

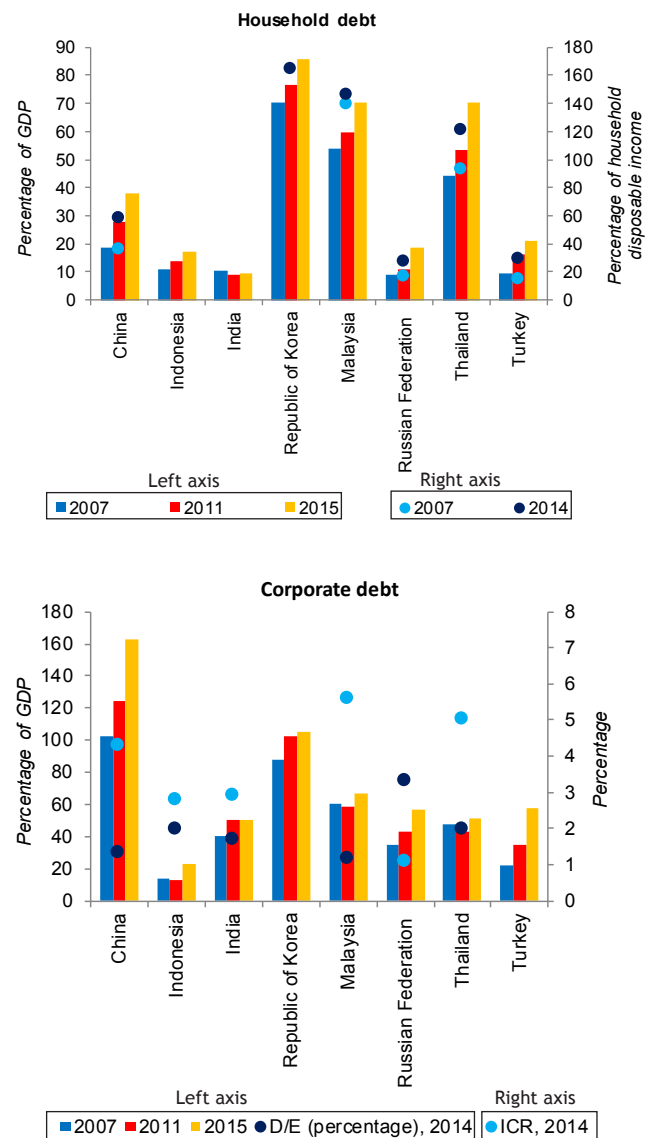
## Household and corporate leverage – where do the risks lie and how do we manage?

In the past decade, the Asia-Pacific region's financial landscape became more diversified, with households having better access to personal loans and mortgages and corporates able to issue bonds, including in offshore markets, and thereby rely relatively less on bank loans. However, as debt levels increased, borrowers' ability to repay became more sensitive to drops in earnings and shifts in interest rate and exchange rate. Historically, episodes of rapid credit growth were almost always followed by a banking crisis, as in the case of the Asian financial crisis of 1997. While the region's financial system today is much stronger and backed by sizeable official reserves, household and corporate leverage has become a key risk factor to the region's economic outlook and financial stability.

Latest available data shows that household debt is as high as 86% of GDP, or 164% of the household disposable income, in the Republic of Korea, and also quite high in Malaysia and Thailand. Corporate debt is as high as 163% of GDP in China<sup>1</sup>; even for countries on the lower-end, firm-level indicators of leverage and debt servicing capacity suggest that firms in India, Indonesia and the Russian Federation are also vulnerable to shocks (see figure 1).

Debt sustainability varies across households, so that pockets of risks could exist even if the overall picture looks manageable. A particular concern is the disproportionate amount of debt held by households with low capacities to service debt.<sup>2</sup> In Thailand, debt servicing as a share of income was 27% for all households but nearly 50% for the poorest income quintile in 2013.<sup>3</sup> Another risk is that much of household debt as well as assets are tied to the real estate sector, making households vulnerable to house price fluctuations.

