

## Chapter 1

# Mobilizing China's Financial Sector Efficiently and Safely for Sustaining Economic Transformation and Strengthening Global Financial Stability

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### The Interactive Nature of Modern Economic Growth

Just as it is necessary for the diet of a person to change when she moves from baby-hood to girl-hood, a country should also change its economic policies after reaching a different stage of economic development in order to facilitate if not enable the progression to the next stage. Without the change in both cases, subsequent performance would, at best, be below potential. The worst outcome from policy paralysis would not just be stagnation, but stagnation, followed by decay, and, then, by collapse. In short, one should always be skeptical about the adage “if it ain’t broke, don’t fix it” because the absence of policy changes could be due as much to ignorance and complacency as to caution based on the realization that our understanding of the world is imperfect.

In order for a leader to excuse her policy inaction by claiming to be being prudently cautious, she also has to claim that the state

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of our knowledge about the economic growth phenomenon is too inadequate to justify policy activism to quicken economic growth. Our considered judgment is that the degree of policy activism to pursue depends on, one, the analytical and implementation capacity of the state agencies, and, two, the stage of economic development. Clearly, if the leadership is ignorant and badly-advised on economic matters, or if the project implementation process is dysfunctional to the extent of being counter-productive, then economic stagnation from policy inaction could be preferable to a quicker economic collapse from wrong policies.

The stage of economic development matters because the lower the stage of economic development, the more we know about what to do to accelerate economic growth, and the more ways we also know how to do it. This is because the lower the stage of economic development, the larger is the number of countries that have already graduated from that stage, and hence the larger the pool of collective experiences for us to draw upon for guidance on how to facilitate economic development out of that particular low stage.

It is correct to say that the voluminous literature on the economic growth of Western Europe, the overseas offshoots of Western Europe, and Japan over the last two hundred years<sup>2</sup> had provided good guidance to policymakers in South Korea and Taiwan to launch successful catch-up growth in their economies in the mid-1960s. It is therefore also correct to say that, in 2013, we know more about what to do, and know more ways, to sustain economic growth in middle-income China than we know about what to do to sustain growth in the high-income United States.

China entered into the middle-income category in 2006,<sup>3</sup> a milestone still denied to its three large neighbors, India, Indonesia and Philippines which were richer than China in 1978. However, Woo *et al.* (2012) have warned that continued fast progress by China to high-income status cannot be taken for granted. Four of the five largest economies in Latin American — Argentina, Brazil, Chile,

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<sup>2</sup>A particularly helpful example of the literature would be Simon Kuznets (1966).

<sup>3</sup>This is according to the Woo's (2012) Catch-Up Index (CUI) which is the ratio of the country's per capita GDP per capita to US per capita GDP, with both measured in purchasing power parity units. In Woo's classification, middle-income begins with CUI at 20% and high-income begins at 55%.

and Mexico — have been in residence in the middle-income category at least since 1960. Furthermore, the secular decline in the Catch-Up Index (CUI) value of Venezuela, the fifth member, from its petroleum-induced high-income status pushed Venezuela down into middle-income status in 1980. And Malaysia is a nearer and more recent warning about the middle-income trap; Woo (2011). After having been hailed in 1993 by the World Bank (1993) as an East Asian Miracle economy, catch-up growth in Malaysia stopped in 1995.

Another way to describe the absence of catch-up growth in these large Latin American economies and Malaysia is to say that they are no longer experiencing what Simon Kuznets (1966) had called Modern Economic Growth (MEG). MEG is the type of economic growth that began in Western Europe in the late 18th Century, and it is distinguished from earlier types of growth on several dimensions: a sustained high growth rate in per capita output, large shifts in the composition of output, an increasing diversity in goods and services produced, and rapid institutional and ideological adjustments. MEG is not just magnification of quantities, it is also comprehensive transformation of qualitative features. MEG is the synergy produced by the two mutually-supportive phenomena of growth and transformation and not an outcome produced by technological progress alone. In short, the quintessential feature of MEG is continual change across the board, and this is the basis of our opening statement that a country should “change its economic policies after reaching a different stage of economic development in order to facilitate if not enable the progression to the next stage.”

Our research on economic growth in other countries has led us to the conclusion that China's successful economic transition from middle-income to high-income cannot be achieved by the present dualistic policy regime of state-led industrialization facilitated by state-directed allocation of capital, and enthusiastic private-sector participation, mostly, in light industries and in the low and medium value-added portions of the service sector. The Soviet Union achieved middle-income status without private-sector participation but it ended in economic collapse in 1991. The achievement of middle-income status in Malaysia (with the China-style policy regime of state-private dualism) has been followed by economic stagnation

because of policy inaction from the government's short-sighted attitude of "if it ain't broke, don't fix it."

Among the fundamental policy changes that China must now make in order to avoid falling into the middle-income trap is its financial sector policy. The role of the financial system is not just to mobilize savings but also to allocate them to the most productive uses. On both of these fronts, China has much to do. To get a sense of what needs to be reformed, and the priority of the different reforms, we first review the historical process that has created the present financial system.

### **The Evolution of the Financial System**

The two primary tasks that the state has set for the financial system since 1949 are, one, to support the rapid industrialization of the country, and, two, to help maintain social stability. The financial system is of course only one of several policy instruments used to promote industrialization and keep social peace.

During the 1952–1978 period of Stalinist socialism where there was central planning and state ownership of all production units, the only type of financial institution that was needed for these two tasks were cash-disbursement cum payments-clearing institutions. The specialized banks established in the central planning period were cashiers to dispense budgetary allocation to support projects in the particular economic sector or economic activity, e.g., Agricultural Bank of China, and People's Construction Bank. The evolution of the financial system since the initiation of market-oriented reform at the end of 1978 is the consequence of trying to carry out these two tasks in the face of policy reforms in other parts of the economy to permit the Chinese economy to converge to a predominantly private market economy in order to initiate and sustain MEG.

Up to the end of 1978, the primary source of revenue to finance industrialization was the agricultural sector. From 1952 to 1978, the state underpriced agricultural products greatly and overpriced the industrial products in order to generate large profits for the state-owned enterprises (SOEs) to hand over to the state treasury. Chinese economists have analogized the gap between the artificially low

agricultural prices and the artificially high industrial prices to the gap between the blades of a pair of scissors that is opened to be in the cut position, and they have hence called this resource-transfer instrument the “price-scissors mechanism.”

Bi Sisheng (2003) estimated that the state took approximately 800 billion yuan from the agricultural sector during the 1952–1985 period by means of the price-scissors mechanism. During this same period, investments in physical assets for the SOEs totaled 1,442 billion yuan, in which 845.1 billion yuan came from the government. This indicates that the capital diverted by the “price-scissors mechanism” accounted for 95% of the government investment in fixed assets in SOEs and 55% of the overall investment in fixed assets in SOEs.

At the end of 1978, the Chinese government began to relax the ban on the private sector by allowing a dual-track system in the agricultural sector. The part of output that was beyond the state-set quota (which had to be sold at the state-set price to the state purchasing agency) could be sold in the newly-legalized free markets. For the financial sector, the marketization process that began in 1979 was noteworthy because it initiated a new round of the monetization of the Chinese economy. Monetization was then boosted further by the steady reduction over time in the number of agricultural products that had state-set prices.

The financial phenomenon of monetization helped the state to finance industrialization by increasing its seignorage revenue with large-scale money creation that did not cause high inflation. From 1979–1992, the average annual growth rates for M2, GDP, and CPI were 26.2%, 6.5% and 9.5% respectively, and the ratio of M2 to GDP rose from 25% in 1979 to 94% in 1992.<sup>4</sup> Figure 1 shows that after the high inflation in the 1993–1996 period, which signaled the near completion of this round of monetization and hence a tighter connection between money growth and inflation, the state reduced its collection

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<sup>4</sup>The exception to price stability was 1988 when CPI increased by 18.8%, a development that was socially destabilizing. This positive aspect of monetization for China's macroeconomy was noted in McKinnon (1991); and a number of scholars have computed the seignorage revenue from the monetization, e.g., Zhang Jie (1997, 2001), Xie Ping (1996), and World Bank (1996).

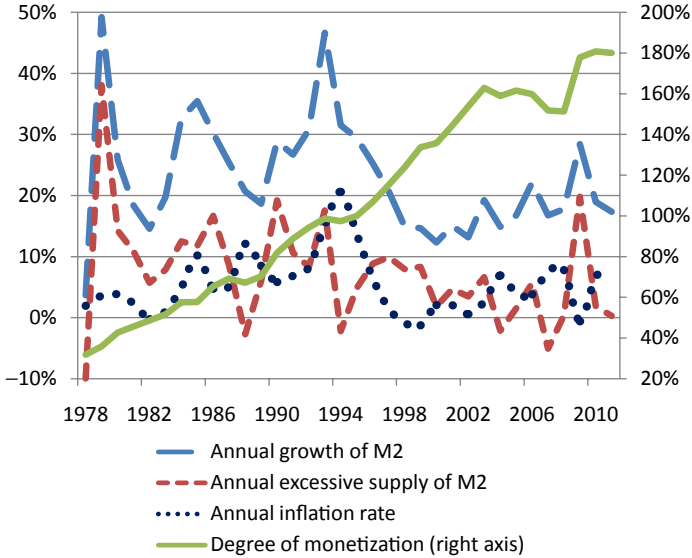


Figure 1. Monetary indicators in China.

Source: China Statistical Yearbook (2012) and Zhang (2011).

of seignorage revenue by reducing the subsequent annual M2 growth rate to less than 20.

Figure 1 also reports a commonly used indicator of seignorage revenue known as “excessive supply of M2” which is calculated as the M2 growth rate minus the (real) GDP growth rate minus the inflation rate.<sup>5</sup> The collection of seignorage revenue was lower in the 1996–2010 period than the 1978–1995 period.

The financial system assumed increasing importance starting in 1985 when the fiscal strength of the central government began to be reduced by the termination of the price-scissors mechanism in 1985, by the reform of the industrial and service sectors that began in 1984, and by the decentralization of fiscal and economic power to the provinces that began in 1983–1984. The price-scissors mechanism had been rendered inoperative by, one, the marketization of agricultural

<sup>5</sup>The exception to this was in 2009 when M2 grew 28% to counter the deflationary effects of the Global Financial Crisis.

production and distribution was almost complete by 1985 — which meant no more artificially low agricultural prices — and the marketization of the industrial sector that began in 1984 and led to fewer and fewer artificially high (relative) prices for industrial products.

