EXECUTIVE BOARD MEETING

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February 7, 2020

To: Members of the Executive Board

From: The Secretary

Subject: **Australia—Staff Report for the 2019 Article IV Consultation**

Board Action:	Executive Directors' **consideration** (Formal)
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***Unless an objection from the authorities is received prior to the conclusion of the Board's consideration, the document will be published.**

INTERNATIONAL MONETARY FUND

AUSTRALIA

STAFF REPORT FOR THE 2019 ARTICLE IV CONSULTATION

February 6, 2020

KEY ISSUES

Context. Despite sound macroeconomic fundamentals and policy management, growth remains below potential and inflation is slightly below its target range. While Australia has not experienced a major impact from declining global trade in the wake of the U.S.-China tensions, subdued global growth prospects pose a challenge, especially given Australia's significant exposure to China. Productivity growth has slowed down.

Outlook and risks. Growth is projected to recover gradually in the near term, supported by monetary policy easing, tax cuts, and the recovery of housing markets. Nonetheless, inflation is forecast to remain slightly below the target range until 2021 due to persistent economic slack. Downside risks, including a renewed escalation of the China-U.S. tensions and weaker private consumption, remain elevated and have increased recently due to the widespread bushfires and the coronavirus outbreak. On the upside, looser financial conditions could re-accelerate asset-price inflation, boosting private consumption but also adding to medium-term vulnerabilities.

Policy recommendations.

- **The macroeconomic policy mix should remain accommodative.** Dependent on incoming data, continued monetary policy easing may be helpful to support demand and inflation expectations. Fiscal policy is appropriately expansionary in FY2019/20 but the planned contraction in FY2020/21, driven by lower state-level infrastructure spending, should be avoided. The authorities should be ready for a coordinated response if downside risks materialize.

- **Macroprudential policy should stand ready to tighten in case of renewed overheating of housing markets.** While currently set appropriately, targeted macroprudential policies could become warranted if vulnerabilities reemerge in a context of loose macroeconomic policies.

- **Australia should step up structural reforms to support strong and inclusive growth.** Critical areas include fostering business investment and innovation, promoting full-time female employment, reducing youth underemployment, and pursuing tax reforms to shift from direct to indirect taxes. Developing an ambitious, national, integrated approach to energy and climate change policies would help reduce policy uncertainty and catalyze investment. Housing supply reform remains key to support affordability.

Approved By
Jonathan D. Ostry (APD) and Rupa Duttagupta (SPR)

Discussions were held in Canberra, Melbourne, and Sydney during December 5-13, 2019. The staff team comprised Harald Finger (head), Dirk Muir, Masahiro Nozaki, Yu Ching Wong, and Sarah Zhou (all APD), with Yosuke Kido (APD) from HQ. Nigel Ray and Laura Johnson (both OED) joined the discussions. Ioana Hussiada and Nadine Dubost (both APD) assisted from HQ.

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CONTEXT

1. Australia is still recovering from commodity and asset price cycles in the 2010s. Macroeconomic adjustment following the 2012-14 mining boom has been prolonged, with mining investment falling through mid-2019. House prices rose rapidly from 2012 to mid-2017 and declined through mid-2019. The economy remained resilient during this period, supported by sound macroeconomic management anchored on inflation targeting, prudent fiscal policy, and exchange rate flexibility. Nevertheless, growth remains below potential and inflation has undershot the target range.

2. While macroeconomic fundamentals are strong, some structural vulnerabilities remain. Supported by high population and employment growth, the economy has avoided recessions since 1991. Nonetheless, labor productivity growth has slowed down in the wake of weakening business investment and R&D spending. The banking sector is adequately capitalized and sound but in part dependent on wholesale funding and highly exposed to residential mortgage lending. The 2012-17 housing boom resulted in household debt as high as 185 percent of disposable income. Australia has yet to develop a national, integrated approach to climate change mitigation.

3. Australia faces headwinds from subdued global economic conditions. While it has largely avoided global trade disruptions originating from the U.S.-China tensions, subdued global growth prospects and deteriorating business confidence pose a challenge for Australia's recovery, especially given its high exposure to China.

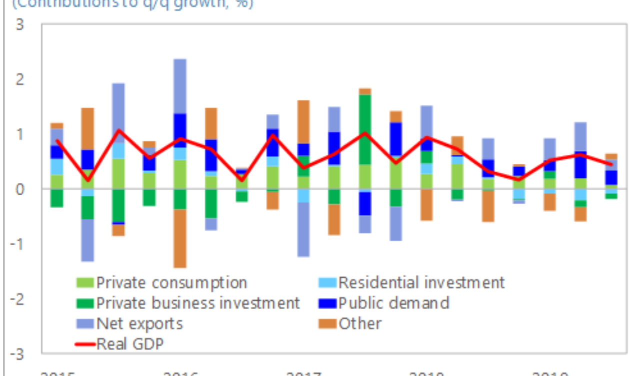
A FRAGILE RECOVERY, SUBJECT TO DOWNSIDE RISKS

A. Recent Developments

4. Growth has recovered gradually but remained below trend in 2019, while inflation dipped below the Reserve Bank of Australia (RBA)'s target range.

- **Demand.** GDP growth recovered to 2.1 percent (q/q, saar) on average in 2019Q1-Q3 from the lows in the second half of 2018. This was supported by strong public demand, reflecting a pickup in infrastructure spending and the rollout of the National Disability Insurance Scheme (NDIS). Net exports also contributed substantially (¶5). However, domestic private demand has remained weak, with negative wealth effects from the housing market downturn through mid-2019 likely

Growth Has Recovered from Lows in 2018H2
(Contributions to q/q growth, %)

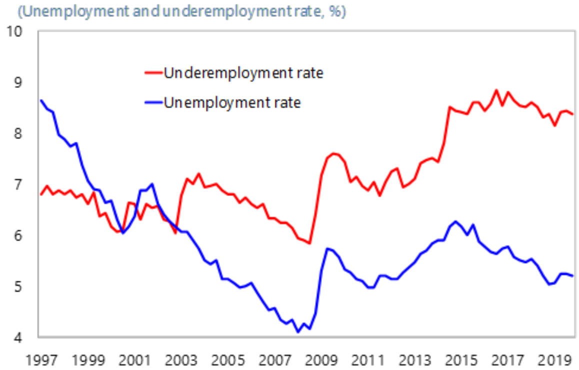


Sources: ABS and Haver Analytics.

weighing on private consumption. While mining investment started bottoming out after a long period of adjustment, it failed to offset a contraction in residential investment since late 2018 and weakening non-mining business investment. The ongoing drought and unprecedented bushfires are negatively affecting economic activity, while effects on growth have been limited so far (Box 1).

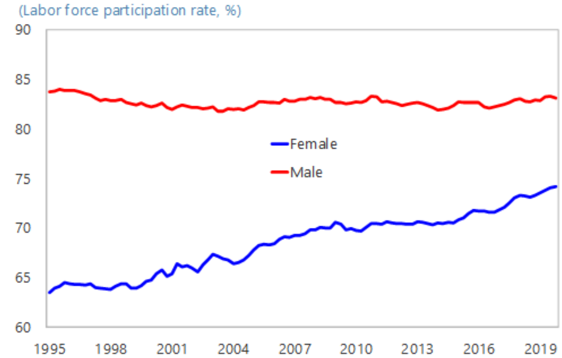
- **Labor markets.** The unemployment rate has declined to 5.1 percent in December 2019, still exceeding the NAIRU estimated at 4.8 percent. The underemployment rate remained high, suggesting persistent labor market slack. Wage growth remained slow at 2.2 percent (y/y) in 2019Q3 in light of persistent underemployment, sluggish labor productivity growth, and prolonged adjustment after the mining investment boom (Box 2). Employment continued to grow strongly at 2.3 percent (y/y) in 2019 owing to rising female and older-adult labor force participation, but job vacancies and advertisements started to ease, indicating cooling momentum in labor demand.

Labor Market Slack Persists
(Unemployment and underemployment rate, %)



Source: Haver Analytics.

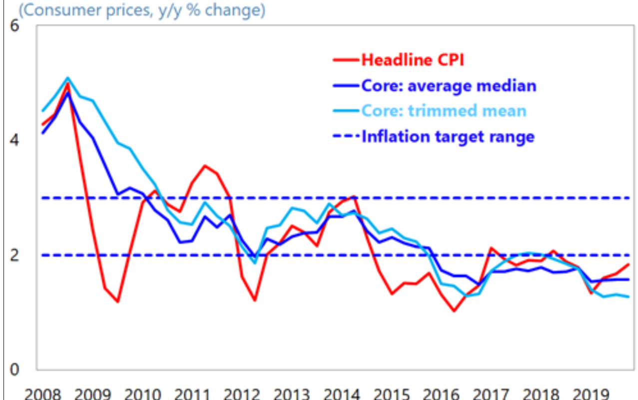
Female Labor Force Participation Is Rising
(Labor force participation rate, %)



Source: Haver Analytics.

- **Prices.** Headline and underlying inflation dropped to around 1¾ percent (y/y) in 2019Q2-Q4, below the RBA's target range of 2-3 percent. This was driven by subdued price increases in housing-related items (rents and new dwellings) and utilities, which more than offset a small pickup in tradable inflation due to exchange rate depreciation. Prices for fresh food items rose in 2019Q4, likely reflecting the impact of the drought on supply.

Inflation Is Slightly Below the Target Range
(Consumer prices, y/y % change)

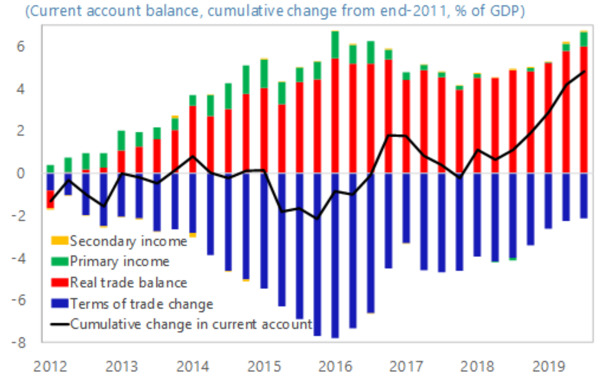


Sources: Haver Analytics and IMF staff calculations.

5. **The external position is broadly in line with fundamentals and desired policies.** The current account (CA) has improved since mid-2018 and is expected to have recorded a surplus of 0.4 percent of GDP in 2019. This reflects a temporary surge in iron ore prices, depreciation of the

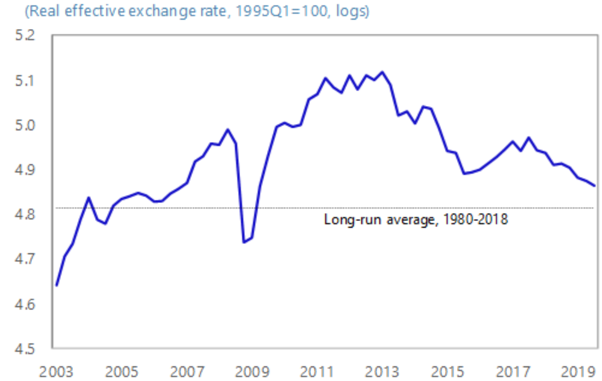
Australian dollar driven by higher U.S. interest rates, continued strong growth in LNG exports, and a contraction in imports reflecting weak domestic demand. The preliminary CA gap for 2019 is estimated at 0.3 percent of GDP, suggesting that the external position remains broadly in line with fundamentals (Annex I). The CA balance is projected to post a deficit of 0.4 percent of GDP in 2020, as the terms-of-trade surge unwinds.

The Current Account Has Markedly Improved
(Current account balance, cumulative change from end-2011, % of GDP)



Sources: Haver Analytics and IMF staff calculations.

The Australian Dollar Has Depreciated in Real Terms
(Real effective exchange rate, 1995Q1=100, logs)



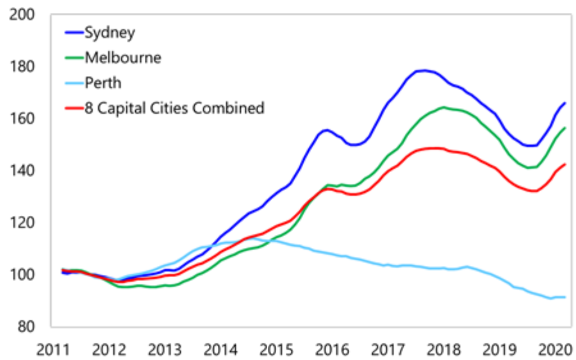
Sources: Haver Analytics and IMF staff calculations.

6. **Housing markets have begun to tighten again.** Nationwide housing prices in December 2019 posted an increase of about 8 percent from their trough in June 2019 but remained about 4 percent below their peak in September 2017. The rise in housing demand and prices was supported by the resolution of uncertainty regarding tax incentives,[1] the Australian Prudential Regulation Authority (APRA)'s recalibration of the safety margin for banks' serviceability assessments which softens borrowing constraints,[2] and interest rate cuts (¶9). However, home sales in December were still about 19 percent below their 2017 average and housing credit growth continued to slow to 3.1 percent (y/y) in December. On the supply side, past declines in residential housing approvals suggest a continuing decline in residential construction, which, in the context of normalizing demand, could indicate upside risks to prices (Figure 3).

[1] During the campaign leading up to the May 2019 Commonwealth election, the opposition Labor Party had pledged to reduce tax incentives for residential real estate investment.

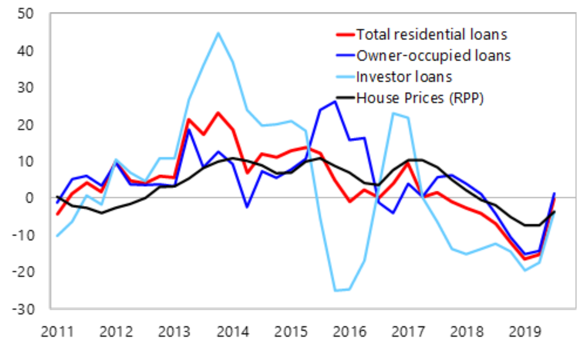
[2] Since July 2019, APRA has removed the requirement for residential mortgage serviceability to be evaluated with a minimum interest rate of at least 7 percent but raised the interest rate buffer over the loan's interest rate to at least 250 basis points from 200 basis points, bringing the effective rate for such evaluations to about 5.5 percent currently.

Residential Property Prices Are Rising Again
(Residential property prices, 2011=100)



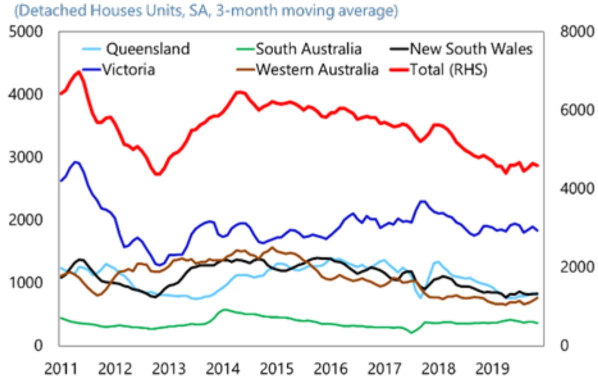
Sources: CoreLogic and IMF staff calculations.

New Housing Loan Approvals Have Stabilized
(New housing loan approvals by ADIs, y/y % change)



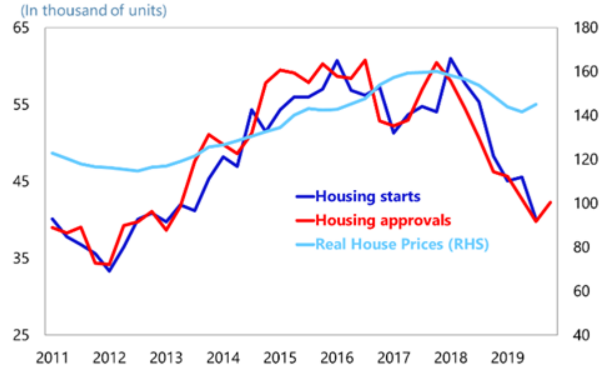
Sources: APRA and Haver Analytics.

New Home Sales Are Beginning to Recover
(Detached Houses Units, SA, 3-month moving average)



Sources: Housing Industry Association and Haver Analytics.

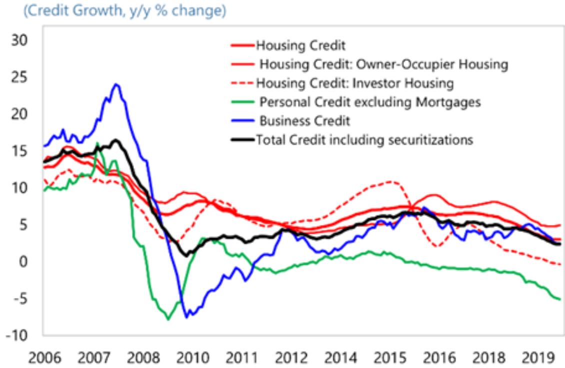
Housing Approvals Have Stablized
(In thousand of units)



Source: Haver Analytics.

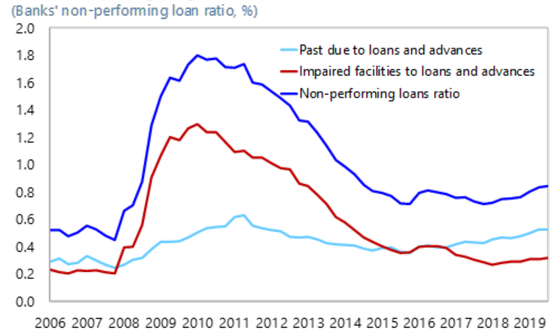
7. Australian banks are adequately capitalized and profitable, though dependence on wholesale funding remains a vulnerability. Major banks' common equity Tier 1 capital ratio averaged 11 percent in September 2019, above the 10.5 percent "unquestionably strong" threshold required by January 1, 2020. That said, bank's earnings have declined amid slower credit growth and increased remediation and compliance costs. The non-performing loan ratio has crept up due to higher housing loans in arrears but remained low at 1 percent in September 2019. Banks' reliance on offshore wholesale funding, albeit declining, remains high, accounting for about 20 percent of banks' total funding (Figures 6-7).

Credit Growth Has Continued to Slow
(Credit Growth, y/y % change)



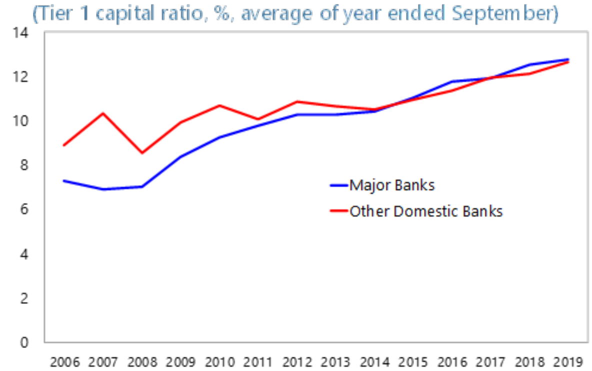
Source: Haver Analytics.

NPLs Have Crept Up but Remain Low 1/
(Banks' non-performing loan ratio, %)



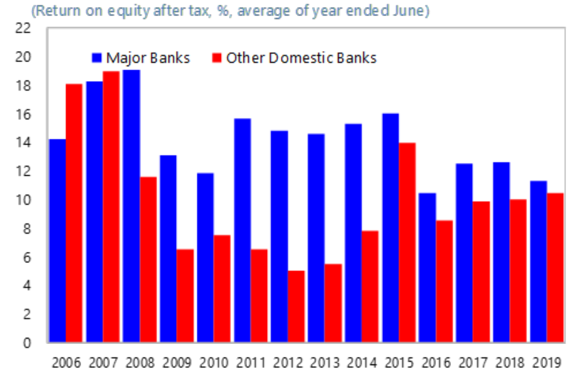
Sources: APRA and IMF staff calculations.
1/ Domestic books.

Banks Are Well Capitalized
(Tier 1 capital ratio, %, average of year ended September)



Sources: APRA and IMF staff calculations.

Banks' Profitability Has Declined
(Return on equity after tax, %, average of year ended June)

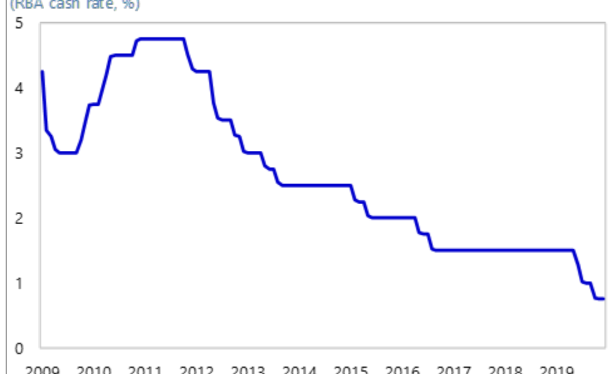


Sources: APRA and IMF staff calculations.

8. The fiscal outturn for FY2018/19 was tighter than expected while budgets for FY2019/20 are more expansionary.[3] In FY2018/19, revenues were stronger than forecast, led by positive terms-of-trade effects on corporate profits and stronger payroll taxes for the states.[4] Expenditures were roughly in line with FY2018/19 expectations although infrastructure investment was weaker than expected because of capacity constraints in the construction industry. FY2019/20 Commonwealth and state budgets imply a fiscal impulse of 0.2 percent of GDP, driven by higher infrastructure investment and personal income tax (PIT) reductions, while the combined overall deficit remains contained at 1 percent of GDP.

9. Monetary policy has eased since mid-2019. The RBA cut the policy rate from 1.5 percent to 0.75 percent in increments in June, July, and October 2019, because of weaker-than-expected inflation and wage outcomes. It has indicated an accommodative bias, highlighting the need for an extended period of low interest rates to reach full employment and the inflation target range. Domestic financial market conditions have loosened, with the policy rate cuts largely having passed through to banks' funding, deposit, and mortgage lending rates, with long-term treasury bond yields declining to historic lows. Despite the monetary easing, business credit growth has remained subdued, reflecting the impact of policy uncertainty on business investment (Annex II) along with monetary policy lags.

The RBA Cut the Policy Rate Three Times in 2019
(RBA cash rate, %)



Source: Haver Analytics.

[3] Australia's fiscal year runs from July to June.

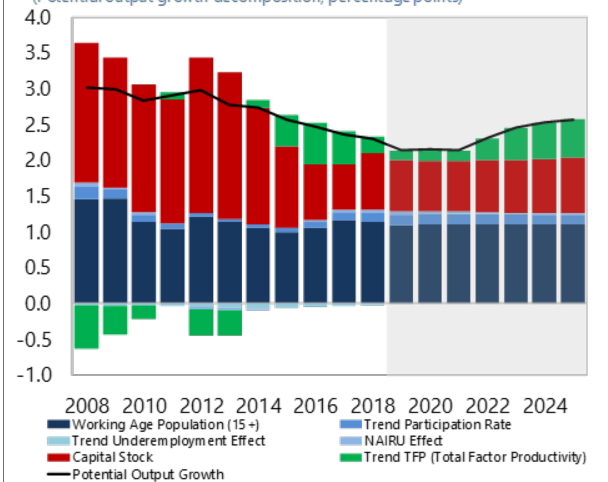
[4] "States" refers to both states and territories.

B. Outlook

10. Growth should continue to recover gradually, but it will take time for the economy to return to potential and restore inflation to within the target range.

