

# Financial Innovation and Emerging Markets

Opportunities for Growth vs. Risks for Financial Stability  
– Proceedings –



hosted by the  
German Federal Ministry for Economic Cooperation and Development (BMZ)

convened by the  
Div. 2.01, Economic Policy/Good Governance, Capacity Building International, Germany  
and the German Development Institute (DIE)

## **Financial Innovation and Emerging Markets Opportunities for Growth vs. Risks for Financial Stability**

– Proceedings –

3 – 4 July 2008 in Berlin

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## Conference Programme

3 July 2008

08:30–09:00 Registration

09:00–09:30 Opening

09:00–09:05 **Words of Welcome** by *Günther Taube*, Head of Department, International Regulatory Framework, Good Governance, Economic Policy, InWEnt – Capacity Building International, Germany

09:05–09:10 **Words of Welcome** by *Peter Wolff*, Head of Department, World Economy and Development Financing, German Development Institute (DIE), Germany

09:10–09:20 **Official Welcome** by *Paul Garaycochea*, Head of Division, World Bank Group, IMF, Debt Relief, International Financial Architecture, Federal Ministry for Economic Cooperation and Development (BMZ), Germany

09:20–09:30 **Financial Sector Trends in Emerging Markets**, *Ulrich Volz*, Senior Economist, German Development Institute (DIE), Germany

09:30–12:30 **Session I:  
Benefits and Risks of New Instruments: Derivatives and Securitisation**

09:30–11:00 **Current Trends in National Capital Market Innovations**

Chair:

*Erich Harbrecht*, Head of Division, International Financial Systems, Deutsche Bundesbank, Germany

*Daniel Mminele*, Executive General Manager, South African Reserve Bank, South Africa

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Q&A

11:00 – 11:30 Coffee break

11:30 – 12:30 **Global Perspectives and the Role of International Financial Institutions**

Chair:

*Rajiv Kumar*, Director General and CE, Indian Council for Research on International Economic Relations (ICRIER), India

*R. Sean Craig*, London Representative, International Monetary Fund (IMF), UK

*Michael S. Bennett*, Principal Financial Officer, Treasury (Paris), International Bank for Reconstruction and Development, France

Q&A

12:30 – 13:15 **Keynote Speech “A Pragmatic Approach to Coping with Financial Globalisation”**

*Eswar Prasad*, Tolani Senior Professor of Trade Policy, Cornell University, USA

## Conference Programme

13:15 – 14:15 Lunch break

14:15 – 18:30 **Session 2:  
New Developments in Bond Markets**

14:15 – 16:00 **Developments and Trends in National Bond Markets**

Chair:

*Hans J. Blommestein*, Head of Debt Management and Bond Markets Programme, Organisation for Co-operation and Development (OECD), France

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*Stephany Griffith-Jones*, Executive Director, Initiative for Policy Dialogue, Columbia University, USA

Q&A

16:00 – 16:30 Coffee break

16:30–18:30 **Best Practices and Scope for Regional and International Cooperation**

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Q&A

19:30 Conference dinner at Siemenssaal, Mövenpick Hotel

**4 July 2008**

09:00–13:00 **Session 3:  
Challenges for Regulatory Authorities, Policy Reform Priorities and Future Cooperation**

09:00–10:30 **Suggestions from Emerging Markets' Perspectives**

Chair:

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Q&A

10:30–11:00 Coffee break

11:00–13:00 **Perspectives of Future International Cooperation**

Chair:

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13:00 **Official Closing** – *Günther Taube*, Head of Department, International Regulatory Framework, Good Governance, Economic Policy, InWEnt – Capacity Building International, Germany

13:10 – 14:30 Farewell lunch

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## Preface

— The dialogue forum on financial innovation and opportunities and risks for emerging markets took place in Berlin in July this year against the background of financial market turbulences in industrial countries that had started about one year earlier with the subprime crisis in the US. The presentations and discussions at the event in Berlin focused on the causes, risks and ramifications of these turbulences, with much attention being given to the decoupling thesis as emerging markets seemed so little affected by turbulences. While writing this preface, in October 2008, the picture looks much different, sadly. Over the past couple of months and weeks the financial market turbulences have intensified so dramatically and fast within the industrial country world that many now believe we are experiencing the worst financial crisis since the great depression of the late 1920s and early 1930s. And the financial crisis is spreading to more and more emerging market economies, triggering also currency crises in some cases.

The ongoing financial crisis shows clearly the global nature and increasing interdependence of financial markets around the world. By now, in October 2008, we realise with even greater urgency than we did when gathering in Berlin in early July how important financial stability is as a public good at the national and international level, as it seems likely that the ongoing financial sector crises will have strong negative impact on the real economy, in particular with regard to growth and unemployment. All of this demonstrates that we urgently need more and better analysis, monitoring, regulation and supervision of financial sector developments, both at the national level and internationally.

The contributions to and results of the Berlin event in July this year are presented in this volume. This event was the first in a series of conferences and workshops on financial market stability (for details see [www.inwent.org/dialogues](http://www.inwent.org/dialogues)). InWEnt regards this series of dialogues as a timely opportunity to intensify the exchange of views on developments relating to financial market stability with representatives from countries like China, India, Brazil, whose significance for dealing with the pertinent issues will continue to increase. With events like this, InWEnt seeks to promote international cooperation between experts from key institutions from the respective national financial systems of our partner countries with a view to increasing capacities for joint and coordinated action. This will remain the main objective at further dialogue events during the next couple of years, where key questions on financial stability will be debated.

The debate of these key questions takes it for granted that good financial sector supervision and regulation, sound banks and other financial sector institutions, robust financial markets marked by depth, diversity and efficiency are and will remain indispensable prerequisites

for long-term sustainable economic development. To be successful, any poverty reduction strategy will require sound macroeconomic policies and financial stability. Avoiding financial crisis is paramount to reducing poverty, as it is the poor who suffer most from the turmoil in the financial sector – something we witnessed in Asia, for example, about a decade ago. Unfortunately, we are likely to see this again in the current financial sector crisis. Moreover, expanding financial services to low-income groups will help alleviate poverty, as has been demonstrated so effectively by the Grameen Bank and many others. Therefore, in addition to financial stability, one of the key issues that InWEnt is striving to promote with this series of dialogues is financial inclusion. This clearly goes beyond the traditional tasks of central banks and supervisory authorities, but in emerging markets this will remain a key issue for financial sector development.

InWEnt is also dedicated to promote reforms towards a more inclusive and effective architecture in international financial governance. As the current financial crisis demonstrates, we not only need stronger and more effective financial sector regulation and supervision at the national level, but we should also seek to intensify the analysis, monitoring and supervision of financial market developments. This calls for a strengthening of the international financial architecture, regionally and globally. Emerging economies like China, India, Brazil or South Africa are important players with regard to regional financial integration and cooperation processes and structures (e.g., through regional bond issues, regional payment systems, foreign exchange pooling). At the international level, emerging powers should be involved in efforts to financial policy coordination, and they should be invited to play a stronger role in existing or new international institutions and mechanisms of the international financial architecture.

InWEnt would like to thank all institutions and experts participating in the dialogue forum on financial innovation and opportunities and risks for emerging markets. In particular, we would like to express our gratitude to the German Development Institute (DIE) for the excellent cooperation in planning and implementing the event in Berlin in July this year. Special thanks also go to Divisions 301 and 220 at the German Ministry for Economic Cooperation and Development (BMZ) for generous conceptual and financial support. Finally, we would like to thank the German Ministry of Finance (BMF) for providing advice and assistance.

Ina Dettmann-Busch

Günther Taube



## 1 Introduction

Ulrich Volz

— The development of financial markets has long been recognised as a key determinant of economic development.<sup>1</sup> There is a firm consensus nowadays that a well-functioning financial sector is a precondition for the exploitation of an economy's growth potential. While there is still an ongoing debate on the exact transmission channels from finance to economic activity, and its quantitative impact in particular, a large and growing amount of empirical research has documented a robust correlation between finance and growth and a causality running from financial development to economic growth.<sup>2</sup>

The economic literature highlights three main channels by which financial development can affect growth.<sup>3</sup> Firstly, a more efficient financial system reduces the cost of financial intermediation and hence raises the fraction of savings funnelled to investment. The more efficient the transformation of savings into investment, the lesser the loss of resources, and the more savings are channelled towards productive investment. Competition and increased efficiency should bring interest-rate margins down. The availability of credit to firms and households should correspondingly increase.

Secondly, a well-functioning financial sector is a precondition for the efficient allocation of resources. Improvements in financial intermediation are expected to lead to a better allocation of resources across investment projects. A better trading, hedging and pooling of risks allows the funding of highly profitable, but risky investment projects that would be relinquished otherwise. The more advanced financial systems become, the better they should be able to deal with the problems of asymmetric information that are persistent in financial markets. This should further reduce the cost of financial intermediation. Moreover, a more sophisticated financial sector should be more capable of distinguishing between good and bad investment opportunities, increasing the social marginal productivity of capital.

A third way by which financial development could affect economic growth is through

<sup>1</sup> The notion that financial development stimulates economic growth dates back to Adam Smith (1776, p. 394), who noted that once the first banks had been established in Scotland, "trade and industry [...] increased very considerably" and "that banks have contributed a good deal to this increase, cannot be doubted". Walter Bagehot (1873) and Joseph Schumpeter (1912) similarly stressed a positive causal relationship between financial development and economic activity.

<sup>2</sup> For surveys of the finance-growth nexus and a more detailed discussion see Pagano (1993), Levine (1997, 2005) and Haber (2008).

<sup>3</sup> See Pagano (1993) in particular.

influencing households' savings rates. While the effect in the two channels mentioned before is generally positive, it is ambiguous in this case. A higher efficiency of the financial system should yield more favourable return-risk combinations for savers. But it is not clear whether or not the prospects of higher returns or lower risk on savings would induce households to save more, which in turn would stimulate higher economic growth.

Closely related to the development of financial markets is the topic of financial stability and thus market supervision and regulation. The more financial markets develop, and the more complex they become, the greater the need for sophisticated supervision and regulation. While financial market development holds great benefits for the real economy, financial innovation also poses risks to financial stability. This is especially true for capital markets, where the systemic risk can be substantial due to huge leverage effects. As historical experience has shown over and over again, crises originating from the financial sector can have devastating impact on the real economy. History is full of examples where progress in economic development that had been made over many years was wiped out by a financial crisis within weeks or months. The Asian financial crisis of 1997–98 is such an example.<sup>1</sup>

Yet the Asian crisis also provides an example for the risk induced in financial systems if parts of the financial sector are not or only poorly developed: before the crisis, the lack of well-functioning local-currency bond markets in most of East Asia had led to an over-reliance on bank lending. As a consequence, many long-term projects were financed with short-term bank loans which frequently had to be rolled over, causing maturity mismatches. In addition, the lack of funding in domestic currency caused local banks to refinance themselves internationally, which created currency mismatches. This double mismatch problem had fatal consequences when international investors started withdrawing money from the region and East Asian monetary authorities were forced to devalue their currencies against the US dollar. As a lesson from the Asian and many other crises, the development of local currency bond markets has been identified as a key policy challenge.

The importance of an appropriate regulation and supervision of financial markets has been demonstrated once more by the current financial crisis that originated in the US “sub-prime” mortgage financing sector. The crisis poses several challenges for developing and emerging economies. Firstly, as most countries have chosen to open or partially open their capital accounts as their financial sectors have progressed, spillovers from international financial markets have become ever more important. Hence an important question is how can markets in the periphery cope with a crisis that has the centre of the world financial

<sup>1</sup> Other recent examples of drastic output losses due to financial crises include Russia and Argentina. See, for instance, World Bank (1998) and Bordo, Eichengreen, Klingebiel and Soledad Martinez-Peria (2001). On the effects of financial crises on poverty and income distribution see Baldacci, de Mello and Inchauste (2002).

## Introduction

system in its grip? Financial markets in developing and emerging countries have remained remarkably resilient to date, but the risk of financial contagion rises as the crisis in the US and Europe worsens. A second important question relates to the lessons that regulators, both in the developed and the developing world, need to draw. With new financial instruments, including securitisation and various forms of derivatives, having been discredited by the current crisis, the costs and benefits of financial innovation and the associated opportunities for growth and risks for financial stability need to be reassessed.

These topics were at the centre of discussion at a conference on “Financial Innovation and Emerging Markets. Opportunities for Growth vs. Risks for Financial Stability” jointly organised by InWent and the German Development Institute in Berlin in July 2008. This volume comprises selected conference papers, with a focus on recent developments in the capital markets of major emerging economies and national and international efforts to foster the development of local currency bond markets. The remainder of this volume is structured as follows. After a conference summary by Klaus Liebig, Part I of the proceedings examines current trends in major emerging financial markets. The contributions by Daniel Mminele, Keith Lui, and Eduardo Manhães Gomes scrutinise developments in the capital markets of South Africa, Hong Kong and Asia, and Brazil, respectively. This is followed by an analysis of current risks to emerging financial markets by R. Sean Craig. The contributions in Part II examine new developments in bond markets and scope for regional cooperation. Garth Greubel, Roberto Marino, Carlos Serrão and Bandi Ram Prasad review developments and trends in the bond markets of Africa, Mexico, Brazil and India, respectively. Srichander Ramaswamy highlights challenges and recent initiatives for developing domestic bond markets in emerging economies. The volume concludes with a description of the Asian experience with regional cooperation and development of bond markets by Lotte Schou-Zibell.

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## 2 Conference Report

Klaus Liebig

### 2.1 Introduction

— During the summer of 2007, one of the worst financial crises after the Second World War began in the United States. Bear Stearns, a major US investment bank, reported problems when the bubble in the US housing market burst with subsequent credit fallouts and liquidity shortages in the banking sectors of the US and Europe. The specific feature of the crisis, which led to its branding as "sub-prime crisis", has been the massive use of innovative structured credit products. These financial innovations aimed at restructuring the risks involved in the sub-prime housing market in order to broaden the market and allocate risks efficiently. However, for a variety of reasons, market participants underestimated the systemic risks entailed in the massive use of the new financial products in times of highly liquid capital markets. As of today, the economic consequences of the crisis are still not known for sure.

Interestingly, emerging markets have remained relatively resilient and negative spillovers to their economies have been limited so far. At first sight, this is surprising, given the increasing globalisation of the financial system. Several explanations are possible: Emerging markets may have not yet employed the most innovative (and, one could argue, most risky) financial instruments, i.e. asset-based securities and certain derivatives. Regulation in emerging markets could have worked better than in industrialised countries. Emerging market economies could be in such a good shape that they can deal with an external shock more easily than during former crises. Finally, international cooperation and regulation might have improved to the extent that excessive spillovers of a financial crisis in the North towards emerging markets can be limited.

Against this background, InWEnt and the German Development Institute (DIE) organised an international conference to discuss these questions. The conference was designed as a platform for mutual learning and peer-to-peer-discussion about the opportunities of innovative financial instruments and new investors for development finance and poverty reduction, but also about their risks for the stability of financial systems at the national, regional and global level. Policy makers and policy advisors from relevant public and academic research institutions from Brazil, China, India, Mexico and South Africa were

brought together with their peers from international and German bodies. The dialogue was structured into three sessions: 1) benefits and risks of new financial instruments; 2) recent developments in bond markets; 3) the resulting challenges for regulatory authorities, policy reform priorities and scope for future cooperation. For the quick reader, a summary of the major lines of discussion will follow. Thereafter, main messages and highlights of the individual presentations and the discussions will be presented in turn.

## 2.2 Major lines of discussion

— Financial markets in emerging market economies have developed dynamically in recent years. However, development has been uneven: while government bonds are traded in fairly liquid markets even for longer maturities, the development of corporate bond markets in most emerging economies is in a more infant stage. The same holds true for the new financial instruments like asset-based securities and certain derivatives, which are hardly traded in emerging markets.

This relatively low involvement helped emerging markets to shield the impact of the sub-prime crisis. Participants agreed that the impacts until now have been only indirect via the global economic slowdown and increasing emerging market bond spreads. However, the IMF representative warned emerging markets to be complacent. In his view, the sub-prime crisis could have severe long-term consequences on emerging markets and could put their institutions under stress.

Interestingly, most participants from emerging markets seemed to favour approaches that increase the availability of innovative financial instruments in their domestic markets. Policy makers and regulators would like to see a further broadening and deepening of their capital markets, including the use of new financial instruments. Regulation should not prevent innovations to happen – this was one of the common themes during the conference, only questioned by some researchers who were more concerned with the risks of the new instruments for financial stability.

At the same time, regulators were rather pragmatic concerning their options to prevent the risks of new financial instruments. Regulators, in their view, will always be “one step behind the market”. Given this self-assessment, it would be useful to take a closer look at an optimal sequencing of capital market liberalisation and regulation, since all participants agreed that institutions in emerging markets are still weak.

Transparency was mentioned as the key factor to ensure that capital markets can fulfil

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their objectives (efficient risk allocation and capital intermediation). All participants from emerging markets reported about progress in this area, e.g. concerning price setting in bond markets. However, it remained somewhat open which additional data should become available to whom in order to prevent the risks of the new financial instruments.

It became obvious that regional initiatives to support capital market development are most advanced in Asia. While in Africa capital markets are less developed – with the important exception of South Africa – Latin American countries seem to be more concerned with their “national homework”. It would be interesting to explore in more detail which types of regional initiatives have worked and which parts can be transferred to other regions as well.

The participants from bilateral and multilateral institutions presented interesting cases of collective support for capital market development in emerging markets. Policy makers from emerging markets agreed that the initiatives were helpful to them. Nevertheless, all participants felt a need for more peer-to-peer-dialogues to discuss pertinent issues. For future dialogues, it could be interesting to take a closer look at existing initiatives and to confront them in a more structured way with the needs of emerging markets.

## 2.3 Benefits and risks of new financial instruments: derivatives and securitisation

— The session discussed the role of new financial instruments in emerging markets. In the first part, three representatives of central banks and regulatory agencies from South Africa, Hong Kong and Brazil commented together with a policy advisor from an Indian think tank on recent developments in the financial sectors of their respective economies and on consequences of the global financial crisis on their financial markets. In the second part, representatives from international financial institutions outlined recommendations of their organisations to balance the chances and risks of new financial instruments. Finally, in his keynote speech, Eswar Prasad presented his view on financial globalisation and possible lessons for emerging markets.

**Daniel Mminele** from the South African Reserve Bank offered some figures to characterise salient features of South Africa’s capital and derivatives market. According to his description, the South African capital and derivatives markets are fairly advanced compared to other emerging markets. The bond market plays a key role in the mobilisation of capital, particularly for the government that dominates the market. Since 2007, foreign issuers are allowed to list Rand-denominated bonds at the South African Bond Exchange, opening up further towards foreign market participants. Growth in South Africa’s securitisation



market has remained relatively healthy, which is largely due to the heavy concentration of industry activity around the five major banking groups. However, securitisation issuances represent only about 6 % of South African banks' total on-balance-sheet loans and advances. South Africa has followed the global trend and witnessed an unprecedented growth in its derivatives market, which includes exchange-traded derivatives and a well-developed over-the-counter (OTC) market in derivatives. All markets can be regarded as very liquid. One area in which South Africa lags behind the industrialised countries is the extent to which credit risk transfer products are available. While securitisation has grown at high rates, the transfer of credit risk separately from the underlying asset is not yet readily available.

**Mr. Mminile** sees a lot of truly welfare enhancing consequences of financial innovation. Possible benefits include reduced cost of capital for investors, mitigated risk exposures, broader access to capital and increased liquidity. However, financial innovation is not without risk. In his view, financial incentives at the individual level, coupled with advancements in technology and financial engineering skills, can result in situations where new instruments outpace the existing market and regulatory infrastructures. An advantage for emerging markets in pursuing financial innovation is that they can learn from the mistakes of others. However, there remains a threat that the pace at which new financial products are imported may outpace the ability of domestic market participants, investors and supervisors to properly understand new products.

In the case of South Africa, the effects of the sub-prime crisis have been mainly indirect so far, felt in the form of higher volatility in its financial markets and an increase in the cost of offshore funding as a result of a general repricing of risk. One of South Africa's weak links is its relatively high current account deficit, which has to be financed by external capital inflows. Another possible channel of direct contagion is through the international exposure of South Africa's banking system.

**Susan Thomas** from the Indira Gandhi Institute of Development Research in India took a similar stance towards the positive welfare effects of new financial instruments, but focused her presentation differently. In her view, new financial instruments have not (and cannot) be introduced in the Indian capital market because the Indian financial regulation prevents financial innovation. She characterised the Indian regulatory system as a "license-permit raj". Every innovation, be it a new financial instrument or even a candy for the customer's use of an ATM, needs to be approved by regulatory authorities in advance.

While in other parts of the Indian economy (trade and industry) and even in the equity market the license-system has been largely abandoned, this has not been the case in currency and bond markets. For example, currency futures are still banned in India.

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Hence, according to Mrs. Thomas, India operates a Byzantine system of controls on finance, detaining innovation. Decontrol and de-licensing is needed in her view, before a sensible debate on true financial innovation and the necessary regulation can start in India.

Financial markets in Hong Kong are as well characterised by prudential innovation, seem to be very dynamic and share some similarities with other emerging markets, as exposed by **Keith Lui** from the Securities and Futures Commission in Hong Kong. Hong Kong is one of the most important global financial centres and has one of the largest stock exchanges in the world. A special feature of Hong Kong is its importance as fund-raising centre for Mainland China companies. Asia's emerging market economies have been relatively unaffected by the market turmoil given that Asia has less exposure to sub-prime credit and structured credit products. According to Mr. Lui, four reasons are responsible for this outcome: first, Asia is still very much a bank-oriented financial system with a capital market that is mainly focused on equities. Second, the mature markets are much more institutionalised compared to Asia, which creates a natural demand for more sophisticated financial instruments in the OTC market. Third, leverage is much more limited in Asian financial markets, as intermediation is mainly through the banking system and leverage is subject to prudential limits. Fourth, the Asian financial crisis of 1997 had been so painful that Asia took the necessary reforms to strengthen the regulatory framework, infrastructure and corporate governance. For affected economies, prudence and caution has very much been the watchword since.

The recent financial crisis has underscored for **Mr. Lui** the importance of ensuring compatibility in the development and growth of the financial system and the real economy. Balance is the key to maintaining macroeconomic and financial stability. He regards capacity building as the major challenge for Asia, particularly the "software" required to put the hardware to work, i.e. people skills and attitudes. It will take time to achieve fundamental progress in this area.

Finally, **Eduardo Gomes** from the Security and Exchange Commission in Brazil added some insights into the Brazilian situation. While a capital market is not new to Brazil, it has only recently started to fulfil its main role, i.e. to finance companies. The Brazilian government had at first to achieve macroeconomic stability before the capital market could take off. Moreover, significant investments in the regulatory environment and in the infrastructure of the capital market has been undertaken to provide a sound and solid framework for market participants. In his view, a fair balance between regulation and innovation needs to be struck. The main lesson for Brazil out of the past decades has been that one needs a fertile soil for innovations in the financial markets to bear fruits: macroeconomic stability and sound infrastructure at the microeconomic level.

He agrees with the other panellists that the spillovers of the global financial crisis have been indirect so far. The Brazilian market is not directly involved in the sub-prime market. For the future, he regards the recommendations of the Global Stability Forum as relevant for emerging markets, for example the warning not to rely too heavily on external ratings and to neglect due diligence by investors. Rating agencies can only be an additional tool.

In the **discussion**, several issues relating to the rising challenges of regulators were raised by participants. There were concerns that financial innovations are happening mainly on the leverage side, which is particularly hard to handle. It was mentioned that leveraged products are mostly traded on OTC markets and that it appeared to be difficult to introduce the same products on (better regulated) exchange markets. It becomes ever more important that banks introduce a good risk management system, which is very difficult since this is more a culture than a technique. Transparency was mentioned by most participants as a key requirement for financial markets.

Moreover, some participants from the research community were a bit more sceptical concerning the welfare-enhancing potential of the new financial instruments. While all agreed that financial markets play important roles in the allocation of capital and risk, it was questioned if every new instrument will really bring marginal benefits given the high risks associated with it, particularly if some market participants and regulators cannot fully assess the consequences of the new instruments.

The second part of the session started with a presentation by **Sean Craig** from the International Monetary Fund (IMF). He agreed with the speakers of the first panel that local financial markets have been quite resilient to the global credit turmoil. But he cautioned emerging markets to be overly optimistic since we are now entering a phase of a more “standard” financial crisis. This will impact emerging markets much stronger and put the financial infrastructure under pressure: the exit of some global investors from local financial markets – particularly hedge funds which had been responsible for 46% of trading – has already curtailed liquidity in these markets. Foreign funding of banks active in local markets as intermediaries come under increased stress from a global economic slowdown that increases credit losses. Markets in countries with large external deficits financed by private debt or portfolio flows, with weak financial infrastructure, or with central banks seen to be falling behind the curve in fighting inflation, are particularly vulnerable. International investors are becoming more selective concerning investments in emerging markets and will take a more critical view on macroeconomic data.

According to Mr. Craig it is improbable that emerging markets can really decouple their economies from a global financial crisis and from a possible economic slowdown in

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industrialised countries. They should therefore take necessary policy measures to cushion the impacts: containing inflation through appropriate monetary and fiscal policies; adjusting to the new tighter external financing conditions through a tightening of limits on external borrowing by banks and other financial institutions; strengthening transparency and supervision in local financial markets; and improving liquidity management by banks.

**Michael Bennett** from the World Bank Treasury presented three recent innovative financing instruments supported by the World Bank that might be useful for emerging markets: local currency bonds, the International Finance Facility for Immunisation (IFFIm) and catastrophe risk products. IBRD began to issue bonds in the markets and currencies of active borrowers in 1996. Of the emerging markets present in the conference, this applies to local bond issuances in Brazil, Mexico and South Africa. The member countries benefit from these issuances through bond market development, through higher international visibility of local markets and through standard setting for other international borrowers. On a larger scale, the World Bank introduced the Global Emerging Markets Local Currency Bond Program (GEMLOC) to support the development of local currency bond markets. Mr. Bennett regards the development of a Global Emerging Markets Local Currency Index (GEMX) as the prime benefit of GEMLOC since it provides an indispensable benchmark tool for future private investors.

The IFFIm aims at increasing and accelerating funding for health and immunisation programmes in poor countries. Sovereign sponsors provide legally binding commitments to IFFIm, which raises funding in the capital markets (managed by the World Bank Treasury) and provides grants through the GAVI Alliance. Catastrophe risk products, on the other hand, address liquidity needs of clients and help transfer catastrophe risks to the market. There are four instruments that are currently being developed: insurance-linked securities, sovereign budget insurance, weather derivatives, and deferred drawdown options.

In his keynote speech, **Eswar Prasad** from Cornell University called for a pragmatic approach to coping with financial globalisation. He started by presenting some new empirical puzzles about the effects of financial globalisation: there is no robust macroeconomic evidence that financial integration leads to growth benefits; emerging markets that import less capital grow more; there is no evidence that financial integration leads to less volatility or better risk sharing. Hence, he asked the question if one should conclude that financial integration is not a good policy prescription for emerging markets. In his view, it makes more sense to look at the collateral benefits of financial globalisation, which he regards as much more important than the neo-classical capital accumulation channels.

This implies a more accurate look at the micro-level, where the benefits of financial

globalisation are more evident in the data than at the macro-level. One can observe positive effects of financial globalisation on financial market development, on institutional quality and governance, and on trade openness. However, threshold conditions seem to exist that complicate the analysis since the same factors that can improve through financial globalisation are required to reap the benefits from financial globalisation. It is important to recognise this tension although there are no easy solutions for policy makers. This is precisely why he calls for a pragmatic approach that weighs the costs and benefits of financial globalisation and puts them into the context of a broader policy reform agenda. In his view, it is better to manage the process of capital account liberalisation than to fight the inevitable. Countries should try to use financial integration as a supporting factor for financial development. This implies making room for financial innovations. Excessive regulatory caution may have its own cost since rewards of financial globalisation cannot be reaped.

## 2.4 New developments in bonds markets

— The deepening of domestic capital markets – including development of domestic currency corporate bond markets with longer maturities – has been identified as a key challenge for many emerging markets. In the first part of this session, four representatives from Brazil, South Africa, Mexico and India, who are directly involved in shaping their respective bond markets, reported about the progressive development of domestic bond markets. Moreover, they stressed the important regulatory and macroeconomic improvements made in recent years which they regard as an important precondition for further deepening the bond markets in their countries. Subsequently, **Stephany Griffith Jones** presented her proposal of GDP-indexed bonds for emerging market economies. In the second part of the session, policy makers from the German Finance Ministry and from three multilateral organisations showed promising examples of regional and international cooperation to support bond market development in developing and emerging countries.

**Carlos Serrão** from the Brazilian Central Bank started the first part of the second session with an encompassing overview over the Brazilian bond market. Just like his colleague in the first session, he stressed the importance of the improved macroeconomic conditions in Brazil for the development of a bond market, including the reforms in the public debt management introduced by the National Treasury. This led to increasing maturities of government bonds in the local market. Moreover, the Central Bank and National Treasury have enhanced the regulatory framework and introduced important institutional innovations in the market. Of primary importance is in his view the reform of the system to choose primary dealers, undertaken between 1999 and 2002. The reform aimed at increasing both the liquidity of the government securities secondary market and the efficiency of the open

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market operations accomplished by the Central Bank of Brazil. To fulfil these objectives, two groups of dealers were created: a group of primary dealers, aimed at primary offers and money market operations, and a group of specialist dealers, aimed at outright operations in the secondary market. The specialist dealers are required to post daily prices in order to increase transparency in the market and to improve the pricing of bonds.

However, Mr. Serrão still sees challenges for the Brazilian bond market: the daily turnover in the secondary markets is very low, even compared to other emerging markets; private credit is growing at a higher pace; there is still an absence of long-term funding, particularly for corporate finance; and there is a preference for short-term operations among asset managers (“culture of overnight”), using overnight rates as benchmarks for the whole industry of local investment funds.

While focusing on South Africa as the most advanced bond market in Africa, **Garth Greubel** from the Bond Exchange of South Africa took a wider perspective and commented on prerequisites for bond market development in Africa. Most African debt capital markets are characterised by a small number of listings, a lack of longer-term maturities, low turnover volumes and a lack of investors. He mentioned seven preconditions to develop bond markets in Africa. Macroeconomic and political stability have to be achieved in advance. Government bonds play a major role in developing a benchmark yield curve that can be used for the development of a corporate bond market. Market liquidity needs to be supported by increased trading volume so that efficient prices can be built and market transparency is achieved. Institutional investors are needed to broaden demand for debt instruments. Tax incentives to develop debt capital markets can play an important role. A legal and regulatory framework that supports the development of capital markets is needed to enforce the rules of the game. It is essential to develop an appropriate capital market infrastructure, including inter alia financial intermediaries, a platform for electronic trade, an efficient settlement system and a centralised distribution of market information.

For the future, Mr. Greubel sees a certain potential in developing regional capital markets in Africa to overcome the fragmentation of African markets. However, he cautions that some of the prerequisites need to be in place at the national capital market level before entering a possibly complicated and burdensome process of regional integration.

**Roberto Marino** from the Mexican Central Bank took up most of the issues raised by his colleagues and focused on the development of the Mexican bond market. As Mexico’s inflation performance has improved, as macroeconomic imbalances have been eliminated, and as a stronger legal framework has been developed in the financial sector, local bond markets have prospered. Strict monetary and fiscal discipline has translated into an increase

in the size and average maturity of domestic debt and into a decrease in the dependence of foreign debt. With monetary stability, market participants are more willing to hold securities with longer maturities and a nominal yield. In Latin America, a key factor behind the rapid development of domestic bond markets has been the growth of assets managed by institutional investors, particularly pension funds.

The main lesson for Mr. Marino is that in order to develop local currency bond markets, countries need to improve policy performance and strengthen institutions. Mexican financial authorities have introduced processes, rules and regulations to ensure that information in relation to bonds is readily available to market participants. Deep and liquid bond markets are conducive to a reduction in currency and maturity mismatches, and therefore lessen the likelihood of future financial crisis. Moreover, competition to bank financing from bond financing should contribute to reduce financial costs for firms and render the economy more efficient.

