

2. International Financial Conditions

Since the onset of COVID-19, financial markets have been highly volatile and key financial markets have experienced periods of severe dysfunction. This reflects the significant deterioration in the economic outlook and a sharp rise in uncertainty, which among other things led to a substantial increase in demand for cash over other assets. Central banks and governments have responded forcefully to these developments, which has helped to reverse much of the tightening in financial conditions and dysfunction in key markets, notably sovereign bond, repurchase (repo) and foreign exchange swap markets. Even so, conditions are yet to fully normalise in those markets. Financial conditions in other markets – such as those in which corporations and emerging market governments raise funding – experienced an even more severe tightening, although these have also eased slightly of late in response to various policy measures (Graph 2.1). The uncertain depth and severity of the economic disruptions associated with COVID-19 mean there is a risk of further tightening in the cost or availability of finance.

Central banks have responded forcefully to limit the tightening in financial conditions

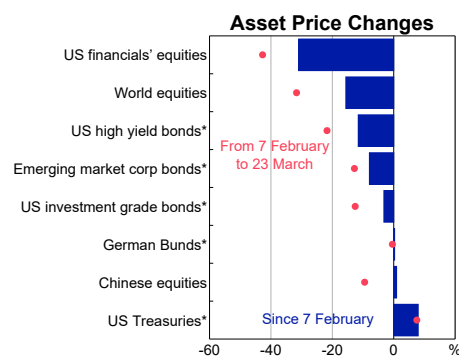
Central banks in advanced economies have provided an unprecedented level of monetary policy stimulus to limit the tightening in financial market conditions and address dysfunction in critical markets (Table 2.1). In many cases, central banks have coordinated with governments to implement

complementary packages of measures. Many central banks have entered new territory in terms of the scale, scope and nature of their responses. The range of programs implemented by the US Federal Reserve (Fed) has been particularly extensive, exceeding the size and scope of measures put in place during the global financial crisis, with a number of these programs underwritten by the US Treasury.

Measures have aimed to achieve one or more objectives:

1. Lower risk-free rates by reducing policy rates, strengthening forward guidance and purchasing sovereign bonds. The pace of asset purchases has far exceeded that seen in the global financial crisis and European sovereign debt crisis (Graph 2.2). In some cases, these purchase programs have been expanded to include securities issued by state and local governments.

Graph 2.1



* Increase represents lower yield
Sources: Bloomberg; ICE Data is used with permission

Table 2.1: Policy Responses by Central Banks in Advanced Economies^(a)

Central bank	Policy rate	Sovereign debt purchases ^(b)	State and local gov debt purchases	Private sector asset purchases	Expanded liquidity operations ^(c)	Expanded lending facilities ^(d)	FX swap line
Fed	1.625% → 0.125%	As required (currently \$8bn/day)	✓	✓	✓	✓	✓
ECB	-0.5%	€870bn	✓	✓	✓	✓	✓
BoJ	-0.1%	Upper limit removed	✗	✓	✓	✓	✓
BoE	0.75% → 0.10%	£200bn	✗	✓	✓	✓	✓
BoC	1.75% → 0.25%	As required (min. CAD\$5bn/week)	✓	✓	✓	✓	✓
RBNZ	1.00% → 0.25%	NZD\$30bn	✓	✗	✓	✓	✓
Riksbank	0%	SEK300bn	✓	✓	✓	✓	✓
Norges Bank	1.50% → 0.25%	✗	✗	✗	✓	✗	✓
RBA	0.75% → 0.25%	As required (yield curve target)	✓	✗	✓	✓	✓

(a) Includes policies implemented or modified since 3 March.

(b) Some figures include private sector asset purchases; purchases by the Fed, BoJ, BoC and RBA are open-ended; figures on a per annum basis unless otherwise indicated.

(c) Includes decreases in cost and/or increases in availability of short-term liquidity through changes to the size, terms and price of open market operations and standing facilities.

(d) Includes new or expanded term funding schemes and purchases of bank loans to certain corporations; also includes facilities that provide loans secured by corporate bonds.

2. Alleviate market dysfunction and meet demands for cash, particularly US dollars. Purchases of public and private sector assets have helped to alleviate dysfunction in many markets. Moreover, central banks have increased access to liquidity through expanded open market operations (including against a wider range of collateral), bilateral foreign currency swap lines, and other programs.
3. Increase the availability and/or reduce the price of credit to borrowers in the private sector, either:
 - Indirectly, by providing stable, low-cost funding to financial intermediaries through expanded term lending facilities. These measures have sought to

encourage lending to the real economy, including by linking funding allowances and/or borrowing rates to the quantity of lending (see 'Box A: Term Funding Schemes').

