

**EDITORS** 

Ratna Sahay, Jerald Schiff, Cheng Hoon Lim, Chikahisa Sumi, and James P. Walsh

#### Note to Readers

This is an excerpt from *The Future of Asian Finance*.

Asia demonstrated remarkable resilience throughout the global financial crisis and its aftermath. But new challenges have emerged in the region's economies

This book provides a comprehensive assessment of the state of Asia's financial sector, the challenges going forward, and the changes that can be expected. It takes stock of how systems in Asia's advanced and emerging market economies compare with the rest of the world and how reforms to develop equity and bond markets have progressed. Chapters discuss how Asian financial systems will evolve in complexity and interconnectedness and what this means for the regional financial centers of Hong Kong SAR and Singapore. Other topics covered in the book include: harnessing the region's demographic dividend to finance infrastructure, the state of economic and financial integration in ASEAN, the role of capital flows, how changes to the global regulatory regimes will affect Asian financial systems, and policy responses to address the region's present and future challenges.

This excerpt is taken from *uncorrected* page proofs. Please check quotations and attributions against the published volume.

#### The Future of Asian Finance

 ${\bf Edited\ by\ Ratna\ Sahay,\ Jerald\ Schiff,\ Cheng\ Hoon\ Lim,\ Chikahisa\ Sumi,\ and}$ 

James Walsh

ISBN: 978-1-49831-719-1 Pub. Date: September 2015

Format: Digital; Paperback, 6x9 in., 310 pp.

Price: US\$30.00

For additional information on this book, please contact:
International Monetary Fund, IMF Publications
P.O. Box 92780, Washington, DC 20090, U.S.A.
Tel: (202) 623-7430 • Fax: (202) 623-7201
Email: publications@imf.org
www.imfbookstore.org

© 2015 International Monetary Fund

# The Future of Asian Finance

Ratna Sahay, Jerald Schiff, Cheng Hoon Lim, Chikahisa Sumi, and James P. Walsh

INTERNATIONAL MONETARY FUND

#### © 2015 International Monetary Fund

Cover design: IMF Multimedia Services Division

#### Cataloging-in-Publication Data Joint Bank-Fund Library

The future of Asian finance / edited by Ratna Sahay, Jerald Schiff, Cheng Hoon Lim, Chikahisa Sumi, and James P. Walsh. – Washington, D.C.: International Monetary Fund, 2015.

pages; cm

Includes bibliographical references and index.

ISBN: 978-1-49831-719-1

1. Finance – Asia. 2. Economic development – Asia. 3. Asia – Economic conditions. I. Sahay, Ratna. II. Schiff, Jerald Alan. III. Lim, C. H. (Cheng Hoon). IV. Sumi, Chikahisa. V. Walsh, James P. (James Patrick), 1972- VI. International Monetary Fund.

HC412.F88 2015

Disclaimer: The views expressed in this book are those of the authors and do not necessarily represent the views of the International Monetary Fund, its Executive Board, or management.

Please send orders to:

International Monetary Fund, Publication Services P.O. Box 92780, Washington, DC 20090, U.S.A.

Tel.: (202) 623-7430 Fax: (202) 623-7201

E-mail: publications@imf.org Internet: www.elibrary.imf.org www.imfbookstore.org

### **Contents**

Foreword v	
Contributors vii	
Part I The Structure of Finance in Asia	1
1 Introduction Ratna Sahay, Jerald Schiff, Cheng Hoon Lim, and Chikahisa Sumi	3
A Bird's-Eye View of Finance in Asia Heedon Kang, Phakawa Jeasakul, and Cheng Hoon Lim	9
Are There Crouching Tigers and Hidden Dragons in Asia's Stock Markets?	. 39
Bond Markets: Are Recent Reforms Working?	. 59
Part II Where Is Asia Going?1	105
5   Is Asia Still Resilient?1 Phakawa Jeasakul, Cheng Hoon Lim, and Erik Lundback	07
6 The Future of Asia's Financial Sector1 Rina Bhattacharya, Fei Han, and James P. Walsh	129
Hong Kong SAR and Singapore as Asian Financial Centers—Complementarity and Stability1 Vanessa le Leslé, Franziska Ohnsorge, Minsuk Kim, and Srikant Seshadri	149
Part III Challenges Ahead1	175
Asia's Demographic Changes and Infrastructure Needs: How Can the Financial Sector Address These Challenges?1 Ding Ding, W. Raphael Lam, and Shanaka J. Peiris	177
ASEAN Financial Integration: Harnessing Benefits and Mitigating Risks2  Geert Almekinders, Alex Mourmouras, Jade Vichyanond, Yong Sarah Zhou, and Jianning Zhou	203