- Growth is projected to recover from 1.8 percent in 2019 to 2 percent in 2020. Private domestic demand is expected to recover slowly, supported by monetary policy easing and the PIT cuts. In addition, the house price recovery will likely reduce the drag on consumption from earlier negative wealth effects. An incipient recovery in mining investment is also expected to contribute to growth. However, residential investment continues to be a drag on growth, and non-mining business investment is expected to take longer to recover, given continued global policy uncertainty.[5] Net exports will contribute less to growth, given the completion of mining export ramp-ups, weakening demand from China, continued global policy uncertainty, the impact of the drought and bushfires on agriculture exports, and the (so far estimated to be limited) effects of the recent coronavirus outbreak. Over the medium term, growth is forecast to reach staff's estimate of potential growth of about 2½ percent, which incorporates a small pickup in total factor productivity growth due to progress in infrastructure development and structural reforms (see below).

Weak Near-Term TFP Drives Sluggish Potential Growth
(Potential output growth decomposition, percentage points)



Sources: ABS, Authorities' data, IMF staff calculations

- Inflation is forecast to stay below the target range until 2021, with a negative output gap (projected at -1.0 percent of GDP for 2020) and labor market slack expected to unwind only gradually.

- Housing prices are expected to stabilize in real terms. Underlying demand for housing should remain strong because of robust population growth, the easing of financial conditions, and a small improvement in housing affordability. Household debt should stabilize at around 185 percent of disposable income in 2019 and decline gradually in the coming years because of moderate increases in disposable income.

[5] Global and domestic policy uncertainty are negatively associated with non-mining business investment in Australia (Annex II; and accompanying Selected Issues Paper "Why Has Business Investment Slowed Down in Australia?").

C. Risks

11. Risks to the outlook remain tilted to the downside (Annex III).

- **On the external side**, Australia is especially exposed to a deeper-than-expected downturn in China through exports of commodities and services (Annex IV). Spillovers from a renewed escalation of the China-U.S. tensions would depend on the reaction of commodity prices and China's policy response, especially on public investment, which is linked to China's imports of iron ore and coal.[6] An escalation could also worsen global business sentiment, discouraging investment in Australia. The Phase I trade deal between the United States and China, while helping to de-escalate global trade tensions, could imply downside risks for Australia's exports to China through trade diversion depending on how the managed trade component of the deal will be executed. More prolonged travel disruptions related to the coronavirus outbreak could lead to a stronger drag on tourism exports, while a pronounced decline in Chinese demand as result of the outbreak could affect Australian merchandise exports. A sharp tightening of global financial conditions could squeeze banks' wholesale funding, raising borrowing costs in the economy.

- **On the domestic side**, private consumption could weaken if a cooling of labor markets squeezed household income. Adverse weather conditions, including a worsening of the bushfires, could affect consumption and tourism in affected urban areas and rural agriculture. Looser financial conditions could re-accelerate asset-price inflation (including in housing; Box 3), boosting private consumption but also adding to medium-term vulnerabilities given high household debt levels.

D. Authorities' Views on Outlook and Risks

12. The authorities expected growth to continue to recover in the near term. As of early December, they projected growth to reach 2¼ percent in FY2019/20 and 2¾ percent in FY2020/21—higher than staff's projection. Household consumption was expected to pick up gradually in coming quarters, supported by the personal income tax relief, continued strong employment growth, recent monetary policy easing, and the recovery in the established housing market. Business investment was expected to contribute significantly to growth, reflecting strong corporate sector balance sheets and a pickup in mining investment to sustain, and in some cases expand, production levels. It was also expected that public demand would continue to support growth, reflecting the government's efforts to boost spending on education, healthcare, and infrastructure, along with the roll-out of the NDIS. With labor market slack gradually diminishing, headline and underlying inflation were expected to increase gradually toward the target range.

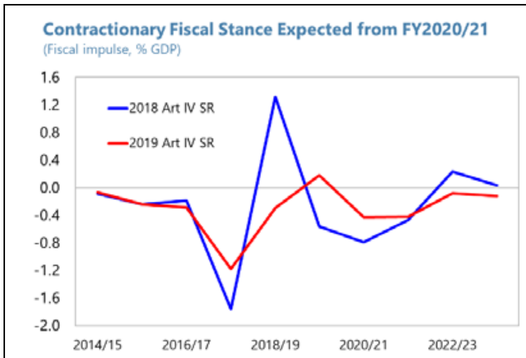
[6] Chinese stimulus measures have increasingly shifted from public investment to private consumption but Australian exports to China have remained resilient so far. For more on the impact of China-U.S. trade tensions, see Annex IV.

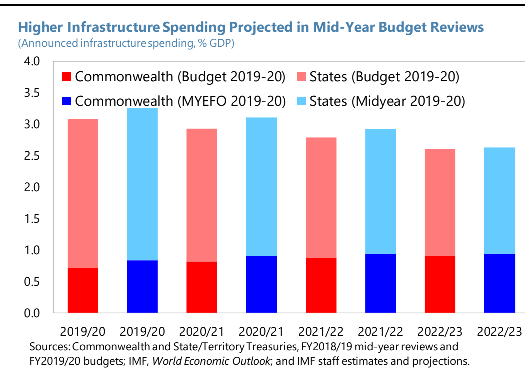
13. Risks to the outlook were seen as balanced, especially beyond the near term. In the near term, escalation or de-escalation of the U.S.-China trade and technology tensions remained a large uncertainty for global growth, which, if realized, could spill over to Australia. China's slowing growth trajectory and the interaction of Chinese domestic policies and external pressures also continued to pose risks to the demand for bulk commodities and Australia's terms of trade. The authorities also remained vigilant against the uncertain downside risks posed by the drought and the unprecedented bushfires, which were still unfolding, and by the recent coronavirus outbreak. More broadly, private consumption could continue to be weak should consumers opt to save gains in disposable income from high employment growth, personal income tax cuts, and lower mortgage costs. The expected turnaround in residential investment in late 2020 could be delayed due to longer-than-expected lead times for high-density dwelling construction. A rapid recovery in the housing market constituted a key upside risk, which could boost private consumption and residential investment beyond the near term but could also add to medium-term macrofinancial risks.

SUPPORTING THE RECOVERY WITH ACCOMODATIVE MACROECONOMIC POLICIES

Context

14. The consolidated fiscal stance is expansionary for FY2019/20 but expected to be contractionary in FY2020/21. Fiscal policy at the Commonwealth level will be supportive of demand in the near term via legislated PIT and CIT cuts and additional infrastructure spending (consistent with the Commonwealth government's commitment of raising its 10-year cumulative infrastructure spending from A$75 billion to A$100 billion), while laying out a clear consolidation path to achieve the medium-term fiscal goal (achieve budget surpluses over the cycle).[7] However, state-level fiscal policy is expected to be contractionary from FY2020/21, as infrastructure investment as a share of GDP is expected to decline.



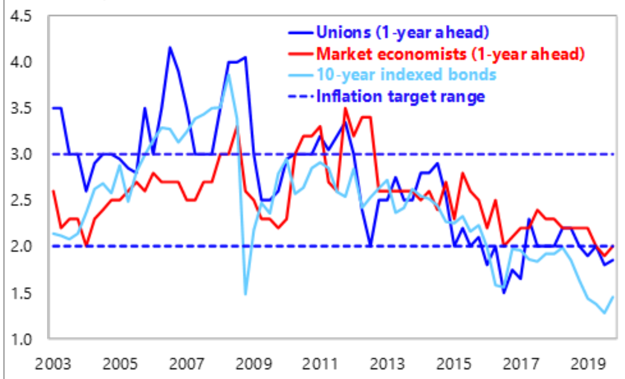


Sources: Commonwealth and State/Territory Treasuries, FY2019/20 budgets and mid-year reviews; IMF. *World Economic Outlook*; and IMF staff estimates and projections.

[7] For FY2019/20, the Commonwealth targets a return to a small surplus in its underlying cash balance, that is the fiscal balance (on a cash basis) excluding cash flow from investments in financial assets for policy purposes and covering future pension liabilities.

15. Monetary policy has been accommodative amid declining inflation expectations. Following the recent rate cuts, the real policy rate stands at almost -1 percent relative to estimates of the real neutral rate in the range of 1 to 2 percent. Market-based inflation expectations have dipped below 2 percent for the first time since 2016.

Expected Inflation Has Edged Below the Target Range
(Inflation expectations, %)



Source: RBA.

Staff's Views

16. The policy mix should remain accommodative. Below-potential growth, weakening inflation expectations, and continued global downside risks present an environment in which continued support from accommodative fiscal and monetary policies will be needed. In addition, the authorities should be ready to respond in case downside risks materialize, including through (i) additional fiscal policy stimulus to avoid over-burdening monetary policy; (ii) further monetary easing, likely including unconventional monetary policy (UMP) measures as the cash rate is close to the effective lower bound (ELB); and (iii) targeted macroprudential measures to arrest the buildup of any pockets of vulnerability from loose financial conditions in the context of UMP.

17. While the consolidated fiscal stance is appropriate for FY2019/20, the contractionary stance in FY2020/21 should be reconsidered. With sluggish private domestic demand, the planned, moderate fiscal expansion in FY2019/20 is appropriate. Spending should be flexible to accommodate any additional costs for response and recovery from the bushfires.[8] That said, the contractionary stance envisaged for FY2020/21 at the consolidated level should be reconsidered as it could put the incipient economic recovery at risk in an environment of still below-potential growth and continued labor market slack. The expected contraction is driven by a decline in state-level infrastructure investment as a share of GDP—a decline which continues in future years in most states. States should attempt to at least maintain their current level of infrastructure spending as a share of GDP.

18. Monetary policy should remain accommodative for the foreseeable future. The 75 basis point policy rate cuts during 2019 were appropriate in supporting domestic demand and inflation. That said, if incoming high-frequency data continue to lend support to the staff baseline scenario of below-potential growth and weakening inflation expectations in an environment of elevated downside risks, additional policy easing will be appropriate.

19. Both Commonwealth and state governments have substantial fiscal space and should be prepared to provide additional stimulus in case downside risks materialize. In this case, they

[8] Staff's baseline forecast incorporates the recently-announced A$2 billion funding for the National Bushfire Recovery Agency for FY2019/20-FY2021/22.

should be prepared to enact temporary measures, including by further buttressing their infrastructure pipelines to step up such investment further. Plans should internalize capacity constraints in the construction industry. In addition, the Commonwealth government could also consider measures such as tax breaks for SMEs, bonuses for retraining and education, or cash transfers to households. In case stimulus is necessary, the implementation of the budget repair (deliver a budget surplus of at least 1 percent of GDP as soon as possible) should be delayed, as permitted under the Commonwealth's medium-term fiscal strategy.

20. UMP could become necessary in case of downside risks. With the cash rate already close to the effective lower bound, UMP may be needed if downside risks materialize. In that case, UMP should focus on measures that affect the short end of the yield curve since Australia's prevalent debt instruments—mortgages and corporate lending—are anchored to variable short-term interest rates. Along with stronger forward guidance that could employ calendar- and/or outcome-based guidance on future policy actions, the main policy options would include quantitative easing through purchases of government debt securities, mildly negative policy rates, and targeted conditional lending operations to banks.

Authorities' Views

21. The Commonwealth government indicated that it would continue to pursue its planned near-term fiscal consolidation provided that its baseline growth forecasts came to pass. Given the expectation of growth returning to potential, the Commonwealth government did not see a case for near-term fiscal stimulus. The Commonwealth expected to deliver a surplus in its underlying cash balance, although it would not be at the expense of funding the recovery from the ongoing bushfires. States planned to continue consolidating their fiscal positions where possible as well.

22. Infrastructure spending was expected to remain strong. Both levels of government were concerned about risks of capacity constraints slowing the pace and increasing the cost of the ongoing infrastructure push. The authorities stressed that they were increasingly coordinating across Commonwealth, state and local levels for the most efficient outcomes, and were using public-private partnerships.

23. The RBA was prepared to provide more monetary stimulus if needed. It stressed that the impact on aggregate demand and inflation from last year's rate cuts had not yet fully materialized in light of the long and variable lags of monetary policy. In addition, the remaining space for conventional policy would likely provide sufficient scope for policy support as needed, with inflation expected to return to the target range by late 2021.

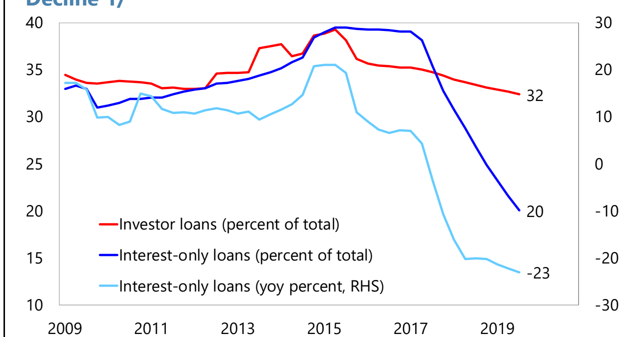
24. The authorities agreed that a severe negative shock might require a combined fiscal and monetary policy response. While a Commonwealth fiscal cash surplus was a priority, the authorities indicated that this could be reconsidered in a downside scenario that significantly changed baseline assumptions. They also noted that in such a downside scenario, UMP may be required as the RBA's cash rate is already close to the lower bound. The precise nature of the policy response would depend on the nature of the shock, although negative interest rates would be a very unlikely choice, as they were generally not seen as effective in Australia's context.

ENHANCING FINANCIAL SECTOR RESILIENCE

Context

25. Macroprudential policy, working in tandem with stricter enforcement of prudential regulations, has been effective in reducing riskier mortgage loans. The tightening of macroprudential policies over 2014-17 helped address high-risk mortgage lending (Annex VI). While regulations were subsequently eased during the housing market downturn, the loan structure has not deteriorated again, with the outstanding share of investor loans at 32 percent and that of interest-only loans at 20 percent, well below their peaks of close to 40 percent in around 2015. Loans with loan-to-value ratios (LVRs) above 80 percent have also stabilized at 23 percent in September 2019.

Share of Riskier Housing Loans Has Continued to Decline 1/

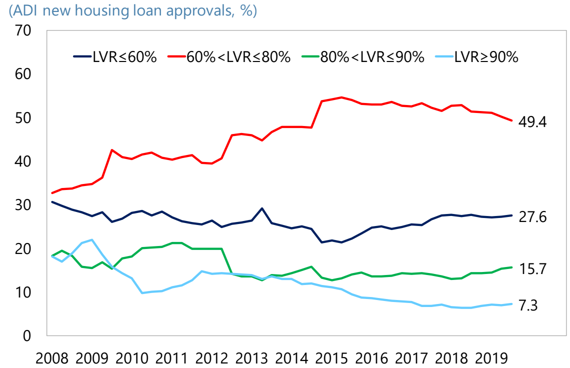


Sources: APRA and Haver Analytics.

1/ ADIs with greater than A$1 billion of term loans.

High-LVR New Housing Loans Are Edging Up

(ADI new housing loan approvals, %)

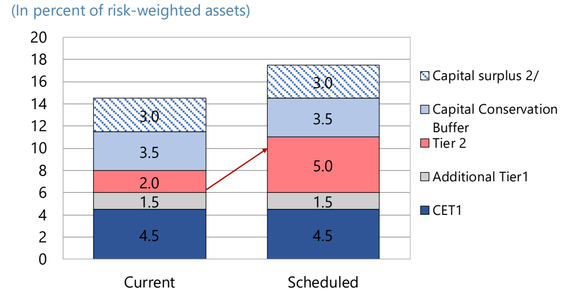


Sources: APRA and Haver Analytics.

26. The capital framework for banks has been further strengthened. APRA announced in July 2019 the requirement for domestic systemically-important banks (D-SIBs) to strengthen their total loss-absorbing capacity (TLAC) by lifting their total capital by 3 percentage points of risk-weighted assets by January 1, 2024. With this, the four major banks will be expected to maintain a total capital ratio of around 17½ percent. Increasing the TLAC will bolster the amount of private funds available to facilitate orderly resolution in the event of a bank failure and minimize taxpayer support. APRA has also proposed revisions to banks' capital framework which would ensure that capital held against assets is more sensitive to their riskiness and aims at reducing the concentration of residential mortgages on banks' balance sheets. It also

Higher D-SIB Regulatory Capital Requirement 1/

(In percent of risk-weighted assets)



Sources: APRA and IMF staff.

1/APRA expects the D-SIBs to increase TLAC through issuance of Tier 2 securities and maintains its overall long-term target to increase LAC by 4-5 percent.

2/ APRA expects these banks to continue to maintain a normal capital surplus in excess of regulatory captial requirements of about 3 percent.

indicated the likelihood of setting a countercyclical capital buffer (CCyB) at non-zero default level.

Staff's Views

27. Australian banks remain adequately capitalized and profitable, but vulnerable to high household debt, exposed to residential mortgage lending, and dependent on wholesale funding. While the risk structure of mortgage loans has significantly improved, financial vulnerabilities from high household debt remain a concern. A renewed overheating of housing markets and a fast pick-up in mortgage lending constitute increasing risks in a low-interest-rate environment. Staff supports the authorities' plan to further enhance banks' capital framework to strengthen their loss-absorbing capacity and resilience. In addition, notwithstanding some progress in reducing wholesale funding dependency, encouraging banks to further lengthen the maturity structure of their wholesale funding would help mitigate structural liquidity risks.

28. The macroprudential policy stance remains appropriate but should stand ready to tighten in case of increasing financial risks. The authorities should ensure that the easing of macroprudential thresholds on investors and interest-only loans and the recalibration of mortgage serviceability assessments will not lead to a renewed increase in high-risk residential mortgage lending as the housing market recovers. APRA should continue to expand and improve the readiness of the macroprudential toolkit to allow for more flexible and targeted responses to persistent and new systemic risks. This should include preparations, for potential use in the event of a rapid housing credit upswing, for introducing LVR and debt-to-income (DTI) limits, and possibly a sectoral CCyB targeting housing exposures. Staff concurs with the recommendation of the APRA Capability Review to further strengthen transparency and public communication on macroprudential policy.[9]

29. Strong reform efforts to bolster the resilience of the financial sector should continue. The authorities' commitment to implement the recommendations made by the Hayne Royal Commission (HRC) by end-2020 is welcome.[10] The comprehensive package of reforms aims to expand protection for consumers, enhance governance and accountability of financial institutions, and further strengthen the effectiveness of regulators to ensure trust in the financial system. Regulators have received more resources in the FY2019/20 budget, and legislation required to implement the HRC's recommendations is being prepared. The improvement in lending standards would further enhance financial sector resilience. At the same time, reducing the uncertainty in the enforcement of responsible lending obligations would prevent excessive risk aversion in the provision of credit. The authorities should implement the APRA Capability Review's recommendations to strengthen APRA's resources and operational flexibility. Staff welcomes APRA's

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[9] The APRA Capability Review, published in July 2019, provides a forward-looking assessment of APRA's ability to respond to an environment of growing complexity and emerging risks for APRA's regulated sectors. It was commissioned by the government as a response to recommendations made by the Hayne Royal Commission.

[10] Hayne Royal Commission (HRC) refers to the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry chaired by Kenneth Hayne.

commitment to strengthening and intensifying its regulatory approach to overseeing governance, culture, remuneration and accountability.

30. Building on the progress so far, continued implementation of the recommendations of the 2018 Financial Sector Assessment Program (FSAP) should remain a priority. Ongoing progress in implementing the 2018 FSAP recommendations is welcome (Annex VII). Strengthening systemic risk oversight of the financial sector and reinforcing financial crisis management arrangements should remain priorities. The authorities should complete the resolution policy framework, expedite the development of bank-specific resolution plans, and introduce statutory powers for bail-in.

31. Recent developments have underscored the need for strengthening the anti-money laundering and counter-terrorist financing (AML/CFT) frameworks. Recent high-profile money laundering cases have pointed to weaknesses in the AML/CFT regime. In line with the 2018 FSAP recommendations, the authorities should strengthen AML/CFT supervision by improving data collection and risk analysis, increasing oversight of control and compliance, and undertaking more formal enforcement action in the event of a breach. In addition, the coverage of the AML/CFT regime should expand swiftly to include all non-financial and business professionals, starting with those identified to present higher ML/FT risks. This would include real estate agents, lawyers, and trust and company service providers.

Authorities' Views

32. The authorities agreed that, while macroprudential policy was currently adequate, vigilance was required in light of a possible renewed housing surge. They pointed to their strong focus on buttressing systemically important banks' loss-absorbing capacity and their ongoing work to strengthen banks' capital framework more broadly. While they noted that banks extending the maturity of their foreign wholesale funding could reduce roll-over risks in the banking system, this needed to be balanced against difficulties in hedging the ensuing exchange rate risk for long maturities.

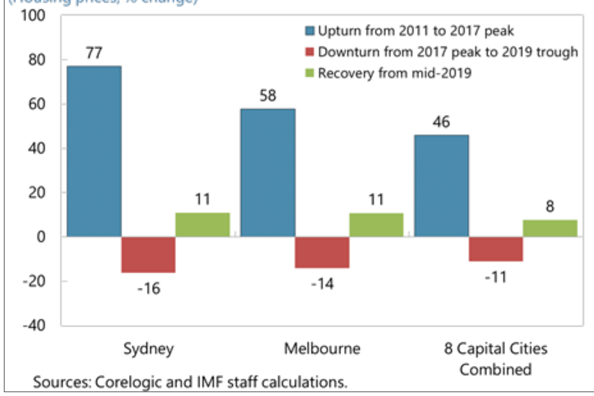
33. The authorities highlighted the progress achieved in implementing the 2018 FSAP key recommendations. Banking and insurance supervision is being strengthened through the introduction of enforcement and penalty powers for the Australian Securities and Investments Commission (ASIC); new enforcement, governance, and risk management approaches for APRA; and adopting a supervisory model incorporating stress testing. In the area of systemic risk oversight and macroprudential policy, there has been progress in improving the transparency of the Council of Financial Regulators (CFR). Ongoing efforts to improve data capability were expected to facilitate financial stability analysis, including stress testing. On financial crisis management and safety nets, work continued on recovery and resolution planning through the CFR and with the New Zealand counterparts. On AML/CFT, a bill currently in Parliament was expected to strengthen the regime and address barriers to prosecution, through increased funding for the Australian Transaction Reports and Analysis Centre (AUSTRAC) to expand risk assessment.

NAVIGATING THE SWIFT RECOVERY IN HOUSING MARKETS

Context

34. The fast increase in housing prices since mid-2019 has partly undone earlier price declines. As such, despite lower mortgage rates, there has only been a limited improvement in housing affordability for many households since the peak in housing prices in 2017 (Box 4).

Housing Price Rise Has Partly Undone the Earlier Correction
(Housing prices, % change)



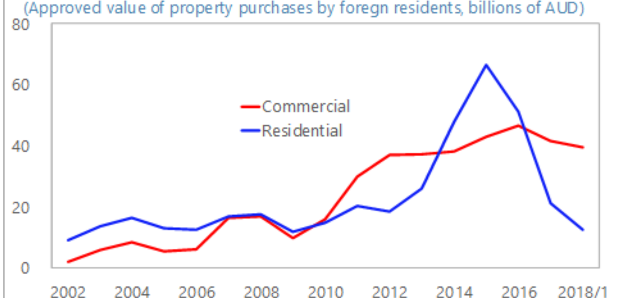
Sources: Corelogic and IMF staff calculations.

Staff's Views

35. Housing supply reforms are critical for restoring affordability. More efficient long-term planning, zoning, and local government reforms that promote housing supply growth, along with a focus on infrastructure development, remain critical to meet the needs of a growing urban population. Initiatives such as "City and Regional Deals" that aim to integrate transport, housing and land use polices to create the opportunity for coordinated action to maximize the value of infrastructure investment, should help meet growing demand for housing.

