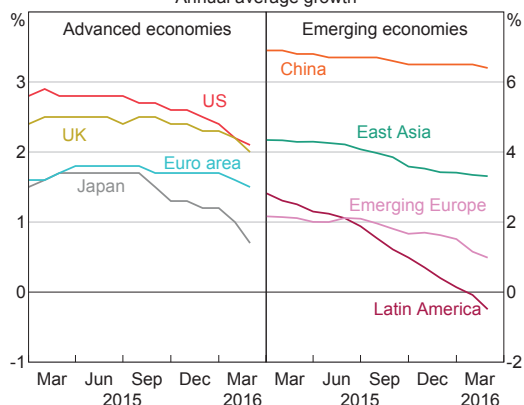


# 1. The Global Financial Environment

China and other emerging market economies remain an important locus of global financial stability risks, given the run-up in debt in the post-crisis period. In China, slowing economic growth has raised the possibility of a sharp increase in defaults, particularly in industries characterised by over-investment. Policy challenges facing the Chinese authorities have also become more evident, although the authorities have a range of tools available to maintain financial stability. In other emerging markets, the rise in corporate debt over recent years has added to financial risk, as slower growth, generally tighter financial conditions and, for some, lower commodity prices weigh on profits. Spillovers of weakness between emerging markets are an additional concern, given past examples where investor skittishness has quickly spread to other parts of the asset class. The main financial risks to the rest of the world from potential adverse developments in emerging markets are likely to be indirect, through channels such as trade volumes, commodity prices and sentiment in financial markets.

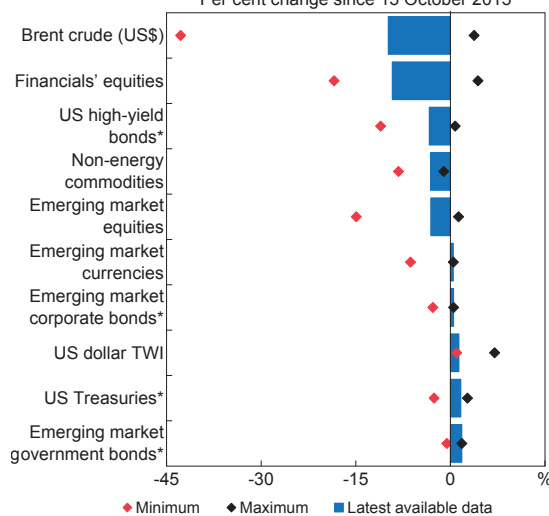
Financial markets have been volatile at times, driven by weaker growth outlooks, particularly among emerging economies (Graph 1.1), the commencement of 'lift-off' in the US federal funds rate while other major central banks have eased monetary policy further, and falls in oil prices. Around the beginning of 2016 equity prices fell and spreads on corporate bonds rose while sovereign bond yields declined (Graph 1.2). The currencies of a range of commodity exporters also depreciated further. However, these moves have been retraced somewhat over the past two months. Bank share

**Graph 1.1**  
**2016 GDP Forecasts**  
Annual average growth



Sources: Consensus Economics; RBA

**Graph 1.2**  
**Asset Prices**  
Per cent change since 15 October 2015



\* Increase denotes lower yield

Sources: Bank of America Merrill Lynch; Bloomberg; RBA

prices in advanced economies have fallen sharply, particularly early in 2016. This has reflected concerns about the profitability outlook in a low-growth environment, including headwinds to earnings from flatter yield curves and negative interest rates in some markets, and deteriorating emerging market and energy sector credit exposures. In Europe, profitability concerns have been compounded by a persistent large stock of non-performing loans. Nonetheless, despite subdued profit growth, advanced economy banking systems have continued to increase capital ratios. In emerging markets, key banking indicators have generally remained sound, although there are pockets of weakness, and some banking systems will continue to face challenging operating environments in the period ahead.

## Emerging Market Financial Systems<sup>1</sup>

### China

As noted in previous *Reviews*, risks in China have been building for some time. The large run-up in debt since the global financial crisis, accompanied by apparent over-investment in the real estate and industrial sectors, has raised the vulnerability of borrowers and lenders to the slower economic growth that is now occurring (Graph 1.3). While policymakers still have many levers to support growth and financial stability, investor perceptions of their effectiveness have been reassessed. This follows some policy actions since mid 2015 that were poorly received by markets, related to share market dynamics and renminbi (RMB) exchange rate flexibility, as well as a pick-up in capital outflows.

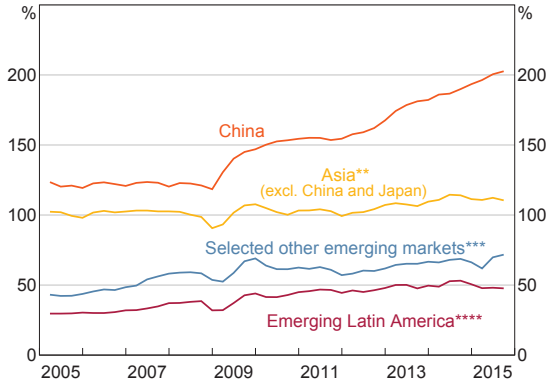
The high and rising level of debt in China has been concentrated among non-financial corporate borrowers, some of which are publicly owned (Graph 1.4). As overall growth has slowed, profits

<sup>1</sup> There are various definitions of emerging markets. The definition used in this section is based on the economies in the MSCI Emerging Markets Index. This includes countries such as South Korea that are excluded from narrower definitions, such as that used by the International Monetary Fund. Hong Kong is also added to this group given its close financial linkages with China.

