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The Financial Sector and Growth in Emerging Asian Economies

William R. Cline

Abstract

This study suggests that Asian emerging-market economies now have financial sectors relatively unlikely to provoke new financial crises, either because of reforms after the late-1990s East Asian financial crisis or because of the dominance of state-owned banks not subject to bank runs. Financial intermediation is found to be surprisingly high and is consistent with higher rates of saving and investment and hence growth in the main economies of the region than in counterparts in Latin America. There are sharply diverging patterns nonetheless (e.g., high foreign ownership of banks in the Republic of Korea versus minimal presence in the People's Republic of China). Differing national structures are identified (bank dominated, portfolio oriented, diversified). Policy recommendations include establishing clear long-term plans to improve efficiency in state-owned banks or reduce their dominance; pursuing bank capitalization targets at least as ambitious as those of Basel III; ensuring adequate regulation of growing nonbank intermediaries; reversing a recent trend toward renewed international financial closure in some economies; and improving legal security of bank regulators in some countries.

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William R. Cline, senior fellow, has been associated with the Peterson Institute for International Economics since its inception in 1981. His numerous publications include *Managing the Euro Area Debt Crisis* (2014), *Financial Globalization, Economic Growth, and the Crisis of 2007–09* (2010), and *The United States as a Debtor Nation* (2005).

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*For inquiries, please contact: Asian Development Bank, 6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines,
Tel +63 2 632 4444, Fax +63 2 636 2444, www.adb.org, adbpub@adb.org*

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This paper takes a broad look at the strengths and weaknesses of the financial sectors in Asian emerging-market economies and draws inferences regarding possible institutional and policy changes that could enhance the contribution of these sectors to economic growth going forward. The first section reviews economic growth theory and the role for the financial sector as it has been featured in the growth literature. The second section considers summary evidence on actual growth performance in recent years in the main Asian emerging-market economies and, for comparison, their counterparts in Latin America as well as the three largest industrial economies. The third section attempts to compile data that provide a profile of the depth and structure of financial sectors in the same set of economies. The fourth section addresses the specific issue of financial sector openness and the balance between risks and opportunities associated with financial globalization. The fifth section briefly summarizes recent patterns encountered in IMF/World Bank financial sector reviews for the Asian emerging-market economies, reported in appendices A and B. The sixth section summarizes the implications for institutions and policies, and the final section recapitulates the conclusions.

GROWTH THEORY AND THE FINANCIAL SECTOR

Capital Accumulation and Factor Productivity

Classic growth theory emphasizes the accumulation of capital as the driving force in raising output, and hence output per worker and GDP per capita. The early economic development literature prominently featured the Harrod-Domar model (Harrod 1939, Domar 1946), in which GDP was equal to the amount of capital divided by the capital-output ratio. Because the amount of capital increased by the amount of investment, and the amount of investment was equal to the amount of savings, and the amount of savings in absolute terms was equal to the saving rate multiplied by GDP (or output), it followed that the growth rate would be equal to the saving rate divided by the capital-output ratio.¹ Growth could thus be increased by increasing the saving rate, or by making production more efficient and thereby reducing the capital output ratio, or both. Although the Harrod-Domar model had been developed in the context of concern about Keynesian unemployment and an excess of saving over desired investment in advanced countries, in the development context it was natural instead to focus on the model's implications for the need to raise capital to increase productive capacity. In this context raising the saving rate was seen as the central challenge of economic development.

The “surplus labor” model of W. Arthur Lewis (1954) formalized this approach by arguing that so long as there was a large pool of rural labor willing to enter the industrial labor force at a constant (and

1. With $Q = K/B$, $\Delta Q = \Delta K/B$, where Q is output, K is capital, and B is the capital output ratio. The change in capital equals the amount of saving: $\Delta K = S = sQ$, where s is the saving rate. It follows that the growth rate, $g \equiv (\Delta Q)/Q$, will be: $g = (\Delta K/B)/Q = ([sQ]/B)/Q = s/B$.

low) institutional wage, the modern sector would behave in a Harrod-Domar fashion with output rising in proportion to the amount of capital in the modern sector. Capital in the modern sector would rise from reinvested profits, boosting the share of saving and investment in the economy as a whole because of the much higher rate in the modern sector. Only when surplus labor from the countryside was exhausted would wages begin to rise in the modern sector, at the “turning point” at which the rising marginal product of labor and falling ratio of labor to capital would make the modern sector begin to behave in a neoclassical fashion (with output constrained by both capital and labor) instead of a fixed-coefficient relationship to capital as the only constraint. Even today the development of the People’s Republic of China in particular is sometimes depicted as largely still being consistent with the surplus labor model, and the question has been whether the turning point has arrived, or when it will (see, for example, Das and N’Diaye 2013).

The alternative growth model was the neoclassical model, which emphasized both capital and labor as well as technological change as the sources of growth. In the famous formulation by Robert Solow (1956), output grows at a rate equal to the sum of proportionate growth of each factor multiplied by its “factor share,” plus a residual attributable to technological change. The weighting of each factor’s growth by its share in output stems from the assumption that each factor is paid its marginal product.² Sometimes the model was formulated to treat human capital as a third distinguishable factor of production (Mankiw, Romer, and Weil 1992).

The natural role for the financial sector in growth in either the Harrod-Domar or the neoclassical model is as an institution that helps mobilize saving for investment, boosting capital, or technological change, reducing the capital required per unit of output (Harrod-Domar) or increasing the growth residual (neoclassical). Finance could also be thought of as facilitating investment in human capital, another factor in the neoclassical framework.

Finance and Growth: Theory

Joseph A. Schumpeter (1911) emphasized his “heresy” that money and credit matter because they were crucial to the process of creative destruction as resources are bid away from the old sectors and channeled to new sectors with new technologies. In the late 1960s, Raymond W. Goldsmith (1969) emphasized the role of finance in economic development (as discussed below). Ronald I. McKinnon (1973) attacked “financial repression” in developing countries, the practice of imposing official ceilings on interest rates.

2. In a neoclassical production function, the elasticity of output with respect to the factor (say, N , for labor) can be shown to equal the factor share of output as follows. The factor is paid its marginal product (MP_N), so total payment to labor is $MP_N \times N$, and labor’s share in total output is $(MP_N \times N)/Q$. The elasticity of output with respect to labor is: $\frac{\partial Q/\partial N}{Q/N}$, which can be rewritten as $\frac{\partial Q/\partial N}{Q/N}$, which in turn can be rearranged into $(MP_N \times N)/Q$ (that is, by definition $\partial Q/\partial N = MP_N$). The total percent change in output will equal the sum of the percent increases in each of the factors times its respective output elasticity (or factor share).

Although the objective of such restrictions was to boost investment, instead the result was to discourage saving and the channeling of resources to productive investment. “Financial liberalization” came to mean the freeing of interest rates to reach market-clearing levels, as well as a shift away from directed lending by state banks toward market-based lending.

Ross Levine (2004) emphasizes that the theoretical approaches to the relationship between the financial system and growth are premised on the role of the financial sector in reducing information and transaction costs. Creditors may have insufficient information on the ability of debtors to repay to make the credit transaction possible. Raghuram G. Rajan and Luigi Zingales (2003) more specifically emphasize the Schumpeterian consideration: the ability of the financial system to finance innovation, regardless of whether the entrepreneur is connected to existing circles of firms (Bertocco 2006).

The Financial Sector and Macroeconomic Stability

Beyond its influence on business-as-usual growth through facilitating capital accumulation and technological change, the financial sector has featured prominently in influencing susceptibility to business cycles. Crises in the financial sector have disrupted macroeconomic stability in emerging-market economies with sufficient frequency, and more recently in the advanced economies, that it can be argued that what might be called the “Hippocratic theory of finance” is the most important. This theory would posit simply that the most important function of the financial sector is to do no harm to the macroeconomy.

Weak financial sectors were a driving force in the East Asian crisis of the late 1990s. Although Argentina’s 2001–02 crisis had mainly fiscal (and political) origins, the freeze in bank deposits in the crisis brought a downward spiral to the economy. Public sector costs of restructuring financial sectors in the crises of the late 1990s reached as high as 57 percent of GDP in Indonesia, 31 percent in the Republic of Korea, 44 percent in Thailand, 22 percent in Ecuador, 32 percent in Turkey, and 16 percent in Malaysia (Laeven and Valencia 2013, appendix A1). More recently, the banking crisis in Ireland imposed direct fiscal costs amounting to 40 percent of GDP (Ahearne 2012, 43).

Excessive credit expansion has frequently characterized the run-ups to financial crises in international historical experience. For emerging-market economies, an iconic application of the financial boom-bust syndrome is the concept of the “sudden stop,” a term coined by Guillermo A. Calvo (1998). The term refers to the switch from the euphoric phase to the panic phase in the flows of foreign capital. The sudden stop featured prominently in the three major sovereign debt crises of the past three decades: the Latin American crisis of the 1980s, the East Asian financial crisis of the late 1990s, and the sovereign debt crisis of the euro area periphery in 2010–13 (Cline 2013a, 2014).

For both advanced and emerging-market economies, Enrique G. Mendoza and Marco E. Terrones (2008) find that in 1960–2006, credit booms were associated with periods of economic expansion,

rising equity and housing prices, and real exchange rate appreciations, dynamics that then reversed in subsequent downswings. They find that many of the recent emerging-market crises were associated with credit booms. Researchers at the International Monetary Fund (IMF) estimated that about one-third of credit booms wind up in financial crises, but also found that many credit booms resulted in permanent financial deepening beneficial to longer-term growth (Dell’Ariccia et al. 2012).³

The Great Recession centered in the United States in 2008–09 is the most conspicuous case in recent history of macroeconomic disruption triggered by financial sector weakness. Breakdowns in the financial sector, notably in the highly leveraged investment banking sector, sharply intensified the recessionary pressures from the downturn in the housing market. The most relevant conceptual framework pertaining to financial crises is probably that of Hyman Minsky (1986, 1992), albeit his approach was less formal than that of the Harrod-Domar or neoclassical growth models. Minsky argued that in periods of prolonged prosperity, complacency induces the financial sector to transit from stabilizing “hedge finance” (in which operating income is sufficient to cover both interest and principal), toward “speculative finance” (expected operating income covers interest but not principal), to “Ponzi finance” (operating income insufficient to cover all interest). Charles P. Kindleberger (1978) similarly emphasized widespread historical episodes of boom and bust associated with initial phases of financial euphoria followed by panic.

The US crisis had some features that accord with the Minsky-Kindleberger framework, but others that did not. The equity and commodity markets had not reached extreme states of euphoria in 2007.⁴ The housing market turned out to be in a bubble, however. US housing prices doubled from 2000 to 2006. They then fell by one-third over the following three years (Cline 2010, appendix 4B). However, it was the combination of this sea change from rising to declining housing prices with several other major factors that brought the crisis. One important influence was the unanticipated vulnerability from financial engineering in the form of securitized subprime mortgages (and associated perverse incentives to rating agencies). For purposes of this review, however, it is appropriate to emphasize another influence: the extremely high leverage ratios of the shadow banking sector and the short-term nature of its financing. Whereas banks had asset to capital ratios on the order of 10 to 1, investment banks had ratios of 20 or 30 to 1.⁵ The “Minsky moment” arrived in the fall of 2008 when Lehman Brothers failed. Lehman was deeply insolvent, so the Federal Reserve could not provide the same financial backstop

3. However, Mathias Drehmann, Claudio Borio, and Kostas Tsatsaronis (2012, 11) find that a much closer linkage of financial crisis to credit cycles is obtained if in addition residential property price cycles are jointly incorporated with credit.

4. The trailing 12-month price-earnings ratio for the Standard & Poor’s 500 Index (operating earnings) stood at 17.8 at the end of 2007, well below its level of 29.6 at the end of 1999 in the tech boom (Standard and Poor’s 2014).

5. Leverage was far higher at the London investment bank unit of insurer AIG, which wrote one-way bets on credit default swaps for collateralized debt obligations with a notional value of some \$500 billion. Gretchen Morgenstern, “Behind Insurer’s Crisis, Blind Eye to a Web of Risk,” *New York Times*, September 27, 2008. The Federal Reserve and US Treasury would wind up providing some \$150 billion in emergency support to AIG (Cline 2010, 273–75).

it had made available for the earlier takeover of Bear Stearns (Cline and Gagnon 2013; Geithner 2014, 207). For emerging-market economies, a key lesson is the importance of capital adequacy and regulatory supervision. More specifically, a key responsibility of economic policymakers is to ensure macroprudentiality. This task requires ensuring that highly interconnected financial institutions with systemic consequences (for the economy) have robust capitalization and supervision.

FINANCE AND GROWTH: EVIDENCE

Goldsmith (1969) argued that there were systematic patterns in financial and economic development in which the ratio of all financial assets to underlying tangible net national wealth increases. He found that this “financial interrelationships ratio” tended to rise to about 100 to 150 percent and then level off, and was about the same for the United States in the 1960s as in the 1920s. In contrast, the ratio was only about 30 to 60 percent in developing countries. However, he judged that it could not be established “with confidence whether financial factors were responsible for the acceleration of economic development” (1969, 48).