The great increase in prosperity in the countryside brought by the agricultural reforms emboldened the government to also use the dual-track mechanism in 1984 to reform the industrial and service sectors. The government signed profit-sharing agreements with the SOEs, allowed them broad discretion in the use of their share of the profits (e.g., for bonus payment and capacity expansion), permitted them operational autonomy (e.g., in what and how to produce, and the replacement of permanent workers with contract workers), and allowed them to sell the above-quota output in free markets. The government also legalized the establishment of collectively-owned i.e., owned by the local instead of the central or provincial government non-agricultural enterprises in the rural area. These rural enterprises are famously known as township and village enterprises (TVEs). In many locations, and increasingly over time, many TVEs were private enterprises masquerading as collectively-owned enterprises.

One unintended outcome of this array of changes in agricultural and industrial pricing and in the regulation of private economic activities was a much larger-than-expected drop in the fiscal power of the federal government. After an initially impressive performance by the SOE sector upon enactment of the enterprise reform, the financial situation of the SOE sector deteriorated sharply. From 1985 to 1994, an average of 5.6% of annual GDP was redistributed to SOEs every year in various forms of subsidies through budgetary channels. Within this 5.6 figure was a declining trend in central government support. The steady weakening of central government's fiscal power caused the subsidies to SOEs to decline over time from 7.5% of GDP in 1985 to 2.2% in 1994 despite the mounting losses in the SOE sector.

The government kept the SOEs afloat (and hence suppressed unemployment from appearing) by channeling implicit subsidies in the form of loans from the state-owned banks (SOBs). Between 1987 and 1995, the average deficit of public sector amounted to 11.16% of GDP, of which 63.53% are financed by the banking sector. Such loans were classified as “government subsidiary loans”

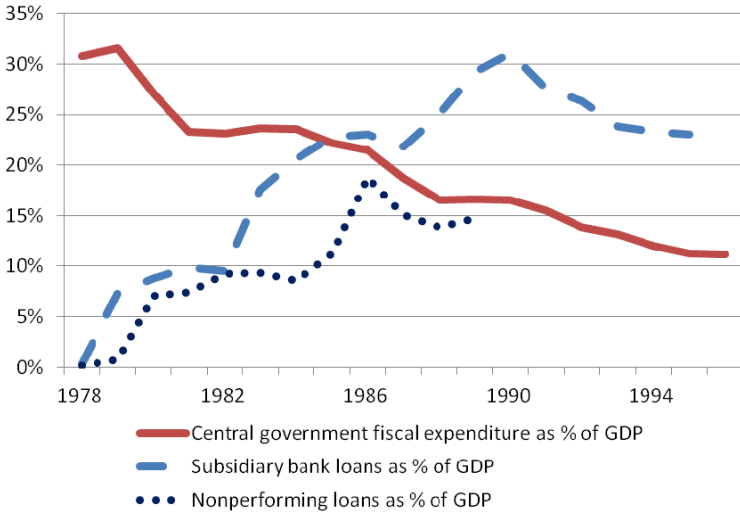


Figure 2. Fiscal expenditure versus bank loans.

Source: Statistical Yearbook of China and Zhang (2011).

whose sub-categories included “loans for national stability,” “loans for Chinese New Year,” and “payroll loans.”

The government of course also used loans from SOBs to fuel the growth of the industrial sector, i.e., bank loans substituting for capital injection from the budget. The average debt-to-asset ratio of SOEs in 1994 rose up to 80%, and 80% of the SOE’s had debt ratios higher than 90% (Zhang, 2001).

Figure 2 plots the shares of fiscal expenditure and subsidiary banking loans as a percentage of annual GDP between 1979 and 1996. Figure 2 also shows the profile of non-performing loans (NPLs) as a share of GDP. There was a significant substitution effect between the fiscal expenditure and subsidiary banking loans as well as a positive association between the ratio of NPLs and the share of subsidiary bank loans to the GDP. Against this background, the banks offered sufficiently high interest rates to absorb household savings, effectively taking on the function of government taxation. Banks effectively assumed the fiscal function of government by extending low-interest loans to SOEs.

The market estimate in 1998 of aggregate NPLs as share of total assets for China’s four largest SOBs was about 48%. China’s entry to



the WTO in 2001 with a commitment to open the domestic financial industry in 5 years to foreign institutions created an urgent demand for the immediate recapitalization of the SOBs to clean up their balance sheets in order to have equal cost competitiveness against the foreign banks.

There were a number reasons in the 1985–1996 period for the large losses in the SOE sector which created this tremendous amount of NPLs in the SOBs. First, the operational autonomy granted to the SOE managers allowed them to engage in embezzlement and asset-stripping. Second, the managers expanded investment recklessly because they were operating under the soft-budget situation where profits were privatized via embezzlement and the losses were socialized via bank loans. Third, the soft-budget constraint allowed the SOEs to continue to be less efficient than the TVEs e.g. by having excess workers. Fourth, the competition from the TVEs reduced the profitability of the SOEs. Clearly, without fundamental reforms of the SOEs, the generation of more NPLs in the future was unavoidable.<sup>6</sup>

The next significant transformation of the financial system occurred in the 1997–2006 period to address the risk of a systemic collapse caused by a bankrupt banking system, a point that was made clearly in the regional economic conflagration in 1997–1998 known as the Asian Financial Crisis. The government had to end the chronic NPL problem in the SOBs, and to strengthen the cost competitiveness of the domestic banks before China's expected accession to WTO.

The termination of the chronic NPL problem at the SOBs had two components — one internal and one external to the financial sector. The first component to solving the NPL problem was to inform the national heads of the SOBs that they would be fired if the NPL ratio were to go up for two consecutive years. The incentive to be more cautious in extending bank loans was passed down the chain of command by a similar commitment to dismiss the heads of the provincial branches of the banks if these branches were to report consecutive increases in the NPL ratio.

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<sup>6</sup>See Fan and Woo (1996) and Sachs and Woo (2000) for a review of the debate on the causes of the losses of the SOEs.

The second component to ending the chronic NPL problem was to end the endemic losses of the SOEs, the primary cause of the NPLs in the portfolios of the SOBs. The government launched a boldly comprehensive reorganization of the SOE sector to restore the financial health and boost the economic vitality of the SOE sector by privatizing most of the small and medium SOEs and some of the large SOEs, by improving the internal incentives of the remaining SOEs to maximize profit; and by reducing the reliance of firms on bank loans to finance investment. In 1997, the China Securities Regulatory Commission issued Document No. 15 that specified that “securities market and institutions should serve the reform and development of SOEs” and “(securities market and institutions) should endeavor to raise supplementary capital for the SOEs in order for them to acquire other financially struggling SOEs that might still have upside potential.”

Most of the remaining SOEs were corporatized, and part of their shares were sold in the Shenzhen and Shanghai stock exchanges to bring in strategic investors and independent directors to help monitor and advise the operations of the SOEs. The corporate bond market was also enlarged along with the two stock exchanges in order to wean the enterprises from the habit of financing the bulk of their investment with bank loans. Figure 3 plots the market shares of IPO capitalization of firms by different ownership forms in the 1990–2012 period. The market shares for SOEs were always 60% to 80% of total annual IPO financing.

It must be pointed out however that the government also distorted the financial markets to help make the balance sheets of the SOEs look better. For one, the central bank kept the interest rate on bank deposits low in order to keep the lending rate paid by the SOEs low. For another, the government limited the public listing of firms (to the great disadvantage of the privately-owned firms) in the two domestic equity markets to raise the price–earnings (P/E) ratio, and thus lower the cost of equity financing. As part of China’s industrial policy of promoting future important industries, the state especially favored SOEs in targeted industry sectors in the public listing selection process. Figure 4 plots the average P/E ratio for the IPO firms during the same period. Figure 5 compares the annual

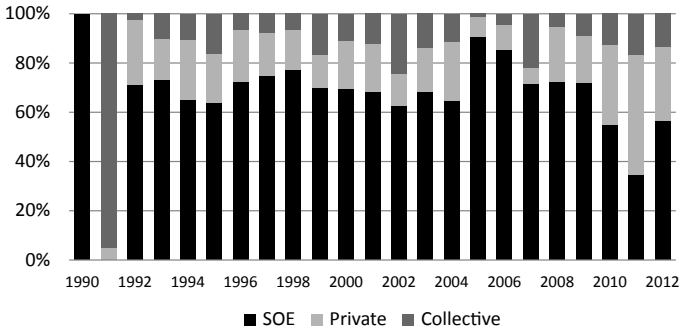


Figure 3. Proportion of A-share IPO capitalization by ownership.

*Note:* State-owned enterprises (SOEs) include the central and provincial SOEs; Collective enterprises include foreign-owned enterprises, collectively-owned enterprises, public enterprises, etc.

*Source:* The classification of firms by ownership is from Wind Info. All data are from April 2013 Wind Info and author's own calculations.

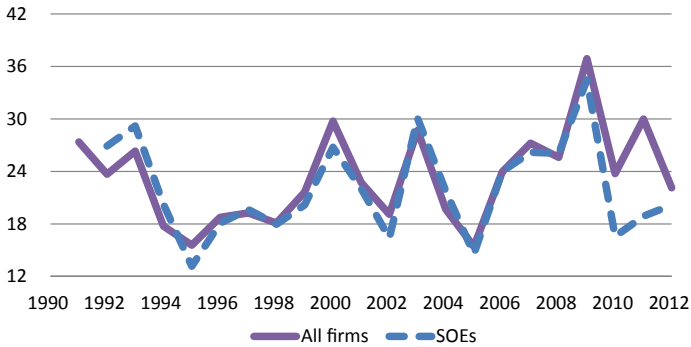


Figure 4. Average IPO P/E ratio.

*Note:* 1. State-owned enterprises (SOEs) include the central and provincial SOEs. 2. IPO price-earnings ratio = Total market cap at IPO/Total net earnings in the previous year.

*Source:* All data are from Wind Info and author's calculations.

dividend yields of A-share stocks to the one-year rate for deposits and the one-year rate for bank lending.

