



September 11, 2014

To the G20 Finance Ministers and Central Bank Governors:

We are pleased to respond to your request of April 2014 for the IMF, FSB and BIS to advance work by September 2014 to address data gaps involving foreign currency exposures, building as far as possible on existing statistical and data initiatives to better assess cross-border risks.

Given the short period of time, the IMF, FSB and BIS have advanced work on different but complementary tracks. The key outputs of the work are:

- The Report on “Advancing the Work on Foreign Currency Exposures” prepared by the Staff of the IMF

The IMF considers the issue of foreign exchange exposures highly relevant in the context of its surveillance work on risks and spillovers, as well as crisis prevention. To this end, the Report outlines the information included in the IMF statistical report forms which provide a conceptual framework for the analysis of domestic and cross-border foreign exchange exposures, from a residence-based approach.

The potential for monitoring foreign exchange risks exists in the IMF report forms; however there are gaps in the availability of data. Information for the financial sector is generally available, including its cross-border foreign currency exposures, but this is not the case for the other sectors of the economy including for non-financial corporations.

- The BIS and FSB Summary of the Joint CGFS/FSB-SCAV workshop on risks from currency mismatches and leverage on corporate balance sheets

The workshop was held on June 20, 2014 with public and private sector participants, to gather views on current trends affecting corporate balance sheets in emerging market economies. The key messages of the workshop underline the rising corporate leverage, the shifting of duration risk to investors, and the unavailability of consistent granular data, which masks the concentration of risks in particular sectors or institutions.

The two main information gaps identified by the workshop participants were, first, in corporate hedging activities and other derivatives positions; and second, in the availability of financial statements for non-listed companies.

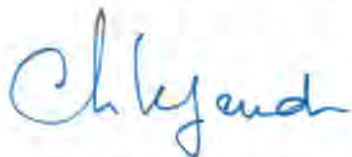
Going forward, the IMF proposes to advance the work on compilation of foreign currency exposures, in particular through the promotion of reporting of the foreign currency exposure table introduced in the sixth edition of the IMF’s *Balance of Payments and International Investment Position Manual (BPM6)*. The IMF intends to work primarily through the IMF

Committee on Balance of Payments Statistics, which is scheduled to conduct its annual meeting in October 2014. Also, the set of templates for internationally comparable sectoral accounts and balance sheets being promoted by the Inter-Agency Group, chaired by the IMF, under the G20 Data Gaps Initiative can be used by countries to help fill the information gap pertaining to the non-financial corporations sector. The forthcoming Triennial Surveillance Review will also look into the issue of foreign exchange exposures, particularly in the context of the effectiveness of IMF surveillance work on risks and spillovers. Moreover, the need for key financial sector data is also emphasised in the 2014 Financial Sector Assessment Program review.

In line with the approaches suggested at the workshop, the FSB will monitor progress by national jurisdictions to implement the relevant accounting standards, and will consider proposing that the accounting standard setters review disclosure requirements, in view of the changing needs of and increasing demand from stakeholders for information on foreign currency risk. Furthermore, the FSB will explore the extent to which supervisors are leveraging data collected by trade repositories and supervisory information to monitor foreign currency exposures, in order to identify key players in markets and to detect emerging vulnerabilities.

The BIS will continue to monitor and analyse these exposures closely. Mismatches between funding currencies and asset holdings on financial and non-financial balance sheets have been a central theme of recent BIS research. For example, the September 2014 issue of the *BIS Quarterly Review* looks at the impact of the increased role of asset managers on the dynamics and risks of cross-border investment flows, including foreign currency flows. In addition, work has recently been completed on enhancing the granularity of the BIS international banking statistics, including an expanded currency breakdown for the locational data. The BIS will continue to foster discussion among authorities and with the private sector on the relevant risks and vulnerabilities.

We will continue to coordinate our efforts in advancing the work on foreign exchange exposures, proposing to report back to G20 Finance Ministers and Central Bank Governors a year hence. We look forward to working further with the G20 economies on these important issues.



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Attachments

Advancing the Work on Foreign Currency Exposures



Prepared by the Staff of the IMF

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ACRONYMS

BIS	Bank for International Settlements
<i>BPM6</i>	<i>Balance of Payments and International Investment Position Manual</i> , sixth edition
COFER	Currency Composition of Foreign Exchange Reserves
CPIS	Coordinated Portfolio Investment Survey
FSB	Financial Stability Board
G-20	The Group of Twenty
<i>GFSM</i>	<i>Government Finance Statistics Manual</i>
IAG	Inter Agency Group on Economic and Financial Statistics
IIP	International Investment Position
IMF	International Monetary Fund
NPISH	Non-Profit Institutions Serving Households
ODC	Other Depository Corporations
OECD	Organization for Economic Co-operation and Development
OFC	Other Financial Corporations
PSDS	Public Sector Debt Statistics
RDT	Reserves Data Template
SDDS	Special Data Dissemination Standard
SDR	Special Drawing Rights
<i>SNA</i>	<i>System of National Accounts</i>
SRF	Standardized Report Form
STA	IMF Statistics Department

EXECUTIVE SUMMARY

In April 2014, the G-20 Finance Ministers and Central Bank Governors asked the IMF, FSB and BIS to advance work by their September meeting to address data gaps involving foreign currency exposures, building as far as possible on existing statistical and data initiatives to better assess cross-border risks.

Given the short time period in which to report back to the G-20 Finance Ministers and Central Bank Governors, the IMF and FSB/BIS have advanced work on different but complementary tracks. The main conclusions of the IMF work are:

- IMF considers the issue of foreign currency exposures highly relevant in the context of its surveillance work on risks and spillovers, as well as crisis prevention.
- The data requested by IMF statistical report forms for the external, financial, and government sectors on a residence basis provide a framework for analyzing both domestic and cross-border foreign exchange exposures.
- The potential for monitoring foreign exchange risks and help meet the concerns raised by the G-20 Finance Ministers and Central Bank Governors exists.
- Data on foreign currency exposures of the financial sector, particularly for depository corporations, are generally available; including their cross-border foreign currency exposures, but this is not the case for other sectors of the economy.
- The IMF will continue to work with countries to encourage the provision of foreign currency exposure data, particularly for the external sector, and will place this issue on the agenda of the October 2014 meeting of the IMF Committee on Balance of Payments Statistics to discuss the strategy for encouraging the reporting of such data.

G20 Finance Ministers and Central Bank Governors Communiqué, April 2014: “*We ask the IMF, FSB and BIS to advance work by our September meeting to address data gaps involving foreign currency exposures, building as far as possible on existing statistical and data initiatives to better assess cross-border risks.*”

