1. The Global Financial Environment

Global economic conditions have generally improved since the previous *Financial Stability Review* and the tail risks to financial stability have changed. However, some long-standing vulnerabilities persist. In line with the improvement in economic prospects and rise in inflation in major advanced economies, policy rates have started to increase in the United States and long-term rates have risen from their mid-2016 trough, although they remain low in a historical context. These increases have caused little disruption to financial markets to date, and should help to relieve some of the pressure on banks' profitability that has arisen in the very low interest rate environment. Nonetheless, there is a risk that, should policy and long-term rates rise more sharply than expected, there could be a disruptive fall in asset prices due to the unwinding of the 'search for yield' behaviour seen since the global financial crisis. Political and policy risks have also increased in the United States of late, and they remain heightened in Europe.

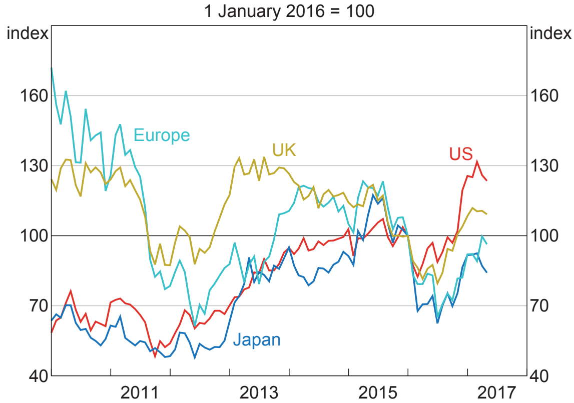
Risks in China continue to build. Growth in the large stock of corporate debt remains rapid, and firms' debt-servicing capacity could come under pressure given the trend slowing in economic growth, the gradual shift in the composition of demand and the authorities' recent steps to tighten monetary policy. Rapid lending growth in the less regulated 'shadow' sector is also weighing on the resilience of China's financial system. In other emerging economies, risks associated with the run-up in corporate debt have receded in line with the rise in commodity prices and the improved outlook for global growth. However, a faster-than-expected rise in global interest rates or adverse geopolitical shocks could also expose underlying vulnerabilities in these markets.

Major Advanced Economies

Since the previous *Review*, an improved outlook for growth and easing concerns about disinflationary pressures have boosted risk appetite, as evident in narrower corporate bond spreads and higher equity valuations in advanced economies. Long-term government bond yields have also risen. Taken together, these factors are likely to ease some of the profitability pressures on banks and other financial institutions, and have contributed to a sharp rise in bank share prices over recent months (Graph 1.1).

However, uncertainty around political and policy developments in the United States has increased since the previous *Review*. While still under consideration, the new US administration's trade

Graph 1.1
International Banks' Share Prices
1 January 2016 = 100

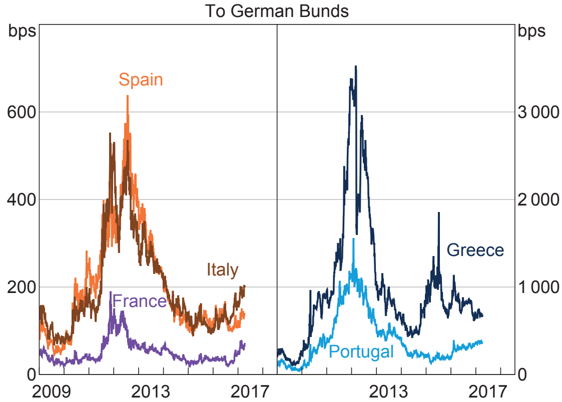


Source: Bloomberg

policies could adversely affect global growth, and the outlook and effects on growth from its tax and other fiscal policies are at this stage unclear. The possible roll-back of financial regulation in the United States could also have global implications, particularly if it were to weaken international cooperation between regulators. Despite these risks, measures of actual and expected volatility in financial markets remain very low, suggesting some complacency among investors.

In Europe, several national elections during 2017 – notably in France, Germany and possibly Italy – have some potential to increase the influence of eurosceptic political parties and add to the uncertain policy environment. While under active discussion by some political parties, few observers currently expect any country to exit the euro area. Nonetheless, French spreads to German Bunds have widened in recent months and further speculation of such a disruptive event could add to volatility in financial markets (Graph 1.2).

