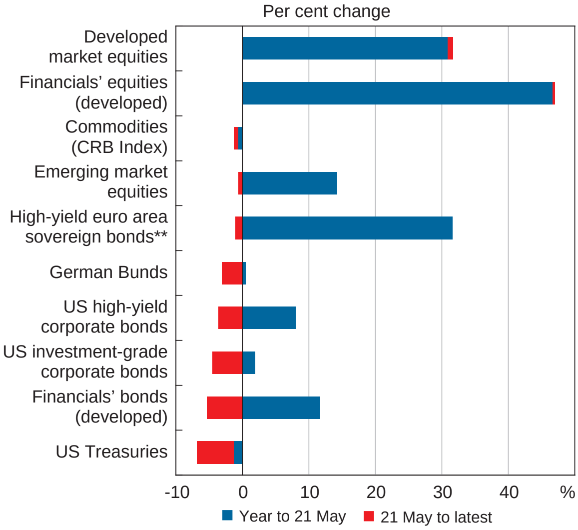
# 1. The Global Financial Environment

Risks to global financial stability have shifted somewhat since the March *Review*. Conditions in the major banking systems outside the euro area have continued to improve, and there have been further signs of recovery in some major economies. Financial market volatility has increased, however, with indications in late May from the Federal Reserve that it may begin scaling back its asset purchase program later this year triggering a rise in yields and declines in prices of a range of risk assets, after generally strong performance over the previous year (Graph 1.1). Market sentiment improved subsequently, and many risk assets have partially unwound their initial price declines. Yields remain higher, which has somewhat curtailed the amount of risk-taking by investors. Though the adjustment to date has been reasonably orderly, some points of pressure are evident in a few emerging markets, partly reflecting the earlier build-up in borrowing. That said, indicators of vulnerability for emerging market economies are not as high as in earlier periods of stress.

**Graph 1.1**
**Asset Prices***
Per cent change



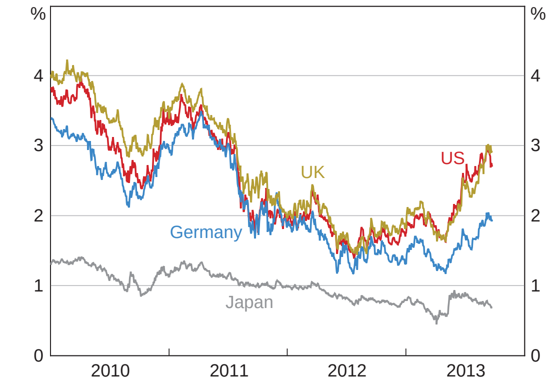

* Sovereign bonds and financials' bonds (developed) are predominantly maturities of 7–10 years
** Weighted average of Greece, Ireland, Italy, Portugal and Spain
Sources: Bloomberg; MSCI; RBA

Despite further positive developments over the past six months, fiscal and banking sector problems in the euro area remain a potential threat to global financial stability. Markets remain sensitive to signs of wavering political support for reforms needed to safeguard the stability of the currency union. Another risk to global financial stability relates to the exit from highly accommodative monetary policy by major central banks, with potential costs to being either too early or too late. There has also been growing concern about the increasing importance of the 'shadow banking' system in China and the extent of credit risk built up within the sector.

## Sovereign Debt Markets

Comments by Chairman Bernanke in late May suggesting that the Federal Reserve may reduce its asset purchases sparked a sharp rise in government bond yields in the United States and other major economies (Graph 1.2). The rise in yields and associated volatility in financial markets highlight the risks to global financial stability around the exit from highly accommodative monetary policy by major central banks. Rising yields could trigger market volatility, expose interest rate risk among investors and borrowers, unduly hamper the economic recovery and aggravate concerns about

## Graph 1.2
## Government 10-year Bond Yields



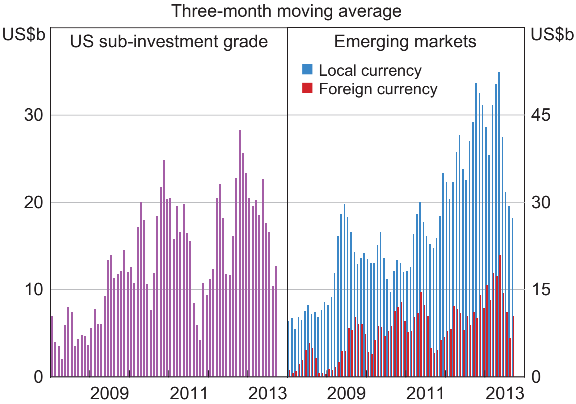

Source: Bloomberg

fiscal sustainability in some countries. On the other hand, leaving quantitative easing policies in place for too long could increase risks to financial stability by encouraging excessive risk-taking, including in other countries.

Earlier this year there had been increasing concern among some policymakers about potentially imprudent risk-taking as investors 'reached for yield' in a low interest rate environment. Globally, there had been signs of increased – but not obviously excessive – risk-taking, including a pick-up in real estate market activity and strong issuance of high-yield bonds in some countries (Graph 1.3). This activity has been somewhat curtailed by the rise in official yields since May.