I. SUMMARY

1. The exposure of the domestic economy to foreign currency risk varies by country but is potentially a source of vulnerability that needs to be assessed. Sharp movements in the exchange rate can cause significant wealth transfers both within an economy and between the economy and the rest of the world. In turn, the impact of wealth transfers can spillover to other economies through trade and financial connections. Work at the IMF has shown that currency (and maturity) mismatches in balance sheets have been a common theme in systemic crises.¹ So improving the availability of foreign currency data is important to the work of strengthening IMF surveillance, including the work on risks and spillovers.
2. The IMF—through its report forms for the external, financial, and government sectors—provides a framework for monitoring foreign exchange exposures. Table 1 illustrates this framework. In addition, the Inter Agency Group on Economic and Financial Statistics has developed a sectoral accounts template that could help close the gap on foreign exchange exposures for the government, nonfinancial corporations, households and NPISH (non-profit institutions serving households) sectors. So the potential for monitoring foreign currency risks and help meet the concerns raised by the G-20 Finance Ministers and Central Bank Governors exists.
3. In recent months, IMF staff has conducted bilateral consultations with G-20 economies as part of the G-20 Data Gaps Initiative. During these consultations, they have raised the issue of reporting foreign currency exposure data, particularly in the context of the International Investment Position (IIP)—which provides the comprehensive view of the external position of an economy. Presently no G-20 country reports these data as requested by the IMF, although a few informed the IMF staff that they had plans to do so. The reporting of data pertaining to foreign currency exposures for the financial sector, particularly depository corporations, and for external positions covered by specialized IMF surveys is somewhat better, as shown in Table 2.
4. Going forward, with the support of the G-20 Finance Ministers and Central Bank Governors, the IMF proposes to advance the work on the compilation of foreign currency exposures across all the domains. In particular, the IMF intends to promote reporting of the table on the Currency Composition of Assets and Liabilities in the sixth edition of the IMF’s *Balance of Payments and International Investment Position Manual (BPM6)*. This table records

¹ See “*Analytics of Systemic Crises and the Role of Global Financial Safety Nets*,” May 2011 - <http://www.imf.org/external/np/sec/pn/2011/pn1198.htm>

the currency composition of assets and liabilities between residents and nonresidents (Table A9-I). The IMF proposes to discuss the strategy for encouraging the reporting of such data at the October 2014 meeting of the IMF Committee on Balance of Payments Statistics.

II. WORK AT THE IMF

5. This report explains that the data sets pertaining to foreign currency exposures that are included in the report forms collected by the Statistics Department (STA) of the IMF fit together to provide a holistic view of the foreign currency positions within an economy. This note also provides information on the scale of reporting by each G-20 economy. The FSB and BIS work has focused primarily on the outcomes of the recent workshop in Hong Kong on corporate leverage and foreign currency exposures and so complements the work being undertaken by the IMF.

6. As cross-border financial linkages have expanded over time and become more complex, data on foreign currency exposures have become increasingly important for our analysis of risks and spillovers, in particular because they help sharpen our understanding of balance sheet effects. To strengthen surveillance, an intensified effort is needed to make these data available. The first step involves increasing the availability of data that are already being sought or are not widely disseminated. Ultimately, additional data may be needed, such as data on un-hedged foreign exchange liabilities given that large un-hedged positions are often a factor in balance of payments crises.

7. The holistic framework from which the collection of foreign currency exposures can be assessed is set out in Table 1, Intersectoral Assets and Liabilities Positions in Foreign Currency. This table is presented in the form of a balance sheet matrix that includes domestic and foreign currency exposures on a vis-à-vis sector basis.²

A. Data on Cross-Border Foreign Currency Exposures

8. The overarching framework for monitoring the external position of an economy is the IIP. The framework was updated in 2009 with the publication of the sixth edition of the IMF's *Balance of Payments and International Investment Position Manual*.

9. The IMF collects cross-border foreign currency exposure data through the IIP report forms. These report forms identify separately the positions of the following individual institutional sectors vis-à-vis nonresidents: central bank, general government, deposit taking corporations except the central bank, other financial corporations (OFCs), and inter-company lending. A table is included within the standard presentation (A9-I) that, for each of these sectors, provides a breakdown of debt claims and liabilities by domestic and foreign currency with short-term original maturity separately identified. The notional values to receive and pay in

² Not all sectors of the 2008 *System of National Accounts* are separately represented in this matrix in order to simplify its presentation.

foreign currency under financial derivatives contracts are also included (Appendix II). These data can be used to populate the external sector column and row in Table 1.

10. Unfortunately at the present time very few countries provide these data, and none from the G-20, although as noted above a few G-20 countries have plans to collect at least partial data on foreign exchange exposures. The difficulty faced by compilers is that data are frequently not available for all types of instruments and sectors, particularly outside of the financial sector.

11. The IMF also collects foreign currency exposure data through surveys of sub-components of the IIP. The Coordinated Portfolio Investment Survey (CPIS) collects data on the foreign currency composition of portfolio investment (security) assets by the same three currencies (US dollar, euro, and yen) identified in the IIP report form plus the British pound and the Swiss franc. Forty-three economies report these data, including 12 G-20 economies.

12. The World Bank in cooperation with the IMF collects and disseminates the currency composition (domestic currency/foreign currency) of external debt. The currency composition of external debt is also an encouraged item under the IMF's Special Data Dissemination Standard (SDDS). Twenty-eight economies (eight G-20 economies) report this SDDS encouraged item to the World Bank.

13. One benefit from the data collections on security assets and external debt liabilities is that they can be used to cross-check the foreign currency exposure data from the IIP presentation.

14. The IMF also collects foreign currency composition data on reserves through the Currency Composition of Foreign Exchange Reserves (COFER) survey. The COFER survey provides a breakdown of foreign exchange reserves by seven major currencies and is monitored closely by markets. As the data and the names of reporters are confidential, individual country data are not published. The IMF is working to increase the number of COFER reporters.

15. Also, the IMF collects reserves and foreign currency liquidity data through the Reserves Data Template (RDT). The RDT includes a two-part breakdown of foreign exchange reserves into SDR basket currencies (US dollar, euro, yen and British pound), and non-SDR basket currencies. These data can be compared with the data in the IIP presentation. The RDT is a required item under the SDDS and so the data reported by economies are publicly available. Seventy-seven economies report the RDT, of which 17 are G-20 economies.

B. Data on Financial Institutions Foreign Currency Exposures

16. The IMF compiles data on financial institutions using Standardized Report Forms (SRFs). These forms cover the activities of the central bank (1SR), other depository corporations (2SR), and other financial corporations (4SR). Taken together they provide comprehensive coverage of the assets and liabilities of the financial sector.

17. The SRFs have an accounting structure, detailing the financial instrument (currency, deposits, etc.), the currency of denomination of the instruments (domestic and foreign currency), and the counterparty sector for each instrument. Counterparty institutional units are split into resident and nonresident units. Resident institutional units are grouped—slightly rearranged—into the different sectors of the *2008 System of National Accounts (SNA)*, namely the central bank, other depository corporations, including money market funds (ODCs), other financial corporations (OFCs), central, state and local government, public nonfinancial corporations, other nonfinancial corporations, and other resident sectors (households and nonprofit institutions serving households). Data are collected on an aggregated gross basis, not netting intra-sectoral positions of the institutional units of the ODC and the OFC sectors. In SRFs, intercompany lending is not separately identified from lending to other institutional units in the same sector as the related corporation (financial or nonfinancial), although it is part of total lending

18. Source data for SRF 1SR is the balance sheet of the central bank, and for SRF 2SR the aggregated balance sheet of the ODCs (commercial banks and other financial institutions that issue liabilities included in the national definition of broad money). Each is typically a reliable source from which to analyze the foreign currency exposures of the economy. 141 economies (12 G-20 economies) report foreign currency exposure data to the IMF through the SRFs 1SR and 2SR.

19. For the OFC sector, comprehensive coverage is difficult because of the large number and diversity of the financial institutions operating in this sector. Further, many of these institutions are supervised by authorities other than the central bank, or not supervised at all, meaning that data from the SRF 4SR are less widely available. 35 economies (Eight G-20 economies) report foreign currency exposure data to the IMF through the SRF 4SR.

20. SRFs contain a detailed level of information by currency and counterparty sector, and so it is possible to use the data reported to STA for monetary statistics purposes to populate the matrix in Table 1.