**Graph 1.3**

### Total Debt of the Private Non-financial Sector\*

Selected economies, per cent to GDP at market exchange rates



\* Loans and other debt funding provided by domestic and non-resident sources; includes public-owned non-financial firms

\*\* Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan and Thailand

\*\*\* Czech Republic, Hungary, Poland, Russia, Saudi Arabia, South Africa and Turkey

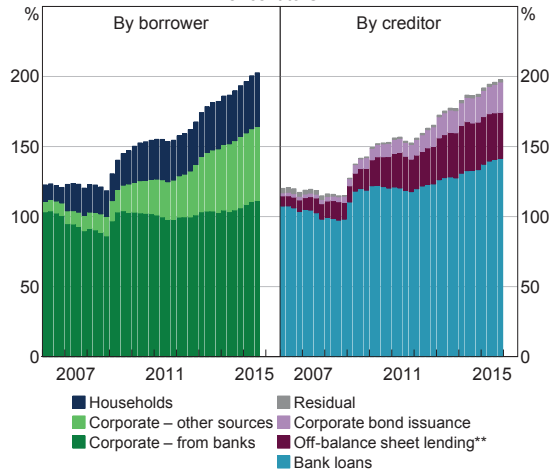
\*\*\*\* Argentina, Brazil and Mexico

Sources: BIS; CEIC Data; RBA; Thomson Reuters

**Graph 1.4**

### China's Private Non-financial Debt\*

Per cent to GDP



\* Data in the left and right panels are sourced from various publications and so can sometimes diverge

\*\* Entrusted loans, trust loans and bank-accepted bills

Sources: BIS; CEIC Data; PBC; RBA

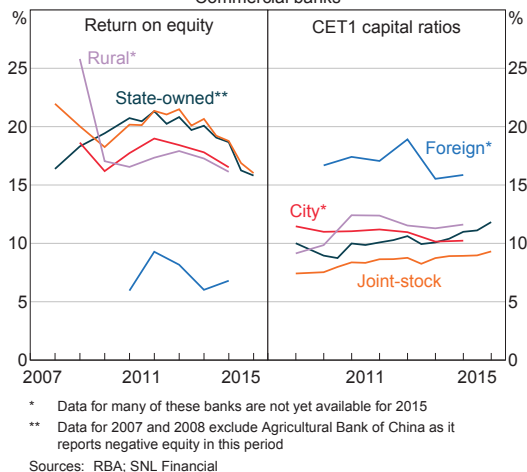
available to service and repay this debt have fallen in a number of sectors, particularly for firms exposed to the mining and real estate industries, which face additional headwinds from low commodity prices and the large stock of unsold homes. Sectoral data suggest that leverage in the construction industry

rose markedly post-crisis, while ongoing deflation in parts of the industrial sector could add to repayment challenges for these borrowers.

While much of the recent rise in corporate debt in China has been provided by the bond market and the shadow banking sector, the bulk of debt is financed by banks. The Chinese banking system continues to report solid profitability, although the recent slowing in economic growth has dampened profit growth as banks have increased loan-loss provisions and write-offs. While reported non-performing loans (NPLs) in aggregate remain low, they have risen over recent years and forward-looking indicators suggest that they are likely to increase further (see 'Box A: Asset Performance in the Chinese Banking Sector'). Looking ahead, the more challenging economic environment, particularly for the corporate sector, is expected to continue weighing on bank profitability, as reflected in some credit rating agencies' overall negative outlook for China's banking system. Some small- and medium-sized Chinese banks appear more vulnerable to adverse shocks than the larger state-owned banks, given their higher NPL ratios, weaker profitability, lower capital ratios, more concentrated regional exposures and greater use of short-term interbank funding (Graph 1.5).

The Chinese banking system as a whole reports adequate levels of capital, with the aggregate Common Equity Tier 1 (CET1) capital ratio stable at around 10 per cent over the first half of 2015. More recently, large Chinese banks' capital ratios were little changed in the six months to December 2015 at between 10 per cent and 13 per cent of risk-weighted assets, compared with the CET1 regulatory minima of 7.3 per cent and the global systemically important bank (G-SIB) surcharge of 1 per cent (where applicable). On the other hand, some smaller banks, most notably joint-stock banks, have CET1 capital ratios that exceed the regulatory minima by only a small margin. As of mid 2015, each of the five largest Chinese banks was reported to be compliant with the Liquidity Coverage Ratio (LCR) on a fully phased-in basis.

**Graph 1.5**  
**Chinese Banks' Capital and Profitability**  
Commercial banks



The less regulated shadow banking sector remains an important area where risks could emerge and potentially spread to the formal banking system. Growth in the measured shadow banking sector has slowed in recent years in response to government policy, but shadow banking still accounts for at least one-fifth, and possibly substantially more, of the stock of debt in China. These activities are considered to be a source of riskier loans for several reasons. As the lending is less regulated, it is not subject to a range of capital and provisioning requirements, and also attracts riskier borrowers that cannot access credit through the formal banking system. Many of the investment vehicles in this sector have maturity mismatches without formal access to liquidity support for the lender. Further, in some cases sponsoring banks have taken on the liabilities of distressed investment vehicles, reducing incentives for such vehicles to lend prudently.<sup>2</sup> The banking system as a whole appears equipped to absorb the initial effects of shocks arising from shadow banking activity, though some small- and medium-sized banks with large exposures to this sector may be less resilient, and

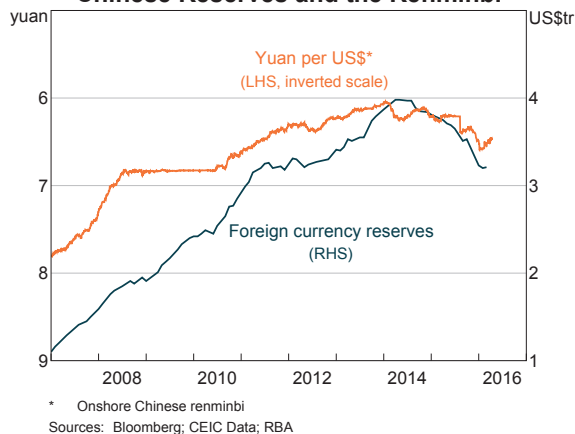
<sup>2</sup> For more information about investment vehicles in China, see Perry E and F Weltewitz (2015), 'Wealth Management Products in China', RBA Bulletin, June, pp 59–67.

stress in this sector could potentially give rise to unpredictable indirect or second-round effects.

Policy actions to address any building or manifested strains will be key. The authorities have taken steps towards financial liberalisation, which, in principle, suggests increased tolerance of financial institutions and investors bearing losses for poor investments. In the long term, this should promote more efficient allocation and pricing of funds through the financial system. But in the short term, it could give rise to added volatility and uncertainty that could amplify any macroeconomic slowdown. Accordingly, authorities may choose to prioritise near-term goals by promoting more debt-financed economic growth and bank forbearance of suspect exposures, though this path comes with longer-term risks to financial stability and growth.