Robert G. King and Ross Levine (1993) applied statistical tests for 77 countries for the period 1960–89 to estimate the influence of finance on development. They found that financial depth, measured by the ratio of liquid liabilities of the financial system to GDP, was a good predictor of growth. The bottom quartile of countries by growth performance had mean financial depth of 0.2, compared with 0.6 for the top quartile. The estimated coefficient implied that the expected difference in growth between the two groups would amount to 1 percent annually. Subsequently Ross Levine, Norman Loayza, and Thorsten Beck (2000) applied instrumental variable and dynamic panel techniques to confirm exogeneity in the influence of financial intermediary development on economic growth, as well as the influence of legal rights for creditors and accounting systems in determining financial development.

More recently, however, in work for the Bank for International Settlements, Stephen G. Cecchetti and Enisse Kharroubi (2012) find that there can be too much of a good thing: Beyond a certain level, financial deepening is associated with slower rather than faster growth. Using data for 50 advanced and emerging-market economies for 1980–2009, they find that when private credit exceeds GDP, it becomes a drag on productivity growth. Similarly, when the financial sector comprises more than 3.5 percent of total employment, further increases in financial sector size are detrimental to growth. Moreover, they find that more rapid financial sector expansion affects growth adversely. For 21 OECD countries, the authors find an elasticity of -0.33 relating annual growth in output per worker to the annual percentage growth rate in the share of employment in the financial sector.⁶

6. Thus, a country with the financial sector employment share growing at 1.6 percent annually (the sample median among countries with rising employment shares in the sector) would experience approximately 0.5 percentage point slower growth annually in labor productivity.

Similarly, Jean-Louis Arcand, Enrico Berkes, and Ugo Panizza (2012) find negative effects of additional financial deepening when credit to the private sector exceeds 100 percent of GDP. They argue that the usual specification in earlier estimates (growth rate on the logarithm of the credit/GDP ratio) failed to allow for the possibility of a reversal of the sign (by being “monotone”). They use instead a quadratic formulation, and the coefficient on the squared term is negative.

These estimates should probably be taken with a large grain of salt, particularly such conclusions as the Cecchetti-Kharroubi estimates that Canada would grow faster by 1.3 percent annually, and Switzerland by 0.7 percent, if each were to shrink the size of its financial sector back to the growth-maximizing point. Except for a casual reference to diverting the brightest from rocket science to finance, there is little motivation of a causal mechanism for the impact of financial deepening on growth to turn negative. Arcand, Berkes, and Panizza (2012) may have a better argument in linking their findings to earlier findings about thresholds at which financial crises become more likely. Nonetheless, cross-country studies such as these are inherently subject to questions of specification and, especially, causality.⁷

If the threshold of 100 percent of GDP were taken seriously, the implications would be fairly negative for some of the key Asian emerging-market economies. Thus, the ratio of credit to the private sector to GDP at the end of 2013 stood at 140 percent in the PRC, 135 percent in the Republic of Korea, 122 percent in Malaysia, and 121 percent in Thailand.⁸ However, it simply flouts common sense to conclude that the most important financial sector policy in these four countries should be to reduce aggressively the level of credit. (Others in the region would be spared, as the ratios stand at 97 percent in Viet Nam, 51 percent in India, 36 percent in the Philippines, and 34 percent in Indonesia.) A more meaningful policy inference could be simply that in the first four countries, the objective of policy should no longer be primarily to raise total depth of credit to GDP further, but the focus instead should be on ensuring that the credit is of high quality in the sense that it is directed to the highest-return activities, and that it is safe, in the sense that excessive leverage is not being pursued nor is a boom-bust credit cycle taking place.

GROWTH PERFORMANCE, 2000–2013

Before examining financial sector development, it is useful to recapitulate the actual growth performance of the major emerging-market economies in Asia so far in the new century. For perspective, it is also useful to compare their growth results with those of peer emerging-market economies in Latin America, as well as those of the largest industrial countries. Table 1 reports annual real GDP growth rates for

7. Consider the influence of the typically higher credit ratios in richer countries, combined with the fact that growth convergence means growth tends to be faster at lower income levels. Unless the control variables give a fully accurate treatment of the convergence effect, there could be a spurious attribution of a negative growth rate influence of rising credit.

8. Using the IMF's data series for credit to the private sector, category 32D, the concept applied in Arcand, Berkes, and Panizza (2012) and IMF (2014b).

2000–2013 for nine emerging Asian economies and seven Latin American economies with populations of 18 million or more and purchasing power parity (PPP) per capita incomes of \$4,000 or more in 2013 (UN 2012, IMF 2014a).⁹

Asian emerging-market economies have led world growth in this period. Unweighted average growth rates were 5.8 percent for the nine emerging Asian economies, 4.2 percent for the seven Latin America economies, and 1.2 percent for the three large industrial countries (column C in table 1). To consider relative growth performance, it is important to take account of growth of the potential labor force. Column D reports the average annual growth of the population aged 15 to 64 years for 2000–2013 (US Census Bureau 2014). Malaysia, the Philippines, and Viet Nam were notable for high growth of this age group (over 2 percent annually), and even India was relatively high (1.9 percent); Germany and Japan were notable for significant declines in the number of persons in this age group.

Column E of table 1 provides a summary indicator of growth performance: the annual real GDP growth rate minus the average annual growth of the working age population. Column F shows country rankings on this measure. Not surprisingly, the PRC ranks first. Somewhat less well known, India ranks second, and Sri Lanka, third. The only Latin American country close to this group is Peru, which ranks fourth. Among the three large rich countries, on this measure both Germany and Japan outperformed the United States. Growth of output per working age population was about 1.4 percent annually in Germany and Japan, versus about 0.8 percent in the United States. These results reflect the fact that the United States was the epicenter of the Great Recession. As expected, nearly all of the emerging-market economies outperformed the three rich countries, the sole exception being Mexico. The outcome for Mexico likely reflects its extreme sensitivity to the US economy.

Finally, the table shows the average rate of gross investment as a percent of GDP in this period. For the Asian emerging-market economies, the unweighted average of the gross investment rate was 29.1 percent; for the Latin American economies, 21.6 percent; and for the three rich economies, 20.5 percent. The results for this period confirm the broadly accepted view that higher growth in emerging Asia than in Latin America reflects higher investment rates, with the PRC in particular at an extremely high average investment rate of 43 percent. Investment was also especially high in Viet Nam (33 percent), India (32 percent), and the Republic of Korea (29 percent).

9. The growth rates are estimated from log-linear regressions of real GDP on time. For Argentina, IMF (2014a) data are used through 2007. Thereafter, estimates are based on Coremberg (2014), who calculates that the official data overstated GDP by 12.2 percent in 2012. Note further that the per capita GDP screen means that four large, low-income countries in Asia are excluded from table 1: Bangladesh, Myanmar, Nepal, and Pakistan.

Figure 1 displays the growth and investment data from table 1 for the 16 emerging-market economies. There is a clear correlation between the gross investment rate and the real GDP growth rate.¹⁰ At a broad level, then, classic Harrod-Domar and Lewis growth models based on capital accumulation do relatively well in explaining differing growth outcomes. At the most basic level, the implicit question for the financial sector is: What kind of financial sector is most successful at mobilizing investment? Because efficiency also matters, however, an important corollary question is: What kind of financial sector leads toward efficient investment? In figure 1, the first question pertains simply to how far the country observation is to the right-hand side. Again, the PRC, India, and Viet Nam led in capital mobilization, and more broadly the strong dominance of the Asian over the Latin American economies is evident in the predominance of diamond-shaped observations to the right and circular ones to the left.

As for the second question, investment efficiency, the relevant information in figure 1 is the extent by which the country observation is found above the trend line (higher than average efficiency) rather than below the line (lower efficiency). In this dimension, Peru stands out favorably (with a gross incremental capital output ratio [ICOR] of 3.6), and Mexico unfavorably (at 10.4).¹¹ Among the Asian emerging-market economies, the investment efficiency outcome was most favorable for the Philippines (ICOR = 4.1) and the PRC (4.4), and least favorable for the Republic of Korea (7.7).¹² Lower return on investment in the Republic of Korea is consistent, however, with its much more advanced level of development (with PPP per capita GDP close to that of Japan and about three times that of the PRC and eight times that of India; table 1, column B).¹³

FINANCIAL SECTOR STRUCTURE

Banks

In most economies the banking sector is the main source of financing to the private sector. A review of financial sector health appropriately begins with the banks. One's prior expectations for the sector in the main emerging-market economies would be roughly along the following lines. First, in part because of reforms following earlier crises, the expectation would be that banks are in relatively sound condition in economies such as Chile, Indonesia, the Republic of Korea, and Thailand. Second, one

10. A simple regression of the full-period growth rates on average investment rates yields: $g = -0.58 (-0.5) + 0.219 (4.7) I$; adj. $R^2 = 0.59$, where g is the growth rate, I is the gross investment rate, and t-statistics are in parentheses.

11. The incremental capital output ratio, or ICOR, is the ratio of investment as a percent of GDP to the growth rate.

12. My colleague Nicholas Lardy points out, however, that the PRC's performance divides into a more favorable period (2000–2007) and less favorable period (2008–14). In the former period growth averaged 10.5 percent annually; in the latter, 8.8 percent (IMF 2014a). Conversely, the investment ratio was lower in the first period (37.8 percent) than in the later period (44.7 percent; IMF 2014b). So the ICOR was considerably lower in 2000–2007 (at 3.6) than in 2008–14 (5.1).

13. The ICOR was even higher in the three rich countries, at a simple average of 20. Note that the ICOR for investment net of capital consumption would be lower. Data are incomplete for capital consumption, however.

would not expect the depth of banking finance to be as great in the emerging-market economies as in the advanced economies. Third, where the state sector owns a large portion of the banking sector, as in the PRC, the expectation would be that banking fragility would be less of a concern because of the assured backstopping by the state. Fourth, however, state banks tend to be less efficient, so that conscious plans for either phasing down their share of the system or introducing means to improve their performance are likely to be needed. Fifth, it is an open question what one might expect regarding bank capitalization relative to that in advanced economies. The general presumption of lesser development in emerging-market economies might point to lower capitalization, but the likelihood of greater sophistication of financial engineering in advanced economies could ironically lead to the opposite. Sixth, among advanced economies, the expectation is that banking plays a more dominant role in Europe and Japan whereas the nonbank financial sector is more dominant in the United States.

Table 2 reports selected indicators for the banking systems of the same countries just considered with regard to growth outcomes. Somewhat surprisingly, the banking sectors are larger than might have been expected in several of the Asian emerging-market countries, especially the PRC, the Republic of Korea, Malaysia, and Thailand. In all four cases bank assets are over 200 percent of GDP.¹⁴ The poorest economy shown, Viet Nam, has surprisingly high bank assets at well above 100 percent of GDP. In contrast, the Latin American economies with the highest bank assets, Brazil and Chile, both have only about 110 percent of GDP in bank assets. The three advanced economies have the expected pattern, though the differences are perhaps more than might have been anticipated, with US bank assets relative to GDP only about one-fourth those in Japan. In broad terms, the data suggest that the Asian emerging-market economies do not suffer from underbanked financial sectors. The more relevant question may be whether in some cases the sector is overdimensioned.¹⁵

The next three columns in table 2 in principle provide information about the health of the banking sectors. Concentration of bank assets in the five largest banks represents potential “too big to fail” risks. The five largest banks account for about three-fourths or more of bank assets in Sri Lanka, Malaysia, Brazil, Chile, Colombia, and Peru.¹⁶ In the advanced economies, the top five banks hold about two-thirds of assets in the United States but considerably less in Germany and Japan. The combined influence of

14. Data are from IMF (2014b) for depository institutions. The most recent available data are used, usually for March 2014 or December 2013. The PRC’s 280 percent of GDP for bank assets is twice the 140 percent ratio of private sector credit to GDP. Only a part of the difference can be explained by claims on the government sector. (In 2013, central government debt was 17.9 percent of GDP, and local government debt, 35.8 percent; see IMF 2014l, 51). The rest of the difference apparently reflects the fact that claims in table 2 include claims on other financial institutions.

15. The principal case of the opposite possibility appears to be Argentina, where bank assets are only about one-third of GDP. This level may reflect the aftermath of the severe banking crisis in 2001–03.

16. Data on individual bank assets were obtained from Bloomberg, bank websites, and Banco Central (2014) for Brazil. Note that in Brazil the large state development bank, BNDES, is not included in the depository bank data.

concentration and overall bank assets indicates that on average each of the five largest banks has assets equal to 32 percent of GDP in Malaysia, 27 percent in Japan, 26 percent in Germany, 20 percent in the Republic of Korea, 19 percent in Thailand, and 18 percent in Brazil. Considering that the corresponding number is only 11 percent of GDP for the United States, where concerns remain about too big to fail, the implication would seem to be that there are grounds for this concern in several other major economies as well.