To summarize, the endemic losses of the SOE sector were addressed by a decisive program of restructuring the SOE sector

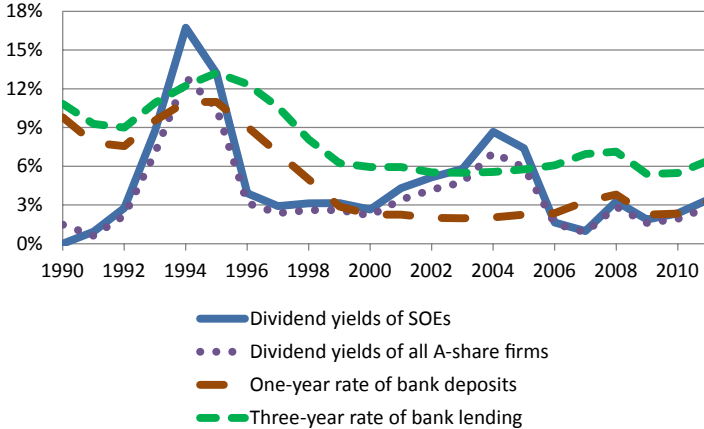


Figure 5. Dividend yields and lending rates.

*Note:* 1. State-owned enterprises (SOEs) include the central and provincial SOEs.  
 2. dividend yield = total annual cumulative dividend in the last 12 months/ year-end market capitalization.

(especially the mass privatization of the small and medium SOEs and the government-sponsored strategic restructuring of the remaining large SOEs), and by a financing program that supplies the SOE sector with cheap household savings mobilized through the tightly-regulated equity markets and the state banking system. These moves succeeded in turning around the financial position of the SOE sector by the early 2000s, and, hence, stopped the creation of new NPLs.

The government implemented an equally comprehensive restructuring of the SOB sector in order to remove the systemic risks of the bankrupt banking system and prepare it to compete against the foreign banks that would come in upon China's entry into WTO. The government set up asset management companies that bought a large portion of the NPLs at face value from the SOBs, introduced a central bank refinancing scheme for the SOBs, and injected capital directly from public saving and foreign reserves. The SOBs were also corporatized and listed in the stock market to bring in foreign strategic investors. The most important means of recapitalizing the banks was to boost their profitability by setting a sustained large margin between the lending rate and the deposit rate; and then to

use the retained earnings to increase core capital of the banks. By 2006, all major SOBs except for the Agricultural Bank of China had completed asset restructuring, met the international standards for prudential operation, and successfully made initial public offerings in the global equity markets.

With the completion of split-share structure reform in 2006, state-owned equities in public SOE's become "true" common shares with the equal provision of valuation and liquidity, see Inoue (2005). The aggregate profit of the banking sector in 2006 was 10 times the amount of just two years ago. Stock indices began to soar. The year 2006 would have been the ideal moment for the Chinese government to complete its withdrawal from its half-century-long financial repression policies and transform the financial system from a government-dominated one to a market-oriented one. If market interest rates had been introduced, the regulatory quota system for the stock issuance phased out, the restrictions on private small and medium banks relaxed, and financial supervisory capacity strengthened beginning in 2006, China's economic growth in 2013 would most likely be more robust and sustainable. Unfortunately, little or no progress has been made on these fronts, making the 2007–2013 the lost years in financial sector development. It is now imperative to immediately launch initiatives that would remove the remaining repressive financial policies to give China a modern financial system, which can support its economic growth to jump over the middle-income trap.

### **The Financial-Sector Reform Agenda**

Most of the studies on the progress of financial development in China use an array of stock-flow ratios like the M2 to GDP ratio and the stock market capitalization to GDP ratio. As the M2 to GDP ratio has increased from 124 percent in 1998 to 188 percent in 2010, and the capitalization of the Shanghai and Shenzhen stock markets has climbed from an average of 30 percent of GDP in 1997–2005 and 53 percent in 2006–2012, it is common for many China analysts to report steady progress in the financial development of China.

However, two recent studies have suggested that this steady upward march of the stock-flow ratios like M2-GDP hides some

unfavorable trends in China's financial sector, that could trigger a financial collapse: (1) Hongzhong Liu and Tai Qin (Chapter 8: "The Structural Friction in China's Banking System: Causes, Measurement and Solutions"), and (2) Jean-Louis Arcand (Chapter 9: Credit Rationing, Bank Bailouts, and the Deleterious Impact of Credit: Evidence from China). These two studies lend credence to our warning at the beginning of this chapter that the "worst outcome from policy paralysis [exemplified by little or no progress in financial sector reform in the 2007–2013 period] would not just be stagnation, but stagnation, followed by decay, and, then, by collapse."

Hongzhong Liu and Tai Qin (Chapter 8) challenge the conventional view that there has been progress (albeit, not enough) in China's financial development. They develop a price indicator instead of using the usual quantity indicator to measure the level of financial development. Their price indicator is the spread between the shadow ("social") rate of return on bank loans and the actual rate of return on bank loans. The size of the spread measures the degree of misallocation of the bank loans — the smaller the spread, the more efficient is the bank sector. Liu and Qin found the disturbing result that the spread between the shadow rate of return and the actual rate of return on bank loans has widened over time, from 1.02 percentage points in 2003 to 2.38 in 2005, to 3.25 in 2007 and then to 3.76 in 2010.

Hongzhong Liu and Tai Qin identifies the cause of the increasing inefficiency to come from two factors

- the disproportionate amount of bank loans that was allocated to state-controlled companies, and
- the average productivity of the state-controlled companies being lower than the average productivity of domestic private companies.

Jean-Louis Arcand (Chapter 9) also shares Hongzhong Liu and Tai Qin's assessment that China's financial sector has become more dysfunctional over time. In an earlier analysis of cross-country data (Arcand, Berkes and Panizza. (2012), he finds that an increase in a stock-flow ratio (e.g. M2-GDP ratio) when it is at a low value has positive impact on economic growth, but there is a threshold value for the ratio beyond which an increase in the ratio would be harmful to economic growth. Specifically, this earlier study found that the marginal

effect of financial development on economic growth becomes negative when credit to the private sector reaches 100 percent of GDP.

In a new paper in this volume, Jean-Louis Arcand finds that this reversal from good effect to bad effect is generated in a simple model with endogenous default probability, credit rationing, and bailout of state enterprises. The important point is that the presence of a bailout leads to a level of loans which is "too large" with respect to the social optimum. When Jean-Louis Arcand tests this model on Chinese data, he finds an empirical regularity that has hitherto gone unnoticed in the Chinese context: there is a large, negative, and statistically significant impact of outstanding loans on the economic performance of counties.

Financial reform is now clearly overdue. The most important requirement in the formulation of the financial-sector policy is the recognition by the Chinese government that the role of a government in a middle-income country has to be substantially different from that of a government in a low-income country if dynamic catch-up growth is to continue. Specifically, the Chinese government should now no longer focus primarily on raising funds cheaply to promote industrialization because China is now a highly industrialized economy. The remaining part of industrialization is small, and the issue there is not the quantity but the quality of industrial expansion.

Furthermore, the fiscal position of the Chinese government is now strong enough that it does not need to distort the financial sector in order to finance its support for industrialization indirectly. Fiscal revenue grew at an average 20% per year since 2001, and fiscal revenue has climbed from 10.7% of GDP in 1997 to over 20% of GDP in the past few years. The rapid appreciation of land price has rendered the government even more secure fiscally, and so the government should fund its industrialization efforts directly and give up its direct intervention in the allocation of financial resources.

The time is ripe for financial transition.<sup>7</sup> The financial transition can only be achieved through a comprehensive reform agenda for

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<sup>7</sup>The concept of financial transition was introduced for the first time by Yingli Pan in 2010 in the article "Why We Should Accelerate Financial Transition" that appeared in the "THINKER" column of *Jiefang Daily*; Yingli Pan (2012). Also see Yingli Pan (2001) for an innovative perspective on the need for financial transition that is based on combining Marxian political economic theory on income distribution with modern economic theory on resource allocation.

the financial system. As Hu Jintao pointed out in his report at 18th Party Congress, all reforms should be market-oriented, giving the market a bigger and more effective role in resource allocation. Therefore, the over-arching objectives in the new growth-oriented financial sector policy that the Chinese government should adopt are “efficiency” and “stability” and not “industrialization.” The government focuses primarily on ensuring that the financial market is channeling funds efficiently to the most productive uses, and that the financial market does not pose a systemic threat to the economy. This new operational stance will foster a well-functioning, market-oriented financial ecosystem whose prudential aspects are closely monitored.

In order to switch to the financial-sector policy that will facilitate China’s graduation from middle-income status to high-income status, four key sets of financial reforms need to be undertaken:

1. Enlarge the financial sector by diversifying the range of financial institutions and the range of financial assets, paying particular attention to the increase in equity issuance by private domestic firms;
2. Deregulate and modernize the banking sector;
3. Update the international dimensions of the financial sector to be in line with globalization and China’s emergence as a major economic power; and
4. Insert shock-absorbers and circuit-breakers into the financial system to increase the resilience of the system to financial malfeasance and financial melt-downs; and build up the financial fire-fighting capability of the regulatory agencies to minimise the costs of financial institution failure and to prevent financial contagion.

***The stock and bond markets: Diversifying the financial sector while enlarging it***

The range of financial instruments that finances investment is too narrow. In 2011, 80% of the external financing of Chinese enterprises came from bank lending, while corporate bond issuances and equity offerings accounted for 12% and 8%, respectively. This means not only that the banking sector bears 80% of the risk from investment, it also means the banking sector is a systemic risk to the economy.



The failure of the banking sector will certainly bring down the entire Chinese economy. It is therefore prudent to diversify the sources of working capital and investment capital. The corporate bond market must expand significantly to provide much more working capital, and the equity markets must grow several folds to make them more important than the banks in supplying investment capital.

The first fundamental step in enlarging the stock market quickly and improving its efficiency greatly is to reform the regulatory quota system for equity issuance by granting equal market access to firms of different ownership, and allowing more qualified firms to be listed. Private enterprises have been discriminated against in the approval process for listing, and the resulting smaller number of listed companies depressed the cost of equity financing to benefit the SOEs that are favored in the listing. The unusually high P/E ratios also discourage business executives from taking a long-term view in the management of the SOEs because they incentivize business executives to immediately cash in their shares for profits. The approval process for listing must become blind to the ownership form of the applicant, and become more permissive to increasing the number of listings in order to increase the supply of equity offerings for lowering the P/E ratios.