Policy actions around the RMB and capital account are another important financial stability consideration. Market participants appear to have become less certain about the authorities' intentions for the RMB exchange rate, following the authorities' decision to allow it to be more market-determined. Accordingly, net capital outflow from China picked up in the second half of 2015, reflecting concerns about a possible depreciation of the RMB, with the authorities selling foreign exchange reserves to stabilise the currency (Graph 1.6). While reserve levels are still substantial, and recent statements suggest that the Chinese authorities do not consider the RMB to be overvalued, some market participants have focused on the risk that net capital outflow increases to the point where the Chinese authorities are pressured to allow the RMB to depreciate more quickly. If this occurred it could prompt a loss of public confidence in the authorities. While the stock of foreign currency corporate debt in China is relatively small at less than 10 per cent of annual GDP, and is often naturally hedged, there are likely to be some pockets of vulnerability; in particular, the real estate sector has sizeable foreign currency borrowings yet has limited foreign currency revenues.

**Graph 1.6**  
**Chinese Reserves and the Renminbi**



Although net capital outflows have historically been strongly associated with financial crises in emerging markets, there are several factors that make this less of an issue in China. China's debt is largely domestic, and the vast bulk of foreign capital in China is direct investment, rather than more mobile forms of capital, which lowers the probability of foreign capital flight. Indeed, net capital outflows to date have been mainly driven by Chinese residents paying down their foreign currency debt, as well as a fall in offshore renminbi deposits. China's foreign currency reserves also far exceed its foreign currency debt exposure, and the authorities have extensive capital controls that can be, and reportedly have been in some instances, more rigorously enforced or tightened. Nonetheless, it is unclear how effective capital controls would be in the face of sustained pressure, and it is possible that capital outflows by Chinese firms and households could continue or even accelerate, particularly if expectations for further RMB depreciation emerge.

The Chinese authorities have used a range of tools to maintain economic and financial stability. They also have scope to provide further support, given the ongoing large role of the state in the economy, the heavily regulated financial system, and the central government's relatively strong fiscal position. Nonetheless, Chinese policymakers face challenges from the growing size and complexity of

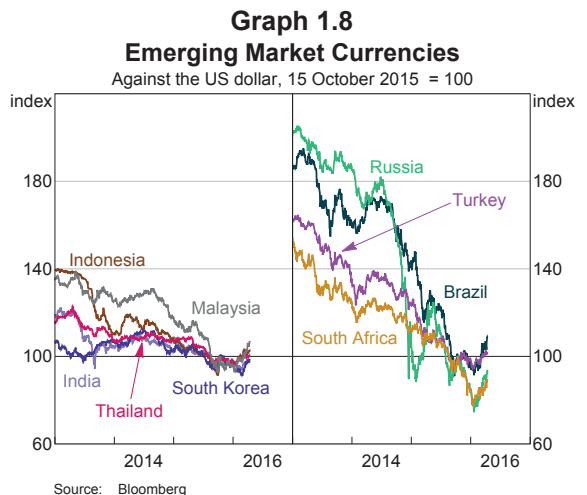
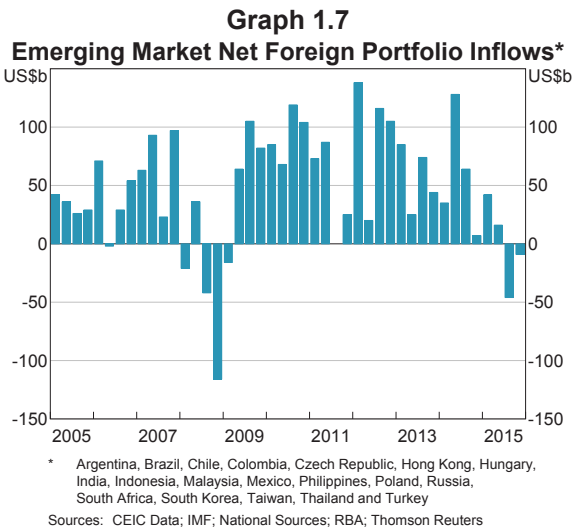
China's financial system, and the tension between short-term stability and longer-term policy objectives.

If financial strains that threaten growth in China emerge, they could spill over to other economies by affecting trade volumes and commodity prices, as well as sentiment in global financial markets. Direct financial linkages between China and other economies are small in aggregate because China's capital account is still relatively closed. But these linkages have grown – both in terms of foreign bank lending to China and Chinese bank lending abroad – and are sizeable for particular jurisdictions, so they could be an additional mechanism for transmitting financial difficulties.

### Other emerging markets

For emerging markets more broadly, growth outlooks have been revised down further (especially for commodity exporters), financial conditions have generally tightened and the pace of net private capital inflows has continued to slow (Graph 1.7). The change in conditions has been associated with lower oil prices, ongoing uncertainty about the outlook for the Chinese economy and prospects for increases in the US federal funds rate. As a result, concerns persist about potential vulnerabilities related to the rise in corporate sector leverage when capital inflows were strong. Asset prices in emerging markets were volatile early in 2016 as some of these concerns intensified, with equity prices falling, bond spreads widening and currencies depreciating further, before recovering somewhat in recent months (Graph 1.8).

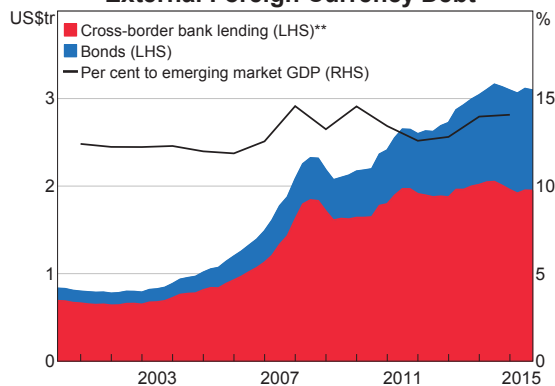
Corporate sector indebtedness has risen since the financial crisis in most emerging market economies, but has increased relatively quickly in Turkey and in commodity-exporting economies such as Brazil, Russia, Malaysia and Indonesia. In part this reflects financial deepening in these economies and a response to lower global long-term interest rates. The available evidence also suggests that currency risks for corporate borrowers in these economies



– which are pertinent given the sharp falls in exchange rates and shifts in capital flows over the past year or so – may be low in aggregate. External foreign currency borrowing by emerging market firms has increased only modestly relative to GDP in recent years, and many of the largest borrowers appear to be naturally hedged (Graph 1.9).<sup>3</sup> Nonetheless, some firms in non-tradeable sectors (which typically do not earn significant foreign currency revenue) have increased foreign currency borrowings. Also, firms remain exposed to a rise in

<sup>3</sup> See Kofanova S, A Walker and E Hatzvi (2015), 'US Dollar Debt of Emerging Market Firms', RBA Bulletin, December, pp 49–58.