## Graph 1.3
## Corporate Bond Issuance*

Three-month moving average

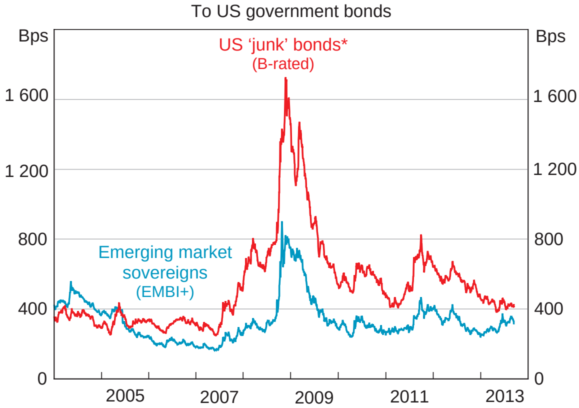



* September 2013 is month-to-date
Sources: Dealogic; RBA

To date the adjustment in markets has been reasonably orderly and some of the feared repercussions have not transpired, at least in advanced economies. For example, advanced economy share prices have risen in net terms for the most part and most segments of the US corporate bond market have remained reasonably liquid, despite concerns that liquidity would be hampered by dealers carrying less inventory in response to regulatory reforms. Spreads on lower-rated US corporate bonds have risen only slightly, and are currently trading close to their post-crisis lows reached in early 2011 (Graph 1.4). Spreads on emerging market sovereign bonds have also risen since May and the financial market response in emerging markets has generally been more pronounced (as discussed in the 'Banking Systems in the Asian Region' section below).

## Graph 1.4
## Bond Spreads

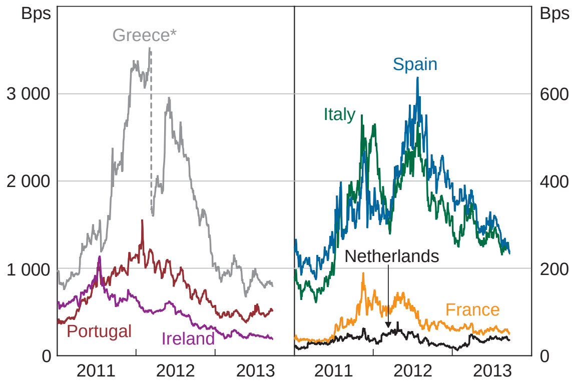
To US government bonds




* 7–10 year maturity
Sources: Bank of America Merrill Lynch; Bloomberg; JP Morgan

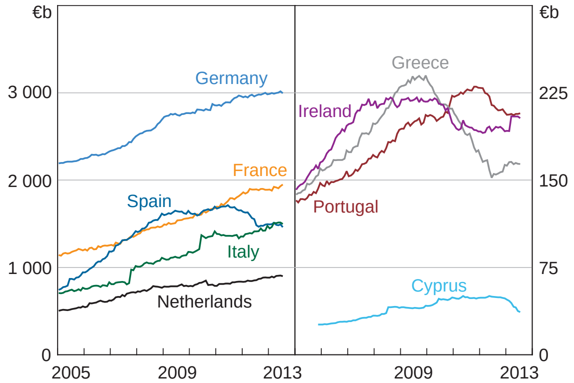
After widening modestly over June and early July, spreads on euro area periphery government bonds have subsequently narrowed, and most of these spreads are now below their levels six months earlier (Graph 1.5). Recent indicators show tentative signs of an improved growth outlook, and investor confidence is also likely to have been boosted by steps taken toward strengthening the ability of the euro area to deal with its banking sector problems. In June, European finance ministers agreed on

## Graph 1.5
**Euro Area Government 10-year Bond Spreads**
To German Bunds




* Break on 12 March 2012 due to the first private sector debt swap
Source: Bloomberg

## Graph 1.6
**Private Deposits Held at Domestic Monetary Financial Institutions**




Source: ECB

the conditions for bank resolution and that the European Stability Mechanism (ESM) could use up to €60 billion to recapitalise banks directly. The ESM is expected to be ready to be used for bank recapitalisations in late 2014, though it is still not clear whether banks affected by the recent crisis would be eligible to receive ESM support. In addition, national governments will be required to contribute to any recapitalisations; this means that the linkage between sovereigns and the banking system, which has been destabilising for a number of countries, will not be completely severed.

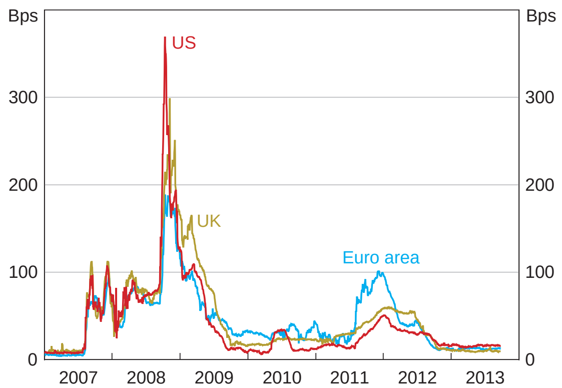
In a further sign of improved conditions in the euro area, the outflows of deposits from the banking systems of most periphery economies have slowed or reversed in recent months, particularly in Greece and Ireland; Cyprus is the main exception (Graph 1.6). Together with a narrowing of the divergence in deposit rates between core and periphery economies, this is consistent with some easing of financial fragmentation within the euro area.