The third column in table 2 provides a direct market indicator of banking sector health: the average credit default swap (CDS) rate on five-year dollar obligations for the three largest banks.¹⁷ All of these spreads are relatively modest, with the exceptions of India, Brazil, and Colombia (all at about 200 basis points), and possibly the PRC as well (about 135 basis points). Typically the banks will not enjoy a narrower credit default swap spread than does the sovereign in question. Recent five-year sovereign CDS rates for these four countries have been around 160 basis points for India, 145 for Brazil, 90 for Colombia, and 80 for the PRC.¹⁸ So at least for Brazil and India the rates may be more a reflection of each economy's sovereign risk than any differential risk of the banking sector itself.

The fourth column reports the average ratio of bank capital to assets, as reported in the World Bank's *World Development Indicators* (2014). The measure for capital is total capital and reserves.¹⁹ The measure for assets is total assets, not risk-weighted. These capital ratios are thus essentially the inverse of asset/capital leverage ratios. They suggest that among the Asian emerging-market economies, the PRC and India in particular may be on the low side in terms of bank capitalization, at 6 to 7 percent ratios of capital to unweighted assets (leverage of about 15 to 1). In contrast, the capital-asset ratio is typically 10 percent or more in Latin America (with Brazil slightly lower and Chile at about 8 percent but Colombia nearly 15 percent).

The lower capitalization ratios for banks in the PRC and India should be considered in light of the fact that in both economies much of the banking sector is owned by the government (an estimated 90 percent in the PRC and 74 percent in India; next to last column).²⁰ If banks are in fact relatively less capitalized, the implications might be less important than in many other economies because of the presumption that the governments would be capable of supporting additional bank capitalization. For the

17. Data are from Datastream and Bloomberg.

18. Bloomberg, July 31, 2014.

19. Including tier 1 paid-up shares and common stock, and other regulatory capital in the form of subordinated debt that need not be repaid if funds are required to meet minimum capital needs (tier 2 and tier 3 capital). A better measure would be tier 1 capital (predominantly common shares and retained earnings; BIS 2010, 2), but cross-country data are not as readily available for this measure.

20. The estimate for the PRC is by Barth, Caprio, and Levine (2013, 7). They also report that in 2007 just the four largest state banks accounted for about 70 percent of bank assets.

PRC this assumption would seem to be especially warranted given the fact that the general government is a net creditor.²¹ For India the presumption of government backing might be less robust, considering that public debt is not particularly low for an emerging-market economy.²²

Table 2 also reports the bank capital to assets ratios for Germany, Japan, and the United States. It is striking that this ratio is only half as high in Germany and Japan as in the United States. The difference in part likely reflects the use of International Financial Reporting Standards (IFRS) in Europe versus Generally Accepted Accounting Principles (GAAP) in the United States. The IFRS allows much less netting of derivatives.²³ Note also that the high capital to assets ratio for the United States reflects the inclusion of all capital; when only tangible capital is included, the ratio is only about half as large. This same consideration suggests that the frequency of capital to assets ratios on the order of 10 percent or above for the emerging-market economies in the table might also be taken with a grain of salt.

Basel III international rules for bank capitalization focus mainly on risk-weighted assets (RWAs). Banks are to hold 4.5 percent of RWAs in common equity and an additional 2.5 percent capital conservation buffer, for 7 percent total by 2019 (BIS 2010, 69). However, risk weighting reduces the reported value of assets by about half for the large banks, under GAAP, and even more under IFRS.²⁴ Basel III introduces only a modest leverage ratio of 3 percent for capital relative to total assets. With the benefit of experience in the Great Recession, however, emerging-market economies would seem better advised to evaluate banking strength against total assets rather than RWAs.²⁵ It would also seem prudent for policymakers to seek capitalization levels *at least* as high as the Basel III requirements. A fruitful debate in the region could address whether the current capital-assets ratios of 11 to 12 percent in Indonesia, the Philippines, and Thailand are too high, or the ratios of 6 to 7 percent in India and the PRC are too low. Given the prospect of increasing regional integration, moreover, the answer to this question would presumably affect competitiveness of banks within a more open regional trading regime. Indeed, a key original motivation for Basel capital requirements was to reduce the competitive advantage of Japan's

21. The PRC's general government gross debt in 2013 was only 22 percent of GDP (IMF 2014a). Considering that its external reserves amount to 43 percent of GDP (IMF 2014b), the government is a net creditor rather than net debtor.

22. General government gross debt stood at 67 percent of GDP in 2013 (IMF 2014a). International reserves were 15 percent of GDP (IMF 2014b).

23. Hoenig (2013) estimates that whereas eight large global systemically important banks (GSIBs) in the United States have tangible capital amounting to 6.2 percent of total assets under GAAP, the ratio is only 3.9 percent using IFRS treatment of derivatives. He calculates that this ratio is only 1.5 percent for the one GSIB in Germany, but the average for non-US GSIBs is 3.7 percent.

24. For the fourth quarter of 2012, the eight GSIBs in the United States had a total of \$5.4 trillion in RWAs, \$10.2 trillion in total assets under GAAP, and \$15.9 trillion in total assets under IFRS. For 16 foreign GSIBs (almost all based in Europe), RWAs were a total of \$9.1 trillion whereas IFRS total assets were \$27.5 trillion (Hoenig 2013).

25. Low risk weights for mortgages based on past history turned out to be misleading for the United States; zero risk weights for loans to sovereigns turned out to be misleading for banks in the euro area.

banks (with relatively low capital ratios) against those of the United States and Europe (where capital requirements were higher).

The final two columns of table 2 report the share of bank assets held by banks that are majority owned by the government (next to last column) or by foreigners (last column). In Asia, government ownership of banks is high in the PRC, India, Sri Lanka, and (to a lesser degree) Viet Nam. Government ownership is intermediate in Indonesia and the Republic of Korea, but low in Thailand, the Philippines, and especially Malaysia. In contrast, Latin America shows only intermediate government ownership (Argentina, Brazil, Chile, and Venezuela) or low government ownership (Colombia and Mexico). Foreign ownership is exceptionally high in the Republic of Korea and Mexico (at about 80 percent of bank assets each). Foreign ownership is in an intermediate range of one-fourth to one-half in Indonesia, Malaysia, Argentina, Chile, and Peru. It is extremely low in the PRC, India, and Thailand (below 10 percent) and moderately low in Brazil, Colombia, and Venezuela (17 to 20 percent). Aside from the two cases of the PRC and India, there is no correlation between the level of bank capitalization (capital/assets ratio) and the degree of foreign ownership.

Nonbank Finance

Financial sector development involves expansion of not only the banks but also nonbank financial institutions as well as the equity and bond markets. It is relatively well known that emerging-market economies have made major progress in shifting government borrowing away from international bond markets toward domestic bond markets, often with increasing shares of foreign holdings of domestically issued government bonds. Thus, from 2000 to 2010, the share of outstanding public debt issued domestically rose from 10 to 91 percent in Chile, from 23 to 63 percent in Thailand, and similarly by 20 to 30 percentage points in Colombia, Mexico, Peru, the Republic of Korea, and the Philippines, and nearly 20 percentage points in Brazil, India, and Malaysia (Cline 2013a, 299).²⁶ It is less clear whether domestic bond markets have become substantially more important as a source of financing for the private sector. Similarly, although it is widely perceived that emerging equity markets have expanded sharply in recent years (and have been increasingly correlated with industrial-country equity markets), it is less clear how important they have become relative to the more traditional source of financing, the banking sector.

Table 3 seeks to shed light on the recent structural profiles of financial sector intermediation in financing the private sectors in major emerging-market economies. The table divides the sector into four categories: loans from banks, loans from nondepository financial institutions, bonds and other debt securities, and equity markets. The first three categories fit easily into treatment as alternative sources of debt finance. For equity finance, the table reports market capitalization. If there were no retained

26. The PRC was a major exception, with a decline from 56 percent in 2000 to 51 percent in 2010.

earnings and no difference between the market price and book value, the market capitalization would equal cumulative paid-in capital from shares issued, the narrow equivalent of alternative financing from debt. Market capitalization will thus overstate the relative role of equity markets in raising capital but nonetheless provides a rough guide to the relative importance of equity compared with debt.

In the table, data on loans to the private (or nongovernment) sector from depository institutions (banks) and nondepository financial institutions (nonbanks) are from IMF (2014b) and refer to end-2013 or March 2014.²⁷ They are expressed as a percent of 2013 GDP. Data for bonds and debt securities are from the Bank for International Settlements (BIS 2014). Market capitalization data are from the *World Development Indicators* (World Bank 2014) and refer to 2012.

Despite the caveat on overstatement of equity finance from total market capitalization, table 3 classifies the type of financial sector structure in each economy based on the simple sum of the four columns. An economy is first identified as having low, high, or medium financial intermediation (next-to-last column) based on whether the total of the four categories is less than 100 percent of GDP, more than 250 percent of GDP, or in between. The final column further classifies the country based on the relative importance of each category of finance. If outstanding bank loans exceed one-half of the sum for the four categories, the classification is “bank” (B). If bond finance plus equity market capitalization exceed 60 percent of the total, the classification is “portfolio” (P). If neither threshold is met, the country is considered “diversified” (D).

As expected, the depth of industrial-country financial intermediation tends to be higher than that of the emerging markets. The unweighted average for total financial intermediation is 318 percent of GDP for the three industrial countries, compared with 193 percent for the nine emerging Asian economies and 113 percent for the seven Latin American economies. Among the Asian emerging-market economies, Malaysia stands out as having the highest equity market capitalization, at 156 percent of GDP, considerably higher than even that of the United States (115 percent). Equity market capitalization is also high in the Philippines (106 percent), Thailand (105 percent), and Chile (118 percent). Overall depth of financial intermediation is found to be low in only two of the Asian emerging-market economies, Indonesia and Sri Lanka. In contrast, intermediation is low in four of the seven Latin American economies (Argentina, Mexico, Peru, and Venezuela). The high intermediation threshold is reached in four Asian emerging-market economies (the PRC, the Republic of Korea, Malaysia, and Thailand) and only one Latin American economy (Chile).

27. However, nonbank credit for the PRC is not available from the IMF, and instead is based on the estimate of the Chinese Academy of Social Sciences for the shadow banking sector in 2013 (Agence France Presse, “China’s Shadow Banking Sector is Now Worth \$4.4 trillion,” May 13, 2014). At nearly 50 percent of GDP, this estimate may be understated because of further rapid expansion in 2014 but may be overstated because of some double-counting with bonds and other securities in the BIS database.

As for classification of structural type, surprisingly only five economies turn out to be bank dominated in finance to the private sector: the PRC, Sri Lanka, Viet Nam, Argentina, and Venezuela. In all other economies in the table, bank loans account for less than 50 percent of the financial intermediation total. The presence of bond and equity finance is high enough to categorize the following economies as “portfolio”: Malaysia, the Philippines, Chile, Mexico, and Peru. Among the three industrial countries, the table confirms the general perception of the greater relative importance of banks in Germany and Japan versus nonbanks, bonds, and the equity market in the United States.

The broad implication of table 3 is that there is already a surprisingly strong presence of bond, equity, and to a lesser extent nonbank loan financing in most of the emerging-market economies, rather than an exclusive reliance on the traditional banking sector.²⁸ The exceptions are the lower-income Asian economies shown in the table (Indonesia, Sri Lanka, and Viet Nam), and the two Latin American economies where institutional distortions have severely curbed markets (Argentina and Venezuela).

Appendix D provides time series information for the nine Asian emerging-market economies considered here. Figure D.1 reveals that high levels of banking intermediation have been a persistent pattern in the PRC, Malaysia, and Thailand, with all three showing bank assets of 100 to 120 percent of GDP already in 2000. The Republic of Korea began the decade at only about 70 percent, but by 2012 was on a par with the PRC at near 140 percent. Bank intermediation has been considerably lower and has grown more slowly in India, Indonesia, the Philippines, and Sri Lanka, at 20 to 40 percent of GDP in 2000 and rising to 25 to 50 percent by 2012. Viet Nam is an exception, as its bank assets relative to GDP began the decade in a range similar to the other four lower-income peers but by 2012 had reached the 100 percent of GDP range characteristic of the higher-income emerging-market economies of the region.

Figure D.2 shows that in bonds and other debt securities financing the nongovernment sector, the Republic of Korea and Malaysia stand out, rising from 30 to 50 percent of GDP at the beginning of the 2000s to 70 to 80 percent by 2012. The PRC began considerably lower (about 10 percent) and reached only about 30 percent. Thailand showed remarkable growth, from 10 percent early in the decade to about 50 percent by 2010–12. The lower-income economies show far lower levels of bond financing, with outstanding amounts reaching only 5 percent of GDP late in the period in India and even less in Indonesia and the Philippines.