36. Broader tax reforms could reinforce the effectiveness of supply-side measures. Transitioning from a housing transfer stamp duty to a general land tax would improve efficiency by easing entry into the housing market and promoting labor mobility, while providing a more stable revenue source for the states. Such reforms could be complemented by reducing structural incentives for leveraged investment by households, including limiting negative gearing in residential real estate. Nonetheless, major changes affecting investment decisions and underlying demand for housing should be gradual, and such reforms should not be undertaken in isolation. In addition, housing policy measures discriminating against non-residential buyers, such as state-level foreign purchaser duty surcharges on residential property, should be replaced by alternative,

Foreign Demand for New Residential Property Has Sharply Declined
(Approved value of property purchases by foregn residents, billions of AUD)



Sources: Australian Foreign Investment Review Board, *Annual Reports*; and IMF staff calculations.
1/ All data are converted from fiscal year. For 2018, extrapolated from 2017/18.

non-discriminatory measures, such as a general surcharge on vacant property or surcharges on all investor-owned housing transactions.[11,12]

Authorities' Views

37. The authorities saw potential risks linked to a possible reemergence of rapid housing price growth. With population growth projected to remain strong, the ongoing weakness in building approvals following the past decline in housing prices and tighter credit supply for developers could result in a shortage of new housing and renewed rapid housing price growth, with the risk that this would, in turn, lead to stronger growth in household debt.

38. The authorities stressed that they would continue to facilitate housing supply reforms and other measures to improve housing affordability. They highlighted that the Commonwealth government provides annual housing-related funding such as rental subsidy for individuals through the Commonwealth Rent Assistance (CRA), funding to states and territories to improve Australians' access to affordable housing through the National Housing and Homelessness Agreement (NHHA), and the First Home Loan Deposit Scheme to provide loan guarantee to lenders for first-time home buyers. Housing has also been a priority in the City and Regional Deals. The authorities thought that tax policy was not the right tool to address potential speculative behavior in housing markets and that macroprudential policy should instead be employed as needed.

FOSTERING STRONG, INCLUSIVE AND SUSTAINABLE GROWTH

Context

39. Australia has been facing longstanding obstacles to growth. A strong and flexible skill base and favorable product-market indicators point towards a competitive business environment in Australia, but Australia's productivity growth has declined. Non-mining business investment growth has been sluggish, with investment in R&D weakening. There is also continued pressure on infrastructure from rising population in the major cities. The tax system is relatively inefficient with a comparatively large share of direct taxes. Despite significant progress, female employment has remained relatively low compared with other advanced economies and Australian women are

[11] Foreign purchaser duty surcharges on residential property were assessed as capital flow management measures (CFMs) under the IMF's Institutional View. See 2017 Article IV Staff Report, and updates in the 2018 Article IV Staff Report.

[12] The Treasury Laws Amendment (Reducing Pressure on Housing Affordability Measures) Bill 2019, adopted by the Senate in December 2019, removes the Capital Gains Tax (CGT) exemption relating to a main residence for foreign residents (with certain exceptions). This bill replaces the previous Treasury Laws Amendment Bill 2018 which had lapsed in July 2019. The withdrawal of the main residency exemption from capital gains taxes of nonresidents was deemed a CFM in the 2017 Article IV Report.

disproportionately in part-time employment, while there is persistently high underemployment of about 20 percent for younger Australians.

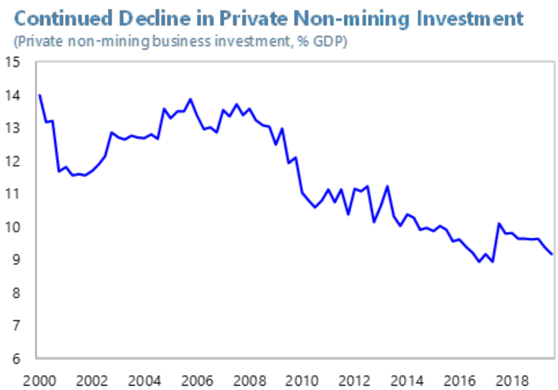
40. Recent structural policy efforts have focused on implementing reforms identified by productivity reviews and sectoral inquiries. Public spending on infrastructure has jumped over the last three years and the government announced a 10-year plan for infrastructure spending in the government's 2019-20 budget. The Commonwealth government enacted PIT cuts and lowered CIT rates for SMEs. A Deregulation Taskforce has been established to remove impediments to investment and job creation in targeted areas. The government launched a Child Care Subsidy program and announced a Mid-Career Checkpoint initiative to support the return to the workforce from caring responsibilities. It has been investing to modernize vocational education and training and launched a targeted initiative to support youth employment. The government is also reforming the R&D tax credit regime focusing on reducing abuses by larger, older firms, and taken initiatives for SME funding.

41. Important challenges remain in energy and climate change policies. While the Commonwealth's energy reform, aimed at reducing prices and improving reliability of electricity supply, has made some progress in replacing coal with natural gas and renewables in electricity generation, Australia remains among the top ten largest greenhouse gas emitters in the OECD. The Commonwealth's Climate Solutions Package, announced in February 2019, aims at meeting Australia's Paris Agreement emissions target for 2030 through financial support to mitigation efforts by businesses, communities, and landholders; and greater use of renewables, including a renewable energy target and plans to significantly improve Australia's energy productivity. However, plans do not rely on price-based measures such as a carbon tax or an emissions trading scheme. State governments have separate energy and emissions strategies that are not sufficiently integrated with the Commonwealth's approaches. The authorities project that Australia will meet its 2030 emissions reduction target on current policies, relying on a carryover from past overperformance that is applied toward the 2030 target.[13]

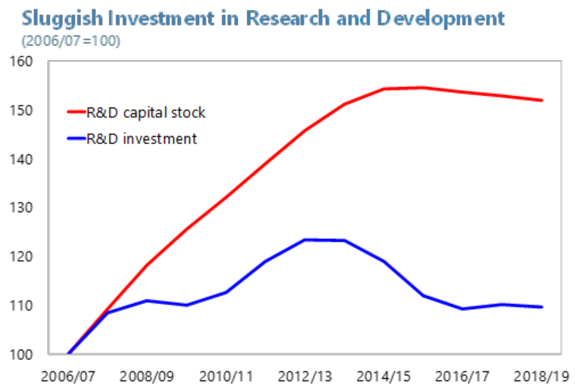
Staff's Views

42. Building on past reforms, further efforts are needed to foster strong, inclusive and sustainable growth. The government should continue to address infrastructure gaps, strengthen the investment environment and innovation capacity, and make the tax system more efficient. Promoting female labor force participation and reducing youth underemployment would also boost potential growth.

[13] Under the Paris Agreement, Australia committed to reducing emissions by between 26 and 28 percent below 2005 levels by 2030. Australia is the only country applying a carryover from past overperformance to its Paris targets. Successive federal governments have proposed and rejected five mitigation initiatives over the past decade, while states have their own targets and plans such as net zero emissions by 2050 (New South Wales, Queensland, and Victoria) and a target on the renewable share of energy (Queensland and Victoria). No Commonwealth-level target has been set beyond 2030.



Source: ABS.



Sources: ABS and IMF staff calculations.

43. Accelerating structural reforms would help to improve the investment environment. Building on reforms in the 2015 Harper Review, Australia can further improve product market regulations, including by simplifying business processes through broadening the work of the Deregulation Taskforce.[14] The ongoing policy priority on skills and education reforms is welcome to improve the environment for innovation, and consideration should be given to faster implementation of the recommended measures in the *Australia 2030: Prosperity through Innovation* report. Government initiatives to relieve SME financing constraints are welcome, including the Australian Business Securitization Fund and the Australian Business Growth Fund. Incentives for banks to lend more to businesses, including through reducing the concentration in mortgages, can help support business investment, as can the promotion of venture capital. Supporting new investment through tax measures, possibly including targeted investment allowances, as well as further improving the effectiveness of government R&D support for younger firms, would also be helpful.

44. Progress in boosting infrastructure spending is welcome. A welcome increase in public spending in transport and social infrastructure has reduced Australia's infrastructure gap. The ratio of infrastructure investment spending to GDP should be maintained at the current level into the medium term, at a minimum (¶17). Bottlenecks in the construction industry could be addressed through increased Commonwealth-state-local coordination and prioritization as under the City and Regional Deals, or skilled laborer visas to alleviate skills shortages.

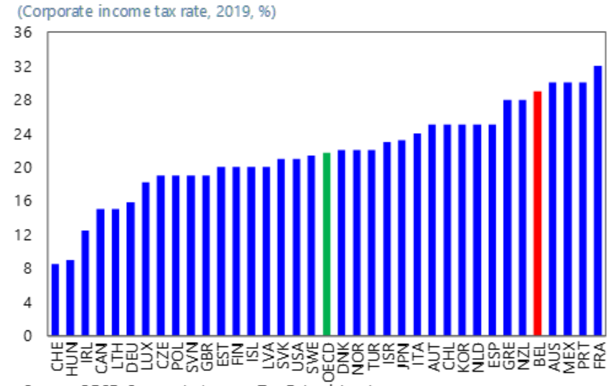
45. Further labor market reforms would help to promote female labor market participation and reduce youth underemployment. There is scope to increase full-time employment for Australian women and addressing persistently high underemployment particularly among youth. The Child Care Subsidy and Mid-Career Checkpoint programs are expected to support women in work. This could lay the foundation for a broader review of the combination of taxes, transfers, and childcare support to reduce disincentives for female labor force participation.

[14] The government supported most of the recommendations from the 2015 *Competition Policy Review* ("Harper Review").

Pursuing ongoing reforms in vocational education and training can help reduce youth underemployment.

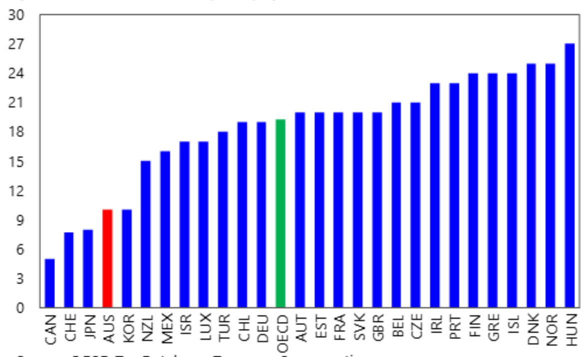
46. Broad fiscal reforms could help promote efficiency and inclusiveness. While the Commonwealth government enacted PIT cuts and lowered CIT rates for SMEs, the share of direct taxes in Australia's tax revenue remains high compared with peers. Australia should continue to work towards shifting from direct to indirect taxes by: (i) broadening the GST base to make the tax system more efficient and (ii) reducing the statutory CIT rate for large firms. Given the potential, adverse distributional consequences of these reforms, there should be emphasis on making their impact less regressive, including by strengthening targeted cash transfers. Tax incentives targeting new investment and innovation could be strengthened (¶43).

Australia's CIT Rate Is Among the Highest in the OECD...
(Corporate income tax rate, 2019, %)



Source: OECD Corporate Income Tax Rate dataset.

...While Its GST Rate is Among the Lowest
(Goods and services tax rate, 2019, %)



Source: OECD Tax Database, Taxes on Consumption.

47. Uncertainty around Australia's climate change mitigation policies may impact investment decisions and sustainable growth. The public debate around Australia's level of ambition in climate change mitigation policies (applying the carryover from past overperformance to the Paris emissions target implies that emissions in 2030 are envisaged to be 4 percent below current levels) has reinforced a sense of policy uncertainty in the energy sector, which is holding back business investment. Developing and implementing an ambitious, national, integrated approach to climate change policy, including long-term goals and strategies, and clarifying how existing and new instruments can be employed to meet the Paris Agreement goals, would help reduce policy uncertainty and catalyze environmentally friendly investment in the energy sector and the broader economy. Price-based measures are generally seen as more cost-effective in reducing emissions than administrative measures, as they provide a robust price signal for mobilizing low-emissions investment. If carbon taxes or similar approaches are not possible in light of political economy considerations, other approaches such as a "feebate system" in power generation, effectively a sliding scale of fees and rebates depending on the intensity of emissions, could be explored.

48. Australia's continued efforts supporting cooperation in international trade and investment are welcome. Staff welcomes the authorities' support to enhance the effectiveness of the WTO and pursuit of the Regional Comprehensive Economic Partnership (RCEP), which aims to liberalize trade, improve quality and environmental standards, and foster labor mobility throughout much of Asia and the Pacific.[15]

Authorities' Views

49. The authorities stressed their continued reform efforts focusing on improving the business environment and competition. They saw the Deregulation Taskforce as an important initial step toward simplifying business regulation in support of investment and job creation, which could be broadened over time. They pointed to the Digital Platforms Inquiry which investigated digital competition and the sustainability of news media following the ascendance of global digital platforms. They highlighted the significant progress made in addressing infrastructure gaps by stepping up public investment spending but cautioned that bottlenecks in project execution, including from long-term planning and zoning and capacity constraints in the construction industry, constituted important challenges. The authorities also reiterated their strong commitment to international cooperation through the WTO and FTAs.

50. The authorities agreed with the merits of tax reform but noted that there was currently not a strong community acceptance of this. They agreed that reduced reliance on direct taxes and increased reliance on indirect taxes would be desirable. They noted, however, that any change to the GST required the support of all states and territories and that consideration of distributional objectives would need to be part of this. The authorities agreed with the need to incentivize business investment, including in intangibles, but pointed out that legislation to lower the corporate tax rate for all firms had failed to pass in parliament. While recent public attention had turned to investment incentives, any incentive would need to be carefully designed to achieve its stated objective. More broadly, the authorities highlighted that a strong medium-term fiscal strategy was an important foundation underpinning credibility and confidence for business investment.

51. Supporting female labor force participation and youth employment remain policy priorities. The authorities stressed Australia's progress in promoting female labor force participation in recent years, with female participation currently around historic highs, and highlighted that important initiatives, such as the Child Care Subsidy and Mid-Career Checkpoint initiatives, the Parents Next program, and the Jobs and Market Fund would be helpful in making further inroads. The government is also modernizing the vocational education and training sector to equip young people with the skills needed to move into stable employment.

52. The authorities' energy reform focuses on reducing energy prices and ensuring reliable supply. Government actions aim to deliver reliable, sustainable and affordable electricity to households and businesses. The government is also focused on securing domestic gas supply and decreasing gas prices. It stressed its commitment in the area of climate mitigation, projecting that Australia is on track to exceed its 2020 emissions reduction commitments and would achieve its 2030 emissions reduction target. It acknowledged that policy certainty is important for investment in

[15] The Regional Comprehensive Economic Partnership (RCEP) is being negotiated between China, Japan, Korea, Australia, New Zealand and the 10 members of ASEAN.

the energy sector and noted that measures are under development to support new investments in the sector.

STAFF APPRAISAL

53. **Australia's economy is in a nascent but still fragile recovery.** The economy has remained resilient through commodity and asset price cycles over the last decade supported by sound macroeconomic management, but growth has remained below potential recently amid global headwinds, with inflation and wage growth subdued. With an improving current account supported by strong exports, the external position for 2019 was broadly in line with the level implied by medium-term fundamentals and desirable policies. Looking ahead, growth is expected to recover gradually, supported by monetary policy easing, tax cuts, an incipient pickup in mining investment, and the bottoming-out of housing markets. However, underlying inflation will likely stay below the target range until 2021 amid continued macroeconomic slack. Downside risks to the outlook remain elevated and have increased recently due to the widespread bushfires and the coronavirus outbreak.

54. **The near-term macroeconomic policy mix should thus remain accommodative.** Monetary policy has been appropriately accommodative, and continued, data-dependent easing will be helpful to support the recovery of domestic demand and inflation expectations. Fiscal policy is appropriately expansionary for FY2019/20, supporting demand via reductions in personal income and small-business corporate taxes and additional infrastructure spending. However, an expected contractionary fiscal stance at the consolidated level in FY2020/21 should be avoided, as states should attempt to at least maintain their current level of infrastructure spending as a share of GDP to continue addressing infrastructure gaps and supporting aggregate demand.

55. **Fiscal and monetary policy should be ready for a coordinated response if downside risks materialize.** Australia has substantial fiscal space it can use if needed. In addition to letting automatic stabilizers operate, Commonwealth and state governments should be prepared to enact temporary measures such as buttressing infrastructure spending. In case stimulus is necessary, the implementation of budget repair should be delayed. In addition, UMP measures such as quantitative easing may become necessary in such a scenario as the cash rate is already close to the effective lower bound.

56. **The macroprudential policy stance remains appropriate but should stand ready to tighten in case of increasing financial risks.** While macroprudential management has been effective in improving the risk structure of mortgage loans, renewed overheating of housing markets and a fast pick-up in mortgage lending remain risks in a low-interest-rate environment. To address them, APRA should continue to improve the readiness of its macroprudential toolkit and prepare for potential use of loan-to-value and debt-to-income limits, and possibly a targeted countercyclical capital buffer.

57. **Strong reform efforts to bolster the resilience of the financial sector should continue.** Australian banks remain adequately capitalized and profitable, but vulnerable to high exposure to residential mortgage lending and dependent on wholesale funding. Staff supports the authorities'

plan to further enhance banks' loss-absorbing capacity and implement the recommendations made by the Hayne Royal Commission. In addition, encouraging banks to further lengthen the maturity structure of their wholesale funding would help mitigate liquidity risks. Reform priorities also include implementing the APRA Capability Review's recommendations, reinforcing financial crisis management arrangements as highlighted in the 2018 FSAP, and strengthening the AML/CFT regime.

58. Housing supply reforms remain critical for restoring affordability. More efficient long-term planning, zoning, and local government reform that promote housing supply growth, along with a focus on infrastructure development, including through City and Regional Deals, should help meet growing demand for housing.

59. Australia should step up structural reforms toward strong and inclusive growth. Weakening business investment could be buttressed by reducing domestic policy uncertainty, supporting SMEs' access to finance, pursuing product market deregulation, and introducing well-targeted tax incentives. Innovation could be promoted by accelerating skills and education reforms and further improving the effectiveness of government R&D support. Reducing disincentives for female labor force participation could increase full-time female employment, and further reforms in vocational training would help reduce youth underemployment. Building on recent reforms in personal and corporate income taxes, a further shift from direct to indirect taxes would reduce distortions of the tax system and promote growth. Adverse distributional consequences of this shift should be offset, including by strengthening targeted cash transfers. Priorities for tax reforms also include transitioning from a housing transfer stamp duty to a general land tax and reducing structural fiscal incentives for leveraged investment by households, including in residential real estate.

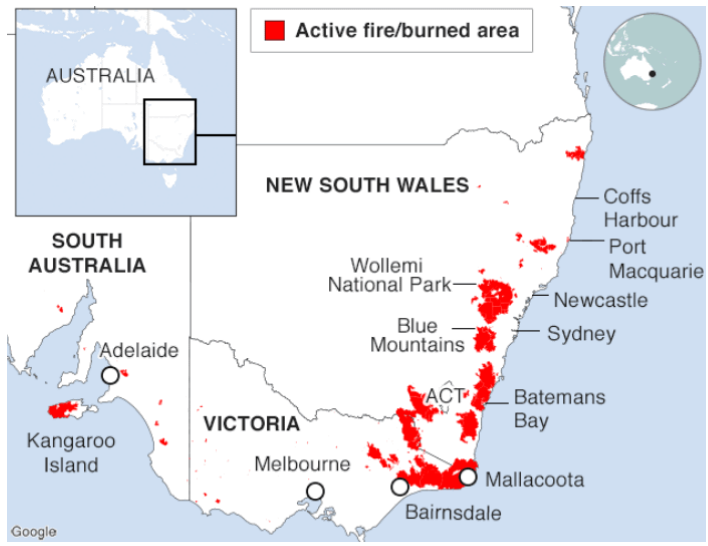
60. Efforts to support international cooperation and tackle climate change should continue. Staff welcomes the authorities' support to enhance the effectiveness of the WTO and pursuit of the RCEP, which would help promote economic integration in the Asia and Pacific region. Developing an ambitious, national, integrated approach to energy policy and climate change mitigation to meet the Paris Agreement goals would help reduce policy uncertainty and catalyze business investment in Australia.

61. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.

Box 1. Bushfires and their Macroeconomic Impact

Australia has been experiencing an unprecedented bushfire season since November 2019. As of January 22, 2020, 10.4 million hectares have burned in the 2019-20 bushfire season. The area is much larger than in the past episodes of severe bushfires and more than 10 times the size of the 2019 Amazon fires. So far, 29 people have been killed, nearly 2,900 homes destroyed, and A$1.3 billion (almost 0.1 percent of GDP) in insurance claims filed. The air quality in Sydney, Canberra, and Melbourne has been heavily impacted by smoke from bushfires. Fires are still spreading, and the bushfire season is expected to last through the summer in Australia.

Bushfires in New South Wales and Victoria
(as of January 21, 2020)



Sources: BBC, DAFF and local fire services.

The prolonged drought, which has contributed to the rapid spread of the bushfires, has been a drag on growth. Over 2019Q1-Q3, agriculture-related output and cereal exports dropped by 9 percent and 33 percent, respectively, from the same period last year. Staff projections envisage continued weakness in agriculture to shave off about 0.1-0.2 percentage points from annual GDP growth in 2020.

The bushfires may have an indirect impact on demand. With Australia's economic activities concentrated in metropolitan areas, the growth impact of severe natural disasters in Australia has been relatively muted. This said, severe bushfires in the past temporarily slowed down retail sales and tourist arrivals in the major cities affected by smoke. Given the unprecedented magnitude of the ongoing bushfires and the frequent smoke events in Sydney, Canberra, and Melbourne, the impact on consumption and tourism could be larger than in past events. The authorities have estimated that the impact of the bushfires could be about 0.2 percent of GDP over 2019Q4 and 2020Q1, though with significant uncertainty. The temporary negative impact could be offset by an increase in demand from post-disaster reconstruction work in the affected regions.

The government has been providing assistance as needed. Aside from firefighting and rescue efforts, the Commonwealth and state governments have supported the victims through various natural disaster support mechanisms. In January, the Commonwealth government created the National Bushfire Recovery Agency to coordinate post-disaster assistance, making available A$2 billion (0.1 percent of GDP) over 2020 and 2021 to provide financial support for affected families, primary goods producers, small businesses, and local governments. The New South Wales state government has announced a A$1 billion package with a focus on rebuilding infrastructure. The Commonwealth disbursed in January 2020 over A$60 million to local governments for dealing with the impacts of bushfires.

Box 2. Why has Wage Growth Been Low in Australia?

Nominal wage growth in Australia has remained subdued in recent years despite a tightening of labor market conditions. After several years of robust employment growth, the headline unemployment has fallen from about 6.3 percent in 2015 to 5.1 percent in December 2019. However, nominal wage growth has picked up only slightly. Real wage growth picked up recently as inflation declined but remains below its historical average.

The disconnect between unemployment and nominal wage growth is not unique to Australia. In many advanced economies, unemployment declined after the global financial crisis, but nominal wages grew at a distinctly slower pace. The October 2017 *World Economic Outlook* found that the weak wage growth in advanced economies can be attributed to labor market slack not represented by unemployment and subdued labor productivity growth.

Persistent underemployment, sluggish labor productivity growth, and prolonged adjustment to the mining investment boom are likely drivers for Australia's low nominal wage growth. Underemployment, defined as part-time employees who want to work more hours, has remained elevated despite the recent decline in unemployment, suggesting continued labor market slack. Labor productivity growth has been on a declining trend since the end of the 2012-14 mining investment boom. The adjustment after the mining investment boom led to a sharp slowdown in wage growth in the mining sector, which was not offset by wage growth in the rest of the economy.

Australia's low wage growth rate is explained well by an empirical model that incorporates these potential drivers. Staff estimated a wage Philips curve by augmenting a standard model containing unemployment and inflation (Galí, 2011).[1] The augmented model, which includes additional explanatory variables comprising underemployment (measured by the involuntary part-time job ratio), labor productivity, and the terms of trade, is able to track the decline in wage growth over 2012-16 and the modest pick-up in recent years.

Wage growth is likely to remain low in coming years. This is because of persistently high underemployment, a projected decline in the terms of trade, and sluggish productivity growth. The persistent labor market slack would imply weak inflation prospects and warrant an accommodative macroeconomic policy mix in the near term.

