMB-denominated capital markets would meet this private demand in the short run, and eventually create the

possibility of a PBoC exit by trading non-RMB assets for RMB assets.

It follows from the preceding that when talking about the internationalization of the RMB, one is talking about a shift in the position of the RMB both in terms of its place in the network of international private money markets, and in terms of its place in the international central bank backstop system. At the moment, the offshore RMB market (known as CNH) is distinct from the domestic market (known as CNY), much as the offshore Eurodollar market used to be distinct from the domestic dollar market (McCauley 2011).² And the most significant link to the international backstop is the relatively limited RMB swap line with the Bank of England.

One lesson of the global financial crisis is that capital markets do not manage themselves and occasionally require support by national central banks. Will there emerge a class of RMB-denominated capital assets that the PBoC is willing to backstop? Foreign-issued RMB assets seem unlikely to qualify, and backstop of domestic-issued RMB assets will not stabilize the larger international market so long as capital controls keep these markets separate. As in the case of money markets, internationalization of the RMB is likely to be held back mainly by continuing control of domestic private money markets and domestic private capital markets.

STEPS GOING FORWARD

This brings us to the three most prevalent views within China on the possible future of the IMS: “US dollar remains dominant; US dollar, Euro and RMB stand like the legs of a tripod; and Special Drawing Rights (SDR) becomes a major global currency” (Wu and Qiao 2013).

Some hope is being attached to the third view, not only as an alternative to dollar hegemony, but even more as a potential means of disciplining the dollar by requiring a dollar-SDR peg. In light of the developments recounted above, together with significant conceptual and practical issues, this hope seems likely to prove illusory. But the second scenario, which has the RMB rising to reserve currency status, seems equally illusory insofar as the lesson of history is that international money is typically an international extension of a national credit money system, and the Chinese national credit money system is currently quite underdeveloped. The first scenario, which envisions a recommitment to a dollar reserve system, also seems illusory insofar as US Congress has made it quite clear that the Fed’s responsibility is domestic, not international.

² The annex on page looks at some of the mechanics of internationalization and the implications for the relative price of onshore and offshore RMB.

This report lays out a variant of the first scenario as the most realistic projection of current trends. The challenge for China is to figure out how exactly it wishes to manage its contact with that emerging system. Since it seems likely, and possibly even desirable, that domestic financial development within China will proceed gradually and cautiously, internationalization of the RMB to full reserve currency status is likely to occur on a similar, possibly even more gradual, time scale. At present, the Chinese central bank acts more or less as lender of first resort, absorbing all fluctuations in net international settlement on its own balance sheet. This role has led to massive reserve accumulation, involving buildup of currency risk that the domestic financial system is currently ill equipped to bear.

Current efforts to support development of the offshore RMB market can be understood, in this context, as the first

step toward developing a deep and liquid RMB money market that could take some of the burden off of the central bank, at least in normal non-crisis times. To be successful, this will involve development of onshore money markets and then integration of offshore and onshore, with consequent equalization of forward interest rates. The danger, however, as noted above, is that first-resort money markets can act not to absorb shocks, but to amplify them. At a moment when the financially developed world seems intent on using monetary policy as a tool of domestic economic stimulus, this challenge is especially great. But it is exactly the financial underdevelopment of China that makes it most vulnerable to these external policy shocks: without a deep forward market, where forward rates can move to provide incentive to absorb shocks, the only shock absorber is the balance sheet of the central bank.

Technical Box One: A World Currency

The debate about using SDRs as a substitute for the dollar, starting with Triffin (1957; 1960) and continuing on to the present, is perhaps the most prominent modern example of the search for an alternative to the national basis of international money (Zhou 2009).

A political framing of the matter, however, obscures the economic reality that national credit monies are not just the issue of any political authority, but rather mostly private issue by banks and other financial intermediaries. Most national monies (bank deposits) are actually private promises to pay the ultimate public monies (currency), on demand at par. National monies are in this sense inherently hybrid public-private entities (Mehrling 2013). This is important to emphasize because it is the private money face of the hybrid, not the public money face, that financial centres have ever mobilized for international use. International money is not the encroachment of one sovereign by another sovereign, so much as it is the encroachment of a putatively sovereign sphere by the dictates of the private marketplace.

In this regard, the political framing has had the further unfortunate effect of focusing excessive attention on the quantity of reserves that are held by the sovereign issuer and, hence, presumably available to redeem the international money should foreign holders request such redemption. What gets obscured by this lens is the more relevant issue of the ability of the international financial centre to generate a positive net cash flow in its direction, which would meet demand for redemption without requiring reserves. The distorted focus is particularly unfortunate because it is precisely the ability to generate positive net cash flow that qualifies the liabilities of the international financial centre as international money. Famously, Keynes' bancor plan for international monetary reform at Bretton Woods was a somewhat quixotic attempt to create a supranational bank that would use its balance sheet to create symmetry in the international payments system, by relaxing the present survival constraint binding deficit central banks while offering bancor credits as payment to surplus central banks. As an attempt to offer elasticity at a time of extreme discipline, Keynes' plan may perhaps be applauded, but as a proposal for international settlements in normal times it was an immediate non-starter. The United States, realizing that it would be the sole surplus agent, rejected Keynes' plan in favour of its own plan, which maintained as an organizing principle for international payments the same asymmetric settlement constraint that serves as an organizing principle farther down in the system. The dollar, not bancor, would be the international money, *de jure* as well as *de facto*.

At the same time, and in recognition of the fact that it would be difficult for the United States to realize potential surpluses in an environment of dollar shortage, the United States took concrete steps to provide the needed means of dollar payment, initially through official grants (such as the Marshall Plan) and then more permanently by supporting the development of private international financial intermediation, which is to say by borrowing short and lending long. Instead of Keynes' plan for a supranational bank offering bancor liquidity to individual central banks, the United States became, in effect, bank to the world, offering dollar liquidity to all comers (Despres, Kindleberger and Salant 1966). Further, instead of Keynes' plan for fixed exchange rates and completely elastic official bancor credit, we got the present hybrid system ranging from monetary unions, to managed exchange rates, to floating exchange rates with bilateral central bank swap lines.