- Directly, by providing credit to private sector entities, usually by purchasing – or committing to purchase – marketable securities. In most cases, the central bank has been partly or wholly indemnified against potential losses by national governments.
- By easing prudential policies and providing guidance to ensure that capital, liquidity and other regulatory requirements do not unduly constrain the ability of financial institutions to

provide credit or serve as intermediaries in markets.

More recently, as conditions in short-term funding markets and sovereign bond markets have improved, some central banks have been able to reduce the extent of operations aimed at injecting liquidity and supporting market functioning. They have emphasised, however, a willingness to adjust operations as necessary to ensure ample liquidity and support market functioning in response to changing conditions. Meanwhile, other programs, including those aimed at credit easing, have only just become operational so it is too early to assess their effectiveness.

After a period of severe dysfunction in sovereign bond markets, conditions have improved

Government bond markets were severely dysfunctional in March. Widespread sales of government bonds by a range of investors to raise cash resulted in sharp increases in yields. These sales reflected an increased demand for cash to meet redemptions and margin calls, as well as for precautionary reasons. The unwinding of leveraged ‘relative value’ positions also contributed to the selling. These trades aimed to profit from small yield differences between more liquid and less liquid bonds, or between cash

bonds and futures; as these trades were unwound, the yield differences between economically similar exposures widened in some cases. The ability of financial intermediaries to manage the heavy volume of sales was limited by leverage and capital constraints, and split site arrangements amplified the disruptions for some market participants. The market dysfunction led to increased volatility in government bond yields, which further discouraged intermediation by some intermediaries.

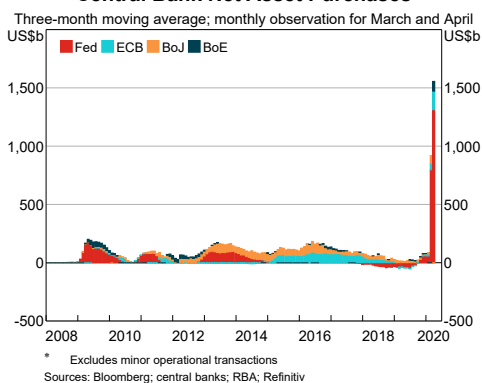
The dislocations in the market for US Treasuries in particular were unprecedented, and contributed to stresses in a wide range of markets globally. The deterioration in liquidity was reflected in higher costs of transacting in this market. This was evident, for example, by a widening in the spread between the price to buy and sell bonds (bid-ask spreads) (Graph 2.3). Also, measures of market ‘depth’ – the volume of bonds that could be bought and sold at the best bid and offer prices – declined sharply.

Actions of the Fed and other central banks, particularly significant purchases of government bonds and other assets, have since helped to improve market functioning and put downward pressure on government bond yields. Expanded liquidity operations have also helped to improve market functioning. Consistent with this, indicators of liquidity conditions have improved noticeably in a range of markets.

Since mid March, government bond yields have declined in most advanced economies, helping to keep funding costs low for borrowers (Graph 2.4). Yields have declined the most where central banks have significantly lowered policy rates, strengthened forward guidance, and expanded government bond purchases. Working in the offsetting direction has been expectations of significantly higher issuance of government securities to fund large fiscal deficits.

Graph 2.2

Central Bank Net Asset Purchases



For some countries, the extent of central bank bond purchases is expected to be of a similar magnitude to the increased issuance of sovereign debt arising from larger fiscal deficits. Despite those purchases, the need to finance large fiscal deficits has led to renewed market concerns around debt sustainability in some economies that have high sovereign debt burdens and do not issue their own currencies, most notably Italy. Reflecting those concerns, spreads on Italian government bonds relative to those on German bunds widened noticeably in March and have remained volatile since (Graph 2.5). In response, the European Central Bank (ECB) removed limits on the share of bonds of any country it may hold for its pandemic-related asset purchase program. Some European

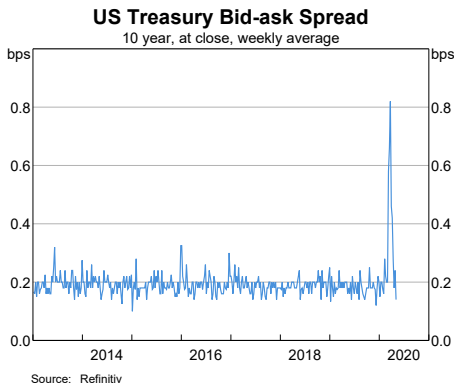
heads of government and members of the ECB's Governing Council have called for greater fiscal burden-sharing across the euro area, though there is not unanimous support for risk-sharing of this nature.