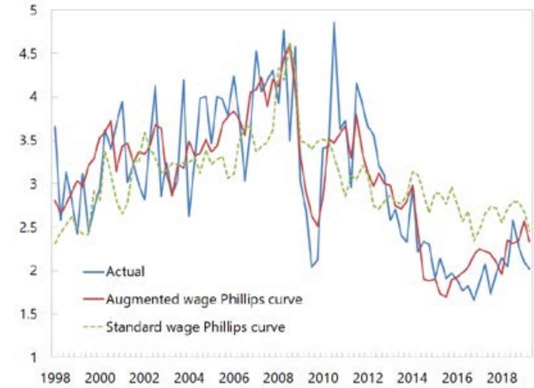
[1] Galí, J., 2011, "The Return of the Wage Phillips Curve," *Journal of the European Economic Association* 9(3): 436-461.

Box 2. Why has Wage Growth Been Low in Australia? (concluded)

Nominal Wage Inflation and Unemployment
(Percent)

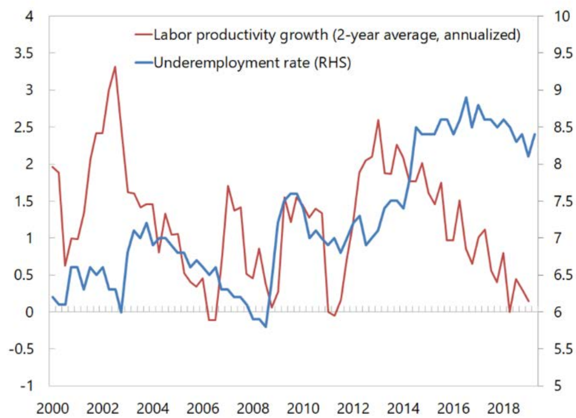
Sources: ABS and IMF staff calculations.

Nominal Wage Inflation and Wage Phillips Curve
(Percent, annualized) 2/



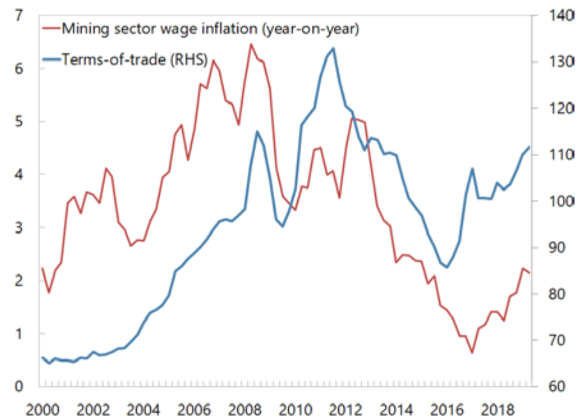
Sources: ABS and IMF staff estimates.

Underemployment and Labor Productivity
(Percent)



Sources: ABS and IMF staff calculations.

Terms of Trade and Mining Sector Wage
(Percent, 2016/2017 average=100)



Sources: ABS and RBA.

2/ The standard wage Phillips curve incorporates unemployment (level and change) and trimmed mean inflation. The augmented wage Phillips curve incorporates underemployment, labor productivity growth and year-on-year changes in the terms of trade as additional explanatory variables.

Box 3. House-Prices-at-Risk in Australia

After a prolonged downturn, housing markets in Australia have begun to recover. Still relatively high valuations and elevated household debt warrant careful monitoring of risks.

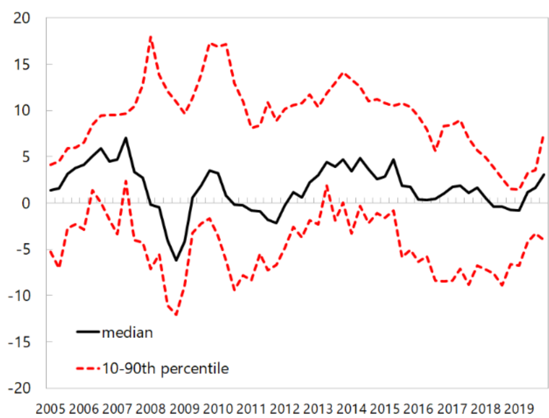
House-Prices-at-Risk (HaR) measures risks to future house prices.[1] HaR quantifies expected changes in house prices at a certain percentile in response to changes in pricing factors. Risks to future house prices are related to financial conditions, overvaluation factors, and capital flows. Tighter financial conditions can affect house prices adversely through higher borrowing costs. Overvaluation (proxied by house prices to GDP per capita relative to historical averages) is associated with downside risk, as a stretched price likely signals a future price correction. Other factors, including capital flows and household leverage, also affect risks.

Staff estimates indicate that downside risks to Australia's house prices at the national-level have eased after the house price correction, with upside risks beginning to build. The national-level HaR over a four-quarter horizon deteriorated gradually and tilted to the downside beginning in 2016 due to overvaluation concerns. Since the beginning of 2019, downside risks have been reduced, although some risks remain. Conditional on 2019Q4 economic conditions, real house prices in Australia would fall by 4 percent over the next four quarters with a 10-percent likelihood. At the same time, upside risks have increased as illustrated by the 90th percentile of the expected distribution four quarters into the future.

Downside risks in Sydney and Melbourne remain. In the two largest cities where there were large price increases during the boom period, downside risks to future house prices have eased but remain.

National-Level House Prices-at-Risk

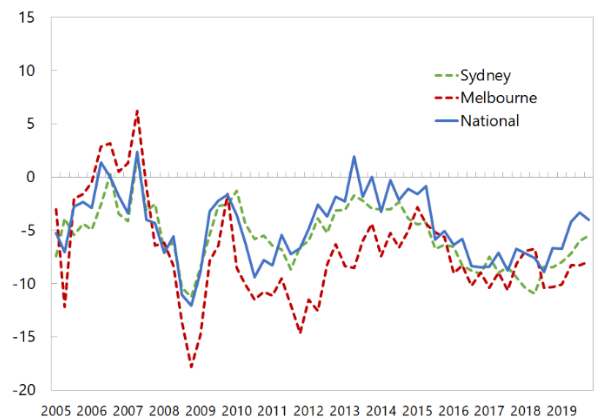
(Percent)



Source: IMF staff calculations.

National-and City-Level House-Prices-at-Risk

(Percent, 10 percentile)



Source: IMF staff calculations.

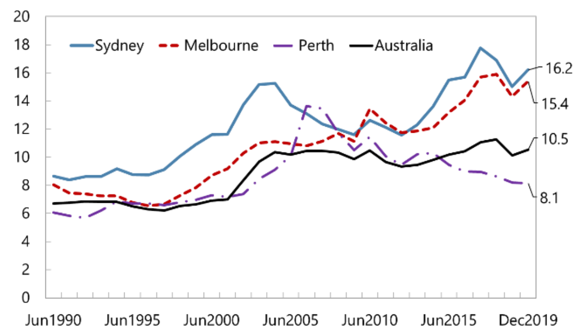
[1] See October 2019 Global Financial Stability Report (Chapter 2).

Box 4. Housing Prices and Affordability

The 2017-19 housing price correction and lower mortgage rates have improved housing affordability, but median-priced homes remain difficult to afford for average two-earner households. Stimulating a stronger supply response remains important for restoring broad-based affordability.

Housing prices have grown faster than income. This long-term trend, reinforced during the 2012-17 housing boom, was only partially corrected in the subsequent price decline through mid-2019, before prices started rising again. House-price-to-income (HPI) ratios increased particularly fast in the population centers, Sydney and Melbourne, in 2012-17, making them the least affordable major cities for owner-occupiers in Australia. In contrast, the HPI ratio for Perth suggests that affordability may have been restored to pre-mining boom levels.

House Price to Income Ratio1/



Sources: CoreLogic; ABS; IMF staff calculations.
1/ Median value of dwellings to gross household disposable income per capita.

A practical benchmark for the affordability of housing is its financial attainability. The borrowing capacity approach is based on the maximum size of a mortgage loan attainable by a household to finance a home purchase given its income, the prevailing mortgage rate, and leverage requirements.[1] This attainable housing price indicator therefore reflects the level of house prices that can be explained by demand fundamentals.

House prices at the national level have consistently exceeded the attainable level albeit with a narrowing of the gap recently. Actual housing prices in Australia in December 2019 were about 7 percent higher than attainable under a debt-service-to-income ratio (DSTI) of 25 percent. This gap has narrowed following the 2017-19 price correction but remains significant. Gaps are much higher in Sydney and Melbourne, where households would need to be able to carry a DSTI of 40 percent or higher for housing to be attainable. By contrast, in Perth, where housing prices have fallen since the end of the mining boom in 2014, affordability has improved significantly, with housing prices attainable with a DSTI of below 25 percent.

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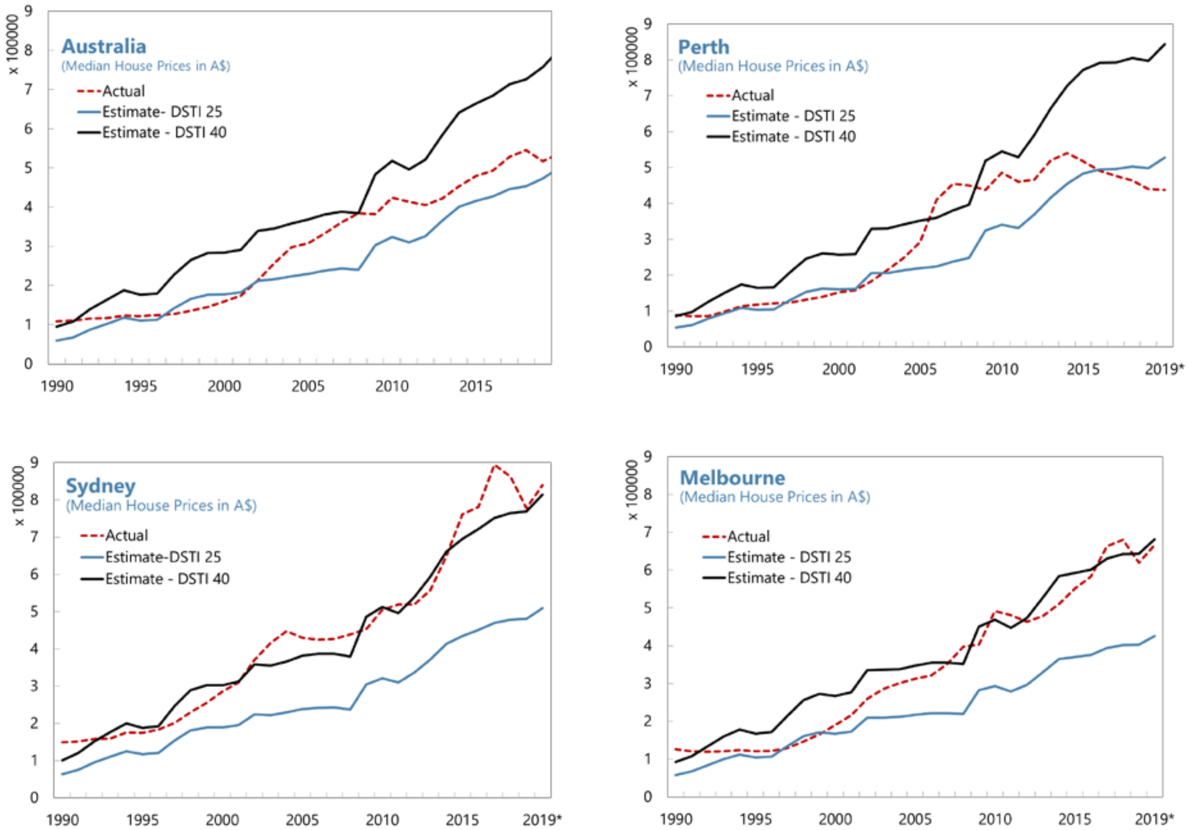
[1] Andrle, M. and M. Plašil, 2019, "Assessing House Prices with Prudential and Valuation Measures," IMF Working Paper, WP/19/59.

Box 4. Housing Prices and Affordability (concluded)

House Prices: Actual versus Attainable Estimate by Borrowing Capacity 2/



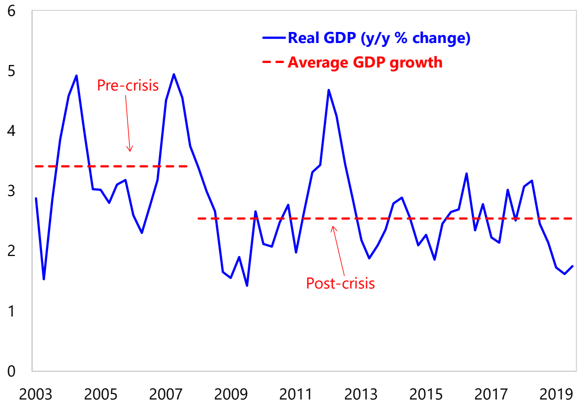
Sources: CoreLogic; ABS; RBA; and IMF staff calculations.

2/ Attainable house prices are estimated by using household disposable income per capita by fiscal year (end-June), assuming that each household is made up of two per capita income earners. Affordable housing cost is assumed to be in the conventional range of a debt service to household income ratio (DSTI) of 25 to 40 percent. The mortgage rate is the standard variable rate for owner-occupier (RBA), applying to a principal and interest loan of 30-year maturity. The mortgage is to finance up to a loan-to value ratio of 80 percent, with a down payment of 20 percent of the house price in cash. Actual house prices are median value of dwellings in June of each year (except for 2019*) reported by CoreLogic. *2019 represents actual house prices in December 2019 and attainable house prices estimated by extrapolating household disposable income per capita in end-December 2019.

Figure 1. Australia's Growth has Remained Below Potential

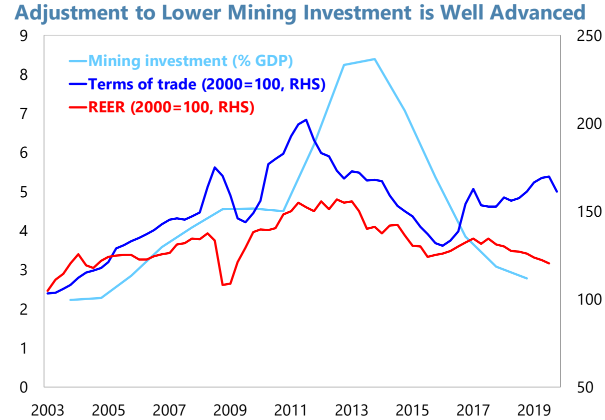
Growth slowed sharply in 2018H2 and recovered only gradually in 2019, bringing y/y growth to multi-year lows…

Growth Performance



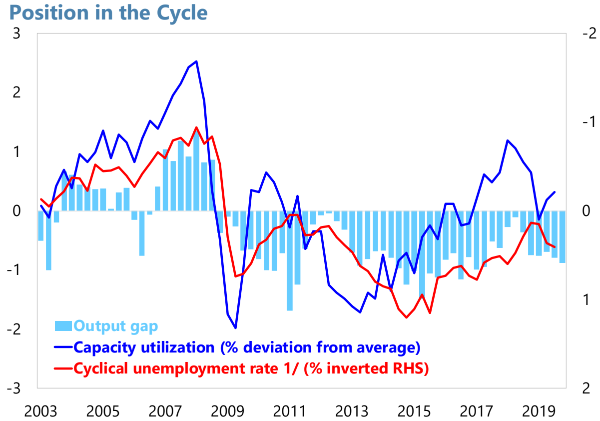
…alhough the long decline in mining investment has started bottoming out.

Adjustment to Lower Mining Investment is Well Advanced



Demand and labor market slack have persisted.

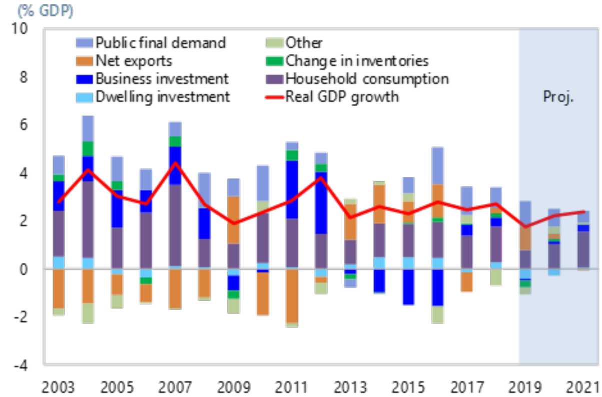
Position in the Cycle



The recent slowdown was driven by a weakening of domestic private demand, which was partially offset by strong public demand and net exports.

Contribution to Real GDP Growth

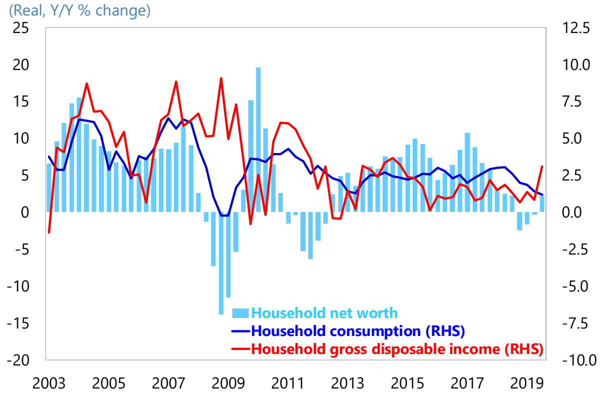
(% GDP)



The slowdown in private consumption has continued despite personal income tax cuts and the recovery in housing prices…

Consumption and Household Indicators

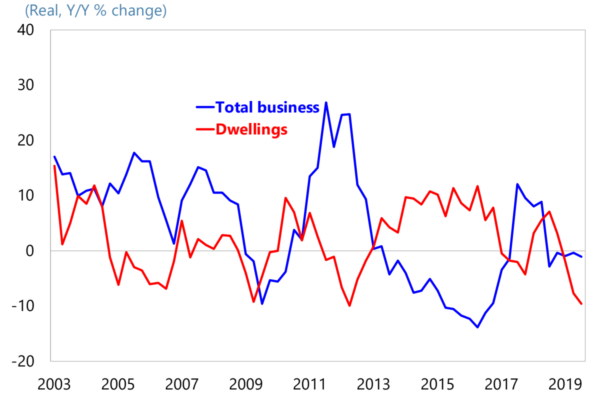
(Real, Y/Y % change)



…while private investment has remained subdued.

Private Gross Fixed Capital Formation

(Real, Y/Y % change)

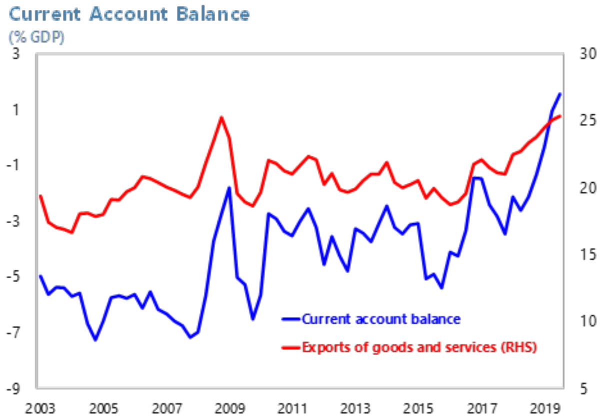


Sources: ABS; Haver Analytics; EconData; and IMF staff calculations.

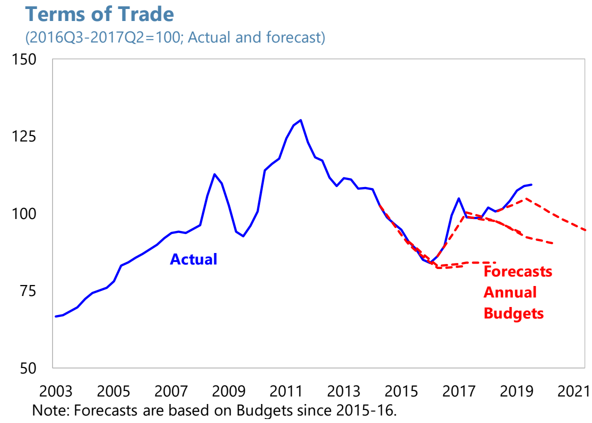
1/ Defined as unemployment rate minus the non-accelerating inflation rate of unemployment (NAIRU).

Figure 2. The Current Account Improved After Rebalancing and a Terms-of-Trade Rebound

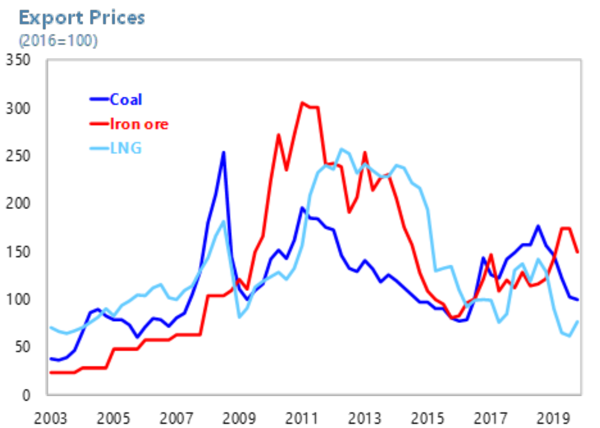
The current account reached a surplus for the first time in 44 years, reflecting strong export growth…



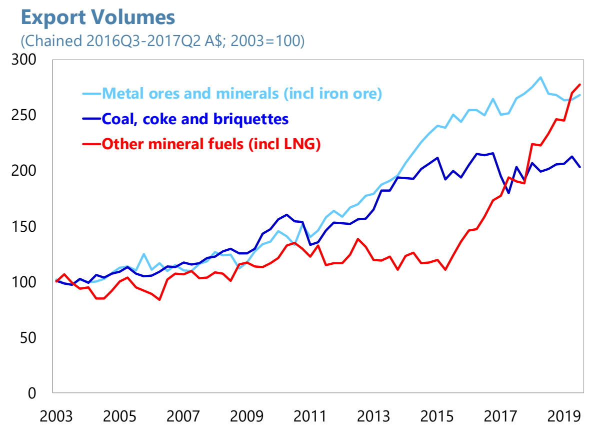
…supported by a pick-up in the terms of trade.



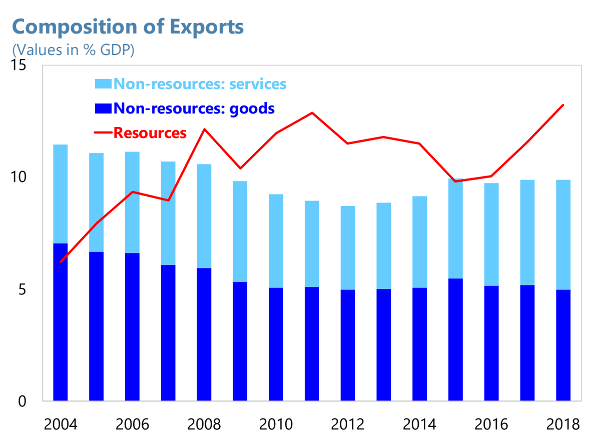
Iron ore prices peaked in mid-2019 due to international supply disruptions.



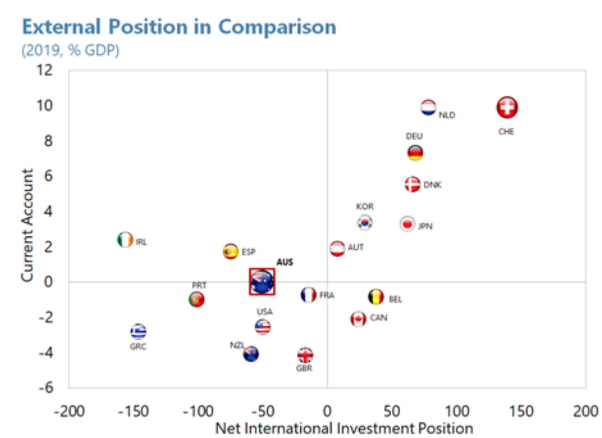
Commodity export volumes have increased further since the end of the mining boom, led by LNG…



…driving up the value of resource exports



The net external liability position remains high compared to peers.