Figure 1. Household and corporate debt in selected Asia-Pacific economies, 2007 to 2015



Source: ESCAP, based on credit to the non-financial sector data set, Bank for International Settlements; household accounts data set, OECD; Richards Dobbs and others, "Debt and (not much) deleveraging", McKinsey and Company; and Julian Chow, "Stress testing corporate balance sheets in emerging economies", International Monetary Fund Working Paper WP/15/216 (Washington, D.C., IMF, 2015).

Note: Corporate debt, excluding financial institutions. Debt to equity ratio (D/E) is a popular indicator of leverage, while interest coverage (ICR, that is, gross earnings over interest) shows debt servicing capacity. D/E above 2 or 3 is typically considered risky while debt held by firms with ICR below 1 or 1.5 are considered as "debt-at-risk." Debt to GDP ratios for the first quarter of 2007 and 2011 and second quarter of 2015 (latest available).

Similarly, firm-level data reveals that the most leveraged firms tend to have lower profitability and lower interest coverage ratios and to be less liquid<sup>4</sup>; many of them are in highly cyclical and excess capacity sectors such as real estate, construction, energy and heavy industries. In India, a third of corporate debt is owed by companies with debt-to-equity ratios above 3 and many firms carry high interest burdens. In China, state-owned enterprises indebtedness soared even as return on assets fell, in contrast to foreign and private industrial firms which were reducing their leverage and boosting their profitability.<sup>5</sup>

Currency risks have also increased. The share of US dollar debt in total non-financial corporate debt is estimated to be 5-10% in China, India, Malaysia, and Republic of Korea, and 30-50% in Indonesia, Russian Federation, and Turkey.<sup>6</sup> Total dollar debt held by non-bank borrowers stood at \$2.1 trillion in 2015 for selected major Asia-Pacific developing economies, two-thirds of which were in bank loans and a third in bonds, although the ratio varied across countries. While China stands out in absolute terms, its dollar debt as a share of annual exports and foreign currency reserves was on the lower end, compared with Turkey where the respective ratios were as high as 127% and 200% (see figure 2).

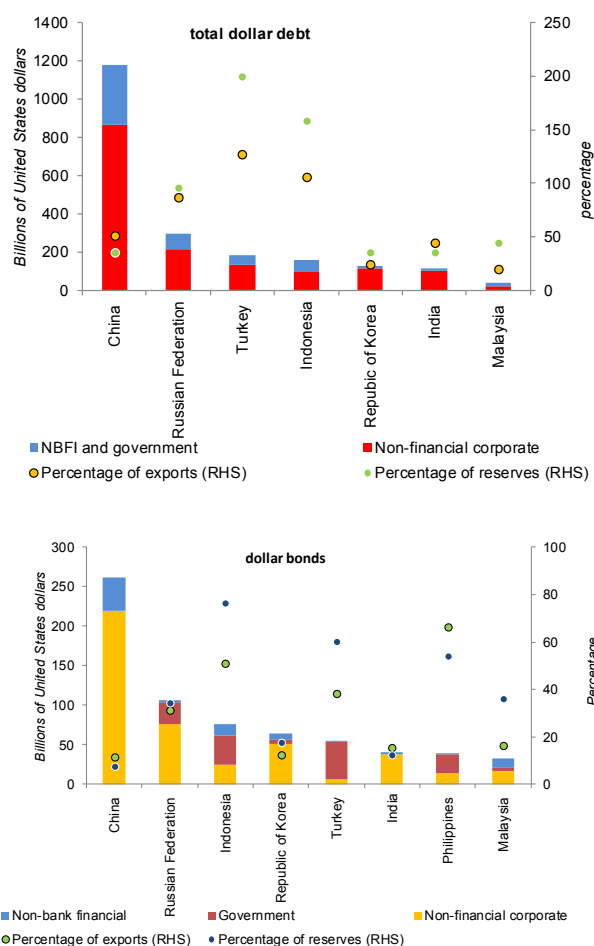
Carry trade is another concern. The surge in dollar debt since the global financial crisis entailed more than just trade finance and dollar funding for investment, as there was an attempt to profit from interest rate differentials or currency movements.<sup>7</sup> For instance, dollars raised in international capital markets were deposited in domestic banks<sup>8</sup> or used to fund corporate holdings of higher-yielding domestic assets (see figure 3).<sup>9</sup>

### Policy considerations and suggestions

The challenge for policy makers is that all three shocks – earnings, interest rate and exchange rate shocks – have materialized in the past year, as economic growth has moderated in many countries while the increase in US federal funds rate and the strengthening of the US dollar are likely to increase financing costs. These are

major shifts taking place after several years of loose monetary policy and relatively cheap dollar funding, and it is very likely that market participants have not fully accounted for such risks through appropriate hedging and adequate buffers.