Graph 1.2
Euro Area 10-year Government Bond Spreads
To German Bunds



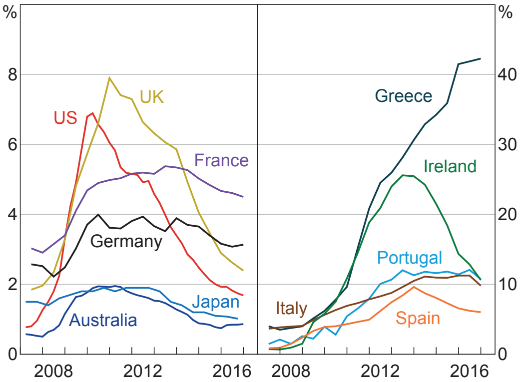
Sources: Bloomberg; RBA

A related concern is the sustainability of sovereign debt levels in some euro area countries. Perceived risks have risen somewhat, with spreads on Italian and Portuguese government bonds widening in recent months. A further large increase in yields on these and some other European government bonds could affect economic growth and financial system health, especially since banks in Europe own large amounts of sovereign debt. Concerns have also increased of late again in Greece, where ongoing disagreement between the International Monetary Fund and the European public sector creditors is hampering a more comprehensive approach to debt restructuring.

In this environment, a range of challenges affecting the profitability and capital positions of some European banks remains a key risk to financial stability. Notwithstanding the recent rise in European banks' share prices, bank profitability in several countries is low, weighed down by relatively high cost bases, large stocks of non-performing loans (NPLs) and legacy legal and investment exposures. Low bank profitability makes it harder to build buffers to absorb unexpected losses. This is mainly because it reduces banks' ability to improve their capital positions and meet rising capital requirements through internal sources (especially as some banks are reluctant to lower, or temporarily cease, cash distributions to shareholders).

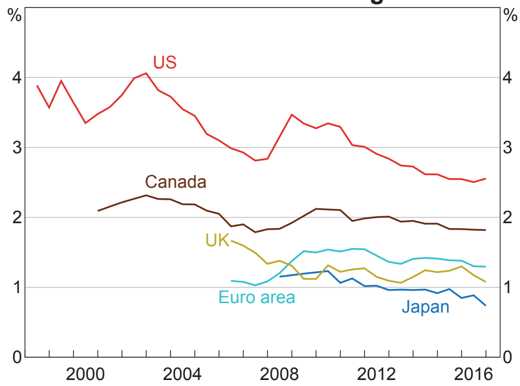
Investors' confidence in some southern European banking systems is being especially affected by uncertainty about the valuation of NPL portfolios (Graph 1.3). This poses particular challenges in Italy, where the combination of weak bank profitability and write-downs of NPLs has required a number of banks to raise equity (see 'Box A: Bank Restructuring Challenges: A Case Study of Italy'). Three Italian banks, including the fourth-largest bank in Italy – Banca Monte dei Paschi di Siena (MPS) – were unable to raise sufficient equity in private markets and have recently commenced procedures to receive capital injections from the Italian Government. Banks in Greece, while much smaller in size and less interconnected with the broader euro area banking system, are also exposed to a high (and rising) stock of NPLs, as

Graph 1.3
Large Banks' NPLs
Share of loans



Sources: APRA; Banks' annual and interim reports; Bloomberg; FSA; RBA; S&P Global Market Intelligence

Graph 1.4
Banks' Net Interest Margins*



* Weighted average across selected large banks headquartered in each jurisdiction

Sources: RBA; S&P Global Market Intelligence

insolvency procedures remain long and costly and the Greek economy remains very weak.

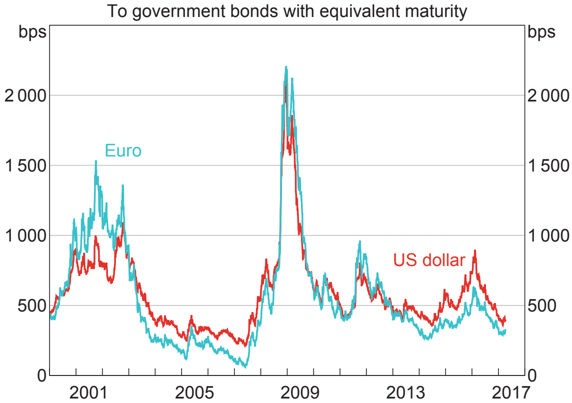
In other parts of the European banking system, however, prospects are more positive than they have been for some time. The euro area economy overall has been growing at close to its long-run trend pace and credit growth continues to recover. Banks' regulatory capital ratios have continued to rise and asset quality has improved. In the period ahead, banks' earnings are expected to benefit from the recent increase in medium and long-term interest rates (through wider net interest margins), though interest rates are still low. Legacy legal and investment exposures nevertheless remain at some large banks (including Deutsche Bank, Barclays and UBS), which may continue to weigh on profitability. More generally, a significant consolidation within the banking sector, especially among small banks, may be required before euro-system profit levels meet banks' average cost of equity.