**Table 1. Intersectoral Asset and Liability Positions in Foreign Currency
(Balance Sheet Matrix)**

		Holder of the Asset (Creditor)						Total
		Central Bank	Deposit-taking Corporations except the Central Bank	Other Financial Corporations	General Government	Other non-financial	External	
Issuer (Debtor)	Central Bank							
	<i>Total</i> */						IIP 1/	
	<i>In domestic currency</i>		SRF 1SR 3/	SRF 1SR 3/	SRF 1SR 3/	SRF 1SR 3/	SRF 1SR 3/	SRF 1SR 3/
	<i>In foreign currency</i>							
	Deposit-taking Corporations except the Central Bank							
	<i>Total</i>						IIP 1/ 7/	
	<i>In domestic currency</i>	SRF 1SR 3/	SRF 2SR 4/	SRF 2SR 4/	SRF 2SR 4/	SRF 2SR 4/	SRF 2SR 4/	SRF 2SR 4/
	<i>In foreign currency</i>							
	Other Financial Corporations							
	<i>Total</i>						IIP 1/ 7/	
	<i>In domestic currency</i>	SRF 1SR 3/	SRF 2SR 4/	SRF 4SR 5/	SRF 4SR 5/	SRF 4SR 5/	SRF 4SR 5/	SRF 4SR 5/
	<i>In foreign currency</i>							
	Government							
	<i>Total</i>						IIP 1/	GFS 2/
	<i>In domestic currency</i>	SRF 1SR 3/	SRF 2SR 4/	SRF 4SR 5/				
	<i>In foreign currency</i>							
Other non-financial								
<i>Total</i>							IAG /8	
<i>In domestic currency</i>	SRF 1SR 3/	SRF 2SR 4/	SRF 4SR 5/			IIP 1/ 6/	IIP 1/ 6/	
<i>In foreign currency</i>								
External								
<i>Total</i>	IIP 1/	IIP 1/ 7/	IIP 1/ 7/					
<i>In domestic currency</i>	SRF 1SR 3/	SRF 2SR 4/	SRF 4SR 5/	IIP 1/	IIP 1/ 6/		IIP 1/	
<i>In foreign currency</i>								
Total								
<i>Total</i>						IAG /8		
<i>In domestic currency</i>	IIP 1/	IIP 1/	IIP 1/	IIP 1/	IIP 1/ 6/	IIP 1/		
<i>In foreign currency</i>	SRF 1SR 3/	SRF 2SR 4/	SRF 4SR 5/					

Notes

*/ The breakdown in the vertical axis should include domestic and foreign currency as well as short and long-term maturity.

1/ Short and long term, and a domestic/foreign currency breakdown, for debt claims and liabilities. Except for reserves, a foreign currency breakdown for these claims and liabilities is provided for US dollars, euro, yen and other currencies.

2/ Data available for total only. A domestic/foreign currency breakdown. For loans and debt securities a further breakdown by maturity (short and long both original and remaining maturity) is provided.

3/ Standardized Report Form (SRF) ISR reported for the central bank provides data with domestic/foreign currency breakdown with no maturity breakdown.

4/ Standardized Report Form (SRF) 2SR reported for deposit-taking corporations provides data with domestic/foreign currency breakdown with no maturity breakdown.

5/ Standardized Report Form (SRF) 4SR reported for other financial corporations provides data with domestic/foreign currency breakdown with no maturity breakdown.

6/ Includes intercompany lending.

7/ The IIP and SRF data can only be compared at the total financial sector level as IIP includes money market funds in OFC, while SRF include them in depository corporations and not in OFC.

8/ Data may be available from IAG templates starting Q4 2014.

C. Data on General Government Foreign Currency Exposures

21. Government finance statistics include a limited amount of data on foreign currency exposures. The data that are available focus on liabilities rather than assets. In particular, the World Bank in cooperation with the IMF and Organization of Economic Co-operation and Development (OECD) disseminates data on general governments' total debt liabilities by currency of denomination on a quarterly frequency³. Fifty-five economies of which 13 are G-20 economies provide data.

22. The new government finance statistics report forms based on the updated government finance statistics methodology (i.e., *2014 Government Finance Statistics Manual (GFSM 2014)*) provide a domestic currency/foreign currency breakdown by instrument for general government debt liabilities. Once reported, this information can be used to populate the total liabilities of the general government line in Table 1. In addition, for debt securities and loan liabilities the new report forms provide a domestic currency/foreign currency breakdown by original and remaining maturity. The first collection of data using these forms will start in late 2014.

23. No data are requested for the general government's assets holdings by currency (domestic/foreign). However, there are possible counterparty data that could partially fill the gaps on general governments' holding of assets by domestic and foreign currency. The SRFs can provide the data on general government holdings of assets through the counterparty information reported by the central bank, deposit taking corporations except the central bank, and other financial corporations. The IIP can potentially provide data of general government cross-border holdings of foreign currency assets. However, data are not currently collected on general government claims on "other nonfinancial sectors".

D. Data on Nonfinancial Corporations, Households and NPISH Foreign Currency Exposures

24. The Working Group on Sectoral Accounts established under the auspices of the Inter Agency Group on Economic and Financial Statistics (IAG) has developed *Templates* for a *minimum* (required) and *encouraged* set of internationally comparable sectoral accounts and balance sheets. The *Templates* specify the minimum and encouraged sector/sub-sector and instrument details for the data on financial positions and flows that countries are requested to compile and disseminate. The *Templates* are being introduced in 2014.

25. Among the encouraged items are the foreign/domestic currency breakdowns for the following instruments: currency and deposits; debt securities; loans; and other accounts receivable/payable for all national accounts sectors, including general government, nonfinancial corporations, and households and NPISHs. If these data are reported, they would provide a

³ Public Sector Debt Statistics-Online Centralized Database www.worldbank.org/qpsd

picture, albeit not complete, of total foreign currency assets and liabilities for these sectors. No maturity information on foreign currency exposures is requested.

26. Under the proposed data cooperation protocol among the member countries of the IAG, the IMF will receive the data from Eurostat/European Central Bank for European Union member countries and from the OECD for all other OECD member countries. The IMF will therefore collect the data, where they exist, for all other countries.

27. In addition, it would be possible to compile external foreign currency exposure data for these sectors through the IIP data. Further using SRF data, it is possible to obtain exposures in foreign currency to domestic financial institutions of the nonfinancial corporations sector, and of the household and NPISH sectors.

E. Data Reporting by G-20 Economies

28. Table 2 sets out the reporting of data to the IMF by the G-20 economies for the report forms described above, excluding the IAG *Templates* on sectoral accounts. More information on all the data collections is provided in Appendix 1.

F. Way Forward

29. With endorsement by G-20 Finance Ministers and Central Bank Governors, the IMF plans to advance the work on foreign currency exposures by promoting reporting on the report forms identified above, in particular, Table A9-I in the *BPM6*. IMF staff will continue to coordinate with FSB and BIS staff.

30. Further, the forthcoming Triennial Surveillance Review will look into the issue of foreign exchange exposures, particularly in the context of the effectiveness of IMF surveillance work on risks and spillovers, and thus crisis prevention. In addition, the need for key financial sector data is also emphasized in the 2014 Financial Sector Assessment Program review.

31. As noted above, there is a data gap within the matrix pertaining to the nonfinancial corporations sector. It is expected that the set of *Templates* for internationally comparable sectoral accounts and balance sheets will be promoted by the IAG under the G-20 Data Gaps Initiative to help fill this gap.