#### iv Contents

10	Capital Flows: A Prospective View	235
	Edda Zoli, Sergei Dodzin, Wei Liao, and Wojciech Maliszewski	
11	Operating within the New Global Regulatory Environment Rina Bhattacharya, James P. Walsh, and Aditya Narain	265
Index	X	289

#### **Foreword**

Recognizing the increasingly important role finance will play in Asia, the International Monetary Fund (IMF) embarked on the "Future of Asia's Finance" project in early 2013. Our aim was to take stock of Asia's financial systems and chart possible paths that it might take to meet the rising economic expectations of its vast population and finance its increasingly consumption-based growth models.

The IMF is committed to playing a supportive role in helping its Asian member countries achieve the twin goals of inclusive growth and financial stability. These goals need to be considered in the context of major ongoing changes in the global financial system following the global financial crisis in 2008, as well as demographic shifts, rapid urbanization, large infrastructure needs, and the evolving structure of economic activity in Asia itself.

Asia demonstrated remarkable resilience throughout the global financial crisis and its aftermath. Although some export-dependent economies were hit hard, the region as a whole recovered quickly and reestablished itself as the global growth leader. One key reason for Asia's resilience was that the region's financial sector was in much better shape than many countries in the West, a sharp contrast to the experience during the Asian financial crisis in the second half of the 1990s. Looking ahead, Asia's relatively conservative business model, a strength going into the global financial crisis, may become a constraint if it holds back further development of the financial sector, such as equity and bond markets and long-term investor bases, that are needed for continued strong growth.

Although Asia's financial sector has been successful in supporting growth, sustaining the region's impressive growth momentum will require the financial sector to innovate further. There is tremendous potential to better manage and mobilize Asia's large savings to finance the region's human capital and infrastructure investment needs. Capital markets need to deepen further to strengthen financial intermediation and risk sharing, diversify sources of funding, and mitigate capital flow volatility. By moving in this direction, the financial sector will help Asia meet the challenges of population aging, reduce gaps between the rich and the poor, and escape the so-called middle-income trap. Given the growing size and influence of the Asian economies, a sound and dynamic financial sector in Asia will also be beneficial to the rest of the world.

So far the IMF's work on the "Future of Asia's Finance" project has focused on taking stock of Asian financial systems and their resilience to global stresses, as well as how they can be retooled to address demographic shifts and infrastructure needs and adapt to the new global regulatory regime. In this context, we have held several public events in the past two years.

- "The Future of Asia's Finance" seminar during the April 2013 IMF-World Bank Spring Meetings outlined the challenges facing Asia's financial sectors and provided a starting point for many of the topics in this book.
- The Joint IMF-Hong Kong Monetary Authority (HKMA) Conference, "The Future of Asia's Finance," held in February 2014, brought together government, private sector, think tank, and other representatives from the region to discuss the role of finance in Asia, including managing capital flows and dealing with regulatory reforms.
- At the October 2014 IMF-World Bank Annual Meetings Flagship Seminar, "Financing Asia's New Growth Models," a high-level panel discussed how to ensure sustainable, high-quality growth in Asia and how financial systems should respond to these challenges.

Drawing on the lessons from our previous and ongoing work, including the key takeaways from the seminars noted above, this book attempts to provide a comprehensive assessment of the state of Asia's financial sector, the challenges going forward, and further changes that can be expected. It also proposes policy responses to address the region's present and future challenges. Lessons learned from cross-country experiences are valuable and yet they need to be applied to Asia with care, recognizing the region's many unique characteristics and the wide diversity of financial systems within the region.

Through the "Future of Asia's Finance" project, the IMF intends to continue serving as an international forum for its Asian members for discussing the challenges faced by its financial systems to meet Asia's twin goals of sustaining high growth and financial stability.