**Bandi Ram Prasad**, formerly from the Bombay Stock Exchange in India and now a consultant on financial market development, added information about the Indian bond market. Though in percentage terms to GDP the bond market in India appears small, in absolute terms it is the third biggest in Asia after China and Korea. The government securities market made rapid progress in the last one and a half decades. Several regulatory and institutional reforms made the government bond market broad based with a fairly liquid yield curve for longer dated securities. The major shortcoming in India is its low level of development concerning corporate debt markets which make up less than 10% of the entire bond market. Shortcomings are particularly worrisome at the secondary market, where liquidity and market depth is limited. Measures to improve the scope and significance of corporate debt markets are being put in place gradually.

Finally, **Stephany Griffith Jones** from Columbia University and the Initiative for Policy Dialogue proposed the introduction of GDP-indexed bonds as an innovative financial instrument that could benefit both emerging and developed economies. In the simplest terms, the instrument implies a bond that promises to pay an interest coupon based on the issuing country's rate of growth. In her view, GDP-indexed bonds would limit cyclical vulnerabilities of developing countries and reduce the likelihood of defaults and debt crises. At the same time, investors would benefit since they could buy an equity-like exposure to a country and hence could save unnecessary litigation and renegotiation costs. On a broader level, GDP-indexed bonds can be viewed as desirable vehicles for international risk-sharing and as a way of avoiding the disruptions arising from formal default. They can be said to have the characteristics of a public good in that they generate systemic benefits over and above those accruing to individual investors and countries.

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This is an argument for collective action by the main stakeholders, namely interested governments, multilateral development banks and the private sector. Mrs. Griffith Jones proposed some steps that should be undertaken: undertake further research; explore the possibilities for coordinating issuance to jump-start the market; explore how international financial institutions could use this instrument; undertake initiatives to improve the reliability, accuracy and timeliness of GDP data; and prepare a draft GDP-linked bond contract as a template. Although most participants sympathised with the idea of GDP-indexed bonds and called it analytically brilliant, there were serious doubts about the question if markets would really accept GDP-bonds and if demand is really big enough for this type of instrument.

The second part of the second session was opened by **Dietrich Lingenthal** from the German Federal Ministry of Finance (BMF). He agreed with the speakers from emerging markets upon the preconditions for a successful development of local bond markets. Regional and international organisations can provide support to emerging markets in terms of know-how, analysis and experience. Moreover, he stressed the importance of exchange platforms between emerging and developing countries to foster regional ownership. Germany is supporting the G8-action plan for the development of local bond markets through diverse activities, e.g. by the KfW and the Bundesbank. As examples he mentioned a KfW project in Ukraine aiming at the establishment of a primary dealer system and a project in Serbia with the objective to elaborate a strategic sequencing plan for debt capital markets development. At the international level, continuous support is provided by the IMF, the World Bank and the OECD. Among the workshops organised by these organisations, the Debt Manager's Forum and the Sovereign Debt Conference played an important role. G8 Finance Ministers committed themselves in their Osaka-meeting in June to help enhance local bond market development in Africa. Hence, he concluded, there is good progress under way accompanied by continued political support.

**Srichander Ramaswamy** from the Bank for International Settlements (BIS) took as a starting point the observation that bond markets are still in their infancy in the emerging market economies in Asia. Several structural impediments have hindered the development of Asian bond markets: limited interest in corporate bonds, narrow investor base, and lack of hedging opportunities. He introduced the Asian Bond Fund (ABF) as a positive example of initiatives undertaken by East Asian authorities to foster bond market development. The Asian Bond Fund initiative aims at facilitating greater financial integration across the Asian region with the objective of promoting the diversity and efficiency of financial intermediation across jurisdictions. The BIS played an active role in facilitating the management of ABF1 in 2003. In June 2005, ABF 2 was set up with seed money of USD2 billion, doubling the amount of ABF1. The ABF initiative has promoted infrastructure development in Asia in a number of ways: first, it has facilitated the creation of the first exchange traded bond fund in

Asia; second, it has helped to improve market infrastructure by creating a regional custodian network, by harmonising legal documentation and by creating transparent indices; third, ABF2 has accelerated regulatory and tax reforms in several participating countries.

**Lotte Schou-Zibell** from the Asian Development Bank added information about another regional initiative – the Asian Bond Market Initiative (ABMI) – and about the support offered by the Asian Development Bank. ABMI aims at fostering the development of regional bond markets, effectively channelling regional savings for regional investment, and preventing maturity and currency mismatches that contributed to the Asian financial crisis. It was endorsed by the ASEAN+3 finance ministers in 2003. ABMI contributions to the dynamic development of Asian bond markets include significant issuances of local currency denominated bonds by various parties including international financial institutions, multinational corporations and bilateral institutions. Research activities and dialogues stimulated discussions and reform processes in participating countries. In 2008, a new ABMI roadmap was endorsed recognising some shortcomings of current activities. The new roadmap will focus on promoting issuance of local currency-denominated bonds; facilitating the demand of local currency-denominated bonds; improving the regulatory framework; and improving related infrastructure for bond markets.

The Asian Development Bank has actively supported the development of local bond markets in Asia. Examples include: technical and research assistance to the ABMI; issuance of local currency-denominated bonds; issuance of Asian Currency Note Program of USD10 billion; information dissemination by AsianBondsOnline and the Asia Bond Monitor.

Last but not least, **Thierry de Longuemar** from the African Development Bank (AfDB) offered his view on bond market development in Africa and on the role of his organisation. The specific challenges of African bond markets can only be overcome through cooperation of the relevant actors: governments, multilaterals, regional communities as well as public and private development partners. The AfDB contributes in two ways to the development of local bond markets: first, by issuing (off shore and on shore) bonds in African currencies. Second, by supporting the development and deepening of financial markets in Africa in an encompassing sense through initiatives like Making Finance Work for Africa and the African Financial Markets Initiative. The latter aims at introducing the African Financial Markets Database (AFMD) and the African Domestic Bond Fund (ADBF), which both take up ideas already in practice at the Asian Development Bank.

In the discussion it was asked if bond markets require a certain minimum size of the country's economy. Speakers on the panel concurred that in the long run there is no alternative to a bond market as a source of government finance. It is therefore important that small

countries show the political will to support regional initiatives in order to overcome problems of size. If the reforms aim at attracting international investors, exchange rate controls have to be liberalised. In Africa, political will seems to be growing in the East African Community and in some neighbouring states. Moreover, the South African Rand plays the role of a de facto lead currency in Southern Africa, leading to some form of financial integration there. All speakers agreed that there is an important sequencing issue in the development of bond markets: one starts with government bonds and then fosters corporate bonds. Moreover, local currency bonds for sub-sovereigns will gain in importance in the medium-term future.

## 2.5 Challenges for regulatory authorities, policy reform priorities and future cooperation

— Ever-closer linkages in international financial markets and the development of increasingly complex products make it progressively difficult for national regulatory authorities to keep track with the pace of financial markets. Closely integrated financial markets and new actors like hedge funds pose challenges to regulators, increasingly also in emerging markets. In the first part of this session, appropriate regulatory instruments and institutions were discussed, taking presentations by representatives from South Africa and Brazil as starting point. In the second part of the session, which proceeded as a final and somewhat summarising discussion, views on possible future forms of cooperation between industrialised economies and the main emerging market economies were exchanged.

The third session was opened by **Phakamani Hadebe** from the National Treasury of South Africa. He dealt more explicitly than the other speakers with the challenges to regulate hedge funds in South Africa. One problem is that there is no legal definition of a hedge fund. While he sees clear benefits of hedge funds, there are three areas of concern: transparency, leverage and herd behaviour. He explained that there are two regulatory approaches towards hedge funds: the regulated product approach which involves a lot of registration requirements; and the regulated marketing approach which aims to limit marketing to specific investors. He favours a balanced approach: this approach calls for middle ground between disclosure that allows authorities to assess risk positions and at the same time allow the innovative nature of hedge funds to continue. Today, the National Treasury of South Africa is still in the process of defining its position towards hedge funds.

**Ronaldo Malagoni Cavalcante** from the Central Bank of Brazil presented an overview of international lessons from the recent financial crisis for Brazil. In his view, a more effective financial supervision and increased transparency is required in the future. Regulation should therefore concentrate on guaranteeing more information to market participants.

At the same time, prudential liquidity risk management has to be ensured. International cooperation is needed given the globalised nature of capital markets today. The IMF and particularly the G 20 play important roles in fostering cooperation and coordination. Mr. Cavalcante favours – just like Mr. Hadebe – a market-based approach to regulation: in his view, it is not sensible to prevent hedge funds from entering the markets but to improve surveillance and liquidity management.

## 2.6 Perspectives of future international cooperation

— In the final round, a discussion among participants about possible forms of future international cooperation was opened with some short inputs from stakeholders of diverse backgrounds. **Jianzhuo Kang** from The People's Bank of China stressed that information disclosure is a key ingredient for cooperation. In her view, it is important to exchange the lessons of past crises because recommendations are always made on the base of past experience. **Gerhard Ressel** from the German Federal Ministry of Economic Cooperation and Development (BMZ) outlined the cooperation strategy of the BMZ with emerging market economies, called “anchor countries”. The idea is to translate existing relations from cooperation to strategic partnerships. He stressed that for strategic discussions about financial stability other players in the German context are in the lead, but that the BMZ can offer spaces for dialogues and capacity building to emerging markets if this is demanded. **Mr. Cavalcante** and **Mr. Hadebe** agreed that it would be useful to have more dialogues since more international coordination is needed in the future.

**Christian Thimann** from the European Central Bank asked if emerging markets are already grasping all opportunities to play a more active role in international financial institutions and fora. Concerning regulation in international financial markets, he proposed to take a closer look at soft forms of regulation, for example the public-private partnership “Principles for Stable Capital Flows and Fair Debt Restructuring in Emerging Markets”, which has been developed on a voluntary basis as an alternative to a more formal sovereign debt resolution mechanism. Although all participants recognised the value of soft forms of regulation, some of them had serious doubts if this has enough teeth to deal with a severe financial crisis (and to prevent that taxpayers would have to pay the price of the crisis (just like it is happening currently in the United States). **Rajiv Kumar** from the Indian Council for Research on International Economic Relations questioned the role of the anchor countries in the G 20. For him, anchor countries should aspire to strengthen their role in their respective regions in order to have the legitimacy to talk for the whole region in global discussions. If this is not achieved, he doubted that all important players would be already present in the existing fora like the G 20. **Hans Blommestein** from the OECD added that there are different

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global fora working under the umbrella of the OECD dealing with issues of financial stability, among them the Global Forum on Public Debt Management. These peer-to-peer dialogues have proved to be useful as platforms for mutual learning. Additionally, the dialogues are helpful as a first step before regulation steps in. The dialogues are complemented with technical assistance work carried out by the World Bank and others.

The best approach towards financial regulation was one of the contested issues of the conference. In the final discussion, opposing viewpoints were voiced. Some favoured a principle-based approach, focused on functions and not on specific institutions (like hedge funds). In general, these participants were willing to take more risks in the sense that regulation should not inhibit innovation. On the other hand, some researchers claimed that there are important regulatory gaps that should be closed, for example concerning the regulation of incentive structures inside financial institutions (e.g. bonuses in banks or hedge funds). These participants felt that one should rather talk of regulatory catch-up than about over-regulation.

Finally, participants agreed that it would be useful to have more dialogues of this type in order to foster mutual learning and to disseminate information. On behalf of the organisers, **Günther Taube** from InWEnt and **Peter Wolff** from DIE informed the participants that they plan to organise similar dialogues in the respective anchor countries in the coming months.



## Part I

### Current Trends in Emerging Financial Markets

## 3 Benefits and Risks of New Instruments: Derivatives and Securitisation – The Case of South Africa

Daniel Mminele

### 3.1 Introduction

— Financial innovation, in the positive sense of the word, can be regarded as any new development in the financial system that either enhances its capital-allocation or operational efficiency. However, financial innovation is often driven by risk/return incentives at the level of the individual trader, structured financier or institution. Can it then be assumed that what is beneficial at the individual level will automatically enhance efficiency at an aggregate or systemic level? Certainly not without some reservations.

In this short contribution, I will highlight some of the potential benefits and risks of financial innovation, illustrating specific trends and issues pertinent to South Africa. I will also touch on recent developments in the South African markets and their exposure to the current turmoil in international financial markets, followed by some comments on the role of international financial institutions.

### 3.2 Salient features of South Africa's capital and derivatives markets

— Compared to most other emerging markets, the South African capital and derivatives markets are fairly advanced. As at the end of March 2008, the Bond Exchange of South Africa (BESA) had 976 listed bonds, with a total nominal value of R762,6 billion (USD96,5 billion).<sup>1</sup> As such, the bond market in South Africa plays a key role in the mobilisation of capital.

In terms of the structure of the bond market, government bonds still dominate the local bourse in terms of the nominal value of listed bonds. However, if one looks at the composition of the number of listings, a different trend is discernible. About 34 % of all listings represent

<sup>1</sup> All amounts in ZAR have been converted to USD at an exchange rate of ZAR7,90/USD1.



securitisation transactions, 18% represent commercial paper and 15% represents credit-linked notes. BESA is also a source of funding for parastatals (33 listings with a total nominal value of R80,6 billion (USD10,2 billion) as at the end of March 2008), while municipalities have recently also started to issue bonds, namely R3,9 billion from the City of Johannesburg and R1,0 billion from the City of Cape Town.

Growth in South Africa's securitisation market has remained relatively healthy, even in the wake of challenges faced by other securitisation markets internationally. This is largely due to the heavy concentration of industry activity around the five major banking groups: Standard Bank, Absa, FirstRand, Investec and Nedbank. It is estimated that these banks account for some 90% of securitised debt. Since the emergence of securitisation in 2000, local institutions have issued almost R125 billion (USD15,8 billion) worth of packaged debt. According to Moody's, the securitisation industry grew by 31% in 2007, with R41,5 billion (USD5,3 billion) issued. However, it should also be noted that this amount still represents only about 6% of South African banks' total on-balance-sheet loans and advances.

In recent years, the growth in corporate listings has surpassed that of government bonds. In 2007, BESA reported an annual increase in corporate listings from 29% of the total nominal value in issue, to 34%. The nominal value of corporate listings increased from R208 billion (USD26,3 billion) in 2007 to R267 billion (USD33,8 billion) by March 2008. Secondary market turnover in listed instruments is healthy: in the first quarter of 2008, the ratio of turnover to total nominal value of listed bonds was 5,4 times.

In 2007, exchange control regulations were relaxed further by allowing foreign issuers to list ZAR-denominated bonds on BESA and allowing investment managers an increased foreign investment allowance, should these funds be deployed for development into Africa. As at the end of March 2008, BESA had five such cross-border or dual listings, the first of which was issued by Mauritius Commercial Bank in 2006. Other such cross-border listings include African Development Bank, Namibia Power Corporation and Swaziland Post and Telecommunications.

Turning to the equity market, the JSE Limited (JSE) is in the top 20 exchanges in the world in terms of market capitalisation of some R6 trillion (USD760 billion) as at the end of April 2008. There are approximately 425 listed companies and a market liquidity ratio of 40%. The JSE offers investors the choice of four markets, namely an equity market, including stocks from the Main Board and the small to mid-cap Alternative Exchange, an interest rate market, an active financial derivatives market and an agricultural products market.

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South Africa has followed the global trend and witnessed an unprecedented growth in its derivatives market. Derivatives are traded in a lively market on the South African Futures Exchange (Safex) – a division of the JSE. Turnover in exchange-traded derivatives amounted to R1,2 trillion (USD152 billion) in 2007. Most recently, as part of the further liberalisation of exchange controls, the JSE was allowed to also list currency futures. As at the end of May 2008, there were close to 370,000 contracts outstanding against USD, EUR and GBP, with a combined absolute value of R3,1 billion (USD387 million).

In addition to exchange-traded derivatives, South Africa has a well-developed over-the-counter (OTC) market in derivatives, with turnover of just over R30 trillion recorded in 2007, by comparison dwarfing the exchange-traded market. Foreign exchange derivatives dominate the OTC market, accounting for approximately 55% of the derivatives market, followed by interest rate derivatives (approximately 40%). Short-term interest rate derivatives, in particular forwards, are the most popular. At the end of 2007, notional amounts outstanding in the money market forward transactions increased from R4 trillion (USD506,3 billion) in 2006 to R7,9 trillion (USD1 trillion).

The foreign exchange market is similarly very liquid, with average daily turnover of USD13,1 billion as at April 2008, with non-residents being party to 71% of total transactions. Foreign exchange swap transactions accounted for 73% of total turnover.

One area in which South Africa lags behind the industrialised countries is the extent to which Credit Risk Transfer (CRT) products are available. While securitisation has grown at high rates, the transfer of credit risk separately from the underlying asset is not yet readily available. For example, the global credit derivatives market has grown from notional amounts of approximately USD4 billion in 2004 to over USD52 trillion in 2007, according to the latest BIS Triennial Survey. This growth was mainly concentrated in credit default swaps (CDS), comprising almost 90% of total credit derivatives globally. However, in South Africa the outstanding balance of credit derivatives as at the end of December 2007 was only about USD6,5 billion – less than 0,01% of the domestic derivatives market.

Another aspect of capital market development that is receiving attention is the improvement of access to finance for smaller borrowers, in particular for small and medium-sized enterprises. In this regard, government-supported initiatives will have to play a role, although the private sector is also making contributions.

### 3.3 Financial innovation in emerging markets: possible risks and benefits

— Financial innovation is truly welfare enhancing if it brings about a reduction in the cost of capital without a commensurate increase in systemic risk. The benefits of relatively broad and deep capital markets, complemented by an active derivatives market, can be measured in terms of factors such as lower pricing, reduced cost of capital, mitigated risk exposures, broader access to capital and increased liquidity, among others. Innovation ought to make the movement of capital more efficient, risk management more targeted, hedging better matched and trading less costly. Financial innovation also ought to contribute to better management and transfer of credit risk, the unbundling and tranching of risk, improved liquidity, more optimal portfolio diversification, and broadened credit risk dispersion. In general, the development of capital markets in emerging markets is often characterised by disintermediation from the traditional financial intermediaries (mostly commercial banks), as well as by extended maturities of funding that can better match the expected lifespan of large projects and investments.

However, financial innovation is not without risk and, as has recently been illustrated by the US sub-prime fallout, can even create or exacerbate risk. Financial incentives at the individual level, coupled with advancements in technology and financial engineering skills, can result in situations where new instruments, vehicles and strategies outpace the existing market and regulatory infrastructures. Such developments have the potential to present challenges for both market participants and supervisors. The transfer of risk to unknown counterparties could create concentration of risk exposures, within or outside the regulated financial sector, especially in a relatively small emerging-market economy. There is also more uncertainty about where exactly risk lies, and some uncertainty about whether risk has been fully transferred. The ability of transferring risk relatively easily may make debt originators less diligent, while investors may not fully understand the products in which they invest and the risks that they are taking on.

An advantage for emerging-market countries in pursuing financial innovation and adopting synthetic or structured financial products is that they can learn from the mistakes of others and in that way shorten the learning curve. They can also benefit from the transfer of technology and skills with regard to risk management processes. However, there remains a threat that the pace at which new financial products are 'imported' may outpace the ability of domestic market participants, investors and supervisors to properly understand new products.

### Benefits and Risks of New Instruments

#### 3.4 Recent financial market developments in South Africa: exposure to turmoil and risk contagion

— In assessing a country's exposure to global financial market developments and its risk for contagion, it is useful to distinguish between the direct and indirect exposure of an emerging market to turmoil in international financial markets. In the case of South Africa, the effects so far have been mainly indirect, felt in the form of volatility in our own financial markets and an increase in the cost of offshore funding as a result of a general repricing of risk.

To illustrate this volatility, the one-month historical volatility of the ZAR exchange rate spiked to 28% in March 2008, compared to a more normal level of around 15%. Since the beginning of the year until mid-June, the exchange rate of the ZAR lost almost 18% of its value on a nominal trade-weighted basis, reflecting reduced appetite for emerging-market-currency assets by international investors combined with a number of domestic issues. On the JSE, the All-share index declined sharply in January 2008, dipping to just above 25,000 on 23 January from a high of 31,531 in October 2007. It subsequently gained 32% to a record high level in mid-May, before moderating again somewhat in June 2008. However, it should be noted that these trends were largely driven by high commodity prices, as South Africa's stock exchange is dominated by heavyweight resources companies. Domestic government bond yields have increased by around 230 basis points since the beginning of the year in the wake of further monetary policy tightening. However, longer-term yields have not increased to the same extent, benefiting from limited supply and expectations of slower economic growth.

Despite the volatility in financial markets, South Africa, like most emerging-markets, has up to now been spared a full-blown direct contagion effect of the credit crunch as witnessed in the US and Europe. However, it would be naive to imagine that we don't run any risks emanating from the fallout of the credit crunch. Just as one is most likely to catch flu when your resistance is low, an emerging market's risk for contagion to global market turmoil is most likely to enter the system through its weakest links with the rest of the world.

One of South Africa's weak links is its relatively high current account deficit, currently standing at around 9% of GDP (Q1/2008). There are some mitigating factors attached to this deficit: Firstly, the trade deficit is mostly attributable to intermediate and capital goods imports related to infrastructure development, in turn driven by high economic growth over recent years. It cannot, therefore, be ascribed to mere over-expenditure by South African consumers. Secondly, it should be recognised that roughly half of the current account deficit

stems from the increased globalisation of South African companies in recent years, reflected in the form of an outflow of interest and dividend payments.

However, although these factors are useful in painting a more balanced picture of South Africa's overall external vulnerability, the current account deficit poses an undeniable risk in the sense that it has to be financed by financial inflows, including foreign portfolio and direct investment. The latest balance of payments data (Q1/2008) showed that this was comfortably achieved, despite a less benign global environment. However, foreign investment can be fickle, greatly influenced by sentiment in international financial markets. Should the global environment turn increasingly hostile, for whatever reasons, South Africa could find itself in a position where it would be difficult to finance the current account without a weakening in the exchange rate of the ZAR. This could, in turn, have implications for other asset prices and inflation.

Another channel, through which direct contagion to liquidity and credit problems in developed markets could occur, is through the international exposures of our banking and broader financial system. South Africa has 20 registered banks, 14 local branches of foreign banks and 46 representative offices of foreign banks. In turn, the larger South African-registered banks have branches in all the major centres of the world, with its own set of exposures. However, bank supervision in South Africa is fairly robust, and the Basel II regulatory framework has been fully implemented from January 2008. The banking sector has capital in excess of the regulatory requirement, with very little direct exposure to the US sub-prime market. Nevertheless, depending on how wide the turmoil and contagion could spread, banks will remain vulnerable in a globalised world.

### 3.5 The role of international financial institutions (IFIs)

— Questions were raised about the role of IFIs to assist national authorities and financial institutions to deal with the risks associated with financial innovation, whether their recommendations would be appropriate for emerging markets, and whether issues of financial innovation has so far been sufficiently considered in the IMF/World Bank Financial Stability Assessment Programmes. In brief, the best answer to these questions would probably be “Yes and No”. IFIs have made invaluable contributions to the ability of national regulators to better understand and supervise new financial products. The work of the Financial Stability Forum under the auspices of the BIS is but one such example. For anyone interested in the topic, the amount of information available is overwhelming.

While much of it should be applicable and relevant to emerging-market countries, it is

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also true that each country has its own set of challenges to deal with, and should be able to tailor conventional wisdom and advice to best effect. IFIs play a key role in establishing international best practice, but national authorities have to be mindful to seek to implement any suggestions against the background of a careful assessment of their unique circumstances.

## 4 Current Trends in Hong Kong and Asia's Capital Markets

Keith Lui

### 4.1 Overview of Hong Kong's capital market

— Hong Kong is one of the leading international financial centres in the world. According to City of London Corporation's Global Financial Centres Index published in March 2008, Hong Kong was ranked third worldwide, just behind London and New York, in terms of financial centre competitiveness. In particular, Hong Kong has been recognised as retaining advantage in the five key competitiveness areas including people, business environment, market access, infrastructure and general competitiveness.

### Securities market in Hong Kong

At present, Hong Kong's stock market is the 7<sup>th</sup> largest in the world and the 3<sup>rd</sup> largest in Asia, with market capitalisation of USD2.4 trillion. During 2007, the total capital raised by the stock market was USD74 billion, making Hong Kong the 5<sup>th</sup> largest fund raising centre in the world.

For the stock market, institutional investors accounted for 60% of total trading, and overseas investors accounted for 40% of the total trading. The large and well-diversified investor base attracts international firms to introduce various new financial products in Hong Kong and these new products in turn attract new sophisticated players such as hedge funds and alternative asset managers to Hong Kong, thus adding depth and breath to the market.

In addition to stocks, our market also provides a wide variety of other financial products such as stock futures and options, index futures and options, derivatives warrants, callable bull/bear contracts, exchange traded funds, retail structured notes, equity linked instruments and real estate investment trusts.

The daily average turnover of our stock market was USD11 billion in 2007. The total volume of futures and options traded reached 88 million contracts in 2007. Furthermore,

our derivative warrants market was one of the most active in the world and the turnover in last year was over USD600 billion. Meanwhile, the aggregate size of retail structured notes and equity linked instruments issued during 2007 was about USD31 billion.

### Debt market in Hong Kong

Turning to the debt market, despite the global credit market turmoil, the Hong Kong-dollar debt market has continued to expand. As of the end of 2007, the total outstanding Hong Kong-dollar debt was USD98 billion. This was about 47% of the GDP, rising from 36% in 2000. Overseas borrowers remained as the major issuer of debt instruments and accounted for about half of the total debt outstanding, whilst banks and the Hong Kong Monetary Authority roughly shared the other half. The total amount of debt instruments issued in 2007 was over USD55 billion with the Exchange Fund Notes accounting for half of this. In order to further develop the debt market, the Hong Kong Monetary Authority has implemented a series of measures including extending the yield curve, refining the market-making system and launching an electronic trading platform in recent years.

Furthermore, the Mainland government made a breakthrough in 2007 and approved Mainland financial institutions to issue RMB (renminbi) bonds in Hong Kong. During 2007, RMB bonds with a total amount of RMB 10 billion were issued in Hong Kong. All the issued bonds were over-subscribed within a short period. With the continuous appreciation of RMB, we expect the RMB bond market in Hong Kong has great potential to grow because of the strong demand from investors.

As to other new developments, the Hong Kong Government has announced the desire to develop Islamic finance in Hong Kong. Our futures exchange will introduce a gold futures contract to the market in the coming months. Just last week, there was an announcement to establish a new commodity exchange which plans to introduce a fuel oil contract in the first quarter of 2009. These new initiatives will help Hong Kong further strengthen its position as a leading financial centre.

### Hong Kong as the gateway to Mainland China

Hong Kong has been fortunate as it played a supporting and facilitating role as China experimented with capital market reform. Hong Kong provided the platform that integrates the Mainland capital market with global capital markets, and has benefited from the growth story of China.

### Current Trends in Hong Kong and Asia's Capital Markets

When Mainland China first embarked on its economic transformation, Hong Kong was the window to China for the rest of the world, and played the role of a fund-raising centre for Mainland companies, providing the platform for state-owned enterprises (SOEs) that sought to raise capital to finance expansion.

Hong Kong's role started in the 1980s with the listing of "red chips". This was followed by the listing of "H-shares" in 1993. The first H-share company listed on the Stock Exchange of Hong Kong was Tsingtao Brewery Company Limited – maker of the famous Tsing Tao beer. For those who may not be familiar with Mainland stocks: "H-shares" are foreign shares issued by enterprises incorporated in China that are primarily listed in Hong Kong and traded in Hong Kong dollars. PetroChina is an "H" share. "Red-chips" are shares issued by companies with business, assets, markets and ownership that have a strong Mainland orientation, but the companies are incorporated outside China. China Mobile, the largest market cap mobile phone company in the world, is an example of a red chip.

When IPO activity on the Mainland was suspended in the period 2005–2006, in support of a plan to convert the state-owned shares into tradable shares in phases, Mainland enterprises seeking capital came to Hong Kong. The listing of H-shares companies on Hong Kong's stock market accelerated.

Hong Kong has been uniquely placed to facilitate and support the Mainland enterprises in raising capital: First, one country two systems. The Mainland market is at a development stage with institutional constraints (such as capital controls), and Hong Kong is an established international financial centre ready to provide an invaluable service to Mainland companies seeking global capital. Second, we have the advantage of close relations and proximity to the Mainland, and are also familiar with the language, culture, practices and systems on the Mainland.

Apart from a need to raise capital in the early days of China's emergence, the reason for listing Mainland companies in Hong Kong was motivated by a conscious and deliberate policy to expose and subject Mainland enterprises to Hong Kong standards and fast track their transformation to world class companies that meet international norms on governance and performance.

Hong Kong's regulatory and corporate governance standards and our Listing Rules are on a par with international standards. International investors looking to tap into the fast growing China market can invest in H-shares and red chips in Hong Kong. They can take comfort in knowing that Mainland companies listed here meet international standards and practices, and be assured of the institutional and legal infrastructure of a thriving international capital market.

In 2007, the world's largest IPO by the Industrial and Commercial Bank of China raised about USD16 billion in Hong Kong. We also saw the listing of another state-owned bank, the Bank of China which raised about USD11 billion in the same year.

Of the 150 Mainland-incorporated companies listed on overseas markets, 148 are listed in Hong Kong as H-shares. During 2007, the total amount of funds raised by Mainland companies directly and indirectly through Hong Kong amounted to USD25 billion. As of 30 April 2008, there are over 240 Mainland companies listed on Hong Kong and these Mainland companies accounted for 48% and 53% of the market turnover and the market capitalisation of the Hong Kong stock market respectively.

The rapid economic growth of the Mainland has resulted in a surge in foreign reserves. This has created a demand to seek investment opportunities outside the Mainland. This presented Hong Kong with another unique opportunity to play a role in bridging the capital from the Mainland with investment opportunities outside the Mainland.

Many would have heard of the Qualified Domestic Investor Scheme, or the QDII scheme, which started in 2006 with the following objectives: (i) widen investment opportunities for the enormous amount of savings and minimise risks through portfolio diversification; (ii) create a more balanced two-way flow of capital; (iii) provide a training ground for Mainland investors; and (iv) converge with international practices and raise the regulatory framework in the Mainland.

At present, the QDII scheme has granted a total investment quota of about USD55 billion to banks, fund management companies and securities firms to invest in overseas markets. Another channel to invest China's huge savings is the China Investment Corporation (CIC), which was established in 2007 as a sovereign wealth fund (SWF) to begin managing part of China's official foreign exchange reserves. Starting with an asset size of USD200 billion, this initiative presents new opportunities for international financial markets and their participants.

## 4.2 Impact of the recent market turmoil on Hong Kong

### Impact minimal given Asia's less capital market-oriented financial system

— Emerging market economies in Asia have been relatively unaffected by the market turmoil given that Asia has less exposure to sub-prime credit and structured credit products. This can be attributed to the very different financial landscape in Asia compared to the US and other developed markets.

First, Asia is still very much a bank-oriented financial system with a capital market that is mainly focused on equities. In contrast, the US and other mature financial markets are highly capital market-oriented and have huge markets in bonds and credit derivatives.

Second, the mature markets are much more institutionalised compared to Asia. The presence of a wide range of institutional investors like insurance companies, mutual funds, endowment funds, pension funds, municipals, hedge funds, and private equity funds in these markets creates a natural demand for more sophisticated financial instruments in the OTC market. In Asia, the derivatives market is not as well developed. As mentioned earlier, Hong Kong has a very active derivative warrants market. In Hong Kong, the warrants are listed and traded on the stock exchange and have attracted significant retail interest. Products offered to the general public or retail investors require the prior authorisation of the Securities and Futures Commission (SFC). There are also more sophisticated financial instruments in Hong Kong, but these are available only to professional investors and high net worth private banking clients. In addition, most of them are equity-linked instruments.

Third, the extent of leverage. In Asia, intermediation is mainly through the banking system and leverage is subject to prudential limits. Housing mortgages in Hong Kong, for example, require the borrower to come up with a down-payment of 30% for the purchase of the house. Stock brokers are subject to limits on margin financing rules and haircuts on the collateral. Asian households are typically not highly geared and the savings habit is strong, driven by a need to be self-reliant given the absence or minimal provision of an official social safety net.