Table 2. IMF Statistics Department Data Collection Forms**G-20 Reporters**

Data Collection Form	Economies Currently Reporting Foreign Currency Breakdown
External Sector	
–International Investment Position Statistics (IIP)-Table A9-I Currency Composition of Assets and Liabilities.	None
–Coordinated Portfolio Investment Survey (CPIS)-Table 2. Currency Breakdown of Portfolio Investment Assets.	France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa, Turkey, and US. (12 economies).
–Quarterly External Debt Statistics (QEDS)-Table 2. Gross External Debt Position. Foreign Currency and Domestic Debt.	Argentina, Germany, India, Korea, Russia, South Africa, Turkey, and US. (8 economies).
–Reserves Data Template (RD T).	Argentina, Australia, Brazil, Canada, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa, Turkey, UK and US. (17 economies).
– Composition of Foreign Exchange Reserves Survey (COFER).	Data and list of reporters are confidential.
Financial Sector¹	
–Standardized Report Forms (SRF)- Central Bank (1SR).	Australia, Brazil, France, Germany, Indonesia, Italy, Japan, Korea, Mexico, South Africa, Turkey, and US. (12 economies).
–Standardized Report Forms (SRF)- Other Depository Corporations (2SR).	Australia, Brazil, France, Germany, Indonesia, Italy, Japan, Korea, Mexico, South Africa, Turkey, and US. (12 economies).
–Standardized Report Forms (SRF)- Other Financial Corporations (4SR).	Australia, Brazil, Indonesia, Japan, Mexico, South Africa, Turkey, and US. (8 economies).
Government Finance Sector	
–Public Sector Gross Debt Statistics (PSDS). Items in the report form: (a) Domestic currency denominated; (b) Foreign currency denominated.	Argentina, Australia, Brazil, Canada, China, France, Indonesia, Italy, Mexico, Russia, South Africa, Turkey, UK and U.S. (14 economies).
–Updated Government Finance Statistics (GFSY)-Table 6.	None

¹ Argentina, China, Saudi Arabia, and United Kingdom provide partial currency breakdowns for some financial instruments using non-SRF report forms.

Appendix I. Detail on Data Collected Through IMF Statistical Report Forms

This appendix provides more detail on data collected through IMF statistical report forms.

A. Data on Cross-Border Foreign Exchange Exposures

Data are collected through the IIP, external debt, Coordinated Portfolio Investment Survey (CPIS), Currency Composition of Foreign exchange Reserves (COFER), and the Reserves Data Template (RDT) report forms.

International Investment Position (IIP)

- **External Assets:** IIP data includes quarterly total external assets vis-à-vis nonresidents broken down by sector and by instrument. Intercompany lending and official reserves data are separately identified. The maturity breakdown available is short and long term, although this breakdown is not available for intercompany lending and official reserves. A currency composition table by sector and maturity is included (table A9-I in Appendix II).
- **External Liabilities:** IIP data includes quarterly total external liabilities vis-à-vis nonresidents broken down by sector and by instrument. Data on intercompany lending are separately identified. The maturity breakdown available is short and long term, although this breakdown is not available for intercompany lending. A currency composition table by sector and maturity is included (table A9-I in Appendix II).

CPIS

- **External Assets:** The CPIS collects data on portfolio investment assets twice a year (equity and investment fund shares, and long- and short-term debt securities). Supplementary data by sector of holder and economy of nonresident issuer (with no currency breakdown), and on the currency composition of securities held, are encouraged.
- **External Liabilities:** The CPIS derives for each reporting economy total portfolio investment liabilities (equity and investment fund shares and long- and short-term debt securities) by nonresident holder. These data do not include a sectoral breakdown or a currency breakdown. The CPIS encourages countries to report their portfolio investment liabilities by geographical breakdown.

External Debt Statistics

- **External Assets** (Not Applicable)
- **External Liabilities:** Table 7.8 of the 2013 *External Debt Statistics: Guide for Compilers and Users*, encourages the dissemination of liabilities by sector, broken down

by instrument, maturity and foreign exchange. Table 7.8 is in line with the memorandum tables A9-I in *BPM6*.

COFER

- The IMF has been collecting quarterly data on the currency composition of official foreign exchange reserves (COFER) since the 1960s from individual countries on a strictly confidential basis. In response to heightened policy and public interest, aggregate COFER data are posted quarterly on IMF's website. The currencies identified in COFER are U.S. dollar, euro, pound sterling, Japanese yen, Swiss franc, Canadian dollar, and Australian dollar. All other currencies are indistinguishably included in the category of "other currencies." Work is advancing to release names of countries/jurisdictions as COFER reporter (with their consent) after the launch of the SDDS Plus.

Reserves Data Template (RDT)

- **External Assets:** The RDT provides at least once a year (although many SDDS reporters disseminate monthly data) the foreign currency breakdown of the monetary authorities' (primarily the central bank but also any central bank operations carried out by government or commercial banks) official reserves through two baskets of currencies—by SDR and non-SDR baskets. No further breakdown is available to identify instruments, functional categories, maturity and counterparty sector. Total claims in foreign exchange vis-à-vis residents are indistinguishably included within other foreign currency assets, with no further breakdown, as long as these assets maintain the key characteristics of reserve assets excluding the residency criteria.
- **External Liabilities:** The RDT provides on a monthly basis total short-term foreign currency drains vis-à-vis residents and nonresidents. The instruments included are debt instruments and financial derivatives. The foreign exchange exposure with residents and nonresidents is available in the RDT but combined with central government data. There is no split by individual foreign currency.

Inter-linkages: Total cross-border foreign currency exposures reported in Table A9-1 assets/liabilities should be consistent with SRF's data pertaining to the deposit taking corporations and OFCs taken together. Data for official reserves will be comparable with assets in the IIP, and also with the SRFs assuming all official reserves are held at the central bank. Liabilities for the statistical sectors in Table A9-1 should be consistent with IIP data. External debt data of all sectors should be fully consistent with IIP, and both frameworks collect the foreign currency split vis-à-vis nonresidents.

B. Data on Financial Institutions Foreign Exchange Exposures

Standardized Report Forms (SRFs)

- **Assets:** *Central Bank* assets include domestic and foreign currency positions broken down by instrument and by resident/nonresident counterparty. Resident counterparties are split by economic sector. Claims on nonresidents are broken down into “Included in official reserves” and “Other foreign assets.” Assets of *Other Depository Corporations* and *Other Financial Corporations* in domestic and foreign currency are broken down by instrument and by resident/nonresident counterparty. Resident counterparties are split by economic sector. There are no maturity breakdowns.
- **Liabilities:** *Central Bank* liabilities in domestic and foreign currency are broken down by instrument and by resident/nonresident counterparty. Resident counterparties are split by economic sector. Claims on nonresidents are broken down into “Short-term” (included in the calculation of net international reserves) and “Long-term.” There is neither a currency nor counterparty sector breakdown for “Shares and other equity,” which are presented at book value in “Capital and reserves.” *Other Depository Corporations* and *Other Financial Corporations* liabilities in domestic and foreign currency are broken down by instrument and by resident/nonresident counterparty. Resident counterparties are split by economic sector. There are no maturity breakdowns. There is neither a currency nor counterparty sector breakdown for “Shares and other equity,” which are presented at book value in “Capital and reserves.”

Inter-linkages: The foreign currency exposure data reported in the IIP for deposit taking corporations and OFCs taken together should equal the data reported in the SRFs for ODCs and OFCs together. In addition the IIP provides more detail by type of currency than available in the SRFs, which provides a domestic/foreign currency split only. Data for official reserves included in the IIP and SRFs are the same if the central bank holds all official reserve assets.

C. Data on General Government Foreign Exchange Exposures

Data are collected through Government Finance Statistics report forms and the Public Sector Debt Statistics Database (PSDS). The PSDS presents government and public sector debt data by maturity structures broken down by instrument, currency composition, and creditor residence. The PSDS covers only debt liabilities: no information on assets is included.