Min Zhu Deputy Managing Director International Monetary Fund

#### **Contributors**

#### **EDITORS**

Cheng Hoon Lim is Assistant Director in the Monetary and Capital Markets Department of the IMF. She is responsible for leading and implementing the department's strategic priorities on macro-financial surveillance and review for advanced and emerging market economies. She has led IMF teams to assess the stability of financial systems in recent years and has worked extensively on IMF programs during the Asian crisis in the late 1990s and early 2000s. Ms. Lim has produced seminal work on the effectiveness of macroprudential policy instruments in mitigating systemic risk. She has also published on other topics, including inflation targeting, sovereign debt crisis and restructuring, contingent claims analysis of banking and corporate sectors, and the future of finance in Asia. In addition to the IMF, Ms. Lim has worked at the UK Financial Services Authority and the World Bank. Ms. Lim received her PhD from Cambridge University.

Ratna Sahay is Deputy Director of the Monetary and Capital Markets Department at the IMF. She is responsible for setting strategic priorities for the department, leading key projects on policy, and coordinating the work and resource management of the department. She has previously worked in the Research, Finance, Asian, European, Middle East, and Western Hemisphere Departments at the IMF, leading key analytical and policy projects as well as several missions to emerging market countries. She has also led regional surveil-lance projects and missions in the Middle East and Western Hemisphere Departments. She has served as Advisor to Stanley Fischer (First Deputy Managing Director) and Michael Mussa and Kenneth Rogoff (both Economic Counselors of the IMF). She has published widely in leading journals on financial market spillovers and financial crises, inflation, economic growth, fiscal policy and debt sustainability, and transition economies. She has taught at Delhi University, Columbia University, and New York University and holds a PhD in Economics from New York University.

**Jerald Schiff** is Deputy Director of the Asia and Pacific Department (APD) and IMF Mission Chief for Japan. He has previously served as a Senior Advisor in the Office of the Managing Director, Assistant Director of APD, and Divison Chief in the European Department. Mr. Schiff received his AB at Cornell University and MS and PhD degrees at the University of Wisconsin. He has also taught at Tulane University and American University School of International Service and worked in the U.S. Department of Treasury.

Chikahisa Sumi is Assistant Director in the Asia and Pacific Department (APD) of the IMF. He is APD's lead on the "Future of Asia's Finance" project. He is also Mission Chief for the Philippines and New Zealand. Mr. Sumi has also held key positions in the Japanese government, including Deputy Vice Minister of Finance and Deputy Commissioner of the Financial Services Agency. He also headed Japan's Debt Management Office. Born in Osaka, Japan, Mr. Sumi holds an LLB from the University of Tokyo (1982) and an MBA from Harvard University (1986).

#### **AUTHORS**

**Geert Almekinders** is a Deputy Division Chief in the IMF's Asia and Pacific Department.

**Rina Bhattacharya** is a Senior Economist in the Monetary and Capital Markets Department at the IMF.

**Ding Ding** is a Senior Economist in the Asia and Pacific Department at the IMF.

**Sergei Dodzin** is a Senior Economist in the Asia and Pacific Department at the IMF.

**Mangal Goswami** is currently the Assistant to the Director at the IMF–Singapore Regional Training Institute.

**Fei Han** is an Economist in the Monetary and Capital Markets Department at the IMF.

**Phakawa Jeasakul** is an Economist in the Monetary and Capital Markets Department at the IMF.

**Andreas Jobst** is a Senior Economist in the IMF's European Department.

**Heedon Kang** is a Financial Sector Expert in the Monetary and Capital Markets Department at the IMF.

**Minsuk Kim** is an Economist in the Strategy, Policy, and Review Department at the IMF.

**Yitae Kevin Kim** is a Senior Financial Expert in the IMF's Monetary and Capital Markets Department.

**Raphael W. Lam** is the IMF's Deputy Resident Representative in China.

Vanessa le Leslé is Deputy Head of Global Regulatory Strategy and Policy for Asia Pacific, at JP Morgan Hong Kong and was Senior Financial Expert at the IMF until 2013.

**Wei Liao** is an Economist in the Asia and Pacific Department of the IMF.

**Fabian Lipinsky** is an Economist in the Western Hemisphere Department at the IMF.

Erik Lundback is a Senior Economist in the Monetary and Capital Markets Department at the IMF.