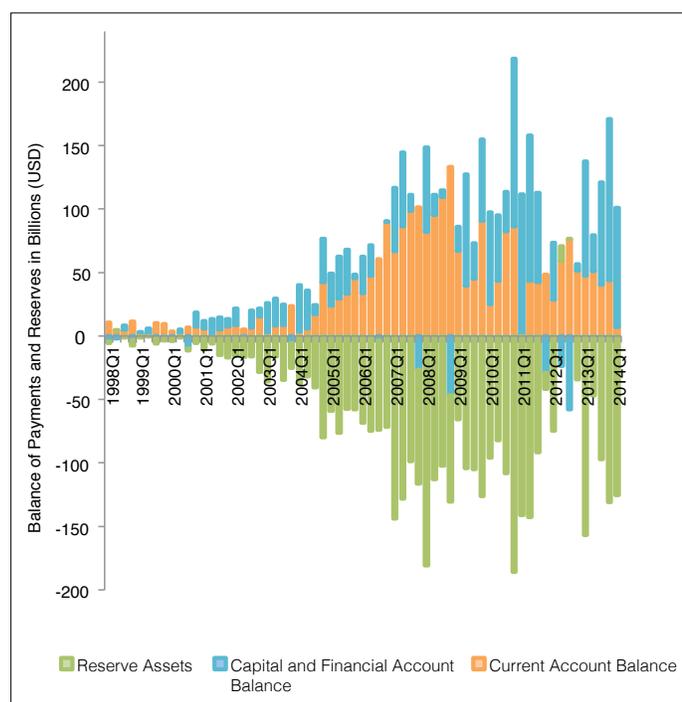
PAYMENTS AND RISK CONSEQUENCES OF CHINA'S GROWTH MODEL

The preceding section explored the IMS as a payments system. In this section, the analysis is extended to look at the domestic financial consequences of China's pattern of payments. In particular, the balance sheets of the central bank and the banking sector, and what these balance sheets tell us about the exchange rate, interest rate and credit risks within the financial sector are examined.

PAYMENT FLOWS — INTERNATIONAL AND DOMESTIC

China has, especially since about 2000, maintained a large net inflow of payments associated with the net export of goods. China has also, for most of the last two decades, maintained a large net inflow of payments (of foreign exchange) associated with net exports of claims (i.e., the issuance to foreigners of claims on China). With China's highly managed exchange rate, these so-called twin current and capital account surpluses have been balanced by flows on the reserve account held on the books of the central bank (see Figure 2).

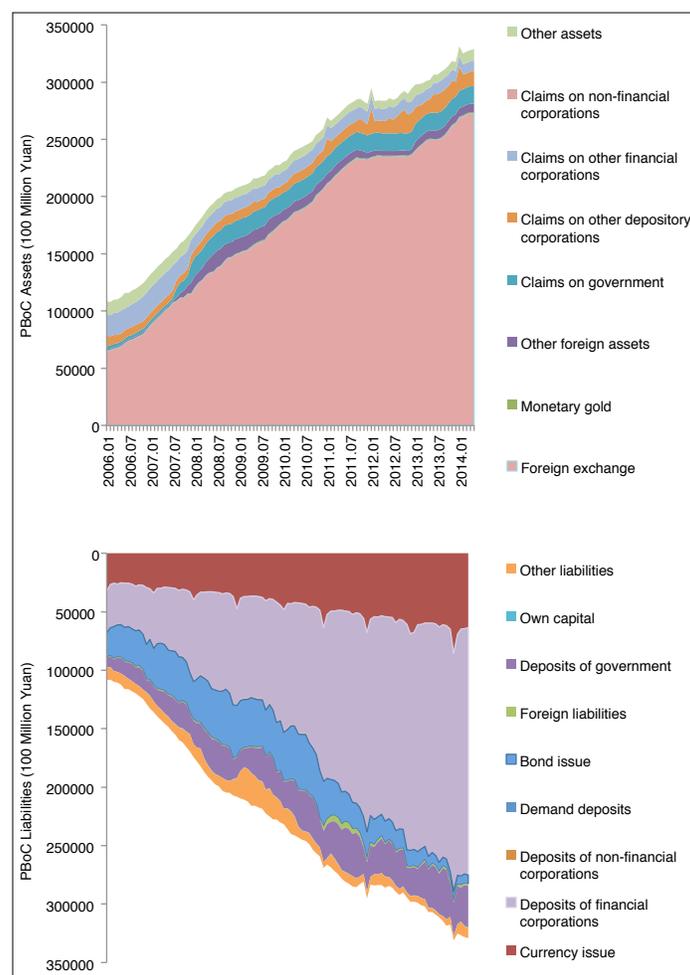
Figure 2: China's Balance of Payments



Data source: State Administration of Foreign Exchange.

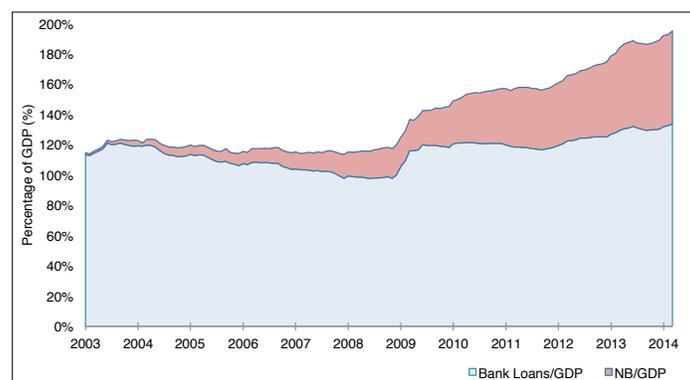
The central bank has, therefore, become the point at which China's domestic monetary system engages with the IMS. Moreover, as can be seen from Figure 3, the absorption of the current account and capital account surpluses dominates the PBoC's balance sheet.

Figure 3: The PBoC's Balance Sheet in Yuan
(CNY Hundred Millions)



Data sources: The PBoC ("Balance Sheet of the Monetary Authority") and authors' calculations.

Figure 4: China's Total Social Financing



Data sources: The PBoC ("The PBoC's Social Financing Statistics").