Corporate funding conditions have tightened, particularly for higher-risk borrowers

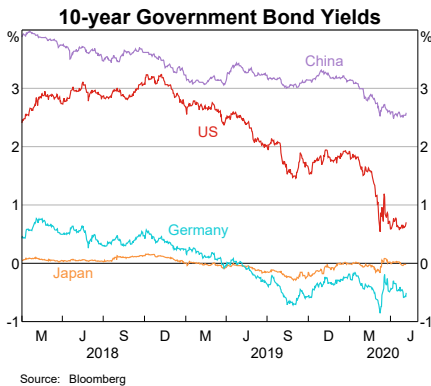
Non-financial corporations experienced a particularly sharp tightening in financial conditions in March as investors grew concerned about the ability of firms to continue to service or roll over debt. Corporate borrowing costs increased sharply and, for a period, lower-quality borrowers were generally unable to issue new debt (Graph 2.6). Companies facing large reductions in income, high fixed costs, and/or high degrees of leverage were most affected. At the same time, many corporations drew on pre-existing credit lines as a source of funding. Higher-quality borrowers issued record volumes of debt, despite increased borrowing costs (Graph 2.7).

Funding conditions for corporations have since eased somewhat following policy responses by central banks and governments, and as the growth in new COVID-19 cases has slowed. Policy measures have included new or expanded corporate bond purchase programs

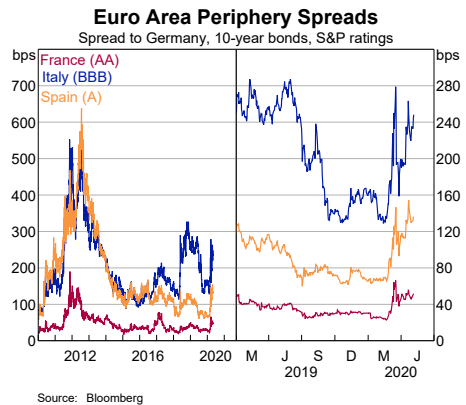
Graph 2.3



Graph 2.4



Graph 2.5



in primary and secondary markets, loans to support issuance in corporate bond or securitisation markets, government-guaranteed loans, and measures to support credit to small- and medium-sized businesses through the banking sector (see 'Box A: Term Funding Schemes'). Some central banks are also purchasing debt securities issued by state and local governments to alleviate dysfunction and/or lower borrowing costs in those markets. In the United States, the Fed has announced its purchases will also include exchange traded funds (ETFs) that hold corporate debt, including some sub-investment grade debt. The Fed will also purchase sub-investment grade debt that was previously rated investment grade (so-called 'fallen angels') and some syndicated loans. Following the Fed's announcement, flows into

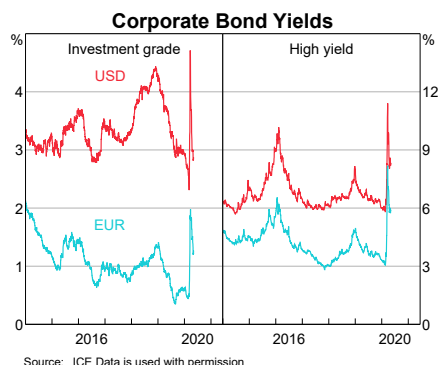
corporate bond ETFs have increased and primary issuance conditions for sub-investment grade borrowers have improved. In the euro area, the ECB has announced that fallen angels will remain eligible collateral for the ECB's open market operations. This is expected to help ensure that banks have access to sufficient liquidity, and prevent fire sales of corporate bonds (and a resulting widening in spreads) in the event of widespread downgrades.

Equity prices have rebounded somewhat but remain volatile

Equity prices declined by more than 30 per cent in late February and March amid extreme volatility (Table 2.2). Large increases in COVID-19 infections and strict containment measures imposed by governments to control the spread of the virus prompted substantial downward revisions to expected corporate earnings. Heightened risk aversion and demand for cash contributed to investors reallocating portfolios away from risky assets. Sharp falls in oil and other commodity prices weighed heavily on equity prices in some sectors.

In the United States, large and rapid declines in equity prices triggered circuit-breakers to temporarily halt trading on a number of occasions. Volatility rose to levels not seen since the global financial crisis, with equity markets recording some of their biggest daily moves in history (Graph 2.8). The S&P 500 index recorded a 12 per cent fall on 16 March – the largest daily decline since 1987 – in addition to several daily rebounds of almost 10 per cent. Similar outsized moves were seen in many advanced and emerging market economies. For instance in Europe, the Euro Stoxx index recorded the largest daily decline in its history. In response to the very high volatility, financial regulators and market operators in the United Kingdom, Europe, and some emerging markets imposed temporary bans on short selling.