Figure 2. Dollar debt in selected Asia-Pacific economies, 2015

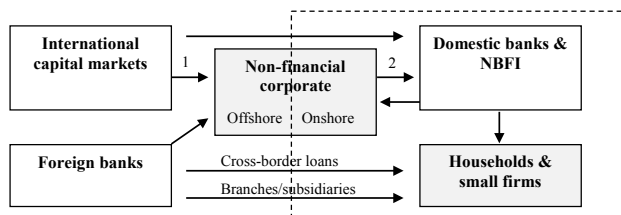


Source: ESCAP, based on data from Bank for International Settlements; Robert McCauley, Patrick McGuire and Vladyslav Sushko, “Global dollar credit: links to US monetary policy and leverage”, Bank for International Settlements Working Papers No. 483 Basel, Switzerland, BIS, 2015); and CEIC Data.

Note: Total dollar debt includes dollar loans as well as dollar bonds. NBF = non-bank financial institutions. Data on dollar debt for the second quarter of 2015, total exports in 2015 and foreign exchange reserves at end-2015.

A key question is how to balance the objectives of sustained economic growth and financial stability and to set out an appropriate path for curbing excessive leverage. There is no straightforward exit strategy, however, as abrupt tightening measures may further push up debt service ratios and limit funding/refinancing options whereas a more gradual strategy based on improving the composition of debt, which a number of countries seem to be pursuing, risks encouraging even more borrowing.

Figure 3. Channels of credit (and carry trade)



Source: ESCAP.

Note: Arrows indicate the direction of credit – bank loans and debt securities. The dotted line indicates a residence-based domestic economy used in GDP and balance of payments; it differentiates onshore and offshore borrowing. As an illustration of the carry trade, funds raised in international capital markets at a low interest rate (arrow 1) are not only used for investment but also deposited in domestic banks at higher interest rates (arrow 2). NBFIs = non-bank financial institutions, also known as “shadow banks”.

Monetary authorities face the challenge of having to support domestic demand (especially given record low inflation) while addressing capital outflow pressures and debt-related risks. An appropriate mix of interest rate increase, currency depreciation, and macro-prudential/capital flow management measures would be needed.<sup>10</sup> However, caution is warranted against competitive devaluations as any export benefits may be offset or even reversed by stock valuation effects that operate through balance sheets, especially for firms with higher dollar debt.<sup>11</sup>

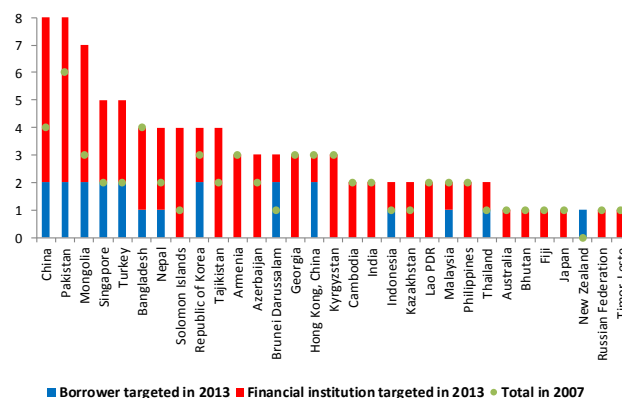
In the medium-term, Governments need to introduce comprehensive measures to manage debt-related risks. First, monitoring of household and corporate finances should be improved. Better data on household assets, both financial and real, are needed as asset quality also affects debt sustainability. Expanded monitoring also requires better data on corporate sector finances, including foreign currency exposures.<sup>12</sup> This may entail greater public disclosure, for instance through accounting standards or stock market listing requirements.