In Japan, the very low interest rate environment has continued to put downward pressure on banks' net interest margins (Graph 1.4). Asset and earnings growth has also been more difficult to maintain amid low nominal GDP growth. Large and some medium-sized Japanese banks have responded by expanding their credit exposures in offshore markets, where yields are higher. These foreign currency assets have been partly funded or hedged using short-term wholesale markets, raising banks' liquidity risks.

Other large global banks, including many of those headquartered in the United States, Canada and the Scandinavian countries, are performing well. To varying degrees, these banks have benefited from more favourable domestic economic conditions, policies that addressed bad debts and capital shortfalls relatively quickly after the financial crisis, and a tendency to be more proactive in adapting their businesses to the post-crisis environment.

Recent trends in a number of financial markets indicate that the 'search for yield' behaviour seen since the global financial crisis remains significant. For example, investor appetite for high-risk assets such as non-investment grade corporate bonds and leveraged loans has been robust, as evidenced by strong issuance volumes, longer average bond tenors and relatively weak covenants. Credit risk spreads also remain comparatively low (Graph 1.5). As a result, valuations in bond markets are elevated, while equity valuations in the United States –

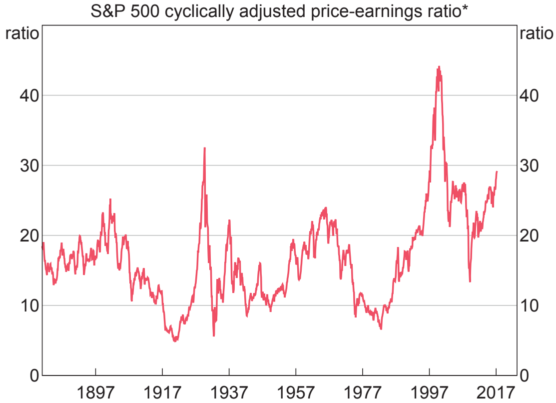
Graph 1.5
Non-investment Grade Corporate Bond Spreads
To government bonds with equivalent maturity



Sources: Bank of America Merrill Lynch; Bloomberg; RBA

measured by the forward price-to-earnings ratio or the cyclically adjusted price-to-earnings ratio – are also at high levels (Graph 1.6). These developments could increase the risk of subsequent sharp and disruptive price falls in the event of an adverse shock. Potential triggers include a sudden large increase in long-term interest rates – for instance due to higher-than-expected inflation in the United States – or a sudden reassessment of global growth prospects and credit risks, perhaps due to an adverse geopolitical or policy development.

Graph 1.6
US Equities Valuation
S&P 500 cyclically adjusted price-earnings ratio*

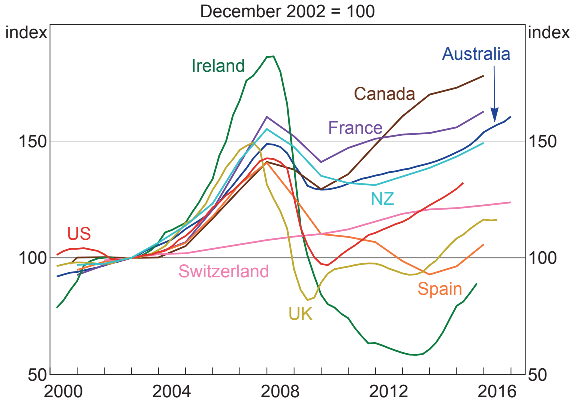


* Ratio of the inflation-adjusted level of the S&P 500 share price index to the ten-year moving average of real earnings of S&P 500 companies

Sources: http://www.econ.yale.edu/~shiller/data.htm; S&P

Real estate markets in many advanced economies have also been buoyed by the prolonged period of low global interest rates. As for other assets, real estate prices could adjust sharply if there were to be a sudden increase in interest rates or shift in investor sentiment. Commercial property prices have risen strongly in many countries over recent years, including in the United States, Canada, New Zealand and parts of Europe, driven by robust domestic and foreign investor demand (Graph 1.7). Rental yields have fallen to low levels in several markets, as rents have risen more slowly than prices. These developments have prompted greater regulatory attention on banks' commercial property lending, especially given the contribution that commercial property markets have made to past episodes of financial instability.