The flipside is that Asia's savings and trade surpluses, which are largely invested in US Treasuries, have helped to keep yields low. Benign conditions of ample liquidity, subdued inflation, stable economic growth globally have worked to increase investors appetite for risk in their search for yield, at a time when easy credit helped to push up asset prices, kept risk premia at unprecedented low levels, and caused leverage to increase in a reinforcing cycle. Asia also does not have the kind of shadow banking system as in the US that has

been an important player in supporting the rapid growth of the credit risk transfer market. The conduits and structured investment vehicles (SIVs) had been able to grow without similar constraints on capital as those imposed on the regulated banking sector.

Fourth, the Asian Financial Crisis was painful as the real economy was severely affected and Asia took the necessary reforms to strengthen the regulatory framework, infrastructure and corporate governance. For affected economies, prudence and caution has very much been the watchword since. In Hong Kong, for example, the failure of a major local securities firm at that time led to the tightening of the regulation of margin financing for stock trading. These measures and the economic recovery, which picked up in recent years, placed Asia in a much stronger position when the current turmoil unfolded.

### Asia's exposure

According to the IMF, the limited exposure reflects a combination of factors. One factor is that Asian financial institutions are relatively less familiar with products related to the US subprime mortgages compared with their counterparts in the developed countries and therefore less likely to purchase these products. Another factor is that the relatively high domestic yields in some countries in the region have lessened the need to search for high yield investments overseas.

In Asia, mortgage-related exposure is concentrated in financial institutions in Japan, China, Hong Kong and Singapore. The overall exposure in other Asian countries seems to be smaller and more manageable.

According to the Asian Development Bank (ADB) in its report issued in December 2007, banks in Indonesia and Malaysia had virtually no direct exposure to the US subprime market. While banks in the Philippines and Thailand dealt with structured credit products, they are largely dispersed rather than systemic, and small in size, according to ADB.

According to data compiled by Bloomberg as of 26 June 2008, globally, financial institutions suffered a total of some USD400 billion from the sub-prime mortgage crisis. Of this, Asian financial institutions accounted for about 5% or USD21 billion. In Asia, major Japanese financial institutions reported a total loss of some USD12 billion. The other major groups were some Mainland banks and Singaporean banks.

There are seven active retail structured credit products issuers in Hong Kong. Our findings showed that the collateral of their structured credit products had no linkage to

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mortgage-backed securities or sub-prime credit, and the sub-prime crisis had no direct impact on such collateral or their retail structured credit products.

### 4.3 Major challenges and risks facing Asia

#### The challenges

— The Asian Financial Crisis had roots in structural weaknesses in the financial system, inappropriate exchange rate regime, and selective and uncoordinated liberalisation of capital controls. The Sub-prime crisis is a crisis of the structured credit markets. A benign economic environment with ample liquidity supported the rapid growth of the credit risk transfer market. Both crises were preceded by excesses in liquidity, leverage, large capital flows and rising asset prices.

Time and again, crises have underlined the importance of ensuring compatibility in the development and growth of the financial system and the real economy. If development is not in tandem, economic development could be retarded by a backward financial system. Similarly, if financial sector activity runs way ahead of real economic activities, the euphoria of rising asset prices would lead to a boom and bust scenario. The financial system is the lifeblood of an economy, and the robustness of an economy is dependent on the robustness of the financial system, and vice versa.

Balance is the key to maintaining macroeconomic stability and financial stability. This calls for having in place sound macroeconomic policies, an appropriate institutional and financial infrastructure, a robust regulatory and supervisory framework, appropriate incentive structures that promote self-discipline and market discipline, and maintaining an appropriate regulatory balance between market efficiency or development and market stability.

Liberalisation has unleashed global competitive forces and integrated economies and financial markets. The result is that businesses and authorities find that, increasingly, it is no longer an option whether there is a need to benchmark to international best practices and standards.

Capacity building is a major challenge in Asia as their economies and financial systems evolve and mature. One aspect relates to institutional and infrastructure building. A simple analogy is to think of this as the "hardware". This would include the legislative and regulatory framework, the institutions necessary to the functioning of a market economy, and the

market microstructure. In the capital market, the microstructure refers to the trading, clearing and settlement systems, the price formation and discovery process, the trading rules, and information dissemination and disclosure. This is where international best practices and standards offer a ready guide for adoption and adaptation.

The more difficult aspect of capacity building is what I call the “software” that is required to put the hardware to work, and work properly. This relates to the people skills and attitudes and involves extensive investment in acquiring the necessary knowledge, skills, expertise, and experience. It will usually take much longer time to achieve any fundamental progress in this area. In sum, underpinning the success of capacity building efforts is having the sustained commitment in implementation.

Asia has come a long way, and it has learnt from the lessons of the Asian Financial Crisis. Managing reforms is not easy and requires a change of mindsets. This is the greatest challenge facing Asia going forward if it is to continue to build on its successes.

### The risks

A major issue for Asia and the rest of the world is how the effects of the turmoil play out in the US economy. Much has been done to restore calm to financial markets, but uncertainty remains whether there are problems in other segments of the financial markets that have yet to surface and whether more losses would materialise. Until confidence fully returns, financial markets are cautious and reluctant to lend. Affected financial institutions have been consolidating their balance sheets and strengthening their capital base.

There are concerns that the worst has yet to come in the US housing market, and as delinquencies increase among borrowers the banking system would be directly affected. Property markets in other major economies have started their downward adjustment, and stock markets have also retreated from the highs of last year and reached new lows recently.

Initially, concerns were very much focused on the impact of an economic slowdown in the US, the severity of which would depend on the depth and duration of the downturn. Since then, in addition to the urgency of normalising the financial markets in the US and other major markets, oil prices spiked and a food crisis emerged. While the sub-prime crisis did not affect Asia directly, the food and fuel crises have affected all economies, the poor being the worst hit.

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In Asia, the focus of policy makers has now shifted to fighting inflation and to slowing down the over-heating economies. At the same time, however, there are some concerns that these tightening measures could cause Asia to experience stagflation depending on the interactions between the various domestic forces and the external environment driven by the economic situation in the US and other developed economies. There is also concern that the tightening of monetary policy would affect the ability of bank borrowers to service their debt at a time when they are squeezed by rising food and fuel prices. Finally, if the asset markets adjust significantly, banks would be faced with non-performing loans, followed by a contraction in economic growth as deleveraging increases.

### 4.4 Lessons for Asia

— While Asia has been relatively unaffected by the current financial turmoil, it cannot decouple itself from the effects of the US economy, the world's largest economy and Asia's largest trading partner.

Asia's less well-developed capital markets has been a blessing in this instance. However, this does not mean that Asia should not proceed to develop its capital markets. A lesson of the Asian Financial Crisis is that Asia is too bank-dominated, and the lack of well-developed capital markets has hindered risk management and resulted in a concentration of risks in the banking system.

Capital markets play an essential role in the efficient allocation of capital, risk transfer and diversification, price discovery and corporate governance. Asia should continue with its plans to develop its capital markets, including the bond market.

Asia can learn from the experience of the sub-prime crisis and understand the functions and risks of new financial instruments and their market dynamics and inter-linkages, the need for transparency and disclosure, and the importance of ensuring that there are no gaps in supervision. The regulatory and supervisory regime also has to be robust and yet flexible enough to respond to changes in the financial landscape. There are also valuable lessons on the need for information sharing, coordination and cooperation among national and international regulators and central banks, and to equip these agencies with the appropriate tools and authority to restore confidence and maintain stability in the face of a looming crisis. In this regard, the Financial Stability Forum and the IMF have made comprehensive recommendations on enhancing market and institutional resilience.



## 4.5 Conclusion

— In conclusion, it is important to remember that regulation aims to reduce excessive risks and not to eliminate risks, and crises cannot be eliminated. The market is always ahead of regulators; otherwise there will be no innovation. What is important is to foster a market and regulatory environment that has the appropriate incentives and discipline for markets and financial intermediaries to behave in a manner that wins the trust and confidence of investors.

Time and again, we see financial markets go through a cycle of liberalisation to facilitate financial innovation and development, followed by increased liquidity and rising leverage induced by irrational optimism, and finally liquidation as asset prices collapse which often leads to limitation that re-regulates or tightens market and intermediary activities. The cycle then repeats once markets rebound and think that this time it would be different. The role of the regulator is to strike a judicious balance between market development and innovation on one hand, and the protection of investors and the maintenance of market stability on the other.

## 5 Brazil's Capital Market

### Eduardo Manhães Gomes

— Let me start mentioning that Brazil has a long history of stock markets. The Rio de Janeiro Stock Exchange was established in the second half of the 19<sup>th</sup> century. In the 90s of last century, after a process of consolidation, the São Paulo Stock Exchange became the only exchange for the trading of shares. The other exchange in existence in Brazil was the Futures Exchange (BM&F). In the last year both exchanges demutualised and were listed in the São Paulo Stock Exchange. This year the two exchanges decided to merge and the resulting new exchange became the third in the world considering its own market value.

What is new in Brazilian capital markets is that now it is performing the main role of financing the growth through the capitalisation of listed companies. In 2006, the Brazilian Securities Commission and the Corporate and Securities Laws celebrated their 30 years of existence. Since their inception, the Brazilian economy and its capital market have undergone great transformations, although we may consider that the more enduring and fast paced changes were produced in more recent times. In this brief statement, I will try to identify some of the major transformations that were produced and which may be brought to your attention.

First of all, the Security and Exchange Commission (Comissão de Valores Mobiliários, CVM) is now a very well-established, well-equipped and respected institution. Its personnel have gathered experience and expertise to deal with all sorts of matters of concern to investors. The CVM deals today with the full spectrum of financial instruments and market players such as securities in general, futures markets, derivatives, all types of funds from money market to hedge funds, listed companies, market consultants, analysts, broker dealers and other intermediaries, SROs and others. In the process of dealing with these areas and players, the CVM also deals with such aspects of market life as company reporting, offerings registration, accounting and auditing and investor education.

The current virtuous environment results from a combination of some well-defined transformations and other more gradual and continuous adjustments. Without any attempt to pinpoint the exact origin of any of them, I may certainly say that the attainment of macroeconomic stability constituted a major turning point in our investment scenario. This fundamental transformation provided the basic support and the metric by which players could start planning their activities. Abstracting from all the other issues that derive from it, stability reintroduced the notion of the long term in our midst. Before this change, long

term in Brazil was a series of short terms, with all the consequences that derive from it.

Another major transformation occurred in the regulatory front. Initially, Corporate and Securities Laws were amended to deal with the investor protection and disclosure concerns of nowadays more dynamic markets. Then, the Commission regulated the complete basic market spectrum of products (fixed income, equity, private equity and venture capital funds, derivatives, etc) and market activities such as company reporting, offerings registration, accounting procedures, broker dealers, asset managers and market analysts activities as well as clearing and settlement procedures. Alongside these changes, there came to be a gradual consolidation of an extensive track record of enforcement decisions and rule interpretations by the Commission – all easily retrievable and widely commented – that provided investors with an assurance about the stability of our rules. This last movement, in short, eliminated many of the so-called jurisdictional uncertainties that used to be raised in relation to Brazil.

A third transformation of significance took place in the self-regulatory environment. This is a very important achievement since, although regulation provides the basic framework and input for market activity, it is really self-regulation which fills the gaps of the regulatory environment and pushes the market forward. In recent times there has been a surge in self-regulatory activity responsible for the establishment of innumerable benchmarks, codes of conduct and best practices in the Brazilian market. It is impossible not to mention the Novo Mercado's standards which, certainly, respond for a great part of the recent IPO boom in our market. Perhaps the most enduring consequence of the coming into activity of these players is the consolidation of a "caring" market culture and the elimination, once and for all, of an unconcerned behaviour that may have prevailed in the thin market environment that used to exist.

This "caring" mentality, as opposed to the more predator behaviour that prevailed in the past, together with other concerns such as the preservation of macro stability and the special focus on governance, for example, only demonstrates that the significant quantitative changes that our market is experiencing – such as the avalanche of IPOs and the taking off of until now dormant segments of the market, like ABSs, MBSs and REITs – has its base in the deep qualitative transformations that were diligently put in place along the last three decades and, specially, during the last one.

Finally, another important change was the stream of micro regulatory reforms in many different areas of market activity. From payment system to market infrastructural activities involving clearing and settlement procedures and passing through basic market procedures such as investor market access and tax issues, innumerable adjustments were made to simplify and rationalise capital movements in the economy.

## Brazil's Capital Market

With all of this in place, numbers began to appear. Total registered market deals (all product categories) that amounted in the 1998–04 period to about USD14 billion a year went up to, roughly, 30, 60 and USD90 billion in the following three years and reached USD42 billion in the first semester of this year. Similarly, equity activity rose from an average of less than USD4 billion a year in the period to close to USD40 billion, including 64 IPO's representing about 10% of the world's market arrivals in 2007. Corporate debt issuance was also up, from around USD5 billion in the 98–04 period to around USD30 billion in the following years, but here our cheering is less enthusiastic as the increased figures are still highly concentrated in a few deals that are not exposed to trading. There was also growth in the remaining market products such as private equity, venture capital and ABSs. Their seven-year average of less than USD5 billion just about tripled in 2004 and 2005 and then reached USD22 billion in 2007.

Other examples of qualitative change in our market, gathered from the most diversified areas, would be the fact that regulatory activity is shifting from the basic standards and products – often, in the past, of a very theoretical nature – to day to day adjustments required by the busy market. We are now fine-tuning concrete market activity as opposed to the market paving efforts of the past. Instead of regulating basic fund categories we are now regulating fund disclosure requirements, their ability to invest in international assets or their mark-to-market procedures. The accounting discussion has moved towards the convergence to IFRS. No doubt, the concreteness of today's discussion is representative of a market at a higher stage of development.

In this framework, what demands befall on the regulator? The main one, I might say, will be the ability to maintain a fair balance between regulatory intervention and the market's own stimulation. This means the ability to strike a correct equilibrium between regulation and self-regulation and between a rules-based system and a principles-based system. One of the most significant recent changes is the migration towards a risk-based supervision system.

In conclusion, I would like to note that Brazil's capital market has gotten very active, with this activity having been provoked by the concerted action of many players. No doubt that the consciousness about the benefits of a curbed inflation environment, the culture of caring about the market (as against the predator instinct that used to prevail), the establishing adequate property rights, the consolidation of the stability of rules, the connecting all assets to the rest of the economy and so on, all of this demonstrates that we are obtaining one of those silent achievements that are taken for granted in more developed nations, but that are of fundamental importance for the advancement of the market.

Before finishing, let me address one of the questions that were posed to the panel, the one in relation with the recommendations of the Financial Stability Forum. No doubt that the recommendations are also relevant for emerging markets. For instance, there is one recommendation related to uses of rating by investors and regulators that I quote: “Authorities should check that the roles that they have assigned to ratings in regulations and supervisory rules are consistent with the objectives of having investors make independent judgment of risks and perform their own due diligence, and that they do not induce uncritical reliance on credit ratings as a substitute for that independent evaluation”.

In the case of Brazil, the Securities Commission is analysing the possibility of taken out of its regulation of mandatory rating.

Another example is the recommendation related to the transparency in securitisation processes that I quote: “Originators, arrangers, distributors, managers and CRAs should strengthen transparency to each stage of the securitisation chain, including by enhancing information on an initial and ongoing basis about the pools of assets underlying structured credit products”.

In the case of Brazil, the Securities Commission has embodied in its regulation strong requirements aimed to enhance transparency for securitised products.

I would like to finalise with a thought concerning the relation between financial innovation and capital market development. Allow me to make an analogy with a plantation with financial innovation playing the role of seeds. My point is that to grant a good crop you will need also a fertile soil. The fertile soil is only granted by the fulfilment of macro and micro economic preconditions.

## 6 Managing Evolving Risks to Emerging Financial Markets<sup>1</sup>

R. Sean Craig

### 6.1 Introduction

— The unexpected resilience of local financial markets to the credit turmoil that engulfed mature markets has helped insulate many emerging market countries from the crisis. These markets had developed sufficiently to provide an attractive alternative for mature market investors and banks when the crisis erupted, which helped sustain capital flows to emerging markets. However, global markets and banks remain under stress, and this resilience may be tested more severely by developing emerging market risks. The exit of some global investors from local emerging financial markets has already curtailed liquidity in these markets, which could deteriorate further as local investors react to accelerating inflation. Foreign funding of banks active in local markets as intermediaries come under increased stress from a global economic slowdown that increases credit losses. Markets in countries with large external deficits financed by private debt or portfolio flows, with weak financial infrastructure, or with central banks seen to be falling behind the curve in fighting inflation, are particularly vulnerable.

Policy responses to the crisis that target mature market financial institutions should benefit emerging financial markets by strengthening their capacity to take and manage emerging markets risks. Complementary initiatives in emerging markets can lessen the vulnerability of local markets to continued stresses on mature market financial intermediaries. The resilience of local financial markets, however, depends to a large extent on how effectively emerging market authorities use monetary and exchange rate policies to manage newly developing risks. This paper argues that the resilience of emerging financial markets relative could be tested more severely going forward by such risks. It considers the role that different mature and emerging market financial sector policy initiatives can play in mitigating them.

<sup>1</sup> The paper draws on the April 2008 Global Financial Stability Report and work by colleagues in the Monetary and Capital Markets Department. The paper reflects the views of the author and not necessarily of the IMF.

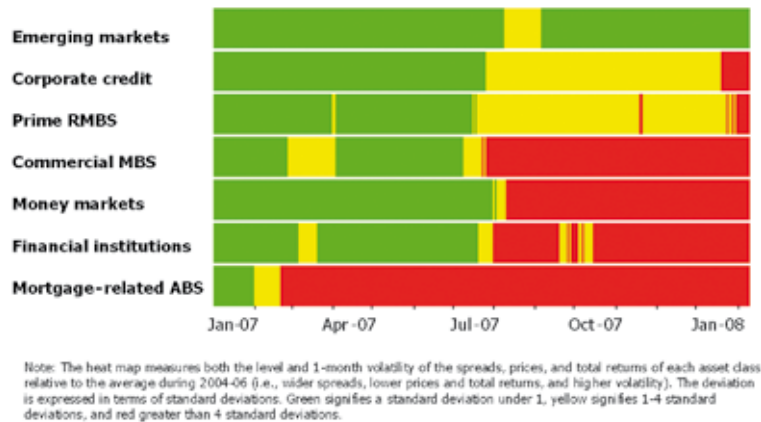
## 6.2 Risks to emerging financial markets

### Emerging financial markets during the global credit turmoil

The global market turmoil spread across mature financial markets but left emerging markets relatively unscathed. What began as a fairly contained deterioration in portions of the US subprime market last summer metastasised into severe dislocations in broader credit and funding markets. The deterioration spread from nonprime mortgage markets to leveraged finance and mortgage-related structured credit markets, to global money markets, and then moved up the credit spectrum from low- to high-grade corporate credit markets and prime residential and commercial mortgage markets. Only emerging market assets (sovereign debt) have so far escaped the turbulence experienced in mature credit (Figure 6.1).

Figure 6.1

#### Spread of sub-prime crisis across asset classes

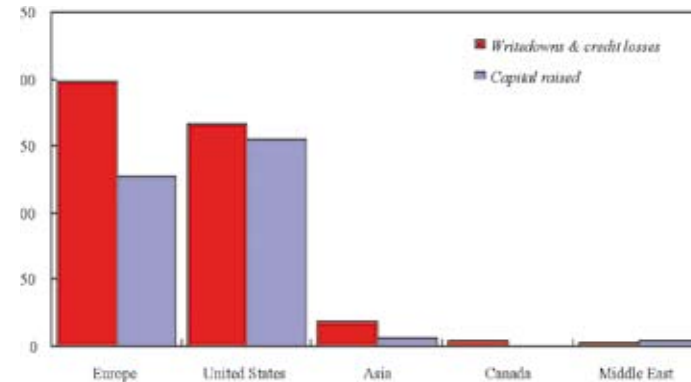


This resilience of emerging markets reflects their lack of direct exposure to US subprime-related losses. These losses were passed to the banks and other financial institutions globally through sale of structured products. Outside of the United States, European banks have booked a large amount of writedowns and credit losses on holdings of complex structured products such as MBS and CDOs (Figure 6.2). However, in emerging markets, relatively attractive domestic profit opportunities helped limit incentives to use leveraged structured finance products to boost yields.

## Managing Evolving Risks to Emerging Financial Markets

Figure 6.2

### Writedowns & credit losses and capital raised, as of June 13 (in billion USD)



Nevertheless, emerging markets have been affected by the crisis through indirect channels. As international investors incurred large losses on private securities in mature markets they reassessed risk and curtail riskier exposures across all investment classes. This pushed spreads sharply wider in international markets for both mature and emerging assets as demand for risky asset dried up and issuance collapsed (Figure 6.3). Reflecting this flight from risky assets by global investor, emerging market corporate spreads becoming more highly correlated with similarly-rated mature market credits and less correlated than with other types of less risky emerging market assets, in particular, sovereign bonds.<sup>1</sup> International market debt issuance has recovered in the last couple of month for sovereigns and high quality private issuers.

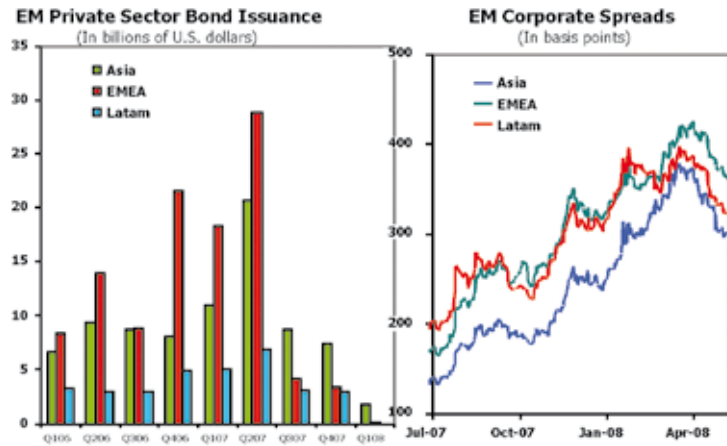
#### Resilience of local emerging markets

Many emerging market borrowers were able to substitute local market funding for international issuance. Data for the first quarter of 2008 show robust local market bond issuance in emerging markets (Figure 6.4), which is testimony to the resilience of these markets in the crisis. This resilience can be explained by the different investor base, the insulation of local financial intermediaries from the crisis and relatively strong fundamentals.

<sup>1</sup> The widening of sovereign bond spread has so far has been quite moderate by the standards of previous financial crises, due to, as well as generally strong sovereign liquidity positions and improved fundamentals, although technical factors, such as debt repurchases that have reduced outstanding supply, also helped.

Figure 6.3

Private international bond market issuance and spreads



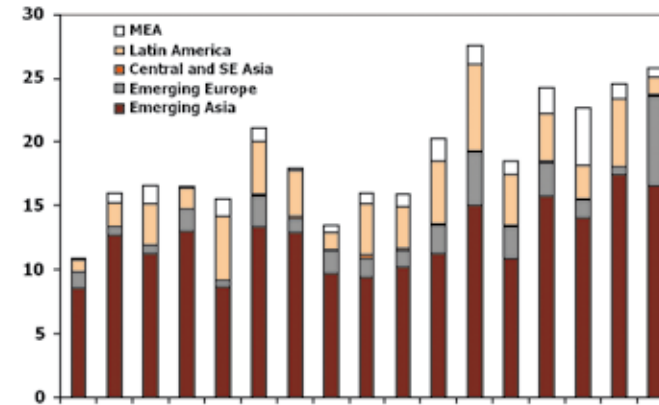
Specifically,

- local institutional investors remained active buyers of local assets but there was also substantial foreign participation. These included – until March – leveraged investors, many of whom emerged unscathed from the crisis. They found local markets attractive, reflecting their relatively high risk appetite. Their relative value and carry trade strategies involved active trading that helped support local market liquidity. Emerging European local markets also benefited from a large shift in convergence fund portfolios into local markets where yield are higher as prospects for euro entry was seen as lessening currency risk.
- Local financial intermediaries had very limited losses from the subprime crisis – as noted above – which made it easier to participate actively in local markets. While many are foreign owned banks, their parent institutions tended to be mid-sized banks with little subprime exposure. They also had strong home country deposit and long-term wholesale funding bases reduced their exposure to the dislocation in global interbank markets.
- Macroeconomic policies have been relatively prudent, which many emerging markets adopting more prudent fiscal policies and/or building up large foreign exchange reserve cushions, which reduced international investor concerns about crisis risk.

Managing Evolving Risks to Emerging Financial Markets

Figure 6.4

Emerging markets: local bond issuance  
(in billion USD)



However, these sources of local market resilience are coming under pressure from several directions.

- The funding pressures on global financial institutions, especially the US broker/dealers, that culminated in the Fed rescue of Bear Sterns sharply curtail funding available to leveraged investors that were an important source of local market liquidity in emerging financial markets. Many such investors had to exit emerging market positions leaving in place a more buy-and-hold oriented investor base.
- Macroeconomic policy faces a major challenge from accelerating inflation. In emerging markets where central banks are seen to fall far behind the curve, the risk is that local investors will respond to negative real interest rates and the threat of exchange rate collapse by exiting local markets. There are signs that foreign are shift back to hard-currency, international markets for emerging market debt to avoid currency risk.
- The global crisis may be entering a new phase where slower global growth could push up bank credit losses, especially to the household sector given the stress on real estate markets. Emerging markets are unlikely avoid a slowdown, and a rise in default rates from low levels could trigger a reassessment of credit risk and a slowdown in lending.

Rising default rates could lead foreign owned banks to slow credit growth – and external funding of this credit – putting pressure on the BOP and increasing risks to local market.

This risk is higher in emerging markets with large external imbalances, which we identify below before assessing these specific sources of pressure on local markets.

### Vulnerable emerging market countries

The most vulnerable local emerging financial markets are in countries with large current account deficits financed by private debt or portfolio flows, rapid credit growth, and where inflation has risen rapidly. Many are concentrated in emerging Europe (Table 6.1).

Foreign investors are increasingly differentiating among emerging markets based on these sources of vulnerability. During the credit crisis, risk premia have risen by more in emerging market countries with external imbalances (defined as a deficit of 5% of GDP or more). They have underperformed other emerging markets across all asset classes – credit (measured by CDS spreads), currencies, and equities. Local market volatility is also much higher in these riskier countries (Figures 6.5.1–6.5.4). This greater market risk probably contributes to their fragility. The latter is reflected in the much sharper spike in volatility during the March 2007 episode of severe global market turmoil. Going forward, slowing global growth and rising inflation could exacerbate this differentiation by investors among emerging markets based on these vulnerabilities, putting relatively more stress on local markets in these countries.

Figure 6.5.1

#### Sovereign CDS spreads (July 1, 2007 = 100)

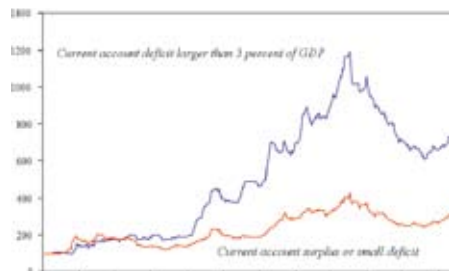
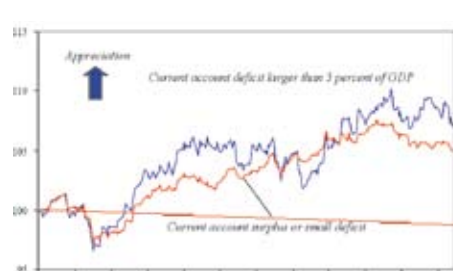


Figure 6.5.2

#### Local currency on US dollar cross (July 1, 2007 = 100)



## Managing Evolving Risks to Emerging Financial Markets

Table 6.1

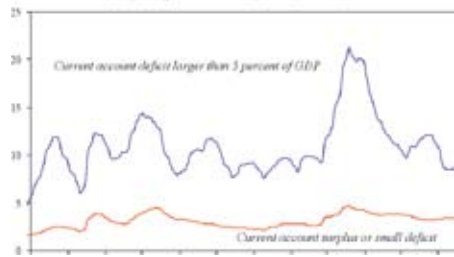
### External and macro vulnerabilities in selected emerging market countries

	Current Account (In percent of GDP)	Growth in Private Credit (In percent, year-on-year)	Change in Private Credit as Share of GDP (In percentage points)	External Net Position vis-à-vis BIS reporting Banks (In percent of GDP)	Actual Inflation less Inflation Target (In basis point)
<b>EMEA</b>					
Bulgaria	-21.4	62.7	19.7	-17.3	15.0 *
Croatia	-8.5	15.1	3.2	-46.0	6.4 *
Estonia	-16.0	32.4	10.6	-58.8	11.3 *
Hungary	-5.6	18.7	6.2	-42.5	380
Iceland	-15.6	55.9	120.9	-230.3	12.3 *
Kazakhstan	-6.6	55.2	11.7	-6.6	1110
Latvia	-23.3	34.0	6.5	-45.2	17.9 *
Lithuania	-13.0	42.8	10.6	-32.6	12.0 *
Poland	-3.7	31.5	6.6	-13.9	170
Romania	-13.9	62.4	9.9	-25.3	480
Russia	5.9	51.0	7.1	2.8	330
Serbia	-16.5	40.2	6.0	-5.2	15.7 *
South Africa	-7.3	22.0	5.1	-7.7	610
Turkey	-5.7	26.4	3.0	-10.1	570
Ukraine	-4.2	73.7	14.2	-4.6	31.1 *
<b>Asia</b>					
China	11.1	19.3	2.3	2.3	7.7 *
India	-1.8	20.4	2.5	-5.8	207
Indonesia	2.5	24.7	1.3	-7.0	300
Korea	0.6	12.5	7.3	-14.0	110
Malaysia	14.0	9.3	-2.7	-1.2	5
Philippines	4.4	4.5	-1.3	0.8	430
Thailand	6.1	3.9	-3.6	4.6	-10
Vietnam	-9.6	53.9	22.2	-3.3	23.2 *
<b>Latin America</b>					
Argentina	1.1	37.0	1.3	1.9	10
Brazil	0.3	36.6	8.6	-5.7	50
Chile	3.7	21.9	6.8	-3.4	530
Colombia	-3.8	23.5	4.0	0.5	170
Mexico	-0.8	17.9	2.0	-1.7	160
Peru	1.6	31.3	3.0	2.4	350

Sources: Bank for International Settlements, Fitch, JPMorgan, the European Central Bank, *International Financial Statistics* and *World Economic Outlook* and IMF staff estimates. Note: The grayed-in boxes of the table point to areas of potential concern. Cutoff values are as follows: current account balance below -5 percent of GDP; private sector credit growth greater than 20 percent year-on-year; change in the ratio of private sector credit to GDP of more than 10 percent year-on-year; net external liabilities to BIS banks less than -10 percent of GDP; actual less target inflation more than 200 basis points; and actual inflation of above 10 percentage points. Estimates for 2007, except that actual inflation data are latest and official target data are from Fitch and JPMorgan. Showing latest inflation data (in percentage point) with asterisk when official target is not available.

Figure 6.5.3

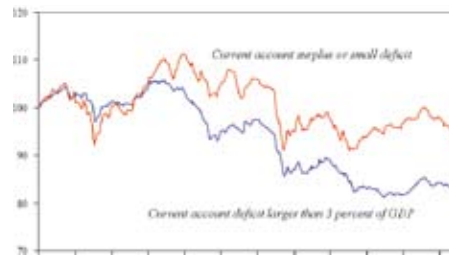
**Local currency volatility**  
(30-day rolling standard deviation of returns, annualised)



Sources: Bloomberg and IMF staff estimates.

Figure 6.5.4

**Share prices**  
(July 1, 2007 = 100)



**Risks stemming from rising inflation**

Global commodity prices have risen strongly in the last few years, raising inflation to uncomfortably high levels in both mature and emerging economies (Figures 6.6 and 6.7). Many emerging economies face both rising headline and core inflation rates, pressured by robust domestic demand and further fuelled by escalating energy and food prices.<sup>1</sup> Overall, a large set of emerging economies have seen inflation rise by more than 5 percentage points since 2007 posing significant policy challenges.