Second, use of macro-prudential and capital flow management tools can be made more effective.<sup>13</sup> Given the renewed increase in debt, macro-prudential measures have been increased – either in scope or intensity – in recent years (see figure 4). This includes borrower-targeted measures, such as limits on loan-to-value ratios and debt-to-income ratios, as well as lender-targeted measures such as concentration limits and limits on foreign currency loans.

Other measures include higher risk weights, for instance, on mortgage loans with high loan to-value ratios, as in the case of Malaysia. If house price booms are driven by increased demand from foreign cash inflows that bypass domestic credit intermediation, other tools, such as stamp duties, may be more effective, as

in the case of Singapore. However, if high house prices reflect supply bottlenecks, structural policies such as urban planning and government-subsidized housing would be required.

Figure 4. Number of macroprudential measures used in selected Asia-Pacific economies



Source: ESCAP, based on data from Eugenio Cerutti, Stijn Claessens and Luc Laeven, “The use and effectiveness of macroprudential policies: new evidence”, International Monetary Fund Working Paper No. WP/15/61 (Washington, D.C., IMF, 2015). Note: The number of measures does not necessarily reflect intensity. Data based on the IMF survey on global macroprudential policy instruments conducted in 2013 and 2014.

Policymakers should be aware that in some cases, prudential controls may shift risks elsewhere. For instance, direct cross-border loans by banks outside China to non-banks in China increased rapidly after the government restricted foreign banks’ ability to bring dollars into the country.<sup>14</sup> This is consistent with the finding that the greater use of macro-prudential policies is associated with increased cross-border claims.<sup>15</sup>

Third, better supervision of the banking sector<sup>16</sup> is needed as risk of credit default increases with higher borrowing costs. Although regional banks are generally well capitalized, with regulatory capital ratios well above the Basel standards, there tends to be a wider variation in asset quality, with Russian Federation and Tajikistan having non-performing loan ratios at over 15%. Even in countries with relatively decent asset quality, there are some early signs of deterioration; China’s NPL ratio has increased by nearly 40% over the past year albeit from a low base.

Fourth, effective debt restructuring that lowers funding/refinancing costs and lengthens maturity can help improve debt sustainability. In China, banks have been forced to bring more of their shadow loans onto their balance sheets<sup>17</sup> while monetary easing and a large bond-swap programme reduced

debt servicing cost. As a result, the weighted interest rate on existing liabilities declined from roughly 6% to 4.5% in 2015. Improving the credit history information of household and firms – for instance, through credit registers – could also help lenders be better informed about the current debt of potential borrowers. Efforts to enhance financial access should be accompanied by financial education and training to inform borrowers of potential risks. While credit helps smooth consumption against income fluctuations, this also means that households can become less concerned about negative income shocks so that rather than saving for rainy days, they just borrow more.<sup>18</sup>

Going forward, policy makers will need to further assess where debt-related risks lie and determine how to best manage those risks. However, it should be noted that financial deepening does not necessarily have to increase instability. In the case of Asia-Pacific region, there remains significant scope for financial development to further lower funding and refinancing costs, reduce currency and maturity mismatches, offer appropriate and cost-effective hedging and importantly, improve the allocation of resources – which would ultimately determine the welfare effect and sustainability of debt finance. Finally, to ensure that financial development supports inclusive and equitable economic growth, greater effort is needed on SME finance and on regional financial cooperation that helps capital to flow to a wider set of countries, including least developed countries which rely more on external finance.

## Endnotes

<sup>1</sup> It should be noted that in China, “corporate debt” includes not only state-owned enterprises but also off-budget borrowing by local governments, which increased rapidly in recent years.

<sup>2</sup> This point should not be over-emphasized, however. As a whole, the bulk of household debt is held by the rich (either by income or assets). For instance, in the Republic of Korea, 46% of total debt is held by the richest quintile, whereas the poorest quintile held 4.2% only.

<sup>3</sup> Athiphat Muthitacharoen, Phacharaphot Nuntramas, and Pasit Chotewattanukul, “Rising household debt: implications for economic stability”, Paper presented at Bank of Thailand Symposium 2014. Available from [www.bot.or.th/Thai/MonetaryPolicy/ArticleAndResearch/SymposiumDocument/Paper4\\_2557.pdf](http://www.bot.or.th/Thai/MonetaryPolicy/ArticleAndResearch/SymposiumDocument/Paper4_2557.pdf).