Despite the recent improvement in the euro area, the region's fiscal and banking sector problems remain a potential threat to global financial stability. Political disagreements have slowed the reform process needed to safeguard the stability of the currency union. The recent disagreement in the Portuguese ruling coalition about the approach to reform briefly unsettled investors and forced an early election. Similar setbacks could potentially spark a future bout of heightened risk aversion and market volatility.

## Bank Funding Conditions and Markets

Funding conditions for most advanced economy banks have remained favourable, even though financial market volatility has increased. Spreads on short-term interbank loans in the United States, the euro area and the United Kingdom have remained around their lowest levels since mid 2007 (Graph 1.7). Banks' use of interbank loans and other

## Graph 1.7
**Interbank Spreads**
Interbank offered rate spread to swap, 3-month maturity*

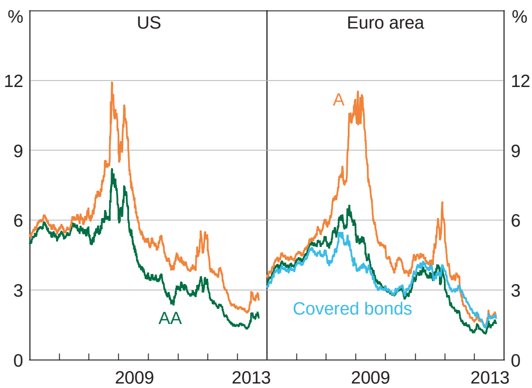



* LIBOR for US and UK; EURIBOR for euro area
Sources: Bloomberg; Thomson Reuters

types of short-term wholesale funding, however, remains subdued in most countries. In the euro area, this is likely to partly reflect that many banks have retained long-term funding obtained earlier from the European Central Bank (ECB): although a considerable amount of the around €1 trillion in three-year funding provided by the ECB in late 2011 and early 2012 has been repaid, approximately two-thirds is outstanding. Some of the banks utilising this funding still cannot access private funding markets.

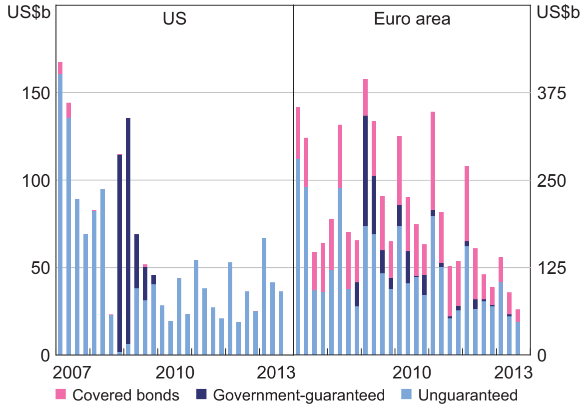
The cost of euro area and US banks' term funding has increased since May in line with the rise in yields on other assets, though term funding costs remain low by historical standards (Graph 1.8). The rise in yields was associated with some slowing in bank bond issuance, which at least in the euro area was already subdued by the standards of recent years (Graph 1.9). Although proposed European legislation would allow losses to be imposed on banks' unsecured bonds in resolution, recent issuance patterns suggest that bond investors have so far not responded by switching to secured instruments such as covered bonds. More generally, slow growth in bank assets has limited required funding and banks in a number of markets have been increasing the share of their funding from customer deposits (Graph 1.10).

**Graph 1.8**
**Banks' Bond Yields**



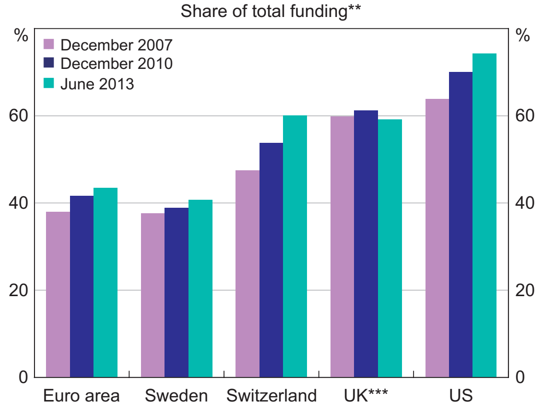
Sources: Bank of America Merrill Lynch; Bloomberg