Graph 1.7
Commercial Property Values*
December 2002 = 100

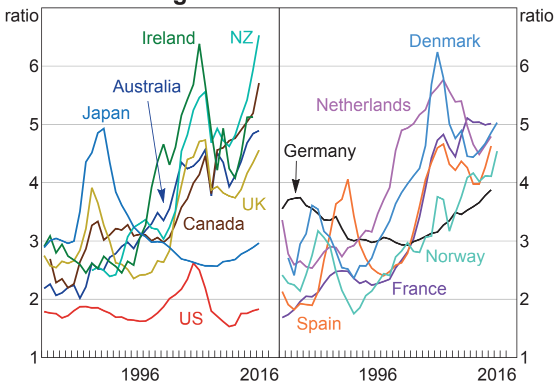


* Series are capital returns indices, which measure changes in an asset's value net of any capital expenditure incurred in purchasing, developing or improving the property; based on an equal weighting of office and retail commercial property

Sources: Bloomberg; MSCI; RBA

Housing prices have also grown strongly in a range of advanced economies over recent years (Graph 1.8). Regulators in some economies where household leverage is high and rising – such as in Canada, Sweden, Norway, New Zealand and Hong Kong – have deployed a range of macroprudential policies to try to restrain the

Graph 1.8
Dwelling Price-to-income Ratios*

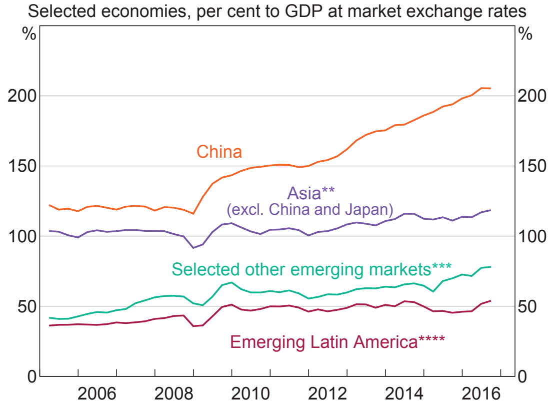


* Average dwelling prices to average household disposable income

Sources: BIS; Bloomberg; Canadian Real Estate Association; CoreLogic; Halifax; national sources; OECD; Quotable Value; Realkreditraadet; Thomson Reuters; United Nations

Graph 1.9
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 publicly owned non-financial firms

** Hong Kong, India, Indonesia, Malaysia, the 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

associated build-up of financial vulnerabilities. For example, some economies have imposed higher countercyclical capital buffers, increasing the regulatory capital that banks must hold against their assets. Others – such as Hong Kong and the Canadian province of British Columbia – have further increased the tax rate on foreign purchases of property.

China

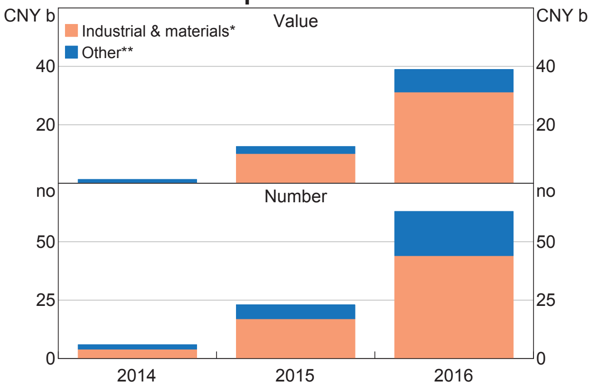
Financial stability risks are elevated in China, as they have been for several years. A rapid expansion of credit has supported economic growth, but has added to the level of debt, which is already high by the standards of other emerging economies (Graph 1.9). This leaves the financial system vulnerable to the trend slowing in economic growth. High debt levels are also concerning in light of several characteristics of the Chinese financial sector: some debt is concentrated in industries with significant excess capacity; lending from outside the regulated banking system is growing rapidly as the financial system generally becomes increasingly large, interconnected and opaque; and the system remains vulnerable to a range of implicit guarantees and other incentive problems that can undermine lending standards. Together these factors raise concerns about asset quality and liquidity positions, and increase the potential for shocks to be amplified and spread across the financial system.