Graph 2.6



Graph 2.7

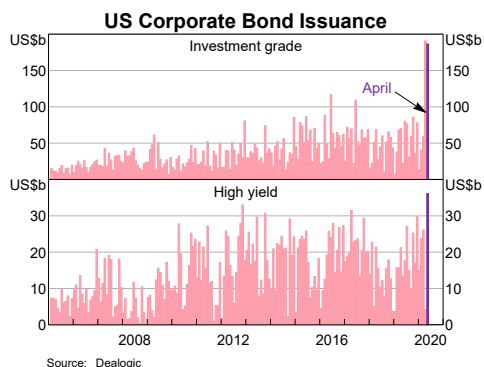


Table 2.2: Changes in International Share Prices

Per cent, since February

	Peak to trough	Trough to current	Peak to current	Largest daily decrease	Largest daily increase
United States	-34	27	-16	-12	9
Euro area	-38	20	-25	-12	9
United Kingdom	-34	17	-22	-11	9
Japan	-31	19	-18	-6	8
Australia	-37	18	-25	-10	7
China	-16	11	-7	-8	3
World	-33	23	-17	-9	8

Source: Bloomberg

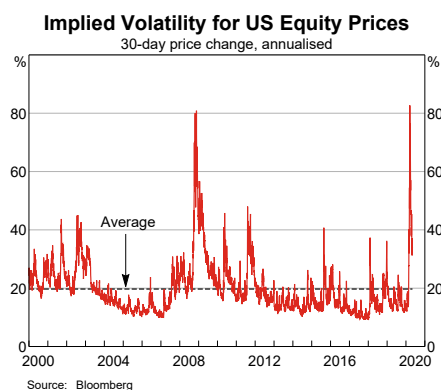
While equity prices overall have since increased significantly from their recent lows, they remain well below the earlier highs recorded in February (Graph 2.9). The partial recovery in equity prices is consistent with expectations of a strong rebound in economic activity, in line with consensus estimates for corporate profits in 2021. Volatility has eased but remains elevated by historical standards.

Bank profitability will decline but there have been few signs of systemic stress in banking systems

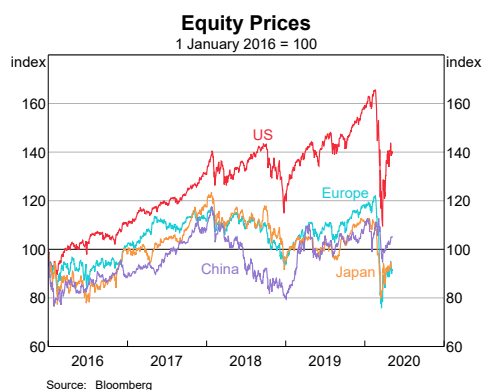
Bank equity prices have declined sharply, reflecting expectations of rising loan losses and lower revenues more generally (Graph 2.10). US

banks' provisions for future loan losses have increased significantly to levels last seen in 2009, which has contributed to sharp falls in March quarter earnings. Bank profits in advanced economies are also expected to be affected by weaker economic conditions eventually weighing on demand for credit and a prolonged period of low interest rates compressing net interest margins. In some countries, declines in equity prices could reflect expectations of capital raisings that will dilute the stakes of existing shareholders. This is particularly relevant in Europe, where many banks remain vulnerable given weak profitability over a number of years and the fact that banks hold significant amounts of European sovereign debt.

Graph 2.8



Graph 2.9



In contrast to equity prices, credit spreads on bank debt have not widened by more than comparable non-bank securities, and large banks have continued to issue unsecured bonds at modest yields. This suggests that investors are not anticipating solvency problems for large banks in advanced economies. It is consistent with the fact that banks generally entered this crisis with robust capital and liquidity buffers and are likely to benefit from policy support if needed given their critical economic role.

Bank lending in some countries has increased notably in recent months, which has helped to offset some of the recent tightening in funding conditions for corporations (Graph 2.11). This partly reflects increased lending arising from corporations drawing down on standing credit lines. Additionally, fiscal support for businesses (especially small- and medium-sized enterprises) has been channelled through banks in some countries. Policies implemented by central banks and other regulators, including new term funding facilities, regulatory relief and lowering of countercyclical capital buffers, have sought to ensure that these channels remain open and supportive of financial conditions. In order to preserve capital levels, and in recognition of the substantial public support being provided to banks, regulators in some jurisdictions have also placed limits on the ability of banks to distribute

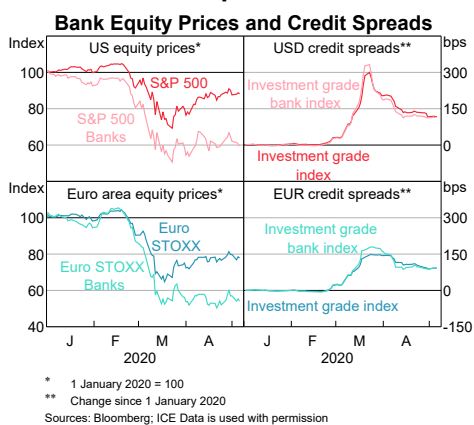
dividends, conduct share buy-backs and pay executive bonuses.