**Graph 1.9**
**Banks' Bond Issuance***
Quarterly



* September 2013 is quarter-to-date
Sources: Dealogic; RBA

**Graph 1.10**
**Customer Deposit Funding***
Share of total funding**

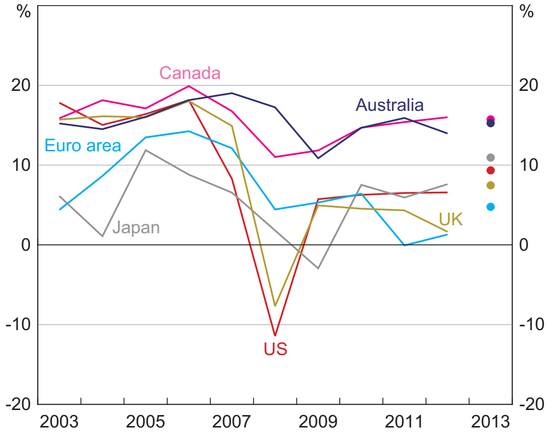


* Total deposits excluding deposits from banks and other monetary financial institutions; ratios across banking systems are subject to definitional differences; certificates of deposit are classified as wholesale debt in all countries except the US, where these instruments are eligible for deposit insurance
** Total liabilities including equity less derivatives and other non-debt liabilities
*** December 2007 data are for banks, while December 2010 and June 2013 data include all monetary financial institutions
Sources: FDIC; central banks

## Banks' Profitability and Capital

The profitability of large banks in the major banking systems has continued to improve in recent quarters, but returns on equity have generally remained well below pre-crisis averages, particularly in the euro area (Graph 1.11). The better performance has been reflected in the equity valuations of banks: on average, large US and UK banks now trade at around or above book value after a long period where this was not the case (Graph 1.12).

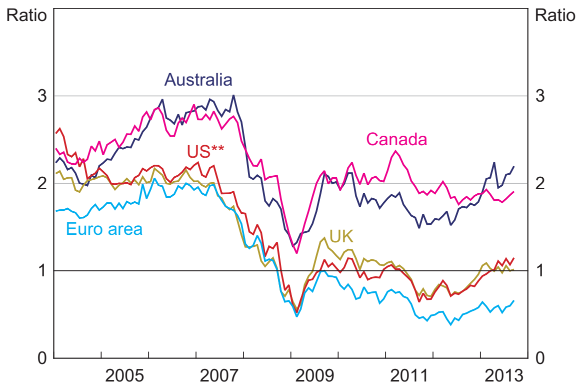
## Graph 1.11
### Large Banks' Return on Equity*
After tax and minority interests




* Includes six US banks, eight euro area banks, four UK banks, three Japanese banks, six Canadian banks and four Australian banks; adjusted for significant mergers and acquisitions; reporting periods vary across jurisdictions; dot for Australia is analysts' full-year forecast, while dots for other jurisdictions refer to annualised profits in 2013 to date divided by total equity as at latest reporting date

Sources: Bloomberg; RBA; SNL Financial; banks' annual and interim reports

## Graph 1.12
### Banks' Price-to-book-value Ratios*




* Monthly; September 2013 observation is the latest available

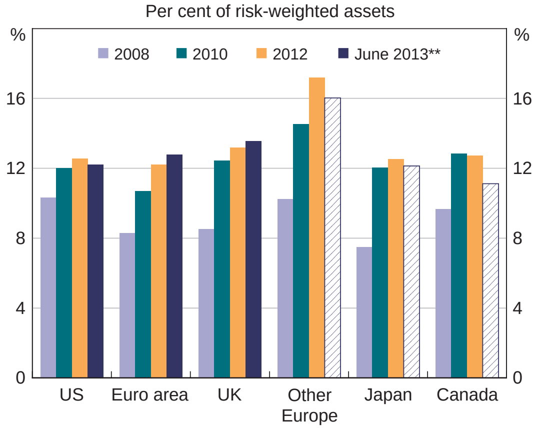
** Diversified financials

Source: Bloomberg

Outside of the euro area, improving asset performance (discussed below) has added to profits through lower loan-loss provisions. The provision expenses of large banks in the United States and United Kingdom are now close to their pre-crisis levels, suggesting relatively less scope for lower provisions to boost these banks' profits in the period ahead. Profit results for a number of international banks continue to be influenced by considerable legal and regulatory expenses related to past misconduct: the absence of significant misconduct costs boosted the profits of UK banks in the first half of 2013. Net interest income has remained subdued for many banks, amid weak balance sheet growth and downward pressure on net interest margins stemming from the prolonged period of low interest rates. Most analysts consider that higher yields will ultimately expand banks' net interest margins, though the recent rise has seen many banks incur valuation losses on their securities holdings.