**Graph 1.9**  
**Emerging Market Corporations'**  
**External Foreign Currency Debt\***



\* Excludes China; includes financials and government-owned corporations  
 \*\* Excludes lending in non-major third-party currencies  
 Sources: BIS; Dealogic; IMF

global interest rates and rollover risk, and thus to deteriorating sentiment in financial markets. While the maturity profile of corporate bond issuance by emerging market firms has lengthened slightly since the financial crisis, which somewhat alleviates rollover risk, the volume of bonds maturing over the coming years is substantially higher than in the past.

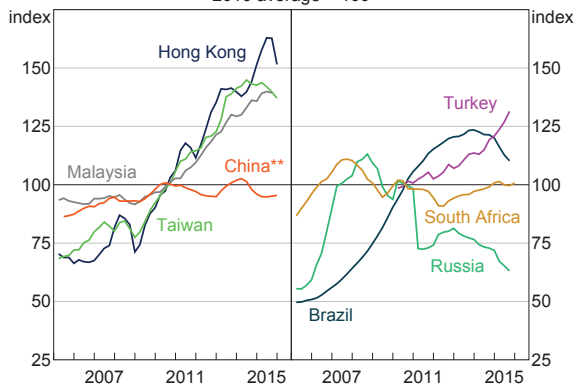
Taking all these factors together, a further increase in default rates of emerging market corporations now seems more likely, following a slight rise in 2015. This is especially the case for commodity-exporting countries, because their terms of trade have fallen significantly and the earlier rise in corporate debt was more concentrated among commodity-producing firms. Commodity firms have issued around one-fifth of the outstanding stock of corporate bonds across emerging markets, with this share even higher – at about 40 per cent – in emerging markets outside of Asia. The risk of financial distress is exacerbated by reduced policy flexibility in some emerging market economies. For example, central banks in Brazil, Russia and South Africa have increased or maintained high policy interest rates, despite slowing growth, to help contain inflationary pressures associated in part with lower exchange rates. Lower commodity-related revenue is also causing budget strains in numerous economies.

Banks in emerging markets bear most of the risk of any significant rise in defaults, as the bulk of emerging market corporate debt continues to be intermediated by domestic banking systems. However, advanced economies could also be affected because direct and indirect economic and financial linkages between the two groups of economies have increased in recent years.<sup>4</sup> Spillovers between emerging market economies are also possible, given the history of concerns about some emerging markets affecting other parts of the same asset class. In aggregate, international bank exposures to emerging economies are relatively small and bond prices for more vulnerable firms have already fallen significantly without, to date, notable wider financial system stress. But to the extent that rising corporate defaults discourage capital inflows to emerging markets and thereby tighten financial conditions further, a feedback loop could emerge with potential for spillovers to both other emerging markets and advanced economies via trade links and higher risk premia.

Housing market risks are also present in some emerging market and Asian economies. This reflects large increases in residential property prices over recent years – including in Hong Kong, Brazil, Malaysia, Taiwan and Turkey – alongside increased household indebtedness (Graph 1.10). Price growth has moderated more recently and prices have fallen in some economies, including Brazil, Russia and Taiwan, which could add to the challenges already faced by these economies and their banks from weaker corporate sectors. Housing prices in Hong Kong rose especially quickly until late 2015, partly as a result of low interest rates associated with its fixed exchange rate system. But prices have fallen recently amid concerns about economic conditions in China and slower credit growth. Housing transaction volumes have also fallen, to be at their lowest level since at least the mid 1990s. Despite the slowdown in the housing market,

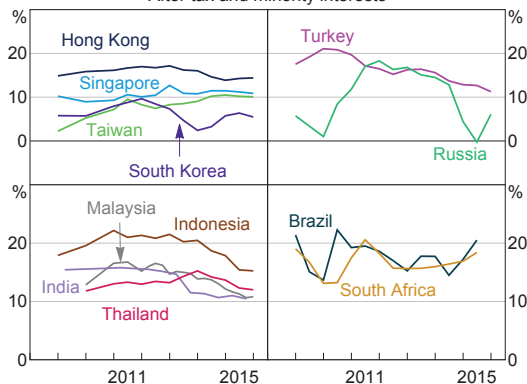
<sup>4</sup> See IMF (2016) 'Chapter 2: The Growing Importance of Financial Spillovers from Emerging Market Economies', *Global Financial Stability Report*, April.

**Graph 1.10**  
Real Housing Prices\*  
2010 average = 100



\* Deflated using consumer price indices  
\*\* Average of new residential property prices  
Sources: BIS; CEIC Data; RBA

**Graph 1.11**  
Selected Banks' Return on Equity\*  
After tax and minority interests



\* Coverage differs across jurisdictions; data are adjusted for significant mergers and acquisitions  
Sources: Bloomberg; RBA; SNL Financial

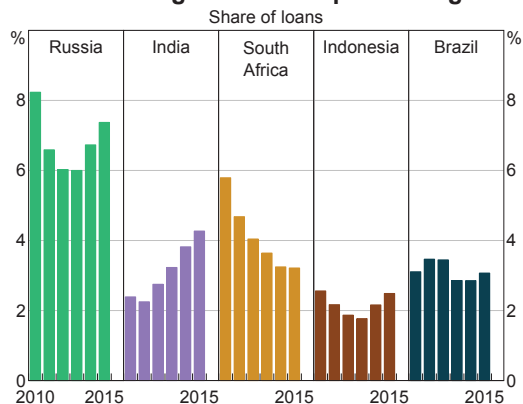
the Hong Kong Monetary Authority imposed a countercyclical capital buffer of 0.625 per cent in January 2016, with further increases scheduled, largely in response to elevated ratios of credit-to-GDP and housing prices-to-rents relative to their long-run trends.

### Banking systems in other emerging markets

The combination of higher corporate leverage, tighter financial conditions and weaker economic growth mean that the banking systems of several key emerging markets face a challenging near-term operating environment, especially as the bulk of lending by emerging market banks goes to corporations rather than households. However, available indicators show that many banking systems continue to be profitable and well capitalised, and NPL ratios remain fairly low overall (Graph 1.11).