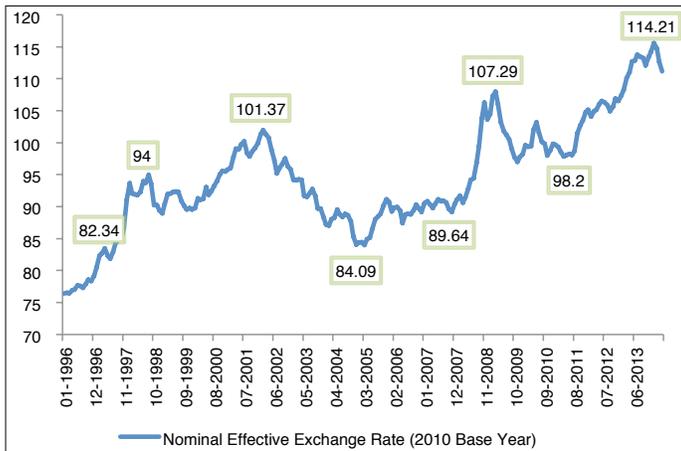
Just as large international payment flows have accumulated as foreign exchange reserves, so have large domestic flows accumulated in the domestic banking and shadow-banking system. As measured by the evolution of total social financing, credit as a percentage of GDP expanded very rapidly from less than 120 percent in 2008 to nearly 200 percent in 2014, with most of the growth occurring outside the formal banking sector (see Figure 4).

THE PBOC'S RISK EXPOSURES

Exchange rate policy has been dominated by management of the US dollar-RMB onshore (USD/CNY) exchange rate, although the PBoC is now understood to set its target with reference to a basket of currencies (Fang, Huang and Niu 2012). The essence of the policy has been to provide a stable environment for the growth of exports, and its implementation has meant that the PBoC has, in practice, had to resist appreciation of CNY.

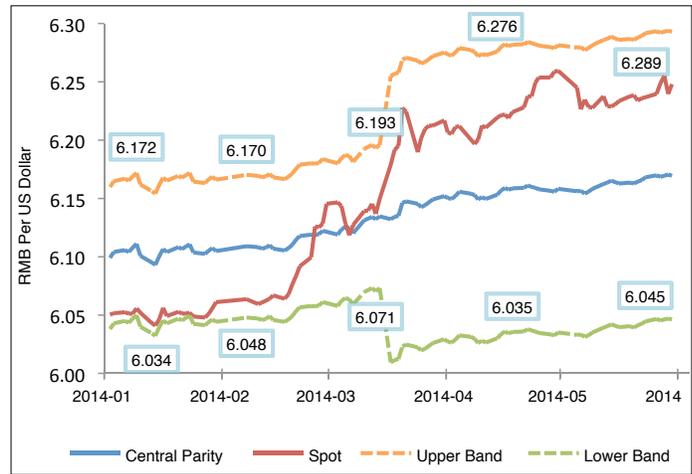
China has made substantial progress toward greater exchange rate flexibility in the past decade, as evident in the movements of its nominal effective exchange rate (see Figure 5). At the same time, the USD/CNY rate has been heavily managed. For the 10-year period up to mid-2005, the RMB was essentially pegged to the US dollar. It has subsequently appreciated significantly, yet foreign exchange reserves continue to accumulate. In March 2014, the PBoC widened the trading range for the RMB against the US dollar to plus and minus two percent around the set parity rate. On the one hand, the wider range points to further acceptance of greater exchange rate flexibility. On the other, when the range was widened, the parity rate was set at a level representing a significant depreciation from the then-peak rate (see Figure 6).

Figure 5: The Nominal Effective Exchange Rate of the Yuan



Source: The Bank for International Settlements.

Figure 6: The Nominal Exchange Rate of the Yuan



Data sources: China's Foreign Exchange Trade System.

The payment mechanics of China's exchange rate policy are illustrated in Figure 7, which lays out the relevant transactions in T-accounts. The PBoC creates CNY reserves for the domestic banking system against its purchases of US dollars. Given the tight capital account and the existence of a large number of export firms, the marginal source of these US dollars for banks is their exporting customers. The PBoC invests the reserves in government securities and sterilizes these transactions. This account of the policy is framed in terms of balance sheet quantities, which is useful for understanding the balance of payments and developments in the PBoC's balance sheet.

In accommodating all inflows on its own books, the PBoC gives up control over the size of its balance sheet. When there is a deficit in payments on the current account, it must contract its holdings of foreign assets and domestic reserves; when there is a surplus, as has generally been the case in China, it must expand. The PBoC thus thwarts price changes by absorbing quantity flows (Treynor 1987). The large twin surpluses on the current and capital account have thus generated a large balance sheet position at the PBoC. With this expansion of USD assets, the CNY liability position of the PBoC can be thought of as providing liquidity to the market for USD/CNY foreign exchange swaps, performing the service of a derivatives dealer in that market by taking on the underlying exposure.

The normal management of the exchange rate — that is, the normal absorption of surpluses of payment on current and capital account — involves the creation and management of large amounts of domestic (or national) money. On the fear that this increase would be inflationary, the PBoC has intervened to sterilize its foreign exchange intervention. In the past, this was primarily done by issuing sterilization bills (Bell and Feng 2013). In payment terms, these bills absorb the high-powered money as they are issued, releasing it again at the maturity of the bill. The issuance of central bank bills at rates exceeding the returns on USD

securities has resulted in the PBoC having also taken on significant interest rate risk and losses.

More recently, the PBoC has relied less on sterilization bills and more on its control of the reserve ratio requirement. This too impacts domestic payments directly, primarily through those major commercial banks that have reserve accounts at the PBoC. (Banks which do not have reserve accounts at the PBoC settle using correspondent accounts with participating banks.)

Commercial banks issue domestic private deposits and extend credit, especially to state-owned enterprises (with government guarantee) and to local governments (with varying levels of central government guarantee). Commercial banks' holdings are characterized by, on the asset side, low-risk debt, funded by the issuance of deposits at managed deposit rates — the only remaining price regulation in the form of a ceiling on deposit rates (Chen, Chen and Gerlach 2011). This appears to have two main consequences. First, in finance terms, the exposure for banks is equivalent to an interest rate swap. In this case, the controlled interest rates essentially guarantee a positive stream of net payments to this swap. Recent liberalization of lending rates has not fundamentally weakened this arrangement. Second, the combination of the use of reserve requirements for sterilization purposes and the force-feeding of assets onto the bank's books, has created the strong incentive for banks to move risks off their balance sheets to the shadow-banking sector.

Figure 7: The T-Accounts of China's Exchange Rate Policy

Onshore bank		PBOC	
1.	+USD		
	+USD deposits		
2.	-USD	+USD	+CNY rsvs
	+CNY rsvs		
3.		-USD	
		+T-bill	
4.			+CNY rsvs

Mainland exporter		Offshore importer	
1.	-goods		+goods
	+USD deposits	-USD	
2.	-USD deposits		
	+CNY deposits		
3.			
4.		+CNY rsvs	

Source: Daniel Nielson.