The second fundamental step in increasing the size and efficiency of the stock market is to strengthen the rule of law in the operations of the stock market. Guo Shuqing, Chairman of the China Securities Regulatory Commission, was correct in his remarks on December 8, 2012 at the opening ceremony of the Shanghai Stock Exchange Forum that integrity and the rule of law are the two cornerstones of a fair and efficient capital market as well as the prerequisites for effective resource allocation. The essential elements of the rule of law include, but not limited to, a robust legal system, thorough implementation of the law, harsh punishment of dishonest behavior, and institutionalized check and balance of power.

The government also should improve the working of the stock market by:

- establishing a specialized court for financial issues, and grant it judicial independence to enhance its effectiveness in law enforcement and to mete out punitive penalties;

- introducing a legal framework in which small and medium investors can initiate class litigation suits against listed companies or financial institutions for compensation for their fraud-induced losses;
- specifying the minimum payout ratio to regulate the distribution policy of public firms;
- observing strictly the policies regarding the penalty of delisting poor performance firms;
- scrutinizing closer the veracity of data supplied by listed firms to protect investors, especially the small ones, from financial statement fraud (for instance, steel firms sometimes misreport their steel production capacity so as to hide the extent of their excess capacity); and
- prosecuting foul plays, such as predatory pre-IPO investment, to the full extent.<sup>8</sup>

An effective financial supervisory and regulatory system would be essential to guarantee both the efficient allocation of financial resources and the shared benefit from economic growth.

There has been more talk than action on scaling up the size of the corporate bond market in the last decade. Part of this unhappy situation is due to over-cautiousness by the relevant state agencies, and the second part of the delay is caused by reluctance to allow the participation of private companies. While these two defects should be addressed decisively, we see that the difficulties of growing the corporate bond market had been compounded by the absence of a large, liquid secondary market in government long-term bonds. The existence of a well-developed government bond market would have greatly increased the credibility of the institutional credit rating system. Sovereign credit has traditionally been the greatest intangible asset for a modern economy by facilitating the government to raise a large sum of money to accomplish projects of great national importance. Moreover, as a traditional Chinese saying, “what the sovereign does, the people will follow,” a gold standard system of infallible

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<sup>8</sup>Criminality is a phenomenon that is common in both developing and well-developed financial markets. The case of the USA is laid out by Jeffrey Sachs (2013) in Chapter 2 of this book.

sovereign credit would exemplify the practice of integrity and fiduciary duties for all bond market participants.

We suggest that one way of accelerating the development of the government bond market is to set up a well-functioning municipal bond market. China's municipal governments have immense difficulties in raising funds at reasonable costs for profitable infrastructure projects because there is no reputable credit rating system. We propose that a few qualified municipal governments be allowed to issue RMB-denominated municipal bonds in the Hong Kong market as well as in the domestic market. These particular municipal government issuers would then be obliged to comply with the legal practices of Hong Kong in protecting creditors' interest and be subject to various market disciplines set by global investors. The acceptance of these municipal bonds by global investors would increase the creditworthiness of these bonds to Chinese investors and allow funds to be raised cheaper than at the present. The other municipal governments that have equally transparent public finances which are as sound as the public finances of the Hong Kong-listed municipal governments should then be able to raise funds at almost the same lower costs.

We recognize of course that a vibrant market for municipal bonds requires that the present system of local finance be revamped to give most local governments stable and adequate local revenue bases to support most of their local expenditure. For example, the size of central-to-local fiscal transfers should be reduced by allowing some of the central taxes to become local taxes (e.g. lower the central income tax and allow provincial income taxes). And the revenue from land sales by local governments should be replaced by a system of local property tax.

### ***The banking system: Deregulation and modernization***

The banking system has been very profitable in the last decade, particularly in the recent sub-period. According to the *2012 Development Report of China's Top 500 Enterprises* released by China Enterprise Confederation, China's Big-Four Banks (i.e., ICBC, ABC, BOC, and CCB<sup>9</sup>) and Bank of Communications jointly

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<sup>9</sup>ICBC = Industrial and Commercial Bank of China, ABC = Agricultural Bank of China, BOC = Bank of China, and CCB = Construction Bank of China.

accounted for 5.7% of the 500 enterprises total revenue but 32.2% of the total profit. For the 272 largest manufacturing firms, they accounted for 42.7% of total revenue and 25% of total profit. In a survey of the branches of the Big-Four Banks and 131 enterprises in 15 cities of 5 northwestern provinces conducted by the Hanzhong Sub-branch of BOC, it was found that the operating margin of the banks had a year-on-year growth of 61.5% in 2012 Q1,<sup>10</sup> while the enterprises experienced a decline of 9.6%; Yang and Dai (2012).

The large profits of the banks are due to several reasons:

- there is a lack of competition in the banking sector, which is not surprising given that four banks dominate the sector, making implicit collusion easy to do, and that all four banks are controlled by the state; and
- the state-set margin between the deposit rate and the lending rate (which are both dictated by the state) has been wider since 1999, with the deposit rate set particularly low.

In short, the high profit margin of the banking sector is the result of the institutional distortions (i.e., economic inefficiencies) in the financial system.

There is another inefficiency in the banking system that is potentially threatening to the systemic stability of the economy. This inefficiency is created by the banks' standard practice of approving loans based on the availability of collateral. Because collateral-based lending is naturally biased towards real estate purchase, manufacturing equipment investment, and infrastructure project construction by local governments, it fosters excess capacity in these three activities at the expense of working capital and investment capital to new enterprises in general and to agricultural and service sector enterprises in particular.

The continuing supply of cheap bank loans to the manufacturing sector maintains the over-expansion of low-end production, and covers the losses of inefficient firms, hence delaying industrial upgrading and postponing structural adjustment. The outcome is that the manufacturing sector exhibits chronic over-capacity, particularly in

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<sup>10</sup>The year-to-year growth in the banks' operating margin in 2011 Q1 was 27%.

machinery and chemical industries. With the eventual realization of the expected excess capacity in the near future, the credit risk accumulated in the banking system would bankrupt the banks, and there would be an economic downturn unless the central government can take the NPLs on as its fiscal obligation.

The banking sector needs fundamental reforms. The number and variety of banks must be increased. Entry into the banking sector should be eased for small and medium private banks because only they are motivated to lend to small and medium private enterprises. Some of the branches of the Big-Four Banks should be spun off and privatized. The original parent banks may retain a minority, 10–20%, of the equity in the newly established community or township banks to better facilitate or complement the interbank businesses with the local banks which lack branch banking capacities.

The spinning-off of branches from the large SOBs will generate other benefits as well such as:

- It eases the capital shortages of the commercial banks.
- It terminates the risk transmission mechanism that translates all risk into government liability because of the too-big-too-fail branch banking regime.
- A large number of small retail banks will better serve individual clients and small businesses, and
- Large SOBs may realign their business priority towards the global markets, contributing more to the internationalization of the Yuan.

The control of the deposit rate and the loan rate should be phased out quickly. There is no need to keep a wide margin between the two rates because the recapitalization of the biggest state banks had been completed by 2006. The central bank should commit to maintaining positive real interest rates and not to keeping interest rates low.

China should establish a deposit insurance system. The government should consider setting the insurance premium to be positively correlated with bank size in order to restrain the empire-building instinct motive of bank managers.

The emergence of a strong small-medium banking sector will reduce the dominance of the state-controlled banks and hence make the economy less vulnerable to their collapse. The entry of private

banks (domestic and foreign) will reduce the probability of any one of the big four state banks would remain too big to fail, and hence reduce the soft-budget protection enjoyed by the now monopoly state banking system. The privatization of some units of the SOBs, and the emergence of large domestic private banks will also help in strengthening the budget constraints perceived by the managers of SOBs. The development of a modern banking system with a major role for the private sector will thence increase the quality of bank loans along with the increase in the quantity of bank loans

### ***Updating the international dimensions of financial policy***

China is now the second largest economy and is projected to become the largest economy in the world in the next decade. This process has already brought a significant change in the international division of labor as exemplified by the decimation of the US manufacturing sector. This process might also bring about equally large shifts in the economic architecture of the world, e.g., the emergence of an Asian economic bloc, amendments to the governance of international financial institutions like the International Monetary Fund and the World Bank, and new international initiatives on the regulation of capital flows, and financial sector supervision.

To be in line with the large structural changes in the Chinese economy, it is necessary that China's exchange rate regime be changed to accommodate and promote these changes. In Chapter 10 of this book, Wu *et al.* (2013) identified the medium-term and long-term choices of RMB exchange rate regime. For the medium-term, they recommend that China implement an exchange rate management with the characteristics of "Basket, Band, and Crawl" (BBC). Specifically, they suggest setting up a dynamic target zone for management of the effective exchange rate where the central parity rate (based on the Balassa–Samuelson hypothesis about relative labor productivity growth) maintains an annual 2% appreciation in terms of the real effective exchange rate, with the width of the target zone set to allow  $\pm 5\%$  fluctuation for the movements of the RMB exchange rate around the central exchange rate. For the long term,

they recommend that China implements a monetary regime that combines a floating exchange rate system and generalized inflation targeting.

Also, in line with China's growing impact on the world economy, it is natural for her currency, the Renminbi (RMB), to become an international vehicle currency, a currency that is used to denominate the prices of goods and financial assets traded among foreign countries. In Chapter 11 of this book, Yingli Pan *et al.* (2013) believe that against the background of the gravity center of the global economy moving towards Asia and a multi-polar global economy being formed, the main reform direction should be to create a multiple reserve currencies system that has an internal stabilizing mechanism. RMB internationalization is an integral component of this reform package. They suggest that RMB internationalization proceeds in two phases. In the early phase, the key task is to transform the Chinese economy and the financial system and foster international demand for the RMB. In the later phase, the task is to open the capital account and increase substantially the supply of RMB for global use.

Reform measures to promote financial openness include issuing licenses to foreign financial institutions to conduct RMB-denominated business, and allowing merger with and acquisition of branches from SOBs. It is desirable to pursue policies that favors capital outflow to incentivize large enterprises and financial institutions to go overseas.

### ***The Potential Future International Status of the RMB and Shanghai's Financial Industry***

To Wing Thyee Woo (2013a), the truly important international aspects of China's financial reform are not, one, whether or when the RMB will be internationalised; and, two, whether and when Shanghai should be allowed to become an international financial center (IFC). He points out that once China's capital account is open like that of Taiwan's, as it would inevitably be, the RMB would automatically be internationalised like the Swedish Krona and the Swiss Franc (because the foreigners could use it freely); and Shanghai would automatically be eligible to be an IFC like Stockholm and Geneva

(because foreign residents would be able to participate in China's stock and bond markets, and the Shanghai branches of foreign banks would be able to operate in any currency).