Government Finance Statistics Report Forms (being introduced in 2014)

- **Assets:** Government debt claims on resident and non-residents are available but there is no currency breakdown.
- **Liabilities:** Debt liabilities to residents and non-residents combined are available with a currency breakdown (domestic/foreign currency split). In addition, for debt securities

and loan liabilities there is a domestic currency/foreign currency breakdown by original and remaining maturity. It is not possible to cross-tabulate information on residency and currency composition.

Inter-linkages: Cross-border foreign currency exposures reported in the IIP for debt liabilities of general government allows for the domestic and foreign currency split of resident holdings of general government debt liabilities to be calculated by residual.

D. Data on Nonfinancial Corporations, Households and NPISH Foreign Exchange Exposures

Using SRF and IIP data, the user could obtain data on foreign exchange exposures to the nonfinancial corporations, households and NPISH sectors by domestic financial institutions and nonresidents.

- **External Assets:** The sectoral accounts *Template* has encouraged items that identify domestic currency denomination for the following instruments: currency and deposits; debt securities; loans, and other accounts receivable/payable for all national accounts sectors, including general government, the nonfinancial corporations, and households and NPISHs. This allows the foreign currency amounts to be derived by residual from the totals for these instruments. So it will be possible to derive information on the domestic currency/foreign currency breakdown of selected external assets for the total economy, but not for the specific sectors.
- **External Liabilities:** As with external assets, the encouraged items in the sectoral accounts *Template* identify domestic currency denomination for currency and deposits; debt securities; loans, and other accounts receivable/payable for all national accounts sectors including general government. So it will be possible to derive information on the domestic currency/foreign currency breakdown of selected external liabilities for the total economy, but not for the specific sectors.

Appendix II. Table A9-I in *BPM6*

Assets (Market Value)

	Central Bank	General Government	Deposit-taking corporations, except the central bank	Other sectors OFC/Other/Total ^{2/}	Intercompany lending	Total
Total ^{3/}						
Domestic Currency						
Foreign Currency						
U.S. dollar						
Euro						
Yen						
Other currencies						
Unallocated ^{4/}						
Of which one year or less ^{5/}						
Foreign Currency						
U.S. dollar						
Euro						
Yen						
Other currencies						
Unallocated ^{4/}						
Reserve Assets ^{6/}						
In SDR basket						
Not in SDR basket						

Financial Derivative Positions—To Receive Foreign Currency (Notional value)

	Central Bank	General Government	Deposit Taking Corporations	Other sectors OFC/Other/Total ^{2/}	Intercompany lending	Total
Receive foreign currency					n.a.	
U.S. dollar					n.a.	
Euro					n.a.	
Yen					n.a.	
Other currencies					n.a.	

Notes:

1/ Table A9-I is a memorandum item of the IIP statistical framework.

2/ OFC=other financial corporations. Other=nonfinancial corporations (except intercompany lending), households and NPISHs.

3/ Excluding reserve assets.

4/ Paragraph 5.107 in *BPM6* explains when currency data is shown as unallocated.

5/ Original maturity.

6/ Total reserve assets.

Appendix II. Table A9-I in *BPM6* (concluded) ^{1/}**Liabilities (Market value)**

	Central Bank	General Government	Deposit-taking corporations, except the central bank	Other sectors OFC/Other/Total ^{2/}	Intercompany lending	Total
Total ^{3/}						
Domestic Currency						
Foreign Currency						
U.S. dollar						
Euro						
Yen						
Other currencies						
Unallocated ^{4/}						
Of which one year or less ^{5/}						
Foreign Currency						
U.S. dollar						
Euro						
Yen						
Other currencies						
Unallocated ^{4/}						

Financial Derivative Positions–To Pay Foreign Currency (Notional value)

	Central Bank	General Government	Deposit Taking Corporations	Other sectors OFC/Other/Total ^{2/}	Intercompany lending	Total
Pay foreign currency					n.a.	
U.S. dollar					n.a.	
Euro					n.a.	
Yen					n.a.	
Other currencies					n.a.	

Notes:

1/ Table A9-I is a memorandum item of the IIP statistical framework.

2/ OFC=other financial corporations. Other=nonfinancial corporations (except intercompany lending), households and NPISHs.

3/ Excluding reserve assets.

4/ Paragraph 5.107 in *BPM6* explains when currency data is shown as unallocated.

5/ Original maturity.

Secretariats

11 September 2014

Summary: Joint CGFS – FSB-SCAV workshop on risks from currency mismatches and leverage on corporate balance sheets

Hong Kong Monetary Authority (HKMA); Hong Kong SAR; Friday 20 June 2014

Outline

On 20 June 2014, the CGFS and FSB-SCAV co-organised a workshop with public and private sector participants at the Hong Kong Monetary Authority to gather views on current trends affecting corporate balance sheets in emerging market economies (EMEs).¹ Its main aim was to help CGFS and SCAV members develop a common understanding of the analytical needs for the assessment of related vulnerabilities. Specifically, the objectives were to: (1) explore the channels through which corporate balance sheets can pose financial stability risks; (2) provide an initial assessment of current vulnerabilities (based on the available data, eg using country case studies or similar analyses); and (3) gather ideas for ways to address data gaps, including enhanced disclosures, stress tests and other data-gathering efforts.

The workshop was organised in three sessions, followed by a final discussion to summarise the key observations. The first two sessions featured case studies (supplied by Brazil, China, India, Mexico, Turkey as well as the IMF), focusing on experiences gained with monitoring corporate balance sheet risks in individual jurisdictions. The third session involved private sector participants from both the buy and sell side of the market (such as credit and rating agency analysts, corporate bankers, asset managers and accountants, mostly covering the Asian region), providing a broader perspective. The discussions during the various sessions are summarised below; the last section reports the key findings and possible follow-up options identified during the final workshop session.

Summary of discussion

Case study sessions

All six case studies highlighted that borrowing by non-financial EME corporates (NFCs) is on the rise, both domestically and from foreign sources. Issuers generally benefited from a deepening of domestic financial markets, while channels for foreign funding differed across jurisdictions. In some countries, such as Mexico, corporates increasingly resorted to direct issuance of foreign debt. In other jurisdictions, where corporates do not have direct access to external bond markets (either due to prohibitive costs or regulation), foreign borrowing of NFCs is

¹ The workshop was co-chaired by Eddie Yue (HKMA) and Ismail Momoniat (South African Treasury).

intermediated mostly by banks. This is, for instance, the case in Turkey. In yet other jurisdictions, such as Brazil, China and India, corporates often draw on foreign bond market funds through offshore subsidiaries and special purpose vehicles.

Assessing broad trends. The average level of NFC debt in major EMEs is estimated at about half of GDP, with significant variation across jurisdictions. While this compares favourably with the levels observed in many advanced economies, growth rates are high and many borrowers have recently accessed bond markets for the first time. Several workshop participants pointed to record issuance of new corporate debt in their jurisdictions and, in some cases such as Turkey, to sizeable shares of corporate liabilities denominated in foreign currencies. Participants generally agreed that the combination of low yields in international debt markets with strong demand from international investors was the main driver behind the recent rapid growth in corporate borrowing, particularly in terms of foreign currency debt. For Mexican corporates, for example, the cost advantage relative to issuing domestic debt is apparently significant even when currency swap spreads are taken into account.