Note: The PBoC accommodates a surplus of payments in USD on the current account. The transaction is analyzed in four steps: 1. Export of goods and payments in USD; 2. Foreign-exchange conversion to CNY; 3. Purchase by PBoC of reserve assets; 4. Sterilization using reserve ratio requirement.

Indeed, as discussed in the section Payment Flows — International and Domestic, the recent heavy reliance on credit expansion has occurred mainly outside the banking sector, in the rapidly expanding shadow-banking sector of the Chinese financial system. Controlling credit on the books of the banking system, in an environment of high demand for credit and high supply of funds, has had the consequence of pushing marginal credit creation to more lightly regulated balance sheets, most characteristically those of wealth management products (WMPs).

The shadow-banking system provides the desired credit to risky borrowers against deposits with (perceived) money-like characteristics. Rather than pass the credit risk on to depositors, the commercial banks provide guarantees of varying levels of credibility. The WMPs and their sponsors, then, effectively insure WMP depositors against credit risk. Together, the two exposures — risky credits and deposit guarantees — are equivalent to a credit default swap (CDS) position. WMP deposits are money-like when times are good, and so it is expected that this CDS is likely underpriced. Cash inflows to banks and shadow banks are positive when defaults are low, but when defaults rise (or are perceived to be on the rise), cash outflows will be onerous.

This payments, or balance sheet, perspective can be summarized in terms of three basic types of financial risk in the Chinese economy: exchange rate risk, interest rate risk and credit risk. Each type of risk is embodied by a swap of IOUs — foreign assets for domestic liabilities, long assets for short liabilities, risky assets for risk-free assets — and can therefore be seen as equivalent to a position in a swap arrangement. The PBoC bears foreign exchange risk in the form of what is effectively a foreign exchange swap position, the commercial banks forego any interest rate risk in the form of what is effectively an interest rate swap position and the shadow banks, along with other marginal sources of funds, bear credit risk in what is effectively a CDS position. The simple T-accounts that follow summarize this analysis of who bears what risk within China's financial system.

Figure 8: T-accounts

PBOC		Commercial banks	
+USD	+CNY	+Risk-free lending	+Deposits
Shadow banks			
+ Risky assets	+Risk-free assets		

Source: Authors.

An overriding question remains, however: who bears the ultimate risks in the system? In the late 1990s, when China's banking system was virtually insolvent, the government transferred a large volume of non-performing loans to four newly created asset management companies, which are still in existence (Ma and Fung 2002). Were some of the current risks in the banking system to materialize, the government could respond in a similar fashion. The possibility exists, however, due to the underdeveloped nature of the domestic financial system and the absence of a clear crisis management framework, that these risks could end up — along with foreign exchange exposures — on the balance sheet of the PBoC as the backstop for the entire Chinese financial system.

THE POLITICAL ECONOMY OF REFORM

In light of the analysis in the first two sections examining the interactions of the Chinese currency with the IMS and the particular challenges facing the PBoC, this section examines the political economy challenges that both China and the global community face in the years to come.

China has benefitted enormously from the openness of the global economy through trade integration.³ A basic premise of this report is that China's future prosperity relies on its continued role and further integration globally. As this possibility materializes, it also holds the prospect of importantly influencing both global economic cooperation and the functioning of the IMS. The two are inseparably linked.

³ Deng Xiaoping's "opening-up" policy started in 1978. Deng's reforms, which were introduced gradually, focused on opening the Chinese economy to foreign trade and investment through special economic zones in southern provinces.

In simple terms, the next wave of China's global integration will be financial. The Third Plenum of November 2013 appears to have given important momentum to this process with its emphasis on market-based reforms. What remains unclear is how extensive the reforms will be, and over what time frame they will be introduced.

There are those who doubt much in the way of reforms will actually occur. Tradition and entrenched views within the Chinese system, it is argued, will dominate. Others, however, see a resolve on the part of President Xi Jinping and the current leadership to move forward. They see Xi's initiatives and policy statements as evidence that a coalition of the willing exists in China and that momentum for reform is building.

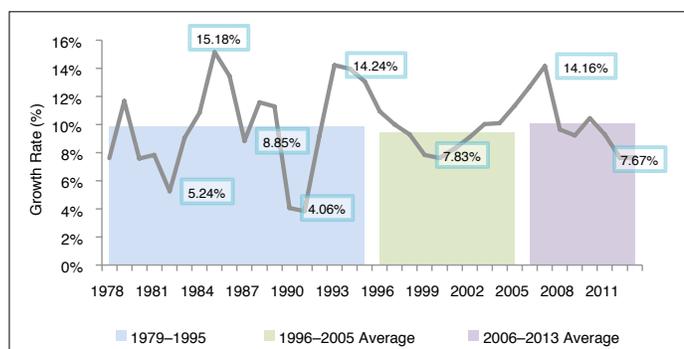
An important unanswered question, however, is whether a one-party governance structure can successfully bridge to a more decentralized economic management structure that puts more emphasis on market outcomes. The answer this report offers is yes, by putting in place a strong institutional foundation, where institutions in China have clear remits consistent with the government's objectives for market-based outcomes and operate at arm's length from government, but have strong direct lines of accountability to government for achieving those objectives.

At the same time, the willingness of the international economic community to embrace China as a respected partner with a role commensurate with its economic standing can both positively influence the environment for reform within China as well as contribute to a more resilient system of global economic cooperation and institutional reform.

SUSTAINING ECONOMIC GROWTH: A PREREQUISITE OF REFORM

Between 1978 and 2013, China's economy expanded at an annual rate of 9.8 percent. On a per capita basis, the growth averaged 8.7 percent over the same period.⁴ These are impressive numbers measured against any comparable metric. However, behind these aggregate numbers is a story of dramatic change. While it shows an economy with considerable cyclical variation, it also shows an economy that underwent a marked change in the mix of aggregate demand as China became increasingly integrated into the global economy. The story, however, also tells of an economy that has developed imbalances evident

⁴ Calculations are based on World Bank statistics measured in constant local currency units.

Figure 9: Real GDP Growth Rate, 1979–2013 Average

Data source: The World Bank.