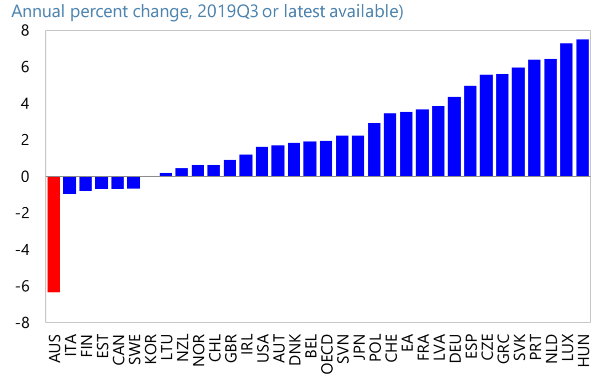
Sources: ABS; RBA; Haver Analytics; IMF, *World Economic Outlook*; and IMF staff calculations.

Figure 3. The Housing Market has Stabilized

Housing affordability has improved during the recent price correction...

House Price-to-Income Ratio

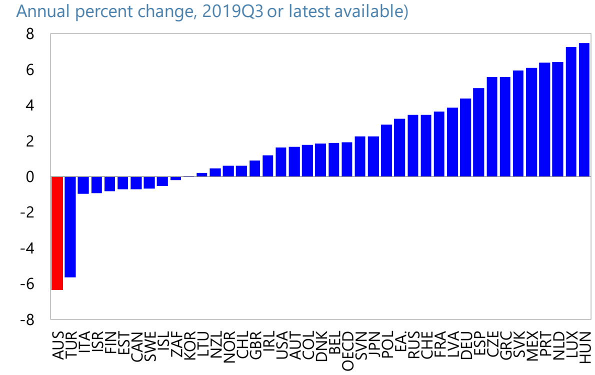
(Nominal house prices over nominal disposable income per head; Annual percent change, 2019Q3 or latest available)



...along with valuation metrics.

Price-to-Rent Ratio

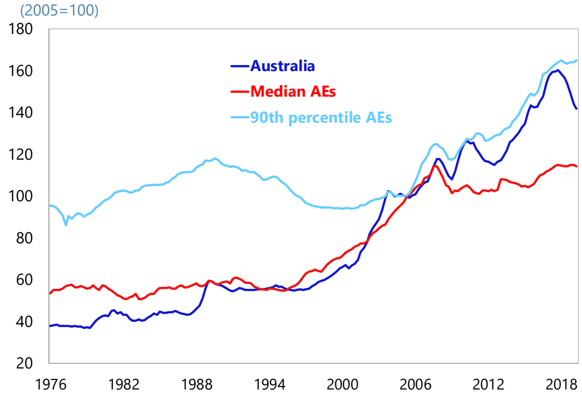
(Nominal house prices over rent prices; Annual percent change, 2019Q3 or latest available)



Still, Australian house prices remain high compared to other AEs...

Real House Prices

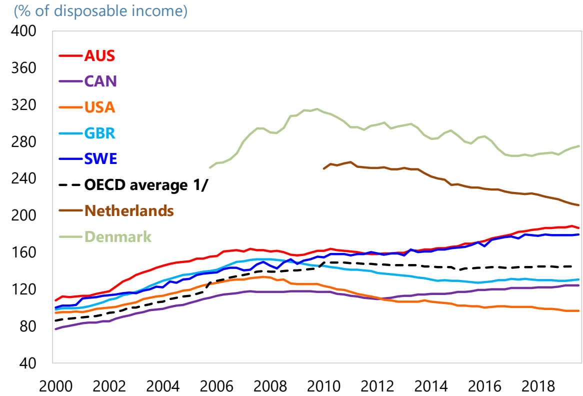
(2005=100)



...and household debt ratios remain among the highest in AEs.

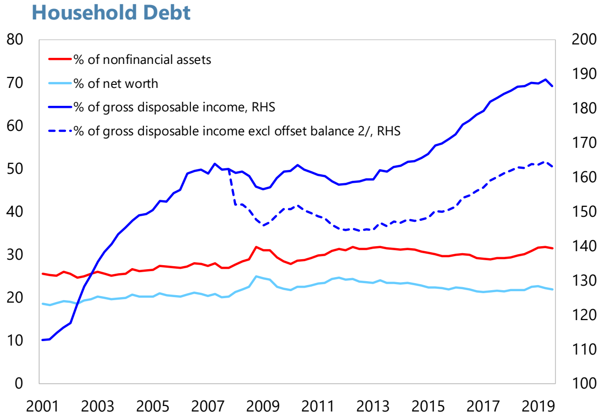
Household Debt

(% of disposable income)



However, households continue to have sizable mortgage repayment buffers...

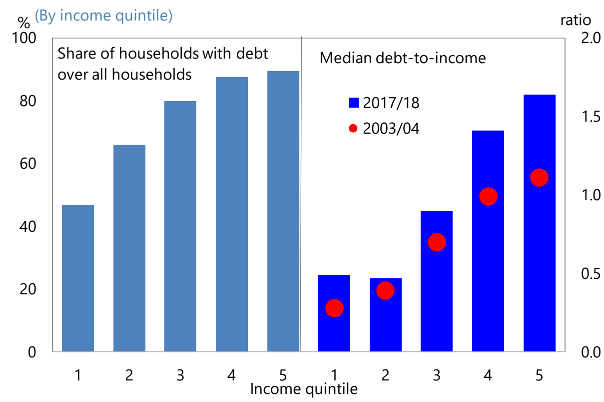
Household Debt



...and most household debt is held by higher income households.

Distribution of Household Debt

(By income quintile)



Sources: OECD, RBA, Haver Analytics, and IMF staff estimates.

1/ Based on a limited number of countries due to the lack of data.

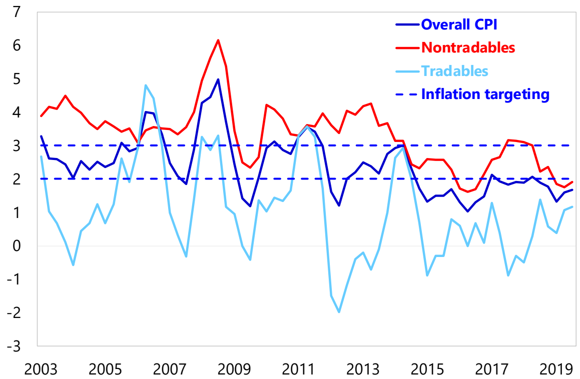
2/ Offset accounts are deposit accounts that are linked to mortgage loans such that funds deposited into an offset account effectively reduce the borrower's net debt position and the interest payable on the mortgage.

Figure 4. Monetary Policy has Been Supportive

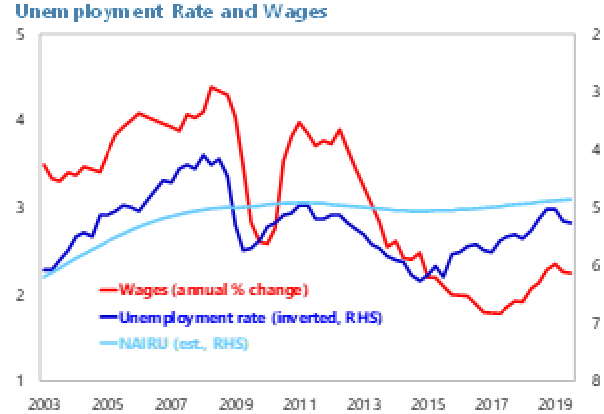
Consumer price inflation remains weak, with tradable and nontradable inflation falling below the 2 percent lower bound…

…as wage growth is slowing again, driven by labor market slack.

Consumer Price Inflation
(Annual % change)



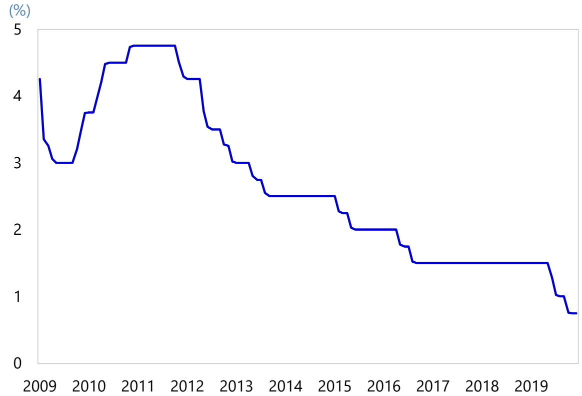
Unemployment Rate and Wages



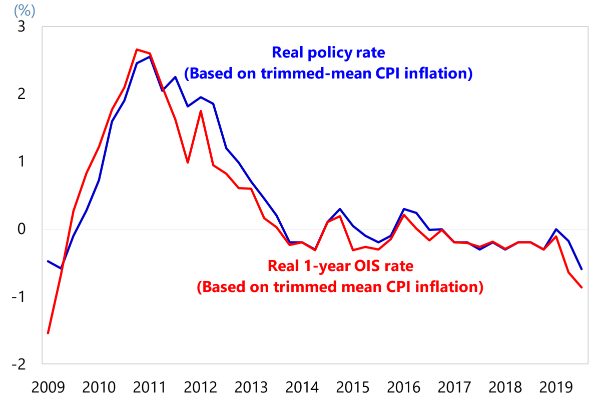
The RBA has cut the cash rate three times since June 2019 to 0.75 percent…

…making the monetary stance even more accommodative.

Policy Rate
(%)



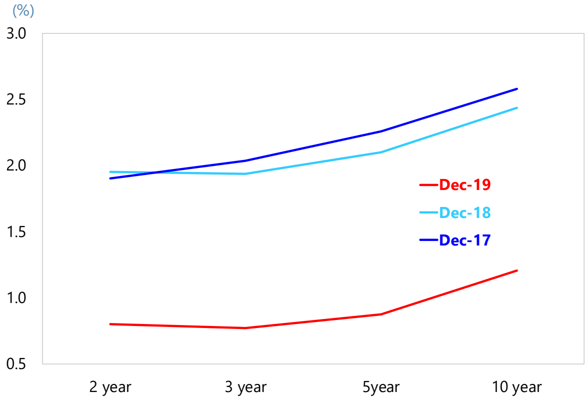
Real Interest Rates
(%)



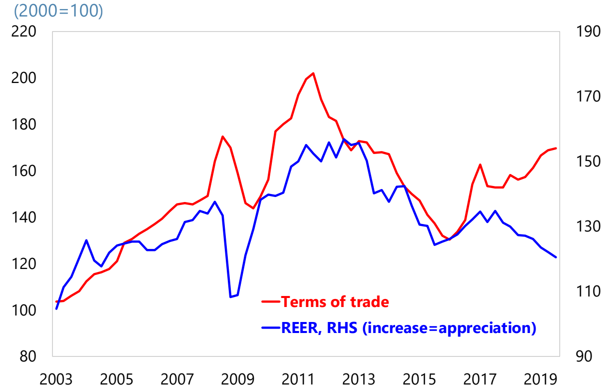
As in other AEs, the yield curve has shifted down substantially in the past year…

…while the exchange rate continued to depreciate despite higher commodity prices.

Australia Commonwealth Yield Curves
(%)



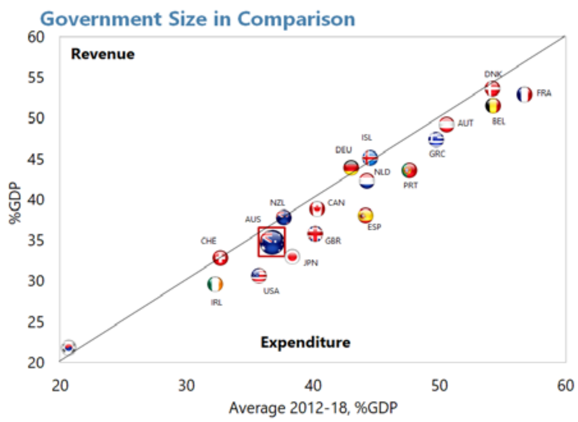
Real Effective Exchange Rate and Terms of Trade
(2000=100)



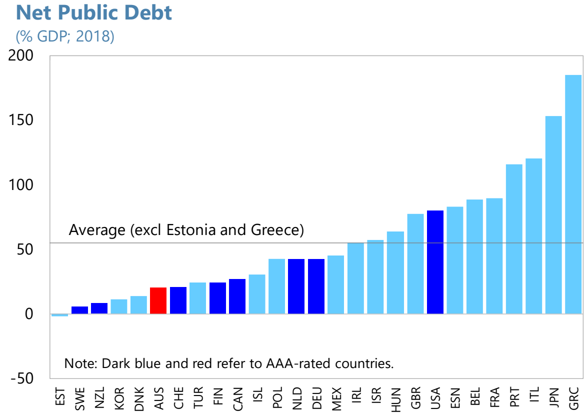
Sources: RBA; Haver Analytics; and IMF staff estimates.

Figure 5. Public Finances Focused on Infrastructure and Lowering Debt

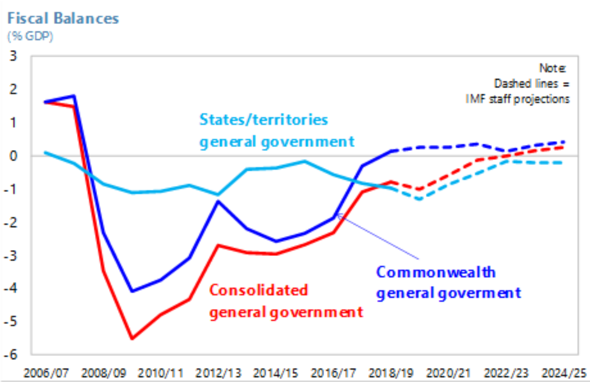
Australia has a relatively small government…



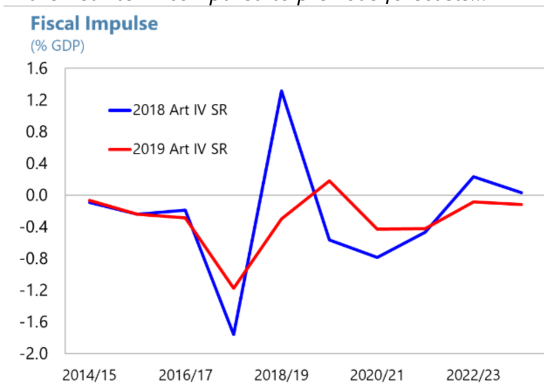
…and a low level of public debt.



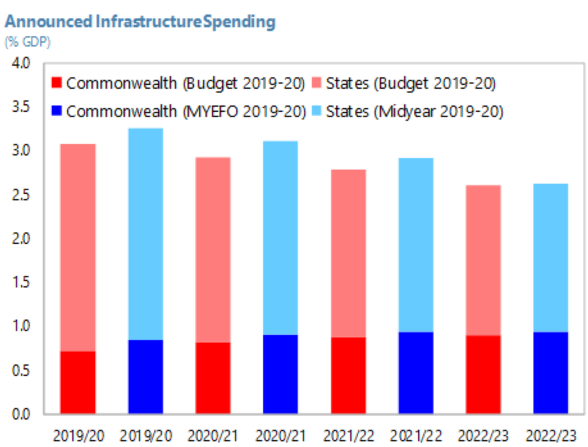
The Commonwealth continues to consolidate while States and Territories stay the course with small deficits…



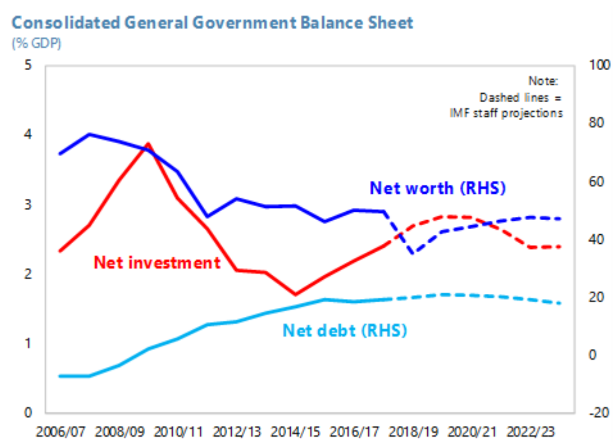
… although the fiscal impulse has become more supportive in the near term compared to previous forecasts…



… as governments increased infrastructure investment in their mid-year reviews relative to the FY2019/20 budgets…



…while maintaining their net worth and stabilizing their net debt.



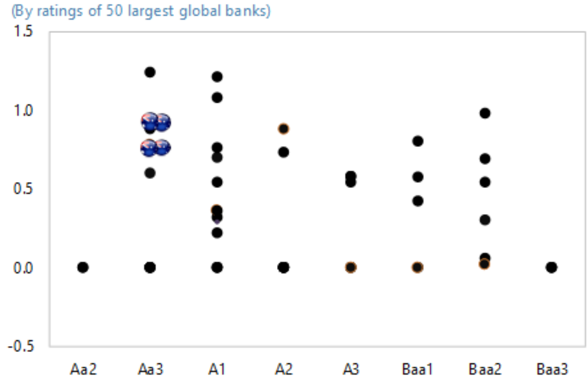
Sources: Commonwealth and State/Territory Treasuries, FY2019/20 budgets and mid-year reviews; IMF, *World Economic Outlook*; and IMF staff estimates and projections.

Figure 6. The Banking System Remains Strong

Australian major banks are highly rated…

Return on Assets

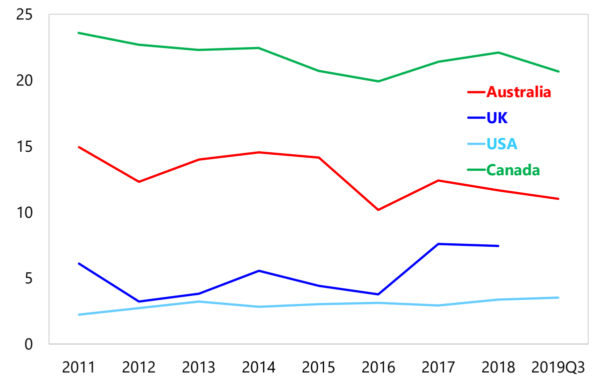
(By ratings of 50 largest global banks)



…and profitable even after complying with higher capital and liquidity requirements.

Return on Equity

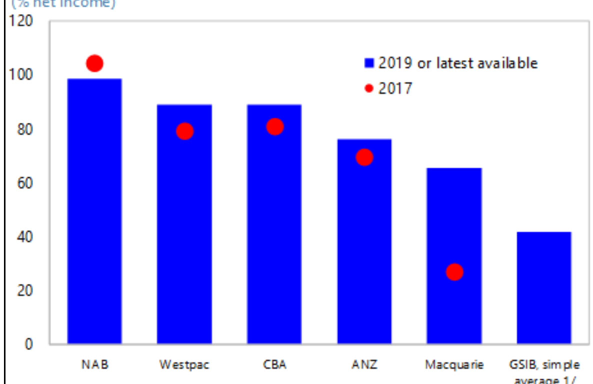
(%)



Dividend pay-out ratios are high.

Australian Banks and GSIBs: Dividend Payout Ratio

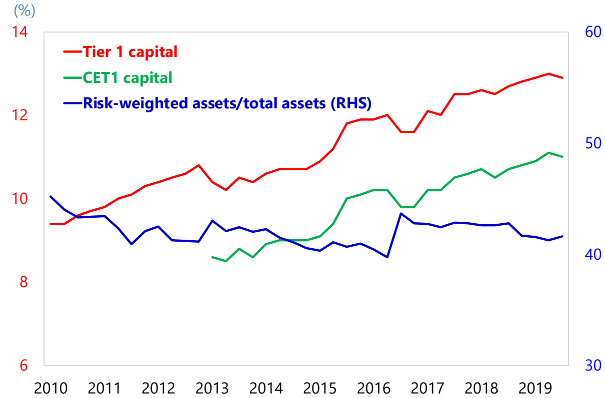
(% net income)



Capital ratios have further increased.

Capital Adequacy Ratios

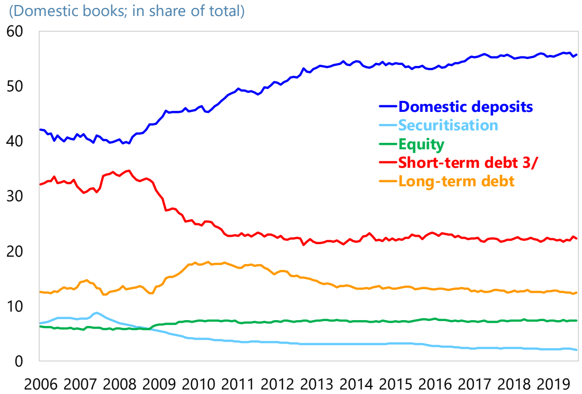
(%)



Banks rely on wholesale funding…

Banks' Funding 2/

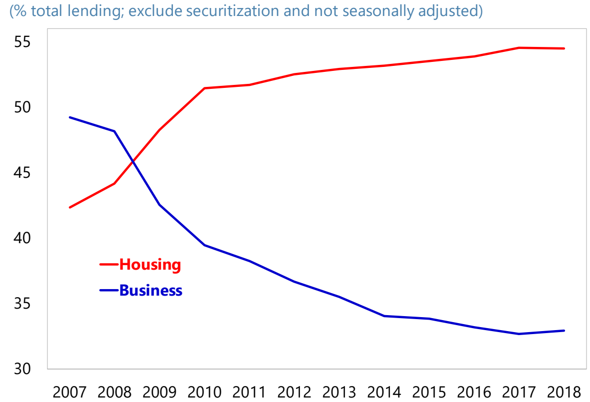
(Domestic books; in share of total)



…with lending concentrated in housing.

Banks' Lending Structure

(% total lending; exclude securitization and not seasonally adjusted)

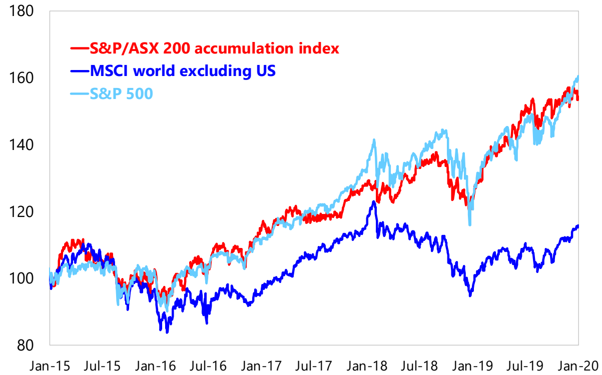


Sources: Orbis by Bureau van Dijk; FitchConnect; RBA; APRA; Financial Soundness Indicators; and IMF staff calculations.
1/ GSIBs stands for global systemically important banks. Simple average of 30 GSIBs.
2/ Adjusted for movements in foreign exchange rates.
3/ Includes deposits and intragroup funding from non-residents.