The phasing-in of the Basel III capital framework has seen large banks' reported capital ratios decline in a number of major banking systems, since capital must now meet stricter quality definitions under the new requirements. In Canada, Japan and Switzerland, reported Tier 1 capital ratios for large banks have declined by between ½ and 1¾ percentage points over 2013 (Graph 1.13). Capital ratios for large US banks also declined, though this was largely the result of the partial introduction of Basel 2.5 raising measured risk-weighted assets; Basel III requirements will not come into effect there until 1 January 2014. Tier 1 capital ratios of large banks in the United Kingdom and the euro area (where Basel III will also

## Graph 1.13
### Large Banks' Tier 1 Capital*
Per cent of risk-weighted assets




* Tier 1 capital ratios are subject to definitional differences; shaded bars indicate that some banks in a region are reporting under Basel III; includes 18 US banks, 41 euro area institutions, four UK banks, 10 other European banks, three Japanese banks and six Canadian banks

** July 2013 used for Canada; latest available data used where banks have not reported their 2013 interim results

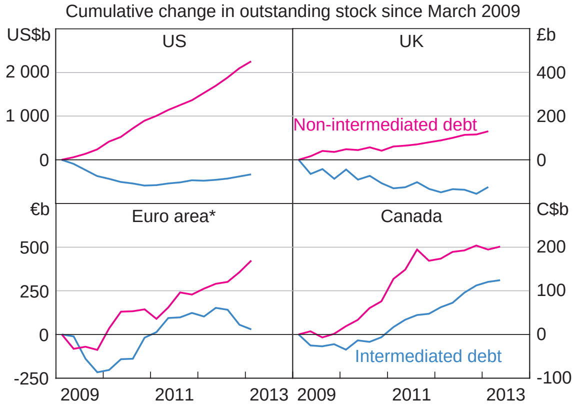
Sources: Bloomberg; FDIC; RBA; SNL Financial; banks' annual and interim reports begin to be implemented in 2014) have increased slightly over 2013, reflecting capital growth through retained earnings and declines in risk-weighted assets. When fully phased in, Basel III will raise both the minimum quantity and quality of capital that banks must hold.

## Credit Conditions and Asset Quality

Historically low corporate bond yields have encouraged non-financial corporations to substitute towards non-intermediated debt financing, which is likely to have weighed on credit growth in a number of advanced economies. Since 2009, corporations' outstanding stock of non-intermediated debt has grown faster than their intermediated debt in the United States, the euro area, the United Kingdom and Canada (Graph 1.14). Intermediated credit has nonetheless been expanding in the United States lately, as growth in business and consumer credit has more than offset the ongoing contraction in housing credit. In the euro area, by contrast, weak economic conditions have also contributed to a fall in region-wide credit over the year to July, especially business credit (Graph 1.15); the contraction has been more pronounced in the periphery. The ECB's bank lending survey shows that euro area banks collectively continued to tighten their lending standards over the March and June quarters, while loan demand from both businesses and households continued to decline over this period. Net lending by participants in the UK authorities' 'Funding for Lending Scheme' – designed to help support lending to the real economy by reducing banks' borrowing costs – increased over the June quarter, though cumulative net lending has been broadly unchanged since the scheme started in July 2012. Additional support for housing borrowing is being provided by the recently expanded 'Help to Buy' scheme, which enables borrowers to buy a dwelling with a small deposit.

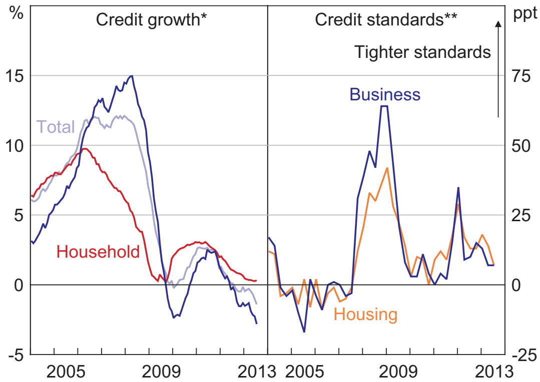
Asset performance in the euro area has continued to deteriorate, consistent with the weak economic conditions in the region. The non-performing loan (NPL) ratio of the large euro area banks increased further over the first half of 2013, driven by banks in the most troubled euro area countries and those with significant exposure to the Spanish property market (Graph 1.16). European authorities have expressed concerns about a potential understatement of NPL ratios, to the extent that banks are forbearing on loans; that is, modifying loan terms to struggling borrowers in ways they would not do for other customers. A lack of investor confidence in banks' asset valuations has likely contributed to euro area banks' low price-to-book

**Graph 1.14**
**Private Non-financial Corporations' Debt Funding**
Cumulative change in outstanding stock since March 2009



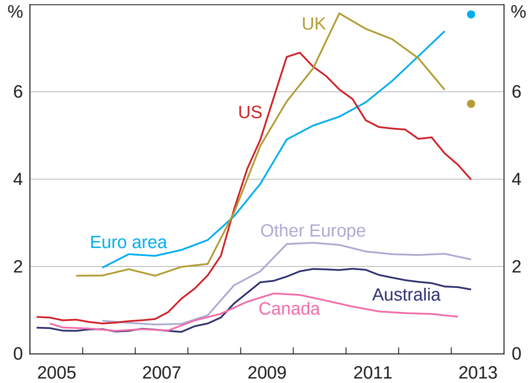

* Refers to public and private non-financial corporations
Sources: ECB; ONS; RBA; Statistics Canada; Thomson Reuters