The magnitude of the recent rise in inflation poses a major challenge to central banks' ability to achieve their inflation objectives, as actual inflation has exceeded official targets by wide margins in many emerging economies. Real policy rates have fallen across emerging economies, in some cases by 5 percentage points or more from end-2006 to present (Figure 6.8). In Latin America, real policy rates have remained positive, while those in Asian and EMEA economies have fallen into negative territory. In some cases, the ability of central banks to combat rising inflation is hampered by weak policy frameworks, limited independence and relatively rigid exchange rate regimes that limit the scope for rate hikes.

<sup>1</sup> Food represents a large share of CPI basket in most emerging countries, up to 60%, significantly higher than about 15% in Europe and the US.

**Managing Evolving Risks to Emerging Financial Markets**

Figure 6.6

**Selected commodity prices**  
(January 2006 = 100)

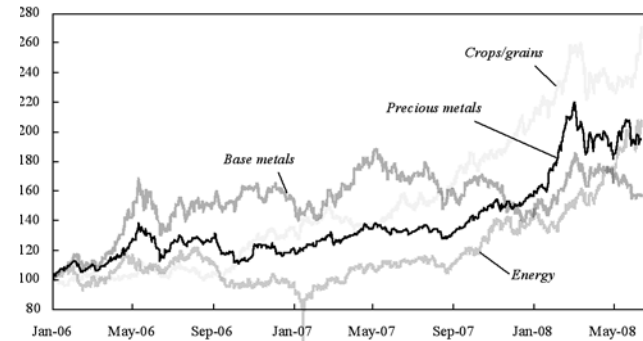
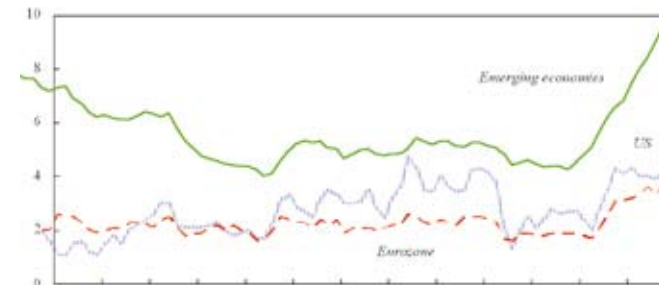


Figure 6.7

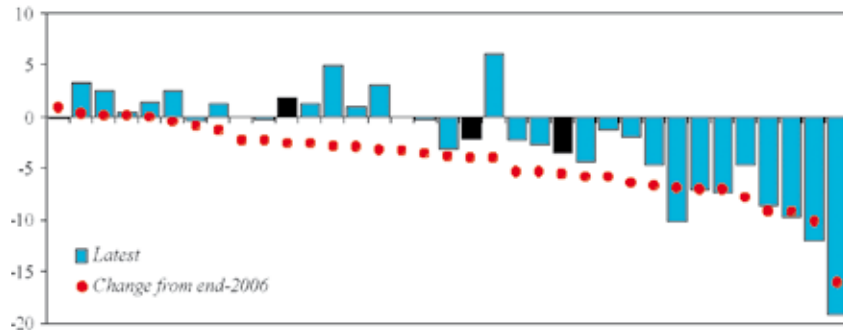
**Year-on-year inflation**  
(in percent)



Sources: Bloomberg and IMF staff estimates.  
Note: Unweighted average for 33 selected emerging economies.

Figure 6.8

**Real policy rates: latest levels and changes from end-2006**  
(January 2006=100)



So far, local bond yields have risen only modestly, by about 130–200 bps since end-2006 across the regions,<sup>1</sup> even though inflation has risen by more than several percentage points. While this may reflect market expectations that the recent rise in inflation is temporary and would ease back once food and energy prices stabilise, there are signs that inflationary expectations are becoming more entrenched. Bond yield curves have steepened across selected emerging economies (measured as gap in the 10-year and 2-year yields, Figure 6.9).<sup>2</sup> If inflation persists, there is a risk of a sharper bond market sell-off increase as central banks are forced to raise rates further. This threatens the environment of low and stable inflation that has underpinned macroeconomic stability, fostered the development of local markets and allowed governments to borrow locally rather than issue foreign currency debt in international capital markets. If inflation causes investors lose confidence in local currency assets investors could rapidly exit local market putting pressure on the exchange rate.

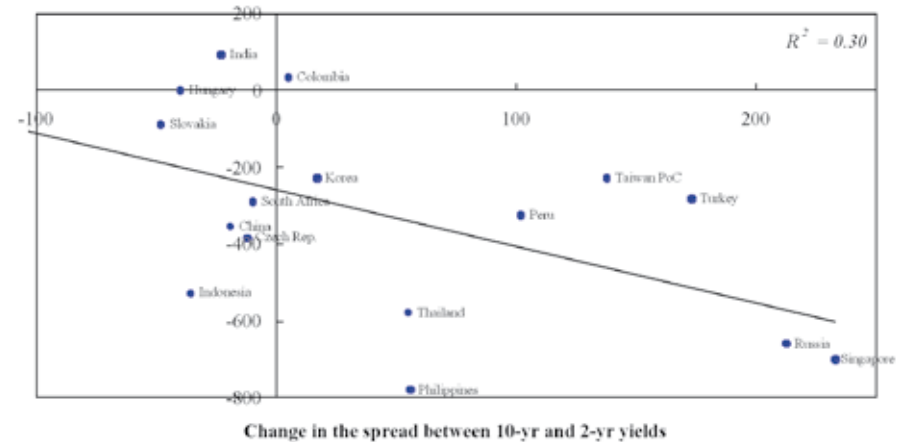
<sup>1</sup> Measured using JPMorgan Government Bond Index-Emerging Market (GBI-EM).

<sup>2</sup> Several factors may have helped contain the rise in bond yields. Expectations of stronger local currencies may have offset low expected returns on local bonds for foreign investors—most of the selected emerging market currencies appreciated against the dollar during the last 12 months, potentially supporting this hypothesis. However, currency performance is expected to be more mixed going forward, particularly as inflation has turned to a negative factor for emerging market currencies. Moreover, the domination of relatively captive local investors in some countries may have made changes in local bond yields stickier than otherwise.

## Managing Evolving Risks to Emerging Financial Markets

Figure 6.9

**Real policy rates and local bond yield curve: change from end-2006 to present**  
(in basis point)



Sources: Bloomberg and IMF staff estimates.

Note: Real policy rates: monthly policy rate and year-on-year inflation data in December 2006 and May 2008; the yield curve: 10-year and 2-year (or similar maturities) local generic bond yield daily data in end-2006 and mid-June 2008.

### Risks from a global economic slowdown

After a period of strong growth, the global economy is slowing with risks skewed to the downside. According to the April 2008 WEO projections, global growth would moderate below 4% in 2008 and 2009, following 4.9% growth in 2007, led by a slowdown in the advanced economies (Figure 6.10).

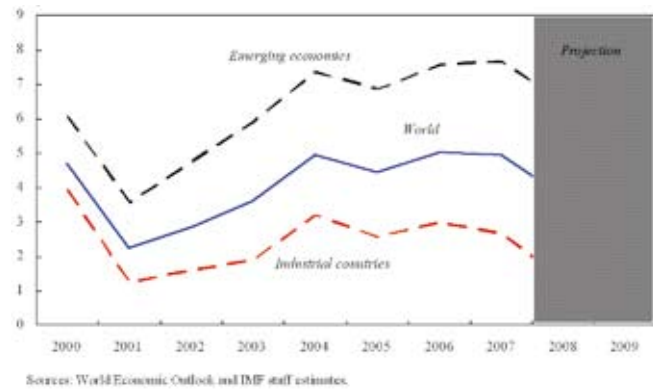
Contributing to the slowdown is the tightening of credit conditions in the US and Europe stemming from the global credit turmoil and concern about rising defaults on existing credits. Credit growth has not slowed much yet, partly due to involuntary balance sheet expansion as off-balance sheet entities are consolidated on balance sheet and corporates draw down low cost credit lines put in place prior to the crisis. The potential for a slowdown in credit growth varies substantially across countries in Europe, with credit in Germany



likely to be the most resilient owing to the healthy corporate sector, and weakest in the UK, Spain and Ireland owing to the pressure on households from declining housing prices.

Figure 6.10

**Real GDP growth**  
(in percent)



A key downside risk is that the housing market correction could make the slowdown more protracted than previous downturns. The housing correction in the United States is particularly severe with house price declines accelerating in recent months<sup>1</sup> and delinquencies and foreclosures continue to rise. Past growth slowdowns in the United States have been more protracted when accompanied by corrections in the housing market and could be the case this time also. This risk is substantial in other countries also where indicators show their housing markets to be more vulnerable to a correction than the US (Figure 6.11).

Emerging markets are likely to slow along with the US and other mature market economies. There is little evidence that they will “decouple” as the historically high cyclical correlation in GDP growth between mature and emerging markets remains intact (Figure 6.12). Indeed, global spillovers may have grown in recent years for these and other countries, consistent with rising trade and financial integration. The tighten monetary policy in response to rising inflation will slow growth in any emerging markets.

<sup>1</sup> The Case-Shiller index registered a 14% decline year-on-year in the first quarter of 2008.

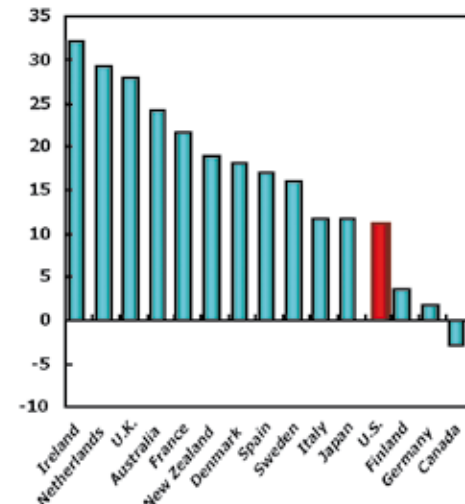
**Managing Evolving Risks to Emerging Financial Markets**

Figure 6.11

**Housing-related vulnerabilities are widespread**

**House “price gaps”**

(1997–2007; in percent of real house prices)



Source: IMF staff calculations.

**House valuation ratios**

(1997–2007; percent change)

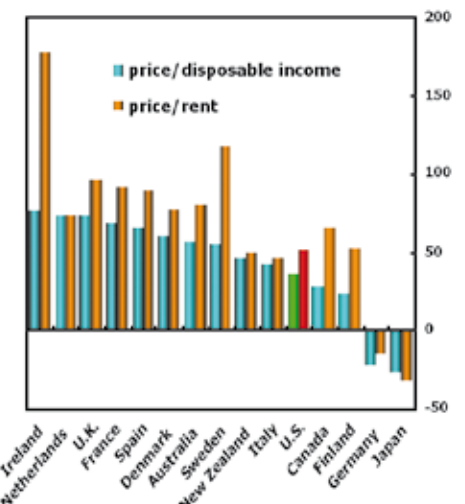


Figure 6.12

**Real GDP growth, cycles**  
(deviation from trend)

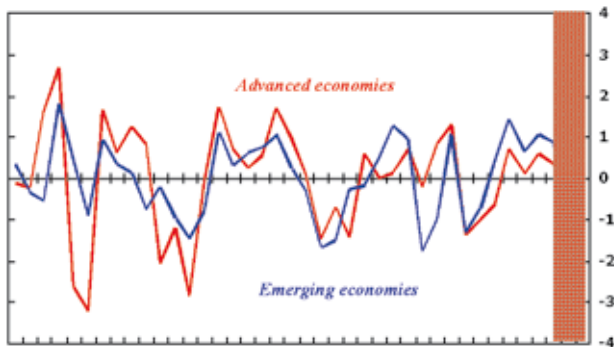
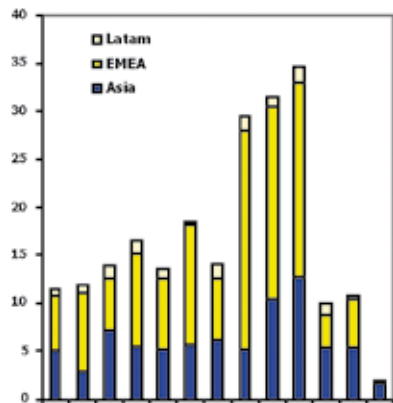
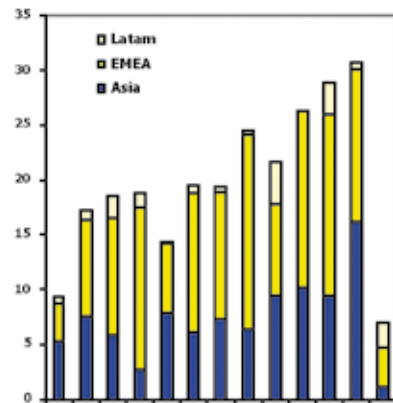


Figure 6.13

**EM banks: external bond issuance**  
(in billion USD)



**EM banks: external syndicated loans**  
(in billion USD)

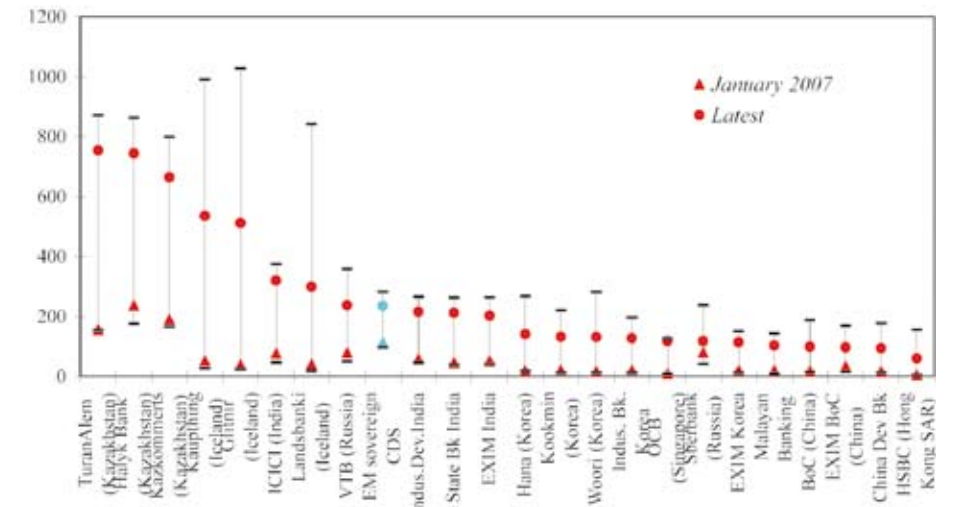


**Managing Evolving Risks to Emerging Financial Markets**

funding of credit growth. Funding of emerging market banks in international bond markets already fell sharply with the start of the crisis (Figure 6.13), impacting countries most dependent on this financing, notably Kazakhstan. Banking systems in emerging market A key channel through which heightened concerns about credit risk stemming from a downturn could threaten local markets is the external funding of banks active in these markets. This risk is highest in countries with large external imbalances, identified above, where credit growth is well above domestic deposit growth, forcing banks to rely on external with out these vulnerabilities are less vulnerable to these funding pressure, as reflected in the smaller widening of their CDS spreads since January 2007 (Figure 6.14), as their relatively high ratio of local deposits to assets makes them relatively immune to such funding pressures (Figure 6.15).

Figure 6.14

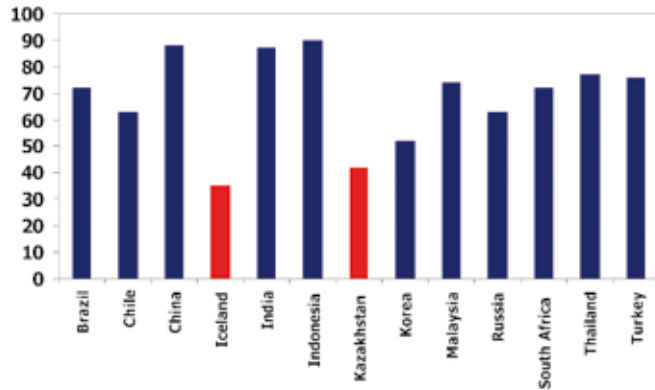
**CDS spreads on selected emerging market banks, January 2007 – latest**  
(in basis point)



Sources: Bloomberg, DataStream, and IMF staff estimates.

Figure 6.15

**Emerging market banks**  
(deposits/total assets)



Cross border interbank funding has been relatively resilient so far, in the crisis even in vulnerable countries, although the fall in syndicated lending to emerging market banks in the first quarter indicates that this may be changing (Figure 6.13). The most resilient so far has been cross border funding provided by foreign banks to their emerging market subsidiaries. This often reflects a long-term strategic commitment by parent banks to their subsidiaries, especially in emerging Europe. Moreover, these parent banks have been relatively unscathed by the crisis owing to their lack of subprime exposures. Thus, while many rely heavily on wholesale funding, they have so far maintained relatively good access to wholesale markets, especially at longer maturities. However, their capacity to sustain cross-border financing emerging markets could be more severely tested as the slowdown in growth pushes up default rates on their home and emerging market credit portfolios. To the extent that such losses increase concerns about bank soundness, access to wholesale financing would become more difficult and management might try to cut riskier emerging market exposures. This would sharply reduce external funding of credit in some emerging markets, precipitating a hard landing in emerging markets particularly reliant on this funding (e.g. the Baltic States).

**Managing Evolving Risks to Emerging Financial Markets**

**6.3 Policy issues for mature and emerging markets raised by the crisis**

— In many emerging economies, growing inflation risks are an immediate concern. Real interest rates are low or have become deeply negative, especially in some countries in emerging Europe and Asia. For many countries, this implies the need to further tighten policies as inflation has risen in the face of surging commodity prices and domestic overheating. This is especially so as not to compromise central bank monetary frameworks, while exchange rate flexibility would provide more scope to help keep inflation pressures under check. For some in Asia, policy trade-offs are made more difficult in gauging the timing of global slowing with the attendant effects on exports and growth. Uncertainty surrounding policies could induce greater volatility in local markets that restricts availability of funding – to both government and corporate issuers – as well as the potential for capital withdrawal at a time when global liquidity may tighten.

Countries vulnerable to external financing shocks need to adjust to the new tighter external financing conditions and adopt policies to reduce domestic repercussions of sustained financial turmoil. These policies may include a tightening of limits on external borrowing by banks and other financial institutions. In addition, to prepare for the possibility of a deeper global liquidity shock, policy makers should map out contingency plans with potential responses to short-term funding problems. The importance of transparency in bolstering investor confidence has also become more apparent. The limited exposure to subprime and other impaired instruments in emerging markets should not lead to complacency, as the same benign conditions have underpinned higher risk-taking in some countries. As well, the lessons from the turmoil underscore the need to make further progress on fine-tuning the design and strengthening the implementation of accounting and disclosure standards for financial institutions.

Policy improvements have contributed to the resilience of many emerging markets in the face of the global turmoil but there is little room for complacency. The subprime crisis demonstrated severe shortcomings in banks’ assessment of credit and liquidity risk among some of the worlds most sophisticated banks. Shortcomings were also revealed in public disclosure, financial sector supervision and regulation, and in implementation of international accounting standards. Despite substantial progress, emerging market have much to do in these areas also: a review of 135 BCP assessments suggests that weaknesses persist across countries in key areas of prudential supervision: more than 40% of the assessed countries did not comply with the essential criteria of the principles dealing with risk management, consolidated supervision, and abuse of financial services. An important lesson from the crisis has been the role that underlying vulnerabilities and weakness in the financial system architecture has played in amplifying problems and raising costs to both

private and public parties. Although a rush to regulate should be avoided, supervisors need to be able to respond proactively to address misaligned incentive structures – such as in the “originate to distribute” model – that together with an overall resolution strategy should reduce future risks.

Confidence in financial institutions can be enhanced through supervisory oversight that examines more broadly the risks banks are taking, with closer coordination among supervisors. In light of the crisis, there is an urgent need to review the regulatory framework and effectiveness of supervision. In particular:

- Financial institutions must be able to show sufficient capital to absorb reduction in mark-to-market valuations or losses on asset sales. They need to demonstrate that they have sufficient capital and liquidity resources to reassure counterparties that good access to funding and money market liquidity, including during periods of severe turbulence, can be maintained. Pillar 2 of Basel II – supervisory review – can be used to ensure that banks hold additional capital beyond the minimum requirement identified by risk weights or by internal models under Pillar 1, when the supervisors identify deficiencies.
- Supervisors need to take more account of balance sheet leverage as they assess capital adequacy. The risks (particularly market and liquidity risks) that have accompanied balance sheet growth need to be properly considered for capital adequacy purposes. While banks continue to meet the minimum regulatory capital requirements, the low absolute capital levels for many large banks at present and the prospect of further losses are adding to concerns about whether capital is sufficient. Banks that must be particularly vigilant are those that hold high levels of assets subject to mark-to-market valuations, that are highly reliant on wholesale funding markets, and that employ high leverage.
- Management of liquidity risk need to improve. This may include improvements in measurement, evaluation of the backup contingency lines, severe stress tests, and contingency plans for long periods when wholesale markets are unavailable. Supervisors need to be more proactive in countering signs that banks have inadequately protected against liquidity risks.
- Stricter rules are needed on the use of off-balance-sheet entities by banks, and disclosure should be improved so that investors can assess the sponsor’s risk to the entity. Supervisors may need to strengthen guidelines regarding the circumstances under which risk transfers to off-balance-sheet entities warrant capital relief.



## Part II

### New Developments in Bond Markets and Scope for Regional Cooperation

## 7 Developing Capital Markets in Africa

Garth Greubel

### 7.1 Current state of debt markets in Africa

— Africa is rich in resources, minerals and unspoiled natural habitat. All could contribute to economic growth and prosperity. Globalisation presents Africa with immense opportunities to improve the quality of life for its people by creating wealth, acquiring knowledge and skills and improving access to goods and services. However, Africa does not have the necessary infrastructure to exploit these wealth opportunities.

Many African countries are characterised by huge disparities in income and a lack of domestic savings. As a result many development projects, run by state-owned enterprises, have been funded from normal government revenue. For various reasons the projects became liabilities, producing increasing government budget deficits. African countries then became reliant on foreign debt and foreign official donors to fund their deficits. In time, however, the use of foreign debt declined. Currency devaluations in many African countries made local debt more attractive. The availability of foreign debt decreased anyway as political instability and weak or non-existing macroeconomic frameworks increased the risk of investing in Africa.

As the availability of foreign debt capital declined, many African countries began to appreciate the potential of their private sectors to contribute to economic growth by providing not only money, but also knowledge and skills. The challenge came down, therefore, to attracting private capital. Many governments have established national savings plans or pension funds to encourage investable domestic savings. They have also explored private-public partnerships to fund development and have embarked on the privatisation of state-owned enterprises (SOEs) in an effort to reduce budget deficits. These initiatives saw, albeit indirectly, the development of African capital markets/exchanges during the late 1980s and 1990s as platforms to facilitate the procurement of private capital. There remain, nevertheless, many African countries that, through dire poverty – marked by reliance on the agricultural and informal sectors – continue to rely on foreign aid.

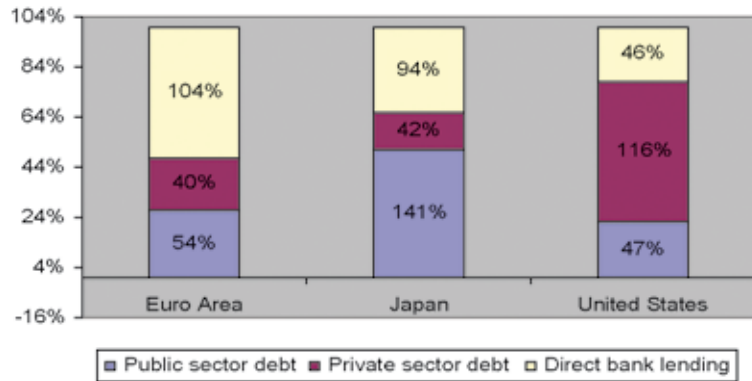
Africa is characterised by small exchanges, all of which are threatened by globalisation. Most African debt capital markets have common features. They are:

**(i) Small number of listings**

As in other emerging and some mature markets, direct bank lending remains a major source of funding in Africa. Many African exchanges are therefore characterised by a small number of listings. Figures 7.1 and 7.2 together show outstanding debt securities and direct bank lending as percentages of GDP in mature and emerging markets. Data for Africa is, however, only for South Africa.

Figure 7.1

**Outstanding domestic debt securities vs. direct bank lending as a percentage of GDP in the mature markets as at the end of 2004**



Source: IMF

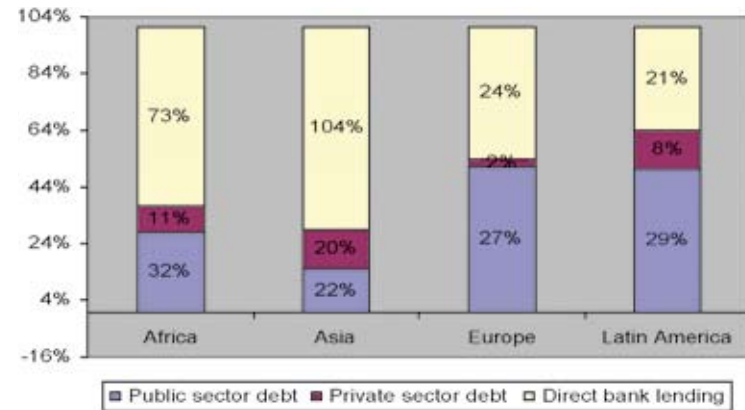
The small number of issues on African exchanges can be ascribed to many factors. Among them is a lack of coherent strategies surrounding capital market development. Another factor is the absence of necessary market infrastructure.

Banks have played a major role in the development of capital markets in non-African emerging countries, not only by arranging and underwriting services but also by providing capital for debt investments. In some emerging markets, however, banks have been reluctant to relinquish their lending relationships with governments and corporates, especially when lending spreads were high. There may also be a reluctance from potential issuers to list debt in a market with limited domestic investable assets.

**Developing Capital Markets in Africa**

Figure 7.2

**Outstanding domestic debt securities vs. direct bank lending as a percentage of GDP in the emerging markets as at the end of 2004**



Source: IMF

**(ii) Lack of longer-term maturities**

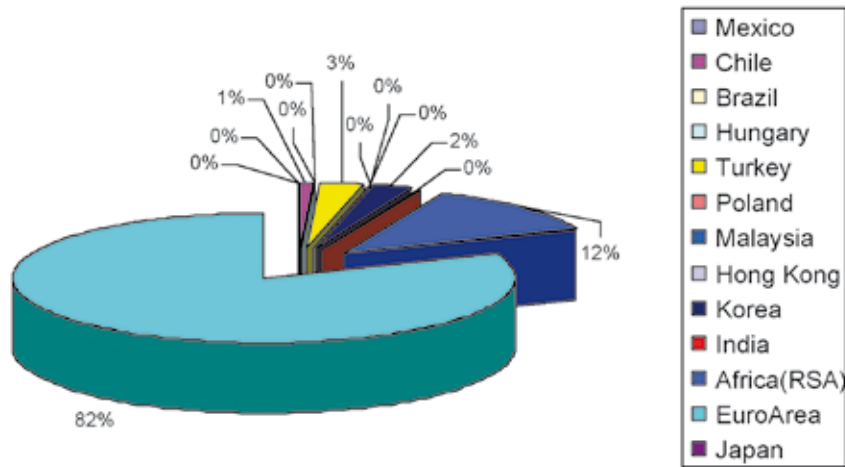
Debt listed on African exchanges is dominated by 2- to 12-year maturities. Macroeconomic instability in some African countries makes forecasting inflation difficult. Investors are therefore reluctant to take a long-term view. Issuers are also reluctant to issue listed debt instruments in the absence of an appropriate benchmark for pricing longer-dated issues.

**(iii) Low turnover volumes**

Turnover in listed debt instruments is low in many emerging markets, especially when compared to mature markets (see Figure 7.3 and Table 7.1). The small number of listed instruments means most of them are bought for holding to maturity.

Figure 7.3

Turnover in emerging markets vs. mature markets in USD terms 2007



Source: World Federation of Exchanges and BESA

Note: Percentages indicated in Figure 7.3 represent percentage of total volume trade turnover in Table 7.1.

**(iv) Lack of investors**

Deep structural poverty in many African countries results in a lack of domestic savings for long-term investment. That, in turn, means the tools for private capital investment and risk-taking are not available. The result is spiralling decline.

The above issues highlight some impediments to the development of debt capital markets in Africa.

**7.2 How can these markets be developed?**

The next question is how to develop the African markets to attract the domestic and private capital required for infrastructure development. Deteriorating economic conditions,

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declining exchange rates and political uncertainty are the most prominent reasons for a lack of enthusiasm by foreign and local investors to invest in some African countries.

Table 7.1

Turnover in emerging markets vs. mature markets in USD terms 2007

Country	Volume Traded in Billion USD
Mexico	137
Chile	139,814
Brazil	483
Hungary	1,161
Turkey	466,651
Poland	637
Malaysia	1,606
Hong Kong	1
Korea	380,954
India	60,398
Africa (RSA)	2,024,840
Euro Area	13,266,802
Japan	3,023
<b>Total</b>	<b>16,346,507</b>

Source: World Federation of Exchanges and BESA

**(i) Macroeconomic stability is a pre-requisite for the development of a sustainable debt capital market**

Deteriorating exchange rates are a major reason for the lack of private capital investment into Africa. African countries are vulnerable to huge amounts of speculative capital flowing



into and out of their markets as economic conditions change. Such speculation replaces long-term investment, largely because of an inadequate macroeconomic framework and undisciplined monetary and fiscal policies.

To attract private long-term capital, South Africa has for the past 10 years concentrated on achieving price stability, which makes it easier to forecast inflation and real returns over longer periods. In 1996, the South African government adopted a “GEAR policy”. It is a macroeconomic strategy devised to be conducive to investment. It is based on the promotion of a free market, the maintenance of sound and sustainable financial and fiscal discipline, and pursuit of a monetary policy aimed at achieving and maintaining low inflation. In support of this monetary policy the government adopted a fiscal policy aimed, on the one hand, at economic growth through tax relief for individuals and businesses – and, on the other hand, at increased government revenue by improving tax collection.

The South African government’s firm adherence to its GEAR policy, despite voluble criticism from trade unions and political groups to the left of the government, has produced a stable macroeconomic environment. Inflation was reduced to single digits leading to lower interest rates up to mid-2006. Foreign direct investment, reflecting foreign appreciation of investment opportunities in South Africa, has increased, and been validated by a country-rating upgrade to BBB+. South Africa is now just one notch below the coveted “A” rating.

The value for South Africa of direct foreign investment lies not only in the capital involved, but also the skills in management, technology, marketing and networking that follow it. But human skills need, like investment, to be assured of social stability if they are not to beat a retreat. And social stability depends heavily on political stability.

## **(ii) Achieving political stability**

In analysing the political risk of investing in an African country, investors tend to regard the risk of expropriation and political violence (which leads to currency devaluation) as the issues that immediately determine whether they will invest in the country. These investors do not seek to mitigate, but to avoid these risks.

That is a reasonable position to take. Political instability, civil war and military conflict often result in mass migration, leading to further economic decline. Such instability and decline is beyond the power of companies to manage.

The first step a government must take to overcome political violence and instability is to

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create initiatives aimed at preventing, managing and resolving conflict; to launch measures aimed at peacemaking and peace enforcement; to construct one or more forums in which past conflict can be laid to rest, the pain of past sufferings healed. South Africa has managed to transform from an apartheid regime to its current democracy through the aid of truth and reconciliation hearings and amnesty programmes in respect of past political crimes. Such peacefully transforming measures are now advocated internationally.

The next step by government is to further strengthen its political and administrative framework. This is achieved through transparency, accountability, integrity, respect for human rights and promotion of the rule of law. The results of a repeated international survey are that Africa is continuously voted as one of the world’s most corrupt continents. South Africa has embarked on various initiatives, sometimes controversial, to combat and detect corruption and embezzlement across all sectors including the government itself. These initiatives have made international news – but it was good news for those receiving it, judging by the absence of any negative impact on foreign investment.

The next focus area for South Africa’s central government is to achieve regional sustainability through regional governmental development and by addressing the divide between the rich and poor through affirmative action, social development, skills development and educational programmes.