Woo (2013a) identifies the fundamentally important international consequences of China's financial reform to be:

1. whether the RMB would become an international vehicle currency (IVC) like the US\$ and the Euro, i.e. be in the small sub-set of internationalised currencies that other countries would commonly use to denominate the prices of their traded goods and to denominate the international loans amongst themselves; and
2. whether Shanghai would become a 1st-tier international financial center (1-IFC) like the two present members, London and New York City (NYC), in which the value of transactions in each is markedly higher (a quantum leap higher) than in the other IFCs like Frankfurt, Tokyo, Zurich, Hong Kong and Singapore.

Woo's (2013a) review of the financial history of the UK£ and the US\$, and of London and NYC leads him to advance five propositions.

First, a city would be eligible to be a 1st-tier IFC (1-IFC) only after its national currency is already an IVC. Because foreigners would hold a significant amount of this country's currency as working capital, they would deposit these funds in this country's banks or branches of foreign banks in that country. This first proposition is based on the UK£ and the US\$ becoming IVCs before London and NYC emerged as 1-IFCs.

Second, after a city has been a 1-IFC for a long period, the maintenance of this status does not depend on the national currency continuing to be an IVC. For example, London is still a 1-IFC today even though the UK£ is no longer an IVC.

Third, the transaction cost of using a foreign currency as the medium of exchange is inversely related to the size of the global use of that currency. And, similar economies of scale also exist in the use of a particular international financial center by foreign investors. There are three implications from the virtuous cycle nature in the use of internationalised currencies and international financial centers:

1. the number of internationalised currencies that would become IVCs is small,



2. the number of international financial centers that would become 1-IFCs is small, and
3. the membership of IVCs and 1-IFCs has a bias towards the status quo.

Fourth, the financial market in an IVC and 1-IFC country has three characteristics:

1. **openness**: there are no restrictions on the international movement of capital and on entry into the financial industry
2. **broadness (sophistication)**: there is a rich menu of financial instruments being traded and a wide range of financial institutions offering differing services, i.e. financial market sophistication is very high; and
3. **calmness (safety)**: the central bank maintains satisfactory overall stability (e.g. price stability and a satisfactory steady growth rate) and an efficient, robust and reliable payments and settlement mechanism; the prudential regulators keep fraud, manipulation, and excessive speculation at low levels; the legal system is predictable and transparent in the protection of private property and in adjudication of disputes; and the macro-prudential authorities display adequate financial firefighting capability (e.g. in-place procedures to take over and manage failed banks in the short-term, and then to re-capitalise and privatize them in the medium-term).

Fifth, the successful convergence to IVC and 1-IFC status requires the country to have been an overwhelming economic force vis-a-vis other countries (i.e. to have great relative economic strength) for a substantial period of time. The United Kingdom enjoyed global economic leadership for over one hundred years because the Industrial Revolution had began there. In 1914, the US-UK GDP ratio was 2.1, but the US\$ was not an IVC. This suggests that a relative economic strength of 2.1 does not qualify as “overwhelming economic strength”<sup>11</sup> A decade later, in 1924, the

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<sup>11</sup>Unless otherwise indicated, the GDPs used in the GDP ratios in this chapter are measured in PPP terms, data from Angus Maddison (2010).

US\$ had eclipsed the UK£ as the most important IVC, and the US-UK GDP ratio was 3.2 and still increasing<sup>12</sup>

One could say that the challenger is not big enough to displace the existing currency hegemon when its GDP is 2.1 times that of the incumbent, and is big enough to do so when its GDP is 3.2 times that of the incumbent. The tipping point for when GDP-ratio (relative economic strength) is sufficiently high to transform a currency into an IVC through overwhelming economic force is somewhere in the 2.1 to 3.2 range.

Much of the literature on IFC has tended to emphasize Proposition 4 as the basis of a city becoming a 1st-tier IFC i.e. the openness, breadth, and calmness of a financial market determines whether it would emerge as a 1-IFC. A few observers like Charles Kindleberger (1967) have emphasized that Proposition 5 is the fundamental market force that propels a city into 1-IFC status i.e. *the city must not only have a large, sophisticated open, and safe financial industry but, more fundamentally, it has be located in a country that has a GDP that is or was disproportionately larger GDP for a substantial length of time*<sup>13</sup> (An open large economy would inevitably also be a large trader in absolute terms.)

The plausibility of the importance of Proposition 5 in deciding the 1-IFC outcome is confirmed by the failure of the Japanese Yen to develop into a significant international vehicle currency in the early 1990s, and hence the failure of Tokyo to join London and NYC in the ranks of 1st-tier IFCs. Specifically, the Japan-US GDP ratio in the 1970–2000 period never reached the level of relative economic strength of the US-UK GDP ratio of 2.1 in 1914 and 3.2 in 1924. The Japan-US GDP ratio doubled from 0.2 in 1963 to peak at 0.41 in 1991 and then declined to 0.31 in 2008. The entire increase in the Japan-US GDP ratio in the 1961-1991 period was due to the standard of living in Japan soaring to that in the United State (i.e. technological catch-up). Half of the decrease in the GDP ratio in 1991–2008 period was due to the decline in the growth rate of Japan’s population, and

<sup>12</sup>The GDP ratio reached 6.5 in 2012, and the UK£ was no longer an IVC.

<sup>13</sup>“For better or worse — and opinions differ on this — the choice of which language and which currency is made not on merit, or moral worth, but on size.” Charles Kindleberger (1967).

half to the faster increase in the US rate of technological progress and capital accumulation<sup>14</sup>

Huw McKay (Chapter 6: “Tokyo’s Ultimately Failed Bid for First Tier International Financial Centre Status: Why Did It Fall Short and What Are the Lessons for Shanghai?”) adds an intriguingly interesting dimension to the above conclusion that Japan never had the overwhelming economic force that would naturally make the Yen into an IVC, the stepping stone toward 1-IFC status. McKay raises the possibility that there was a period of time in which IVC status could have been achieved if the Japanese government had made this quest for IVC status an overwhelming policy priority and hence had intervened decisively to promote the pricing of manufactured exports and of raw materials imports in Yen. Such focused intervention would have broken the “legacy mindset that was holding back progress toward the IFC goal.”

The argument here is that Japan was too timid in working towards denominating its major commodity imports in yen, particularly where benchmark prices were negotiated rather than traded on an exchange. After all, just as it was the world’s largest exporter of manufactures in 1985, it was the largest steel producer with almost one quarter of global output, and it was also the largest importer of fuel and mining products in the same year, narrowly surpassing the United States . . . While with hindsight we see that this was a temporary situation, we can be certain that many contemporary observers would have expected that ranking to persist having been caught up in the “Japan as number 1” euphoria of the times. (Huw McKay, Chapter 6)

McKay attributes the absence of active promotion of Yen as an IVC as the result of two factors:

1. the Japanese government did not elevate “the goal of becoming a first tier IFC . . . above other competing objectives . . . [and so] the necessary intermediate steps . . . [were not] achieved in timely fashion . . . Japan’s ambivalence to the IFC goal can be read through the succession of official studies on yen internationalisation, trade invoicing, the financial system’s international competitiveness and

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<sup>14</sup>The Japan-US ratio in GDP per capita was 39% in 1961, 85% in 1991 and 73% in 2008; and the Japan-US ratio in population was 52%, 49% and 41% respectively. The Japan-US ratio in population is expected to fall to 30% in 2030.

the like, that spanned more than two decades of ‘further discussion’ ...”; and

2. the Japanese government thought that it had time on its side because it did not expect that Japan’s economic strength would start weakening steadily in 1992 vis-a-vis the United States

Woo (2013c) sets the background for thinking about the international financial policy choices for China with the following four observations. First, under some circumstances, a country could find itself in a dual equilibria situation: an ordinary IFC equilibrium like Paris and a 1-IFC equilibrium like New York City.

Second, the experience of the United States in the 20th Century suggests that if

- the relative economic strength of the country grows rapidly over time, and
- if the country’s financial sector is marked by financial openness (e.g. few restrictions on capital account transactions), financial depth (e.g. the total value of transactions in the market is very high and the market operates in a highly competitive setting), financial breadth (e.g. existence of a wide variety of financial instruments and of financial institutions), and financial calmness (e.g. in place are financial regulations that are transparent, predictable, and prudentially-effective, and monetary-financial authorities that have effective financial firefighting ability to restructure failed large financial firms and to prevent financial contagion),

then market forces would naturally first push the country’s currency into IVC status, and then push the country’s largest financial market into 1-IFC status. In this case, the dual equilibria situation is temporary.

Third, in a dual equilibria situation, appropriate state actions might be able to accelerate the movement from the ordinary IFC equilibrium to the 1-IFC equilibrium. For example, a country could first identify the types of international transactions in goods and financial assets where it has significant market power, and then push for the transactions in some of these markets to be priced in the country’s currency.

Fourth, while all the sets of circumstances that would enable a country to face a dual equilibria situation in its international status, one such set would be a large economic weight (e.g. a disproportionately large GDP and big trader across a large number of world markets), and a deep, broad and calm financial market.

The implications from the above four observations is that the Swedish Krona and Stockholm could not have become, respectively, an IVC and a 1-IFC regardless of how aggressively the Swedish state had intervened in the 1900–2008 period to promote these two objectives. As the Sweden-USA GDP ratio never reached anywhere near critical level (e.g. it did not even exceed 0.05 at any time<sup>15</sup>), Sweden never had to worry about the dual equilibria dilemma in the 20th Century.

In this context, Huw McKay's analysis could be interpreted as saying that Japan possibly faced the dual equilibria dilemma in the 1980–1997 period when the Japan-USA GDP ratio peaked in the 0.37 to 0.41 range; and the probability for policy intervention to jolt the Yen into IVC status was highest before 1991 when the relative GDP ratio was rising strongly. The crucial question for Huw MacKay's analysis is whether Japan's peak relative economic strength of 0.4 was enough to generate a dual equilibria outcome. We suspect not because, after all, the US\$ was not an IVC when US relative economic strength was 2.1, which is five times that of Japan in 1991.