Conditions in short-term US dollar funding markets tightened sharply

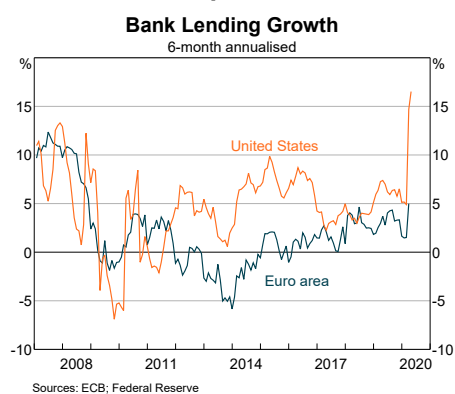
In March, funding in short-term US dollar money markets became much more expensive and/or difficult to obtain for many borrowers. That was most evident for instruments involving greater credit risk, such as unsecured commercial paper (CP), or that are issued at longer terms (Graph 2.12). In addition, US dollars became more expensive to borrow in the foreign exchange swap market, which is an important source of US dollar funding for non-US entities.

The tightening in US dollar funding conditions reflected a confluence of factors. First, demand for liquidity increased globally, both for precautionary purposes and to meet contractual obligations such as margin calls and redemptions. That included increased demand for US dollars, reflecting the large role the dollar plays in international trade and finance. At the same time, the supply of US dollars declined, particularly for terms beyond overnight, as lenders of US dollars sought to reduce their exposures or shore up their own liquidity needs. For instance, a spike in investor redemptions resulted in 'prime' US money market funds favouring financial CP with very short maturities

Graph 2.10



Graph 2.11



(one week or less) compared with longer-term CP issued by the same financial entities; this was one factor contributing to the sharp increase in three month US LIBOR rates. Finally, financial institutions were unable or unwilling to bridge these gaps in their capacity as intermediaries in markets, reflecting both regulatory constraints that limit the scope of banks to (profitably) expand balance sheets and increased difficulty in pricing risk amid heightened uncertainty.

In response, the Fed expanded the supply of liquidity via a range of operations. These included its open market operations and asset purchases, a new facility to help banks purchase assets sold by money market funds, and facilities to purchase CP to ensure that firms could continue to roll over their debt as it matured. In addition, the Fed improved access to US dollar liquidity by activating, expanding and lowering the cost of existing swap lines with central banks, introducing new swap lines with other central banks, and by introducing a new US dollar repo facility for other foreign monetary authorities.

These measures have helped to ease US dollar funding conditions, and the Fed has subsequently been able to decrease the size of its repo operations (Graph 2.13). The cost of

funding in US dollars in foreign exchange swap markets has also declined.

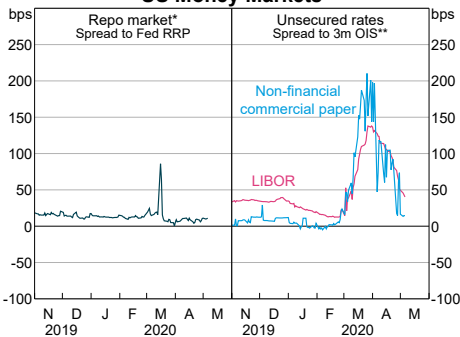
Foreign exchange markets experienced sharp movements

Foreign exchange markets were highly volatile in March, with spot and swap markets experiencing periods of dysfunction. From around the start of March through to mid March, the US dollar appreciated rapidly alongside a sharp rise in uncertainty and increased demand for US dollar liquidity (Graph 2.14). Significant flows in foreign exchange markets accompanied large movements in underlying asset markets, alongside a deterioration in overall market functioning (see 'Box B: Recent Developments in Foreign Exchange Markets').

The exchange rates of both advanced and emerging economies depreciated against the US dollar over this period, with particularly large moves for those that have a significant exposure to commodity exports such as oil and gas (Graph 2.15). In particular, the Norwegian krone depreciated by more than exchange rates of other advanced economies reflecting its greater exposure to oil prices. A number of emerging market exchange rates also depreciated sharply reflecting a range of vulnerabilities that have become more apparent in the current environment (see below). In contrast, moves in

Graph 2.12

US Money Markets



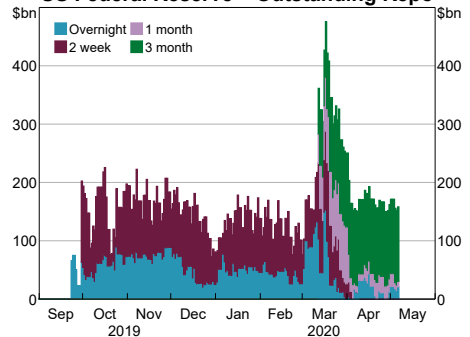
* General collateral overnight repo; spread to Fed's reverse repurchase facility (RRP)