<sup>4</sup> IMF, “Corporate leverage in Asia: a fault line?” In *Regional Economic Outlook: Asia and Pacific*, April, Chapter 2 (Washington, D.C., International Monetary Fund, 2014).

<sup>5</sup> Ryan Rutkowsky, “Deleveraging the State in China”, *China Economic Watch*, 26 January 2015. Peterson Institute for International Economics. Available from <http://blogs.piie.com/china/?p=4239>.

<sup>6</sup> Robert McCauley, Patrick McGuire, and Vladyslav Sushko, “Global dollar credit: links to US monetary policy and leverage”, BIS Working Papers No 483 (Basel, Switzerland, Bank for International Settlements, 2015).

<sup>7</sup> Firms engaged in international trade borrow dollars to finance dollar-invoiced transactions. They also use dollar credit to fund holdings of inventory and fixed assets at home or to fund productive assets held by affiliates outside the home country. While the extent of carry trade is difficult to estimate, there are signs such as dollar debt increasing even as investment was subdued. However, assessment of how much of the funds raised are invested should also consider possible future investments, as firms may have front-loaded funding on the back of low US dollar yields but have delayed investments due to domestic and global uncertainties. Also, outbound foreign investment has increased in some cases.

<sup>8</sup> This may explain how banks were able to increase lending to households and small firms while maintaining relatively stable loan-to-deposit ratios even in countries with relatively low domestic savings..

<sup>9</sup> Michael Chui, Ingo Fender, and Vladyslav Sushko, “Risks related to EME corporate balance sheets: the role of leverage and currency mismatch”, *BIS Quarterly Review*, September (Basel, Switzerland: Bank for International Settlements, 2014).

<sup>10</sup> ESCAP, “Year-end Update of Economic and Social Survey of Asia and the Pacific 2015” (Bangkok, ST/ESCAP/2743, 2015).

<sup>11</sup> Jaime Caruana, “Credit, commodities and currencies”, Lecture at the LSE, London, 5 February 2016. Available from [www.bis.org/speeches/sp160205.pdf](http://www.bis.org/speeches/sp160205.pdf).

<sup>12</sup> IMF, “Corporate leverage in emerging markets – a concern?” In *Global Financial Stability Report*, October 2015, Chapter 3 (Washington, D.C., International Monetary Fund, 2015).

<sup>13</sup> Macro-prudential measures are designed to limit systemic financial risks, whereas capital flows management measures address the negative effects of large and volatile capital flows. The latter tends to, but does not always, discriminate on the basis of residency. Given that systemic risks may arise from capital flows, there are overlaps.

<sup>14</sup> Robert McCauley, Patrick McGuire, and Vladyslav Sushko, “Global dollar credit: links to US monetary policy and leverage”, BIS Working Papers No 483 (Basel, Switzerland, Bank for International Settlements, 2015).

<sup>15</sup> Eugenio Cerutti, Stijn Claessens, and Luc Laeven, “The use and effectiveness of macroprudential policies: new evidence”, IMF WP/15/61 (Washington, D.C., International Monetary Fund, 2015).

<sup>16</sup> An assessment here does not include non-bank sectors due to limited data availability. The non-bank sectors have expanded rapidly in several countries and are typically less regulated than the banking sectors. This suggests greater risk of financial instability. For example, while the stress tests on banking capital adequacy in the Republic of Korea yield favourable results, the tests show that capital adequacy of the non-bank sectors would fall short of the requirement if the default loan ratios were to increase by 6-8 percentage points (See endnote 13).

<sup>17</sup> This is one reason why bank loans have growth faster than overall credit growth. Economist, “Debt in China: deleveraging delayed”, 24 October 2015. Available from [www.economist.com/news/finance-and-economics/21676837-credit-growth-still-outstripping-economic-growth-deleveraging-delayed](http://www.economist.com/news/finance-and-economics/21676837-credit-growth-still-outstripping-economic-growth-deleveraging-delayed).

<sup>18</sup> Karen Dynan, and Donald Kohn, “The rise in U.S. household indebtedness: causes and consequences”, Finance and Economics Discussion Series 2007-37 (Washington, D.C., Federal Reserve Board, 2007).

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