Woo (2013b) calculates what he expects China's relative economic strength to be in the future by using the decomposition of:

$$\begin{aligned} \text{China's Relative Economic Strength}^{16} &= [\text{GDP}_{\text{China}}/\text{GDP}_{\text{USA}}] \\ &= [(\text{GDP}/\text{L})_{\text{China}}/(\text{GDP}/\text{L})_{\text{USA}}] \times (\text{L}_{\text{China}}/\text{L}_{\text{USA}}) \\ &= (\text{standard of living ratio}) \times (\text{labor ratio}) \end{aligned}$$

In 2008, the situation was

- $(\text{L}_{\text{China}}/\text{L}_{\text{USA}}) = 4.3$
- $[(\text{GDP}/\text{L})_{\text{China}}/(\text{GDP}/\text{L})_{\text{USA}}] = 0.2$
- China's Relative Strength =  $[ \text{GDP}_{\text{China}}/\text{GDP}_{\text{USA}} ] = 0.2 \times 4.3 = 0.86$

<sup>15</sup>Sweden-USA GDP ratio reached its peak at 0.04 in 1931–1940.

<sup>16</sup>As noted earlier, GDP is measured in PPP US\$

For estimates of relative China-US economic strength in the future, Woo (2013b) assumes that

- $(L_{\text{China}}/L_{\text{USA}})$  will decline from **4.3** but will remain big. In the new steady-state equilibrium in, say, 2050,  $(L_{\text{China}}/L_{\text{USA}}) = \mathbf{3.2}^{17}$ ; and
- **2 Catching-Up Scenario Assumptions**
  - Scenario A:  $[(\mathbf{GDP}/L)_{\text{China}}/(\mathbf{GDP}/L)_{\text{USA}}] = \mathbf{0.3}$ , the Middle-Income Trap outcome
  - Scenario B:  $[(\mathbf{GDP}/L)_{\text{China}}/(\mathbf{GDP}/L)_{\text{USA}}] = \mathbf{0.8}$ , the Successful Catching-Up outcome

Woo (2013b) calls the “standard of living ratio” the Catch-Up Index (CUI). The CUI value for the Middle-Income Trap scenario is based on the average CUI value for the five largest Latin American countries (Argentina, Brazil, Chile, Mexico and Venezuela) being about 0.3 in 1960 and 2008. The CUI value for Malaysia has stayed at 0.3 in the 1994-2008 period.

The CUI value for the Successful Catching Up scenario is based on the average CUI value for the five largest Western European countries (France, Germany Italy, Sweden and United Kingdom) being about 0.7 in 1960 and 2008. So the assumed value of 0.8 is not a probable understatement of the Catching-Up outcome.

The Relative Economic Strength outcome under

- *Scenario A*:  $[\text{GDP}_{\text{China}}/\text{GDP}_{\text{USA}}] = 0.3 \times 3.2 = 1.0$
- *Scenario B*:  $[\text{GDP}_{\text{China}}/\text{GDP}_{\text{USA}}] = 0.8 \times 3.2 = 2.6$

As mentioned earlier, when the US-UK GDP ratio was 2.1 in 1914, the US\$ was not an IVC, and when the US-UK GDP ratio was 3.2 in 1924 *and increasing*, the US\$ had become an IVC. If China is stuck in the Middle-Income Trap and has a long-run relative economic strength of 1.0, we think that China would not find itself in a dual equilibria situation, i.e. there is low probability that the RMB would become an IVC and Shanghai a 1-IFC.

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<sup>17</sup>The value of 3.2 is computed from the population projections of the World Bank (accessed 16 January 2014): <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTDATASTATISTICSHNP/EXT-HNPSTATS/0,,contentMDK:21737699~menuPK:3385623~pagePK:64168445~piPK:64168309~theSitePK:3237118,00.html>.

However, if China is successful in catching up to the living standard of the United States to possess steady-state relative economic strength of 2.6 (which is between 2.1 and 3.2), we think that China would have a choice between Shanghai being an ordinary IFC and Shanghai being a 1-IFC. The RMB would be eligible to become Vehicle Currency but since China's relative economic strength would not grow over time, there is **no overwhelming natural market forces to ensure an IVC outcome**. The Chinese state would therefore have to implement decisive action to encourage international traders and international creditors to price their transactions in RMB if RMB is to be an IVC and Shanghai a 1-IFC

We think that the Chinese government should see the IVC and 1-IFC objectives as worth pursuing. This is not only because these two developments would benefit China (e.g. the creation of a new high value added financial service industry, and the lowering of costs in international transactions) but also because the world would also benefit tremendously from these two developments, which would amount to increasing the supply of a basic global public good. Specifically, the emergence of RMB as an IVC would help meet global demand for international reserves and for diversification of reserves, and this would strengthen global financial stability fundamentally by addressing an important systemic confidence problem<sup>18</sup>

To summarise, the policy agenda to ensure that the RMB would be an international vehicle currency and Shanghai be a 1st-tier international financial center would require three sets of actions:

1. root and branch reform of China to ensure that China would leap over the Middle-Income Trap (such a reform agenda is given in Woo, Lu, Sachs and Chen, 2012).

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<sup>18</sup>In the present global monetary system where the US\$ is the primary global reserve currency, there is a **non-sustainable tradeoff between** the need for additional global liquidity to accommodate the growth of the international economy **and** the requirement for confidence in the US\$ as the global reserve currency. The larger is the amount of US\$ held by non-US businesses and foreign governments, the greater is their concern about the ability of the US government to maintain the purchasing power of the US\$. This present day tradeoff not identical to the Triffin dilemma. Robert Triffin (1960) had expressed the skepticism about the continued ability of the US over time to swap gold for US\$ freely as required by the Bretton Woods Monetary System.

2. internal actions to strengthen the international competitiveness of Shanghai as an international financial center by establishing a financial sector that is open, deep and broad; and ensuring that there is adequate macro-prudential monitoring of the financial sector, and having macroeconomic and financial firefighting teams ready if things go awry; and
3. external actions to promote pricing in RMB by seeking to set prices in RMB for export goods (manufacturing) and import goods (raw resources) where China has market power; and seeking to set value in RMB in purchases of foreign financial assets (which should be possible because China is a creditor not debtor)

### ***Modernizing the Financial Sector Safely and Bolstering Financial Firefighting Capability***

The discussion of how to avoid systemic financial crisis can usefully begin by analysing the recent financial collapses in a number of advanced economies, and then identifying their lessons for developing countries like China which are seeking to reform their financial sectors to support Modern Economic Growth. Jeffrey Sachs examines the record financial malfeasance in the United States in the last thirty years in Chapter 2 (“Wall Street Lawlessness”). Peter Boone and Simon Johnson investigate the roots of the systemic imprudence in the financial institutions of the developed countries in Chapter 3 (“Systemic Lack of Prudence in Wealthy Nations: Avoiding the Dark Side of Financial Development”). Seppo Honkapohja identifies the reasons for the financial crises in Finland, Norway and Sweden in the 1980s in Chapter 4 (“Lessons from the Financial Liberalization in the Nordic Countries in the 1980s”).

Jeffrey Sachs (Chapter 2) finds that one of the features of the 2008 financial crisis is the epidemic of lawlessness among America’s major investment banks, commercial banks, hedge funds, financial conglomerates, and stock exchanges, collectively known as Wall Street. Major Wall Street firms have been repeated lawbreakers, and as a result have faced dozens of lawsuits and criminal actions regarding corporate practices at the core of the business. The startlingly common aspect of these legal actions is that, with few exceptions, senior Wall



Street managers do not face personal risks as a result of corporate malfeasance. When settlements in the SEC cases are reached, the defendant firm typically pays a fine but has been allowed to “neither admit nor deny wrongdoing” (a practice that has been, correctly, criticized by Federal court judge Jed Rakoff as not serving the public interest). The fine is often a small fraction of the gains that accrued to the company as a result of its malfeasant behavior. Without no judgment of guilt or acknowledgement or denial of wrongdoing, no further action is taken against senior management (e.g. a revocation of an manager’s right to engage in banking).

It is useful to examine the Jeffrey Sachs paper in some detail because most of the causes for the widespread financial malfeasance that he identifies exist in all capitalist economies in similar degrees. Jeffrey Sachs argues that there are five main structural reasons for the intrinsic proclivity for US financial institutes to engage in overly risky transactions:

1. the CEO’s are inadequately supervised;
2. the firms are highly leveraged operations;
3. the equity-based compensation scheme for CEOs;
4. the financial industry is under-regulated; and
5. the political power of Wall Street in Washington D.C.

Large US companies have limited liability, are generally publicly owned, and are characterized by highly dispersed shareholdings rather than ownership by a family or a small number of core investors. Because of the dispersed shareholding and limited liability, shareholders generally free ride on the public good of corporate governance. The upshot is that the CEOs have considerable authority with relatively low oversight from the board of directors, whose appointments are frequently made at the suggestions of management.

Banks tend to have an extremely high leverage ratio compared with non-financial corporations because the bank’s job is to take on debt from depositors, other banks, and the financial markets, to invest in assets. Using a simple numerical example, Jeffrey Sachs shows that high leverage increases the shareholder’s appetite for risk beyond the social optimum. The ability to leverage is facilitated, in general, by the presence of deposit insurance and by the

implicit expectation of government bailouts of bank creditors in the event of a crisis. In the run-up to the 2008 financial crisis, US investment banks and European commercial banks had the highest leverage, a remarkable average of around 30 (total assets relative to equity), while US commercial banks were less highly leveraged at around 10, still a very high leverage ratio compared with non-financial companies.

In Jeffrey Sachs's view, a major factor in the soaring compensation of CEOs in the last three decades was the increasing use of equity-based compensation, especially in the form of stock options. He extends his simple numerical example on leverage to clarify how stock options increase the CEO's appetite for risk beyond those of the shareholders. The combination of highly leveraged firms and CEO pay packages laden with stock options is strong motivation for a CEO to treat his enterprises as an enormous gamble for riches.

The process of financial deregulation started in earnest in the early 1980s in the savings and loan (S&L) industry. Within a few years, the entire sector was bankrupt, in effect "looted" by its CEOs, in the words of economists George Akerlof and Paul Romer (1993). Insolvent S&Ls took advantage of federal deposit insurance to attract new deposits, and then used deposit inflows to make payments of phantom profits and other insider payments to the owner-managers of the S&Ls. In the end, the federal government had to pay off the depositors, while many corrupt owners of bankrupt S&Ls walked away with fortunes.