### **(iii) The development of a benchmark government yield curve**

Government bonds played a major role in the development of most developed countries’ capital markets. A developed government bond market is considered a pre-requisite for the development of a strong corporate market since government bonds provide risk-free yields and are used as benchmarks off which corporate bonds are priced, usually as a spread to the government yield curve or specific government reference bonds.

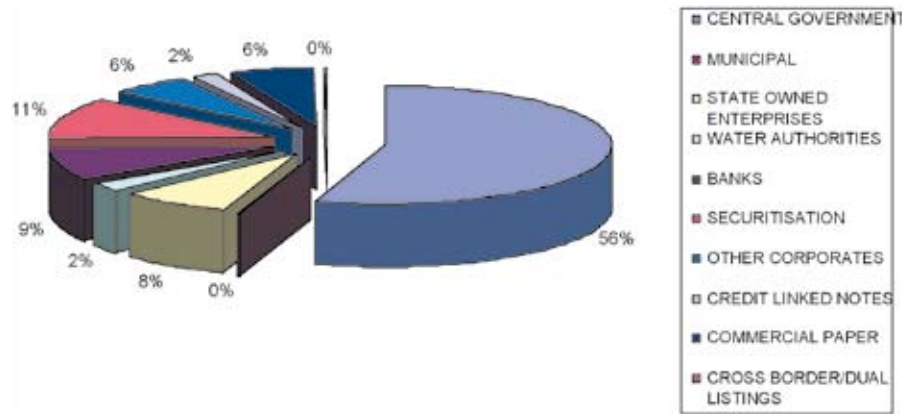
In many African countries, government yield curves do not extend past five-year maturities, and in those countries where the curves do extend over long periods, bond issues are concentrated in the shorter maturities. Corporates, however, require various maturities out to 30 years to which they can match their own investment maturity needs. Infrastructure, too, specifically requires long-term financing and in terms of that a government yield curve is imperative.

In South Africa, government bonds support the debt capital market. As at the end of September 2005, government bonds comprised 69% of the nominal in issue on BESA

while corporate bonds and SOEs comprised 23% and 11% respectively. By the end of 2007, these percentages were 56 (for government bonds), 34 (for all corporates), and 10 (for SOEs) (Figure 7.4).

Figure 7.4

**BESA nominal in issue (end of 2007)**



Source: Bond Exchange of South Africa

In South Africa the government has been increasing its efforts towards privatisation of the provision of public services, the creation of private-public partnerships for developing infrastructure and effective tax revenue collection. As it succeeds in those aims, its issuances will continue to decrease. That could well stimulate more growth in the total value of corporate issuances.

**(iv) Promotion of market liquidity supported by increased trading volume**

It is essential for the development and sustainability of debt capital markets that buyers and sellers exchange securities for cash at reasonable prices. That comes down to liquidity. Liquidity is measured by bid-offer spreads. When looking at emerging markets in general, including Africa, bid-offer spreads of government bonds are very wide compared to those in developed countries. They are even wider for corporate bonds. There are various reasons, such as lack of price transparency and buy-and-hold investment strategies.

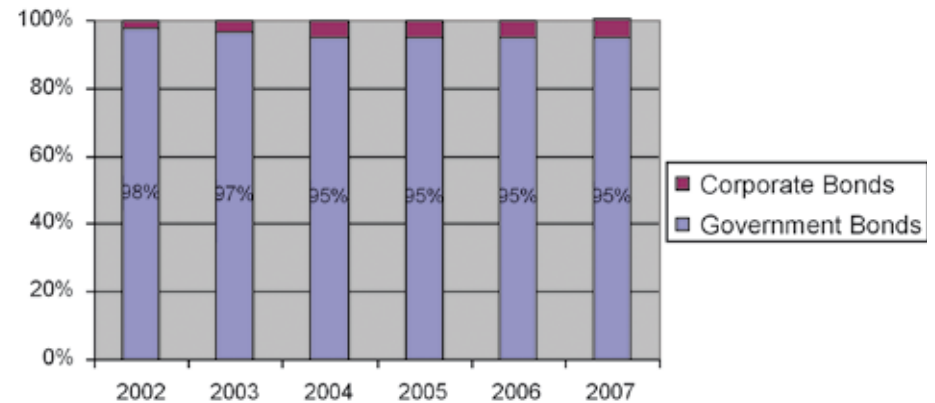
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To improve liquidity in government bonds, the South Africa government in 1998 appointed 12 primary dealers / market makers. There are now 9 primary dealers. Their obligation is to quote firm prices (bid and offer) in certain government bonds. The quid pro quo is participation in the auctioning of government issues (getting first bite of the cherry) and similar benefits. South Africa's bond exchange, BESA, has also facilitated the development of an active repo market – in effect a money market that makes a major contribution to the secondary market. Traders use repos to fund their positions, hedge short positions in the capital markets, to facilitate settlement and to employ cash for the short term between investment decisions.

The bid-offer spreads in South African government bonds have narrowed over the years. That's not surprising since they account for well over 90% of total market turnover (see Figure 7.5).

Figure 7.5

**BESA turnover 2002 to 2007**



Source: Bond Exchange of South Africa

Illiquidity is directly linked to an inability to price a bond efficiently through lack of price transparency. BESA believes, therefore, that liquidity can be further improved by promoting price dissemination. The Exchange has developed a system in terms of which firm bid and offer prices and traded prices are entered into a central price-discovery screen which is available to all the Exchange's users. BESA continues to develop and promote

this system as the central price screen for all bonds in South Africa, believing it will improve the liquidity of corporate bonds.

**(v) Investor demand for debt instruments**

An investor base with a pool of investable cash is essential for the development of a debt capital market, and is provided by institutional investors such as pension funds and insurance companies. In many countries the growth in capital markets is directly related to the increase in assets under management of pension funds and insurance companies.

Some African countries have encouraged the establishment of national savings plans, but many of these plans invest in the limited stock of government bonds which are held until maturity, and which are often continuously rolled over. More and more of these funds are, however, being privatised. As this process continues, the greater demand for diversified investment will become. For one thing, these institutional investors have long-term liabilities; the shorter-term maturities of most fixed-income securities in Africa may not match their asset-liability strategies.

Many institutional investors are, however, faced with instrument-limited mandates or legislation that prescribes their asset allocation and often prevents them from freely investing in corporate bonds and other non-government instruments. These mandates prescribe credit rating as well. It is therefore important for the development of the debt capital market that institutional investors are given the choice to invest in alternative debt instruments to government debt – subject, of course, to appropriate risk management.

Due to the increase in assets under management by institutions in South Africa, and an increase in public-sector issuance that does not match that rate of increase, there is a significant demand for high-yield debt instruments in order to diversify portfolios and improve overall portfolio returns. Prescriptive investment mandates, however, prevent the institutions from investing in these instruments. The legislation governing these institutions’ asset allocation also promotes investment into government bonds and select SOEs above that of corporate bonds. BESA believes that legislation should move away from an investment-limit-by-instrument regulatory approach to that of a risk-based approach.

Investment decisions depend heavily on the credit ratings of debt issuers. Credit rating agencies therefore play an important role in the development of the debt capital market. Ratings agencies require full disclosure of information and transparency, subject to confidentiality, to determine credit ratings. It is therefore recommended that, due to the lack of infrastructure and transparency in certain African countries, governments and potential

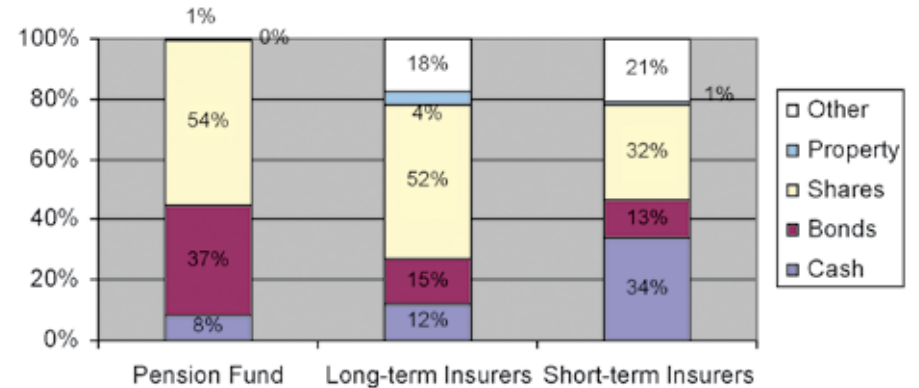
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corporate issuers should establish investor-relations offices to ensure that rating agencies and investors are kept informed, and their expectations and reactions to economic change managed appropriately to prevent over-reaction.

South African asset-managing institutions were underweight in bonds a few years ago, due mainly to the equity bull-run and tax legislation that favoured equity investment. However, the take-up of bonds by pension funds had increased by the end of 2007 from 13% to 37% (see Figure 7.6).

Figure 7.6

**Institutional asset allocation in South Africa (2007)**



Source: South African Reserve Bank

**(vi) Tax incentives to develop debt capital markets**

A government’s tax policy with respect to different individuals, institutions and classes of securities (especially its tax policy with respect to debt instruments) could have a significant impact on the development of the debt capital market. With respect to private infrastructure development, tax incentives can help produce a steady project flow that will boost the supply of bond issues to finance the projects – issues that will help the development of the debt capital market.

Tax incentives include tax breaks such as reduction in or elimination of stamp duty on

debt instrument issues, reduction in import duties on equipment required for infrastructure development, reduction or elimination of tax on investment-income securities, and addressing differences in tax treatments between residents and non-residents, or individuals and institutions.

All such tax incentives can be used to boost supply of private-sector investment and thus the supply of debt instruments, and at the same time to encourage investment into the debt capital market. However, governments should approach any tax incentives specifically aimed at the development of debt capital markets with caution to prevent a situation where a tax incentive is ultimately borne by the taxpayer, or where the incentive further destabilises the capital market. The tax incentive should be of such a nature that, should it be reduced or eliminated over time, other factors see the capital market continuing to develop and become sustainable.

In South Africa, fiscal policy is aimed at economic growth. Tax relief is therefore provided to business and companies to encourage their expansion. Such relief includes exemption from stamp duty on debt issues and deductibility of interest from taxable income if the interest was incurred in the production of income. From an investor's perspective it is less tax efficient to invest in debt securities than in equity. Pension funds and insurers are not taxed on dividend income but are taxed at 18% on any interest earned (which includes bond coupons). The tax significantly reduces debt investors' after-tax return compared to an equity investment and may explain the institutions' bias towards equity investment.

#### **(vii) Legal and regulatory framework that supports the development of capital markets**

The purpose of a legal and regulatory framework is to strengthen and develop the debt capital market, to monitor it, and to provide investor protection. The framework is also important for the development of the debt capital market since it provides for an institutional organisation to enforce the rules. Many exchanges across the world have developed as self-regulatory organisations under the supervision of a national regulator.

##### **Debt capital market regulation should provide:**

- rules, processes and procedures to deal with listings of bonds, trading, trade capture, matching of trades, clearing and settlement, surveillance, dispute resolution, failed trades, default procedures, appeal processes;
- sanctions regarding market manipulation, and providing misleading information;

#### **Developing Capital Markets in Africa**

- licensing, monitoring, sanctions and penalties of inter-dealer brokers;
- licensing, powers, duties and responsibilities of self-regulatory organisation and supervisory bodies;
- ownership, transfer, pledge of securities and security depositories;
- internationally accepted accounting standards, practices and corporate governance;
- capital adequacy requirements;
- legislation to prevent money-laundering, fraud and other white collar crime;
- legislation to permit institutional investment into debt capital markets.

To encourage local and foreign investment into debt capital markets, governments have to ensure that the legislation and regulations that govern the debt capital markets comply with international standards. BESA has ensured that the rules of the exchange are G30-compliant. It continuously strives to mark its rules against international best practice.

#### **(viii) General debt capital market infrastructure**

It is essential to develop an appropriate infrastructure for debt capital markets which inter alia consists of:

- financial intermediaries or an inter-dealer broker network to support the bond market and promote liquidity;
- a platform for electronic trade capture and matching;
- an efficient settlement system that meets the BIS recommendations, e.g. DvP, T+3;
- a central securities depository to facilitate transfer of ownership of scrip;
- centralised distribution of market information; and
- a centralised pool of liquidity, e.g. central and transparent price dissemination from a central platform.

#### **7.3 The future of capital markets in Africa**

— African markets are faced with several constraints and impediments to their development and may find it difficult to become self-sufficient on their own. Several African membership groups such as SADC (Southern African Development Community), EAC (East African Community) and COMESA (Common Market of Eastern and Southern Africa) are promoting regional cooperation and integration of exchanges as a way to overcome some of the hurdles that constrain development. The SADC, for example, is striving towards an integrated trading platform for Africa, one central bank and one African currency by 2016.

African markets are fragmented and fledgling. Pooling capital through regional integration might help these markets attract private capital for infrastructure development since integration would diversify risk by creating a broader market, lower costs (the start-up costs of many African exchanges have been financed by foreign organisations, which has made trading expensive), give access to larger number of investors and enhanced liquidity through the creation of a bigger regional pool of trading. Regional integration is also a way for Africa to hedge itself against the economically destabilising effect of huge inflows and outflows of speculative foreign capital.

However, before regional integration is considered and implemented, some development needs to happen at national capital market levels. Educational programmes and campaigns generating public awareness of the benefits of investment and encouraging investment on exchanges are needed. Countries need to harmonise their monetary policies and regulatory frameworks, and to develop systems and infrastructure to facilitate trading and liquidity within their own countries. Successful development of national exchanges requires commitment from leaders, politicians and government, for development results from the enthusiastic participation of all potential issuers and other market participants.

Regional integration, even if eagerly sought, may become a long and delayed process. Putting in place the technology required for efficient on-exchange trading may be beyond the means of many smaller exchanges; such exchanges would clearly benefit from integrating with an exchange already possessing the necessary technology. Many African countries, though, have already spent a lot of money on development of their exchanges and regard them as symbols of national sovereignty and might be reluctant to submit to regional integration. And, as already mentioned, many African countries are subject to such deep poverty that development of capital markets are not a priority and regarded as irrelevant.

Africa is faced with immense opportunities to create wealth for its people, and African leaders realise they need to unify. Only thus will adequate development of Africa be achieved by mobilising resources through capital markets.

## 8 Developments and Trends in Mexico's Bond Market

Roberto Marino

### 8.1 Introduction

— The development of bond markets in Mexico has been a main issue on the agenda of policy makers throughout years. After suffering from severe macroeconomic instability and the banking crisis of the mid-nineties, Mexico has improved its macroeconomic performance by strengthening monetary and fiscal policies. Over the past decade, with the objective of developing more complete and stable domestic financial markets, the monetary authorities have undertaken a major revamping of financial market regulation to foster the healthy development of this sector.

The work in this area has sought to strengthen the financial sector and to reduce vulnerabilities to future financial crises. In the aftermath of the Mexican financial crisis, an excessive reliance on bank-intermediated financing, currency and maturity mismatches and difficulties in borrowing longer term, particularly in local currency were identified as mayor weaknesses of the system.

This paper reviews recent trends and progress in the development of the bond market in Mexico and the importance of bond market development for strengthening the institutional framework of the financial sector.

After presenting some stylised facts, the paper points out the macroeconomic aspects behind bond market development such as inflation and public finances. The second part touches on the role of institutional investors, the microeconomic aspects of bond market development and institutional and legal reforms that have strengthened the institutional framework of Mexico's debt markets. The last part presents some brief conclusions.

### 8.2 Stylised facts on Mexican bond markets

— In Mexico domestic debt markets remain small compared to industrial countries and other Latin American countries. Despite considerable growth over the last seven years the size of the Mexican government debt market is equivalent to about 17.3% of GDP.

During the last decade, Mexico implemented several reforms and actions to foster capital markets. From 2000 to 2007, total domestic bonds issued by the central government have averaged around 13.2% of GDP.

The average maturity of government debt increased from less than one year in 1990 to more than six years in 2007.

Nominal interest rates on 91-days CETES (Mexico's treasury bills) declined from 35% in 1990 to 8.01% mid June 2008, reflecting the decline in inflation from 29.9% to around 5.0% in May 2008.

Domestic bonds issued by private sector have recently gained dynamism. From 2000 to 2007, total private sector debt issued outstanding grew from 1.6% to 5.2% of GDP (it was 0.78% in 1990). In 2007, the issuance of long-term corporate debt amounted to 1.5% of GDP.

### 8.3 Macroeconomic developments

— During the 1980s, high and variable inflation and large public sector deficits and macroeconomic instability were important drivers behind the slow development of financial markets in Mexico.<sup>1</sup> Other contributing factors were a weak institutional framework in areas such as the legal and judicial systems, high transaction costs for issuing and trading bonds, and its impact on their liquidity, which is a fundamental deterrent for market development.

Some of the forces at work behind the growth of Mexico's debt markets at different stages of their development have been:

- To meet specific public sector borrowing needs in a more efficient manner through the non-intermediated debt market.
- To tap the wide range of investors available in the traded debt market.
- To reduce reliance on funding of fiscal deficits from the central bank.
- To sterilise large capital inflows associated with freer movement of capital worldwide.
- To generate positive externalities for other borrowers in terms of providing a pricing benchmark for other fixed-income securities. The yield curve for government debt provides valuable information about expectations of likely macroeconomic developments and about market reactions to monetary policy moves.

<sup>1</sup> For an account of this see G-20 Secretariat (2005).

## Developments and Trends in Mexico's Bond Market

- As a by-product of pension system reform which led to the growth of institutional investors.

### 8.4 Inflation and bond market development in Mexico

— An essential precondition for the development of debt markets is a low and stable inflation, which provides the adequate incentives for investors and facilitates the development of markets in fixed income securities. In contrast, high inflation and large fiscal deficits distort economic behaviour in favour of short-term speculative projects and discourage the long-term investment projects conducive to sustainable economic development.

In any economy, borrowers need to finance investment projects that are expected to yield returns over a long period. If long-term financing is not available from banks, as is the case in an inflationary environment, and corporate bond markets do not exist or are underdeveloped due to macroeconomic instability, firms may have to cope with the acquisition of long-term assets by incurring short-term debt, thereby creating a maturity mismatch. If firms compensate for the lack of a domestic bond market by borrowing in international bond markets, they may undertake excessive foreign exchange risk. Therefore, the undesirable consequence is that investment policies will tend to be biased towards short-term projects.

In the case of México, the initial step in the development of bond markets was taken back in 1978,<sup>1</sup> when the first government peso-denominated fixed rate security (CETES) was issued. This testifies to the relatively recent creation of Mexican bond markets. In the 1980s and 1990s, high inflation levels had important effects on the incipient bond market development (Figure 8.1). The most important result was that government debt could be issued only with very short maturities. Investors were reluctant to buy bonds with longer maturities. The yield curve could not be developed given the interest rate uncertainty for longer periods. In this environment, the main government debt instruments carried floating rates since investors would not demand fixed rate instruments due to the high level of uncertainty and volatility. Moreover, the government had to develop different type of indexed instruments to cope with monetary instability. This was the reason behind the creation of dollar indexed bonds (TESOBONOS), real interest rate bonds (PAGAFES), and bonds linked to the price of oil (PETROBONOS).

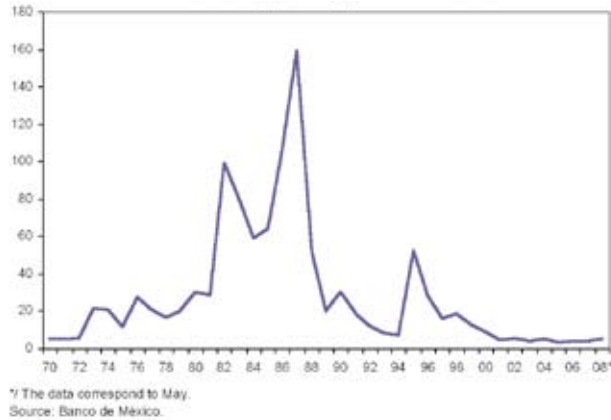
As is well known, inflation reduces the demand for local currency denominated bonds in general. For instance, in the aftermath of the 1994-95 macroeconomic crisis in Mexico,

<sup>1</sup> For an account of the development of the CETES see Mancera (1992).

the government in its efforts to tap the bond markets and lower the cost of financing the deficit launched the UDIBONOS which are inflation linked bonds and, therefore, pay a real interest rate.<sup>1</sup>

Figure 8.1

**Mexico: annual inflation rate**  
(in percentage)



Therefore, increased demand for government fixed interest debt instruments has been a major by-product of the more stable macroeconomic environment since the late 1990s. Fixed rate instruments accounted for only 2.68% of GDP in March of 2000, rising to 12.82% of GDP at end 2007 (Figure 8.2). The Bank of Mexico's monetary policy framework has led to a sustained reduction in inflation, with the rate of increase in the consumer price index declining from 52% in 1995 to 4.95% in May 2008.

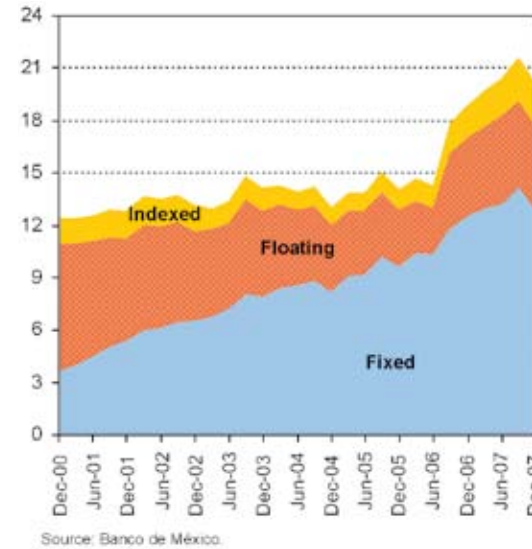
Since the late 1990s, with the progress in achieving low and stable inflation, the Mexican government has fostered the development of the peso bond markets. Its aim has been to promote more efficient financial markets by generating a range of market yields that reflect the opportunity cost of funds at each maturity in the local currency. Clearly, this is an essential element for market participants in order to make efficient investment and financing decisions.

<sup>1</sup> See appendix tables with the description of Mexican government bonds.

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Figure 8.2

**Public sector debt**  
(by type of interest rate, percent of GDP)



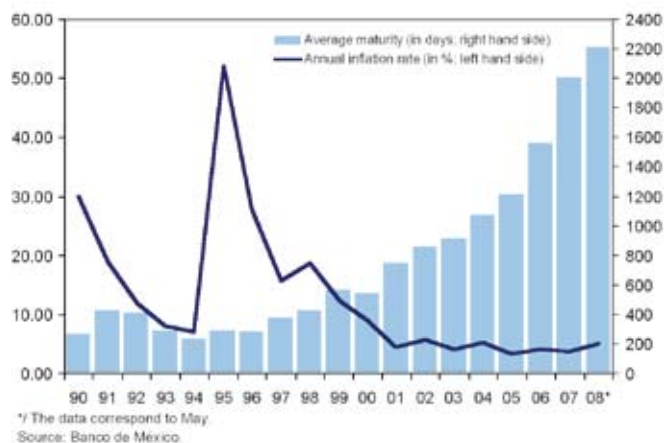
The maturity of domestic government debt has improved considerably (Figure 8.3). The average maturity of federal government bonds rose from less than one year in 1994 to more than six years in 2008. During episodes of severe macroeconomic imbalances in the 1980s and early 1990s, the government was able to issue only very short-term bills, sometimes with maturities of no more than seven days.

In 1999, the government debt yield curve extended to only 1 year (Figure 8.4). The year 2000 is a significant benchmark because it was the first time that government bonds denominated in pesos and with a fixed rate with a 5-year maturity were issued. Since then, the yield curve in Mexico has been extended in several steps. In July 2001, it was extended to 10 years, in October 2006, to 20 years and in April 2007 to 30 years. Due to the fact that the government bond yield curve helps to identify the economy-wide opportunity cost of funds for investors as well as savers, plays and serves as a pricing benchmark for other domestic debt instruments, the placement of private bonds in Mexico has gained certain

dynamism since 2000. These considerations partly explain why in a cross-country context the growth of private sector debt issuance and the growth of bank credit to the private sector are positively related. Both variables are affected by the same factors.

Figure 8.3

### Average maturity of government domestic debt



Government debt instruments: Cetes, bondes, bondes d, bonos and udibonos.

In particular, the existence of tradable instruments based on the Mexican peso yield curve allows market participants to hedge their exposures: fixed-rate Mexican peso liabilities can be converted into floating-rate liabilities, and/or foreign exchange exposures can be transformed into local currency exposures via the use of foreign exchange forwards or cross currency interest rate swaps.

Arbitrage opportunities between foreign and local currency debt markets can also be exploited to lower the cost of borrowing. At a more general level, a local currency yield curve contributes to the stability of the financial system.

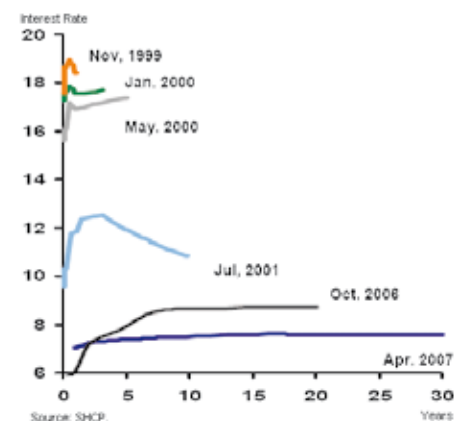
Since the adoption of a freely floating exchange rate system in Mexico in 1994, the authorities have sought to promote a liquid and deep exchange rate market in order for market participants both foreign and domestic to be able to exit the market in an expeditious manner. Mexico rapidly developed instruments to hedge exchange rate risk, such as the

## Developments and Trends in Mexico's Bond Market

currency futures and options on the Mexican peso. There are now well-developed financial markets for such instruments both in Mexico and abroad, including organised markets as well as OTC. Mexican peso futures trade at the Chicago Mercantile Exchange. The volume of contracts traded in this market has increased steadily. The Mexican peso is one of the most actively traded currencies from emerging markets.

Figure 8.4

### Yield curve



## 8.5 Public finances and development of government debt markets

Financial system development depends to a great extent on a stable macroeconomic environment. A necessary condition for a stable macroeconomic environment are sound public finances. The lessons from the recurrent macroeconomic crises suffered by Mexico from 1976 to 1995 have taught us that a solid macroeconomic framework is essential for the development not only of bond markets but in general of the monetary system, the banking system, the securities and other capital markets. In general, an important lesson from the period of macroeconomic stability from 1996 to 2008 is that financial development occurs naturally if a country maintains its public finances and macro balances in order and strengthens the institutional framework that supports the financial system.

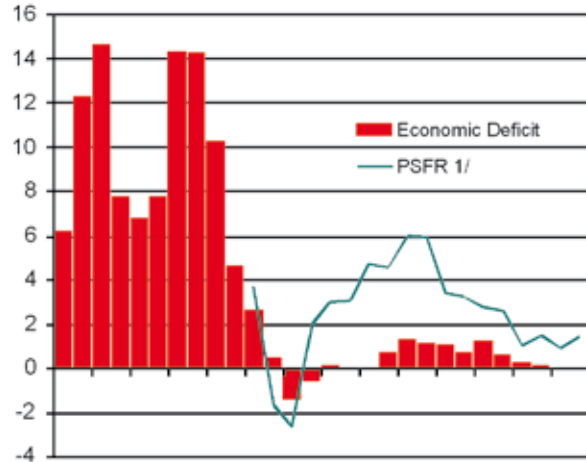
In recent years, the reduction in the public sector fiscal deficit (Figure 8.5) has meant



that the private sector has had more room for its own financing. Indeed, the government has not crowded out the private sector from the bond markets. The trend in government debt levels shows that from 1997 to 2007 it has hovered around 20% of GDP. This seems very favourable when compared to the developments in the eighties when in 1986 government debt amounted to 90% of GDP (Figure 8.6). Moreover, foreign debt has declined substantially since 1995 when it amounted to 32 % of GDP contributing to a stronger financial government position (Figure 8.7). The interest rates paid on foreign debt, in particular spreads and its maturity, has also improved significantly since 2000, and this has permitted other private issuers to obtain resources at more competitive rates.

Figure 8.5

**Public sector fiscal deficit**

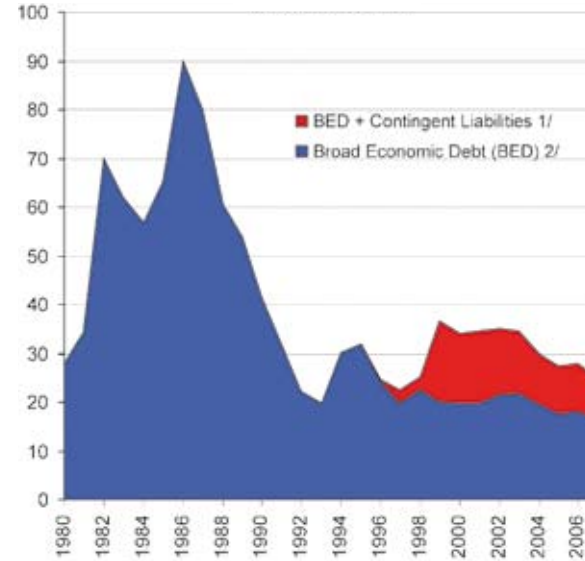


1/ Public Sector Financial Requirements  
Source: Banco de México.

**Developments and Trends in Mexico's Bond Market**

Figure 8.6

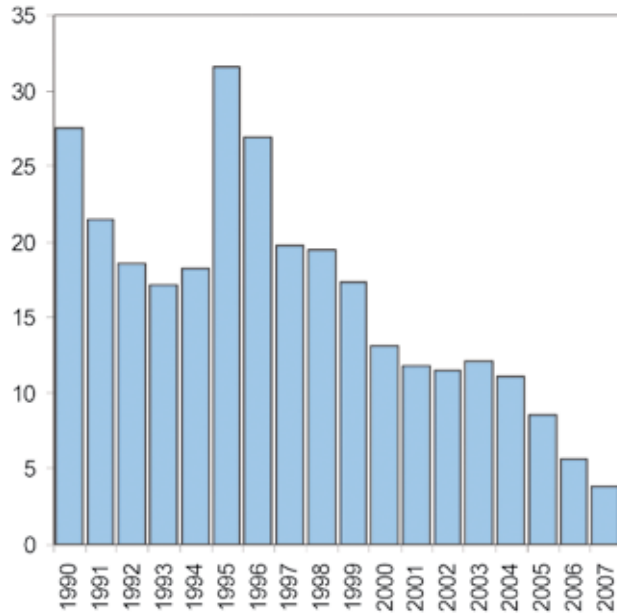
**Public sector total debt**  
(percent of GDP)



1/ Since 1994 includes IPAB, FARAC, direct PIDIREGAS and other financial assistance programs  
2/ Published by Banco de México; includes central government debt, non-budgetary public sector, developing banks and non-banking public sector financial intermediaries.  
Source: Banco de México.

Figure 8.7

**Mexico: total external debt**  
(percent of GDP)



Sources: SHCP and IMF.

**8.6 Growth of institutional investors**

As pointed out by the G8 Action Plan for Developing Local Bond Markets in Emerging Market Economies and Developing Countries (G8 Finance Ministers 2007), “Broadening and diversifying the investor base is one of the most important steps towards deepening local bond markets in EME. The development of the domestic investor base is a priority that can be fostered by improving the regulatory environment and lowering barriers for foreign investors.”