** Overnight indexed swaps

Sources: Bloomberg; Refinitiv

Graph 2.13

US Federal Reserve – Outstanding Repo



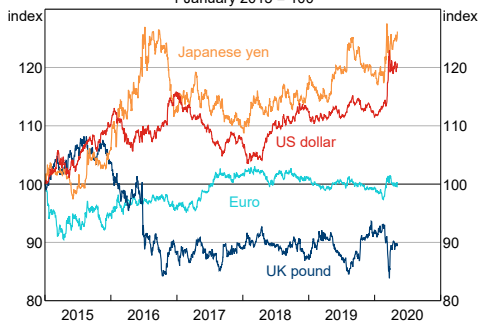
Source: Federal Reserve Bank of New York

the Japanese yen and Swiss franc were quite modest against the US dollar, and both have appreciated (as often occurs in periods of heightened risk aversion) on a nominal trade-weighted basis (TWI) since the start of March.

Since the introduction of large-scale monetary and fiscal policy measures, including policies to increase the supply of US dollars, strains in foreign exchange market functioning have eased somewhat and measures of volatility have declined. The exchange rates of advanced economies have appreciated against the US dollar and a number of emerging market exchange rates also appear to have stabilised, although most exchange rates still remain noticeably lower (vis-à-vis the US dollar) than at the start of the year.

Graph 2.14

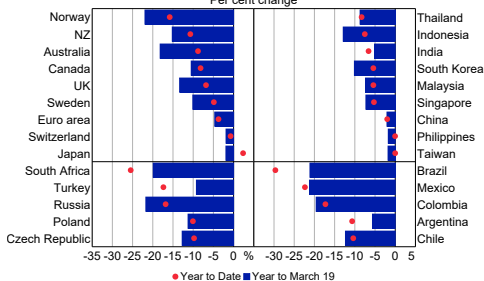
Nominal Trade-weighted Exchange Rates
1 January 2015 = 100



Sources: Bank of England; BIS; Bloomberg; Board of Governors of the Federal Reserve System

Graph 2.15

Currency Against US Dollar
Per cent change



Sources: Bloomberg; RBA

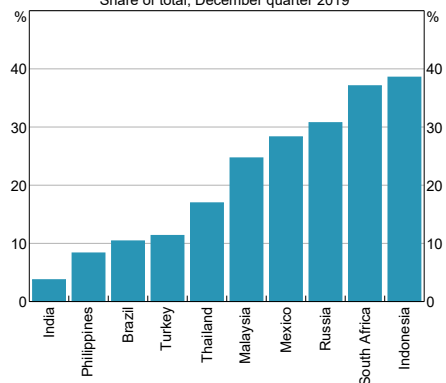
Some emerging market economies experienced a sudden outflow of foreign capital

Financial conditions in a wide range of emerging market economies (EMEs) tightened notably following the onset of the COVID-19 pandemic. Government bond yields rose significantly, equity prices declined, and exchange rates depreciated sharply alongside substantial portfolio outflows from equities and bonds.

The tightening in conditions partly reflected broader concerns about the impact of COVID-19 on global economic growth, as well as concerns that some EMEs may experience more severe health and economic impacts from the virus (see ‘International Economic Conditions’ chapter). For commodity exporters, a decline in their terms of trade also contributed to the tightening. In addition, some EMEs were particularly vulnerable to the tightening in global financial conditions that occurred in March, given their high levels of external financing and/or foreign currency debt, much of which is unhedged (Graph 2.16; Graph 2.17). Concerns remain about the ability of some countries to finance growing fiscal deficits should capital flows remain volatile.

Graph 2.16

Foreign Ownership of Public Debt*
Share of total; December quarter 2019



* Central government debt securities denominated in local currencies
Sources: Arslanalp and Tsuda (2014); IMF

Financial market conditions in emerging Asia have generally been more resilient than in other regions, although the experience has varied somewhat across individual economies (Graph 2.18). In particular, the depreciation of exchange rates has been more modest in Asia than in other emerging markets. This is likely to reflect a number of factors, including the relatively high buffers of foreign exchange reserves generally held by Asian economies, low rates of foreign ownership of local currency debt, more fiscal space and faster underlying economic growth.

Recently, there has been some improvement in conditions across emerging financial markets underpinned by significant monetary and fiscal stimulus in advanced economies. Also, emerging market central banks have reduced policy rates, intervened in foreign exchange markets to help stabilise their exchange rates and conducted asset purchases. Despite this, the exchange rates of more vulnerable EMEs, such as Argentina, Brazil, Turkey and South Africa, have seen further depreciations against the US dollar.