Wojciech S. Maliszewski is a Senior Economist working on China and Hong Kong in the IMF's Asia and Pacific Department.

**Alex Mourmouras** is a Division Chief in the IMF's Asia and Pacific Department.

Aditya Narain is Deputy Director of the IMF's Monetary and Capital Markets Department.

Franziska Ohnsorge is a Lead Economist in the Development Prospects Group (DECPG) at the International Bank for Reconstruction and Development, and was Senior Economist at the IMF until 2014.

Li Lian Ong is Senior Vice President at GIC Private Limited, Singapore. She was Deputy Division Chief in the Monetary and Capital Markets Department of the IMF until 2014.

**Shanaka Jayanath Peiris** is the IMF's Resident Representative to the Philippines.

**Srikant Seshadri** is the IMF's Senior Resident Representative in Turkey.

**Dulani Seneviratne** is a Research Officer in the Regional Studies Division of the IMF's Asia and Pacific Department.

**Jongsoon Shin** is an Economist in the IMF's Asia and Pacific Department.

Jade Vichyanond is an economist in the IMF's Asia and Pacific Department, Macroeconomic Research Division.

James P. Walsh is Deputy Division Chief in the Monetary and Capital Markets Department at the IMF.

Jianping Zhou is a Senior Economist in the Monetary and Capital Markets Department at the IMF.

Yong Sarah Zhou is a Senior Economist in the IMF's Asia and Pacific Department.

**Edda Zoli** is a Senior Economist in the IMF's Asia and Pacific Department.

## **The Structure of Finance** in Asia

#### Introduction

## RATNA SAHAY, JERALD SCHIFF, CHENG HOON LIM, AND CHIKAHISA SUMI

Asian economies are rich in diversity. Yet a common thread runs through them: In recent decades they have grown faster than have the economies of other regions. In fact, they now account for about 30 percent of the world's GDP. Asian markets have expanded and they are more interconnected with each other and the rest of the world. A growing and vibrant middle class—the backbone of stable and sustainable growth—and continued prosperity will transform Asia's growth models in the future. This growth will be driven more by domestic demand and consumption than by exports. Estimates show that by 2030, two-thirds of the world's middle class will be in Asia.

The potential for expanding consumption is high, as it accounts for only 20 percent of the world's GDP. A growing middle class with higher household incomes will demand a greater range of goods and services, especially financial services. The latter includes home mortgages and auto financing, working capital for more start-ups, equity financing as companies expand, trade credit for corporations going global, bonds to finance infrastructure, and financial products to provide stable incomes for retirees. Technological innovation, including mobile and Internet banking, is extending the reach of finance to rural and previously unbanked areas, leading to greater financial inclusion of low-income households and small and medium-sized enterprises.

Even as Asia continues to evolve and grow, however, pockets of uncertainty remain. After two lost decades of growth, Japan is making a concerted effort to tackle deflation and revive its economy through a three-pronged strategy—aggressive monetary easing, fiscal stimulus, and structural reforms. With an aging population and a large public debt, this task is not easy. China's mighty economy is slowing, and given its prominence in global goods markets, its spillovers are already being felt in declining commodity prices. India and Indonesia are counting on their newly elected governments to improve governance, modernize their economies, and reduce the gap between rich and poor. Economic and financial integration of the Association of Southeast Asian Nations (ASEAN) economies, a region of more than 600 million people and a GDP of over \$2.5 trillion, is promising. Low-income countries in Asia are also reforming to promote broad-based and sustainable growth, but they face a more unfavorable global environment than do Asian trail blazers that have now reached high-income status.

On a broader level, there are several reasons to be concerned: changing demographics in countries that were once major engines for growth, falling exports resulting from weak external demand, and infrastructure bottlenecks that are hindering total factor productivity growth. Despite a prolonged period of very low global interest rates, world events are stoking fears of "secular stagnation" and negative spillover to the rest of the world. These include sluggish growth and high unemployment in some major advanced economies, political turmoil in the Middle East, and the Russia-Ukraine impasse.