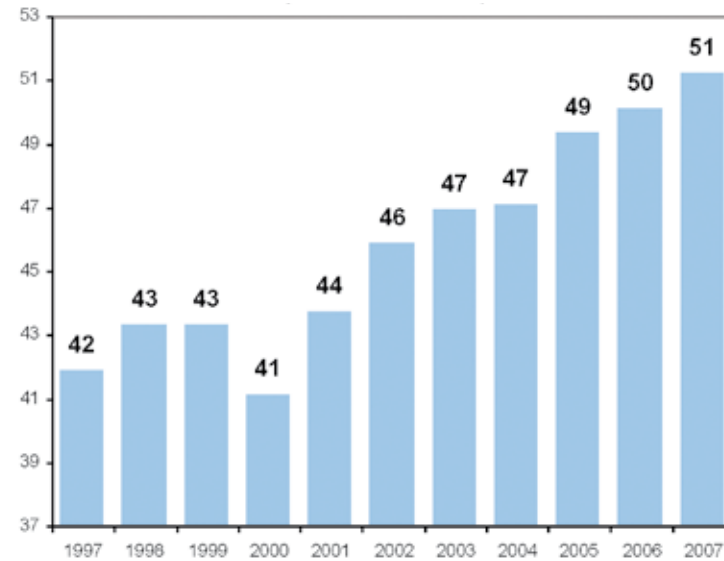
Accordingly, it is recognised that the expansion of the domestic institutional investor base depends to a large extent on the development of pension systems, mutual funds and

**Developments and Trends in Mexico's Bond Market**

insurance markets. All these actors also contribute to increase financial savings in the economy. Financial savings in Mexico had reached an earlier peak in 1994, but declined substantially with the 1994-95 financial crisis (Figure 8.8). From 2000 to 2007, financial savings have increased by 10 percentage points of GDP. However, they are still low when compared to the levels observed in developed countries.

Figure 8.8

**Financial savings\***  
(percent of GDP)



\* / M3a minus coins and bills.

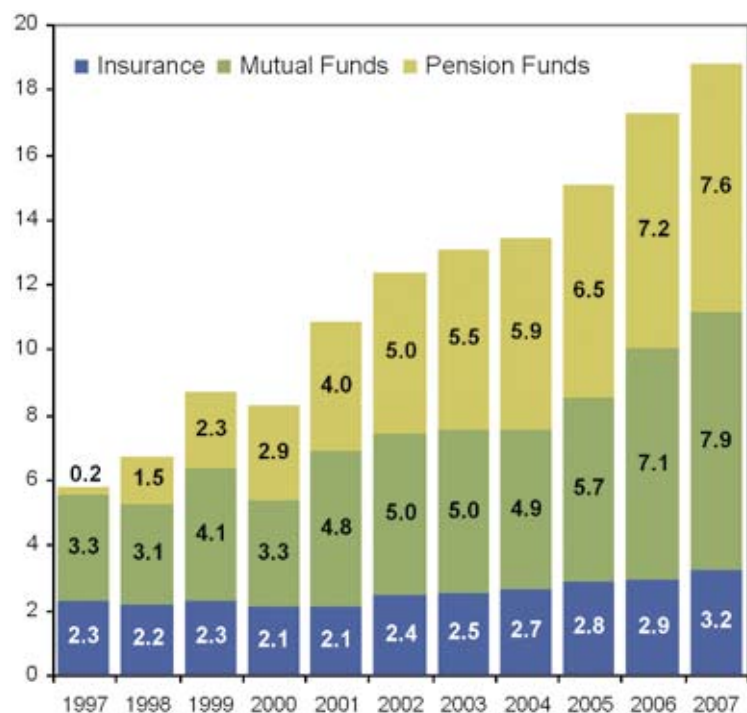
Source: Banco de México.

In Latin America, a key factor behind the rapid development of domestic bond markets has been the growth of assets that are managed by institutional investors, both domestic and foreign. In 1997, the government in Mexico implemented a sweeping reform of its pension system for workers in the private sector (pension schemes for public sector workers were until very recently reformed). The existing defined benefit system was replaced by a compulsory defined contribution plan that is fully funded by individual accounts managed

by private administrators known as Administradoras de Fondos para el Retiro (AFORES). Indeed, pension reform provided the foundation to promote the institutional investors resource base. Assets under management for pension funds have grown from 1.5% GDP in 1998 (the year after the pension reform), to around 7.6% of GDP in 2007 (Figure 8.9). Assets managed by mutual funds have increased from 3.3% of GDP in 1997 to 7.9% in 2007.

Figure 8.9

**Institutional investors**  
(percent of GDP)



Source: Banco de México.

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At the end of 2007, private bonds in pension fund portfolios represented 30% of the total portfolio. Portfolios managed by AFORES are heavily invested in government securities. By December 2007 this figure was 70 down from the 93% registered in 2000.<sup>1</sup>

When the fully funded pension system began operations, the authority that regulates the AFORES, the CONSAR, established quantitative limits on the type of instruments in which AFORES could invest their resources. In particular, at least 65% of AFORES' portfolio had to be invested in government bonds, leaving a maximum investment of 35% in private instruments from which only 10% could be invested in instruments issued by financial firms. In practice, investment in government bonds has always exceeded the legal minimum.

Between 2002 and 2003, the rules governing AFORES' investment regime were liberalised. Quantitative limits by instruments were removed, the range of eligible issuers was broadened (equity indexes and corporate bonds), and limits for credit rating were introduced. However, these changes have only gradually affected the concentration of investments in government debt.

**8.7 Microeconomic aspects in the development of debt markets**

— Bond markets become more efficient when information is readily available. The establishment of processes, rules and regulations can promote the amount of information that bond markets receive and process, and can be instrumental in disseminating this information among actual and potential investors.

Indeed, information asymmetries are a deterrent to bond market development particularly for the corporate debt market. Valuable information will of course be produced by the market. But financial regulators have to make sure that the playing field is even and that insider information is kept to a minimum. Many people hold that if information is really worthwhile, it will come out automatically through market processes. But historically, capital markets have not automatically generated needed information. Information certainly has value, but in capital markets people who possess inside information, as a matter of self-interest, seek to retain it for their own use.

Placement of corporate bonds requires an improved corporate disclosure of its accounts and activities. This is good overall because it spreads information widely and thereby serves to expand financial markets while making them fairer.

<sup>1</sup> See Banco de Mexico (2007a, p. 40) and Boletín Estadístico AIOS.

Any successful capital market operates on the basis of confidence in their openness, honesty, and fairness. Market participants seek these attributes that monetary authorities, particularly regulators and supervisors should promote through greater transparency and disclosure. In this area, the Mexican financial authorities have taken many steps to improve the information that is provided in relation to the issuance of Bonds:

**Issuance Calendar:** Announced quarterly by the Federal Government, specifies the instruments to be issued and placed in each weekly auction. Announced jointly with public entities issuance (such as PEMEX).

**Auction Rules:** The Government Securities Auction Rules were modified in 2002, in order to improve the efficiency of the allocation process.

**Issuance Reopening Policy:** Policy focused on creating faster size benchmark and minimise the number of securities.

**Strips Market:** Allows market participants to strip any of the existing fixed rate government securities, enhancing the depth of secondary markets.

**Exchange Programme:** Was implemented to reduce the high levels of government cash balances needed to redeem bonds close to maturity by exchanging fixed rate bonds.

In 2000, the government introduced a market-making<sup>1</sup> scheme for government debt with the aim of increasing liquidity in the secondary market of domestic debt, introducing best international practices, promoting investment in government instruments and promoting the derivatives market.

Market makers committed themselves to bid for a minimum amount of securities at primary market auctions, to make two-way quotes at all times for a minimum amount of fixed income securities and to maintain a cap on the bid-offer spread. In return for those obligations, market-makers were given the right to participate in a “green shoe” auction that follows the public auction, hold regular meetings with federal debt management authorities and have access to the Bank of Mexico’s securities lending window (standing repo facility).

The availability of market-determined prices is an essential element for the development of secondary markets and the valuation of intermediaries’ portfolios. The monetary authorities have worked together to ensure that market participants have easy access to

<sup>1</sup> A market maker is a firm who quotes both a buy and a sell price in a financial instrument or commodity, hoping to make a profit on the turn or the bid-offer spread.

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daily market prices for tradable fixed income securities. An important element has been the creation of private price vendors that are in charge of compiling market information from brokers and disseminating it to broader market participants. In general, price vendors contribute to guarantee fair pricing, to greater transparency of portfolio valuations of banks/ institutional investors, and foster the development of local market indexes.

In 2005, the government launched a Strips Market Operation Programme, which allows participants in the government bond market to strip and reconstitute any bonos and udibonos. The regular reopening by the government of issues with semi-annual coupon payment dates allows for the individual interest components of instruments with different maturities to be perfectly interchangeable. The availability of long-dated zero coupon bonds should prove particularly attractive to institutional investors with long investment horizons. It should also help enhance the depth of the secondary market.

### 8.8 Foreign investor participation in local markets

— Mexico has recognised that foreign investor participation in local bond markets brings several benefits such as:

- diversification of the investor base;
- increased demand for long duration instruments;
- technology transfer to local participants;
- greater interest from analysts and more quantity/quality research focused on local market strategy; and
- more active foreign investors operations in the market, which helps to improve liquidity and reduces market volatility.

Several elements have fostered the participation of foreign investors in Mexico’s local debt market. An important benchmark was back in 1998 when Mexico’s external debt reached an investment grade rating. Some investors foresaw that this factor would produce a decline in rates on peso denominated debt, specially in long dated securities with fixed rates and sought to benefit from the potential capital gains.<sup>1</sup> Other factors have also been instrumental such as the issuance of relatively large amounts of a single security and the formation of a group of market makers on these securities.

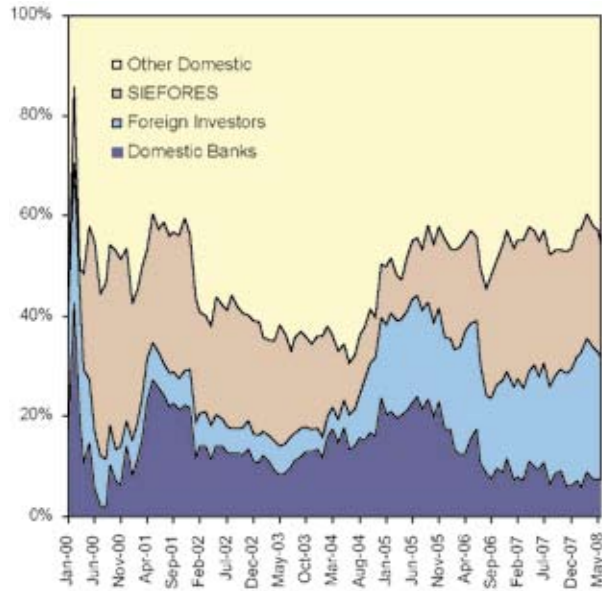
The foreign interest in Mexico’s longer-term government bonds rose sharply since 2004, as the local market started to realise the benefits from ongoing reforms to establish

<sup>1</sup> For details see Castellanos and Martinez (2008).

a credible benchmark yield curve, improve transparency and promote market liquidity. Foreign investment in government bonds increased from USD2.1 billion in 2003 to USD20.2 billion in December 2007 (Figure 8.10).<sup>1</sup>

Figure 8.10

**Outstanding domestic public bonds by holder**  
*long-term fixed yield bonds (Ms)*



Source: Banco de México.

**8.9 Corporate debt market**

In Mexico the corporate debt market has been supported to a large extent by developments in the government bond market, and has followed the overall patterns of financing for the private sector. Indeed, government bonds represent a benchmark for risk-free debt of a comparable maturity.

<sup>1</sup> See Banco de Mexico (2007b, p. 167).

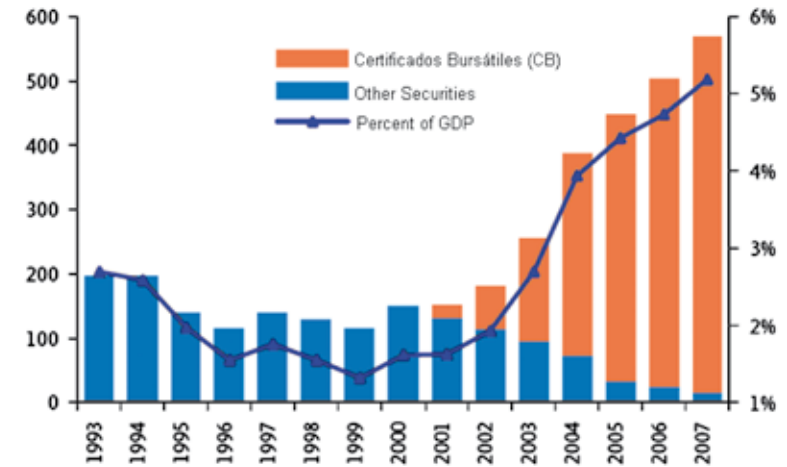
**Developments and Trends in Mexico's Bond Market**

It has been pointed out that governments in emerging economies should have as a policy objective to promote domestic corporate debt markets so as to avoid concentrating intermediation solely on banks. In particular, it is argued that a developed corporate bond market can help avoid a credit crunch during periods of weakness in the banking sector. Moreover, proponents stress that it should potentially lower the risk-adjusted cost of borrowing, reduce the overall level of risk by spreading it across many participants, and to entities best placed to bear the risk.

Some obstacles to the development of the corporate bond markets are related to the difficulties in estimating the probability of default and the expected recovery from the liquidation or sale of the firm. Moreover, in the event of default, the country needs to have an institutional framework that requires firms to have credible accounting, auditing and disclosure practices, and reliable bond ratings.

Figure 8.11

**Outstanding corporate debt**  
*(thousand Mexican Pesos, percent of GDP)*



Source: MEXBOL.

The challenge, therefore, is to have clear laws setting out the bondholders' rights in the event of default, a strong enforcement mechanism for such rights and an efficient judiciary to oversee the enforcement of creditor rights.

The market for corporate debt in Mexico (private firms, states and municipalities, public sector enterprises) has been very dynamic in recent years. The outstanding debt has increased from 1.6% of GDP in 2000 to 5.2% of GDP in 2007 (Figure 8.11), a growth of 300% in real terms, although from a low base. Around 87% of the outstanding debt corresponds to issuance of long-term Certificados Bursátiles (CB).<sup>1</sup>

Indeed, a significant step in the development of corporate debt markets in Mexico was the introduction of CB. The flexibility of these credit titles makes them very attractive to issue and hold. CB account for the entire medium-term and long-term issues since 2004. Among their main characteristics are:

- credit titles for circulation in the securities market;
- can be issued by private companies, public companies and local governments;
- can be issued with any maturity and return;
- their coupons can be negotiated separately;
- they are operated in the debt market rather than in the capital market;
- their issuance does not require a protocol, thus reducing costs.

CB have largely substituted two other instruments: CPOs (debentures), that protected investors excessively and were costly to issue, and Pagarés (medium-term notes), that were easy to structure but provided no investor protection.

## 8.10 Reforms to financial market legislation

— Since 2001, the Mexican financial authorities have made important changes to financial market legislation.<sup>2</sup> Some of the most important reforms are:

- In 2000, the reform to the bankruptcy law and the introduction of a more flexible legislation regarding credit guarantees which sought to improve the process of recovery of collateral including the reduction of the costs associated to it.
- In 2001 and 2005, the government undertook important reforms to the securities market law (SML). Its aim was to improve the corporate governance of public firms, the rights of minority shareholders, and the process of information disclosure.

<sup>1</sup> See SHCP (2008).

<sup>2</sup> See G-20 Secretariat (2005) and appendix with the description of recent legal reforms.

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- The Mutual Funds Law was also reformed in order to increase flexibility in portfolio investment, and to permit the development of a wide variety of collective investment vehicles which must clearly state in their prospectus the structure and investment objectives.

### 8.11 Conclusions

— As Mexico's inflation performance has improved, as macroeconomic imbalances have been eliminated and as a stronger legal framework has been developed in the financial sector, local bonds markets have prospered. Strict monetary and fiscal discipline has translated into an increase in the size and average maturity of domestic debt and a decrease its dependence on foreign debt. With monetary stability, market participants are more willing to hold securities with longer maturities and a nominal yield. Since 2000, the government has successfully issued 3-, 5-, 10-, 20- and 30-year fixed coupon bonds and decreased the share of floating rate issues in the outstanding stock of government debt.

The main lesson is that in order to develop local currency bond markets countries need to improve policy performance and strengthen institutions. Deep and liquid bond markets are conducive to a reduction in currency and maturity mismatches and therefore lessen the likelihood of future financial crisis. Moreover, competition to bank financing from bond financing should contribute to reduce financial costs for firms and render the economy more efficient.

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## Appendix 8.1

### Key milestones in the reform of the financial sector (2001–2006)<sup>1</sup>

- **Credit Institutions Law and Financial Groups Law.** Aimed at channelling a greater proportion of national savings through the financial system; fostering long-term savings; strengthening banking regulation and supervision; promoting transparency and competitiveness; fostering new financial products and services; and strengthening the credit institutions’ corporate governance; and broadening the range of services offered.
- **Amendments to the Rules of Capitalisation Requirements for Multiple Banking Institutions and Development Banks.** Aimed at advancing the convergence between banking regulation and international standards.
- **Amendments to the Miscellany on Credit Collateral.** Aimed at promoting bank lending by reducing transaction costs; widening the options to secure credit transactions; granting greater judicial certainty to creditors and borrowers; and promoting an orderly and sustainable recovery of defaulted bank loans.
- **Credit Information Institutions Law.** Aimed at regulating the establishment and operation of credit information societies; and ensuring a proper access to credit information, while respecting valid privacy concerns.
- **Credit Institutions Law.** Established a prompt corrective regime consistent with international best practices.

<sup>1</sup> Sources: “Institution Building in the Financial Sector,” G20, 2005; and FSAP Update team discussions with the Mexican authorities.

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- **Law of Transparency and Ordering of Financial Services.** Regulates commission fees, interbanking fees and other aspects related with the provision of financial services; prohibits discriminatory practices between credit institutions and between users; establishes transparency requirements in contracts and check account balances, credit and debit cards; foresees transparency mechanisms to allow clients of credit institutions to know the carried out transactions and their fees; and establishes sanctions for breaches of the law.
- **Organic Law of the Federal Mortgage Society.** Aimed at increasing the housing supply for wage earners and other workers; promoting the construction and acquisition of housing, preferably low-income; and fostering mortgage securitisation and increasing credit supply for housing construction and acquisition.
- **Popular Savings and Credit Law and Organic Law of the Bank of National Savings and Financial Services.** Strengthened the institutional and regulatory framework of popular savings and credit activities, increasing access of low-income sectors and small enterprises to the formal financial sector; established the conditions to foster the development of a popular savings and credit system; created the Bank of National Savings and Financial Services, which offers training and consulting services to popular savings and credit entities, and promotes cost reduction through centralised provision of services subject to economies of scale.
- **Organic Law of the Financiera Rural.** Aimed at supporting the development of agriculture, forestry, fishing and other rural activities. The *New Financiera Rural* replaced the former Rural Credit Bank (BANRURAL). *Financiera Rural* does not take deposits from or issue debt to the public, it is financed by the government through the budget with all appropriations, allocations, financing and guarantees properly and explicitly accounted for in the budget and approved by congress.
- **Amendments to the Securities Market Law (2001).** Aimed at promoting the development of the securities market by making it more transparent, efficient and accessible. The 2001 amendments enhanced information, disclosure, minority stockholders rights; improved corporate governance practices; introduced a new versatile instrument (*certificado bursatil*), a security note that can be issued by private and public debtors; incorporated the central counterparty (lender and borrower rights and obligations in securities transactions) to the market structure, reducing systemic risk in the securities market; introduced a consolidated regime applicable to public companies; redefined the functions and responsibilities within the corporate structure; introduced audit and corporate governance committees with independent Board members; included clear

mandates and fiduciary duties for Board members, managers and external auditors, and further improved minority shareholder rights. It also promoted access to abroad securities market to small- and medium-size firms through new corporate vehicles.

- **Mutual Fund Law.** Aimed at facilitating access to the stock and debt market by a wider range of investors. It improved mutual funds corporate governance practices; allowed for a mutual fund to change from one mutual fund operator to another, to promote competition and to reduce investment manipulations not associated to maximising the investors' returns; allowed for a more flexible investment regime; and prohibited banks and investment banks to act as mutual fund operators but allowed them to carry out this function by establishing a subsidiary.
- **Amendments to the Law of Mutual Insurance Institutions and Associations and the Federal Sureties Institutions Law.** Aimed at strengthening the institutional and regulatory framework for the activities of insurance institutions; increasing the efficiency of insurance institutions' operations; consolidating the insurance sector's legal framework with that in place for the financial sector; and developing best corporate practices among intermediaries. Recently, a new amendment introduced the Mortgage Credit Insurance (*Seguros de Crédito a la Vivienda*) and Financial Warranty Insurance (*Seguros de Garantía Financiera*).
- **Modernisation of the legal framework that applies for Sofoles, leasing and factoring companies.** Aimed at enhancing competition in the credit market, reducing administrative costs, and fostering the legal framework that applies to financial leasing, factoring and credit. This reform included the deregulation of leasing and factoring activities.
- **Amendments to the Income Tax Law.** Established a fiscal regime that allows for the development of two investment vehicles, the FIBRAS (*Fideicomiso de Infraestructura y Bienes Raíces*), a vehicle similar to the Real Estate Investment Trusts in the US, and private equity vehicles.
- **Amendments and Additions to the Retirement Savings System Law.** Opened the possibility for more workers to access the benefits of the New Pension System, including workers not registered in the social security institute (workers affiliated with the social security system for public sector employees, state and municipal governments, and public universities or working independently); allowed complementary contributions for retirement for all workers; and allowed investing, up to a limit of 20%, in foreign securities.

## Developments and Trends in Mexico's Bond Market

- **Payment System Reforms.** Revamped the legal framework by enacting a Payment Systems Law, in order to ensure payment finality and improve the execution of collateral and the oversight powers of the BOM; eliminated remaining credit risks in the large value payment systems, in line with the BIS CPSIPS; improved the quality of collateral associated with BOM's credit; and consolidated the intraday credit into one payment system (from the previous three systems).
- **New Securities Market Law (2005).** Established a regulatory framework in line with international standards covering several aspects of the market, such as disclosure of information to investors, minority rights and sound corporate governance. This framework supports the access of mid-sized corporations into the securities market, consolidates the rules applicable to issuers, in order to improve their organisation and operations, through modern corporate structures and revamped liabilities. The new law updates the legal framework applicable to securities firms and those financial entities that participate in this sector, such as securities depository entities and central counterparties, among others. The law also seeks to update the regime of criminal offences and redefine the powers of financial authorities in order to make their functioning more efficient. The CNBV is enabled to inform to the general public the existence of inquiries and sanctions imposed.



# 9 Developments and Trends in Bond Markets – The Brazilian Experience

Carlos Serrão

## 9.1 Introduction

— In recent years, Brazil has seen significant advances in terms of economic stability, largely as a result of the implementation of its inflation target system, adoption of a tighter fiscal discipline and a huge adjustment of external accounts. Simultaneously there is an ongoing effort to improve financial infrastructure. Despite the size of the Brazilian bond markets, there is still a lot of work to do in order to consolidate these markets in Brazil. This paper tries to describe what are the main initiatives and efforts being developed in order to develop Brazilian Bond markets and describes some of the main challenges to this development.

## 9.2 Macroeconomic overview

— Brazil's macroeconomic performance which has been erratic during the last decades finally reached the foundations for a sustainable growth. Having posted anaemic growth in 2001–2002 and then stagnated in 2003, the economy has grown briskly after the first half of 2004 with an average growth is 4,5% in the last five years. Domestic demand is strengthening, taking over from a period of strong increase in exports. Private consumption is recovering, pushed by the expansion of credit and improvements in labour markets. Formal unemployment is trending down and real wages are on the rise. An improving climate for business is providing impetus for private investment (investment increased by 13,7% in 2007), which is still showing signs of recovery.

The measures implemented by the recent administrations have contributed to gradually restoring confidence, which had faltered during the last decade and during and in the aftermath of the presidential election in 2002. These measures have succeeded in stabilising foreign exchange markets, reducing sovereign credit risk, and taming inflation. Those measures are based on the three following pillars: fiscal commitment, reduction of the external vulnerability and inflation control and economic stability.

The implementation of consistent macroeconomic policies and the comfortable global

liquidity fostered record inflows of capital to the country, while the performance of exporting companies and the dynamics of global growth resulted in exports, trade balance and current account improvements. The remarkable external adjustment since the floating of the real in 1999, with continued strong export performance and the ensuing turnaround in the external current account deficit is making the economy less dependent on foreign financing and, consequently, more resilient to external shocks and changes in market sentiments. In 2007, Brazil recorded the fifth consecutive yearly current account surplus. This paramount series in the economic history of the country was mainly driven by the significant trade results in the period, which breached USD40 billion from 2005 to 2007, more than offsetting the increase in net remittances of services and income. Although expecting a reduction of the trade balances in the near future, at least until 2010 foreign direct investments (FDI) more than compensate eventual current account deficits. The financial account of the balance of payments similarly reflects this improvement. Capital inflows were well distributed among FDI, portfolio investment and others. FDI net inflows reached a record high in 2007, USD34,6 billion, more than twofold the values observed in 2002. Among foreign investment in portfolio, the main net inflows were related to stocks and fixed income securities. The developments of Brazilian stock market, the strengthening of corporate governance rules, the stimulus to stock capitalisation through IPOs and the country sound fundamentals contributed for a record high of foreign net inflows in Bovespa in 2007 (USD24,6 billion revenues). Net inflows of foreign investors in domestic public debt strengthened after 2006, with the publication of Law 11312, of June 27, 2006. This new regulation reduced income tax rate for foreign investments to zero, stimulated external capital inflows, totalling USD11 billion in 2006 and USD20,5 billion in 2007. Due to this scenario, a significant change in the Brazilian external position, with elevation of international reserves to USD198,1 billion in June 2008 from USD16,3 billion in 2002 (excluded IMF loans) and a reduction of public sector external liabilities with the anticipation of external payments (amortisation of IMF loans and redemption of Brady Bonds as well as a buyback programme implemented by the National Treasury), led to a sharp improvement of Brazilian external sustainability indicators.

Throughout this period the country has moved in the direction of credible policies that govern the outcome of the budget process and constraints that contribute to providing incentives and constraints to promote fiscal discipline and increase transparency. The hallmarks of these measures include the Fiscal Responsibility Law and the impressive primary surplus targets achieved between 1999 and 2005. This led to a downward trend of the ratio of net public sector debt to GDP from 52,4 in 2003 to 40% in 2008. The Central Government, Federal Public companies and Regional Governments' average contribution to the primary surplus was 2,21; 0,57 and 0,84 p.p of the GDP in the last 8 years, respectively. In 2007 it was 2,33; 0,47 and 1,17 p.p., respectively. The Budgetary Guidelines Law for 2008 establishes 3,8% of GDP for the Primary Balance.

## Developments and Trends in Bond Markets – The Brazilian Experience

In 1999, the Banco Central do Brasil (BCB) set up a fully-fledged institutional framework for inflation targeting following the floating of the real. Although targets have been missed a few times, this policy regime is working well and has been instrumental in anchoring medium term inflation expectations, particularly in situations of financial stress. In a volatile macroeconomic environment, monetary authorities have been successful in communicating to markets their policy response to external shocks, while acting to mitigate their secondary effects on prices and economic activity. Due to these efforts, inflation is following a downward trend and is below the upper limit of the band since 2004 and below targets since 2006. Median IPCA inflation expectations for 2008 and 2009 compiled BCB's Investor Relations Group (GERIN) are above the 4,5% target (6,08% for 2008 and 4,78% for 2009). This recent surge in inflation in Brazil is a consequence among other factors of a mismatch between the expansion of aggregate supply and demand, global food and commodities prices behaviour and important time lags in the transmission of monetary policy but the Central Bank is implementing an adjustment of the basic interest rate in order to reduce the risks for the concretisation of a benign inflationary scenario. This adjustment of the monetary policy stance is a prompt answer to the increased risks and is aimed to help to sustain economic growth which requires stability, predictability and a consequent extension of the planning horizon for businesses and families, as well as to protect the substantial increases in real income of workers observed in recent years.

The consolidation of macroeconomic stabilisation, which will require vigilance of the authorities, is of paramount importance in the years to come, anchored by a prudent monetary-fiscal policy mix in pursuit of continued low inflation and a steady reduction of public indebtedness. In this context mode, modern and efficient domestic market structures make important contributions to financial intermediation, financial stability and sustained economic growth. Deep and well-functioning local currency bond markets are key in this respect as the development of local currency bond markets create conditions to the reduction of foreign exchange risks to local borrowers (especially the National Treasury) and also reduce the local companies dependency on loans and broaden opportunities of investment financing.

### 9.3 Public debt management

— The National Treasury strategy to improve Brazilian domestic debt profile has reached impressive results in recent years, with significant advances in financing standards and an important reduction of risks inherent to the public debt negotiator.

Public debt management's main objective is to minimise long-term financing costs,

while ensuring the maintenance of prudent risk levels and contributing to the smooth operation of the public bonds market. In other words, public debt management’s focus is on mitigating rollover risks in “bad” times and reducing foreign exchange and interest rate volatility in “good” times. Subject to market conditions, the National Treasury main guidelines are the following:

- lengthening of average DPF maturities and reducing the percentage of DPF maturing in 12 months;
- gradual substitution of floating-rate bonds for fixed-rate or inflation-linked bonds;
- improvement of the external liability profile through issuance of benchmark bonds, early redemption programme and structured operations;
- incentives to the development of the interest rate term structures for federal public bonds on domestic and external markets; and
- expansion of the investors base.

A thorough analysis of this strategy reveals that for the fixed rate securities (LTN- Letras do Tesouro Nacional and NTN-F- Notas do Tesouro Nacional série F) the National Treasury is aiming the following: focusing on increasing the average issuance term of these bonds; and, on the Issuance of shorter term LTN, with benchmarks of 6, 12 and 24 months, while maintaining 3, 5 and 10 year NTN-F. For the inflation linked bonds (NTN-B- Notas do Tesouro Nacional série B and NTN-C- Notas do Tesouro Nacional série C), the principal aim of the National Treasury is the issuance of 3, 5, 10, 20, 30 and 40-year bonds for NTNB (linked to IPCA). Net redemptions of floating-rate bonds-LFT, with new bonds issued maturing in the third month of each quarter and the lengthening of the average issuance term of these bonds are the main objectives of the National Treasury for floating rate bonds.

In doing so, the debt dynamics would be less vulnerable to changes in market sentiment, allaying concern over the sustainability of Brazil’s debt dynamics and, thereby contributing to further reducing risk premia. The National Treasury has undertaken a great deal of reforms to reduce risks and the lengthening the average maturity of Brazilian public debt. And this effort already showed some signals of the success of this strategy. Table 9.1 on page 109 shows the lengthening of debt maturities.

Figure 9.1 aside shows a change in the profile of the public debt (gradual substitution of floating-rate bonds for fixed-rate or inflation-linked bonds). The effort of the National Treasury caused a reduction of the participation of LFT-zero coupon floating rate bill pegged to one-day term rate (SELIC rate).

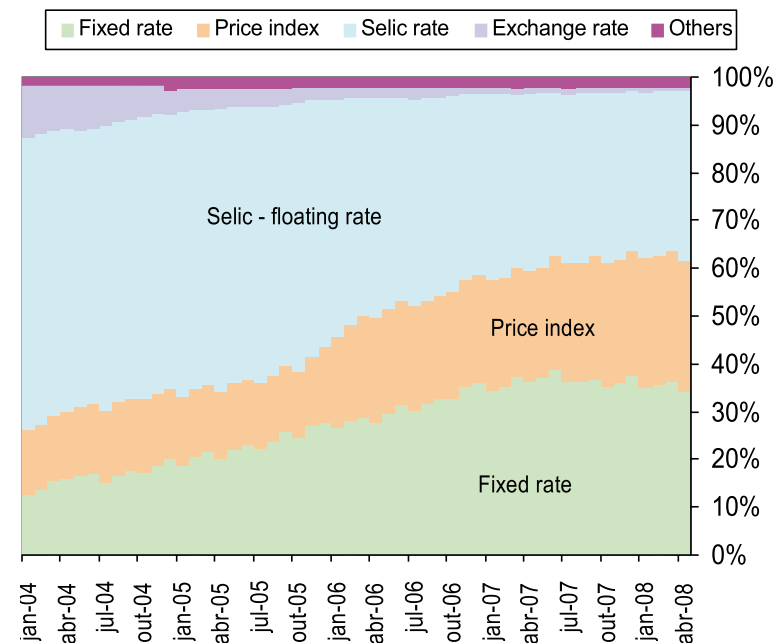
## Developments and Trends in Bond Markets – The Brazilian Experience

Table 9.1

Indicators	2003	2004	2005	2006	2007	feb-08
Stock of DPF held by public (R\$ billion)	965,8	1.013,9	1.157,1	1.237,0	1.333,8	1.345,4
Average Maturity- Federal Outstanding Debt(months)	39,0	35,3	33,3	33,3	39,2	40,0
% maturing in 12 months	30,7	39,3	36,3	32,4	28,2	29,4

Figure 9.1

### Profile of public debt



## 9.4 Initiatives

— Modern and efficient domestic market structures make important contributions to final intermediation, financial stability and sustained economic growth. There is a clear recognition that our bonds markets show a certain level of development. Yet, there is still a need to enhance the regulatory framework and risk-based prudential regulation, removing non-prudential barriers to entry and investment, nurturing a vibrant credit culture with the implementation of international standards and practices, improving the human capital of both local market participants and regulators and promoting efficient and transparent markets.