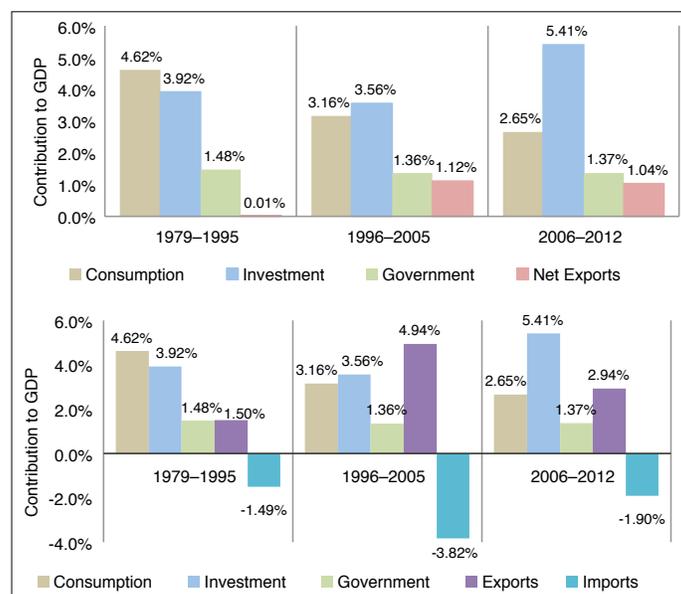
across sectoral balance sheets that put in question the sustainability of China's current growth model.

Over the period 1979–1995, growth in China averaged 10 percent, with annual GDP growth ranging from a high of 15 percent in 1984 to a low of around four percent in 1990 (see Figure 9). The main contributors to growth were personal consumption and fixed capital investment, with both of these two components of aggregate demand also showing the largest swings in year-over-year growth (see Figure 10).

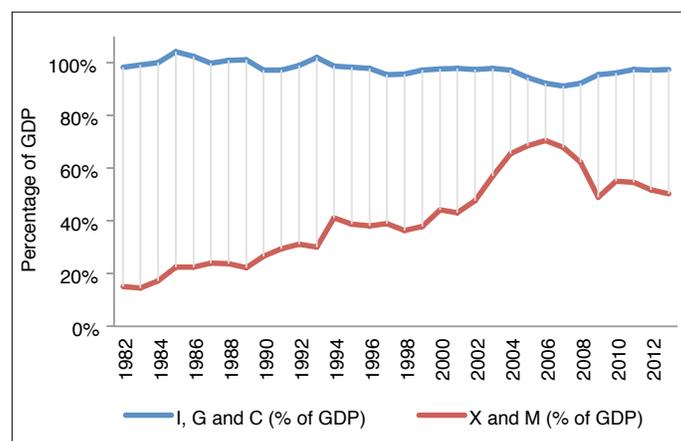
For the 10-year period 1996–2005, real GDP growth averaged close to nine percent, only marginally below the previous 16 years. As well, growth was much more stable, ranging from a low of 7.6 percent in 1999 to a high of 11.3 percent in 2005. As in the earlier (1979–1995) period, both consumption and investment were the main contributors to growth through 1996–2005, but with investment becoming the more important of the two.

This shift toward a reliance on investment as an engine of growth became particularly pronounced in the aftermath of the global financial crisis. Indeed, China put in place a massive stimulus package that focused primarily on increases in investment to offset the decline in foreign demand. Over the crises years, 2008–2010, investment grew on average by 14.2 percent per year. Moreover, as discussed in the section Payments and Risk Consequences of China's Growth Model, this surge in investment was financed primarily through credit extended by the shadow-banking sector to fund state-sponsored property developers and purchases of commercial and residential real estate.

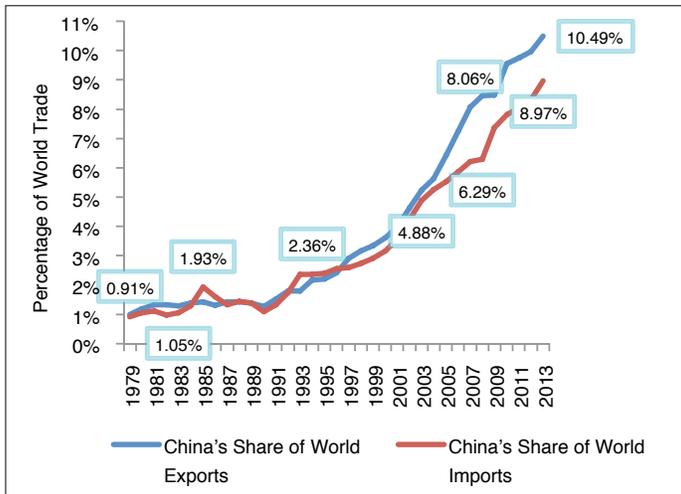
Starting in around 2001, another dramatic change in the composition of aggregate demand occurred in China. With China's accession to the World Trade Organization in 2001, international trade became a rapidly expanding component of aggregate demand. Both exports and imports of goods and services began to rise very sharply.

Figure 10: Contribution to GDP Growth by Components

Data sources: The World Bank and authors' calculations.

Figure 11: China's Trade Openness

Data source: The World Bank.

Figure 12: China and International Trade

Data source: The World Bank.

Indeed, as a measure of China's expanding integration with the global economy, the sum of exports and imports (to capture the flow of goods and services crossing China's border) rose from an average of about 30 percent over the 1982–2000 period to an average of close to 70 percent before the onset of the global financial crisis (see Figure 11). As a result of the crisis, China's export and import growth slowed sharply, relative to other components of aggregate demand, especially compared with investment, which as a percentage of GDP rose to its highest level over the entire period since the early 1980s.

Preserving and developing its trade relationships should remain a strategic policy objective. China must continue to develop new markets and avoid disruptions to its supply chains. As well, further integration through trade will enable China to continue to benefit from productivity spillovers and having access to pools of global technology. But it is unrealistic for China to expect that its share of global trade can continue to expand at the rate it has over the past 15 years.⁵ China's exports as a share of global trade rose from an average of around one percent over 1978–2000 to above 10 percent today (see Figure 12). At these levels, the traded goods sector can remain an important source of growth for China without requiring its share of global trade to continue to expand.