Set against these forces at play, what does the future hold for Asia? How will the region transform its long-standing growth model of a manufacturing hub to meet the evolving needs of the region and the world? There is no single answer or simple solution. Asia has many faces, with countries at different stages of development. This book considers one aspect—the role of the financial sector in facilitating Asia's transformation. We argue that the financial sector will take on a bigger role than it has in the past and will, itself, become an engine of growth.

The financial sector will face many challenges, including:

- Better managing accumulated saving. An aging population in the countries
  that have been the region's major engines of economic growth—China,
  Japan, Korea, and Singapore—will put increasing downward pressure on
  that growth. To help ensure adequate retirement saving and alleviate fiscal
  pressures, the large saving accumulated in these countries will need to be
  managed better.
- Efficiently mobilizing saving. As demographic changes occur and Asia becomes less of a net saver, a long-term global shortage of saving could develop. This could, in turn, cause long-term interest rates to rise. To counter this potential development, the financial sector will need to more efficiently mobilize saving and governments will need to adopt policy measures that encourage rebalancing from surplus to deficit countries.
- Investing in human and physical capital. Many Asian countries have a young population, and can expect a demographic dividend in the future. However, many are currently burdened with a high young-age dependency ratio and are in need of large-scale investment both in human (education, health, and training) and physical (transportation, electricity, and telecommunication) capital to reap the benefits of an expanding labor force and avoid development of a youth-unemployment problem.
- Deepening capital markets to escape a "middle-income trap." Asian bond markets
  are still shallow and equity and venture capital play a limited role in corporate
  financing. Deepening capital markets to provide long-term and risk-sharing
  capital, reducing the dominance of state banks in several countries, and developing a domestic institutional investor base will help increase productivity,
  diversify sources of funding, and mitigate capital flow volatility.
- Supporting economic and financial integration of ASEAN. Most ASEAN countries are still at an early stage of development and have large

infrastructure gaps. Establishment of an ASEAN Economic Community will provide opportunities for further liberalizing inter- and intraregional flows of goods, services, and capital. The financial sector can play a critical role in supporting integration initiatives and help unlock growth-enhancing cross-border flows of capital.

Rapid growth of the financial sector can, in itself, pose risks. Although Asian financial markets showed remarkable resilience during the global financial crisis of 2008, they are becoming bigger, more complex, and interconnected. At the same time, global regulatory reforms are also creating domestic and cross-border challenges for markets and regulators alike. The implementation of this agenda is influencing market structures and liquidity, financial products and flows, the size of banks and shadow banks, financial safety nets, and resolution frameworks. Asia will need to adapt to and influence these changes and be ready to manage emerging risks.

Understanding how this process will work requires looking deeply into Asia's financial systems, at what they have in common and how they differ, at why they proved so resilient to global financial shocks, and at how successful they have been at deepening and diversifying their financial services. It also requires digging down into how these issues affect the financial sector, and how market participants, supervisors, and households in turn react. Many of these questions have been raised in some countries, but in this book we try to look at them for various countries across the region, drawing insights for the high-income countries and financial centers, along with emerging markets and, when possible, low-income countries as well.

In this book, we adopt a chronological approach by first taking stock of the current state of play in Asia's financial sectors. We then assess how they must adapt to support the transformation of Asia's growth models to become more service oriented and to meet the high expectations of its diverse populations. Finally, we consider the challenges that will need to be addressed in this process.

Three chapters in Part I describe the structure of finance in Asia. Chapter 2 presents an overview of Asia's financial system and the next two chapters investigate how capital markets in Asia can be developed further to provide adequate stable funding for long-term investment and risk capital for innovation and entrepreneurship.

In Chapter 2, "A Bird's-Eye View of Finance in Asia," Heedon Kang, Phakawa Jeasakul, and Cheng Hoon Lim describe Asia's financial systems. As home to about half the world's population and highly heterogeneous economies, Asia's financial systems are quite diverse, ranging from global hubs for securities and derivatives trading to low-income economies where financial services have yet to reach much of the population.

Yet across the region, there are some striking similarities. Asian banking sectors tend to be large, constituting about 60 percent of the aggregate assets of financial institutions across the region. The role of government in banking is significant. Asian banks tend to be quite conservatively run—they focus on commercial lending,

their liabilities are dominated by deposits rather than wholesale funding, and they tend to be well capitalized. Financial inclusion, as measured by access to finance by small and medium-sized enterprises and households, tends to lag other regions.