China's debt has risen rapidly as a share of GDP in recent years, with much of the run-up concentrated in the corporate sector. The rapid growth in debt, and the fact that much of it has been extended through less regulated channels, raises the risk that some lending has been of low quality and to more marginal borrowers. Of particular concern is lending to highly leveraged firms in industries that already have excess capacity, such as mining and other parts of the industrial sector, as well as parts of the real estate sector. Returns on capital at many of these firms are low and declining.

While measured financial stress in the corporate sector remains low overall, it has been rising. The number and value of corporate bond defaults has more than doubled over the past year –

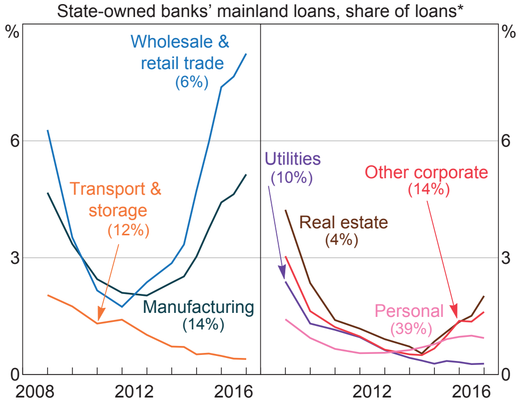
albeit off a low base – which has contributed to a sizeable widening of corporate bond spreads over recent months (Graph 1.10). Banks' NPL ratios for some sectors have also risen significantly (Graph 1.11).

Graph 1.10
Chinese Corporate Bond Defaults



* Includes mining, steel production and transportation
** Includes IT, real estate, retail and utilities & energy
Sources: RBA; WIND Information

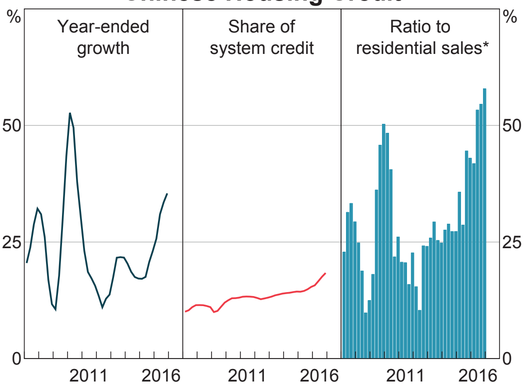
Graph 1.11
Chinese Banks' NPLs
State-owned banks' mainland loans, share of loans*



* December 2016 borrower share of total loans in brackets; Bank of Communications is excluded as it does not report these data
Source: Banks' annual and interim reports

Vulnerabilities from the household sector are also rising, but overall remain low. As in a number of other countries, mortgage lending has been growing quickly in China and has been associated with a rapid rise in housing prices (Graph 1.12).[1] However, in contrast to the corporate sector, overall household indebtedness is low by international standards, borrower leverage appears to be low, and mortgages account for less than one-fifth of overall bank lending (although there is considerable variation across banks).

Graph 1.12
Chinese Housing Credit



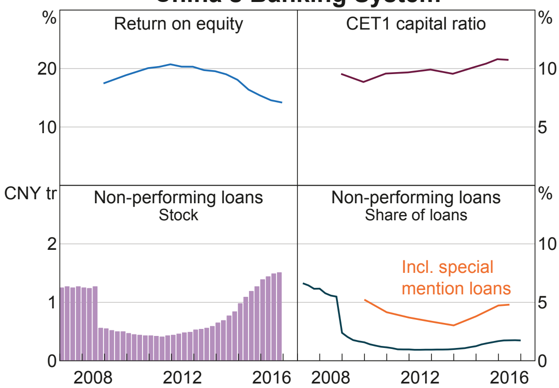
* Ratio of quarterly change in the stock of credit to quarterly new residential sales; includes estimated values prior to 2013
Sources: CEIC Data; RBA

As a consequence, a sharp property market correction would be more likely to cause financial stress among property developers than households, particularly those developers that are highly leveraged, reliant on shadow financing sources and have large stocks of unsold properties. It would also affect the construction industry and the economy more broadly. However, the risk in this regard is mitigated by the Chinese authorities' ongoing use of policy tools to actively manage trends in the housing market.