East Asian banking systems, which are of particular interest given Australia's trade and financial linkages, generally remain sound. In contrast, bank profitability has declined noticeably in Russia and NPLs remain high and rising, driven in particular by low oil prices and contracting economic activity (Graph 1.12). NPLs are also high and rising in India,

**Graph 1.12**  
Selected Banking Sector Non-performing Loans\*  
Share of loans



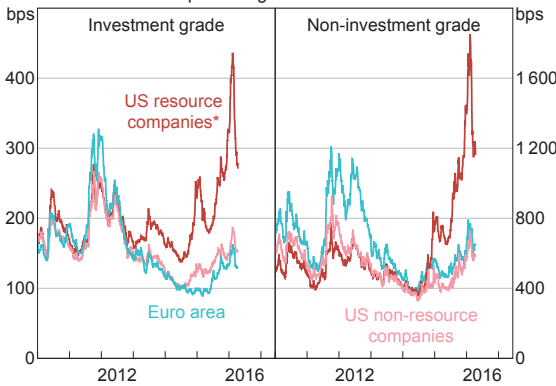
\* Definitions of non-performing loans can differ across jurisdictions  
Sources: CEIC Data; RBA; World Bank

mostly reflecting legacy issues at state-controlled banks, with the government planning to inject capital into these banks to shore up their balance sheets. Looking ahead, the more vulnerable systems appear to be those of energy-related commodity-exporting economies that tend to be less connected to Australia, including Russia, Brazil and other parts of South America, because economic conditions have deteriorated markedly and capital buffers are thin for some banks in these systems.

## Advanced Economy Financial Systems

Since the previous *Review*, the outlook for growth in the advanced economies has moderated and there has been ongoing volatility and a further reassessment of risk in global financial markets. In particular, equity prices fell and yield spreads for corporate bonds widened in early 2016 after an extended period of low risk premia and investors ‘searching for yield’ (Graph 1.13). While a weaker outlook for growth in China and other emerging markets has been an important driver, some commentators have attributed these developments in part to concerns that monetary policymakers in advanced economies may be running out of options to stimulate growth.

**Graph 1.13**  
**Corporate Bond Spreads**  
To equivalent government bonds



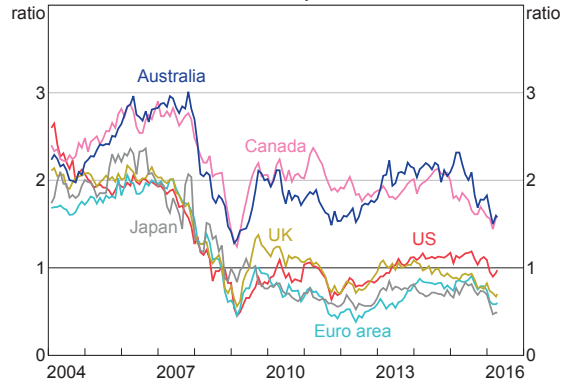
\* Energy, metals, mining and steel sectors  
Sources: Bank of America Merrill Lynch; RBA; Thomson Reuters

The prices of bank securities have fallen particularly sharply since the previous *Review*, especially in Europe and Japan where share price falls have taken price-to-book ratios to low levels (Graph 1.14). Heightened concerns about the bank profitability outlook reflect a range of factors.

- Lower, and increasingly negative, policy interest rates are shifting yield curves and pressuring net interest margins, particularly in Europe and Japan, in the wake of monetary policy responses to persistent low inflation.

- Resource company defaults are likely to rise given the large declines in oil and other commodity prices over recent years. While resource exposures generally account for only a small share of advanced economy banks’ lending – often in the low single digits – significant losses on these exposures could be challenging for banks with already weak profitability or concentrated exposures and could accompany a broader weakening in corporate credit quality.
- The weaker outlook for growth in emerging markets is, to some extent, expected to weigh on advanced economies’ growth prospects and, in turn, their banking systems. Some international banks also have significant exposures to emerging markets, where credit quality is deteriorating.

**Graph 1.14**  
**Banks’ Share-price-to-book-value Ratios**  
Monthly\*



\* End of month; April 2016 observation is based on latest available data  
Source: Bloomberg

In Europe, bank profitability concerns have been compounded by additional factors, including a general fall in profits in the second half of 2015 and, in several countries, a persistent large stock of NPLs. Government and corporate debt levels remain high in some European countries, which in a sustained low growth and inflation environment creates challenges for debt serviceability and repayment, and political developments remain a potential source of uncertainty. The continued weak health of banking systems in Europe was reflected



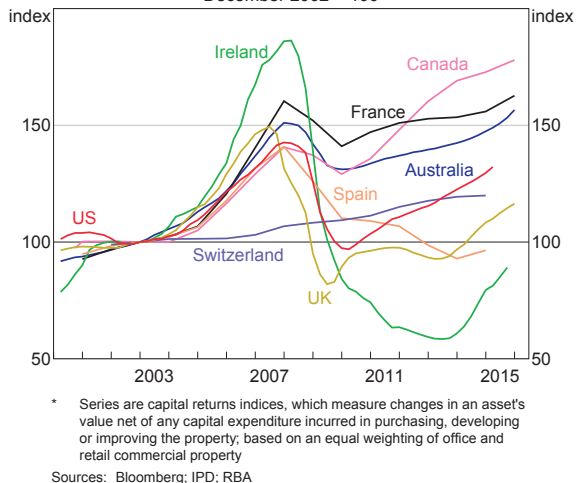
in some high-profile bank recapitalisations and resolutions completed in late 2015 in Greece, Italy and Portugal. These episodes focused attention on the legal powers to ‘bail-in’ creditors under the new euro area bank resolution framework, the Bank Recovery and Resolution Directive. Along with the weakening in European bank profitability, this may have contributed to a sharp fall in the prices of contingent capital instruments in early 2016 (discussed further below).

While the ‘search for yield’ behaviour that had been evident for many years has moderated, it remains apparent in some markets, raising the risk of disruptive falls in asset prices in the future. Commercial property markets in a range of countries have been experiencing strong investment alongside rising prices, including in the United States, United Kingdom, Canada and Ireland (Graph 1.15). While this in part reflects the strengthening of their economies, it has attracted regulatory attention, and commercial property lending standards have recently tightened in the United States.