Figure D.3 shows corresponding trends in equity market capitalization. Malaysia stands out as persistently having the highest capitalization, at 120 to 140 percent of GDP even early in the period. The Philippines, the Republic of Korea, and Thailand all showed relatively steady progress from capitalization

28. A caveat is that in cross-country firm-level data, Tatiana Didier, Ross Levine, and Sergio L. Schmukler (2014) find that a high degree of concentration by firms receiving financing by equity and bonds means that these forms of financial intermediation may be considerably less significant as a source of financing for most firms than implied by the country aggregates.

of about 30 percent of GDP in 2000 to about 100 percent by 2012. Similar broad increases along a lower path were also present in Indonesia and Sri Lanka (from 10 to 20 percent of GDP in 2000 to 30 to 50 percent by 2012). In contrast, stock market boom-bust dynamics characterized market capitalization in both India and the PRC, as market cap rose from about 40 percent of GDP in 2003 to 140 to 180 percent in 2007 before plunging to around 40 to 60 percent by 2012.

Figure D.4 shows that real stock market indices (deflating by consumer prices) registered the boom-bust pattern in the PRC and India. With January 2006 as 100, real stock prices soared to peaks in 2007 of 450 in the PRC and about 300 in Viet Nam. The stock market crash in the PRC seems likely to have been a major driver in the subsequent real estate boom, as a result of investors' seeking alternative assets. A reasonable question is whether the equity market can soon again play a major role in these two economies in the aftermath of this experience. Otherwise, the real stock price index patterns in figure D.4 not surprisingly show the similar (but far less dramatic) boom and bust in 2007 and 2009, respectively, in sympathy with international asset prices during the Great Recession. There is also some evidence of the "taper tantrum" of May to December 2013 in the temporary declines of markets in some economies (Thailand, Indonesia, and the Philippines). In contrast, there is no such adverse impact for the Republic of Korea, suggesting that it turned out to be something of a regional safe haven in the taper shock experience.

ROLE OF EXTERNAL FINANCE²⁹

Levine (2001) emphasizes the role of liberalization to entry by foreign capital in increasing efficiency and total factor productivity growth of the domestic financial sector. He finds statistically significant positive effects of capital market opening on the value of share trading relative to GDP in emerging-market economies. Based on other results relating growth positively to stock market liquidity, he infers a positive growth effect of the opening of portfolio equity inflows. Geert Bekaert and Campbell R. Harvey (2005) and Peter B. Henry (2000) directly examine the influence of portfolio equity opening to foreign capital on growth and find strong positive effects.

Levine (2001) also examines the influence of financial openness on banking sector efficiency. He argues that superior skills, management techniques, technology, and products of foreign banks spur domestic competition in the sector. He confirms earlier statistical results of Asli Demirgüç-Kunt and Enrica Detragiache (1998) indicating that foreign bank entry reduces the ratio of overhead costs to assets as well as profit to asset ratios, reflecting greater competition.

Alessandra Bonfiglioli and Caterina Mendicino (2004) find a high responsiveness of financial sector development, as measured by the ratio of private credit to GDP, to capital account openness as measured

29. This section draws on Cline (2010, chapter 2).

by the Quinn index (discussed below). Ellen Vanassche (2004) finds that for 43 developing countries in the period 1980–95, there is a statistically significant positive effect of capital account openness (based on the IMF’s *Annual Report on Exchange Arrangements and Exchange Restrictions* (AREAER) on domestic financial development.

As shown in table 2, foreign ownership of banks is particularly high in the Republic of Korea (77 percent by assets) and Mexico (85 percent). It is useful to consider whether the strong foreign presence is generally seen as having been positive or negative. For Mexico, the strength of the foreign banks has recently been underscored by the fact that they have turned out to be in a better position than their holding company parents, and a portion of equity has been sold to bolster the home parent in one case (the Mexican subsidiary of Spain’s Banco Santander).³⁰ One recent study argues that the Mexican banking system is stronger than ever before, following three decades in which it was extraordinarily unstable. The authors attribute this outcome to the decision of President Ernesto Zedillo following the 1995–96 banking crisis to choose a set of large, foreign-owned banks as the government’s de facto banking partners, in contrast to the decision to exclude foreign owners in the earlier 1991–92 bank privatization (Haber and Mussachio 2013).³¹

For the Republic of Korea, Insill Yi, Stephen M. Miller, and Yongil Jeon (2009, 132) state that the government liberalized foreign entry in the wake of the 1998 financial crisis (including allowing 100 percent ownership) to strengthen the financial system. By 2006, only one of the seven largest banks was not majority-owned by foreign holders. The authors conduct statistical tests and find that increased foreign ownership does not increase loans to large firms or reduce loans to small and medium firms. They find that foreign banks engage more in foreign-related activities and less in derivative activities, which they interpret as a preference for safer bank management. They find no influence of foreign ownership on return on assets, but a negative relationship with return on equity, which they interpret as consistent with earlier findings in the literature regarding increased competition in the sector after foreign entry.

Stijn Claessens and Neeltje van Horen (2010) use a new dataset on more than 5,000 banks in 137 countries, for 1995–2009, to examine the influence of foreign ownership. They find that for OECD countries and emerging markets, there is no evidence of an influence of foreign ownership on the ratio of private credit to GDP (after taking account of several control variables). For developing (i.e., poorer) countries, however, there is a significant negative relationship.³² However, they “cannot claim the direction of causality” (2010, 16). In view of heightened concerns after the Great Recession that foreign banks might reduce credit in host countries in response to crisis, they conduct relevant tests. They do find such

30. Similarly, in 2012 the Mexican subsidiaries of BBVA, Citibank, and Santander all had better ratings than their parents. See “From Tequila Crisis to Sunrise,” *Economist*, September 22, 2012.

31. The Lopez Portillo government had nationalized the banks in 1982 at the time of the debt crisis. The Salinas government reprivatized them as part of a broader program of privatization but excluded foreign purchasers.

32. A result also found by Detragiache, Tressel, and Gupta (2008).

a pattern overall in the crisis year of 2009 but also find that where foreign banks are dominant their maintenance of credit was more stable than that of domestic banks. They also find that foreign banks relying mainly on funding from local deposits were much less likely to reduce lending.

In the most recent major economic crisis, that of the euro area periphery in 2010–13, foreign banks did indeed contribute to destabilization in the form of sudden stop and exit. International banks' cross-border claims on the five periphery economies (Greece, Ireland, Italy, Portugal, and Spain) fell by 43 percent from end-2009 to end-2013. Foreign banks' claims on domestic banks fell even more sharply: by 91 percent in Greece; 66 percent each in Ireland, Portugal, and Spain; and 47 percent in Italy (Cline 2014, 60–61). However, for most emerging-market economies the nature of foreign bank involvement in the financial sector likely goes well beyond the portfolio holdings that characterized these outflows. Foreign bank presence is in the form of direct investment for ongoing presence. Foreign bank loans to sovereigns were predominant in the Latin American debt crisis of the 1980s, but thereafter sovereign finance shifted heavily back to bonds (the dominant form before the Great Depression). Loans from foreign to domestic banks (but not sovereigns) had featured centrally in the East Asian crisis of the late 1990s. In perhaps the most conspicuous case, that of the Republic of Korea, the postcrisis involvement of foreign banks has instead been much more in the form of ongoing corporate presence, as just described. Even so, the recent euro area experience can reasonably be read as a cautionary tale about heavy reliance on loans and portfolio investment by foreign banks, as opposed to openness to their ongoing corporate presence in the economy.

On the broader question of the influence of financial globalization on growth, Cline (2010) surveys 76 studies.³³ Of those conducted at the general level (about one-third), the studies with statistically significant results almost uniformly find a positive effect on financial openness on growth.³⁴ Typically the impact identified is that a move from complete financial closure to complete openness is associated with an increase in the annual growth rate by 1.5 to 2 percentage points.³⁵ The study arrives at a more conservative benchmark of a 0.5 percentage point growth impact for the difference between complete openness and complete closure, after applying statistical meta-analysis (Hedges and Olkin 1985)

33. For a synopsis and partial update, see Cline (2013b).

34. Other categories include the influence on financial development, impact of direct investment, portfolio equity, crisis effects, institutional discipline, sector level studies, and calibrated theoretical studies.

35. A popular skeptical survey (Edison et al. 2004) found that earlier significant results turned insignificant when a variable for government reputation was included, but Cline (2010, appendix 2D) shows that this variable itself is explained by prior country growth. Although Edison et al. (2002) found endogeneity, the resulting correction of impact coefficients reduced them by only about one-fourth (Cline 2010, 9).

both across studies and within them (among various models included in each).³⁶ Even applying this conservative estimate, the study finds that about 8 percent of current-day GDP levels in industrial countries can be attributed to the cumulative effect of financial openness since 1980 (given actual openness levels) and about 2 percent of present GDP in emerging-market economies (where openness was lower and other sources of growth higher).

Nor does consideration of risks from financial crises reverse the growth verdict on financial openness. Using evidence on currency and banking crises compiled by Hutchison and Noy (2005) in comparison to the financial openness index of Quinn and Toyoda (2008), Cline (2010, 99) finds that crises have tended to be somewhat more frequent in countries with low openness than in those with high openness. In a calibrated model considering the probability and severity of banking and currency crises, the study estimates that the odds are 20 to 1 in favor of the secular gains from financial openness exceeding the losses from any increased chance of crisis (Cline 2010, 101). In actual experience in the Great Recession, declines in equity markets in 2008–09 were no greater for more financially open emerging-market economies than for those that were more closed (Cline 2010, 258–59).

More recently, the “taper shock” after the May 2013 announcement that the US Federal Reserve would reduce quantitative easing induced yet another episode of turbulence in emerging markets. Rather than having long-lasting adverse effects, however, the shock had the salutary effect of reducing the overvaluation of several emerging-market currencies.³⁷ It remains to be seen whether the future actual arrival of higher real interest rates in the United States and other industrial economies will cause new and lasting pressures on emerging markets. The IMF has emphasized potential vulnerability associated with the large increase in corporate debt in emerging-market economies since 2008 in the context of low international interest rates, noting susceptibility in Argentina, Turkey, India, and Brazil in particular. It notes that larger foreign participation in local markets can transmit new instability and that investor herding continues. Nonetheless, it finds that “the progress made by emerging markets toward strengthening their financial systems reduces their financial asset prices’ sensitivity to global financial shocks” (IMF 2014c, 25, 67).

In December 2012, the IMF adopted a new policy view approving the use of capital flow management measures (CFMs) under certain circumstances.³⁸ The staff document underlying the change emphasized that capital flows can have substantial benefits and that capital restrictions should not be substitutes for sound macroeconomic policies (IMF 2012a). It indicated that in the face of large capital inflows, countries should usually adopt macroeconomic policy adjustments, including lower interest rates,

36. In meta-analysis results are weighted by the inverse of the variance of the estimate.

37. Those of Turkey, South Africa, Brazil, India, and Indonesia (Cline 2013c).

38. Sandrine Rastello, “IMF Officially Endorses Capital Controls in Reversal,” Bloomberg, December 3, 2012.

increased holdings of reserves, and currency appreciation. But the report endorsed a role for CFMs “when the room for adjusting macroeconomic policies is limited” (p. 18), for example, because the economy is overheating, the exchange rate is overvalued, and further reserve accumulation would be inappropriate or costly. It argued that restrictions should be temporary and took a less permissive view on capital outflow restrictions (e.g., they “should always be part of a broader policy package that includes macroeconomic, financial sector, and structural adjustment to address the fundamental causes of the crisis” [p. 26]). The report specifically cited Brazilian taxes on certain types of capital inflows and Korean leverage caps on banks’ derivatives positions as examples of potentially appropriate measures (p. 17). For economies with long-standing capital restrictions, the report recommended that the sequence of liberalization should begin with direct investment inflows, followed by direct investment outflows and long-term portfolio flows, and finally short-term portfolio flows, with the phase-in linked to strengthening of legal, accounting, regulatory, and supervisory institutions.

Although the IMF guidelines emphasize the temporary nature of appropriate capital controls and the importance of correct underlying macroeconomic policies, there is some risk that the policy signal may be read as a relatively relaxed attitude toward controls that may not be in the best interest of longer-term growth. The framing of the view in terms of staged domestic maturing of institutions would also seem to lend itself to interpretation by a country’s officials that their economy is never quite ready to liberalize.³⁹ In the case of Brazil, domestic distortions have made it necessary to maintain a high interest rate (averaging 4.5 percent in real terms for the short-term policy rate in 2008–14Q1)⁴⁰ that provides a strong incentive for capital inflows. International policy advice would seem better oriented to address these distortions rather than commend the capital inflow tax.⁴¹

TRENDS IN FINANCIAL OPENNESS

The Chinn-Ito de jure index of financial openness provides a useful basis for tracking trends in financial openness in major emerging-market economies (Ito and Chinn 2013).⁴² The index is based on the IMF’s AREAER, with variables pertaining to regulatory controls over current or capital account transactions,

39. Note in particular that special tests in Cline (2010, 42–44) did not find support for the proposition that whereas direct investment openness is good for growth, openness to bond and bank flows is not.