**Graph 1.15**
**Euro Area Credit Conditions**




* Year-ended; not adjusted for securitisations prior to 2009
** Net percentage of respondents reporting tighter standards
Sources: ECB; RBA

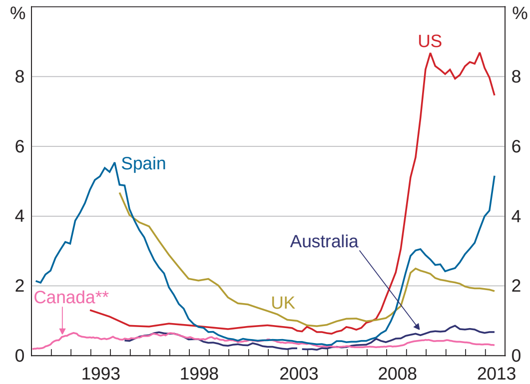
## Graph 1.16
## Large Banks' Non-performing Loans*
Share of loans




* Definitions of 'non-performing loans' differ across jurisdictions, sometimes including loans that are 90+ days past due but well secured and in the case of Australia small amounts of non-loan assets; includes 18 US banks, 41 euro area institutions, 10 other European banks, four UK banks, six Canadian banks and four Australian banks; latest available ratios have been used for some euro area and UK institutions where June 2013 data are unavailable

Sources: APRA; RBA; SNL Financial; banks' annual and interim reports

## Graph 1.17
## Banks' Non-performing Housing Loans*
Share of all housing loans




* UK and Spain include some non-bank lenders

** Includes only the six large Canadian banks, HSBC Canada and Manulife Bank

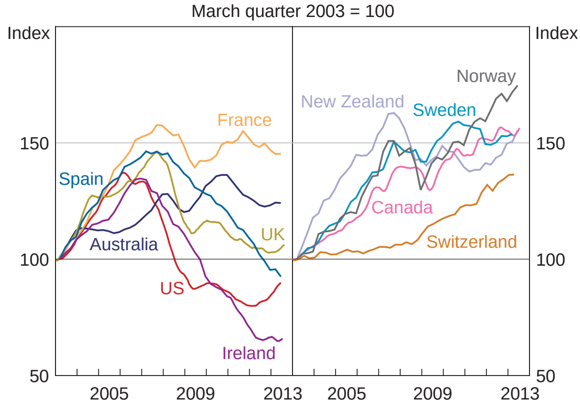
Sources: APRA; Bank of Spain; Canadian Bankers' Association; Council of Mortgage Lenders; FDIC; RBA

ratios, which in aggregate remain well below one (Graph 1.12). The ECB is to commission an independent review of larger euro area banks' asset quality, which is expected to be carried out early next year.

Asset quality continues to improve in most advanced economies outside the euro area. The aggregate NPL ratio for the largest banks in the United States declined to 4 per cent in June, well below the peak of around 7 per cent reached in early 2010, though it is still historically high. Despite falling over recent quarters, the NPL ratio for US banks' housing loans remains not far below its peak in 2010 (Graph 1.17). There have been further signs of improvement in the US housing market, with construction activity and house prices rising (Graph 1.18). However, both activity and real prices remain well below their pre-crisis levels and mortgage interest rates have recently risen sharply.

Relatively strong economic growth and low interest rates have contributed to buoyant residential property price performance in a number of smaller advanced economies (Graph 1.18, right panel). This includes New Zealand, an important market for the large Australian banks, where higher

## Graph 1.18
## Real Residential Property Prices*
March quarter 2003 = 100

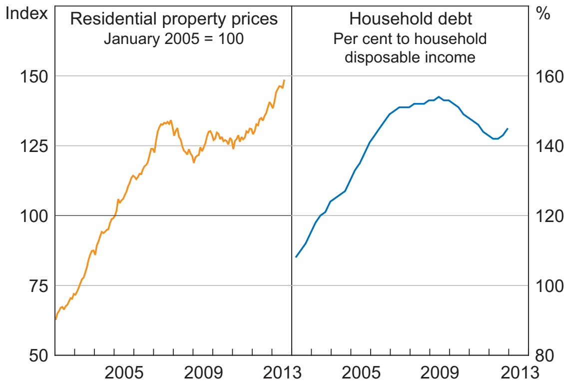



* Deflated using consumer price indices

Sources: BIS; Bloomberg; RBA; REINZ; RP Data-Rismark; SNB; Teranet-National Bank; Thomson Reuters

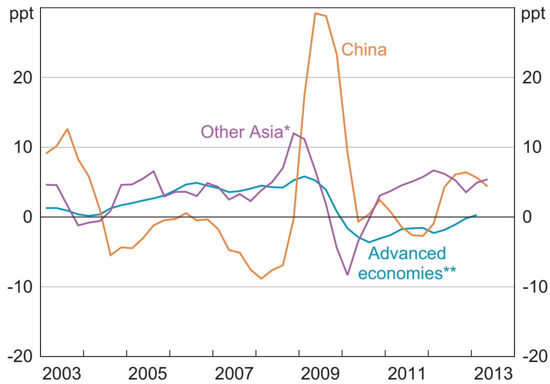
residential property prices have been accompanied by moderately faster growth in housing credit (Graph 1.19). More of the new lending than usual has been at high loan-to-valuation ratios (LVRs) and the Reserve Bank of New Zealand (RBNZ) responded to this by tightening capital requirements on such loans. In May, the RBNZ formalised its macroprudential framework through a Memorandum of Understanding with the New Zealand Minister of Finance. The framework includes powers to adjust