The simple and risk-averse business model was a strength going into the global financial crisis as it limited the exposure of Asian banking systems to subprime loans and securitization that beset advanced economies. At the same time, bank dominance has come at the cost of underdeveloped equity and bond markets in most countries. Also, the short duration of banks' liabilities limits their capacity to finance long-term investments such as infrastructure projects.

In Chapter 3, "Are There Crouching Tigers and Hidden Dragons in Asia's Stock Markets?" Fabian Lipinsky and Li Lian Ong explore the pricing of Asia's equity markets, which have become a key source of financing for firms. They find that idiosyncratic factors, such as the implementation of securities regulation, tend to play a more important role in driving equity price movements compared to the G7 markets. This suggests that improvements in the regulation of securities markets in Asia could enhance the role of stock markets as stable and reliable sources of financing into the future.

In Chapter 4, "Bond Markets: Are Recent Reforms Working?" Mangal Goswami, Andreas Jobst, Shanaka J. Peiris, and Dulani Seneviratne find that bond markets have grown rapidly, albeit unevenly, across emerging Asia in the aftermath of the global financial markets. Foreign investors have come in and, at the same time, the availability of hedging instruments has risen. Emerging Asian financial systems are starting to fire up the "twin engines," with the corporate bond market developing into an alternative and viable nonbank source of private sector and infrastructure funding. Deeper corporate bond markets will help channel resources from aging savers in industrialized Asia to infrastructure investment in emerging Asia, as highlighted in Chapter 8. In addition, developing a local institutional investor base and encouraging offshore issuance will help deepen bond markets and reduce the volatility of asset prices to global shocks.

Having established where Asia's financial sectors currently stand, Part II of this book asks: Where are they going?

In Chapter 5, "Is Asia Still Resilient?" Phakawa Jeasakul, Cheng Hoon Lim, and Erik Lundback discuss the lessons Asia learned after the Asian financial crisis, and how it has applied those lessons in recent years. Following the Asian financial crisis, Asia reduced its macro-financial vulnerabilities, introduced more exchange rate flexibility, built foreign exchange reserves, cleaned up the balance sheets of banks and firms, and stepped up the regulation and supervision of its financial sectors. This helped ensure a rapid bounce-back from the global financial crisis in 2008. While most of Asia withstood the "taper tantrum" of asset prices in mid-2013 following the Federal Reserve's hint of monetary tightening, some Asian countries that had re-leveraged and built up higher domestic imbalances were hit hard.

A quantitative analysis comparing more recent macro-financial conditions with those before the Asian financial crisis suggests that parts of Asia have become less resilient because of growing domestic imbalances from rapid credit growth and elevated house prices, higher leverage in the household and corporate sectors,

and deteriorating external positions. Maintaining Asia's standing in the world as an engine of growth will require proactive policies to reduce vulnerabilities and push ahead with structural reforms.

In Chapter 6, "The Future of Asia's Financial Sector," Rina Bhattacharva, Fei Han, and James P. Walsh look farther ahead at how evolving economic structures, higher growth, and demographic changes in Asian economies are likely to affect the region's financial sectors. Although the sustained economic growth in the medium term should boost the region's financial sectors, the pace of financial sector growth is likely to slow down as the Asian emerging markets converge to advanced economy income levels. The different pace of demographic change will also have an impact. Asia's aging economies, chiefly the advanced economies and China, will begin to see a decline in saving in favor of consumption, while the region's younger economies, especially India and Indonesia, can expect further financial deepening as saving begins to increase. Further, rising incomes tend to go hand in hand with increasing sophistication and integration of financial institutions, which should work to make Asia's financial systems both more complex and more globally connected. This, in turn, will present new challenges for the region's regulators and supervisors, who will have to oversee increasingly networked, complicated, and large financial sectors.

Vanessa le Leslé, Franziska Ohnsorge, Minsuk Kim, and Srikant Seshadri show in Chapter 7, "Hong Kong SAR and Singapore as Asian Financial Centers—Complementarity and Stability," how these two cities have evolved from modest beginnings as entrepôt trade hubs into international financial centers in terms of their depth, scope, financial sophistication, and interconnectedness. To the extent that greater levels of interconnectedness might result in greater propagation of financial shocks, this chapter highlights the positive role that complementary coexistence of these financial centers can play in enhancing financial stability in the region and beyond. Regulatory and supervisory considerations of cooperation and coordination to facilitate such positive outcomes are presented.