While overall China's banks remain profitable and report adequate levels of capital, their return on equity has declined noticeably over recent years and headwinds to profitability are likely to persist (Graph 1.13). In particular, it is likely that Chinese banks' NPLs would be much higher than

1 See RBA (Reserve Bank of Australia) (2016), 'Box A: The Pick-up in the Chinese Housing Market', *Statement on Monetary Policy*, August, pp 15–18.

Graph 1.13
China's Banking System



Sources: CEIC Data; RBA; S&P Global Market Intelligence

currently reported if they were calculated on an internationally comparable basis, and an increase in 'special mention loans' (which are not classified as NPLs, but are considered to be at risk) points to further rises in NPLs.

Other vulnerabilities continue to build at smaller banks in China.[2] These banks' holdings of opaque investment securities (such as credit products packaged as securities by trust and securities companies) have been growing rapidly. They have also been increasingly reliant on short-term interbank funding. As a result, small banks are at increased risk of insolvency and distress arising from the combination of riskier, potentially illiquid assets and the short-term maturity structure of their liabilities. This combination could lend itself to contagion to other institutions. A number of smaller banks also have thin capital buffers.

Beyond the regulated banking sector, shadow banking activities in China continue to pose significant risks. Shadow lending has been a key driver of the run-up in debt since 2009, and is estimated to account for around one-quarter of total debt. This lending takes various forms, including inter-company loans and loans made by separately regulated firms, such as trusts and asset managers. This form of intermediation is likely to be comparatively risky. First, lighter regulation means that lending standards are likely to be more relaxed and lending is subject to less stringent capital and other safeguards than traditional bank lending. Second, funding for shadow lending is often short term, raising the possibility of liquidity problems for shadow lenders that lack formal access to central bank liquidity and are not backed by deposit insurance. Finally, the growth of opaque investment products has increased the links between banks and non-bank financial institutions, making exposures less transparent and raising the risk of contagion. Recognising these risks, the Chinese authorities have flagged new restrictions on shadow lending over the past year. However, it is unclear how effective these actions could be, partly because in the past shadow lenders have been adept at circumventing new regulations.

Capital outflows have the potential to exacerbate financial vulnerabilities in China. To date, the authorities have restrained capital outflows and downward pressure on the renminbi by tightening existing capital controls and selling foreign currency reserves.

If widespread financial distress were to emerge in China, Australia and other economies would likely be affected mostly through the impact on the Chinese economy and the resultant lower trade volumes and commodity prices, as well as through weaker confidence and higher volatility in financial markets. Direct financial linkages between China and other economies are generally small, but have grown in recent years. The Chinese authorities are aware of the risks that are building within the financial sector and can draw on a broad range of policy tools to address them. But the policy trade-offs they face are difficult. And the longer that debt-driven growth

2 See RBA (2016), 'Box A: Recent Growth of Small and Medium-sized Chinese Banks', *Financial Stability Review*, October, pp 14–16.

and distortionary incentives in the financial sector persist, the more likely it is that China's economic transition will include a financial disruption of some form.