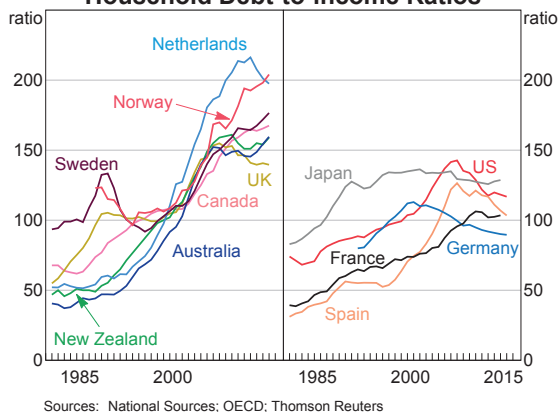
Housing prices have also continued to increase in many advanced economies, including Canada, Norway, Sweden and the United Kingdom; in many of these countries, household debt-to-income ratios have also risen (Graph 1.16). Authorities in some of these countries have imposed macroprudential regulations in an effort to limit the build-up of financial risks in the household sector; some, including in Sweden, Norway and the United Kingdom, have set countercyclical capital buffers above zero. Outside of property markets, the low interest rate environment also continues to pose longer-term challenges for insurance firms and defined benefit pension plans, which, to a large extent, rely on financial asset returns to meet their long-term liabilities.

As highlighted in previous *Reviews*, authorities have been focusing on the liquidity risks posed by asset managers because some of them offer daily or intraday withdrawals despite often investing in

**Graph 1.15**  
**Commercial Property Values\***  
December 2002 = 100



**Graph 1.16**  
**Household Debt-to-income Ratios**



assets with low liquidity, such as corporate bonds. These liquidity risks mean that investor redemptions could exacerbate asset price falls and add to contagion, particularly as bond market liquidity is generally considered more fragile post-crisis as risk management actions by banks and regulators to boost financial system resilience have reduced market-making activity. However, asset management firms have a number of features that mitigate liquidity risks and operate with much lower leverage than banks; indeed, in late 2015 a few small high-yield bond funds in the United States

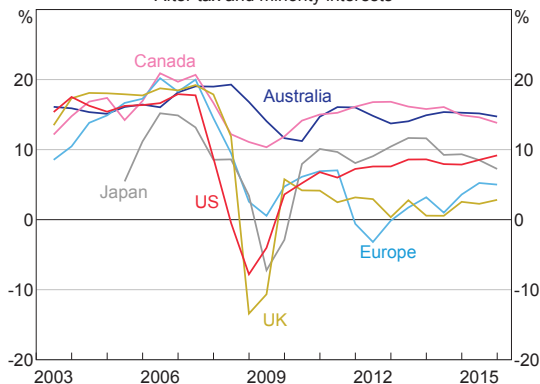
were able to close and begin liquidating their assets following large redemptions without significant contagion.

Related to these market liquidity concerns, a number of sovereign wealth funds (SWFs) of commodity-exporting nations have been selling assets and withdrawing funds from external asset managers to address government budget pressures stemming from falls in commodity prices. This marks a key turnaround from prior years when assets under management accumulated quickly amid high commodity prices. This shift has likely had an important, but difficult to quantify, tightening effect on global financial conditions and may have contributed to bouts of financial market volatility over the past year or so. There is usually limited transparency on SWFs' asset holdings and investment strategies, and some SWFs may have large and concentrated positions in less liquid markets (because of their typically long investment horizon and low withdrawal risk). These characteristics increase the risk that, in the event of a further fall in commodity prices, SWF asset sales could contribute to market volatility.

### Banking systems in advanced economies

Profitability of the major banking systems generally declined or remained low in the second half of 2015 (Graph 1.17). Bank profitability has been soft in Europe in recent years, with a persistent large stock of NPLs – alongside higher capital requirements – weighing on profitability. Profits at the large European banks fell in the six months to December 2015, reflecting some high-profile asset write-downs, costs associated with litigation and business-model restructurings, and a decline in trading and fee revenue amid higher market volatility. Outside of Europe, bank profitability has continued to drift lower in Japan, while banks in the United States reported an increase in profitability in the second half of 2015, albeit mainly due to falling legal expenses. As noted above, expectations for bank profitability in the advanced economies

**Graph 1.17**  
**Large Banks' Return on Equity\***  
After tax and minority interests

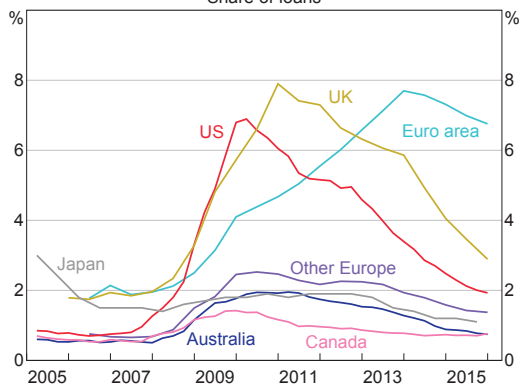


\* Number of banks: Australia (4), Canada (6), Europe (52), Japan (4), United Kingdom (4) and United States (18); adjusted for significant mergers and acquisitions; reporting periods vary across jurisdictions  
Sources: Bloomberg; RBA; SNL Financial

have been scaled back due to a weaker outlook for economic growth, persistently low interest rates and an expected deterioration in credit quality among resource sector and emerging market exposures.

Asset performance generally continued to improve in the second half of 2015, with NPL ratios declining in all major banking systems except Canada (Graph 1.18). In the United States, further declines in NPL ratios for residential real estate loans continued to drive asset quality improvements.

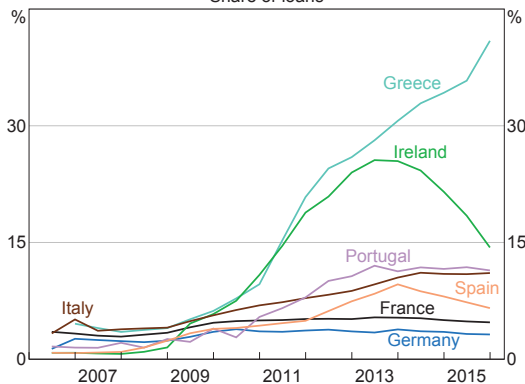
**Graph 1.18**  
**Large Banks' Non-performing Loans\***  
Share of loans



\* Definitions of 'non-performing loans' differ across jurisdictions; number of banks: Australia (4), Canada (6), euro area (42), Japan (5), other Europe (10), United Kingdom (4) and United States (18)  
Sources: APRA; Banks' Annual and Interim Reports; Bloomberg; FSA; RBA; SNL Financial

While NPL ratios continued to fall in the euro area – especially in Ireland and Spain – they remain high in most euro area countries relative to both pre-crisis levels and other banking systems (Graph 1.19).