There was general agreement that an assessment of current trends using aggregate, macroeconomic data would tend to understate risks. For example, credit-to-GDP ratios are not particularly elevated for most EMEs, ratios of short-term to long-term debt seem relatively stable, and country fundamentals are often healthy, suggesting that risks at the aggregate level are limited. Yet, aggregate data can often mask risks accumulating at the sectoral level and are subject to known biases (eg due to their reliance on the residency principle; see below), necessitating the use of more granular data in coming to an overall assessment.

Therefore, most case studies focused on risk assessments using firm-level data combining different risk metrics (eg debt to GDP, debt-to-EBITDA, share of foreign currency liabilities, debt maturity structure), often supplementing basic statistics with scenario analyses of interest rate and foreign exchange risks.

Leverage-related risks. Higher indebtedness can raise rollover risks, debt service burdens, and balance sheet sensitivity to interest rate changes. Even though the recent increase in borrowings has meant that upcoming maturities have significantly increased in select jurisdictions, representatives broadly judged rollover risks to be limited at the current juncture. In many cases, the maturity of corporate liabilities has been lengthening, and the share of long-term debt is growing faster relative to earnings than that of short-term debt. Still, some parts of the corporate sector continue to have shorter-dated liability profiles, which may expose them to risks once the current funding environment changes. Longer debt maturities, in turn, translate into higher duration risks for investors, which were mentioned as a potent amplification mechanism in case of shocks.

There was greater degree of disagreement concerning corporate debt service ratios and exposure to interest rate risk. While, despite fast debt growth, risk assessments within a number of individual jurisdictions pointed at stable debt service ratios, one case study cited evidence that the debt service ratios of many EMEs have been deteriorating, judging by the rising net debt-to-EBITDA ratios. Similarly, while several representatives judged interest rate risk facing corporates in their jurisdictions as limited (referring, eg, to fixed rate coupons for the majority of outstanding foreign bonds), cross-country comparisons suggest that net interest

rate expenses have broadly gone up, despite the current low interest rate environment (Graph 1, left-hand and centre panels).

In general, the risks associated with corporate leverage were judged to be greater when the assessment relied on firm-level data, taking the distribution of losses and, hence, sectoral differences or other relevant dimensions into account. This is in line with broader evidence, suggesting that leverage may be concentrated in particular sectors (eg the more cyclical ones) and in the weaker part of the corporate spectrum (Graph 1, right-hand panel). Such concentrations can be an issue particularly in those sectors where corporate profitability may have peaked or which have been experiencing a sustained run-up in prices (eg real estate).

Leverage, interest rate expenses and distribution of debt at risk

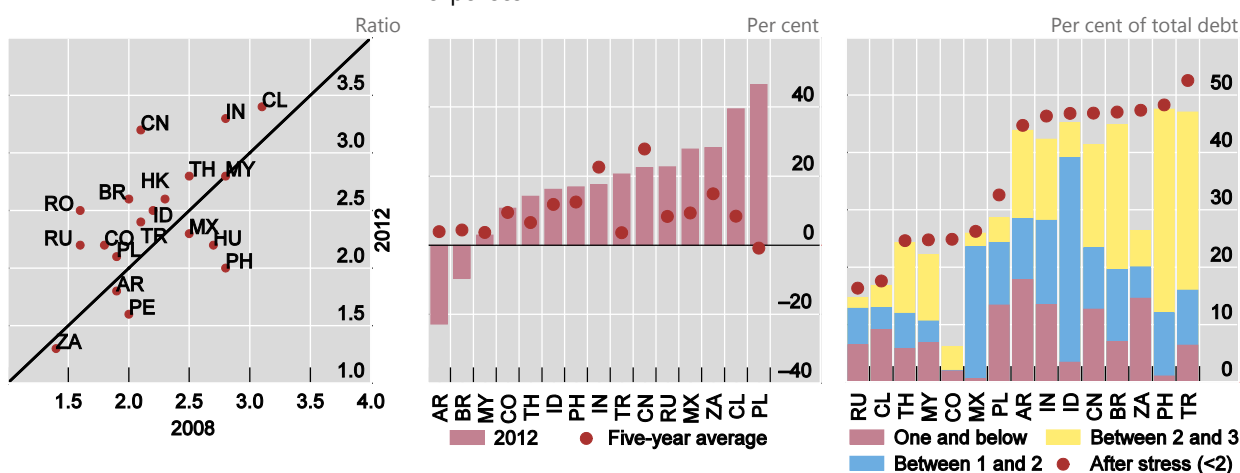
Cross-country comparison

Graph 1

Net debt-to-EBITDA ratio

Growth rates (yoy) of interest expenses

Distribution of debt-at-risk by ICR¹



¹ As a share of total debt; ICR = interest coverage ratio. The red dots indicate (as a share of total debt) the debt held by firms with ICR < 2 if interest service costs were to rise by 25%.

Source: IMF.

Currency mismatches. Workshop participants were less concerned about exchange rate risk, at least when taken in isolation. The development of local currency bond markets, particularly in Asia, reduces the need for foreign currency borrowing for many companies. Furthermore, while both domestically and internationally financed leverage seem to have risen (Graph 2, left-hand panel), in many jurisdictions foreign currency borrowing appears to be done in large part by firms from sectors with natural hedges (see, eg, Graph 2 centre and right-hand panels). In some cases, these appear to be supplemented with financial hedges, even though firm-level data on the use of these hedges are scarce (see below).

Some of the relatively benign country views on foreign exchange risks were corroborated by scenario analyses based on firm-level data. For example, using balance sheet information for listed companies, several countries reported analyses of projected losses (as a percentage of EBITDA or total equity) due to a given large-scale currency depreciation under alternative assumptions about natural and financial hedging ratios. A key result from these analyses is that the shocks needed

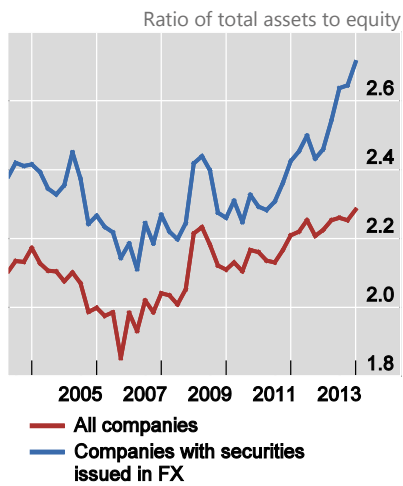
to generate significant projected losses appear to be relatively large.² Still, the impact of correlated shocks, such as the joint effect of interest rate changes and, exchange rate volatility, coupled with disruptions in bond market access, are more difficult to analyse, which may bias the results.

Overall, subject to data availability issues, country authorities typically found truly unhedged corporates to be a small part of their corporate universe (ie in terms of total corporate debt). Even so, they noted signs that unhedged borrowing is clustered in particular sectors, which may raise concentration concerns.³

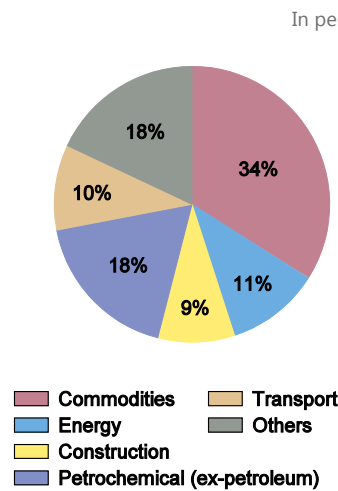
Leverage of corporates active in international capital markets and distribution of borrowers by sector in selected economies

Graph 2

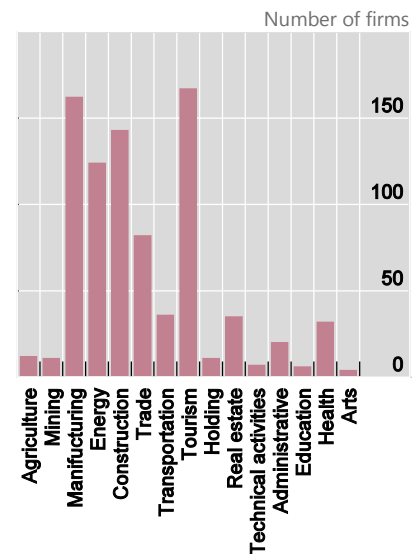
Leverage of publicly listed firms in Mexico



Sectoral distribution of unhedged FX debt in Brazil



Sectoral composition of high-risk firms in Turkey¹



¹ Firms that are categorised as having relatively low exports/high FX liabilities; size of FX revenues will differ according to sectors.