Figure 7. Financial Market Indicators: New Lows for Yields and Spreads

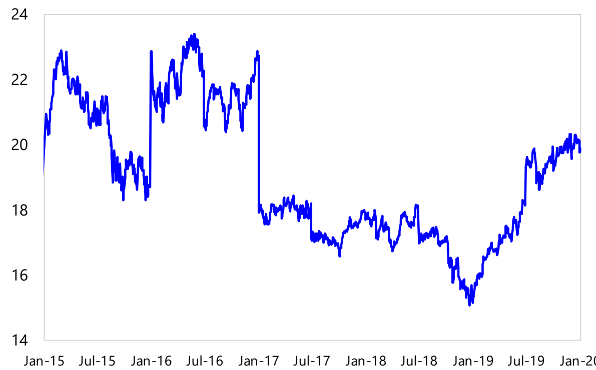
Australian equity prices have risen broadly in line with U.S. equity prices…

Stock Market Indices
(Jan 2015=100)



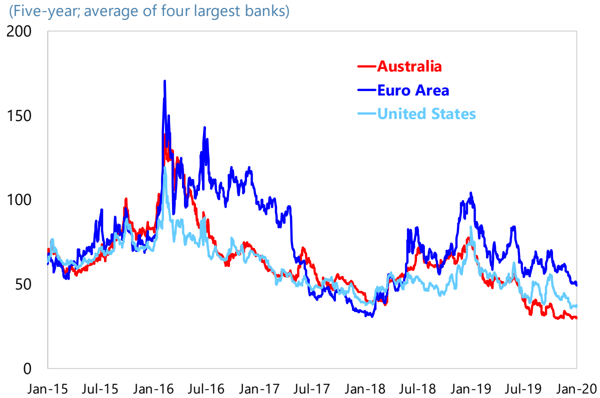
…with increasingly rich valuations.

Price-to-Earnings Ratio
(ASX 200)



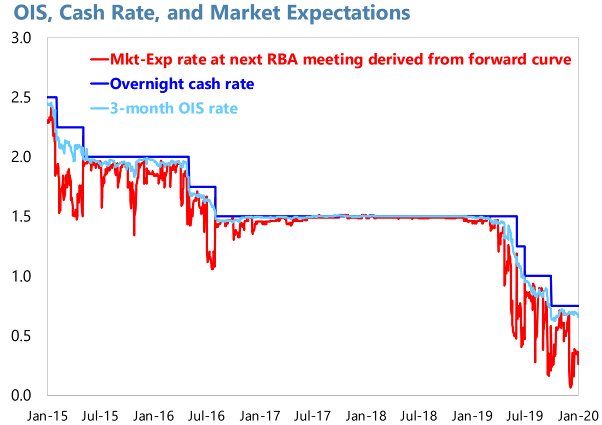
The market perception of Australian banks' default risks has declined.

Credit Default Swap (CDS) Spreads
(Five-year; average of four largest banks)



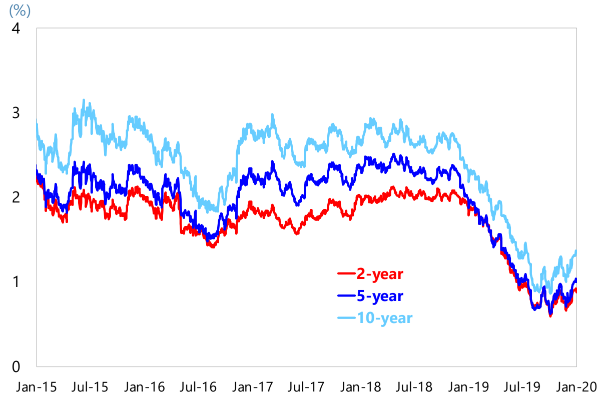
Markets expect policy rates to lower further.

OIS, Cash Rate, and Market Expectations



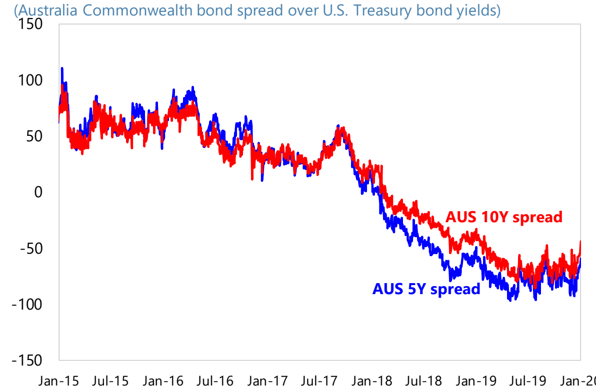
Government bond yields have declined sharply,…

Australia Commonwealth Debt Yields
(%)



… more than the yield on U.S. Treasury securities.

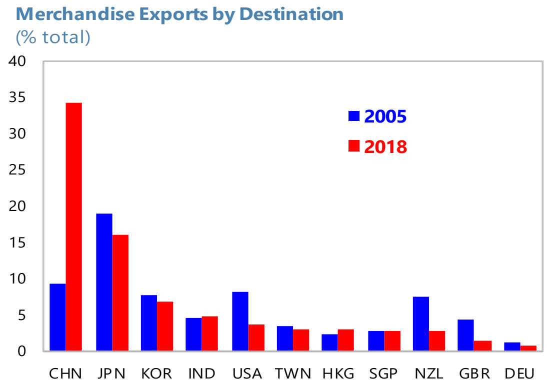
Australia Sovereign Spreads
(Australia Commonwealth bond spread over U.S. Treasury bond yields)



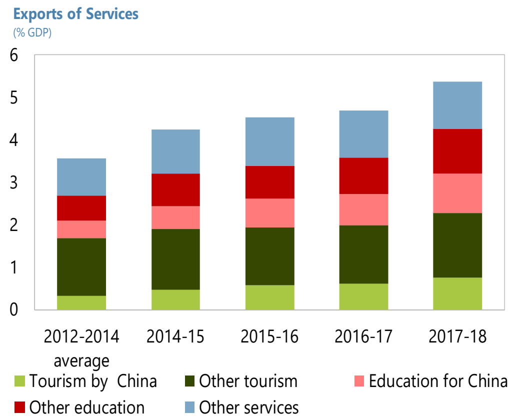
Sources: Bloomberg; RBA; and IMF staff calculations.

Figure 8. Interconnectedness and Spillovers

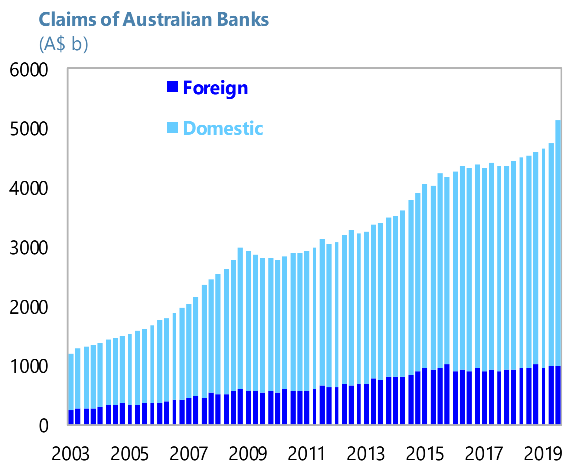
Trade links are dominated by exports to China…



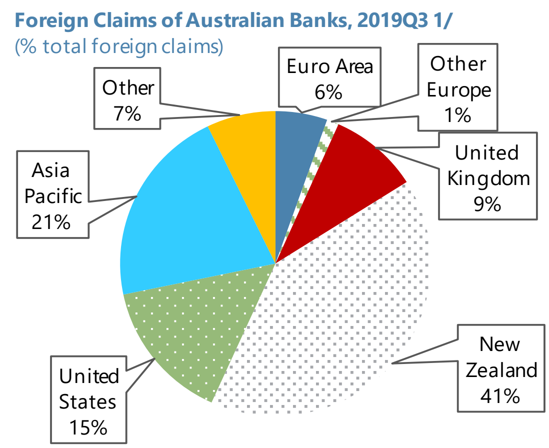
…including services exports, dominated by education and tourism.



Australian banks' foreign claims have been stable…

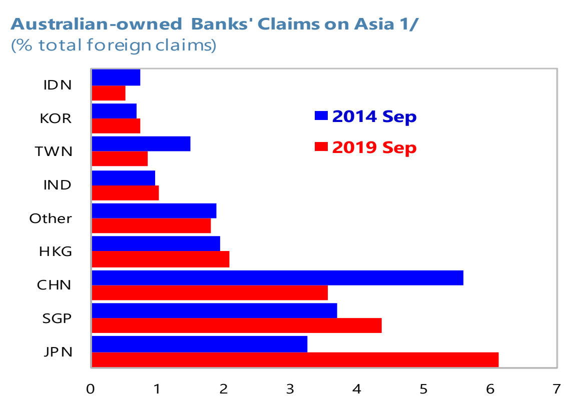


…while financial links are strong with New Zealand, the U.S., the U.K., and Asia-Pacific, …

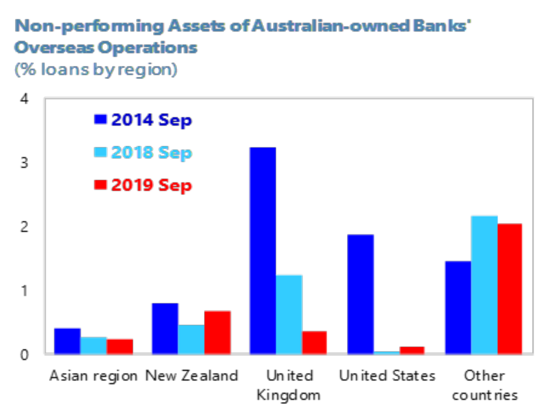


1/ Measured on a consolidated, ultimate risk basis.

…especially, Japan, Singapore, and China.



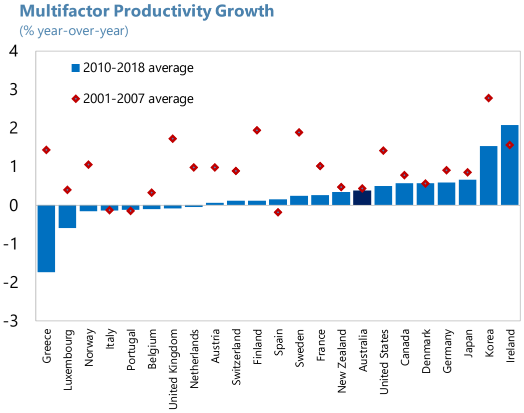
Non-performing assets in banks' overseas operations are low.



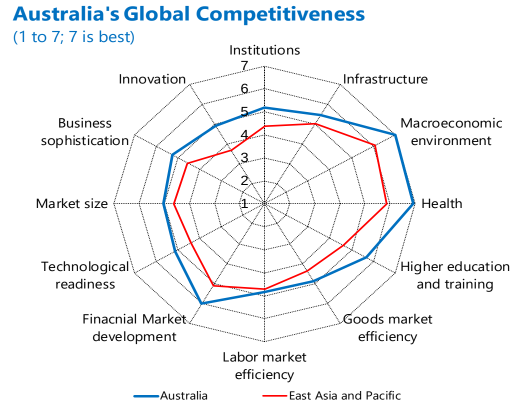
Sources: ABS; APRA; RBA; IMF, *Direction of Trade Statistics*; BIS; OECD Trade Facilitation Indicators, Department of Foreign Affairs and Trade, *Trade in Services Australia*, for 2014-15 and 2017-18; and IMF staff calculations.

Figure 9. Australia's Macro-Structural Position

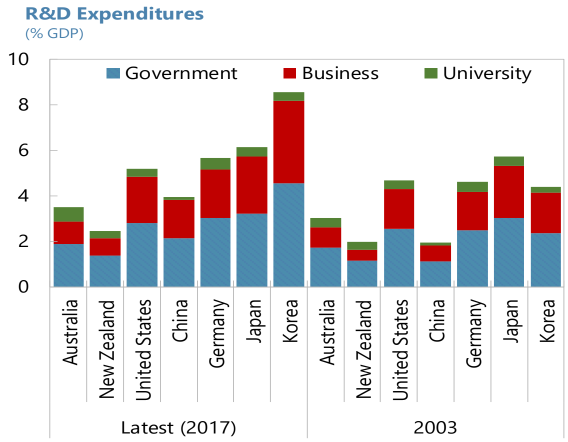
Australia has consistent, but relatively modest, productivity growth…



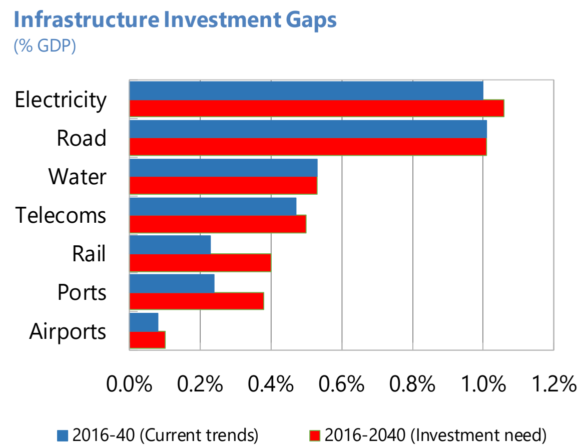
… as it has a favorable economic and regulatory environment, though with room for improvement…



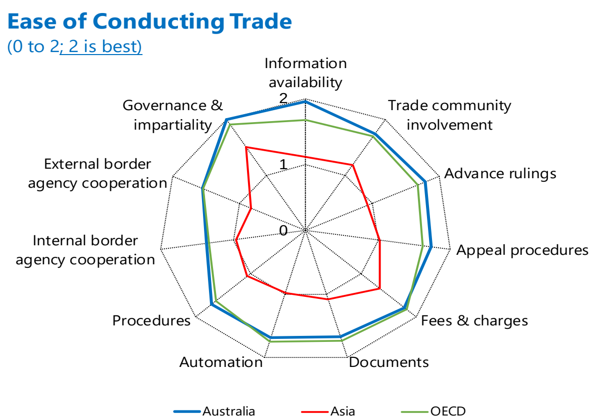
… lagging behind other advanced economies in terms of R&D spending…



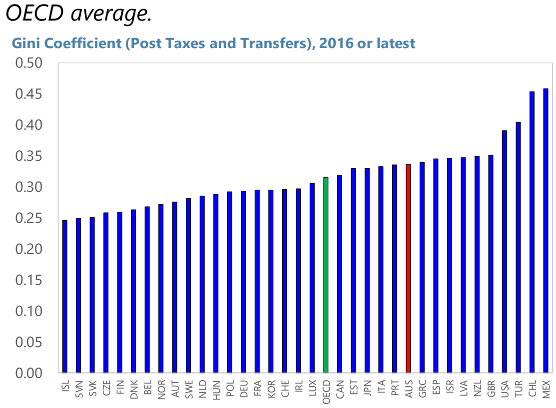
… and it could raise productivity growth by closing infrastructure investment gaps.



This would complement a trade environment which is already highly conducive to strong foreign relationships.



Income inequality in Australia is slightly higher than the OECD average.

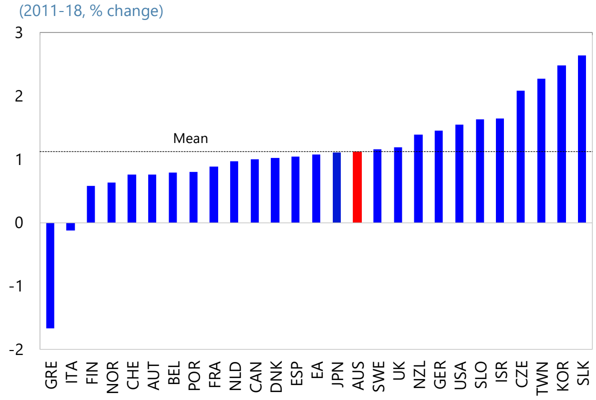


Note: The Global Competitiveness Index combines both official data and survey responses from business executives on several dimensions of competitiveness. This measure of competitiveness is a subjective depiction of competitiveness, particularly in comparison between Australia and its peer group.
Sources: OECD.Stat; World Economic Forum, The Global Competitiveness Report 2018; OECD Main Science and Technology Indicators; Oxford Economics and G-20 Global Infrastructure Hub, Global Infrastructure Outlook; OECD Trade Facilitation Indicators, Department of Foreign Affairs and Trade, Trade in Services Australia, for 2014-15 and 2017-18.

Figure 10. Australia in International Comparison

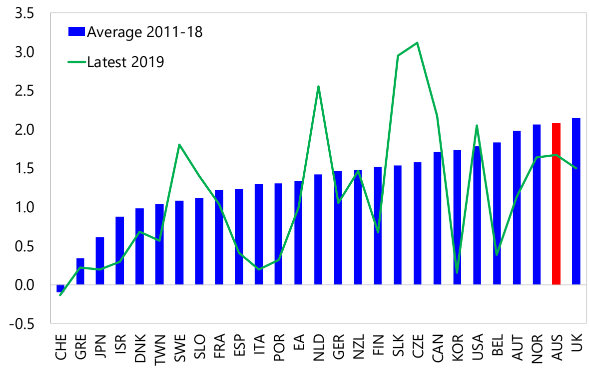
Australia's per capita growth was around the average of AEs over the past eight years.

Average Annual Per Capita Real Growth
(2011-18, % change)



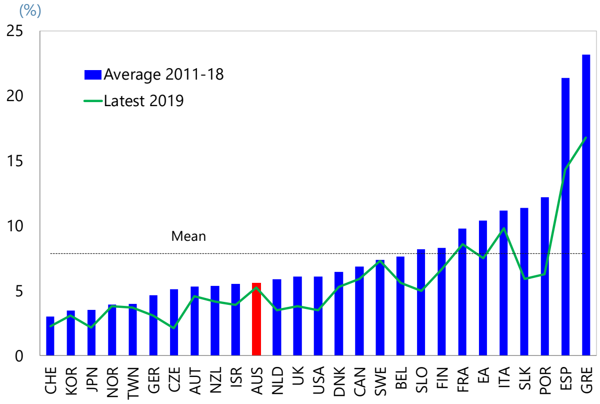
Inflation has been subdued as in other AEs.

Consumer Price Index
(Y/Y % change)



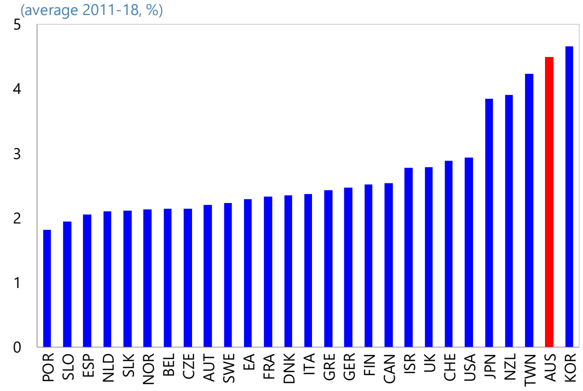
Unemployment is relatively low.

Unemployment Rate
(%)



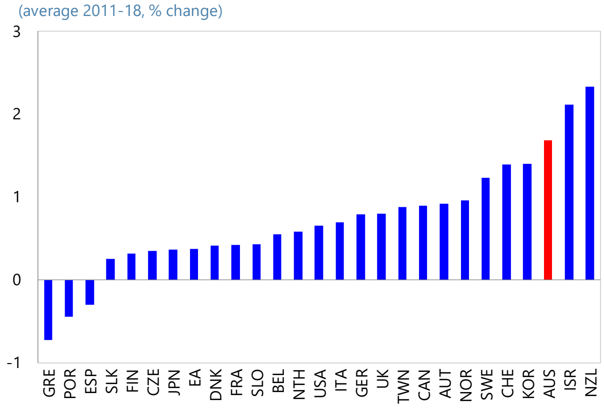
Australia has benefited from growth in dynamic Asian partners.

Trading Partner Growth
(average 2011-18, %)



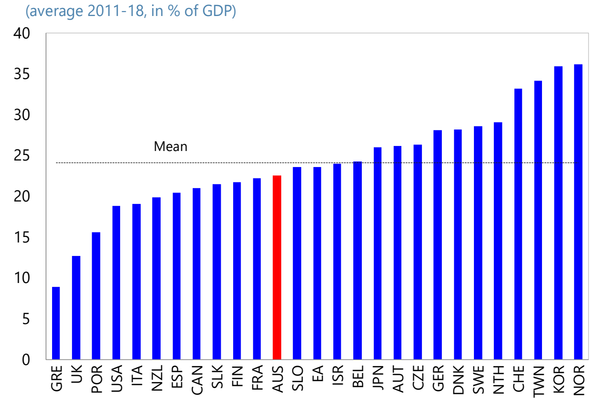
Labor force growth, driven by immigration, has contributed to Australia's growth momentum.

Labor Force Growth
(average 2011-18, % change)



Australia's national saving ratio is close to average.

Gross National Savings
(average 2011-18, in % of GDP)



Source: IMF, World Economic Outlook database.