The most important act of deregulation was the Gramm-Leach-Bliley Act of 1999, which repealed of the 1933 Glass-Steagall Act, a major part of Great Depression financial reform that separated deposit-taking activities and investment banking activities. Glass-Steagall was repealed in 1999 with strong bipartisan artisan support. The leading architect of the repeal, Treasury Secretary Robert Rubin, immediately became Chairman of Citigroup, a new financial conglomerate (formed in a \$140 billion mega-merger of Citicorp and Travelers Group, one of the largest mergers in history) made possible by the deregulation.

Jeffrey Sachs attributes the extremely low personal risk of any penalties from financial malfeasance that senior Wall Street managers

face, and the steady deregulation of the financial industry to the enormous political power of Wall Street in Washington. The money flows mainly in two forms: as campaign contributions and as lobbying outlays, much of which end up in political pockets indirectly through hiring politicians into lobbying firms (and law firms).

More controversially, Jeffrey Sachs hypothesizes that there has been a change in the moral zeitgeist in the United State that has increased the acceptability of self-serving or illegal behavior. He makes the case that super-high managerial compensation is not the social norm in the rich capitalist countries by citing the case of a leading and highly successful Swedish CEO, Percy Barnevik, who engineered a retirement package typical of a US CEO. When the news of the retirement package became commonly known several years later, the public outcry forced the retired CEO to recant the arrangement and to step down from other public positions. In the United States, however, the social restraints on high compensation packages have diminished, thereby making it easier for US CEOs to take the opportunity to increase their own paychecks.

Based on his overview of Wall Street lawlessness, Jeffrey Sachs suggests the following seven areas for the greatest attention in trying to promote financial sector development safely:

1. Limit the leverage of financial institutions because it promotes excessive risk-taking or outright looting.
2. Implement tougher scrutiny and regulatory limits on compensation packages of CEOs as in the European Union. Shareholders should have an automatic vote on compensation packages, and the use of stock options should be limited to avoid excessive risk-taking.
3. Increase significantly the higher levels of marginal taxation, in part to tamp down the incentives for managerial abuse.
4. Legislate CEOs and senior managers to face *personal* liability for major acts of malfeasance committed by their companies during their watch. Personal liability could include the loss of license to practice, forced resignation from office, a ban on bonuses, and personal liability for a portion of corporate fines and civil settlements in cases where CEO responsibility or negligence can be determined.

5. Bring criminal prosecutions against firms and individuals for large-scale financial malfeasance.
6. Bar Wall Street firms from lobbying activities and senior bank managers from making campaign contributions.
7. Undertake research on how to restore ethical norms on Wall Street.

Peter Boone and Simon Johnson (Chapter 3) document that prudent financial regulation, broadly defined, has proven difficult to do in wealthy nations. The economic incentives and political forces that promote undercapitalized financial institutions, over-leveraged production firms, and unfinanced public entitlements have consistently and invariably won out over prudent management across Europe, the US, Canada and Japan. This outcome has placed much of the wealthy world on a path with intermittent, but growing financial crises. In particular, these countries are addicted to methods of economic management that are debt-financed (e.g. re-capitalizing banks by issuing new government debt) because they have ageing populations, and the future generations are not represented in the policy-making process.

Successive financial crises are bailed out with additional debts, adding to deficits caused by ageing populations and limited political incentives to balance budgets. Rapid growth tends to obscure insolvencies, and these difficulties usually surface only when growth prospects turn down. Once large undercapitalized systems and structural budget deficits have developed, it is very difficult to change course, leading to financial traps with rising dangers. Inflation, financial repression, and new crises will be outcomes of this systemic lack of prudence in wealthy nations.

While Peter Boone and Simon Johnson “are sceptical that adequate changes can be achieved [in the developed economies] without crisis,” they see the possibility that the rapidly growing economies (like China) might be able to avoid the same outcome if they take the following three sets of actions now.

First, China must promote the safety of financial institutions by

1. enlisting the energy of creditors to monitor the financial institutions by passing strict no bailout laws which require creditor bail-in before public funds can be used;

2. requiring financial institutions to have large buffers of equity and contingent capital; and
3. strengthening regulation by imposing multi-year restrictions on the participation of former financial regulators in private financial firms, i.e. stopping revolving-door practices between the state and the private sector.

Second, China must promote stable public finance by:

- enforcing balanced budget rules through constitutional amendment (this requirement will keep current spending in check but it cannot prevent over-promises on pensions);
- implementing means-test requirement for pensions because this would reduce size of the group lobbying for high pension at expense of future generations
- increasing transparency in the financial implications of fiscal actions, e.g. there should be a nonpartisan agency (like the Congressional Budget Office) that makes projections on the budget; and
- institute regular auditor-general reports and prosecute malfeasance

Third, China must recognise that financial bubbles usually cannot continue for extended periods without the complicity of the central bank. The US Federal Reserve under Alan Greenspan encouraged bubbles by giving implicit bail-out guarantees to systemically-important financial institutions (e.g. Long Term Capital Management, Bear Stearns). It is therefore important to create an independent “Financial Stability Oversight Board” to look over the shoulders of the central bank and the other financial regulators. The existence of this independent financial sector overseer will increase the emergence of whistle-blowers whose timely warning would help prevent financial collapses.

Seppo Honkapohja (Chapter 4) reviews the process of liberalization in the Nordic countries in the 1980s and discusses the reasons why Finland, Norway, and Sweden drifted into financial and economic crises. He arrives at four key conclusions.

The first conclusion is that the Nordic countries paid too much attention on the “how to” and too little attention on “what is”. There was a lot of attention on what would be the optimum sequencing of

policy actions to dispense with the system of financial market and capital account controls. There was insufficient attention to (1) how the different markets and production sectors would adjust to the policy actions; and (2) what conditions the banks and other market institutions were in. It was thought that firms and households would know how to adjust to the new system and would do so in a flexible way. However, it turned out that both banks and their customers moved toward the new equilibrium too rapidly, causing a credit boom, an asset price bubble and, in the end, a banking crisis.

The Nordic countries did not realize sufficiently that liberalization leads to increased risks and, hence, that a new kind of behavior was needed. Prudential supervision did not have a significant role in the period of a controlled financial system, because the control mechanism by itself had secured the stability of banks to a very large extent. How could the existing institution of prudential supervision which was not needed under the controlled system could have been counted on to start working adequately right away upon financial deregulation?

It is important that all the parties involved understand the need for changing ways of thinking and business practices. Traditional ways of thinking can become a trap, which should be avoided. Market-based financial systems are inherently less controllable and thus market participants must prepare for new risks and uncertainties that were absent in a system of financial repression. Risk management and supervision become very important with financial deregulation.

Seppo Honkapohja's second conclusion was that strengthening the capital base of banks and reforming their supervisory systems are important steps to make in advance of the major liberalization steps.

The third conclusion was that the Nordic countries should have known that it would be very difficult to maintain fixed exchange rates after they have moved to market-based financial systems and have freed cross-border capital flows. The combination of free capital flows and a fixed exchange rate regime can generate immense speculative pressures, which make the defense of the exchange rate costly.

The fourth conclusion is that it is important to try to time the main parts of the liberalization so as to avoid a business-cycle upswing.

Seppo Honkapohja points that the sheer size of China's economy makes its liberalization process different from that of most countries. The reforms in China could have major spillover effects on other countries, and they might well take actions in response to the Chinese reforms. China should hence take into account in the planning of its financial deregulation the international repercussions of its financial sector reform and the possible foreign reactions to it.

To summarise, these three papers by Jeffrey Sachs, Peter Booue and Simon Johnson, and Seppo Honkapohja propose three sets of actions to modernise the financial sector safely and to bolster prudential oversight and financial firefighting capabilities. The first set seeks to reduce the incentives and means of financial institutions and their managers to engage in excessive risk-taking by

- requiring the government to prosecute financial institutions for financial malfeasance, and to make their managers bear personal liability for illegal acts by their firms;
- replacing bailouts of creditors and stockholders with bail-ins,
- increasing the buffer of capital requirements, and
- reducing the leverage ratios of financial institutions, and the use of equity-based compensation for the managers

The second set of reforms is to change the cosy, self-serving relationship between the financial industry and the political establishment by:

- limiting the amount that financial industry can spend on political donations; and
- stopping the practice of revolving door employment pattern between Wall Street and Pennsylvania Avenue by putting multi-year delay in switching jobs between employment in these two places.

The third set of reforms is to strengthen the regulatory capability of the state financial agencies, and to limit the ability of the central bank and fiscal authorities to destabilise the macroeconomy by:

- establishing an independent Systemic Financial Stability Oversight Board to audit the conduct of monetary policy of the central bank to (1) end the practice of the "Greenspan put" to bail out the

culprits of irrational exuberance, (2) prevent the bias toward the defence of an overvalued currency, (3) audit the work of the financial agencies in approving new financial instruments and in prosecution of financial fraud, and (4) monitor the readiness of the slew of federal financial agencies to handle the orderly restructuring of failed financial institutions and to prevent financial contagion in the country and across countries; and

- passing a law to stop the bias toward debt-financed state spending by (1) requiring the federal budget be balanced over the business cycle, and (2) establishing an independent Fiscal Mediation Board to craft the overall expenditure-revenue reconciliation.

### ***Final Remarks***

We end this chapter with three final remarks.

First, the emergence of a more robust and efficient financial sector would protect China's growth from protectionism as well. The Global Financial Crisis has greatly increased attention on the chronic imbalances in global trade and incited strident justifications for US protectionism against China's "beggar-thy-neighbor" policies.<sup>19</sup> The prevention of foreign protectionism is in essence, a new growth driver for China, and the key is the modernization of China's financial system.

Because China's trade account surplus is largely caused by the difference between its savings and investments, it has become fashionable to call for China to adopt consumption-led growth by reducing savings and investments.<sup>20</sup> This is from the GNP identity:

$$CA = (S - I) + (T - G),$$

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<sup>19</sup>See, for example, Krugman (2010a, 2010b); Wolf (2010); Landler (2010); and the hard-hitting editorial "Will China Listen?" published in *The New York Times* (2010). See Woo (2008) for a detailed discussion on the causes of US-China trade tensions.

<sup>20</sup>For example, Lardy (2007) wrote that the more desired growth path is one marked by "a reduction in China's national savings rate" (p. 10), and by a reduction in "China's excessive rate of investment" (p. 10). The latter "is a prerequisite to a successful transition to a more consumption-driven growth path" (p. 10).



where

CA = current account balance,  
S = non-governmental savings,  
I = non-governmental investments,  
T = government revenue, and  
G = government expenditure.