The concentration of growth in investment and trade has given rise to risk exposures and debt accumulation clearly evident in the flow through to China's sectoral balance sheets, as set out in the preceding section. Most striking has been the massive accumulation of foreign exchange reserves on the PBoC's balance sheet, exposing

China's central bank to a very pronounced long US dollar position. The predominant role of credit in support of the current growth model is also clearly evident in the strong credit expansion outside major banks. Moreover, shadow-banking activities, which are subject to less regulation and supervision, have exhibited extensive maturity mismatches and high leverage. And the concentration of investment in real estate property has produced a chronic oversupply in that market, representative of the worrisome trend evident now over several decades of investment flowing to low-productivity and high-risk projects.⁶

The upshot of these sectoral imbalances is the need for a three-pronged shift in China's growth strategy: a shift in the composition of aggregate demand growth toward more reliance on domestic demand; a shift within domestic demand from investment to consumption; and a redirection of investment to the higher-productivity, non-state sectors, with a growing emphasis on services investment. Along with the challenge of how China wishes to engage the evolving IMS, Chinese policy makers need to bring about this transformation on the real side of the economy as well.

THE IMPORTANCE OF POLITICAL WILL

Political leadership and will are essential to bring about reform, especially of the magnitude suggested by this report. Political will can be seen as constituting an understanding of the need for action, availability of appropriate policy tools and willingness to apply the appropriate policies. All systems, be they economic or governmental, give rise to vested interests over time. This makes the challenge of significant reform all the more difficult to bring about. It requires a vision of the ultimate objective and the will to identify and utilize the necessary instruments.

In China, the lack of transparency in the political and decision-making processes makes it difficult to gauge the likelihood of a particular outcome. This is what perplexes many observers. While the Third Plenum set out a broad vision, its translation into concrete policy actions remains obscure and subject to a political system that most outside observers do not understand.

The exercise of political leadership and political will at the regional and global level has been seen as even more problematic than at the domestic level. A prime example is the current governance structure of the IMF carved out by the economic powers of the 1940s and still largely unreformed. For countries, such as China, whose influence is disproportionately low to their economic weight, this raises serious questions of legitimacy, which, in turn, constrains the ability of the IMF to be seen as an "honest

5 If over the next five years world trade were to expand at 3.17 percent, which was the average in the past five years, and if China's share of world trade were to expand by around five percent, China's exports to the rest of the world would have to expand by over 11 percent per year.

6 See, for example, Wang and Yao (2001), Bosworth and Collins (2008) and Brandt and Zhu (2010) for a growth accounting approach to the sources of China's growth.

broker” enforcing the rules of the game. A number of studies, including several by the Independent Evaluation Office of the IMF, have consistently underlined the perception of many emerging markets, including China, of a lack of even-handedness in the Fund’s surveillance. The responses by the Fund during the recent financial crisis, including in particular the euro-zone crisis, has reinforced a view that the “rules” get changed to suit the interests of the major developed economies and that the emerging markets are “rule-takers” rather than full participants in the design and management of the global economic system.

To change this perception, the need for political leadership and political will is as strong at the international level as it is nationally in China. In response to the 2008 financial crisis, the G20 was elevated to the leaders’ level and proclaimed as “the premier forum for economic cooperation.” Cooperative policy responses were developed, which many credit as having avoided a much greater crisis. As leaders turned to address economic prospects for the medium term, they sought to articulate a shared vision, built around the Framework for Strong, Sustainable and Balanced Growth. The hope was that this vision would provide the backdrop for countries to articulate their policy measures to support achievement of these goals, thereby enhancing global growth prospects. Regrettably, the associated Mutual Assessment Process, designed to give meaning to this commitment, has fallen far short of its objectives and is perceived by many observers as moribund. The current chair of the G20, Australia, has attempted to reinvigorate the process by proposing a commitment to enhancing global growth potential by two percent over the next five years, but many observers remain skeptical that governments will embrace new policy measures to help achieve this.

The reality is that, absent a crisis, national windows for policy action open and close over time, and it is extremely difficult to keep leaders on the same page. As has been witnessed in previous crises, when the immediacy of the crisis fades, the lessons of the benefits of collective action also seem to fade and the impulse for reform weakens. And the G20, established to bring developed and emerging markets together and to develop a shared framework for enhanced economic policy cooperation, now faces an identity crisis weakening efforts at policy cooperation.

BUILDING STRONG, ACCOUNTABLE INSTITUTIONS

Strong institutions provide the basic building blocks on which policy actions can be developed and implemented, and can play a vital role, both domestically and internationally, in providing the confidence to allow reform to proceed. This requires further action both within China and internationally.

At the national level, improved governance requires an integrated, long-term strategy built upon cooperation between government(s) and citizens. It involves both participation and institutions. The rule of law, accountability and transparency are technical and legal issues at some levels, but also constitute fundamental principles that interact to produce government that is legitimate, effective and widely supported. These principles can apply in different political systems.

On one level, it would appear that China has embarked on a plan to strengthen its institutions, as reflected in a report on recent statements by State Councilor Ma Kai:

The State Council plans to transform government functions at the ministerial level to reduce administrative intervention in the market and on social issues, State Councilor Ma Kai said in a report to the parliament’s annual session on Sunday.

The plan by China’s Cabinet aims to build an efficient and law-based government with a clear division of power, reasonable distribution of labor and well-defined responsibilities, Ma said while explaining the report on the State Council’s institutional reform plan. (Xinhua 2013)

On another level, however, the challenge for China will be resolve in the implementation, with observers divided as to whether sufficient political will exists to actually bring about this change. This report stresses the importance of developing private money markets to enable China to more fully engage with today’s global financial markets and further it progress in internationalizing the RMB. But much more is involved: reforming the state-owned enterprise system to bring about fundamental change in the function of government (to a monitoring role rather than a management role); establishing competitive labour markets (which implies the development of social safety nets to facilitate this transition); and a hardening of financial constraints through reforms of the fiscal systems and the commercialization of banks. Each of these on its own represents a tremendous challenge. Collectively, a huge and complex systematic transformation is involved. Fully-developed institutions with clear remits and properly aligned internal and external incentive structures should be capable of delivering good outcomes even in a one-party system. At the same time, the challenge to vested interests is clearly enormous and a process of change can be expected to generate huge resistance. It will not all be smooth sailing. This is where political resolve and clear direction will be important.