40. In this period inflation averaged 5.7 percent and the policy interest rate 10.2 percent (IMF 2014b).

41. The distortions include the need for stronger fiscal performance to weigh against Brazil’s historic memory of hyperinflation, as well as the presence of low-interest credit from the state development bank that eases borrowing costs for industry, thereby facilitating maintenance of the high policy interest rates that attract foreign capital. For its part, the Fund seems to endorse the capital inflow tax (IMF 2013k, 13–14).

42. For problematical aspects of the alternative of de facto measures, such as gross capital flows as a percent of GDP, see the discussion in Cline (2010, 177–78).

the presence of multiple exchange rates, and requirements for surrendering export proceeds.⁴³ In the 2011 version the maximum value for the financial openness variable is 2.44 (“most financially open”) and applied to 54 countries; the minimum value was –1.86 and applied to 13 countries (of a total of 182 countries). Figure 2 shows the path of the index for the 16 emerging-market economies considered in this paper, for 2002–11.

Panel A in figure 2 shows that the PRC and India were systematically relatively closed (index value of –1.17) during the entire period. Venezuela began more open but became the most closed of the 16 countries by 2009 and after (index of –1.86 by 2010). Thailand also began relatively open (at –0.11) but in 2007 and after switched to the same degree of closedness as the PRC and India. Argentina is also in the relatively closed group, and its index would likely show an even more closed level if the period extended to 2012, when a de facto dual exchange rate policy took force.⁴⁴ The only country in the first panel that shifted from closed to more open was Viet Nam, which had the same index score as the PRC and India during 2002–07 but then shifted to intermediate openness (index at –0.11) in 2008 and after.

Panel B (with an average index of –0.1 for the six countries over 10 years) includes Colombia and Brazil from Latin America and four Asian emerging economies. Sri Lanka maintained an unchanging intermediate openness through the period, but Malaysia and the Philippines showed a substantial move toward closure in 2010–11. Only the Republic of Korea in this group showed an opening trend toward the end of the period.

Panel C shows four relatively open economies. Peru systematically maintains the highest openness score possible. Openness is also at the maximum for Chile in 2004–06 but more moderate by 2010–11. Mexico and Indonesia are both relatively open (index of 1.1) through most of the period, although there is a move toward less openness by Indonesia in 2011.

The recent trends for Asian emerging-market economies are sobering. Through 2011 they show no opening in the relatively closed cases of the PRC and India. Thailand, Malaysia, and the Philippines all moved toward closedness at the PRC-India level by 2010–11. Even Indonesia joined the closing trend albeit to a lesser degree. Only the Republic of Korea and Viet Nam moved in an opening direction (although Sri Lanka maintained a steady intermediate openness). The more dominant trend toward closing may reflect a response to capital inflow pressures associated with the extremely low interest rate environment in the United States (as well as eurozone aside from the debt-afflicted periphery). The Republic of Korea’s opening could then be seen as an exception that proved the rule, considering that it adopted controls on currency derivatives that were not of the more usual type captured by the Chinn-Ito index.

43. The index is the first principal component of these variables and is recalculated for the entire sample for each year’s new set of data.

44. Hilary Burke, “Analysis: Argentina Currency Policy Creates Multi-headed Monster,” Reuters, September 12, 2012.

As a final note on these data, it is suggestive that the country with unambiguously the highest persistent financial openness, Peru, is also the country that has the highest efficiency in the use of capital in figure 1.⁴⁵

PRINCIPAL STRENGTHS IN ASIA

For the nine Asian emerging-market economies considered in this study, appendix A reviews recent financial sector conditions as described in the most recent available Financial Sector Assessment Program (FSAP) and IMF Article IV reports. The qualitative message that emerges from these reports can be read as a sound bill of health for especially the financial sectors in Malaysia and the Republic of Korea and relatively robust sectors in the Philippines, Thailand, and Indonesia. It is likely no coincidence that all five of these economies were at the epicenter of the East Asian crisis of the late 1990s and that this crisis was centered in the financial sector rather than in the sovereigns. Reform and restructuring of the traumatized sectors seems to have left them much stronger. Even within this group there are key differences in strategies. The Republic of Korea has chosen the route of importing financial strength through dominant presence of foreign banks. Malaysia instead has a considerably greater role of the government, direct and indirect.

A second major pattern is revealed by omission of comment in the international reviews: Economies with predominantly state financial sectors do not face the usual financial sector risk of bank runs, because the sovereigns stand behind their banks. This is the case for four economies with socialist traditions: the PRC and India, where the state owns the great bulk of the banking system; Sri Lanka, where it owns well more than half; and Viet Nam, where it owns about half (table 2). The FSAP and Article IV concerns for the state-dominated sectors are focused more on the termites-in-the-woodwork (as opposed to sudden-catastrophic) risk that poor banking practices will result in losses that add to government debt.

Overall, the combination of reform-after-crisis for the five East Asian economies and state-sector-backstop for the PRC, India, and Viet Nam suggests that the region has relatively good prospects of continuing to achieve the first responsibility of the financial sector: do no harm, in the sense of avoiding severe crises like those that (most recently) afflicted the United States, Ireland, and to a lesser extent the United Kingdom and Spain.

PRINCIPAL CHALLENGES IN ASIA

The region nonetheless faces financial sector challenges. For the state-oriented sectors, the other side of the safety coin is the potential problem of inefficiency and poor allocation of credit. From the macroeconomic outcomes, this problem is not directly evident in the PRC and India, because their residual growth perfor-

45. In the simple regression reported above, Peru has the highest positive residual (actual average growth at 1.86 percent per year in excess of the level predicted by the regression of growth on the investment rate).

mance has been positive and the amount of investment mobilized in the economies (either because of or despite the financial sector structures) has been high (figure 1).⁴⁶ Even so, one suspects that such features as preference for lending to state-owned enterprises (SOEs) has meant the state-dominated systems have and will tend to inhibit rather than stimulate efficient growth (see the discussion of the Chinese and Indian cases in appendix C). The policy considerations below thus suggest that a conscious long-term plan should be articulated for the future path of the state banking sector in those economies where it is predominant.

There are also conjunctural issues, and in particular what appears to be excessive credit to an overextended housing sector in the PRC (a pattern familiar from the US, Irish, and Spanish crises). A new problem that seems to be brewing in the PRC concerns the nonbank sector, in particular the wealth management product sector with questions of opacity and possibly excessive leverage. This problem in turn has been aggravated by the distortions caused by interest rate ceilings (in turn associated with the strategy of exchange rate intervention).⁴⁷

Of the various problems enumerated in the FSAPs and Article IV reviews, a particularly sobering one is the specific mention of legal vulnerability of supervisors in three cases: Indonesia, the Philippines, and Viet Nam.

In all of the economies, an important challenge going forward will be to arrive at the right balance in setting capital requirements, for the banks, and enforcing regulation and supervision as well as setting appropriate capital requirements in the emerging nonbank sectors. The US experience with financial engineering gone wrong can be a useful cautionary tale in this regard. Especially in view of the dangers of high leverage revealed in the US experience, the Asian emerging-market economies might do well to treat the Basel III capital targets as minimum goals rather than state of the art goals for ensuring sound finance (see Hoenig 2013).

LOW-INCOME ECONOMIES

This study primarily examines the main emerging-market economies in Asia. However, appendix B briefly reviews financial sector conditions in four major low-income economies in the region: Bangladesh, Pakistan, Myanmar, and Nepal. Governance issues appear to be more serious in at least some of these cases. There may be a greater structural tradeoff for the advantages and disadvantages of state-dominated

46. Applying the regression line for the observations in figure 1, the PRC has a positive growth residual of 1 percent per year and India a positive residual of 0.7 percent per year.

47. Thus, Nicholas Lardy (2013, 21) argues that “economic growth based on a super-elevated level of investment and systematic suppression of private consumption is not a viable long-run growth model. ... Reform of the financial sector is the single most important prerequisite for sustained economic rebalancing in favor of consumption. The key element of financial reform ... [is] eliminating the remaining government controls on interest rates on both deposits and loans.”

systems, because of greater vulnerability to fraud and poor control in state systems (IMF 2013h, 19), in addition to the more questionable solvency status of the sovereign and hence greater risk of losses socialized from the banking sector. These considerations suggest that the potential confidence (“no-run”) advantage of a state sector may be lesser. Opening to strong foreign banks to bolster the system may accordingly be more attractive.

IMPLICATIONS FOR INSTITUTIONS AND POLICIES

There are large differences among the Asian emerging-market economies in levels of development, economic structure, and strengths and weaknesses of financial sectors. Nevertheless, it is important to seek to identify principal patterns in the policies and institutions needed to further develop their financial sectors. These sectors are not necessarily seriously lagging, even though by comparison with dynamic manufacturing export sectors (for example) they might seem to be so. Indeed, financial depth in the main economies is surprisingly high. The lines of action suggested here thus represent approaches meant to consolidate areas of strength and reduce areas of vulnerability.

Articulate Long-Term Plans for the State-Owned Banking Sector. Central planning for economic development has long been out of fashion. But state planning cannot responsibly be avoided for the banking sector when it is heavily dominated by state banks, as in the PRC, India, and Sri Lanka. Their governments should set forth and implement clearly articulated plans for the future of the sector, say for the coming decade.⁴⁸ For both the PRC and India, the state banking sector has a reputation of misdirecting credit, largely to favored state firm clients (see appendix C). Even the main offsetting benefit, broad absence of bank panics because of assurance of government support, could be eroded if the transition to a less state-dominated banking sector were not handled properly.

Where the state banking sector is predominant, governments should clearly state their 5- and 10-year targets for the share of banking sector assets held by the state banks. Ideological imperatives might well compel such targets to be close to current high levels. Otherwise it would seem desirable to make commitments to reduce the long-term shares of state banks to no more than 50 percent of bank assets. This process would probably involve some form of privatization. As the second main component of multiyear plans for strengthening the state banking sector (regardless of the target share), lines of action to ensure improved efficiency should be set forth. For example, in countries where the management of state banks is less experienced, requirements could be established for presence of recognized outside managers (perhaps including from major international banks) on boards of directors.

48. For the PRC, Lardy (2014, 137) notes several official commentaries in 2013–14 calling for a greater role for private banks, in part to help finance small- and micro-enterprises. However, the steps actually taken so far have been limited.

In the transition toward lower state bank shares, governments would need to be sophisticated in designing mechanisms for handling bank failures. A sudden switch to an aggressive hands-off posture as part of the move to a larger private sector share in banking could undermine public confidence as a consequence of a jarring shift from presumed state support to presumed nonsupport, inviting bank panics. Clear rules for bank resolution, likely applied to weak, small institutions, could help achieve a more gradual and stable evolution of public expectations about banking support by the government.

Other questions posed by the state banking sector include the following: What are the appropriate capital requirements for state banks, and do they differ from those for private banks? Should the answer depend on the relative solvency of the sovereign? How would persistently state-dominated banking systems interact with the international trading regime, in an environment in which new initiatives such as the Trans-Pacific Partnership as well as bilateral economic agreements are likely to call for greater scope for US and other Western financial institutions to increase their access to the region's market in financial services? Comparative advantage would seem to recommend such access, although some might view foreign institutions as having lost their claim to excellence as a consequence of the recent US and European banking crises.

Eliminate Interest Rate Controls. As emphasized by Lardy (2014, 135–36), the PRC's practice of limiting bank deposit rates, especially to low levels that are negative in real terms, creates many distortions. It encourages excesses in wealth management products not subject to control as well as real estate speculation. By curbing household interest earnings it likely inhibits consumption and thus the desired shift from external- to internal-led growth. It is an anachronism four decades after McKinnon's analysis of counterproductive financial repression in Asia. But the PRC will also need to move further toward market determination of the exchange rate (and possibly toward looser capital controls) in parallel with lifting deposit rate ceilings, because otherwise its mechanism for sterilization of reserve buildups would be in jeopardy.⁴⁹ Another structural change that would need to accompany interest liberalization would be developing clear rules for resolution of failed banks and phasing down of the assumed blanket government guarantee of banks. Otherwise individual banks could offer irresponsibly high interest rates and depositors would shift deposits to the banks in question without fear of potential loss, reflecting moral hazard from implicit government guarantee of all banks.

Develop Nonbank Financial Institutions but Regulate Shadow Banking. Development of nonbank financial institutions would seem desirable as part of the process of diversifying the financial sector. However, the recent US experience suggests that the sector should be developed on a basis of careful regulation and attention to adequate capitalization and in particular that its expansion should not be

49. Sterilization involves requiring the banks to hold more idle reserves so that yuan issued in exchange for exporter surpluses do not expand the money supply. Without deposit rate ceilings, banks would be forced to take losses on additional reserves.

primarily the consequence of efforts to avoid capital and supervisory requirements of the banking sector. In the PRC in particular the large and rapidly growing shadow banking system needs closer regulation, with appropriate capital requirements and perhaps with such measures as minimum down payments for mortgages as well.