Source: Central Bank of Mexico; Central bank of Brazil; Central Bank of Turkey.

Sectoral interactions. Interactions between the corporate and other sectors of the economy received relatively little coverage during the discussions, in part because related risks are very difficult to analyse with the available data. Participants noted, however, that the degree of bank involvement in both domestic and external financing of EME NFCs remained large across jurisdictions. Domestic as well as foreign banks and their subsidiaries also remain key counterparties to EME corporates in derivatives markets, with some local banks depending on corporate deposits for part of their funding. Standard metrics suggest that EME banks tend to have relatively good loss-absorbing buffers, which may explain why workshop participants assessed the risks for their respective banking sectors to be rather contained. There was agreement, however, that weaker borrowers tend to interact with weaker banks, pointing to potential vulnerabilities at individual institutions.

² For example, a scenario analysis of Indonesian corporates estimated that only nine out of 85 assessed firms would face solvency issues if the rupiah was to depreciate by 41%.

³ In response, jurisdictions, such as India, have tightened their regulatory requirements on bank lending to unhedged corporate borrowers.

Finally, it was acknowledged that bond market financing has grown in size across EMEs, raising the importance of asset managers and other institutional investors in the transmission of shocks as well as related spillover risks.

Data availability. Workshop participants agreed that granular data on financial statements for listed corporates were generally available from a variety of commercial sources as well as public disclosures. Data gaps, therefore, affect predominantly unlisted firms, even though inconsistencies across data sources and a lack of standardisation in public disclosures can complicate analysis even for listed firms. Several participants pointed out that, although listed companies represent only a fraction of the firms in their jurisdictions, their share in cross-border business and foreign funding markets tends to be large.⁴ Yet, this does not exclude the possibility that the listed universe may represent only a very small share of estimated total domestic and international debt in some country cases.

In addition to public sources, some jurisdictions were able to obtain granular balance sheet information on NFCs from their own reporting systems (eg through the supervisory reporting of their banks), including for part of the unlisted sector. For example, the Central Bank of Turkey presented results based on corporate balance sheet data for more than 9,400 firms. However, some workshop participants noted that collection of NFC data can raise serious legal issues for central banks, as it may be outside their existing data-gathering mandates. Several participants also indicated that in their jurisdictions central banks would face restrictions on the scope of data collection as well as confidentiality issues; therefore, some form of collaboration with national statistical authorities or other agencies would be necessary to gather more granular data in practice.

Data availability is more problematic in the area of derivatives-related information, as public disclosures on hedging practices and the use of derivatives are not standardised, and therefore cannot be turned into quantifiable metrics for financial stability assessment purposes. Even so, individual jurisdictions have managed to generate useful information at the aggregate (ie via surveys) or micro levels (ie from derivatives exchanges). For example, the Reserve Bank of Australia (RBA) collaborates with the national statistical authorities to augment their quarterly balance of payments data collection (every four years) with quantitative questions on the foreign currency exposures and derivatives positions of financial and non-financial institutions. Based on the survey results, the RBA is able to monitor the aggregate currency composition of the country's external position and banks' hedging of foreign currency debt liabilities. However, several shortcomings of this approach were also discussed. These include a lack of consolidated information, because the data are collected on a residency basis, and restrictions on the use of the granular, firm-level survey responses (for confidentiality reasons).

Examples of jurisdictions with access to micro-level data through derivatives exchanges or dealer networks include Brazil and South Africa.⁵ In Brazil, two clearing houses handle derivatives transactions and provide derivatives registry services,

⁴ For example, while publicly listed firms in Turkey represented only about 3% of the number of firms for which the central bank has granular data, they accounted for about half of all assets and export volume. Similarly, listed firms in Mexico reportedly accounted for approximately 90% of international bond issuance by Mexican non-financials during the 2009–13 period.

⁵ Some jurisdictions also pointed out that data which used to be gathered for capital control purposes could also be useful to monitor corporate balance sheets; hence it may be worthwhile to keep such data collections in place even after the controls have been relaxed or dismantled.

which allow banks to collect information on the derivatives exposures of their clients. One shortcoming of the Brazilian registry is that data on offshore derivatives activity (ie derivatives with non-resident banks) are not or, at best, are only partially covered.

Overall, it was apparent that information from a variety sources can typically be combined to allow for basic sensitivity analyses, including those of interest or exchange rate shocks. Yet, participants also pointed to consistency issues across data sources, highlighting that data validation can be a challenge. In addition, a recurring theme was that aggregate data often suffer from residency bias in that they fail to capture the activities of offshore vehicles and subsidiaries.

Roundtable discussion

The views of market practitioners during the roundtable discussion broadly supported those from the country case studies. Overall, participants agreed that EME corporate leverage was growing to varying degrees across jurisdictions in Asia (just as in other regions). There was also agreement that borrowing had taken place predominantly in domestic currencies. Thus, interest rate and rollover risks were seen as the more relevant issues for EME corporates, with currency mismatch regarded as a lesser concern. In terms of outstanding currency exposures, while market practitioners acknowledged that shallow hedging markets tend to make financial hedges less attractive (as they will tend to eat up any foreign currency funding advantage), they also suggested that issuers typically have natural hedges in place, which would seem to mitigate any foreign exchange risk.

As already highlighted during the earlier sessions, market practitioners also acknowledged the importance of sectoral differences and the existence of “pockets of risk”, such as in property-related sectors and with regard to the use of derivatives. Overall, therefore, they felt that growing leverage as well as maturity and currency mismatches may cause EME corporates to be increasingly vulnerable to sharp (and correlated) adjustments in interest rates and exchange rates. The exact size and repercussions of these effects, however, remained hard to assess.

In terms of data availability, private sector participants underscored the lack of granular data, particularly for unlisted firms, and how this affects their ability to assess the full array of firms’ currency risks (unless a direct client relationship is in place). They also highlighted that national balance of payments data do not typically enable the identification of debt raised offshore, and that such offshore borrowing is important in jurisdictions such as Brazil, China, Russia, and Turkey.⁶

Corporate leverage. Market practitioners highlighted the significant growth in Asian corporate debt since the global financial crisis, spurred by very low interest rates and generally positive, though moderating, economic growth. While local currency debt markets have deepened in Asia, dollar-denominated borrowing has also increased, reflecting lower funding costs than in local markets and, in some jurisdictions, an expectation of currency appreciation on the part of corporate issuers (see below).

In terms of overall leverage trends, analysts noted that EME corporate leverage was on the rise in terms of a variety of balance sheet and income statement metrics

⁶ In addition, in making sectoral assessments, debt issued by SPVs and similar entities may have to be reclassified according to the sector of the ultimate issuer to avoid the associated leverage risk to be allocated to the non-bank financial sector.