The challenge is perhaps even greater at the international level. As noted above, a number of studies have documented the views of China and many other

emerging market economies on the current Bretton Woods organizations' lack of legitimacy. The establishment of the G20 was, in some ways, an attempt to short circuit the inability to achieve reform and to provide political leadership to the global economy. Yet, as pointed out above, this attempt is faltering.

Celebrated economist Charles Kindleberger (1973) has written that the world needs a benevolent hegemon: a dominant economic power able and willing to take the interests of smaller powers and the operation of the larger international system into account. Kindleberger's "theory of hegemonic stability" is perhaps the leading approach used by political scientists to understand how order can be maintained in an otherwise anarchic international system. While the United States has arguably played that role for more than half a century, the rise of China, as an economic superpower, now potentially threatens that role.

Through its overwhelming economic size and strength and the dollar's role as the dominant reserve currency, the United States has led the system, as set out in the first section of this report. A crucial factor in addressing the 2008 financial crisis was the actions by the Federal Reserve in providing liquidity to the world. Some argue that given the size and depth of US financial markets, this role is unlikely to be seriously challenged in the foreseeable future. However, others argue that with the size of the Chinese economy poised to surpass that of the United States, the ability of the United States to "lead" the global system is much more constrained than in past decades. In addition, political dysfunction in the United States and growing attempts to constrain the Fed also raise questions about the leadership role it could be expected to play in the future.

Even if China were to face a long road to develop and truly open up its economy, the challenge remains of how to manage the global system to build a common understanding on the rules of the game. In a world concerned with "secular stagnation," the potential gains from cooperative actions are too important to be ignored.

And were China to evolve more quickly, the world would face the prospect of two hegemons — a situation not known in recent history. This could happen much more quickly than many anticipate — after all, the transfer of the position as the world's leader to the United States from the United Kingdom largely occurred over a decade.

What might be the implications of such a situation for global economic cooperation and the functioning of the IMS? Arvind Subramanian (2014) recently wrote:

One must keep in mind a broader truth, or rather the big dirty secret, about cooperation in general. *Vis-à-vis* a dominant power, on the one hand, no

cooperation can be effective if some critical self-interest is at stake for the dominant power, and on the other, no cooperation might even be necessary if natural forces are at work that align self-interest with the collective interest. Cooperation is only necessary, and perhaps possible, for the muddy middle, the gray zone where neither the consonance of self-interest and collective interest nor the clash between the two is particularly strong....For that grey area, multilateralism offers the best hope for placing checks on dominant economic powers.

The global challenge we face is to reform or create strong, accountable and transparent institutions that can help establish the rules of the game (rule of law) and provide a framework where intersecting interests can be addressed in a manner consistent with a broader vision serving the global economy. Failure to achieve the necessary institution building, at either the national level in China or at the global level, will leave the system more vulnerable to shocks and subpar outcomes.

Technical Box Two: Policy Coherence

The policy frameworks within which policy actions are taken and markets operate, are central to good governance and the ability of an economy to deliver desired economic and social outcomes. There are lessons from the experiences of both developed and developing economies in terms of the more robust and resilient policy frameworks that have been put in place over time. Policy frameworks directed to achieving price stability, fiscal sustainability, sound financial regulation and open engagement with the global economy have helped establish the economic principles supportive of economic growth and an ability to respond to economic and financial shocks. Countries with coherent economic policy frameworks, such as Australia, Canada, Chile, Korea and Mexico, weathered the fallout from the global financial crisis better than those with evident gaps in their policy frameworks.

The main attributes that make up a coherent policy framework are:

- a clear and achievable objective;
- the tools capable of meeting the policy objective;
- clear lines of responsibility for implementing policy; and
- a well-defined process of accountability.

At a time when countries have again become inwardly focused, we need to double-up in our efforts to foster a deeper and shared understanding that the benefits of a globally integrated economy do not come without exposure to shocks, and that it is in the national interest to manage pressures in the system through multilateral policy cooperation. New avenues of research, which expand beyond the more traditional class of models (Obstfeld and Rogoff 2002; Hamada 1976), are helping us to better understand the benefits of collective action in the aftermath of the global financial crisis in preventing a buildup of systemic risks in the financial system, and dealing with the fallout were those risks to materialize.⁷

Benes et al. (2013), for example, analyze the effects of fiscal and macroprudential policies using various models to estimate the gains from cooperation in times of financial stress. While not without their limitations, these new classes of models strengthen and add to our toolkit in helping us understand the gains from international policy cooperation.

Indeed, the global financial crisis demonstrated that the financial system can be both the source and the propagation mechanism of shocks. The prevention and management of a buildup of systemic risks in domestic and global financial markets are only now beginning to be understood. Moreover, with interest rates at the effective zero lower bound, increasing reliance on forward guidance, and large-scale asset purchases in the form of both quantitative and credit easing, we have moved into new territory with insufficient understanding of the effectiveness of such policies, including the spillover effects from advanced to emerging economies.

CONCLUSION

This report has set out a conceptual approach to examining the IMS as a payments system. In so doing, it has highlighted the challenges facing China as it seeks to achieve its announced intention to liberalize its financial system and capital markets so as to allow markets to play a much greater role in the future. This transition is central to China's future ability to sustain its impressive growth profile. But the report also highlights the changes that have occurred in the functioning of the IMS resulting from the extraordinary growth of financial markets over recent decades. The global financial crisis of 2008 has underscored the complexity and interconnectedness in the world's financial markets, as well as the imperative for major economies to cooperate to avoid and respond to crises and in so doing enhance global growth and stability. The increasing integration of China into this evolving system represents an unprecedented challenge, both for

China given the magnitude of the policy changes required, and for the global economy given the interdependencies of today's global markets and the potential scope of China's engagement with the system. Through the conceptual approach set out in this report, the objective has been to provide an alternative perspective, or apparatus, to assist both Chinese and global policy makers better understand those challenges and, going forward, how to successfully meet them to the benefit of all.

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⁷ Taylor (2013) provides a historical and current perspective on international monetary policy coordination.

ANNEX: THE RELATIVE PRICE OF ONSHORE AND OFFSHORE RMB

The focus here is on the relative price of onshore and offshore RMB, which is mostly easily done using the exchange of each against the US dollar (Figure A1).