Set Bank Capital Requirements at least at Basel III Levels and Include Meaningful Leverage Ratios.

The financial crisis and Great Recession showed the need for higher bank capitalization, and as discussed above, Basel III may not go far enough in considering total assets rather than RWAs.

Provide Legal Immunity So Bank Regulators Can Do Their Job. The fact that the FSAP and Article IV reports explicitly cite the inadequacy of such legal protection in three economies (Indonesia, the Philippines, and Viet Nam) speaks volumes, in view of the strong incentive for such reports to be diplomatic, and makes one worry that this issue may be present elsewhere as well.

Develop Domestic Equity and Bond Markets. A more diversified financial sector is likely to be more resilient, as illustrated by recent experience of the United States (more diversified) versus the euro area (heavily bank-dominated). The bond market appears relatively highly developed in the Republic of Korea and Malaysia but is tiny in Indonesia and the Philippines (if the BIS data provide an accurate portrayal; table 3). A fruitful area for research could be an examination of the reasons for the contrast, as well as analyzing this sector in several other regional economies for which the BIS data appear to be incomplete (including India). Measures to foster development of equity markets include ensuring shareholder rights and opening the economy to international portfolio investors. Clear creditor legal rights in case of default are important for bond markets. Governments might also consider programs designed to increase coverage of domestic firms by major international credit rating agencies.

Renew Gradual Progress toward Financial Opening. The recent trends reversing previous opening, discussed above, are not healthy for long-term development. Policies toward capital controls would seem to have much scope for liberalization without excessive risk of external shocks. Rigid controls on private capital outflows in particular are a symptom of either financial sector underdevelopment or government policy distortions or both, and even the IMF's new flexibility on prudential capital controls does not extend to approval of persistent controls on capital outflows.

Get Macro Policies Right. The core set of government macroeconomic policies—fiscal, monetary, and exchange rate—should be managed in a coherent fashion that favors long-term growth but avoids financial crises. Sovereign debt solvency is perhaps the foremost prerequisite, because the banking system is typically heavily exposed to the sovereign (as shown by the crises in Greece recently and Argentina more than a decade ago). Monetary policy needs to weigh against credit booms that become so excessive that

Minsky's dynamics seize hold and eventually result in a panic. Exchange rate policies need to move in the direction of greater flexibility in some important cases, and growth strategies correspondingly need to be consistent with trade outcomes that do not depend on high and ever-increasing trade surpluses.

CONCLUSION

This review suggests that the financial sectors in the main Asian emerging-market economies seem to be performing adequately their most important responsibility: the avoidance of financial crises. A likely reason is that reforms and restructuring after the East Asian financial crisis of the late 1990s left the systems in better shape than before in the five economies directly involved (Thailand, Indonesia, Malaysia, the Republic of Korea, and the Philippines). On an alternative track, the tradition of strong state involvement in the financial sector in countries with more socialist traditions has meant a low risk of collapse of public confidence in banks and thus bank runs (the PRC, India, Sri Lanka, and Viet Nam). The strong growth performance of the region in 2000–2013 further suggests that the financial sector is also managing to perform the task of mobilizing savings for investment. Investment and growth have been especially high in the PRC, India, and Viet Nam. Nonetheless, clear plans should be articulated for either reducing the share of the state-owned banks in the banking sector over time or implementing mechanisms designed to increase their efficiency.

Financial sector depth is especially great in the PRC, the Republic of Korea, Malaysia, and Thailand, where credit to the private sector from banks, nonbanks, and portfolio debt securities, plus stock market capitalization, exceeds 250 to 300 percent of GDP (table 3). Although there is an empirical literature relating growth to financial depth, a recent study at the BIS (Cecchetti and Kharroubi 2012) finds that at some point further deepening begins to act as a drag on growth. By implication, with perhaps the exception of Indonesia and Sri Lanka, where financial depth remains relatively shallow, it might at least be said that further financial deepening is not among the highest priorities for spurring growth in the region.

Instead, a higher priority for policy is probably to ensure the robustness and quality of the financial systems. Stronger legal protections for regulatory authorities appear to be needed in some countries. In others, new needs for capital requirements and regulatory supervision seem to be emerging in the rapidly growing nonbank sectors. Clearer resolution plans would also seem prudent considering the potential too-big-to-fail problems (on average, each of the five largest banks has assets of 32 percent of GDP in Malaysia, 20 percent in the Republic of Korea, and 19 percent in Thailand).

The cases of the Republic of Korea and Mexico suggest that entry of foreign banks can help assure banking sector stability. In those economies with a strong state bank tradition, increased foreign

presence might also help apply competitive discipline.⁵⁰ It is perhaps a cause for concern that recent trends in the region seem to be more in the direction of narrowing financial openness to external capital. Notwithstanding the recent IMF endorsement of capital restrictions under certain circumstances, in my view the broad empirical experience is that greater financial openness benefits rather than threatens growth, even after taking account of the potentially greater risk of sudden stops.

50. It is conceivable that a bilateral trade and investment agreement between the United States and the PRC could lead to greater foreign presence of banks even in the PRC, although a long phase-in period would seem likely.

Table 1 Growth performance, 2000–13

Country	Population (millions)	PPP GDP per capita (thousands of US dollars, 2013)	Real GDP (percent annual growth)	Population, ages 15–64 (percent annual change)	Real GDP relative to potential labor force (percent annual) (C - D)	Rank (E)	Investment (percent of GDP)	ICOR (G/C)	Rank (H)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	
Asia									
People's Republic of China	1,386	9.8	9.93	1.09	8.84	1	43.3	4.36	3
India	1,252	4.1	7.27	1.90	5.37	2	32.4	4.46	4
Indonesia	250	5.2	5.41	1.50	3.91	6	27.4	5.06	10
Republic of Korea	49	33.2	3.78	0.51	3.28	8	29.1	7.70	15
Malaysia	30	17.7	4.75	2.21	2.54	12	23.5	4.95	8
Philippines	98	4.7	4.88	2.42	2.46	13	20.1	4.12	2
Sri Lanka	21	6.5	5.67	0.97	4.70	3	26.7	4.71	7
Thailand	67	9.9	3.98	0.88	3.10	9	26.5	6.66	14
Viet Nam	92	4.0	6.41	2.12	4.29	5	33.1	5.16	11
Latin America									
Argentina	41	18.7	4.56	1.17	3.39	7	20.7	4.54	5
Brazil	200	12.2	3.55	1.48	2.07	14	17.9	5.04	9
Chile	18	19.1	4.30	1.44	2.87	10	22.4	5.21	12
Colombia	48	11.2	4.45	1.82	2.62	11	20.8	4.67	6
Mexico	122	15.6	2.23	1.80	0.43	19	23.1	10.36	16
Peru	30	11.1	6.09	1.69	4.40	4	21.9	3.60	1
Venezuela	30	13.6	4.07	2.01	2.06	15	24.2	5.95	13
Industrial 3									
Germany	83	40.0	1.13	-0.32	1.45	16	18.3	16.19	18
Japan	127	36.9	0.7	-0.71	1.41	17	22.1	31.57	19
United States	320	53.1	1.68	0.91	0.77	18	21.0	12.50	17

PPP = purchasing power parity; ICOR = incremental capital-output ratio

Sources: Columns A, B, C, and G: IMF (2014a); column D: US Census Bureau.

Figure 1 Gross investment and average growth, 2000–2013

ARG = Argentina; BRZ = Brazil; CHL = Chile; CHN = People's Republic of China; COL = Colombia; IND = India; INS = Indonesia; KOR = Republic of Korea; MLS = Malaysia; MEX = Mexico; PHL = Philippines; PER = Peru; SRL = Sri Lanka; THA = Thailand; VEN = Venezuela; VTN = Viet Nam
Source: IMF (2014a).

Table 2 Banking sector indicators

Country	Bank assets (percent of GDP)	Largest 5 share (percent)	Average CDS rate of 3 largest (basis points)	Capital/ assets (percent)	Government- owned (percent)	Foreign- owned (percent)
Asia						
People's Republic of China	280.5	45.3	136	6.3	90e	2
India	94.7	28.4	204	6.9	74	7
Indonesia	56.4	47.3	n.a.	12.5	38	34
Republic of Korea	241.6	42.2	67	8.1	22	77
Malaysia	207.7	76.3	97	9.6	0	22
Philippines	93.1	44.9	n.a.	10.8	13	11
Sri Lanka	50.9	79.9	n.a.	8.2	59	14
Thailand	203.8	45.8	92*	10.9	18	7
Viet Nam	125.5	54.3	n.a.	9.9	49e	n.a.
Latin America						
Argentina	34	38.3	n.a.	12.1	44	26
Brazil	112.2	79.3	197	9.3	44	18
Chile	109.1	76.3	92*	8.1	20	39
Colombia	66	73.9	201*	14.8	6	20
Mexico	66.4	41.6	78*	10.4	13	85
Peru	51.2	80.7	n.a.	10.1	0	49
Venezuela	59.8	48.1	n.a.	10.9	33	17
Industrial 3						
Germany	274.6	46.7	83	5.5	32	12
Japan	363.6	37.8	62	5.5	n.a.	n.a.
United States	85.4	62.7	65	11.8	0	n.a.

e = estimate; CDS = credit default swap; * = data for only one bank; n.a. = not available

Note: Dates for the data are as follows: Bank assets and largest five shares, end-2013 or March 2014; CDS rates, July 2014; capital/assets, 2013; ownership, 2010 (PRC: 2012).

Sources: Barth, Caprio, and Levine (2013); Bloomberg; Datastream; EY (2014); FRBSF (2011); IMF (2014b); World Bank (2013, 2014).

Table 3 Structure of financing to the nongovernment economy (percent of GDP)

	Loans, 2013		Bonds, debt securities, 2013	Stock market capitalization, 2012	Total	Depth	Type
Country	Banks	Nonbanks					
Asia							
People's Republic of China	146.1 ^a	47.9	28.1	44.9	267.0	H	B
India	50.9	n.a.	n.a.	68.0	118.9	M	D
Indonesia	34.2 ^a	3.8 ^a	2.3	45.3	85.6	L	D
Republic of Korea	135	n.a.	77.5	96.5	309	H	D
Malaysia	122.2	n.a.	58.5	156.2	336.9	H	P
Philippines	35.8	n.a.	1.1	105.6	142.5	M	P
Sri Lanka	29	n.a.	n.a.	28.7	57.7	L	B
Thailand	122.1 ^a	33.4 ^a	44.2	104.7	304.4	H	D
Viet Nam	96.8	n.a.	n.a.	21.1	117.9	M	B
Latin America							
Argentina	15.7 ^a	0.5	3.0	5.7	24.9	L	B
Brazil	74.5 ^a	6.9	32.3	54.7	168.4	M	D
Chile	77	25.4	36.3	117.7	256.4	H	P
Colombia	41 ^a	10.4	0.6	70.8	122.8	M	D
Mexico	22.2 ^a	8.2	17.5	44.3	92.2	L	P
Peru	32.3	n.a.	6.1	50.3	88.7	L	P
Venezuela	27.6 ^a	n.a.	n.a.	6.6	34.2	L	B
Industrial 3							
Germany	95.7 ^a	n.a.	57.8	43.4	196.9	M	D
Japan	113.1	75.9	61.7	62	312.7	H	D
United States	58.6	139.5	131.7	114.9	444.7	H	D

n.a. = not available; L: low; M: medium; H: high; B: bank; P: portfolio; D: diversified

a. March 2014.

Sources: BIS (2014); IMF (2014b); World Bank (2014).

Figure 2 Chinn-Ito index of financial openness, 2002–11

Source: Ito and Chinn (2013).

APPENDIX A FINANCIAL SECTOR EVALUATIONS IN THE FSAP AND ARTICLE IV REPORTS

The FSAP was established in 1999 and conducts periodic reviews of financial sectors in emerging-market and developing countries (by the IMF and World Bank) and in advanced economies (by the IMF). The IMF also conducts surveillance reviews of member economies, usually annually, under Article IV of the Articles of Agreement. This appendix seeks to convey key findings of the most recent published FSAP and (with respect to the financial sector) Article IV reports for each of the nine Asian emerging-market economies considered in this paper.

The People's Republic of China

The June 2011 FSAP report for the PRC (IMF 2011) identified several areas of risk: the impact of rapid crisis-related credit expansion on credit quality; rising off-balance sheet exposures; a reversal in rapidly rising real estate prices; and the buildup of contingent liabilities as a consequence of the government's role in credit allocation at the central and provincial levels. It did find that stress tests found most of the large banks to be resilient to shocks. The report judged that existing financial policies fostered (overly) high savings, high liquidity, and high risk of capital misallocation and asset bubbles, especially in real estate. It noted that absorption of associated costs through the implicit tax on households through low remuneration on deposits could not be presumed to continue. The report noted that high levels of foreign exchange intervention and strong incentives for capital inflows hampered control of liquidity. It called for a shift from administrative limits on bank lending to interest rates as the instrument to govern credit expansion. It warned that banks' large exposure to SOEs and guaranteed margins from interest rate regulation undermined effective credit risk management. It called for an improved legal, regulatory, supervisory, and crisis management framework and better corporate governance in banks as preconditions to acceleration of financial deepening, liberalization of interest rates, and liberalization of the capital account.