**Graph 1.19**
**New Zealand Residential Property Prices and Household Debt**




Sources: RBNZ; REINZ

**Graph 1.20**
**Growth in Credit and Nominal GDP**
Year-ended credit growth *less* year-ended growth in nominal GDP




* Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan and Thailand
** Canada, euro area, Japan, UK and US
Sources: BIS; CEIC; ECB; Federal Reserve; RBA; Thomson Reuters

banks' core funding ratios,[1] set countercyclical capital buffers,[2] adjust sectoral capital requirements and restrict high LVR lending.

In August, the RBNZ announced the deployment of restrictions on high LVR mortgages; from 1 October, banks will need to limit loans with LVRs above 80 per cent to no more than 10 per cent of their new mortgage lending. The New Zealand Government has announced expanded subsidies and other measures to assist first home buyers in the face of these restrictions.

## Banking Systems in the Asian Region

Amid volatility associated with shifting expectations about US monetary policy, Asia has been a particular focus, as the global low yield environment has contributed to a prolonged period of credit growth in excess of growth in Asian economies' nominal incomes – a stark contrast to the picture in the major advanced economies (Graph 1.20). To some extent, earlier concerns about low interest rates in the major advanced economies stoking excessive capital inflows to the region have given way to concerns about the effects of higher yields and depreciating exchange rates on inflation and financial stability, with a particular focus on countries with current account deficits. Sovereign bond prices have fallen, and the exchange rates of a number of regional economies have depreciated against the US dollar amid reports of capital outflows. More recently, the effect of heightened geopolitical tensions in Syria on oil prices further weighed, for a time, on sentiment toward oil-importing emerging markets. A few countries have intervened to support their currencies, after many years where the usual pattern was intervention to resist currency appreciation. Several countries with explicitly managed exchange rate regimes are still facing strong property markets and credit growth, and some have further refined their macroprudential measures in response (discussed below).

These interventions in, or explicit management of, exchange rates highlight that many emerging markets face potential vulnerabilities related to their foreign borrowing. Much of this borrowing, particularly in the case of corporate debt, is denominated in foreign currency, because global investors often do not want exposure to these countries' currencies (Table 1.1). There is some

1 New Zealand banks have been subject to a 75 per cent minimum core funding ratio since 1 January 2013; as part of the macroprudential framework, the RBNZ may adjust the core funding ratio.

2 As part of its implementation of the Basel III framework, the RBNZ will be implementing the countercyclical capital buffer framework from 1 January 2014, though no announcement regarding the size of any buffer has been made.

## Table 1.1: Emerging Asia – Gross External Debt
Per cent to GDP

| | 1996 | March 2013 | |
|---|---|---|---|
| | Total | Total | Foreign currency denominated |
| China | 14 | 9 | na |
| India | 25 | 21 | 16 |
| Indonesia | 57 | 29 | na |
| South Korea | 26 | 36 | 26 |
| Malaysia | 37 | 33 | na |
| Philippines | 43 | 23 | 22 |
| Thailand | 60 | 37 | 25 |

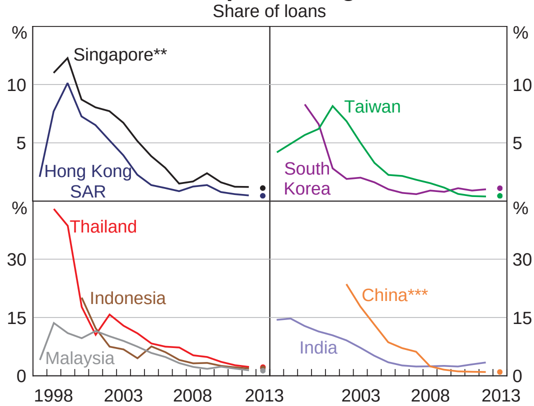
Sources: CEIC; IMF; World Bank

risk that actions to resist the earlier exchange rate appreciation through intervention may have lulled domestic banks and firms into believing that the authorities could successfully limit exchange rate volatility, and thus into borrowing more in foreign currency than they otherwise would have done. The potential for exchange rate depreciation in these countries, and for borrowers' debt burdens (in local currency terms) to rise, is now more evident. That said, the countries currently affected mostly have noticeably lower external debt positions than the countries most affected by the Asian crisis had at that time.