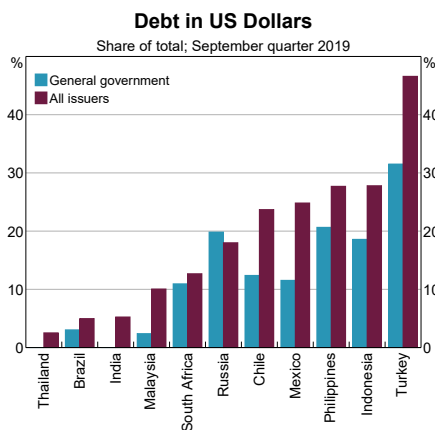
Bilateral and multilateral measures have been implemented to support EMEs and further international support is likely to be required. To improve access to US dollar liquidity, the Fed has

expanded its US dollar swap line facilities to include a number of emerging market central banks (including Brazil and Mexico), and introduced a repurchase facility for others where US Treasury holdings can be exchanged for US dollars on a rolling overnight basis. In addition, over 100 EMEs and low income countries are engaged in discussions with international organisations about accessing emergency financing facilities. The International Monetary Fund has sought to increase the size of its existing emergency lending facilities and established a new Short-term Liquidity Line. The G20 has also endorsed a temporary suspension of debt service payments for the poorest countries and called on private sector creditors to participate in the initiative.

Financial conditions in China have remained broadly accommodative

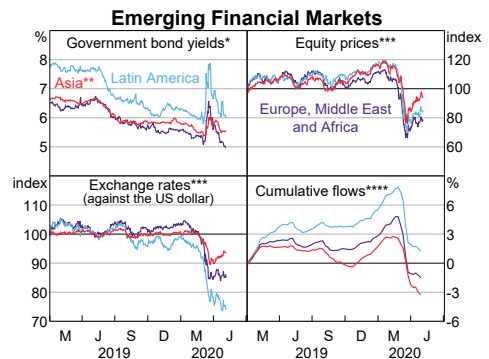
Financial conditions have been relatively resilient in China in recent months, notwithstanding a temporary tightening during the early stages of the COVID-19 outbreak (Graph 2.19). Sovereign bond yields have fallen notably and money market conditions have been benign. Credit has continued to flow, with growth in total social financing picking up in March as bank lending

Graph 2.17



Source: BIS

Graph 2.18



* Local currency bonds, weighted by market value
 ** Excluding China
 *** 1 Jan 2019 = 100
 **** Per cent of assets under management; includes flows to bond and equity funds
 Sources: Bloomberg; EPFR Global; IMF; JPMorgan; MSCI; RBA

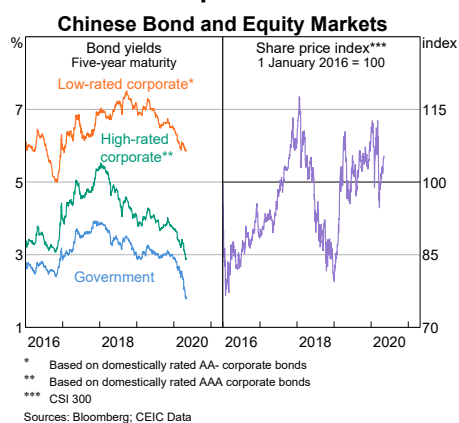
to businesses accelerated and corporate bond issuance rose (Graph 2.20). The price of credit has also been relatively stable, even for riskier borrowers. Missed bond repayments have remained low as a share of outstanding issuance. This resilience suggests that the policies enacted during the early stages of the outbreak to avoid a sharp tightening in credit conditions have been fairly successful so far. The fact that the number of new COVID-19 cases in China has fallen to very low levels is likely to have also supported conditions.

More recently, the balance of policy has shifted from containment of the virus to supporting economic growth. Reflecting this, the People's

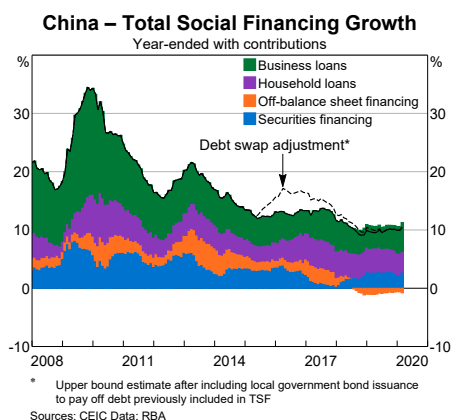
Bank of China (PBC) has expanded existing policies and introduced a raft of new measures to support the flow of credit, especially to smaller firms. For instance, the PBC announced targeted reductions in the reserve requirement ratio, cut the interest rate offered on excess reserves and reduced the interest rates on its short- and medium-term lending operations. Subsequently, the one- and five-year Loan Prime Rates, the reference rates for lending by Chinese banks, declined by 20 and 10 basis points respectively in April (Graph 2.21). In addition, the State Council announced that the PBC's existing re-lending facility would be increased by CNY1 trillion (around 1 per cent of GDP; this facility supplies funds to banks to provide concessional loans to affected businesses). The State Council also said it would support financial institutions to issue CNY300 billion (around 0.3 per cent of GDP) of bonds to provide credit for smaller firms.