The July 2013 Article IV report (IMF 2013a) warned that heavy reliance on credit and investment to sustain activity was raising vulnerabilities, leading to a steady buildup of leverage that was eroding the strength of the financial sector, local government, and corporate balance sheets. It found that rapid expansion of nontraditional finance, including trust companies, corporate bonds as well as alternative wealth management products, raised questions about the adequacy of supervision and regulation. The report called for liberalizing interest rates and allowing market-pricing of deposits and introducing explicit deposit insurance while removing the moral hazard stemming from the perception that all interest-bearing assets are implicitly guaranteed. It correspondingly called for tolerance for occasional losses or haircuts on such instruments as corporate bonds or wealth management products. The report did not address the potentially greater resilience of the PRC's banking system to bank runs because of its preponderantly state ownership and instead suggested that fiscal space was narrower than believed because of larger debt

(amounting to 45 percent of GDP) and deficits (10 percent) when an augmented measure including local government finance vehicles and other off-budget funds is applied. The report contained an appendix reporting progress on 29 prior recommendations of the FSAP. At the top of the list was advancing the process of interest rate and exchange rate reform; the reported progress amounted to small changes.⁵¹

India

The most recent FSAP report for India (IMF 2013b) makes the surprisingly frank critique that “[t]he prominent role of the state in the financial sector contributes to a build-up of fiscal contingent liabilities and creates a risk of capital misallocation that may constrain economic growth” (p. 3). “In light of its commitment to retain the public sector character of state-owned banks, the government needs to consider how to manage its ownership in ways that are compatible with the public banks prudently financing a rapidly growing economy” (p. 7). The report calls for gradually reducing mandatory holdings of government securities by financial institutions and allowing greater access to private domestic and foreign sources of capital. It commends remarkable progress toward a stable financial system but notes a worsening of bank asset quality. Nonetheless, stress tests find banks’ buffers of high-quality assets robust to pressures. The report finds the regulatory and supervisory regime to be well developed and largely in compliance with international standards. Recommendations for improvement include consolidated supervision of financial conglomerates, reductions in large exposures and related-party lending limits, and stronger solvency requirements in insurance. The report notes potential conflict of interest from the inclusion of Reserve Bank of India (RBI) officers on the boards of public banks supervised by the RBI.

The Article IV report of February 2014 (IMF 2014d) expressed concern that despite the apparently strong capital adequacy ratio (at 13.8 percent in March 2013), loans nonperforming (4.2 percent) or restructured (5.7 percent) were rising, and the weakest corporations were at much more risk of default than in 2009. The review reiterated the FSAP’s call for limits on loans to interrelated companies. It called for a more rigorous treatment of asset valuation in restructured loans and improvements in the insolvency framework. For their part, the authorities included better access to finance for SMEs and underserved parts of the population. The report found that India’s banks are likely to require significant new capital injections over the next few years, in part because of the new Basel III capital requirements. In a severe stress scenario additional capital costs for public sector banks could amount to 5 percent of 2013 GDP.

51. For example, deposit rates could be 1.1 times the benchmark rate instead of strictly limited; the trading band for the renminbi against the dollar had been widened from 0.5 to 1 percent.

Indonesia

The FSAP report published in 2010 (IMF 2010a, 1) found the “banking system is generally healthy” and had improved significantly in the past decade. But it noted “lingering concerns over weak enforcement of the rule of law, transparency, and governance issues.” It found that gaps remained in dealing with problem banks, and welcomed plans for creating an integrated supervisory agency. The report judged that the financial sector “lags behind comparable countries in terms of depth and contribution to the economy,” that securities trade at a discount relative to regional peers, and wealthy Indonesian citizens still prefer to place savings offshore (p. 7). It cited “the absence of legal protection for the financial sector regulator and supervisor” and consequential “public questioning of and political interference in supervisory actions” (p. 8). Stress tests showed banks vulnerable to credit risk and some mid-sized banks to liquidity risk. The report urged the government to desist “from using moral suasion and prudential regulations to promote credit growth” to avoid weakening bank balance sheets and system stability (p. 8). It noted that the nonbank financial sector is small, and that much more should be done to develop capital markets, including the small insurance industry. The report listed 44 FSAP recommendations, beginning with bringing risk weights to at least Basel I levels and tightening the accounting definition of tier 1 capital.

The December 2013 Article IV review (IMF 2013c) found the banking system “sound as a whole, with systemic risk remaining low” (p. 18). It viewed the banks as well capitalized at a capital adequacy ratio of 17.5 percent but noted that quality of capital remains an issue. It considered shadow banking activity to be limited, mainly through finance companies with less than 10 percent of financial system assets. The review noted that financial markets are less developed than in emerging-market peers, with stock market capitalization at 49 percent of GDP at end-2012 and domestic debt securities only 15 percent of GDP (of which 85 percent were issued by the government). It judged that “[d]eepening financial markets in Indonesia is vital for mobilizing savings to fund investment” (2013c, 21). It called for increasing the availability and liquidity of short-term treasury bills to bolster the relatively thin and volatile money market. The report urged heightened monitoring of banks with large restructured loans or heavy exposure to export-related and property sectors, as well as corporate leverage ratios in light of depreciation of the rupiah. It urged the development of crisis management protocols, especially regarding emergency liquidity and interventions in systemically important financial institutions. The report called for a more investor-friendly negative list for foreign investment and less rigidity in labor regulations, particularly severance pay.

The Republic of Korea

The May 2014 FSAP report for the Republic of Korea (IMF 2014f) finds that since the 2008 crisis, banking sector capitalization has improved, foreign currency liquidity profiles have strengthened markedly, and nonperforming loans (NPLs) have been reduced to low levels. The report calls for a more

robust regulatory framework for the growing nonbank financial sector, however. In light of the high degree of capital account openness and financial integration, the report advocates more formal arrangements for macroprudential policy. It also calls for improvements toward international best practice in the resolution framework for conglomerates and systemically important financial institutions, greater independence of the supervisory system from political influence, and more meaningful fines and penalties. The overall tone of the report was that an already good financial sector could be made better and safer.

The April 2014 Article IV review (IMF 2014e) notes that although banking sector soundness remains robust, low interest rates and high credit costs have reduced banks' return on assets from over 1 percent in 2005–07 to just 0.5 percent (compared with 1 percent in 35 countries followed by the IMF's periodic *Global Financial Stability Report*). Lower profitability has contributed to retrenchment of foreign banks' operations in the Republic of Korea. The report estimates corporate debt at 127 percent of equity at end-2012 and notes a marked duality, with improved profitability of large export-driven corporations but concentration of liquidity risks and leverage in a few sectors (construction, shipbuilding, transportation) and outside the most profitable chaebols. The report finds that the Republic of Korea had emerged as a safe haven in the course of the 2013 international market turmoil.

Just as the FSAP and Article IV reports for the PRC do not mention the stability accorded to the financial sector by state ownership, the reports for the Republic of Korea are tacit about the stability provided by the high participation of foreign banks.

Malaysia

The most recent FSAP report for Malaysia (IMF 2013d) gave the financial system a sound bill of health, citing successful reforms in the 10-year financial and capital markets master plans undertaken by the central bank and the securities commission after the late 1990s financial crisis. The report noted resilience to the recent global financial crisis, helped by limited reliance of financial intermediaries on cross-border funding, a supervisory and regulatory regime highly compliant with international standards, and a well-capitalized banking system. The report did note high reliance on demand deposits, rapid loan growth, rising home prices, and high household leverage but had only nine relatively general recommendations (e.g., enhanced monitoring of household leverage), the shortest list among the FSAPs reviewed in this appendix. The report noted the extensive government ownership in the financial sector, direct and indirect, and noted that the authorities' development plans recognized the need for transition to more reliance on the private sector.

The early 2014 Article IV review (IMF 2014g) reaffirmed the favorable assessment of the financial sector, noting that deep financial markets (and a flexible exchange rate) had helped Malaysia weather the taper turmoil of mid-2013. It noted, however, that large foreign holdings of domestic bonds and

equities make the economy vulnerable to capital outflows in periods of global stress. It identified high house prices, rising household debt, and banks' large exposure to real estate as areas of concern. The review found the banking sector well capitalized, with a tier 1 capital ratio of 13.9 percent at end-2012, compared to the Basel III target of 8.5 percent by 2019. The 2019 liquidity target could be more challenging.

The Philippines

The most recent FSAP report for the Philippines (IMF 2010b) found that the banking sector had been strengthened substantially since the Asian crisis of the late 1990s, had become generally resilient to macroeconomic risks, and had withstood the global financial crisis better than had been feared. It noted progress in banking supervision but called for further strengthening of the bank resolution authority. It cited bank secrecy provisions as an obstacle to supervisors' access to depositor and investment information and called for improved legal protection of supervisors. The report urged further development of nonbank financial sectors, harmonization of tax treatment of various financial products, and rationalization of overlapping state entities financing housing.

In the April 2013 Article IV review (IMF 2013e), the Fund noted strong capital adequacy and declining NPLs in the banking sector. It welcomed rapid growth of nonbank financial intermediation (new equity financing through initial public offerings raised almost half as much as new bank lending for private credit in 2012) but urged greater supervisory oversight of the growing nonbank sector. The report emphasized the need for avoiding excessive bank exposure to consolidated conglomerate groups and increased attention to observing the single borrower limit. The review also expressed concern about less-stringent lending standards of real estate developers, calling for macroprudential measures to contain risks in the sector. It reiterated concern about the need for legal protections of central bank supervisors.

Sri Lanka

The most recent available FSAP for Sri Lanka was issued in 2007, too long ago to be of much help. The Article IV report of May 2013 (IMF 2013f) is sparse in analysis of the financial sector. It warns about rapid credit growth (with credit about 30 percent higher in 2011 than a year before) but also reports that the base for the credit ratio was low (only 30 percent of GDP in 2010) and the pace of expansion had moderated by late 2012. Similarly, equity prices rose about four-fold from 2009 to 2011 but then eased by about 40 percent in 2012. The report indicates that a severe stress test raising NPLs to 23 percent would leave 7 of the 12 largest banks undercapitalized but also finds that the fresh capital required would amount to only ½ percent of GDP, apparently reflecting the financial shallowness of the economy.

Thailand

The most recent available FSAP report for Thailand was issued in 2008, also out of date. The Article IV report of November 2013 (IMF 2013g) noted that profitability of commercial banks has been strong. NPLs have fallen from 12 percent in 2004 to 6 percent in 2008 and 2.5 percent in 2012; the capital adequacy ratio was around 15 to 16 percent in 2010–12, and banks are expected to meet Basel III capital and liquidity requirements on time. The report noted that Thailand's private sector credit-to-GDP ratio is relatively high, at 115 percent in early 2013. It noted that the specialized financial institutions (public banks that carry out government lending programs) reached 27 percent of total bank credit in 2012 and that their assets tend to be of lower quality. Rising household debt (reaching 78 percent of GDP in 2012) was another source of concern. The report called for expansion of central bank supervision of the special financial institutions and credit cooperatives but did not see a pressing need for tighter macroprudential policies at this time.

Viet Nam

No FSAP has been published for Viet Nam. The July 2012 Article IV review (IMF 2012b) reported that after years of rapid credit growth, the tightening of monetary conditions and a decline in asset prices had caused intense liquidity pressure for a number of small joint stock banks accounting for about 7 percent of deposits. The government adopted a bank restructuring plan, although the report noted a reluctance to close insolvent banks. For the state-owned banks, the plan envisions continued equitization, with the state remaining a dominant shareholder. Capital is to be increased to meet Basel II requirements by 2015. For commercial banks, healthy banks are to be encouraged to consolidate and expected to support weak banks with liquidity or through mergers. Banks with temporary liquidity shortages are to be refinanced by the central bank, while weak banks will be subject to special control, including limits on dividends and suspension of managers. The report judged that “the regulatory and supervisory framework needs to be strengthened at every stage including bank resolution” (p. 14) and that supervisory authorities' staff should be protected from personal liability (and staff capacity improved).

APPENDIX B THE FINANCIAL SECTOR IN LOW-INCOME ECONOMIES: BANGLADESH, MYANMAR, NEPAL, AND PAKISTAN⁵²

Bangladesh and Pakistan

As with the PRC, India, Sri Lanka, and Viet Nam (as discussed in the main text), the government plays a major role in the banking sectors of Bangladesh, Myanmar, Nepal, and Pakistan. International official sector reviews tend to find that poor governance and political interference in the lending activities of state-owned banks have restricted the potential of the financial systems in Bangladesh and Pakistan. In Bangladesh, the nonperforming loan (NPL) to total loan ratio was 30 percent for state-owned commercial banks at the end of 2013, compared with 12 percent for the banking sector as a whole (IMF 2014h, 10).