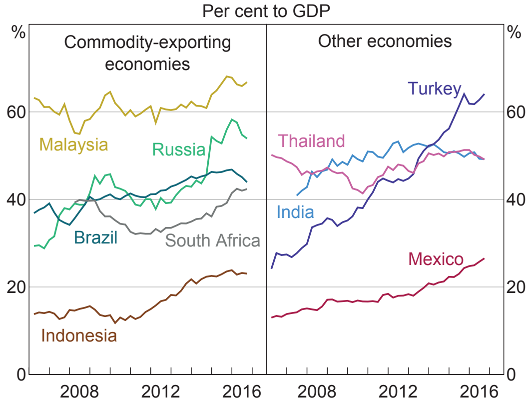
Other Emerging Economies

Economic growth is generally expected to pick up in other emerging market economies this year. A period of asset price falls and capital outflows following the US election was mostly short-lived, as the stronger global growth outlook and higher commodity prices outweighed concerns about higher interest rates and possible protectionist policies. Nonetheless, as with China, private sector debt has increased sharply over recent years, especially in commodity-exporting economies such as Brazil, Russia, South Africa and Indonesia. This has been driven by rising corporate indebtedness, which remains high relative to history despite flattening out or even declining in some economies recently (Graph 1.14). This could give rise to debt-servicing problems if global interest rates were to continue to rise, though these concerns could be mitigated if higher rates were associated with stronger global growth and higher commodity prices. In contrast, a scenario where interest rates rose, but commodity prices remained low, would be particularly challenging for many emerging market economies, though associated exchange rate depreciations would likely provide some offsetting support to these economies' net exports. This might be the case if there were a sudden repricing of risk, for instance in response to domestic or international political developments.

A significant increase in global interest rates would lead to higher borrowing costs for firms rolling over debt in the corporate bond market. A relatively large volume of US dollar-denominated debt is due to mature in the next few years in some emerging market economies (Graph 1.15). While the adjustment of global interest rates is expected to be fairly gradual, a significant repricing of emerging market risk would see these pressures develop more quickly and in a more disruptive way.

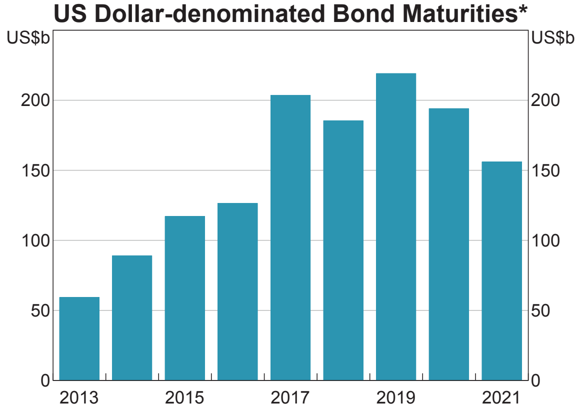
Emerging market banks, which are typically the main financiers of domestic corporate debt, seem well placed to weather moderately higher corporate defaults. Banking system profitability generally remains at or above estimates of the cost of equity, and banks' reported capital

Graph 1.14
Total Credit to Private Non-financial Corporations
Per cent to GDP



Sources: BIS; CEIC; RBA; Thomson Reuters

Graph 1.15
Emerging Market Corporations' US Dollar-denominated Bond Maturities*

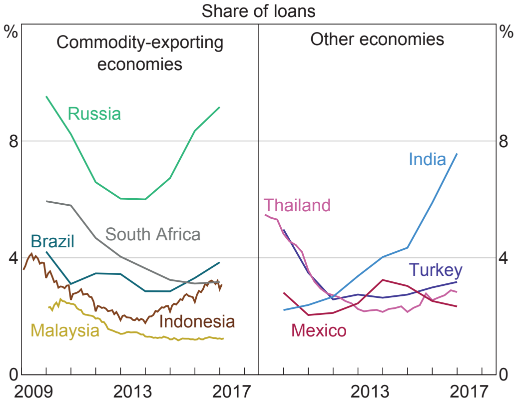


* Includes some jurisdictions that are excluded from narrower definitions of emerging markets; for example, these data include China, Hong Kong, Singapore and South Korea

Source: Dealogic

ratios are typically high by global standards. Nonetheless, NPLs have continued to pick up in commodity-exporting economies (Graph 1.16). While the recent recovery in commodity prices may take some pressure off these banking systems, the effect of earlier weak growth and low commodity prices may take time to fully work through.

Graph 1.16
Selected Banking Sector NPLs*
Share of loans



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

A few emerging market banking systems, however, face more immediate challenges. The Turkish economy has weakened, in part due to ongoing political turmoil, and the lira has fallen sharply. Corporate debt in Turkey, which has increased sharply over recent years and is often denominated in foreign currency, is likely becoming more difficult to service. Broad corporate sector distress could weigh heavily on bank profitability in Turkey. In India, banks' NPL ratios are high and have continued to rise, particularly at public sector banks. The recent rise in NPLs largely reflects efforts by the regulator to improve NPL recognition. The Indian Government is continuing with banking sector reforms and the recapitalisation of troubled banks.