The Chinese renminbi has remained fairly stable over the past few months, having depreciated only slightly against the US dollar. This pattern of renminbi stability was also observed in the crises of 2008 and the late 1990s. The exchange rate appears to have been supported by the PBC via its setting of the daily fixing rate and sales of foreign exchange reserves (though the stock of reserves remain around US\$3 trillion). The

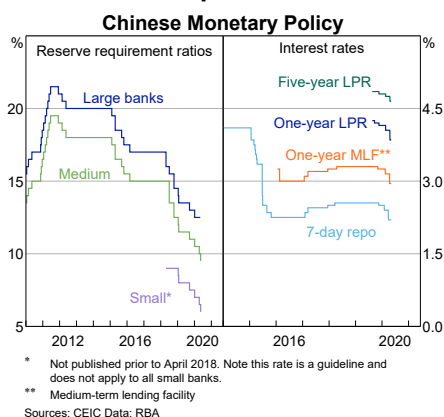
Graph 2.19



Graph 2.20



Graph 2.21



resumption of more balanced capital flows appears to have also contributed.

The Australian dollar depreciated sharply to its lowest level since the early 2000s

The Australian dollar depreciated sharply through to mid March, reaching its lowest level since the early 2000s (Graph 2.22). The depreciation was broad based, but was particularly noticeable against the US dollar, at one point depreciating by about 15 per cent since the previous *Statement* and reaching an intraday low of about US\$0.55 (Graph 2.23). Since then, the Australian dollar has appreciated by more than other advanced economy exchange rates and is back up to around \$US0.64. Even so, the Australian dollar has depreciated by 9 per cent over the year to date against the US dollar, and by 6 per cent on a TWI basis.

In early March, the broad-based deterioration in foreign exchange market functioning extended to the market for Australian dollars. Market conditions have since become more orderly, but remain more strained than in the period prior to the pandemic (see ‘Box B: Recent Developments in Foreign Exchange Markets’).

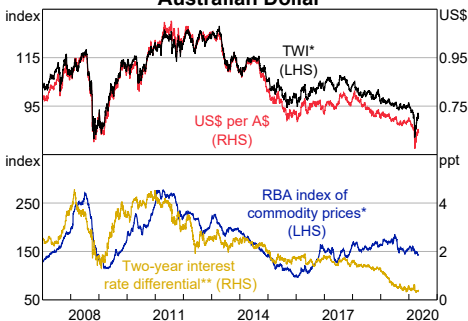
The recent sharp moves in the Australian dollar occurred alongside an increase and subsequent

easing in financial market volatility and risk aversion globally. These factors have been associated with the fall and then rebound in the value of the Australian dollar at a time when changes in other longer-term influences on the value of the exchange rate – the decline in Australia’s interest rate differential with other major advanced economies and in the prices of Australia’s major export commodities – have been modest by comparison.

In response to tightening conditions in US dollar funding markets, the Reserve Bank and the Fed established a temporary reciprocal swap line of \$US60 billion. Under this agreement, US dollars are made available to Australian market participants through a weekly auction conducted by the Reserve Bank, where bidders post eligible Australian dollar-denominated securities to the Reserve Bank in return. Auctions for US dollars have attracted relatively little interest so far, consistent with modest demand for US dollar funding by Australian entities. ✖

Graph 2.22

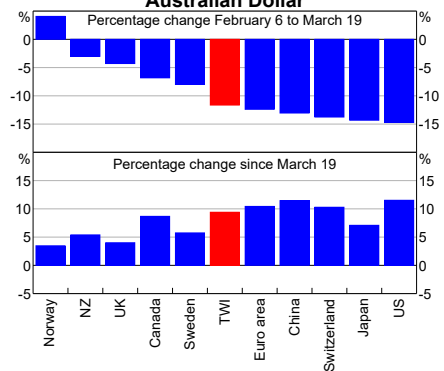
Australian Dollar



* Indexed to 1 January 2016 = 100
 ** Spread to equally weighted nominal yields in Germany, Japan, the United Kingdom and the United States
 Sources: Bloomberg; RBA

Graph 2.23

Australian Dollar



Sources: Bloomberg; RBA