**Graph 1.19**  
Euro Area – Large Banks’ Non-performing Loans\*  
Share of loans



\* Definitions of ‘non-performing loans’ differ across jurisdictions; number of banks: France (6), Germany (9), Greece (4), Ireland (2), Italy (5), Portugal (3) and Spain (6)

Sources: Banks’ Annual and Interim Reports; RBA; SNL Financial

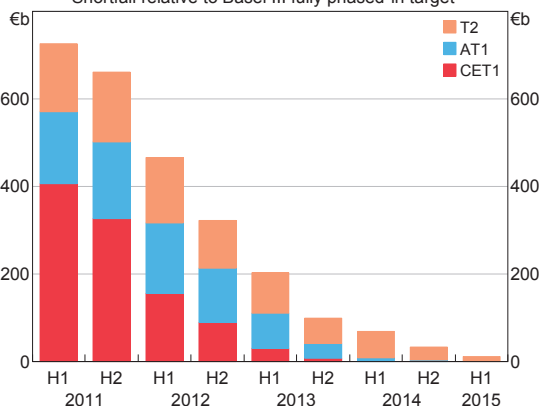
Lower commodity prices, particularly for oil, are expected to lead to higher delinquencies in banks’ commodity and energy portfolios. These expectations have already led some large banks in Europe and North America to increase energy-related loan-loss provisions, albeit from a low level. But banks in advanced economies do not appear to have large direct exposures to these industries, so the direct effect on profitability is likely to be small. Nonetheless, lower commodity prices could indirectly reduce bank profitability in commodity-exporting economies by weighing on economic growth.

Some international banks also have significant exposures to emerging markets, where the outlooks for growth and loan performance have weakened, particularly for those economies exposed to lower commodity prices. As a proportion of their total global exposures, banks headquartered in the United Kingdom have the largest exposures to commodity-exporting emerging economies, most notably to Brazil, South Africa and the United Arab Emirates (Table 1.1). UK banks also have the most

significant exposures to other emerging economies, including China, and Asian financial centres, particularly Hong Kong. Japanese banks have been actively expanding their overseas activities recently, notably to emerging Asian economies, although the Bank of Japan (BoJ) has assessed that the risks to Japan’s financial stability from a slowdown in Asian economies are ‘limited’. Nonetheless, the BoJ has continued to highlight the foreign currency and liquidity risks associated with these activities, as a significant proportion of foreign currency lending is funded via short-term money markets.

The majority of large banks in the advanced economies increased their CET1 capital ratios over the second half of 2015. This was mainly achieved through lower risk-weighted assets as well as higher retained earnings for banks that recorded profits. All the G-SIBs continued to exceed the minimum Basel III CET1 capital requirements, including the capital conservation buffer and the G-SIB surcharge, even though full phase-in does not occur until 2019. More generally, the aggregate capital shortfall for G-SIBs has fallen significantly in recent years, with only a small capital shortfall remaining as of mid 2015 (Graph 1.20). Looking ahead, there has been some concern about the ability of some advanced

**Graph 1.20**  
G-SIBs’ Aggregate Capital Shortfall\*  
Shortfall relative to Basel III fully phased-in target\*\*



\* Includes banks classified by the Financial Stability Board as G-SIBs as of November 2015

\*\* CET1 capital targets include the Basel III capital conservation buffer and G-SIB surcharges

Source: BIS

**Table 1.1: Advanced Economy Banks' International Exposures<sup>(a)</sup>**  
 Claims by BIS reporting banks; ultimate risk basis; September 2015

	Share of total global exposures (per cent)			
	Euro area	Japan	United Kingdom	United States
<b>Commodity-exporting Emerging Economies<sup>(b)</sup></b>	<b>2.3</b>	<b>0.9</b>	<b>5.5</b>	<b>1.7</b>
Brazil	0.7	0.2	0.9	0.6
Indonesia	0.0	0.1	0.3	0.1
Malaysia	0.0	0.1	0.7	0.1
Russia	0.3	0.1	0.1	0.1
South Africa	0.0	0.0	1.2	0.1
United Arab Emirates	0.1	0.1	1.0	0.1
<b>Other Emerging Economies</b>	<b>5.7</b>	<b>2.0</b>	<b>8.4</b>	<b>3.6</b>
China	0.4	0.4	2.9	0.7
India	0.2	0.2	1.2	0.6
Mexico	0.7	0.1	0.6	0.7
Turkey	0.8	0.1	0.4	0.2
<b>Asian Offshore Financial Centres</b>	<b>0.5</b>	<b>0.8</b>	<b>8.0</b>	<b>1.0</b>
Hong Kong	0.2	0.5	6.2	0.5
Singapore	0.3	0.3	1.8	0.5

(a) Regional totals for emerging markets are equivalent to the BIS totals for 'developing' economies; selected individual economy exposures do not sum to group totals

(b) Based on the IMF classification of commodity-exporting emerging markets in the October 2015 *Global Financial Stability Report*  
 Sources: BIS; RBA

economy banks to generate sufficient retained earnings to meet future regulatory capital requirements and their own capital targets, which contributed to the recent fall in bank share prices. Banks are likely to continue to adjust their balance sheets ahead of additional changes to regulations, including the finalisation of the leverage ratio and the proposed total loss-absorbing capacity (TLAC) requirement for G-SIBs.

Increases in bank capital in recent years have included issuance of contingent convertible capital instruments – included in Additional Tier 1 (AT1) and Tier 2 (T2) capital – which has been supported by strong investor demand for high-yielding assets.<sup>5</sup>

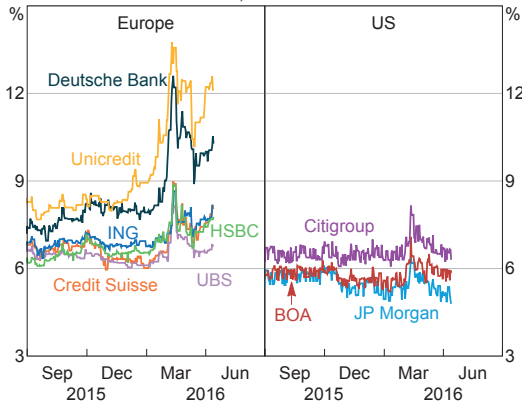
<sup>5</sup> AT1 capital must be able to absorb losses on a going-concern basis, while the objective of T2 capital is to provide loss absorption on a gone-concern basis. For financial instruments to count as AT1 and T2 capital, they must meet a range of criteria laid out in the Basel III capital rules. For example, AT1 capital instruments must have no maturity date, must be the most subordinated claim after CET1 capital and, for instruments considered liabilities for accounting purposes, contain a numeric loss-absorption trigger. AT1 capital instruments typically include preference shares and convertible securities. T2 capital instruments typically consist of subordinated bonds.