(eg debt-to-assets, debt-to-equity, debt-to-earnings, and interest coverage ratios) as well as in broad economic terms (debt-to-GDP). However, in most jurisdictions, corporate leverage metrics remain below those of advanced economies, even though there are signs of weakness at the sectoral level (eg in Brazil, China, India and Indonesia). For example, the growing leverage of part of the Chinese corporate sector, in particular property developers, was mentioned by several workshop participants. It was noted that the lack of foreign currency revenues and the absence of hedging may leave such agents with large currency mismatches, while short maturities and less reliable sources of funding (eg via the shadow banking sector) may increase their vulnerability to rollover risks. Such risks would be highest for unlisted and unrated property developers that provide little financial information, do not have sophisticated risk management and suffer from concentration risk on property markets of third- or fourth-tier cities. (Yet, private sector participants also highlighted that they perceived high levels of foreign exchange reserves as an ultimate backstop for corporate sector risks at the aggregate level).

Instrument choice, in turn, has become more selective, amid signs that deal structures may be getting riskier. Hybrid equity/debt products (such as perpetuals), for example, are used to more actively manage leverage metrics, which may conceal the true extent of leverage in some sectors. At the same time, weaker loan covenants appear to be proliferating at a time when the sheer volume of issuance may be starting to stretch the due diligence capabilities of even the larger institutional investors. In this context, analysts highlighted the emergence of structures utilising “keep-well agreements” from the parent company to reassure holders of the structurally subordinated debt issued by offshore subsidiaries; such commitments remain essentially untested, as bankruptcy cases are rare. In addition, there was mention of guarantees or stand-by letters of credit provided by domestic banks to facilitate offshore borrowing through subsidiaries or special purpose vehicles.

Currency mismatches and hedging. Private sector participants generally suggested that they were less concerned over currency mismatches relative to leverage, while acknowledging that, at the firm level, they often had only limited information on actual currency exposures, terms of hedging, and counterparties. Still, overall, the more active foreign currency borrowers appeared to come from sectors generating foreign currency revenues (providing natural hedges), such as exporters and commodities firms. An exception is property-related sectors, where revenues are typically in local currency.

However, workshop participants also noted that shallow hedging markets and associated hedging costs as well as complicated hedge accounting rules can reduce corporates’ inclination to hedge. They also highlighted the role of currency regimes in setting borrowing incentives and noted that capital controls can raise the attractiveness of unhedged foreign currency funding (including for speculative purposes) for those corporates that are able to issue internationally (eg through offshore vehicles). In this context, recent cases of over-invoicing in Chinese trade finance markets were seen as evidence for speculative, carry trade-type corporate activities. There was also some disagreement over how far Asian corporates are

using the more exotic, structured hedging instruments (such as KIKO products),⁷ which have led to financial stability concerns in the past.

Data challenges. Market participants highlighted two key challenges with regard to data availability. The primary data gap arises from the significant lack of information on leverage and currency hedging of unlisted corporates. A second data challenge is the qualitative nature and inconsistency of public company disclosures of currency risks and hedging. While commercially available information was the primary source used to assess such risks, data on the nature and comprehensiveness of actual hedges were lacking. In Asia, for example, hedge accounting as such is not yet commonly adopted because corporates reportedly find the relevant rules complex and difficult to apply. However, the expected issuance of the new accounting standards on financial instruments by the end of 2014 should make it easier to apply hedge accounting and hence may help promote a wider adoption of hedge accounting and related disclosures in the region. More broadly, for the majority of corporates that have not adopted IFRS, hedging disclosure is generally weak. Any enhanced reporting, therefore, would need to include more detail on types and maturities of derivatives, counterparties, and the extent to which hedging aims to mitigate currency (and interest rate) risks.

Key messages

The key messages from the workshop can be summarised as follows:

Current assessment

- **Rising leverage.** Participants generally agreed that EME corporate leverage was on the rise, both through bank borrowing and debt issuance. Based on the available data, leverage (and associated interest rate and rollover risks) were assessed to be a more important issue than currency mismatches. Overall, EME authorities seemed to be largely aware of the relevant risks and had stepped up their monitoring activities, albeit to varying degrees in different countries.
- **Pockets of risk.** While the overall assessment was relatively benign, participants also acknowledged that this view may change if present trends toward increased leverage were to continue. They also noted that aggregate data can understate risks in particular sectors or at individual corporates. For example, firm-level data showed that, in some jurisdictions, growth in foreign currency borrowing has been concentrated among riskier firms and sectors, including property developers in countries such as China. Such “pockets of risk” put a premium on more granular analysis, but detailed data (eg from income statements) are often unavailable, particularly for non-listed firms.
- **Amplification effects.** In addition, while the recent increase in the maturity of corporate external liabilities was seen as a mitigant for rollover risks, there was less discussion concerning the flip-side implications for duration risk and the associated amplification effects from the behaviour of buy side investors. In this context, the recent shift in the composition of external funding from banks to

⁷ “Knock-in-knock-out” (KIKO) contracts use option features to insure their users against modest exchange rate movements, while exposing them to potentially large losses if the local currency depreciates sharply – a feature that reduces hedging expenses at the cost of retaining the tail risk of stronger currency depreciations.

bond market sources may have shifted duration risk to institutional investors, which may result in greater bond market volatility and amplify market reactions to any disruptions.

Data availability and gaps

- **Data availability.** There was agreement that granular data on corporate financial statements are available from a variety of sources, including commercial vendors. In addition, in some jurisdictions, balance sheet data can be obtained from countries' own reporting systems (eg banks' supervisory reporting), at least for listed firms. Combined with information from other sources, such information allows for basic sensitivity analysis, including that of interest or exchange rate shocks. Consistency across data sources, however, remains an issue, implying that data validation can be a challenge and that simplifying assumptions may be needed to cover for missing information.
- **Derivatives positions.** Data gaps were identified mainly in two areas. The first is corporate hedging activities and other derivatives-related positions. Three different approaches were suggested to improve data availability. The first would be enhanced disclosures of financial hedges via improved accounting standards (eg providing detailed currency and maturity information on financial hedges and their underlying positions, including those not qualifying for hedge accounting). The second approach would follow the Australian example and collect information on corporate hedges in the context of existing BOP data surveys, leveraging the existing statistical infrastructure and legal reporting requirements in this area (possibly based on a common template across countries). The third response, in turn, would follow the Brazilian example and seek to obtain information on outstanding derivatives positions directly from trade repositories and central counterparties (possibly also on a cross-border basis to capture off-shore derivative activities).⁸
- **Non-listed firms.** The second data gap is financial statements for non-listed companies. While some countries do have information on non-listed firms and standard databases tend to cover the sector at least to some extent (ie those companies that issue debt in public markets even though they are not listed on the stock market), coverage is much less complete than for larger, listed companies. Workshop participants proposed a variety of measures that could be taken to alleviate this problem. One is country-level surveys of consolidated corporate balance sheet positions, focusing specifically on the sectoral, currency and maturity breakdowns of external debt.⁹ In addition, given that unlisted firms are more likely than their listed peers to depend on bank financing, information obtained through banks (eg through supervisory channels) may be a viable way forward for some jurisdictions.

⁸ International workstreams exist in all three of these areas, suggesting that any follow-up work could possibly be addressed via BOPCOM (BOP surveys), standard setters such as IOSCO (enhanced disclosures), and the FSB AFSG initiative (options for aggregating trade repository data).

⁹ Such surveys would be implemented at the national level, but could benefit from international coordination (eg via the G20 data gaps initiative) to improve the consistency and comparability of the reporting templates.