Overall, the potential for emerging market financial distress to spill over to other economies is rising over time due to their increasing global economic and financial integration. As with China, at this stage distress would be most likely transmitted through trade links, as direct financial linkages remain fairly small overall. It could, however, weigh on financial market sentiment, particularly in economies that are perceived to have similar vulnerabilities.

New Zealand

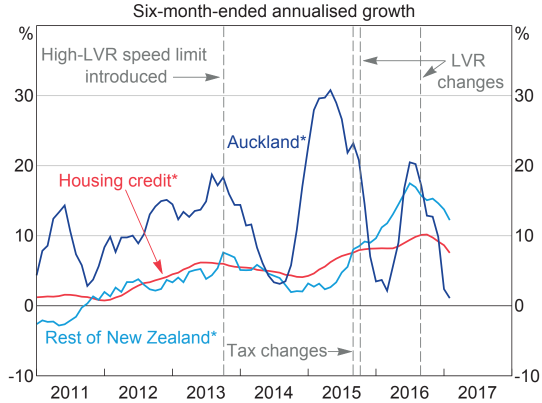
The four major Australian banks all have large operations in New Zealand, with business models that are similar to those in Australia (see 'The Australian Financial System' chapter for more details). Economic and asset price cycles in the two countries are also strongly correlated, and hence any widespread losses in New Zealand would likely affect the Australian banks at a time when they were already under stress from their domestic operations.

Housing prices and aggregate household debt have risen strongly over recent years, although price growth has slowed somewhat over the past six months. New Zealand housing prices now average about 6½ times annual average household disposable income, which is very high by international standards (Australia's internationally comparable ratio is currently around five, though making international comparisons can be difficult; Graph 1.8). While housing price increases are partly being driven by fundamental factors (including a high rate of migration to capital cities), there is a risk that these factors could slow or reverse. The share of new loans with high debt-to-disposable income (DTI) ratios (greater than six) has also increased, to be around one-third, and investors account for nearly half of such loans. More broadly, the investor share of all new loans has been high (peaking at just under 40 per cent in mid 2016). This presents additional risks, because high DTI borrowers are less resilient to income or interest rate shocks, and investors may be more likely to sell in a downturn, which could exacerbate price falls.

In response, the Reserve Bank of New Zealand (RBNZ) has introduced three rounds of macroprudential policies since 2013, mainly targeting high loan-to-valuation (LVR) loans and investor borrowing. These policies have helped to reduce the share of riskier housing loans on banks' balance sheets and appear to have, at least temporarily, slowed the growth of housing prices (Graph 1.17). The RBNZ has requested that restrictions on high DTI lending be added to the set of agreed macroprudential tools outlined in the Memorandum of Understanding on macroprudential policy with New Zealand's Minister of Finance, which could be used to contain a further build-up in housing risks.

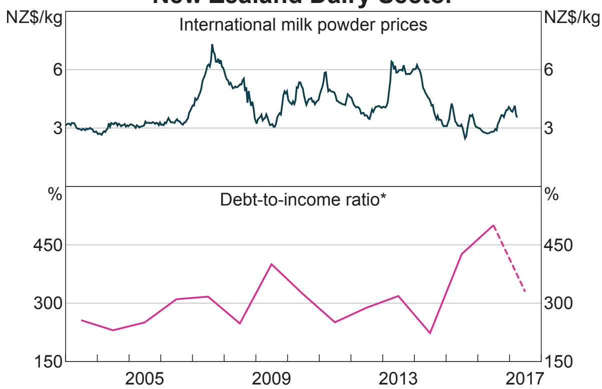
In contrast, the immediate risks in the dairy sector in New Zealand have subsided due to a rise in global dairy prices, though some underlying vulnerabilities remain (Graph 1.18). Dairy sector debt has continued to increase, and the more highly leveraged, higher-cost farmers remain somewhat vulnerable to any future weakness in dairy prices or a rise in interest rates.

Graph 1.17
New Zealand Housing Credit and Prices



* To latest three months
Sources: RBNZ; REINZ

Graph 1.18
New Zealand Dairy Sector



* 2017 estimate uses latest Fonterra and ABARES forecasts for farmgate milk prices and milk production respectively; debt held constant at 2016 levels
Sources: ABARES; Bloomberg; RBA; RBNZ; USDA