Along with the broader repricing of risk, yields on these instruments rose sharply (and prices fell) in early 2016, as investors priced higher coupon-payment and conversion risks into these relatively new and untested financial securities, although part of the increase has since been unwound (Graph 1.21). The increase was particularly marked for some euro area banks; in addition to broader concerns about the outlook for profitability, market uncertainty arose around regulatory treatment of these securities, including whether some large banks would be permitted to make coupon payments on their contingent capital instruments given their profitability and capital positions. As noted above, some unexpected creditor loss allocations from a spate of bank recapitalisations and resolutions in the euro area in late 2015 may have also contributed to the increase in yields in some jurisdictions. The sharp price response of these contingent capital instruments highlights their potential to contribute to volatility, particularly as it was accompanied by

**Graph 1.21**

**Banks' Additional Tier 1 Capital Yields**

Yield to first call date, selected USD instruments



Source: Bloomberg

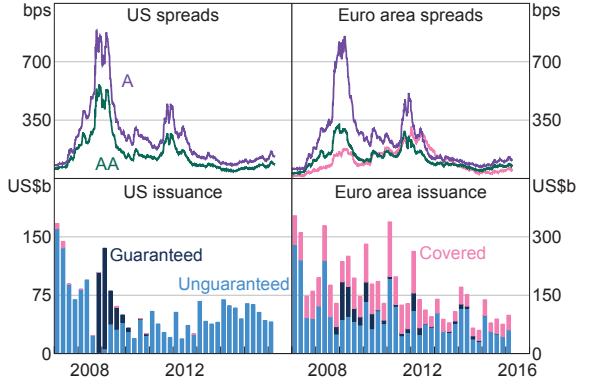
sharp falls in share prices and a widening in banks' credit default swap premia; this may have partly reflected spillover effects from hedging activity by contingent capital investors seeking to minimise their mark-to-market losses. To the extent that contingent capital yields remain permanently higher, this could add to the cost of funding for banks seeking to meet loss-absorbing capital requirements through issuance of these instruments.

Other bank funding conditions have remained broadly favourable since the previous *Review*. Bond spreads widened moderately alongside the more general repricing of risk assets, before narrowing to be little changed on net over the past six months, while the volume of issuance has remained around the level of recent years (Graph 1.22). Nevertheless, banks in both Europe and the United States have continued to reduce their use of wholesale debt funding. The share of deposit funding has increased in Europe and has been broadly stable in the United States since the previous *Review*. Most advanced economy G-SIBs continue to report LCRs that either are close to meeting or exceed their fully phased-in Basel III requirements.

Consistent with the recovery in economic conditions and banks' balance sheets, credit growth in advanced economies picked up over the second half of 2015, including in the euro area where it has

**Graph 1.22**

**Banks' Bond Spreads and Issuance\***



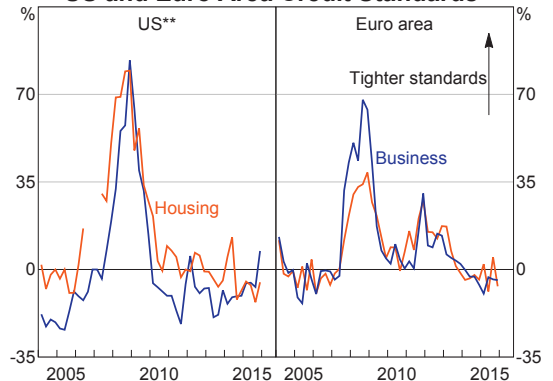
\* Spread to equivalent government bonds

Sources: Bank of America Merrill Lynch; Bloomberg; Dealogic; RBA

been low since the financial crisis. Credit growth has been supported by an ongoing easing of lending standards across most major markets and borrower types (Graph 1.23). The main exception is the United States where lending standards to businesses have tightened recently, due to concerns about the economic outlook, particularly for energy-related industries. Changes in credit demand have been more mixed across the major markets. Recent surveys, while not capturing developments in the past few months, indicate that demand for credit increased in the euro area, Japan and the United Kingdom in late 2015, but decreased in the United States.

**Graph 1.23**

**US and Euro Area Credit Standards\***



\* Net percentage of respondents reporting tighter standards

\*\* US housing from June 2007 onwards is a simple average of housing loan sub-categories

Sources: ECB; RBA; Thomson Reuters

## New Zealand

Financial stability risks in New Zealand are of key interest given that Australia's major banks have significant operations in that country. The dairy and housing sectors continue to be the main sources of risk to New Zealand's financial stability.

The Reserve Bank of New Zealand (RBNZ) is concerned about the prospect of rising loan defaults by dairy farmers as low dairy prices persist. International milk prices have fallen by around 55 per cent in New Zealand dollar terms since their 2013 peak and are currently below the estimated industry average break-even point (Graph 1.24). Lending to the sector accounts for about 10 per cent of bank lending in New Zealand. Within the total, risk could be quite skewed because higher-cost producers tend to be the most leveraged. The RBNZ estimates that around

80 per cent of dairy farmers will have negative cash flow in the current financial year, compounding cash flow pressures experienced in 2014/15. Dairy land prices have also fallen over the past year, which increases the likelihood of farmers falling into negative equity, and so raises the probability of defaults and bank losses in the event of foreclosure. While defaults have been limited to date, many farmers have increased their borrowing to service existing debts. Recent stress testing conducted by the RBNZ found that severe stress scenarios would be manageable for the largest dairy lenders and the banking system as a whole.

The RBNZ also continues to warn that the interaction of low mortgage rates, high household debt and increasing housing prices – particularly in Auckland – poses a 'significant risk' to financial stability. In response to this risk, the RBNZ has introduced tougher restrictions on investor lending. The measures restrict the flow of investor lending for properties in Auckland with a loan-to-valuation ratio above 70 per cent to 5 per cent of new investor loans in that city. Capital requirements for such loans have also been raised. These macroprudential measures have been supported by an increase in taxes on investment properties sold within two years of their purchase and the introduction of a requirement for buyers to disclose additional information (including foreign buyers). While housing price growth in Auckland has since slowed, price growth outside of Auckland has recently been quite strong. ❖