Table 1. Australia: Main Economic Indicators, 2015-2025

(Annual percent change, unless otherwise indicated)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
					Projections						
NATIONAL ACCOUNTS											
Real GDP	2.3	2.8	2.5	2.7	1.8	2.0	2.4	2.5	2.6	2.6	2.6
Domestic demand	1.0	1.8	3.0	2.9	1.1	1.7	2.4	2.5	2.5	2.5	2.5
Private consumption	2.4	2.7	2.5	2.7	1.4	1.8	2.7	2.7	2.7	2.6	2.6
Public consumption	4.0	5.1	3.9	4.0	5.2	2.9	2.0	2.0	2.0	2.2	2.2
Investment	-4.0	-2.3	3.5	2.4	-2.8	0.3	2.0	2.6	2.8	2.8	2.7
Public	-1.5	14.0	10.4	2.1	1.5	3.4	1.8	1.4	1.2	1.2	1.2
Private business	-9.9	-11.8	4.0	3.2	-0.7	1.0	2.6	3.4	3.8	3.8	3.6
Dwelling	9.1	8.0	-2.2	4.7	-6.9	-5.3	1.0	2.3	2.4	2.5	2.0
Net exports (contribution to growth, percentage points)	0.9	1.4	-0.8	0.2	1.0	0.0	0.0	0.0	0.1	0.1	0.1
Gross domestic income	-0.2	2.8	4.9	3.1	3.4	2.3	1.3	1.3	2.0	2.3	2.4
Investment (percent of GDP) 1/	25.9	24.6	24.2	24.2	22.5	22.3	22.4	22.7	22.8	22.8	22.8
Public	4.4	4.8	5.1	5.1	5.0	5.0	5.0	5.0	5.0	4.9	4.8
Private	21.4	19.7	19.1	19.0	17.7	17.3	17.4	17.6	17.8	17.9	18.0
Mining investment	5.4	3.9	3.1	2.7	2.5	2.7	2.7	2.7	2.7	2.7	2.7
Non-mining investment	16.0	15.8	16.0	16.3	15.1	14.7	14.7	14.9	15.1	15.2	15.3
Savings (gross, percent of GDP)	21.6	20.8	22.0	21.8	22.4	21.9	21.1	20.4	20.2	20.1	20.0
Potential output	2.6	2.5	2.4	2.3	2.2	2.2	2.2	2.3	2.4	2.5	2.5
Output gap (percent of potential)	-1.2	-0.9	-0.8	-0.4	-0.8	-1.0	-0.8	-0.6	-0.4	-0.2	0.0
LABOR MARKET											
Employment	2.0	1.8	2.3	2.7	2.3	2.0	1.8	1.8	1.8	1.8	1.7
Unemployment (percent of labor force)	6.1	5.7	5.6	5.3	5.2	5.2	5.2	5.1	5.0	4.9	4.8
Wages (nominal percent change)	2.1	1.9	1.8	2.1	2.2	2.2	2.3	2.6	3.0	3.3	3.3
PRICES											
Terms of trade index (goods, avg)	88	87	100	103	112	110	105	100	97	95	94
% change	-12.4	-0.4	14.5	3.1	8.6	-2.0	-4.2	-5.2	-3.1	-1.5	-1.1
Iron ore prices (index)	44	46	56	55	74	69	61	56	54	54	54
Coal prices (index)	67	75	101	121	88	83	86	88	88	88	88
LNG prices (index)	61	42	41	55	31	28	35	37	37	37	37
Crude prices (Brent; index)	48	40	50	65	59	60	55	53	52	52	53
Consumer prices (avg)	1.5	1.3	2.0	1.9	1.6	1.9	1.9	2.1	2.3	2.5	2.5
Core consumer prices (avg)	2.3	1.7	1.6	1.6	1.6	1.8	1.9	2.1	2.3	2.5	2.5
GDP deflator (avg)	-0.7	1.0	3.7	2.2	3.3	1.2	0.8	1.3	2.0	2.2	2.3
FINANCIAL											
Reserve Bank of Australia cash rate (percent, avg)	2.1	1.7	1.5	1.5	1.2	0.4	0.3	0.5	1.0	1.5	2.0
10-year treasury bond yield (percent, avg)	2.7	2.3	2.6	2.6	1.4	0.5	0.5	0.9	1.4	1.9	2.4
Mortgage lending rate (percent, avg)	5.6	5.4	5.2	5.3	4.8	4.3	4.3	4.8	5.3	5.8	6.3
MACRO-FINANCIAL											
Credit to the private sector	6.8	5.6	5.2	4.7	2.3	3.4	4.3	4.5	4.8	5.0	5.0
House price index	131	141	148	140	144	149	154	159	163	168	173
% change	8.7	7.7	5.0	-5.1	2.5	3.7	3.4	3.0	3.0	3.0	3.0
House price-to-income, capital cities (ratio)	4.5	4.7	4.7	4.4	4.3	4.3	4.3	4.2	4.2	4.1	3.9
Interest payments (percent of disposable income)	8.8	8.6	8.9	9.0	7.4	6.4	6.3	7.1	7.8	8.5	8.5
Household savings (percent of disposable income)	6.4	5.0	4.1	2.9	3.4	4.3	3.6	3.2	3.2	3.2	3.3
Household debt (percent of disposable income) 2/	173	180	187	187	185	183	181	178	175	172	170
Business credit (percent of GDP)	51	51	50	50	49	49	49	50	50	50	51
GENERAL GOVERNMENT (percent of GDP) 3/											
Revenue	34.2	34.8	34.6	35.5	36.0	35.8	36.0	35.9	35.3	35.3	35.3
Expenditure	37.2	37.5	36.9	36.6	36.8	36.9	36.6	36.1	35.4	35.2	35.1
Net lending/borrowing	-2.9	-2.7	-2.3	-1.1	-0.8	-1.0	-0.6	-0.1	0.0	0.2	0.3
Commonwealth only	-2.6	-2.3	-1.9	-0.3	0.1	0.2	0.2	0.4	0.1	0.3	0.4
Operating balance	-1.7	-1.4	-0.8	0.5	1.0	0.9	1.4	1.7	1.6	1.7	1.8
Cyclically adjusted balance	-2.7	-2.4	-2.2	-1.0	-0.7	-0.9	-0.4	0.0	0.1	0.2	0.3
Gross debt	35.8	39.5	41.0	41.2	41.7	43.0	42.7	43.0	41.7	40.2	38.7
Net debt	16.4	19.0	18.5	19.1	19.8	20.9	20.8	20.1	19.1	17.9	16.7
Net worth	50.9	46.0	50.1	49.5	34.9	42.7	44.4	46.4	47.5	47.1	46.6
BALANCE OF PAYMENTS											
Current account (percent of GDP)	-4.6	-3.3	-2.6	-2.1	0.4	-0.4	-1.3	-2.2	-2.6	-2.8	-2.8
Export volume	6.5	6.9	3.4	5.1	3.5	1.7	2.1	2.1	2.3	2.3	2.5
Import volume	2.0	0.1	7.8	4.1	-1.1	1.6	2.4	2.1	2.0	2.0	2.0
Net international investment position (percent of GDP)	-56	-57	-54	-54	-49	-48	-48	-48	-49	-49	-50
Gross official reserves (bn A$)	63	74	85	76	…	…	…	…	…	…	…
MEMORANDUM ITEMS											
Nominal GDP (bn A$)	1,641	1,703	1,808	1,899	1,995	2,060	2,127	2,209	2,314	2,427	2,547
Percent change	1.6	3.8	6.2	5.0	5.1	3.3	3.3	3.9	4.7	4.9	5.0
Real GDP per capita (% change)	0.8	1.1	0.8	1.1	0.2	0.5	0.9	0.9	1.1	1.1	1.1
Population (million)	24.0	24.4	24.8	25.2	25.6	26.0	26.4	26.8	27.2	27.6	28.0
Nominal effective exchange rate	90	91	94	90	…	…	…	…	…	…	…
Real effective exchange rate	90	91	94	90	…	…	…	…	…	…	…

Sources: Authorities' data; IMF *World Economic Outlook* database; and IMF staff estimates and projections.

1/ Includes changes in inventories.

2/ Reflects the national accounts measure of household debt, including to the financial sector, state and federal governments and foreign overseas banks and governments. It also includes other accounts payable to these sectors and a range of other smaller entities including pension funds.

3/ Fiscal year ending June.

Table 2. Australia: Fiscal Accounts, 2014/15-2024/25

(In percent of GDP, unless otherwise indicated)

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
					Est.			Projections			
CONSOLIDATED GENERAL GOVERNMENT OPERATIONS 1/											
Revenue	**34.2**	**34.8**	**34.6**	**35.5**	**36.0**	**35.8**	**36.0**	**35.9**	**35.3**	**35.3**	**35.3**
Tax revenue	27.3	27.9	27.6	28.6	28.8	28.9	29.1	29.3	28.9	28.9	28.9
Direct taxes	20.0	20.2	20.1	21.1	21.5	21.4	21.7	21.9	21.5	21.5	21.5
Individual and withholding	14.1	14.5	14.2	14.4	14.7	14.7	14.9	15.2	14.8	14.8	14.8
Corporate	5.9	5.7	5.9	6.7	6.8	6.7	6.7	6.7	6.7	6.7	6.7
Indirect taxes	7.3	7.7	7.5	7.5	7.3	7.4	7.4	7.4	7.4	7.4	7.4
Of which: GST	3.4	3.6	3.5	3.5	3.4	3.3	3.4	3.4	3.4	3.4	3.4
Non-tax revenue	6.9	6.9	7.0	6.9	7.2	7.0	6.9	6.7	6.5	6.4	6.4
Expenditure	**37.2**	**37.5**	**36.9**	**36.6**	**36.8**	**36.9**	**36.6**	**36.1**	**35.4**	**35.2**	**35.1**
Expense	35.9	36.1	35.3	35.0	35.0	34.9	34.6	34.2	33.8	33.6	33.5
Employee expenses	8.5	8.7	8.5	8.5	8.4	8.5	8.0	8.0	7.9	7.8	7.8
Other operating expenses (excl. depreciation)	9.9	10.1	10.3	10.4	10.6	10.7	10.6	10.6	10.4	10.3	10.3
Transfers	12.4	12.0	11.4	11.0	10.8	10.4	10.4	10.3	10.2	10.2	10.1
Current	11.8	11.6	11.0	10.5	10.5	10.2	10.1	10.0	10.0	9.9	9.9
Capital	0.5	0.4	0.4	0.5	0.3	0.2	0.3	0.3	0.2	0.2	0.2
Interest (excl. superannuation)	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2
Other	3.8	3.9	3.8	3.7	3.9	4.0	4.2	4.1	4.1	4.1	4.1
Net acquisition of nonfinancial assets	1.2	1.3	1.5	1.6	1.8	2.0	2.0	1.8	1.6	1.6	1.6
Of which: Gross fixed capital formation	2.9	2.9	3.3	3.4	3.7	4.2	4.0	3.8	3.6	3.6	3.6
Operating balance	-1.7	-1.4	-0.8	0.5	1.0	0.9	1.4	1.7	1.6	1.7	1.8
Primary balance	-1.5	-1.2	-0.9	0.3	0.5	0.3	0.7	1.1	1.1	1.3	1.4
Net lending (+)/borrowing (-)	**-2.9**	**-2.7**	**-2.3**	**-1.1**	**-0.8**	**-1.0**	**-0.6**	**-0.1**	**0.0**	**0.2**	**0.3**
CONSOLIDATED GENERAL GOVERNMENT BALANCE SHEET											
Liabilities	**69.1**	**78.4**	**74.6**	**75.6**	**82.8**	**73.8**	**72.5**	**71.6**	**69.0**	**66.3**	**63.6**
Gross debt	35.8	39.5	41.0	41.2	41.7	43.0	42.7	43.0	41.7	40.2	38.7
Commonwealth	26.3	30.4	32.3	32.3	33.1	32.5	31.7	31.6	30.2	29.1	27.8
States, territories and local governments	9.5	9.1	8.7	8.9	8.5	10.5	11.0	11.4	11.5	11.2	10.9
Other liabilities	33.3	38.9	33.6	34.4	41.1	30.8	29.8	28.6	27.3	26.1	24.9
Assets	**120.0**	**124.4**	**124.7**	**125.1**	**117.6**	**116.5**	**116.9**	**118.0**	**116.6**	**113.4**	**110.2**
Financial assets	48.5	50.0	51.8	52.1	46.5	46.2	46.8	48.3	48.3	46.7	45.1
Other assets	71.5	74.4	72.9	73.0	71.1	70.3	70.1	69.6	68.2	66.7	65.1
Net financial worth	**-20.5**	**-28.4**	**-22.8**	**-23.5**	**-36.3**	**-27.6**	**-25.7**	**-23.3**	**-20.7**	**-19.6**	**-18.5**
Net debt	**16.4**	**19.0**	**18.5**	**19.1**	**19.8**	**20.9**	**20.8**	**20.1**	**19.1**	**17.9**	**16.7**
Commonwealth 2/	14.9	18.0	18.3	18.6	19.2	18.2	17.4	16.4	15.6	14.6	13.5
States, territories and local governments	1.6	1.0	0.1	0.4	0.6	2.8	3.4	3.6	3.5	3.3	3.2
Net worth	**50.9**	**46.0**	**50.1**	**49.5**	**34.9**	**42.7**	**44.4**	**46.4**	**47.5**	**47.1**	**46.6**
Commonwealth	-18.6	-25.1	-22.6	-23.2	-27.9	-15.9	-15.0	-13.8	-12.6	-11.3	-10.0
States, territories and local governments	69.5	71.1	72.7	72.7	62.8	58.6	59.4	60.2	60.1	58.4	56.6
MEMORANDUM ITEMS											
Cyclically adjusted balance (in percent of potential GDP)	-2.7	-2.4	-2.2	-1.0	-0.7	-0.9	-0.4	0.0	0.1	0.2	0.3
Fiscal impulse (change in CAB; in percent of potential GDP)	-0.1	-0.2	-0.3	-1.2	-0.3	0.2	-0.4	-0.4	-0.1	-0.1	-0.1
Change in real revenue (percent)	1.4	2.5	3.8	5.7	5.0	1.7	1.7	1.2	0.5	2.2	2.4
Change in real primary expenditure (percent)	1.3	1.0	2.6	0.5	3.9	2.0	1.7	1.7	1.5	1.4	2.0
Commonwealth general government 3/											
Revenue	19.9	20.3	20.2	21.2	21.8	22.0	22.0	22.0	21.6	21.6	21.6
Expenditure	22.5	22.6	22.1	21.5	21.6	21.7	21.7	21.7	21.4	21.3	21.2
Net lending (+)/borrowing (-)	-2.6	-2.3	-1.9	-0.3	0.1	0.2	0.2	0.4	0.1	0.3	0.4
States, territories and local governments 4/											
Revenue	13.6	14.0	13.7	13.7	13.5	13.4	13.6	13.5	13.3	13.4	13.4
Expenditure	13.7	14.1	14.0	14.3	14.2	14.4	14.2	13.7	13.2	13.2	13.2
Net lending (+)/borrowing (-)	-0.1	-0.1	-0.2	-0.5	-0.7	-1.0	-0.6	-0.2	0.1	0.2	0.2
Commonwealth transfers to subnational governments	6.6	6.6	6.7	6.8	6.8	6.4	6.7	6.7	6.7	6.7	6.7
Of which: General revenue assistance	3.6	3.6	3.6	3.6	3.6	3.4	3.4	3.5	3.5	3.5	3.5
Nonfinancial public sector capital stock	99.4	103.2	100.3	101.0	100.1	102.3	103.3	103.2	101.7	99.9	98.0
GDP (in billion A$)	1,624	1,661	1,764	1,850	1,948	2,029	2,093	2,164	2,261	2,369	2,486

Sources: Authorities' data and IMF staff estimates and projections.

1/ Accrual basis; GFS. Comprises the Commonwealth, and state, territory, and local goverments.

2/ Includes Future Fund assets.

3/ Excludes general revenue assistance to states and territories from revenue and expenditure.

4/ Excludes Commonwealth payments for specific purposes from revenue and expenditure.

Table 3. Australia: Balance of Payments, 2015-2025
(In percent of GDP, unless otherwise indicated)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
							Projections				
Current account	-4.6	-3.3	-2.6	-2.1	0.4	-0.4	-1.3	-2.2	-2.6	-2.8	-2.8
Balance on goods and services	-2.3	-0.8	0.5	1.2	3.5	3.0	2.0	1.0	0.5	0.3	0.2
Exports of goods and services	19.7	19.8	21.4	23.1	24.9	24.4	23.4	22.6	21.9	21.4	21.0
Exports of goods	15.3	15.2	16.7	18.2	19.8	19.5	18.7	17.9	17.2	16.7	16.3
Of which: Resources	8.8	8.8	10.5	12.0	13.5	13.5	12.8	12.1	11.5	11.1	10.9
Exports of services	4.5	4.6	4.7	4.9	5.0	4.8	4.7	4.7	4.7	4.6	4.6
Imports of goods and service	22.0	20.6	20.9	21.9	21.3	21.4	21.4	21.5	21.3	21.0	20.7
Imports of goods	16.8	15.7	16.0	16.7	16.2	16.3	16.4	16.6	16.4	16.2	15.9
Imports of services	5.2	4.9	4.9	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.8
Primary income, net	-2.3	-2.4	-3.0	-3.2	-3.1	-3.3	-3.3	-3.2	-3.1	-3.1	-3.0
Interest payments	-1.3	-1.2	-1.1	-1.3	-1.1	-0.9	-0.9	-0.7	-0.7	-0.9	-1.0
Equity income	-0.6	-0.8	-1.4	-1.5	-1.6	-2.0	-2.0	-2.2	-2.1	-1.9	-1.8
Secondary income, net	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Capital and financial account											
Capital account, net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account, net	4.8	3.1	2.9	2.5	-0.2	0.4	1.4	2.3	2.7	2.8	2.9
Direct investment	3.2	3.6	2.8	4.3	2.8	2.3	2.2	2.2	2.2	2.2	2.2
Equity	1.2	3.0	2.7	4.0	2.9	2.3	2.2	2.2	2.2	2.2	2.2
Debt	1.9	0.7	0.2	0.3	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Portfolio investment	2.4	-2.2	1.5	-0.8	-3.2	0.3	0.6	0.6	0.7	0.7	0.5
Equity	0.8	-0.4	-1.1	-2.9	-1.7	-0.5	-0.2	-0.1	-0.1	-0.1	-0.1
Debt	1.6	-1.8	2.6	2.1	-1.5	0.8	0.7	0.7	0.8	0.7	0.6
Financial derivatives	-0.1	0.3	-1.0	-0.4	-0.1	-0.3	-0.2	-0.3	-0.2	-0.2	-0.2
Other investment	-0.9	2.0	0.3	-1.4	0.0	-1.8	-1.2	-0.4	0.0	0.2	0.3
Reserve assets	0.2	-0.6	-0.7	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Net errors and omissions	-0.1	0.1	-0.3	-0.4	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET											
Net international investment position	-56	-57	-54	-54	-49	-48	-48	-48	-49	-49	-50
Equity, net	5	2	3	5	9	7	5	2	0	-2	-4
Assets	67	70	73	74	85	85	85	85	85	85	85
Liabilities	63	67	70	68	76	78	80	83	85	87	89
Debt, net	-61	-59	-57	-59	-58	-55	-52	-51	-49	-47	-46
Assets	68	67	62	63	68	68	68	68	68	68	68
Liabilities	129	127	119	122	126	123	120	119	117	115	114
External assets (gross)	135	137	134	137	152	153	153	154	154	154	154
Equity	67	70	73	74	85	85	85	85	85	85	85
Debt	68	67	62	63	68	68	68	68	68	68	68
External liabilities (gross)	192	194	189	191	201	201	201	202	202	203	203
Equity	63	67	70	68	76	78	80	83	85	87	89
Debt	129	127	119	122	126	123	120	119	117	115	114
Of which: foreign currency, hedged	50	44	36	39	39	38	38	37	37	36	36
A$-denominated	54	58	59	59	61	60	59	58	57	56	55
Short-term	43	44	40	40	38	37	37	36	36	35	35
MEMORANDUM ITEMS											
Gross official reserves (bn A$)	63	74	85	76	...	...	...	...	...	...	...
In months of prospective imports	2.1	2.4	2.5	2.2	...	...	...	...	...	...	...
In percent of short-term external debt	8.8	9.9	11.9	10.1	...	...	...	...	...	...	...
Net official reserves (bn A$)	58	58	57	62	...	...	...	...	...	...	...
Iron ore prices (index)	44	46	56	55	74	69	61	56	54	54	54
Coal prices (index)	67	75	101	121	88	83	86	88	88	88	88
Oil prices (Brent crude; index)	61	42	41	55	31	28	35	37	37	37	37

Sources: Authorities' data and IMF staff estimates and projections.

Table 4. Australia: Monetary and Financial Sector, 2015-2025

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
					Est.			Projections			
BALANCE SHEET					In billions of A$						
Total assets 1/	4,023	4,230	4,187	4,406	4,550	4,742	4,943	5,158	5,393	5,640	5,900
Currency and deposits	275	310	255	306	377	389	402	417	437	458	481
Securities other than shares	607	626	624	634	669	691	713	741	776	814	854
Loans	2,894	3,043	3,100	3,244	3,266	3,377	3,515	3,668	3,845	4,036	4,239
Claims on government	12	11	12	10	9	9	10	10	10	11	11
Claims on MFI	382	391	366	385	409	422	436	453	474	498	522
Claims on non-MFIs	2,204	2,359	2,466	2,577	2,599	2,688	2,803	2,929	3,071	3,224	3,386
o/w private sector	2,204	2,359	2,466	2,577	2,599	2,688	2,803	2,929	3,071	3,224	3,386
Claims on non-residents	295	282	255	271	249	258	266	276	289	303	318
Shares and other equity	56	49	50	46	44	45	47	48	51	53	56
Other (w/o residual)	192	202	185	176	194	200	207	215	225	236	248
Other	192	202	160	176	194	241	267	284	285	279	270
Total liabilities 1/	4,023	4,230	4,187	4,406	4,550	4,742	4,943	5,158	5,393	5,640	5,900
Capital and reserves	256	254	270	277	279	288	297	309	323	339	356
Borrowing from RBA	73	78	87	88	88	91	94	98	103	108	113
Liabilities to other MFIs	759	792	763	796	836	873	912	954	996	1041	1088
Deposits of non-banks	2,359	2,503	2,493	2,662	2,719	2,841	2,969	3,102	3,242	3,388	3,540
Debt securities	385	405	422	419	441	456	470	489	512	537	563
Other liabilities	191	198	153	164	187	193	200	207	217	228	239
					In percent of GDP						
Total assets (w/o residual) 1/	245	248	232	232	228	230	232	233	233	232	232
Loans	176	179	171	171	164	164	165	166	166	166	166
Claims on MFI	23	23	20	20	21	21	21	21	21	21	21
Claims on non-MFIs	134	139	136	136	130	130	132	133	133	133	133
					Percent change						
Credit non-bank private sector 2/	6.6	5.6	4.8	4.3	2.4	3.4	4.3	4.5	4.8	5.0	5.0
o/w Housing credit	7.4	6.3	6.3	4.7	3.1	4.0	4.5	4.5	4.9	5.1	5.2
o/w Owner-occupied housing	7.4	7.9	8.0	6.5	5.0	5.4	6.1	6.0	6.5	6.7	6.7
o/w Investor housing	7.3	3.6	3.4	1.1	-0.3	0.9	0.9	0.9	0.9	0.9	0.9
Personal credit	0.0	-0.8	-1.1	-2.1	-5.1	0.5	0.5	0.5	0.5	0.5	0.5
Business credit	6.4	5.5	3.0	4.7	2.5	2.8	4.4	5.0	5.3	5.3	5.3

Sources: IFS (Other Depository Corporations, Table ODC-2SR) , RBA, APRA, and IMF staff projections.
Notes: 1/ IFS (Other Depository Corporations, Table ODC-2SR).
2/ RBA (Table D1 Growth in selected financial aggregates).

Table 5. Australia: Selected Financial Soundness Indicators of the Banking Sector

(Year-end unless otherwise noted, in percent)

	2014	2015	2016	2017	2018	2019Q3
Capital Adequacy						
Regulatory capital to risk-weighted assets	12.4	13.9	13.8	14.7	14.9	15.4
Regulatory Tier I capital to risk-weighted assets	10.7	11.9	11.6	12.5	12.8	12.9
Capital to assets	5.9	6.0	6.6	6.9	6.9	7.3
Large exposures to capital	76.0	82.0	82.3	76.5	79.3	...
Nonperforming loans net of loan-loss provisions to capital	9.8	7.9	7.8	7.3	7.8	7.9
Asset Quality						
Nonperforming loans to total gross loans	1.1	0.9	1.0	0.9	0.9	1.0
Sectoral distribution of loans to total loans						
Residents	92.9	90.5	92.2	93.3	93.1	94.3
Deposit-takers	0.1	0.1	0.1	0.2	0.2	0.2
Central bank	0.0	0.0	0.0	0.0	0.0	0.0
Other financial corporations	2.8	3.1	3.3	3.4	3.6	3.5
General government	0.3	0.3	0.3	0.2	0.2	0.2
Non-financial corporations	23.2	22.7	23.0	23.0	22.9	23.2
Other domestic sectors	66.6	64.3	65.5	66.6	66.2	67.2
Nonresidents	7.1	9.5	7.8	6.7	6.9	5.7
Earnings and Profitability						
Return on assets	1.2	1.4	0.8	1.2	1.3	0.9
Return on equity	20.8	23.8	12.1	16.7	19.4	12.0
Interest margin to gross income	66.9	59.4	82.5	71.3	64.9	77.2
Noninterest expenses as a percentage of gross income	47.9	42.8	53.8	47.5	44.7	55.1
Liquidity						
Liquid assets to total assets	16.4	17.0	17.6	17.8	18.0	15.9
Liquid assets to short-term liabilities	40.2	39.7	41.2	40.1	41.9	34.5

Sources: APRA and IMF, Financial Soundness Indicators (FSI) database.