Despite the recent volatility in financial markets and slower economic growth in the region, available indicators suggest favourable conditions in Asia's banking systems. Banks in Asia have continued to earn solid profits, allowing many of them to raise their capital ratios through retained earnings (for a more detailed discussion of bank profits in China, see 'Box A: Recent Developments in Net Interest Income in the Chinese Banking System'). Aggregate capital ratios across Asian banking systems are relatively high, so they are well placed to meet Basel III capital requirements, which regulators in most jurisdictions have now started introducing.

NPL ratios in most banking systems in Asia remain at historically low levels (Graph 1.21). Nonetheless, these are typically a lagging indicator and some concerns

## Graph 1.21
### Asia – Non-performing Loans*
Share of loans

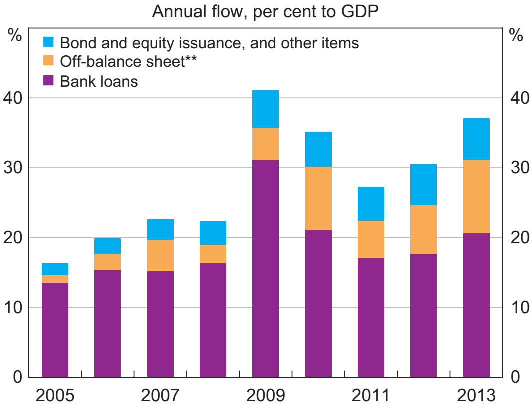



* Definitions of 'non-performing loans' differ across jurisdictions; dots represent latest available 2013 data
** Singaporean-owned banks only
*** Data for 2002–04 are for major commercial banks only
Sources: CEIC; RBA; banks' annual reports; national banking regulators

remain about the build-up of credit risk in the region in recent years. Specifically, in China, questions remain regarding the quality of infrastructure-related loans made to local governments during the 2009–10 countercyclical credit surge, and banks are commonly thought to be forbearing on some of these loans. In response to such concerns, the Chinese Government recently announced that the National Audit Office will carry out an audit of the debt of all levels of government in China; this audit should shed more light on the size and quality of banks' exposures to local governments.

Another potential risk to China's financial stability is its 'shadow banking' system. In recent years, an increasing share of financing in China has been provided by non-bank entities and through banks' off-balance sheet activities (Graph 1.22). Restrictions on both the quantity of bank credit, and loan and deposit rates have been associated with demand for credit exceeding the formal banking sector's ability to supply it, and savers seeking alternatives to low-yielding bank deposits, such as wealth management products (WMPs). The Chinese authorities have introduced a number of measures in recent years to mitigate the risks from shadow banking, including regulations on banks' exposures to WMPs announced in late March; many types of shadow banking activities in China face increased regulatory oversight. Although little is known about the quality of the assets held by China's shadow banking system, some commentators consider it likely that significant credit risk has built up within the system.

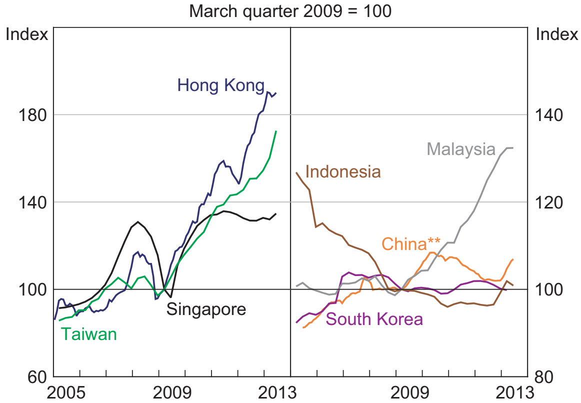
**Graph 1.22**
**China – Total Social Financing***
Annual flow, per cent to GDP




* Funding provided by the financial system to the real economy; 2013 data are for the first half of the year
** Includes entrusted loans, trust loans and bank accepted bills
Sources: CEIC; RBA

Property markets remain buoyant in a number of Asian economies, especially those with managed exchange rates and thus relatively low interest rates, given their economic growth performance (Graph 1.23). The strength in property prices has been accompanied by increased household indebtedness, which has raised concerns about borrowers' ability to repay if interest rates rise or economic conditions deteriorate. Regulators in the region have responded by introducing additional macroprudential policies in an attempt to limit lending activity and growth in prices. In Singapore, authorities have introduced a total debt-servicing ratio cap on mortgages, which limits a borrower's monthly repayments to 60 per cent of their gross income. Malaysian regulators have sought to curb excessive household indebtedness by capping loan terms at 35 years for mortgages and 10 years for personal loans, and introducing a ban on pre-approvals for personal financing products. In Indonesia, authorities have sought to dampen speculative demand by decreasing maximum LVRs for borrowers to 60 per cent for second mortgage loans and 50 per cent for third mortgage loans, from the 70 per cent cap that was introduced on all mortgages in early 2012. Property prices in China have continued to rise, despite measures introduced by Chinese authorities in March to curb demand. The implementation of the controls, however, was left to local governments, which in many cases have been slow to implement them.

**Graph 1.23**
**Real Residential Property Prices***
March quarter 2009 = 100




* Deflated using consumer price indices
** Data are an average of new and exisiting residential property prices
Sources: CEIC; RBA