Nonetheless, private commercial banks now account for the majority of bank assets in both Bangladesh and Pakistan. Their performance has improved—in terms of better asset quality, higher levels of lending stock, declining NPLs, and stronger capital adequacy ratios—even as the performance of the state-owned banks has declined. While private banks have eroded the market share of state banks, the latter still play a systemically important role in the sector (in Bangladesh, private commercial banks hold more than 50 percent of total deposits compared with 30 percent for state-owned commercial banks; IMF 2010c, 36). The state-owned banks are mandated to direct lending at targeted industries and SOEs to fulfill government social policies but private banks earn higher rates of return on their assets and have healthier loan portfolios.

While the growth of private commercial bank assets in many of the other Asian emerging-market economies has been correlated to a rapid growth in private credit, in particular to households (largely to finance purchases in the real estate sector), the growth of private commercial bank assets in Bangladesh and Pakistan has coincided with a moderation in private credit. Commercial banks in fact have a high concentration of holdings in public debt since the two sovereigns have sought to finance their large fiscal deficits by selling government securities to commercial banks. The underdeveloped housing finance and insurance institutional frameworks in Bangladesh and Pakistan could explain why there is a divergence in credit patterns compared with the previously surveyed Asian emerging-market economies.

Banks have increased their exposure to the capital markets through equity financing and transactions in the primary market for government bonds. In equity markets, from January 2011 through June 2013 the Karachi Stock Exchange far outperformed other major emerging stock markets (IMF 2013i, 46). There are negligible corporate bond markets in the two countries, however, and activity in the secondary market for government bonds is low.

52. This appendix was prepared by Abir Varma. It is based on IMF (2010c, 2013h, 2014h) for Bangladesh; IMF (2004, 2013i, 2014i) for Pakistan; IMF (2013j, 2014j) for Myanmar; and IMF (2014k) for Nepal.

There is significant overlap in the key IMF recommendations for strengthening the banking systems of Bangladesh and Pakistan since the financial systems in both countries largely experience the same chronic symptoms. First, both governments should strengthen the balance sheets of state commercial banks through further capital injections, formulating stronger credit risk management and compliance policies and limiting lending activities of state banks to other SOEs. Second, both governments must improve the industrywide legal and regulatory framework. Specifically, both countries should adopt clear deposit insurance schemes and develop sound loan classification and bankruptcy/liquidation laws. Finally, the governments should keep their fiscal deficits in check so as to prevent the possibility of financial crowding out.

Myanmar

Since Myanmar has only recently begun the process of implementing economic and financial reforms to modernize its economy, its financial system remains underdeveloped compared with those of other Asian countries. There are no foreign banks, and governance and supervision of local banks lag behind other countries in the region.

State banks dominate the financial system. The two biggest banks, Myanma Foreign Trade Bank (MFTB) and Myanma Economic Bank (MEB), carry out commercial operations and perform several government functions: The MFTB holds the government's foreign reserves and performs all the foreign exchange transactions for both the private and public sectors while the MEB acts as the treasury.

Nonetheless, authorities are taking many steps to reform the sector. While only land was previously accepted as collateral on loans, certain agricultural exports have now been made eligible as collateral. The Myanma Agricultural Development Bank has raised credit limits for farmers, and licenses have been issued to the Microfinance Bank and the Housing and Construction Bank (both new joint ventures between the government and the private sector). A ban on interbank trading has been lifted and a payment union for interbank settlements has been established. In addition, credit cards and ATMs have recently been introduced.

The Central Bank of Myanmar's (CBM) budget is currently set by the parliament and further reforms in the financial sector should include steps to increase the autonomy of the central bank and the monetary policy tools at its disposal. The IMF recommends that the CBM bring reserve requirements in line with international standards and establish deposit/credit and treasury securities auctions as first steps toward setting market-based interest rates. The Fund suggests that state banks be brought under the CBM's supervision while the roles of various state banks will have to be redefined as the CBM takes over foreign exchange and monetary policy functions. For instance, the MFTB will have to be absorbed into the CBM, merged with another state bank, or liquidated.

To strengthen the regulatory framework underpinning the sector, the Fund suggests aligning bank capital and NPL definitions with accepted international standards. The Banking and Financial Institutions Law, which is currently being drafted, should include provisions to enhance data reporting and supervision of both banks and nondepository financial institutions such as microfinance and insurance institutions. The IMF endorses the government's intention to open the financial sector to foreign banks as a means of helping transfer technology and increase integration with financial markets. However, it suggests that initially only three to five licenses be awarded because of limited central bank supervisory capacity (IMF 2014j, 9).

Nepal

Like Viet Nam, Nepal's financial sector is large relative to peer countries (domestic bank deposits are 68 percent of GDP). Lax licensing rules have given rise to an excessively large number of financial institutions: As of April 2014 there were 30 commercial banks, 86 development banks, 56 finance companies, and 35 microfinance institutions (not to mention the number of credit cooperatives—totaling 17,000—that are growing rapidly and are not supervised by the Nepal Rastra Bank [NRB]). As in Bangladesh and Pakistan, NPLs are likely underreported, credit information is weak, and debt enforcement and insolvency systems are rarely enforced.

The Fund recommends a number of steps to improve the stability of the financial system. Most importantly, the NRB could undertake a thorough asset quality review of banks' balance sheets and actively guide a bank consolidation process to avoid the formation of large weak banks from small weak ones. The NRB should also strengthen bank licensing regulations and “be given special resolution powers to close insolvent banks” (IMF 2014k, 11) while debt enforcement and insolvency systems should be improved more generally. The number of state-owned banks should be reduced, and the Employment Provident Fund and Citizens Investment Trust should be brought under the joint purview of the NRB and the Insurance Board. The supervisory mandate of the Department of Cooperatives must be strengthened for greater oversight of the cooperatives sector. Lastly, the Fund recommends the creation of a collateral agency and the elimination of the Credit Information Bureau's minimum reporting threshold to make credit information more transparent.

APPENDIX C INEFFICIENCIES IN THE STATE BANKING SECTORS IN THE PEOPLE'S REPUBLIC OF CHINA AND INDIA

People's Republic of China

As indicated in the main text, the PRC's banking system is heavily dominated by the state. Based on summary data from 129 banks with annual data for the period from 2003 to 2010, Xiaoxi Zhang and Kevin Daly (2011) find that the traditional “big four” state-owned banks performed worse in terms of return on assets, return on equity, and net interest margins compared with other banks during this period. Although only three wholly government-owned banks remain—each with a distinct function (agriculture, infrastructure, and export promotion)—the government has a majority stake in most banks, and private banks held only 15 percent of bank assets in 2012 (Lardy 2014, 20). The PRC's banks generally share the same governance system involving senior bank officers, a board of directors and a board of supervisors. Senior bank officers are members of the Chinese Communist Party (CCP), and the top three positions are appointed by the Organization Department of the Party. Except for the three wholly owned state banks, in the large state-owned banks the boards of directors consist of a mix of senior bank officers, persons appointed by major shareholders (the state), and “independent directors”; the board of supervisors includes individuals appointed by the CCP, the major shareholders, the bank's labor union, and “external supervisors” (CRS 2012, 26).⁵³ Concomitantly, there is a regular exchange of personnel between commercial banks, the People's Bank of China (the central bank), and the China Banking Regulatory Commission (Lardy 2014, 21). Thus, the governance structure is frequently seen by commentators as evidence of excessive government influence in the financial sector.

Chinese state-owned banks are widely, albeit possibly misleadingly, perceived as providing subsidized loans to selected enterprises, generally other SOEs.⁵⁴ Even though the PRC does not officially report information on interest rates on loans by type of enterprise, many contend that SOEs are provided loans at lower interest rates. A survey-based study conducted by the Hong Kong Institute of Monetary Policy in 2009 found that in 2004–05, SOEs were charged 188 basis points less than private enterprises after controlling statistically for sector and province (Ferri and Liu 2009, 10, 21).⁵⁵ In contrast, a survey of 100 Chinese financial institutions conducted by the People's Bank of China and the International Finance

53. However, there is a large number of city commercial banks, many of which are not listed, for which the role of the party in choosing senior officers is not clear. Nicholas Lardy, by communication, October 14, 2014.

54. Lardy (2014, 94) cites—and disputes—examples from the *Economist*, *Financial Times*, and a leading international investment bank.

55. A possible critique of this result could be that the measure of interest cost is misleading because it is calculated on the basis of interest paid compared with debt, but debt includes noninterest-bearing liabilities such as accounts payable. Lardy (2014, 164) criticizes a similar finding by other authors on this basis. It is unclear, however, why SOEs would have relatively larger noninterest-bearing debt, or whether that source of finance might itself be a manifestation of preferential access to credit.

Corporation found that in 2004–05 average interest rates charged to state-owned companies were only slightly lower (5.67 percent) than interest rates charged to privately owned companies (5.96 percent) (IFC 2007, 57). Lardy (2014, 108) cites these results to challenge the popular image of state bank distortions favoring state firms. He also cites recent data on loan volumes to show that in 2010–12 the flow of new loans to the privately owned firms substantially exceeded the flow to state-owned firms. Nonetheless, he notes that private firms still account for only one-third of the stock of loans outstanding, only one-half their estimated share of two-thirds in economic output (Lardy 2014, 109). Moreover, even if state banks charge interest rates to private firms that are broadly comparable to those they charge to state firms, to the extent that private firms can obtain loans from state banks only when their projects are politically connected (including especially private firms that are effectively owned by local political leaders), the question of misallocation remains. The rapid rise of the shadow banking system appears to be a symptom of the fact that private firms not politically connected rely heavily on borrowing from institutions outside the formal state-dominated banking system.

Nicholas Borst and Nicholas Lardy (2015) provide data showing significant improvements in the Chinese banking sector from 1999 to 2011 (for example, an increase in return on assets from 0.7 to 1.1 percent), as well as data suggesting that by 2011 Chinese banks performed well compared with the G-20 average. They cite “China’s success in reforming state-owned financial institutions” as experience that might be useful for policymakers in other Asian countries. Even so, it would seem desirable for the PRC to articulate the medium-term goal for the role of the state-owned banks and to specify mechanisms designed to insure efficiency and market-oriented allocation, as suggested more generally for state-owned banks in the main text.

India

In India, public sector banks (PbSBs) (those with at least 51 percent government ownership) have lower profitability than private sector banks (PSBs), with lower profits per branch and lower profits per employee than PSBs (RBI 2013a, 61). PbSBs also faced a lower return on assets for almost all years from 2000 to 2012, and latest estimates place the return on assets for PbSBs at 0.9 percent compared with 1.5 percent for PSBs (RBI 2013a, 62).

State-run banks account for around three-quarters of total lending in the banking sector, but their asset quality has deteriorated in recent times. In fact, there is a concern that they face a bigger bad debt problem than their nonperforming loans ratio suggests due to the classification of many bad loans as “restructured” loans. Estimates by the *Economist* suggest that public lenders hold 93 percent of restructured loans. If the largest state bank—State Bank of India—is excluded, 80 percent of restructured loans sit with smaller state banks that hold 50 percent of the banking sector’s tier 1 capital.⁵⁶ The poorer

56. “Hold Your Nose; Indian Banks,” *Economist*, August 18, 2012.

asset quality of PbSBs might be explained by what observers deem political meddling in how state banks are run. PbSBs are regulated by both the central bank and the Ministry of Finance and frequently receive directives to push the social agenda of the government; from October 2012 to January 2014, the Ministry of Finance issued 82 circulars to PbSBs.⁵⁷ It is telling that iron and steel and infrastructure (which includes power and telecommunications), sectors with many government-business partnerships, account for the highest proportions of total restructured debt (23 and 22.7 percent, respectively) (RBI 2013b, 67). Additionally, even though the statutory liquidity requirement (SLR) is set at 22 percent, the proportion of banks' liabilities that must be backed by their holdings of government bonds, most state banks hold a much greater amount of government bonds and have played a major role in funding the government's persistent fiscal deficits.⁵⁸

57. Nupur Acharya, "Is India Ready to Relinquish Control of its State-Owned Banks?" *Wall Street Journal*, May 15, 2014. The author does not clarify, however, the extent to which the directives to state-owned banks exceed the government's more general programs of priority lending applicable to all banks.

58. Acharya, "Is India Ready."

APPENDIX D FINANCIAL SECTOR INDICATORS

Figure D.1 Bank loans outstanding, 2000–2013

Sources: IMF (2014b); World Bank (2013, 2014).

Figure D.2 Nongovernment bonds outstanding, 2000–2013

percent of GDP

percent of GDP

Sources: BIS (2014); World Bank (2013).

Figure D.3 Stock market capitalization, 2000–2012

Source: World Bank (2014).

Figure D.4 Real stock market indices, 2006–14

index (January 2006 = 100)

index (January 2006 = 100)

Sources: Bloomberg; IMF (2014b).

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*ADB recognizes “China” as the People’s Republic of China.

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