Much progress has been made to strengthen the institutional framework for public debt management, including measures to increase liquidity in the secondary markets such as a new system of primary dealers; the improvement of electronic platforms; a securities lending programme carried out by the Central Bank; and the clarification of the roles of the Central Bank and the National Treasury in issuing public debt securities in domestic and foreign markets.

In this effort to improve market conditions and to consolidate a deep and robust market for bond markets, the National Treasury and the BCB have undertaken several initiatives. Among them, the reformulation of the system to choose primary dealers is of the great importance. During the years 1999 to 2002, a joint effort was made reformulate the primary dealers system. This effort begun with a diagnosis that revealed the following aspects:

- low liquidity in the securities secondary market;
- lack of institutions playing the role of market makers;
- large institutions, with great participation in public offers and repo operations, benefited too much from the performance evaluation system;
- institutions ranked below the 12<sup>th</sup> position used to contribute only marginally to the primary market (less than 3 % of participation per institution);
- the Brazilian system, regarding dealers' privileges and obligations, was too timid when compared with the international experience;
- liquidity in the secondary market can be increased if representative maturities are chosen for each security;
- the primary dealers' current structure of privileges and obligations should be changed in order to spur intermediation and increase the number of participants in the federal securities market.

This diagnosis led to a complete reformulation of the primary dealers system with the

## Developments and Trends in Bond Markets – The Brazilian Experience

following purpose: improvement of the current system aiming at increasing both the liquidity of the government securities secondary market and the efficiency of the open market operations accomplished by the BCB. So, with the creation of two groups of dealers (Group of Primary Dealers, aimed at primary offers and money market operations, with up to 12 institutions; Group of Specialist Dealers, aimed at outright operations in the secondary market, with up to 10 institutions) a new primary dealers system was originated. In this new system, certain incentives are given to primary dealers such as: participation in second round auctions; acceptance as a counterparty in the Central Bank's open market operations; and access to the Central Bank's securities lending programme.

Prior to the mid-1990s, changes in the Brazilian payment system were motivated by the need to cope with high inflation rates. During that time, the system achieved significant technological progress, especially aimed at enhancing the speed of processing financial transactions. In the reform carried out by the BCB in 2001 and 2002, the focus shifted to risk management. In this vein, the launch of the Sistema de Transferência de Reservas (STR; Reserves Transfer System), on April 22 marked the beginning of a new phase of the Brazilian payment system. With this system, Brazil entered in the group of countries where interbank funds transfers can be settled irrevocably and unconditionally, i.e. with finality, on a real-time basis. This fact by itself provides settlement risk reduction for interbank operations and consequently systemic risk reduction, that is, reduction of the risk that the bankruptcy of one bank causes the bankruptcy of other banks, namely domino effect. In the scope of the reform, there was another important change, as the completion of funds transfer between reserves accounts nowadays depends on the existence of sufficient balance in the account of the sending participant. Therefore, overdrafts are no longer allowed.

Real-time settlement is also being used in transactions with federal government securities carried out in the Sistema Especial de Liquidação e de Custódia (SELIC; Special System for Settlement and Custody), which came to be possible with the connection between this system and STR. Therefore, since April 2002, SELIC has been a DVP model 1 securities settlement system.

The Brazilian payment system reform, however, goes beyond the launch of STR and the SELIC's modus operandi changes. To reduce the systemic risk, the main goal of the reform, legal changes were also made. For example, Law 10,214, enacted in March 2001, recognises multilateral netting in the environment of a clearing and settlement system and sets forth that, in all multilateral netting system considered systemically important by the BCB, the corresponding clearinghouse must act as central counterparty.

Also in 2002, Central Bank and CVM (Comissão de Valores Mobiliários) established the

compulsory adoption of mark-to-market rules for financial institutions and other institutions (investment funds and pension funds). By adopting validation criteria for pricing portfolio assets, this initiative brought more transparency to the markets. Nowadays, some institutions (such as ANDIMA) make a daily disclosure of government bonds and debentures indicative market negotiated prices, used for portfolio pricing.

On 7 January 2002, the National Treasury, with the technical and operational support of the Brazilian Custody and Settlement Company (CBLC), implemented the Treasury Direct, allowing individuals to purchase public bonds directly through the Internet. The programme aims at democratising investment in federal bonds, stimulating long-term savings, and providing information regarding the management and structure of the Brazilian federal public debt. This initiative is first of its kind in Latin America.

In order to provide liquidity to the bonds purchased through the Treasury Direct system, the National Treasury performs weekly repurchases, held between 9 am on Wednesday and 5 pm on Thursday. There is no time limit regarding the resale of bonds back to the Treasury Direct, nor is there a limit to the repurchase value. The bonds are repurchased at the market price quoted on the date of the transaction. Through this initiative, the National Treasury is promoting the enlargement of investors base (there are more than 150,000 investors registered in this programme).

Another initiative was the introduction of the securities lending programme in 2002. By this programme the BCB provides a secondary and temporary source of securities to the Treasury financing market to promote smooth clearing of Treasury securities. The programme offers securities for loans from the BCB portfolio in accordance with certain conditions and is restricted to primary dealers. Securities loans are awarded to primary dealers based on competitive bidding in an auction held each business day at noon eastern standard time.

In terms of trading infrastructure, enormous efforts are being made to improve our systems. There is an ongoing reformulation of the SELIC, which is a central depository of government bonds that registers negotiations and promotes their respective settlement. Created in 1979, this system is now adapting and changing its programmes into more modern software versions that will speed up the settlement of deals in bonds markets. There is also National Debenture System and Brazilian market financial network (RTM) that link all the financial sectors and give support to all transactions in bond markets. Nowadays, the National Treasury and the Central Bank are stimulating the implementation of electronic negotiation platforms (such as SISBEX- held by BMF and CETIPNET- held by CETIP). And as there is a compulsory registration of every bond operation within the SELIC (public) and

## Developments and Trends in Bond Markets – The Brazilian Experience

CETIP (private bonds), all the information of those trades is released on the next following work day, without identifying counterparts, with minimum, average and maximum prices of each bond maturity, separated in total and extra economic group and total volume traded per bond maturity. This gives more transparency to market participants.

### 9.5 Trends and challenges

— In terms of prospects, a new wave of investors flocking to Brazil in the coming years can be foreseen, as result of the recent upgrade in the country's risk classification to "investment grade" granted by two rating agencies (Standard & Poor's and Fitch). After sovereign rating has been raised, we are expecting a natural flow of foreign institutional investors that were prohibited by mandate from investing in securities of countries classified with a low credit risk grade. The difference between domestic interest rates and interest rates abroad is favouring investments in fixed income government and private securities, in securitisation operations, among other investment opportunities. Other initiatives such as the simplification of the operational procedures for investing in Brazil will help those flows.

With a focus on the improvement of our bonds markets, other initiatives will be launched by the BCB, the National Treasury and some self-regulatory entities (ANDIMA) to improve transparency and liquidity, ensure a higher diversification of the investor base, disseminate information about financial operations and eliminate impediments that affect trading in securities. To do this, these organisations are investing in order to improve the knowledge of its human resources and in market infrastructure.

Concerning the future agenda, there are challenges to overcome. In spite of the improving debt profile, the business volume in the public securities secondary markets is still too short of its potential. The low daily turnaround in our secondary markets (less than 2% of the total outstanding in the market) is a clear signal that we still have a long path to go. Even when compared with other emerging economies Brazil is far beyond its peers. This is a clear symptom of the existence of problems. One of the reasons for this to happen is the "culture of overnight" that reveals a clear preference for overnight operations instead of longer duration bonds. This phenomenon is certainly linked to the absolute value of the basic rates that inhibits investors to stretch the duration of their portfolios. Another explanation for the existence of this "culture of overnight" is the utilisation of overnight rates (such as the CDI) as benchmark for the whole industry of local investment funds. Asset managers always complain about the existence of those daily benchmarks but as the competition is very severe among them nobody wants to change it in this "non-cooperative game". Yet, some local hedge funds are trying to escape from these daily benchmarks

introducing redemption periods but the great majority of investment funds follow those overnight rate benchmarks.

Notwithstanding still being less than the stock of public securities, growth of corporate bonds and forms of private credit has been impressive in the last years (it came from less than 24% of GDP in 2004 and is now reaching 36% of GDP). Thus, another challenge to overcome is the recent surge of private credit which generated a fund raising increase through credit issue originated bonds and from securitised processes.

Therefore, issues related with securities market structure, such as investor base enlargement, transaction costs reduction, incentives to new strategies such as short selling, or information transparency become more important and are objectives to be pursued by the main agents of bonds markets (financial brokers, banks, investment funds, pension funds, government and self-regulatory entities).

## 10 New Developments in Indian Bond Markets

Bandi Ram Prasad

### 10.1 Introduction

— India's economic growth averaged over 8% a year in the last four years. Financial markets in India in particular have experienced exceptional growth in this period. Stock market capitalisation reached one trillion USD and bank assets are expected to touch that level in the next couple of years. Asset values showed strong surge as did the pace and intensity of foreign institutional investments.

To sustain the pace of economic growth, overcome market vulnerabilities, and to pursue further deepening of the financial markets, it is important to develop vibrant debt markets, for which several policy and market related initiatives were put in place in the recent period. This note presents a brief outline of major developments in India's debt markets.

### 10.2 Size of the bond market

— According to data published by the *AsianBondsOnline*, at the end of the first half of 2007 the size of the bond markets in India formed 41.6% of the GDP with a major chunk of the business being represented by the government bond market that accounted for 38.3% of the GDP and corporate debt market forming 3.2% of the GDP. The size of the Government bond market in India is about USD365 billion and the corporate bond market at USD30 billion. Though in percentage terms to GDP, bond markets in India might appear lower than that of countries such as Malaysia (USD139 billion) and Thailand (USD137 billion), in absolute terms however, at USD395 billion, it is third biggest in emerging Asia after China (USD1,368 billion) and Korea (USD1,286 billion). The major shortcoming in regard to India is its lower level of development in regard to corporate debt markets. As a share of GDP, India is only ahead of Vietnam and Indonesia, and in absolute terms, the size of the corporate debt market at USD31 billion is lower than that of Korea (USD550 billion) and China (USD118 billion).

In 2007, fresh issuance of government-dated securities amounted to Rs.162 billion as compared to Rs.147 billion in 2006. The market capitalisation of government of India securities rose from Rs.1131 billion in December 2006 to Rs.1318 billion in December 2007. The market capitalisation of corporate bonds was Rs.68 billion in December 2007 as against

Rs.49 billion in December 2006. Of the total net inflows of Rs.84 billion in 2007, flows to debt markets amounted to Rs.9 billion.

The thrust and focus in India thus is more on developing corporate debt markets in which a wide range of initiatives were evident in the last three years.

### 10.3 Developments in the government securities market

— The outstanding stock of government securities in India at present is 26% of GDP; fourteen times the level in 1992 with the annual turnover placed at 300% of the GDP in the recent years as against 34% in 1996.<sup>1</sup>

The Government securities markets in India made rapid progress in the last one and half decade. A market that was characterised by administered interest rates, illiquidity and lower level of transparency in the early 1990s transformed into an active market with greater transparency, efficiency in pricing and speed in settlement. Bond issuances which mostly comprised of fixed coupon securities in the 1990s developed into a wide range that include; zero coupon, capital indexed, floating rate and bonds with calls and put options, though concerns of depth in continue to challenge the development of government bond market. Several policy measures were put in place to enhance liquidity and efficiency. These included introduction of repo/reverse repo operations; introduction of an automated electronic trading system in the form of a Negotiated Dealing System (NDS-OM); establishment of a Clearing Corporation of India; introduction of trading in government securities in stock exchanges; introduction of real time gross settlement; introduction of over the counter and exchange traded derivatives to facilitate hedging of risk; adoption of modified DVP mode of settlement; announcement of an indicative auction calendar for treasury bills and dated securities; and permission for short sale in dated government securities.

These reforms made the government bond markets in India broad based with a fairly liquid yield curve for longer dated securities. An active primary dealer system, an electronic trading and settlement technology supported by Straight Through Processing (STP) and central counterparty guarantee support are geared to ensure safety in settlement. Foreign institutional investors are allowed to invest up to USD3.2 billion in government securities and USD1.5 billion in corporate bonds. Highlights of the improved government debt market include elongation in the average maturity of outstanding stock (weighted) from 6.5 years in 1997–98 to 10.4 years in 2007–08 leading to a smooth and reliable yield curve. In 2006–07, the weighted average maturity of new loans was 14.7 years with a range of 4 to 30 years

<sup>1</sup> Cf. Reddy (2007).

### New Developments in Indian Bond Markets

and the weighted average yield of new loans was at 7.9%. Market liquidity is comparable with other emerging markets with bid-offer spreads in benchmark securities at 1–2 basis points. The ownership of the government securities too has widened. In 1991, 25% of the central government securities were owned by the Reserve Bank of India (RBI) and 56% by commercial banks and others (5%). In 2005, the share of RBI in holding of central government securities came down to 7% and that of commercial banks to 53% giving scope to newer players such as Life Insurance Corporation (20%), Employees Provident Fund Schemes (2%) and others (16%). Between 1992 and 2006 outstanding stock of government debt securities rose from Rs.769 billion to Rs.9767 billion; turnover/GDO ratio from less than 30% to 212%; average maturity increased from 5.7 years to 16.9 years; weighted average cost reduced from 11.78% to 7.34% and minimum and maximum maturities of stock issued expanded from 2–10 years (in 1996) to 5–30 years.

The Government Securities (GS) Act of 2006 was passed, based on which the RBI framed the Government Securities Regulations which came into effect from December 1, 2007. The main features of the regulation included an investor friendly automatic redemption facility; pledge, hypothecation or lien of government security facility; and a simplified procedure for the recognition of titles to a government security of a deceased holder.

### 10.4 Developments in corporate debt market

— The Indian government is giving utmost priority and importance to the development of the corporate debt market (Tables 10.1 and 10.2). While the primary market is dominated by private placements and few leading public sector financial institutions, shortcomings in the growth of secondary market have posed numerous problems in the realm of liquidity and market depth.

Major developments in regard to the development of corporate debt markets in India include the adoption of recommendations of the High Level Expert Committee on Corporate Bonds and Securitisation (2005); clarity on regulatory jurisdiction of the corporate debt market between the RBI and the Securities and Exchange Board of India (SEBI), the securities market regulator; trading and reporting platforms set up by the two national stock exchanges namely the National Stock Exchange of India (NSE) and the Bombay Stock Exchange (BSE); coordination of both these exchanges in disseminating information; commencement of order driven electronic trading platforms by NSE and BSE; and the use of Electronic Clearing Services (ECS) and Real Time Gross Settlement (RTGS) by the issuers to streamline the process of interest and redemption payments.

Table 10.1

Financial year: 2007 – 08

	No. of Securities Traded	No. of Trades	Traded Value Rs. billion
Bombay Stock Exchange	1646	27697	41
National Stock Exchange	2016	3789	31
FIMMDA@		3662	23
Total	3662	32217	75
Private placement of corporate debt reported to BSE and NSE			

	No. of Issues	Amount Rs. billion
Bombay Stock Exchange	302	31
National Stock Exchange	619	99
Total	921	130

Source: SEBI Data includes transactions in trading and reporting platform.  
@Fixed Income and Money Market Dealers' Association.

## New Developments in Indian Bond Markets

Table 10.2

Institutional investment into debt markets: Rs. billion

Year	Mutual Funds	FII's
2004–05	16	2
2005–06	36	-7.3
2006–07	52	5.6
2007–08	73	12

Source : Securities and Exchange Board of India

In his budget speech (2008–09), the Finance Minister proposed measures to expand the corporate bond market further with the following:

- take measures to develop the bond, currency and derivatives markets that will include launching exchange traded currency and interest rate futures and developing a transparent credit derivatives market with appropriate safeguards;
- enhance the tradability of domestic convertible bonds by putting in place a mechanism that will enable investors to separate the embedded equity option from the convertible bond and trade it separately; and
- encourage the development of market based system for classifying financial instruments based on their complexity and implicit risks.

In May 2008, SEBI announced regulations on the public offer and listing of securitised instruments. SEBI has also simplified the process for primary issue of the corporate bonds.

Two aspects that might further the pace of growth of corporate bond markets, namely a rationalisation of stamp duty and the abolition of tax deduction at source as in the case of government securities, both of which were recommended by the High Power Committee, are currently being pursued.



## 10.5 Debt market segments at stock exchanges

— Both NSE and BSE have debt market segments that provide reporting and trading platforms in debt markets. Both exchanges have wholesale, retail and corporate debt segments. The Wholesale Debt Market (WDM) segment of the NSE commenced operations on June 30, 1994. This segment provides trading facilities for a variety of debt instruments including government securities, treasury bills and bonds issued by public sector undertakings, corporates and banks like floating rate bonds, zero coupon bonds, commercial papers, certificates of deposits, corporate debentures, state government loans, SLR and non-SLR bonds issued by financial institutions, units of mutual funds and securitised debt by banks, financial institutions, corporate bodies, trusts and others. The BSE has similar trading and reporting platforms for wholesale, retail and corporate debt.

## 10.6 The road ahead

— The plan in India is to create a robust and vibrant market in all the three major segments, namely government bond, corporate bond and securitised debt market. While government securities markets have progressed significantly, measures to improve the scope and significance of corporate debt markets are being put in place gradually. Simultaneously, initiatives to develop securitised debt are underway and the recent experience in global financial markets would provide useful insights for development of this segment from an emerging market perspective. The development of bond markets in India is in tune with the G8 action plan for developing bond markets in emerging markets in terms of strengthening market infrastructure, broadening and diversifying investor base, developing derivatives and swap markets, broadening the database etc.

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# 11 Developing Domestic Bond Markets in Emerging Economies: Challenges and Recent Initiatives<sup>1</sup>

Srichander Ramaswamy

## 11.1 Introduction

— Developing a well-functioning domestic bond market can bring many benefits to emerging economies. For example, it helps the conduct monetary policy, avoids concentrating intermediation uniquely on banks, and makes financial markets more complete by generating market interest rates that reflect the opportunity cost of funds at each maturity. For emerging market borrowers, issuing debt in local currencies is a useful way to avoid risk arising from currency mismatches. This aspect is particularly relevant for governments whose revenues are almost entirely denominated in local currency.

Given its importance, government bodies in emerging economies have taken a range of initiatives to foster the development of a domestic bond market. Specific initiatives in recent years include improvements in market infrastructure, development of repo and derivative markets, pre-announcement of the issuance calendar, introduction of custodian system, and creation of primary dealer systems to improve liquidity. The local currency denominated Asian bond fund initiative taken by EMEAP (Executives’ Meeting of East Asia and Pacific) central banks has helped lifting cross-border restrictions and harmonising trade settlement conventions in Asia.

Supported by recent rapid economic growth, large foreign reserves holdings, prudent fiscal and monetary policies, low inflation expectations and improved debt to GDP ratios in many emerging market economies (EMEs), investor confidence in EMEs’ local currency debt securities has grown. Outstanding local currency debt securities in EMEs have now risen from about USD1,000 billion in 1995 to more than USD4,000 billion in 2006. Several index providers now include local currency denominated emerging market bonds in their suite of investable bond indices facilitating benchmarking and risk assessment. There is evidence that global bond funds are starting to include EMEs’ local currency bonds in their portfolio mix as these are now included in global bond indices. Notwithstanding the

<sup>1</sup> The views expressed are those of the author and not necessarily those of the BIS.

improvements in market infrastructure and efforts to promote growth of local bond markets, global investor's share of EME debt is small, and their exposure tends to be concentrated in a few countries.

## 11.2 Investor base and challenges

— The diversity of the investor base has a major bearing on the efficiency, price discovery and liquidity of bond markets. The CGFS report on local bond markets draws attention to the narrowness of the investor base in EME markets. About 94% of the EME debt is held by domestic investors, and banks held 42% of all domestic debt in 2005. In contrast, only 11% of industrial country domestic debt is held by banks. Banks in EMEs have increased their holding of domestic debt as a percentage of total outstanding debt from 28% in 2000 to 42% in 2005. This increase reflects the growing share of foreign exchange (FX) intervention securities held by EME banks.

Growing stock of government securities on bank balance sheets can give rise to risks and policy challenges. For example, in circumstances where the losses from government bond holdings are likely to be large on bank balance sheets from rising interest rates, the central bank may be constrained in its monetary policy decisions. In contrast, during periods of falling interest rates, bank profitability will rise, and this can induce complacency in risk management. Managing interest rate risk in less liquid markets and with limited hedging tools remains a challenge for banks in EMEs. Furthermore, pension fund portfolios in many EMEs have large exposure to government bonds. Clearly, the concentrated holding of local bonds by banks and other key domestic institutional investors in EMEs give rise to greater levels of systemic risk exposure with consequences for financial stability.

While outstanding local debt in EMEs has grown, the share of private sector debt (financial institutions and corporates) is only around 25%. As a significant share of the local currency debt in EMEs is being used to sterilise foreign currency intervention, the issuance of public debt securities has been inflated by large-scale reserve accumulation. This has implications for the balance sheet position of the country because the net asset position of the country would worsen if the local currency were to appreciate by a large amount against the reserve currencies.

The underdevelopment of corporate bond markets in EMEs can be attributed to a number of factors. These include: close relationship between corporates and banks; poor quality of corporate disclosure to support public issue of corporate debt; and inadequate credit rating infrastructure. However, the notion that corporates can seek capital market

## Developing Domestic Bond Markets in Emerging Economies: Challenges and Recent Initiatives

funding in times when bank lending contracts has now come under scrutiny. Even in developed markets, as bank balance sheets have come under pressure, investor appetite for high yield bonds have fallen dramatically. Many market participants during workshops on local bond markets expressed the view that corporates in EMEs will find it difficult to access funding through bond markets if weaknesses in the banking sector are exposed.

In Asia, trading volumes in bonds remain low despite being ahead of other emerging regions in terms of local bond issuance. Corporate debt securities are rarely traded even in Hong Kong (SAR) where the turnover in exchange fund bills is quite high. The low turnover activity in Asia is attributed by market participants to underdeveloped repo markets and a lack of opportunities to manage risk exposures in a cost-effective way. In developing repo markets, central banks need to play an important by either providing the services or by acting as an intermediary. However, a well-functioning repo market favours the trading of government paper and less of corporate debt. The development of a broader securities lending market can help enlarge the range of debt instruments traded and participants involved. The lack of cost effective tools for managing risk exposures might explain the reluctance of foreign investors to enter Asian markets. In particular, the access to liquid forward foreign exchange market is often cited as a prerequisite for developing local currency bond markets.

The recent expansion of Asian bond markets has been partly associated with the replacement of earlier loans by bonds that are kept in bank's balance sheets. Nevertheless, the distinction between loans and bonds become blurred if much of the bond issuance is held by banks or insurance companies with little or no trading. In a nutshell, several structural impediments have hindered the development of Asian bond markets: limited interest in corporate bonds; narrow investor base; and lack of hedging opportunities.

## 11.3 Bond market initiatives in Asia

— Since the Asian crisis of 1997, local currency bond markets in the region have expanded rapidly; even so, they are still seen as not achieving their potential to intermediate between domestic savers and borrowers. Bank lending and equity markets continue to be the most important source of funding for firms. Domestic investors have so far shown limited appetite for local bonds in Asia, preferring instead equity risk, and Asian banks remain major investors in bonds. Cross-border flows into local bonds are still underdeveloped, in part reflecting strong home bias among Asian institutions. Further, the relatively low foreign investor participation in local bond markets in Asia seems to be associated with a lack of cost effective FX hedging tools. These factors have contributed to financial integration in Asia to lag behind economic integration.

*Srichander Ramaswamy*

Perceiving the need for deeper and more liquid local bond market to foster greater financial intermediation within the region, the Asian Bond Fund (ABF) initiative has been pursued by the EMEAP central banks. In the first phase of this regional initiative, a US dollar denominated Asian bond fund, the ABF<sub>1</sub>, was launched in June 2003 with seed money of USD1 billion. The BIS played an active role in facilitating the management this bond fund. This fund invests in bonds issued by sovereign and quasi-sovereign issuers in eight EMEAP markets – China, Hong Kong, Korea, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

The ABF<sub>1</sub> initiative was followed by the setting up of the local currency denominated ABF<sub>2</sub> in June 2005 with seed money of USD2 billion provided by EMEAP central banks. The ultimate objective of the ABF<sub>2</sub> initiative is to make local currency bond market in Asia attractive to retail and foreign institutional investors. The BIS acts as the fund administrator for the EMEAP's investment in ABF<sub>2</sub>.

The ABF initiative has been successful in a number of ways to promote infrastructure development in the Asia. First, it has facilitated the creation of the first exchange traded bond fund in Asia that is likely to promote greater retail investor interest in the bond fund. Second, it has helped to improve market infrastructure by creating regional custodian network, harmonise legal documentation for investment funds in the region, and creation of transparent indices, which is also a key requirement to promote institutional investor interest and retail bond funds. Third, ABF<sub>2</sub> has accelerated regulatory and tax reforms in a number of EMEAP markets. The Pan Asian Index Fund (PAIF), which is quoted in US dollars on an unhedged basis, is the first foreign institutional fund to be given access to China's interbank bond market. Malaysia liberalised its FX administration rules, while both Malaysia and Thailand have exempted non-resident investors from withholding tax to facilitate listing of PAIF as a bond exchange traded fund (ETF).

## **Developing Domestic Bond Markets in Emerging Economies: Challenges and Recent Initiatives**

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## 12 Regional Cooperation and Development of Bond Markets – The Asian Experience <sup>1</sup>

Lotte Schou-Zibell

### 12.1 Introduction

— The 1997 Asian financial crisis clearly demonstrated the need for the region to develop deep, diversified and well-functioning local-currency bond markets. Prior to the crisis financial institutions and corporations in the region relied heavily on short-term foreign currency debt to finance long-term investment projects in domestic currency. Such funding typically took the form of short-term bank loans which were often rolled over. With insufficient hedging, however, currency and maturity mismatches between assets and liabilities – the so called double mismatch – made balance sheets vulnerable to foreign exchange risk. Due to poor governance at both corporations and financial institutions – together with a generally inadequate supervisory and regulatory frameworks – credit was often misallocated, contributing to the further weakening of balance sheets. The system collapsed when market perceptions suddenly changed and when foreign lenders ceased to roll over loans to Asian borrowers.

Since then, policy makers in the region have made significant efforts to develop more stable, efficient and integrated financial systems. As a result, Asian bond markets have showed strong growth over the past decade. But despite their considerable progress, they remain largely underdeveloped. In terms of the composition of domestic financing, East Asia relies less on bond markets than on equity or bank financing. They also lack liquidity and are largely fragmented. To further advance the development of domestic and regional bond markets, many challenges need to be addressed.

### 12.2 Trends in Asian local currency bond markets

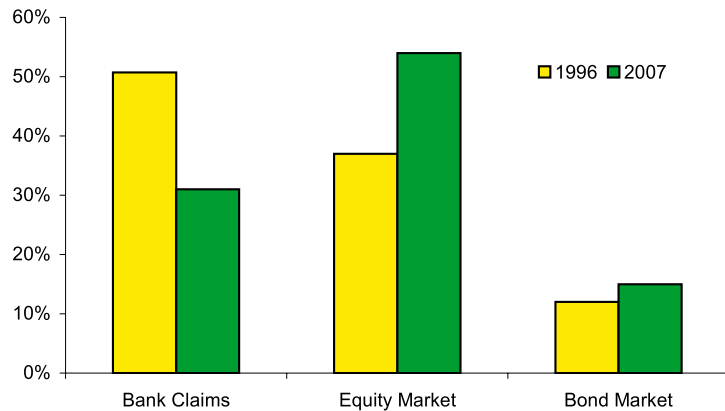
— Asia's bond markets continue to expand but domestic funding remains bank-dominated. Although Asian bond markets have increased from 12% to 15% of total financial sector assets over the period 1996 to 2007, bank funding remains dominant at 31% (Figure 12.1).

<sup>1</sup> The author would like to thank Guy Sacerdoti for editorial assistance and to the *AsianBondsOnline* team for data collection. The views expressed in this paper are those of the author and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), its Board of Directors, or the governments they represent.

The rapid expansion of Asian bond markets has occurred during a period when international sovereign credit ratings of many Asian governments have risen by three to five notches as a sign of improved fiscal management and corporate and financial governance. The appreciation of local currencies against the US dollar – and improvements in both demand and supply conditions in regional bond markets – have contributed to the strong growth and the increasing appetite for Asian bonds among international and regional investors. Over the last 10 years, Asian bond markets have grown an average 37% per year, increasing from USD160 billion to USD3.9 trillion in total bonds outstanding by March 2008 (Figure 12.2).

Figure 12.1

**Financial sector development in percent of total financial sector assets, emerging East Asia**



Sources: Local government agencies; *AsianBondsOnline*

Corporate bond market growth has accelerated, but still lags government bond markets in terms of size. Both local currency government and corporate bond markets grew by approximately 20% over the past year. Growth in the government bond market has largely been driven by central bank sterilisation and fiscal stimulus, while local currency corporate bond markets grew as a wider variety of highly-rated issuers accessed the markets – suggesting that the initial impact of the global credit crisis was limited in Asia. The value of local-currency corporate bonds outstanding in emerging East Asia<sup>1</sup> amounted to USD1.0

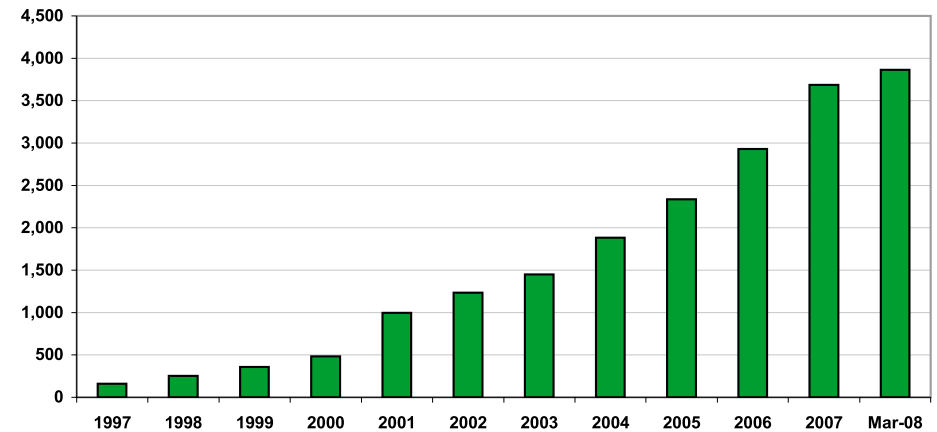
<sup>1</sup> In this note, emerging East Asia is defined as People’s Republic of China (PRC); Hong Kong, China; Indonesia; Republic of Korea (Korea); Malaysia; Philippines; Singapore; Thailand; and Viet Nam.

**Regional Cooperation and Development of Bond Markets – The Asian Experience**

trillion in March 2008, compared with USD2.9 trillion in government bonds outstanding (Figure 12.3). The expansion of the corporate bond market helps create fee-based income for financial institutions and provides stable long-term domestic currency funding to the region’s most dynamic enterprises. The significant growth of regional corporate bond markets is the fruit of years of policy reforms, facilitating market access for a greater diversity of highly-rated issuers in the region.