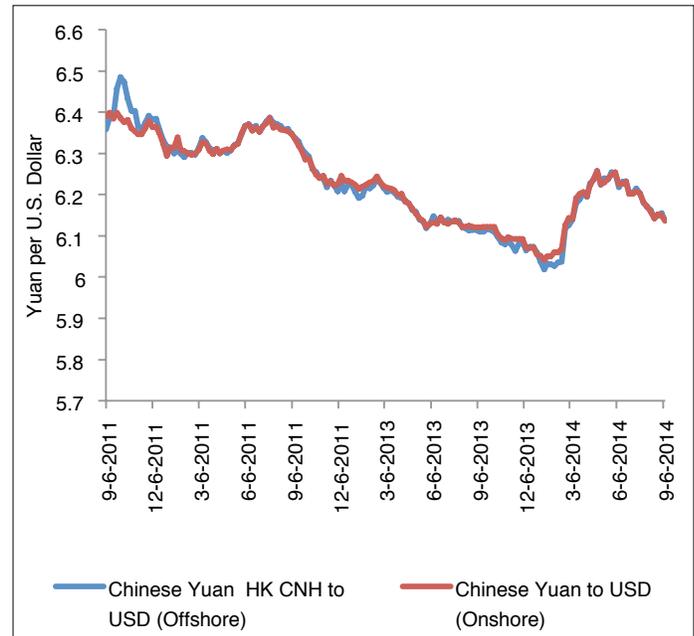
Over the period since 2010, the central tendency is RMB appreciation, with an episode of depreciation in early 2014; this tendency is shared by onshore CNY and offshore CNH, at more or less a constant spread — a constant relative price. Against this are the two periods during which the spread changed. In late 2010, market expectations of RMB appreciation were high, and net flows from the mainland to Hong Kong were high as speculators sought to obtain CNH balances. The Bank of China (HK) reached the quota on its net position, at which point further movements from onshore to offshore became impossible. The PBoC/Hong Kong Monetary Authority (HKMA) swap line was activated to provide CNH to the Hong Kong market. In 2011, net flows from offshore to the mainland again caused the quota to be exhausted, this time in the other direction (Minikin and Lau 2013).

In short, when net flows do not exhaust the liquidity provided by the offshore–onshore clearing system, CNY and CNH trade at a nearly constant relative price. Large net flows can exhaust this liquidity, pushing the relative price around. The quota at the clearing bank provides the first line of defence, and the PBoC–HKMA swap line provides a public backstop. If an international currency is to provide a means by which the large accumulated balances in the Chinese financial system are to be moved offshore, a considerable amount of such liquidity, with robust backstops, will be required.

Indeed the PBoC has signalled its intention to maintain parity between the CNY and CNH exchange rates. The main challenge it will face is in the wide divergence between onshore and offshore interest rates (see Figure A2).

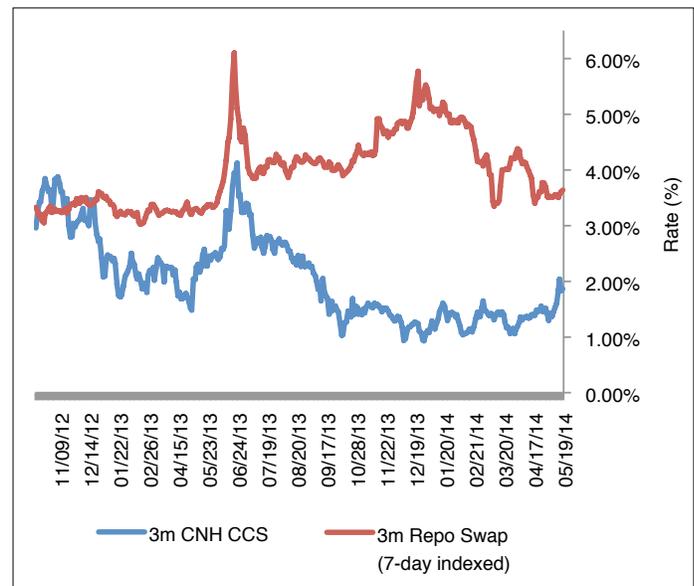
By covered interest parity, this differential could be balanced in the forward foreign exchange market — the higher yield onshore would be offset by a forward discount in the foreign exchange market. But a policy commitment to a fixed exchange rate between CNH and CNY would create an arbitrage between the spot rate and the forward rate implied by covered interest parity. Only capital controls could limit the resulting short-term funding flows.

Figure A1: Onshore and Offshore RMB to USD Exchange Rate



Data source: Thompson Reuters Datastream (2014).

Figure A2: Three-month Interest Rates, Onshore and Offshore RMB



Data source: Bloomberg Database (2014).

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ACRONYMS

C6	Federal Reserve, Bank of England, ECB, Swiss National Bank, Bank of Japan and Bank of Canada
CDS	credit default swap
ECB	European Central Bank
G20	Group of Twenty
HKIMR	Hong Kong Institute for Monetary Research
HKMA	Hong Kong Monetary Authority
IMF	International Monetary Fund
IMS	international monetary system
PBoC	People's Bank of China
RMB	renminbi
SDRs	special drawing rights
USD	US dollar
WMPs	wealth management products

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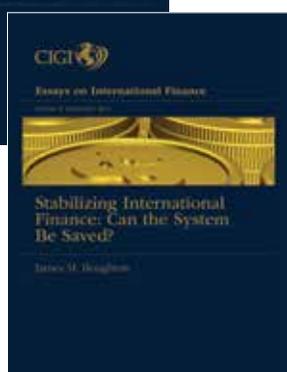
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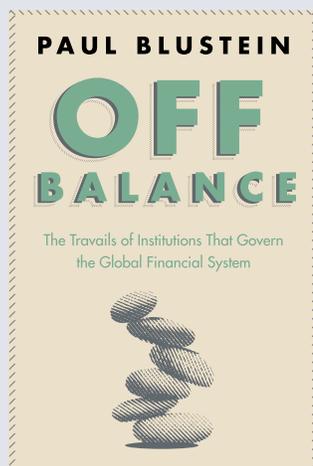
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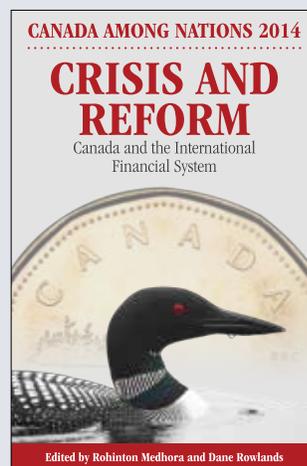
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