Part III looks at three specific challenges that face Asia in the coming years: the nexus of aging societies in need of infrastructure investment, increasing openness to capital flows, and the evolving agenda of global regulatory reform.

Several countries in the region are aging rapidly, while infrastructure needs across the board are large. In Chapter 8, "Asia's Demographic Changes and Infrastructure Needs," Ding Ding, W. Raphael Lam, and Shanaka J. Peiris examine how Asia's heterogeneity can work in its favor. They find that enhancing financial innovation and integration in the region could facilitate intraregional financial flows and mobilize resources from the aging savers in industrialized Asia to finance infrastructure investment in emerging Asia. Strengthening the financial ties within the region, as well as with the global financial markets, alongside appropriate prudential frameworks, could also help diversify the sources of financing and reduce the cost of funding in emerging Asia.

The scope for financial integration is particularly evident in southeast Asia, where the 10 member countries of ASEAN have become highly integrated with global trade flows, yet financial integration has lagged. In Chapter 9, "ASEAN

Financial Integration: Harnessing Benefits and Mitigating Risks," Geert Almekinders, Alex Mourmouras, Jade Vichyanond, Yong Sarah Zhou, and Jianping Zhou look at the pros and cons of ASEAN's ongoing financial integration. ASEAN member countries plan to integrate further through the ASEAN Economic Community, due to be established in 2015. The process has so far been prudent and gradual, dominated by their concern that premature financial liberalization can exacerbate domestic vulnerabilities and heighten risks. However, breaking down barriers to financial flows within the region could further support growth, jobs, and financial inclusion, and help ASEAN in transforming from an export powerhouse to a growth model that is increasingly dependent on domestic investment and consumption.

In Chapter 10, "Capital Flows: A Prospective View," Edda Zoli, Sergei Dodzin, Wei Liao, and Wojciech Maliszewski look at capital flows in Asia in the last two decades, and discuss prospects going forward. They find that traditionally, the size and composition of capital flows in Asia have been driven to a large extent by the region's stronger growth prospects, global interest rates, and investors' risk appetite. Capital flows are likely to react to Japan's monetary easing, capital account liberalization, especially in China, increasing financial integration and development, and changes in saving patterns driven by demographics. Overall, this will increase the volume of capital flows in the region, and most likely also lead to higher volatility. Many Asian countries already use macroprudential policies to minimize systemic financial risk; improving and fine tuning these tools will be key for managing these flows.

Finally, in Chapter 11, "Operating within the New Global Regulatory Environment," Rina Bhattacharya, James P. Walsh and Aditya Narain look at the broader agenda for global regulatory reform and its potential effect on Asia. Asia's fast-evolving financial systems have always presented challenges for supervisors and regulators, and the new efforts to reduce systemic risk across the world have added to the task. They find that the region's financial supervisory frameworks are generally robust. Crisis management tends to be strong but, as elsewhere, the presence of too-important-to-fail banks or government-owned banks remains a concern. Shadow banking, which is still small across the region, is growing rapidly in some countries. Looking toward the global regulatory agenda, new rules on bank capital and liquidity are unlikely to affect most of the region's banks, which already tend to be well capitalized and liquid. But like the rest of the world, potential unintended consequences from regulatory reform, such as continued growth in nonbank finance and structural changes in market liquidity, will continue to challenge the region's regulators and supervisors.

This book paints a potentially bright future for Asia's finance to support the new growth models. Moreover, the Asian authorities are well placed to safeguard financial stability as financial markets deepen and financial institutions grow, based on lessons learned from the Asian financial crisis of 1997, the global financial crisis of 2008, and the integration of the European Union. The region's financial systems have underwritten an impressive growth record over the past generation, and we are optimistic that the financial sector in Asia will successfully meet the challenges ahead.

To purchase a copy of the complete book or for additional information on IMF publications, please visit www.imfbookstore.org

To download digital formats, visit the IMF eLibrary www.elibrary.imf.org