We note, however, that

- this adjustment recipe of a lower investment rate is at its essence a call for China to grow slower and delay its economic catch-up with the advanced economies;
- what is truly economically unnatural, is for China to have been putting its savings abroad when the rate of return on domestic investment is so much higher than the rate of return on US Treasury securities; and
- China's "over-savings" could just as accurately be described as China's "under-investment."

The true cause of China's chronic trade surpluses is the inability of China's financial system to intermediate all of domestic savings into domestic investment, and the best cure is to eliminate this dysfunctional aspect by modernizing the financial system through freeing up entry to private financial institutions, both foreign and domestic.<sup>21</sup> Financial sector modernization will not only lower the savings rate and raise the investment rate but also establish new investment financing mechanisms that will channel investments toward the non-tradeable sector (e.g., a proper actuarially-based, forward-looking credit system that will re-direct non-collateralized mortgage loans to housing for new rural migrants away from collateralized investment loans to the existing export and import-competing industries). This cure will reduce trade imbalance and forestall the protectionism that would lower China's growth imbalance and rate and harm the international economy.

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<sup>21</sup>Liu and Woo (1994) shows formally and empirically that an underdeveloped financial system, *ceteris paribus*, raises the savings rate and hence increases the current account balance.

Our second concluding remark is on the great concern in China about the safety of the transition to IVC Status and 1-IFC Status. It is prudent to note from international experiences that the use of financial markets to accelerate economic development could sometimes be as dangerous as riding a tiger. The Japanese economy has been stagnant up to today following the bursting of its real estate and stock market bubbles in 1990. More recently, the implosion of the US financial system in September 2008 and the subsequent European financial crises have produced prolonged high unemployment.<sup>22</sup>

In our opinion, the fact that the developed economies have yet to produce a financial system that is absolutely safe to use should not be allowed to justify delaying the restructuring of China's financial industry. The key is to study the foreign experiences carefully and to think critically about how the foreign lessons on building an efficient financial sector safely should be modified to take China's circumstances into account – a task that has been done in this book. It is also important not only to prevent financial failures with effective monitoring and appropriate regulation but also to possess financial firefighting ability to put out financial conflagration.

This concern for safety during financial transition is most strongly seen in the Chinese debate on whether, when and how the capital account should be opened. The concern is that capital account liberalization could bring,

- first, the danger of excessive foreign capital inflows that would cause asset bubbles and inflation; and,
- then, the danger of an abrupt sudden reversal of the foreign capital flow that would panic domestic capital into joining the flight, and thus precipitate the collapse of the RMB and financial system, and trigger a cessation of normal trade credit, resulting in an import compression that would deepen the output decline.

This is a valid concern but this potential cost of financial openness has to be compared with the benefits from financial openness. The

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<sup>22</sup>Carlos Diaz-Alejandro (1985) has wryly summarised the Latin American experience with financial reforms in the 1970s as “Good-Bye Financial Repression, Hello Financial Crash.”

fact is that there is no way to eliminate the possibility of this disaster but we can undertake actions to minimise the probability of it occurring (e.g. require a large capital buffer and low leverage ratios), and actions to maximise our ability to control the disaster quickly and rebuild expeditiously afterward (e.g. set up a Resolution Trust Corporation).

Furthermore, the view that the capital account should not be opened until effective financial monitoring and prudential regulation systems are in place is untenable. The realities are that:

1. financial regulation is learned best in the classroom *and* in the marketplace. The recent establishment of the Shanghai Free Trade Zone (SFTZ) will allow the emergence of an off-shore international financial center to give real-life training for China's financial regulators to recognise the signs of a developing financial storm and defuse the situation; and to handle efficiently the recapitalization and reorganization of failed financial institutions.
2. a financial market is not either open permanently or shut permanently, the degree of openness at any point in time is a policy choice at that point in time. As we will argue, a capital account once opened could always be partially closed temporarily without long-run adverse consequences if the closure is done for the right reasons like stopping a financial panic.

When a financial disaster occurs, the most important action is to prevent it from spreading. In a large financial crisis that is causing massive capital flight to occur, the normal tools of management like raising the interest rate to high levels and imposing macro-austerity are usually ineffective. The Hong Kong dollar (HK\$) was attacked four times in the 1997–1998 period where speculators sold the HK\$ and took a short position on the Hang Seng Index. The first three speculative attacks (October 20–23, 1997, June 10–12, 1998, August 4–6 1998) were successfully defeated by high interest rates, but each successive attack was significantly larger in scale. The scale grew each time because, in each subsequent attack, more of the general public were panicked into joining the strategic financiers (who had started the panic) in the sell-off of HK\$ and Hong Kong stocks. The Hang

Seng Index suffered a major loss each time along with the fall in the Hang Seng Index Futures.

The fourth speculative attack on the HK\$ started occurred on August 13, 1998, and the Hong Kong Monetary Authorities (HKMA) took the extraordinary actions of, one, buying the HK\$ but now putting it back into the banking system to prevent the interest rate from rising; and, two, buying the blue-chip stocks on such a large-scale that the Hang Seng Index and the Hang Seng Index Futures actually went up. This HKMA counter-attack worked very well because there has not been another speculative attack on the HK\$ since September 1998, and the HKMA made HK\$30 billion (US\$4 billion) in profits when it sold off the blue-chip stocks. It should be noted that what HKMA did go against a fundamental principle of central banking which is that a central bank should not print money to buy private company shares because this action amounts to the nationalization of private property.

The lesson here is that extraordinarily adverse financial market developments can be contained only with extraordinary state actions that break the general public sense of panic about asset values and the economic future. The free fall of the Malaysian ringgit, and with it, the free fall of the Malaysian stock market, was stopped in September 1998 only after Malaysia imposed temporary capital controls.

For both Hong Kong and Malaysia, their “extraordinarily unfair confrontations with private capital by changing the rules of normal finance” have not resulted in any long-term reduction in their access to international financial markets or in the growth of their financial industries. This is because private capital recognises that the only iron rule that matters for profit-maximization is that long-run economic stability and normal economic growth are preserved, and these non-textbook methods of economic management were effective in maintaining this iron rule.

Just as the belief that “a capital account, once opened, must always be kept open” is overly dogmatic, the belief that “the financial market is always efficient in its working” is equally overly dogmatic. The deep collapse in the Asian Financial Crisis of 1997–1998 and the Global Financial Crisis of 2008–2009 and the galloping bull markets in the two-year periods before both collapses are undeniable

examples of financial panic and irrational exuberance, respectively. Hence, another step that China should take to strengthen global financial stability and to increase the safety of opening its capital account and financial industry is to take leadership at the global level (e.g. at the G20 summit, and at the United Nations) to push for a global transactions tax on capital movements — push for a Tobin (1978) tax (a currency transaction tax) — to induce investors to take a more long-term view of their overseas investment.

Our final concluding remark is on whether there is the issue of speed in the internationalization of the RMB. As pointed out at the beginning, the phenomenon of economies of scale in the use of a particular currency in international transactions means that the number of IVCs is a small one. The “natural IVC oligopoly” could consist of, say, two or three members. If any one of the Indian Rupee, the Russian Ruble and the Brazilian Real were to join the US\$ and the Euro as IVCs before the RMB, the RMB would be denied IVC status forever, and Shanghai be denied 1-IFC status forever.

Clearly, if Russia, Brazil and India would not come close to China's economic strength in the coming half century, there is no reason for China to complete capital account liberalization and financial sector opening in the next twenty years until China is completely satisfied that it has made every preparation possible to ensure that the deregulation would not generate the slightest perturbation to its economy. China could repeat what Japan did, which is to take two decades to decide whether, when and how to promote its own currency to be an IVF and a reserve currency (McKay, Chapter 6).

So could India pose a challenge to China's ascent to IVC and 1-IFC status given that India's GDP per capita in PPP\$ today is only half of that of China's? The answer is yes because the competition between them stretches over a long time span.<sup>23</sup>

The Chinese-US living standard ratio (LSR) is 20 percent today, and we had termed China's catching-up to be completed when the ratio reaches 80 percent. Going by the observation that the Taiwan-US LSR had risen from 20.7 percent in 1973 to 67.1 percent in 2008, which is an increase of 1.3 percentage points per year, we will assume that China

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<sup>23</sup>Georges de Menil alerted us to this point in private communication.

continues its higher-than-normal economic growth and hence raises the China-US LSR by 1.5 percentage points annually. The US-China LSR will reach 80 percent in 2050, and, with the China-US population ratio (LR) at 3.2 in that year, China-US relative economic power in 2050 would be 2.56 percent, as calculated earlier.

If we assume that India continues to grow slower than China, at 1.3 percentage points annually, then the India-US LSR would be 62 percent in 2050, i.e. the India-China LSR would be 77.5 percent. However, because the India-US population ratio (PR) will be 4.2<sup>24</sup> then, India-US relative economic power in 2050 will be 2.60, just pipping China in the economic power race.

If the India-US LSR were to grow at 1.5 percentage points a year just like the China-US LSR, then India-US relative economic power in 2050 would be 2.9. And if the India-US LSR were to grow faster, say 1.7 percent points annually, then India-US relative economic power would be 3.3 in 2050.

In short, among the conditions required for China's ascent to IVF and 1-IFC status is that India's economic growth rate for the next forty years would not come close to that of China. This is a prerequisite that has no basis. In any case, it would not be rational for China to base its dream of the RMB being an IVC and Shanghai being a 1-IFC on the hope that its competitor would not be able to achieve exactly what it has done.<sup>25</sup>

As China is unlikely to be able to out-compete India for IVC and 1-IFC status on the basis of relative economic strength, China will have to out-compete India in the attractiveness of its financial market. To do so, China has better get on with the deregulation and opening of its capital account and its financial industry, and with building up its financial firefighting capacity in order to build a competitive lead for China's financial industry over India's in openness, sophistication, and safety.

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<sup>24</sup>Computed from the population projections of the World Bank (accessed 15 January 2014): <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTDATASTATISTICSHNP/EXTHPSTATS/0,contentMDK:21737699~menuPK:3385623~pagePK:64168445~piPK:64168309~theSitePK:3237118,00.html>

<sup>25</sup>This hope is unrealistic because the average annual growth rate of India in the 2003–2010 period (which includes the 2008 severe downturn) was 8.4 percent.

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