Figure 12.2

**Emerging East Asia total bonds outstanding (in USD billion)**

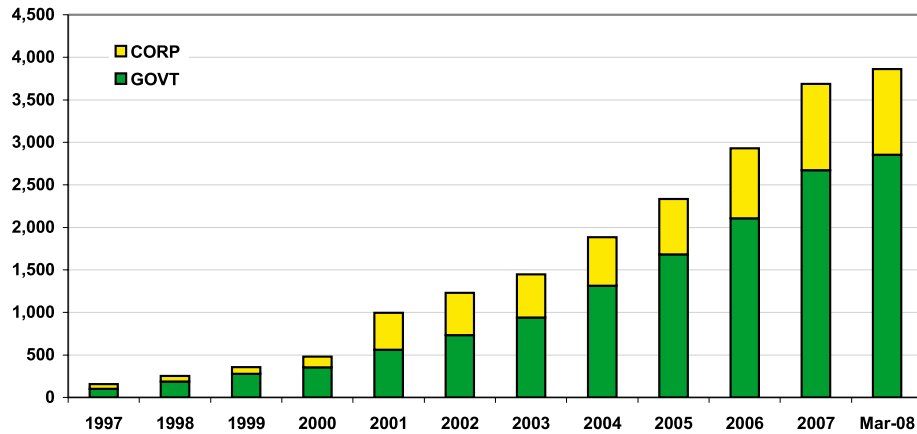


Sources: Local government agencies; *AsianBondsOnline*

Cross-border corporate bond issues have been growing. Companies and financial institutions are increasingly tapping into attractive financing deals outside their domestic markets. And regionally-based companies able to access offshore markets have begun strategic debt issues in local currencies of emerging East Asian economies. Because many of these companies have cash-generating operations across the region, they have a variety of local currencies to choose from. Domestic regulators have started to support these foreign issuers. In addition to offshore centres like Singapore and Hong Kong, China, countries such as Malaysia and the Republic of Korea (Korea) are attracting regional issuers to their local-currency markets with growing success. This increased cross-border issuance – accompanied by liberalised rules on swaps and derivatives – is leading to better liquidity in currency hedges, which in turn facilitate greater cross-border issuing.

Figure 12.3

**Emerging East Asia total government and corporate bonds outstanding**  
(in USD billion)



Sources: Local government agencies; *AsianBondsOnline*

New rules and regulations have contributed to the development of new markets and products, an incentive to new issuers. New rules and regulations allowed the introduction of alternative products such as Islamic *sukuk* and domestic interest-rate swaps – attracting not only regional corporations but also foreign issuers. Government agencies from outside the region such as KfW, and companies such as Daimler-Chrysler, have also begun to issue in Asia’s local-currency bond markets. They take advantage of favourable swap rates in funding local investments, thus stimulating domestic investment by increasing the supply of high-grade bonds.

Mutual funds have grown considerably in recent years, but remain small. As of September 2007<sup>1</sup> USD1.6 trillion in mutual funds were issued in emerging East Asia, with over half invested in fixed-income products. However, the industry remains rather small both in absolute and in relative size by international standards. Gradually allowing mutual fund investors more discretion in the types of risk they undertake – taking into consideration individual investors’ needs, funds available, and risk taking capacity – can help strengthen domestic financial market stability.

<sup>1</sup> Investment Company Institute and Nomura Asset Management

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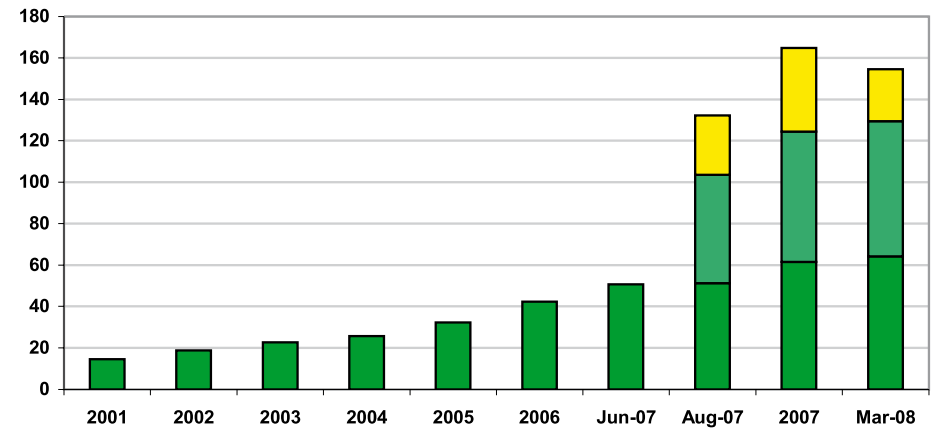
**12.3 Innovations in Asian bond markets**

**(i) Islamic bonds**

Islamic bonds have gained universal acceptance as a viable alternative to conventional products. Although Islamic bond markets still lag mainstream debt markets, demand for Islamic bonds has grown substantially and the size of Islamic bond markets in Asia is expanding rapidly – from USD14.5 billion in 2001 to USD65 billion in March 2008 (Figure 12.4). Aside from the obvious attractiveness among Muslim investors, Islamic bonds also appeal to conventional investors looking for attractively-priced instruments for regular income and capital gains. Islamic bond markets operate within the rules and principles of Islamic law (*sharia*) and are divided into sovereign (and quasi-sovereign) and corporate certificate (*sukuk*) markets.

Figure 12.4

**Islamic bonds outstanding**  
(in USD billion)



Source: Bloomberg, Islamic Interbank Money Market BNM

Malaysia<sup>1</sup> is at the forefront of Islamic bond market development in emerging East Asia, and aims to become a global Islamic finance hub. The country pioneered *sukuk* issuance

<sup>1</sup> See *Asia Bond Monitor* November 2006 for a discussion on Islamic bond market development in Malaysia.

and is now expanding its reach to the Middle East, particularly the petrodollar-rich Gulf region. Malaysia's Islamic bond market grew 33% year-on-year in the first quarter of 2008, quadrupling its size since 2001. As of March 2008, Islamic bonds accounted for a third of all bonds issued in Malaysia, with 61% of corporate issue structured as Islamic or *sukuk* bonds (totalling USD48 billion). Malaysia has approximately 70% of the world's *sukuk* issues. Recently upgraded payment links between the Malaysian central bank (Bank Negara Malaysia) and the Hong Kong Monetary Authority correspond with the rapid build up of Hong Kong, China's own Islamic finance infrastructure, incorporating PRC assets. Recently, Brunei Darussalam and Indonesia also began *sukuk* issuance.

With the fast paced growth of Islamic finance worldwide, the Asian Islamic bond markets have great potential for continued strong growth, emerging as an innovative and viable finance market model that can contribute to financial sector development in the coming years.

**(ii) Expansion of securitisation markets<sup>1</sup>**

Since the 1980s, securitisation has become a powerful and widely-used tool in both developed and emerging markets to assist funding and investment (Figure 12.5). In the wake of the 1997/98 Asian financial crisis, asset securitisation in emerging East Asian bond markets has been used increasingly as a mechanism for credit-risk transfer – for example, in addressing loan losses by financial intermediaries; as a device to help regional, market-based systemic reform; and in providing an incentive to support improved risk assessment and data collection.

As a form of structured finance, reliable and efficient securitisation can assist development by enabling financial systems to deepen and strengthen. However, there are both overt and more subtle risks in certain uses of securitisation, as the recent subprime mortgage market turmoil exposed. Using securitisation as a means for excessive risk-taking or regulatory arbitrage, rather than as a tool to assist more conventional or conservative approaches to funding, risk management, or investment is just one of the dangers. Used properly, however, securitisation allows policyholders and consumers to benefit from a broader range of products and funding options.

The further development of securitisation markets in the region will require efforts to enhance asset discovery and price transparency as well as strengthen credit rating and risk management capacity for structured products. By making transparent to potential investors

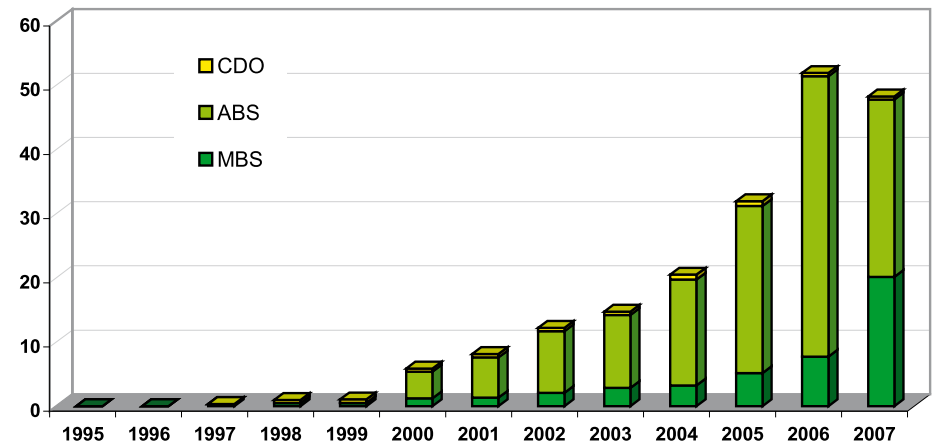
<sup>1</sup> This section is based on Asian Development Bank (2007) and Lejot, Arner and Schou-Zibell (2008).

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the level of leverage and the risk of the securitised pool's assets, arrangers can regain the confidence of investors around the region. In addition, for securitisation to take hold in the region, governments, regulators, and the financial sector need to develop (i) transparent legal and taxation frameworks; (ii) clear accounting principles and common standards across the region; (iii) standardisation of credit assessment and documentation across the region; (iv) new initiatives to use securitisation for example to fund the regions vast infrastructure requirements.

Figure 12.5

**Total outstanding securitisation, emerging East Asia**  
(in USD billion)



Sources: Chinabond for PRC; Bloomberg for HK, KR, MY, PH, SG, TH, and VN; AsianBondsOnline estimates

**(iii) Development in information-related infrastructure**

Electronic bond trading platforms (E-bond platform) and systems have been introduced in several economies in the region and use of the Internet for information dissemination has increased. E-bond platforms introduced in Singapore, Korea, and Malaysia, for example, allow global investors easy access to real-time trading volume and price quotations and contribute to boosting investor confidence by promoting more efficient price discovery. E-bond platforms

also contribute to increasing the resilience and transparency of the market; bring about more robust yield curves; help attract more issuers and investors to participate in the domestic bond market; as well as improve the resilience of the market in times of stress.

Considerable effort is being put into developing domestic standards and harmonising payment and settlement systems between central depositories that work well with existing interbank systems. Although the process is not complete, it is currently possible to settle bond trades in the same day as the order across half a dozen borders.

Financial market regulators can help ensure that market participants are informed simultaneously, for example, by publishing long-term plans and regulatory changes on websites. News services, commercial and public data vendors can also provide a steady flow of information that can reduce uncertainty and thus price volatility. One such example is the *AsianBondsOnline* website, which was developed and has been maintained by ADB since May 2004. The website disseminates information on ASEAN+3 bond markets and is one of the most widely read portals on Asian bond markets. The website contributes to enhancing transparency by disseminating timely and accurate information on regional bond markets to both issuers and investors.

#### 12.4 Conditions for the successful development of bond markets

— Asian bond markets have shown robust growth over the last decade and have taken significant steps to further strengthen domestic bond markets. But domestic bond markets remain at diverse stages of development where equity or bank loans still dominate domestic financing and where regional savings are not effectively channelled to investment needs.

Deep and liquid bond markets provide a safety valve when access to bank credit tightens by providing an alternative source of financing. Many challenges remain, and for the region to further advance the development of domestic and regional bond markets, several measures will need to be taken to enhance certainty and increase investor confidence in local currency bonds. These include the need to further (i) strengthen legal and regulatory frameworks to ensure transparency and investor protection; (ii) remove impediments to market entry and investment, particularly those on capital and exchange controls; (iii) broaden and diversify the investor base; (iv) develop derivative and swap markets; (v) strengthen capacity of regulators; (vi) improve transparency through better valuation and accounting of off-balance sheet instruments; (vii) improve related infrastructures, such as clearing and settlement, credit guarantee and the quality of bond market data; and (viii) increase the significance of bond markets to economic development.

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(i) Strengthening legal and regulatory frameworks, as well as accounting standards to help ensure transparency and investor protection can help create a more conducive environment for companies to issue debt instruments for infrastructure and other securitised instruments. Compliance with the International Organization for Securities Commission (IOSCO) principles for securities regulation can help to facilitate the development of capital markets and protect investors. Establishing a governance structure that enforces contracts and resolves disputes in a reliable and speedy manner can help increase investor confidence in domestic and regional bond markets.

(ii) Removing impediments to market entry, investment and to cross-border issuers and investors can help promote greater demand for local currency bonds. Policy makers need to make continued efforts to remove or limit capital and exchange controls, remove discriminatory taxes such as transaction taxes to make trading of local currency bonds less costly, as well as withholding taxes on interest and taxes on capital gains earned by foreign investors. Improving the regulatory environment and lowering cross-border transaction barriers can greatly encourage the participation of international financial intermediaries and foreign investors in regional bond markets.

(iii) Broadening and diversifying the investor base can help ensure high liquidity and stable demand in local bond markets in the region. The investor base in emerging East Asia tends to be dominated by government-controlled institutional investors, such as provident funds and insurance companies – who tend to operate relatively passive portfolio strategies. Developing derivative markets; examining the role of dominant investors; re-evaluating regional cooperation strategies; and reforming the tax systems are all critical measures that encourage more provident, pension, and insurance funds to participate in East Asia's local currency bond markets. Reducing cross-border transaction barriers to encourage participation of international financial intermediaries and foreign investors in these markets would also help.

(iv) Establishing well-developed derivatives and swap markets allow a wider dispersal of exchange rate and interest rate risks, which help reduce costs and enhance returns. They can also help broaden investor diversity by allowing investors to manage risks with greater certainty and precision. While some derivative markets in the region have grown significantly in recent years, most markets remain underdeveloped, particularly those for interest rate derivatives. Given their importance in financing the region's vast investment needs, countries should consider developing these markets together with conducive legal, regulatory, and infrastructure frameworks.

(v) Strengthening risk assessment and risk management among financial institutions,



credit rating agencies, and regulators. Investors need to have the capacity to clearly analyse product risks and establish appropriate internal risk-monitoring systems over the life cycle of the investments. Credit rating agencies can help bolster the growth of corporate bond markets by contributing to the market debate on issuers' credit quality and in helping investors make appropriate decisions on credit risk and pricing spreads of corporate bonds but they must also remain free from political, issuer, or dealer influence in calculating ratings.

Regulatory capacities should be strengthened to safeguard against risks associated with non-transparent instruments and excessive risk-taking or herding behaviour. Securities market regulation needs to enforce rules and regulations that can effectively protect investors, ensure that markets are fair, efficient and transparent, and reduce systemic risk. Enhanced regional (and global) cooperation in information sharing and monitoring and regulatory coordination in financial markets and financial institutions' risk management techniques would help promote regional financial stability.

(vi) Improving transparency through better valuation and accounting of off-balance sheet instruments. Regulators and market participants need to assess how transparency can be provided in various markets, especially for relatively new or illiquid instruments, to reduce uncertainty and avoid surprises. Providing greater clarity in the link between various investment entities and institutions; assessing contingent draws on funding channels that occur and the risks of credit exposure; determining whether capital charges on standby credit lines are sufficient; and defining accounting adequacy and legal parameters for guaranteeing adequate risk control.

(vii) Improving bond market related infrastructure such as clearing and settlement, credit guarantee and the quality of bond market data. Clearing and settlement infrastructure in most domestic bond markets has improved significantly in the past decade. However, as cross-border bond transactions increase, there is an absence of a planned infrastructure at the regional level. For cross-border bond transactions, Asia has the disadvantage of being in earlier time zones than the rest of the world when using existing clearing and settlement infrastructure. This increases regional investors' exposure to settlement risks – or "Herstatt" risks. However, as the volume for cross-border transaction is low, the issue of Herstatt risk is currently not a serious concern. But as Asia's bond markets continue to grow and the potential volume for cross-border bond transactions increase, rising Herstatt risks needs to be addressed as it could add to the systemic risks of the region's financial markets.

Establishing a regional credit guarantee agency could enable private companies avoid costly and lengthy approval processes and issue debt instruments at credit ratings higher

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than what they could obtain on their own and help close the gap between an issuer's credit quality and the minimum credit requirements of investors. A regional credit guarantee could also encourage cross-border investment in the region as well as investment from outside the region. For a firm to issue corporate bonds with an investment grade (BBB and above) that appeal to potential investors generally requires an issuer to go through a costly and lengthy approval process. But in the initial stages of bond market development, the development of a regional credit guarantee agency could enable private companies to avoid this process.

Improving existing data and developing a database that covers gaps in data – for instance those on the composition of foreign capital flows and currency and maturity structures of debt outstanding – can help identify underlying weaknesses and risks in individual bond markets. Limited aggregated data on emerging East Asian bond markets, particularly on currency composition and maturity and coverage of corporate bond markets, hampers the analysis of the local currency bond markets. While initiatives have been taken by international financial institutions, local bond markets are also encouraged to improve the quality, comparability and consistency of local bond market data.

(viii) Increasing significance of bond markets to economic development by shifting the focus to the potential of tapping the region's vast savings through its bond markets to meet its long-term financing needs of infrastructure – roads, ports, power generation projects – to securitisation of existing assets.

### 12.5 Regional cooperation and its role in facilitating the development of bond markets

— There have been strong efforts made by Asian policy makers in recent years to enhance regional local-currency bond markets. Prominent among these regional efforts are the Asian Bond Markets Initiative (ABMI), which was endorsed by the finance ministers of the Association of Southeast Asian Nations (ASEAN) and the People's Republic of China (PRC), Japan, and Republic of Korea (Korea) – collectively known as ASEAN+3 – in August 2003. Another is the Asian Bond Fund (ABF), launched by Asian central banks through the Executives Meeting of East Asia-Pacific Central Banks (EMEAP) in June 2003. Other efforts include the Asian Currency Note Programme; and the *AsianBondsOnline* website.

#### (i) Asia Bond Markets Initiative (ABMI)

The Asia Bond Markets Initiative (ABMI) aims to foster the development of regional

bond markets, effectively channel regional savings for regional investment, and prevent maturity and currency mismatches that contributed to the 1997 Asian financial crisis. To achieve this objective, ABMI aims to facilitate a wide variety of issuers' access to bond markets; and remove policy and regulatory impediments to foster the development of bond markets. Priority areas include: (i) securitised debt instruments; (ii) credit guarantee and investment mechanism; (iii) foreign exchange transaction and settlement; and (iv) credit rating systems.

Since its endorsement by the ASEAN+3 finance ministers in August 2003, Asian local currency bond markets have achieved remarkable growth in terms of bond market size and in diversity of issuers. Local currency bond markets have expanded by nearly three times, or 170%.<sup>1</sup> The issuer base has grown by 73%. ABMI contributions include significant issuances of local currency denominated bonds by various parties including international financial institutions (IFIs), multinational corporations (MNCs) and bilateral institutions. In turn, these issuances have led to the introduction of standards for issuance as well as disclosure and documentation according to international best practices and set a precedent for other issuers to follow. For example, since 2004 ADB has issued local currency-denominated bonds with issue standards aligned with international best practices in Malaysia, People's Republic of China, Philippines, and Thailand.<sup>2</sup>

Through dialogues and discussions stimulated under the ABMI, ASEAN+3 members have also undertaken their own reforms in developing bond markets, ranging from unifying issuing authorities for government bonds and simplifying corporate bond issuance procedures to facilitate securitisation, to removing barriers for bond issuance by domestic and foreign entities. Studies on specific factors that impede the development of regional bond market development have also been undertaken by some member countries with financial support from ADB. Japan has also provided technical assistance to support bond market development in selected individual ASEAN+3 member countries. ASEAN+3 and ADB are also finalising the design of a credit guarantee mechanism for local currency denominated bonds.

The new *ABMI Roadmap* will focus on promoting issuance of local currency-denominated bonds; facilitating the demand of local currency-denominated bonds; improving the regulatory framework; and improving related infrastructure for bond markets. ASEAN+3 has recognised that the development of a liquid and well-functioning regional bond market requires continuing efforts beyond current activities – taking into account remaining

<sup>1</sup> Local currency bond markets in emerging East Asia have grown from USD1,448.13 December 2003 to USD3,869.79 in March 2008 or by 167%.

<sup>2</sup> In addition to another transaction in India.

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constraints. ASEAN+3 has also recognised the necessity of streamlining ABMI operating procedures to ensure tangible outcomes. To demonstrate their renewed and strong commitment to further develop bond markets in the region, ASEAN+3 and ADB have developed and endorsed a new medium-term roadmap to accelerate the development of the regional bond market.

Focus of the new roadmap will be given to produce tangible and practical outcomes, rather than ambitious but less feasible ones. Activities under each key area will be undertaken by a Task Force, and a Steering Group will monitor and coordinate the activities of the four Task Forces in charge of the respective areas.

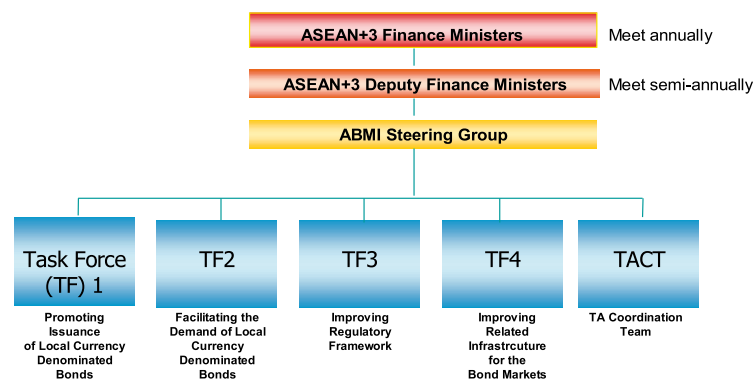
### The New ABMI Roadmap

The four key issues in the New ABMI Roadmap of (i) promoting issuance of local currency-denominated bonds (supply-side); (ii) facilitating the demand of local currency-denominated bonds (demand-side); (iii) improving the regulatory framework; and (iv) improving related infrastructure for bond markets will be addressed by separate Task Forces. These key issues will be classified according to a sequenced 3-tier structure which will be finalised by each Task Force after it is established and endorsed by a Steering Group. The Roadmap will be reviewed on an annual basis and new initiatives may be added as necessary.

To develop local currency denominated and regional bond markets voluntary efforts of member countries will be crucial. “References for self-assessment” will be developed and serve as benchmark for member countries. Each member country should report on a periodic basis – as a part of the current Self-Assessment process – its efforts, progress and experiences made in developing bond markets and thus contribute to the development of local currency denominated bond markets through information sharing and concerted efforts to develop more accessible regional bond markets both for issuers and investors.

The “Steering Group” has as its key focus six missions which include: (i) to set, review and revise the comprehensive ABMI Roadmap; (ii) to oversee and provide guidance to the activities of the Task Forces, Technical Assistance Coordination Team (TACT) and the Working Team from a cross cutting standpoint; (iii) to set up a strategy to promote public awareness for the ABMI; (iv) to check the practicability of the studies made by Task Forces; (v) to assign a task to an appropriate Task Force or create, if necessary, a Working Team; and (vi) to encourage the exchange of information among member countries on local currency denominated and regional bond market development through a self-assessment process.

## New ABMI Roadmap



### (ii) Asian Bond Fund (ABF)

The Asian Bond Fund (ABF) promotes the development of national and regional bond markets by directly creating bond funds. In June 2003, the EMEAP central banks launched the first fund, ABF1, pooling USD1 billion in international reserves from the 11 EMEAP central banks and monetary authorities and invested these in dollar-denominated sovereign and quasi-sovereign bonds issued by eight countries – PRC; Hong Kong, China; Indonesia; Korea; Malaysia; Philippines; Singapore; and Thailand. In June 2006, EMEAP central banks launched the second set of funds, collectively known ABF2, comprising USD2 billion of pooled central bank reserves. ABF2 is actually nine separate funds: eight single-market funds and the Pan-Asian Bond Index Fund (PAIF). The eight single-market funds purchase the respective local currency bonds in the eight EMEAP markets. The PAIF is a single-index bond fund investing in local-currency sovereign and quasi-sovereign bonds from the same eight EMEAP economies. Unlike its predecessor, ABF2 was designed to be listed in individual markets and opened up to private investors. Most of the ABF2 funds have already been listed or have become open-ended funds, with the total size increasing by some 60% to USD3.2 billion as of December 2007.

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The ABF2 framework has helped develop deeper and more liquid local currency bond markets. The use of passively-managed funds has provided a low-cost and convenient way for investors to invest in Asian bonds. The PAIF is designed to allow institutional and retail investors to get access to local bond markets in a simple and transparent way. As a listed open-indexed fund, the PAIF would help broaden both investment menu and investor base. In addition, the implementation of the ABF programme has allowed policy makers and regulators a deeper understanding of the practical impact of market impediments, which usually come in the form of capital controls, withholding taxes, regulatory hurdles, and weak infrastructure.<sup>1</sup> It has already been effective in promoting regulatory and tax reforms of local bond markets – for instance, prompting some national governments such as Malaysia and the PRC to loosen capital controls and others including Thailand and Korea to offer withholding tax exemptions on investment income to non-resident investors.

### (iii) ADB's role in Asian bond market development

ADB has actively supported the development of the region's bond markets in several ways. First, by issuing prime-name credit paper in local Asian currency debt markets, ADB established a regional platform dedicated to bond issues denominated in regional currencies. Starting in 2004, ADB completed 16 such issues in PRC; Hong Kong, China; Malaysia; Philippines; Singapore; and Thailand. Total local-currency bond issuance from 2003 to March 2008 amounted to approximately USD3.9 billion.<sup>2</sup>

In September 2006, ADB also launched a USD10 billion Asian Currency Note (ACN) programme in Hong Kong, China; and Singapore and is expected to expand its ACN programme to Malaysia, Korea, and Thailand in the near future. Under the ACN, ADB has issued local currency-denominated bonds in several ASEAN+3 countries using common disclosure standards and terms and conditions governed by English law. As participating member countries have adopted these standards to make it possible for ADB to issue bonds under the programme in their markets, the ACN programme has initiated the harmonisation of these standards among participating countries.

Second, since 2003, ADB has actively supported the ASEAN+3 Asian Bond Markets Initiative by providing technical assistance to its working groups. Since the inception of the ABMI in August 2003, ADB has provided 14 regional technical assistance projects (RETAs) in support of ABMI. ADB also provides the venue for holding meaningful policy dialogues

<sup>1</sup> See Ma and Remolona (2005).

<sup>2</sup> ADB internal sources.

between the ASEAN+3 governments and the private sector through market consultations, workshops, seminars, and conferences.

Third, as mentioned above, ADB developed and maintains the *AsianBondsOnline* website to disseminate information on ASEAN+3 bond markets.

Fourth, ADB conducts research on bond market related topics. Research includes special features in the semi-annual *Asia Bond Monitor*, working papers, reports, and books.

In all these efforts, ADB strives to provide the necessary forum to stimulate discussions, to catalyse policy dialogues between the private and public sectors, and to enhance greater public participation in discovering ways and means to improve the investment climate and enlarge investment opportunities for both local and foreign investors in the region's securities markets.

## 12.6 Concluding remarks

— Emerging East Asia was hit by a severe financial crisis in 1997/98 due to too much dependence on bank financing and lack of adequate financial regulatory and supervisory framework. Ten years later, the regional economy has become more resilient due to continued successful domestic reforms, particularly in the financial sector. Bond markets in emerging East Asia have developed substantially in the last decade and are expanding at a faster rate than gross domestic product in most of the regions markets. Policy makers in the region have committed to undertake reforms to continue their support to the development of bond markets including the easing of cross-border investment flows and removing market impediments. As a result, investment opportunities for Asia's local currency bonds have increased. The Asian Bond Fund (ABF) Pan-Asia Index, for example, has produced an annualised return of nearly 10% (9.7%) from its inception in 2001 through June 2007.

The fruits of these efforts can be seen in the current resilience to the expected slower global economic growth in 2008 in response to the effects of a weakening US economy, continuing workout of the US subprime generated financial turmoil, tighter credit conditions, and rising inflation. Strong economic growth and financial market conditions – together with relatively small exposure to US subprime mortgages – have helped limit spillover effects of the US subprime turbulence to emerging East Asia. (see *Asia Bond Monitor* April 2008)

Nevertheless, the region must remain vigilant for potential financial risks and economic

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turbulence and continue to develop broader and deeper local currency bond markets and strengthen regulatory and institutional capacities in order to safeguard against the risks. Liquid and well functioning bond markets play an important role in supporting efficient and stable financial market intermediation and economic growth.

As the region is expected to continue to grow rapidly over the next few years, demand for infrastructure services is also expected to increase. A joint study by ADB, Japan Bank for International Cooperation (JBIC), and World Bank estimate that developing economies of East Asia and the Pacific will need to spend approximately USD165 billion or about 6.2% of GDP annually from 2006–2010 to meet the demand for infrastructure investment in areas such as energy, transport networks, electricity, telecommunications, water and sanitation. The continuing robust economic performance of the region and demand for increased infrastructure investment thus bolsters the need for debt finance outside the banking system. Regional cooperation for the development of bond markets will be necessary in order for bond markets to tap into the region's vast savings and thereby meet financing needs.

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## Appendix 12.1

**Evolution of financial assets: selected Asian economies, US, and EU, bank claims**  
*(equities and bond markets in billion USD and as percent of GDP, 1996 and 2007)*

Billion USD	Bank Claims		Equities Market		Bond Market		Total	
	1996	2007	1996	2007	1996	2007	1996	2007
Japan	11,354.8	9,840.5	3,011.2	4,330.9	4,530.6	7,653.2	18,896.5	21,824.7
PRC	800.4	4,654.7	118.6	4,478.9	61.7	1,689.8	980.7	10,823.4
India	176.6	574.9	122.2	1,818.0	81.2	435.2	622.6	4,489.2
Hong Kong, China	242.4	259.9	449.2	2,654.4	37.2	98.0	728.8	3,012.3
Korea, Rep. of	605.8	1,060.9	139.1	1,122.6	283.3	1,313.8	1,028.1	3,497.3
Singapore	73.9	136.3	153.1	539.2	24.7	118.1	251.7	793.5
Taipei, China	482.1	679.0	273.8	663.7	100.2	196.9	856.0	1,539.6
Indonesia	121.8	170.6	90.9	211.7	6.9	87.6	219.5	469.8
Malaysia	143.1	220.7	306.2	325.3	73.1	164.2	522.4	710.1
Philippines	61.1	65.8	80.5	102.9	27.0	58.0	168.6	226.7
Thailand	251.9	273.6	95.9	197.1	18.2	153.9	366.1	624.6
<i>Memo</i>								
United States	15,721.6	38,964.4	8,451.7	19,922.3	11,540.5	27,488.9	35,713.8	86,375.6
European Union 15	10,496.1	24,596.1	4,381.0	14,921.1	8,124.1	21,323.3	23,001.2	60,840.5

As a % of GDP	Bank Claims		Equity Market		Bond Market		Total	
	1996	2007	1996	2007	1996	2007	1996	2007
Japan	244.8	224.5	64.9	98.8	97.7	174.6	407.4	497.9
PRC	93.3	137.7	13.8	132.5	7.2	50.0	114.3	320.2
India	46.3	57.3	32.1	181.2	21.3	43.4	163.4	447.5
Hong Kong, China	152.5	125.7	282.6	1,283.8	23.4	47.4	458.5	1,456.9
Korea, Rep. of	113.6	110.2	26.1	116.6	53.1	136.5	192.7	363.3
Singapore	79.3	80.7	164.2	319.3	26.4	69.9	269.9	469.9
Taipei, China	166.6	177.1	94.6	173.2	34.6	51.4	295.9	401.7
Indonesia	54.0	40.5	40.3	50.3	3.1	20.8	97.4	111.6
Malaysia	139.8	113.8	299.1	167.7	71.4	84.6	510.3	366.0
Philippines	73.9	40.8	97.4	63.8	32.7	36.0	204.1	140.5
Thailand	140.1	96.1	53.3	69.2	10.1	54.1	203.6	219.4
<i>Memo</i>								
United States	201.1	281.5	108.1	143.9	147.6	198.6	456.9	623.9
European Union 15	117.3	157.6	49.0	95.6	90.8	136.7	257.1	389.9

Sources: *AsianBondsOnline*; local government agencies; IMF International Financial Statistics Online; BIS; World Federation of Exchanges; IMF World Economic Outlook Database, April 2008.

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