Annex I. External Sector Assessment

Overall Assessment: *Based on preliminary data and EBA model results, the external position in 2019 is estimated to have been broadly in line with medium-term fundamentals and desirable policies.* While the CA is estimated at a surplus of about 0.4 percent of GDP mainly due to a temporary surge in commodity prices, exchange rate depreciation, and weaker domestic demand, it remains broadly in line with medium-term fundamentals and desirable policies. **Potential Policy Responses:** with below-potential growth, weakening inflation expectations, and continued global downside risks, the policy mix should remain accommodative. Continued data-dependent monetary policy easing will be appropriate to support demand and inflation expectations. The fiscal stance is appropriately expansionary for FY2019/20 but the planned contraction for FY2020/21 should be reconsidered. The authorities should be ready for a coordinated monetary and fiscal policy response if downside risks materialize. Structural reforms should aim at boosting productivity, especially of the non-mining sector.						
Foreign Asset and Liability Position and Trajectory	**Background.** Australia has a large and relatively stable negative NIIP, which is estimated at about –49.1 percent of GDP in 2019. Liabilities are largely denominated in Australian dollars, whereas assets are in foreign currency. Foreign liabilities are composed of about one-quarter of FDI, one-half of portfolio investment (principally banks' borrowing abroad and foreign holdings of government bonds), and one-quarter of other investment and derivatives. The NIIP improved by around 4.5 percent of GDP in 2019, driven by the improved CA balance and nominal economic growth. The NIIP-to-GDP ratio is expected to remain around –50 percent of GDP over the medium term. **Assessment.** The NIIP level and trajectory are sustainable. The External Stability approach suggests that the NIIP would be stable at around current levels over the medium term with a CA deficit at around 2.5 percent of GDP. The structure of Australia's external balance sheet reduces the vulnerability associated with its high negative NIIP. With a positive net foreign currency asset position, a nominal depreciation tends to strengthen the external balance sheet, all else equal. The banking sector's net foreign currency liability position is mostly hedged. The maturity of banks' external funding has lengthened since the global financial crisis, and in a tail risk event where domestic banks suffer a major loss, the government's strong balance sheet position allows it to offer credible support.					
2019 Est. (% GDP)	NIIP: –49.1	Gross Assets: 152.3	Debt Assets: 67.8	Gross Liab.: 201.4	Debt Liab.: 125.8	
Current Account	**Background.** Australia has run CA deficits for most of its history, reflecting a structural saving-investment imbalance with very high private investment relative to a private saving rate that is already high by advanced economy standards. Since the early 1980s, deficits have averaged around 4 percent of GDP. The CA balance in 2019 is estimated to have improved to a surplus of about 0.4 percent of GDP, reflecting mostly strong iron ore prices and a ramp-up in new resource exports, including liquified natural gas. The CA is expected to return to deficit at around 0.4 percent of GDP in 2020, due to still strong though relatively lower commodity prices. Over the medium term, the CA deficit is expected at a level lower than the historical average, given the end of the prolonged import-intensive mining investment boom and a lower interest differential on Australian bonds relative to foreign bonds compared with longer-term averages. With over half of Australia's exports going to emerging Asia, a key risk is a sharper-than-expected slowdown in China resulting in a further sharp decline in commodity prices. **Assessment.** Considering the relative output gaps and the cyclical component of the commodity terms of trade, the EBA model estimates a cyclically adjusted CA balance of 0.1 percent of GDP for 2019. Comparing with the EBA CA norm of –0.4 percent of GDP, this suggests a model-based CA gap of 0.5 percent of GDP. However, in staff's view, two adjustments are warranted: (i) the CA norm of Australia should be adjusted by –1.0 percent of GDP (which implies an adjusted CA norm of –1.4 percent of GDP), reflecting Australia's traditionally large investment needs due to its size, low population density, and initial conditions; and (ii) given that the EBA model may be underestimating the cyclical effects related to the temporary surge in iron ore prices, the projected cyclically-adjusted CA balance should be adjusted by –1.2 percent of GDP (iron ore prices increased to 37 percent above medium-term WEO commodity price assumptions and iron ore exports amount to about 3.3 percent of GDP). Taking these adjustments into consideration, the staff-adjusted CA gap would be in the range of –0.2 to +0.8 percent of GDP (with the midpoint of 0.3 percent of GDP).					
2019 (% GDP)	Projected CA: 0.4	Cycl. Adj. CA: 0.1	EBA CA Norm: –0.4	EBA CA Gap: 0.5	Staff Adj.: -0.2	Staff CA Gap: 0.3
Real Exchange Rate	**Background.** Australia's REER has entered an overall depreciation path since the unwinding of the commodity boom in 2014. As of November 2019, the REER was around 4.7 percent below the 2018 average, partly reflecting uncertainties related with US-China trade tensions, volatile commodity prices, as well as narrowing interest gap between Australia bonds and U.S. treasury bills. **Assessment.** For 2019, the REER gap is tentatively estimated to be in the range of -3 to 0 percent of GDP (with the midpoint of 1.5 percent of GDP) by the EBA CA model.					
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The financial account recorded net outflows in Q2-Q3, 2019, reflecting the improvement in the CA balance. Foreign direct investment continued in 2019 but was offset by portfolio investment outflows, against the backdrop of higher interest rates abroad. **Assessment.** Vulnerabilities related to the financial account are limited, supported by a credible commitment to a floating exchange rate.					
FX Intervention and Reserves Level	**Background.** A free floater since 1983. The central bank has not intervened in the foreign exchange market since the GFC. The authorities are strongly committed to a floating regime, which reduces the need for reserve holdings. **Assessment.** Although domestic banks' external liabilities are sizable, they are either in local currency or hedged, so reserve needs for prudential reasons are also limited.					

Annex II. Why Has Business Investment Slowed Down in Australia?[1]

1. Although Australia exhibited relatively strong gross fixed capital formation after the GFC, it slowed after the end of the mining investment boom in 2014. The investment slowdown has been broad-based across non-mining sectors. This has led to capital shallowing, with negative effects on labor productivity. Capital deepening has been significantly hindered in non-mining sectors post-GFC compared to pre-GFC.

2. Three sets of econometric analysis consider long-term determinants of investment.

- **At aggregate-level of non-mining business investment, factors other than economic activities play a role.** These include both global and Australia-specific economic uncertainty, the terms of trade, and the real effective exchange rate.

- **Firm-level data analysis using publicly-listed non-mining corporations suggest further factors holding back business investment.** First, in addition to expected profits, financial conditions (cost of finance, leverage, and liquidity) and uncertainty play key roles in investment decisions. Second, small firms and young firms face more difficulties in accessing financing, an important constraint because these firms tend to have less capacity to self-finance than established, large firms. Third, investment in intangible assets is more sensitive to financial conditions and uncertainty, implying that more restricted access to credit would lead vulnerable firms to cut back investment particularly in intangible assets.

- **Cross-country analysis suggests that product market reform can boost private business investment.** Implementation of major reform is estimated to raise business investment by 4 percent over the medium term. Even though Australia's product market regulations are less restrictive than the OECD average, there is room for improvement—for example in easing the administrative burden for start-ups and simplifying regulations.

3. In the near term, ongoing changes in business investment may be masked by trade policy uncertainty. A study based on a trade policy uncertainty index, econometric analysis, and an IMF macroeconomic model finds that the continued slowdown in business investment may be partly in response to the U.S.-China trade tensions.

4. The investment slowdown, while not unique to Australia, has nonetheless been a drag on stronger economic growth. Australia can take measures to promote non-mining business investment, focused on policy uncertainty, product market reform, easing financial constraints, and encouraging investment through tax policy and R&D. Policy reforms should not favor established, larger firms over small companies and new entrants.

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[1] This annex summarizes the accompanying Selected Issues Paper by, S. Hlatshwayo, Y. Kido, D. Muir, M. Nozaki, Y. Wong and Y. Zhou, "Why Has Business Investment Slowed Down in Australia?"

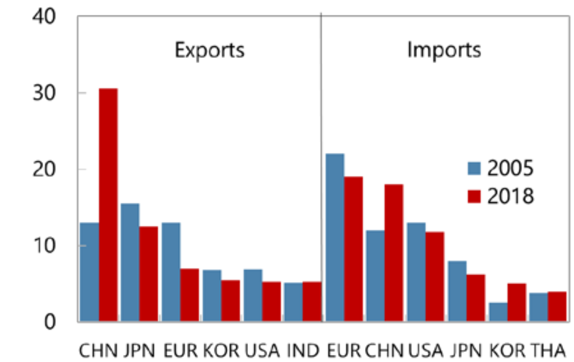
Annex III. Risk Assessment Matrix

	Source of risks	Likelihood	Time horizon	Impact	Policies to reduce impact
	Domestic risks				
	Slowing of economic recovery (downside)	**Medium**	Short to medium term	**M** Private consumption growth can slow down if a more-than-envisaged cooling of labor markets reduces wage growth and squeezes household disposable income, leading to weaker growth and an economic downturn.	Combined monetary policy easing (likely including unconventional monetary policy tools) and fiscal policy loosening.
	Significant housing markets upturn/downturn (upside/downside)	**Medium**	Short to medium term	**H** Risks of a housing market downturn have diminished in the near term, though large negative shocks, domestic or external, would likely interact and amplify vulnerabilities in the housing sector, also posing downside risks to domestic demand. On the upside, loose financial conditions may re-accelerate house price inflation, boosting consumption through wealth effects but increasing financial vulnerabilities.	In case of downside risks, monetary policy easing (likely including unconventional monetary policy tools); fiscal policy loosening. In case upside risks materialize, tightening of macroprudential policies; stepped-up policies to incentivize housing supply.
	Adverse weather conditions (downside)	**High**	Short to medium term	**L/M** Adverse weather conditions such as a worsening of the drought and/or bushfires could disrupt rural agriculture, dampening growth. Impacts would be larger if consumption and tourism in urban areas were affected.	Mitigate the impact on affected regions through disaster-related government programs.
	External Risks				
	Weaker-than-expected growth in China (downside)	**High**	Short to medium term	**H** A sharp growth slowdown in China can be triggered by renewed escalation of trade tensions in the near term and weaker external demand in the medium term. This would result in a large commodity price decline and negatively affect Australia's commodity exports, tourism, and education services, leading to a growth downturn in Australia. The impact would also depend on China's policy response, especially on public investment, which is closely linked to China's imports of iron ore and coking coal.	Combined monetary policy easing (likely including unconventional monetary policy tools) and fiscal policy loosening. Structural fiscal measures to facilitate adjustment in commodity sectors and regions, including active labor market policies.
	Sharp rise in risk premia (downside)	**High**	Short term	**M** An abrupt deterioration in market sentiment (e.g., stresses in emerging markets, a disorderly Brexit) could trigger global risk-off events. Australia would be affected through direct asset price channels, their impact on international funding conditions of Australian banks, and spillovers from their broader effects on global growth and commodity prices. Much would depend on investor sentiment toward Australia.	The exchange rate would likely act as a shock absorber and dampen the impact; monetary policy easing as needed.
	Rising protectionism and retreat from multilateralism (downside)	**High**	Short to medium term	**H** Trade tensions could re-intensify, weakening trade and business confidence. In the medium term, geopolitical competition and protracted tensions can lead to economic fragmentation and undermine the global rules-based order. These would reduce global growth and commodity prices and increase uncertainty and financial market volatility, negatively affecting Australia. A de-escalation of the China-U.S. trade tensions could weaken Australia's commodity exports to China through trade diversion.	Combined monetary policy easing (likely including unconventional monetary policy tools) and fiscal policy loosening. Continued pursuit of open market policies for trade.
	Large swings in energy prices (upside/downside)	**Medium**	Short to medium term	**M** Risks to global energy prices are broadly balanced, reflecting offsetting—but large and uncertain—supply and demand shocks. Persistently high energy prices can promote new investment in coal and LNG sectors over the medium term. While a significant drop in energy prices would hurt these sectors, the growth impact would depend on whether the price drop can be absorbed by profit margins.	The exchange rate would likely act as a shock absorber and dampen the impact; monetary policy response if needed.

Annex IV. The Impact of U.S.-China Trade Tensions on Australia[1]

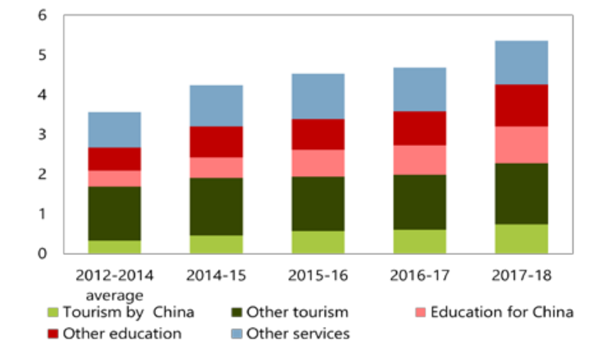
Although China is Australia's largest trading partner, the impact on Australia of the recent U.S.-China trade tensions (and of any potential future re-escalation) are generally expected to be mild to moderate.

Australia's Key Trading Partners
(In percent of exports or imports)



Sources: ABS and RBA calculations.

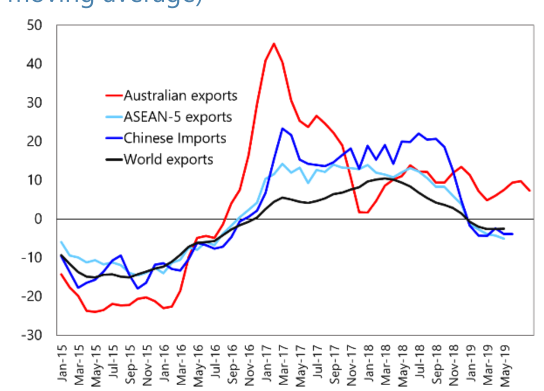
Australia's Exports of Services
(In percent of GDP)



Sources: DFAT, *Trade in Services, Australia*, various volumes since 2014, and IMF staff calculations.

1. **China is Australia's largest trading partner in terms of both imports (almost one-quarter of its total) and exports (almost one-third of its total).** Australian exports are driven by demand for iron ore, coal, and LNG from China's commodity-intensive development and from its growing middle-class demand for services such as tourism and education. China is Australia's top destination for resource exports (51 percent) and rural produce (25 percent). Australia's exports of tourism and education services to China is approaching 2 percent of GDP. Chinese students accounted for nearly 30 percent of Australia's international student enrolments in 2017 and roughly 30 percent of all university income.

Trade Performance
(Year-over-year percent change, 3-month moving average)



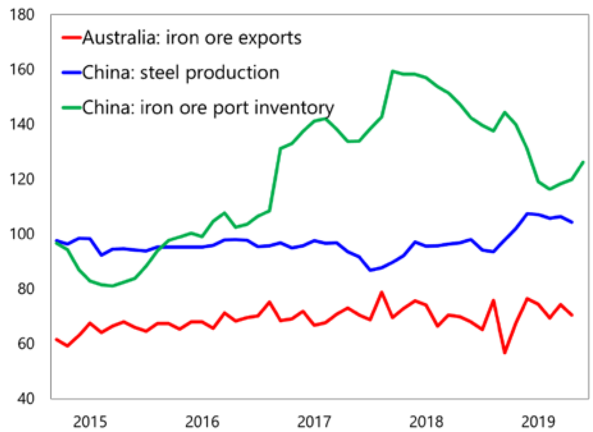
Sources: CEIC, CPB World Trade Monitor, and Haver Analytics

2. **Australia has been largely insulated from the effects of the U.S.-China trade tensions so far.** This is in part because an estimated 77 per cent of Australian resource exports to China are consumed domestically in China, and do not contribute much to China's involvement in global value chains. Overall Australian export growth has remained

[1] Prepared by Dirk Muir (APD), Susanna Mursula (RES), and Yong Sarah Zhou (APD).

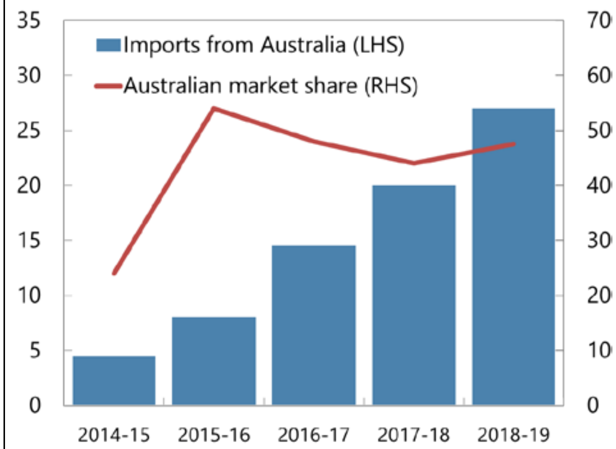
strong, even to China, where exports grew 8.2 percent year-over-year in 2019H1. This contrasts with the 4.1 percent contraction year-over-year in 2019H1 of China's imports.

Iron Ore and Steel Market
(In millions of tons)



Sources: Bloomberg, CEIC, and IMF staff calculations.

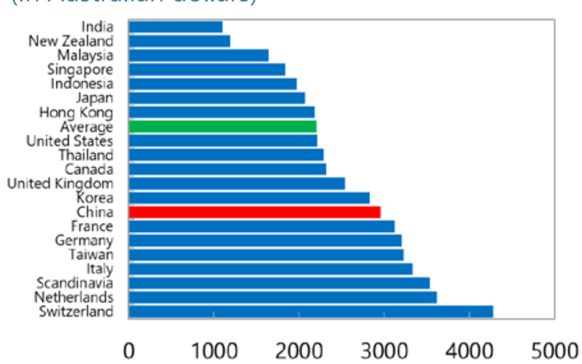
China's Imports of Australian LNG
(In millions of tons, LHS; In percent, RHS)



Source: EnergyQuest.

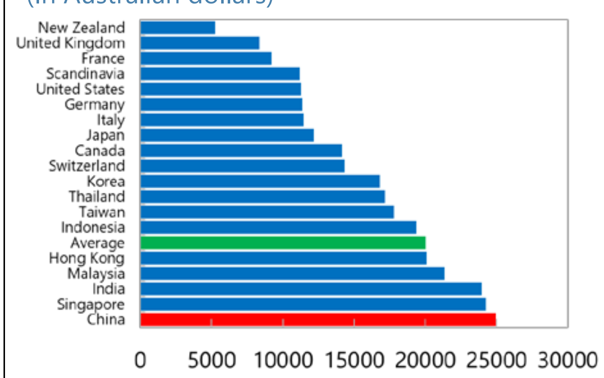
3. Most of the increase in exports has been from demand for natural resources in China. After China's ports reduced their iron ore inventories in early-2019, iron ore exports have returned to their 2018 highs. Australia accounts for 74 percent of China's imported iron ore as China's steel production has risen by 5 percent in 2019H1. Similarly, Australia has helped to fill the gap in Chinese demand after China imposed tariffs on imports of various goods from the United States such as LNG and cotton.

Average Spend Per Tourist, 2018-19
(In Australian dollars)



Source: Tourism Research Australia, *International Visitor Survey Results, August, 2019.*

Average Spend Per Foreign Student, 2018-19
(In Australian dollars)



Source: Tourism Research Australia, *International Visitor Survey Results, August, 2019.*

4. Australia continued to benefit through mid-2019 from Chinese tourism and education-related travel services. While group travel (six or more visitors) to the United States from China declined 34.4 percent for 2018, short-term Chinese visitor arrivals in Australia continued to grow, although moderating to a much lower rate. Australia is receiving more Chinese students amid tighter U.S. visa procedures. Chinese tourists and students spend more than those from other countries. Growth in tertiary-education enrollments by Chinese students in Australia grew by 11.4 percent in 2018 (over 25,000) versus a fall of 2 percent (roughly 23,000) in the United States (ICEF monitor 2019a, 2019b).

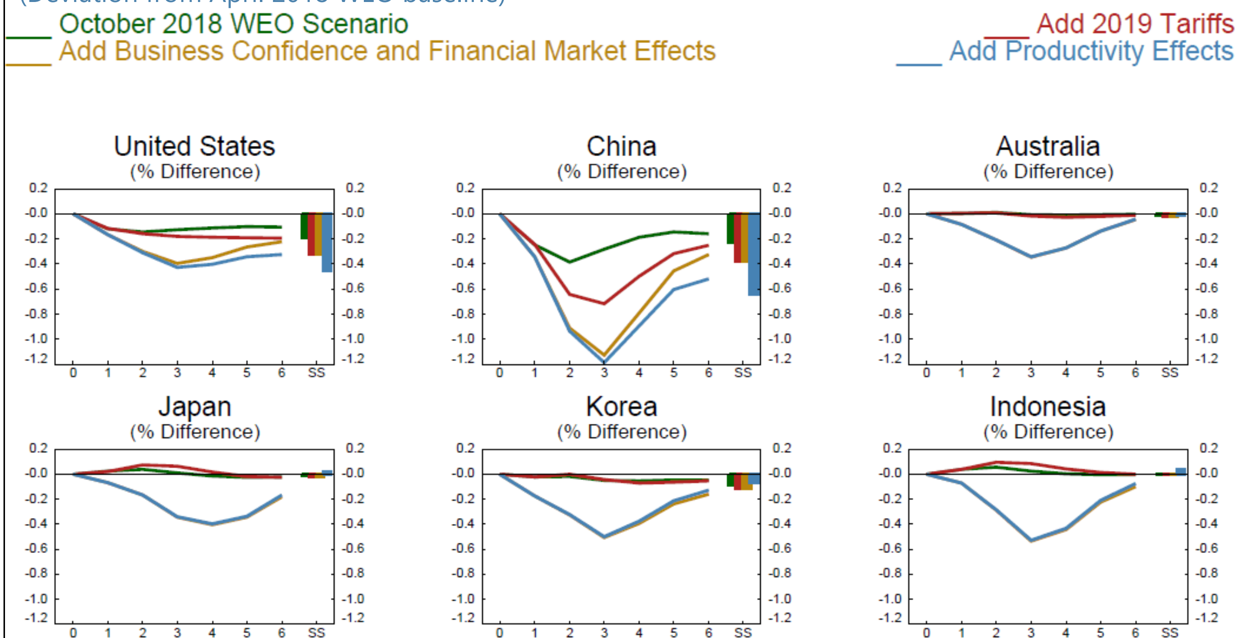
5. Nonetheless, trade tensions between the United States and China are continuing with spillover effects on other countries increasing over time, with uncertainty playing a larger role. The potential effects of the trade tensions have most recently been presented in the October 2019 *World Economic Outlook* (IMF 2019b) using the IMF's Global Integrated Monetary and Fiscal model, GIMF (Anderson and others, 2013; Kumhof and others, 2010). The potential effects are presented below in greater detail, supplemented by an Australia-focused version of the same model (Karam and Muir, 2018). The results differ from the October 2019 WEO as many of the tariffs proposed for 2019 were never implemented and have been dropped from this analysis. This analysis does not account for the "expanded trade" clauses of the "Phase I" trade deal signed between China and United States in January 2020, which could have effects on the composition of China's imports, as it is expected to import an additional $200bn from the United States over two years (2020 and 2021). Another key feature of this analysis is that it does not account for policy responses in any country to counteract the tariff effects. Here, the U.S.-China trade tensions are summarized in four layers focused on the direct impacts of tariffs and their spillovers on short-term business confidence, short-term financial market reactions and productivity:

1) ***October 2018 WEO Scenario*** *(green lines)* – The United States imposed tariffs on steel and aluminum across the world, 25 percent tariffs on $50bn of imports from China and 10 percent tariffs on $200bn of imports from China. China imposed commensurate tariffs in retaliation against $130bn of U.S. goods.
2) ***2019 Tariffs*** *(red lines)* – The United States introduced 15 percent tariffs on roughly $120bn of goods imported from China in late 2019, that were cut in half in 2020. China imposed commensurate retaliation against the United States.
3) ***Business Confidence and Financial Market Effects*** *(blue lines)* – Business investment faces two negative impacts - lower business confidence, quantified by the Baker-Bloom-Davis economic policy uncertainty index for the United States and short-term impacts on corporate spreads, based on private-sector-estimated impacts on U.S. corporate earnings. These are translated to other countries by their trade openness and relative sovereign credit ratings, respectively.
4) ***Productivity Effects*** – Shocks to economy-wide productivity capture the effects of the reallocation of labor across different sectors in each country based on the results from a computable general equilibrium (CGE) trade model (Caliendo and others, 2017).

6. While impacts from these four layers from 2018 (Year 1) onwards are large for China and the United States, the impacts are more limited for other countries in the Asia-Pacific region, particularly for Australia (see figure below). China experiences the largest impact on real GDP of -1.2 percent relative to the April 2018 WEO by 2020 (Year 3), followed by United States at -0.5 percent of GDP. Countries with the strongest and most diverse trading relationships with

China, such as Korea, suffer larger spillovers. Those more reliant on the United States may suffer less, as they may experience some trade diversion, as U.S. demand that formerly was met by China can now be met by other partners, not just the domestic economy.

The Impact of U.S.-China Trade Tensions Scenario on Real GDP Across Asia and the Pacific
(Deviation from April 2018 WEO baseline)

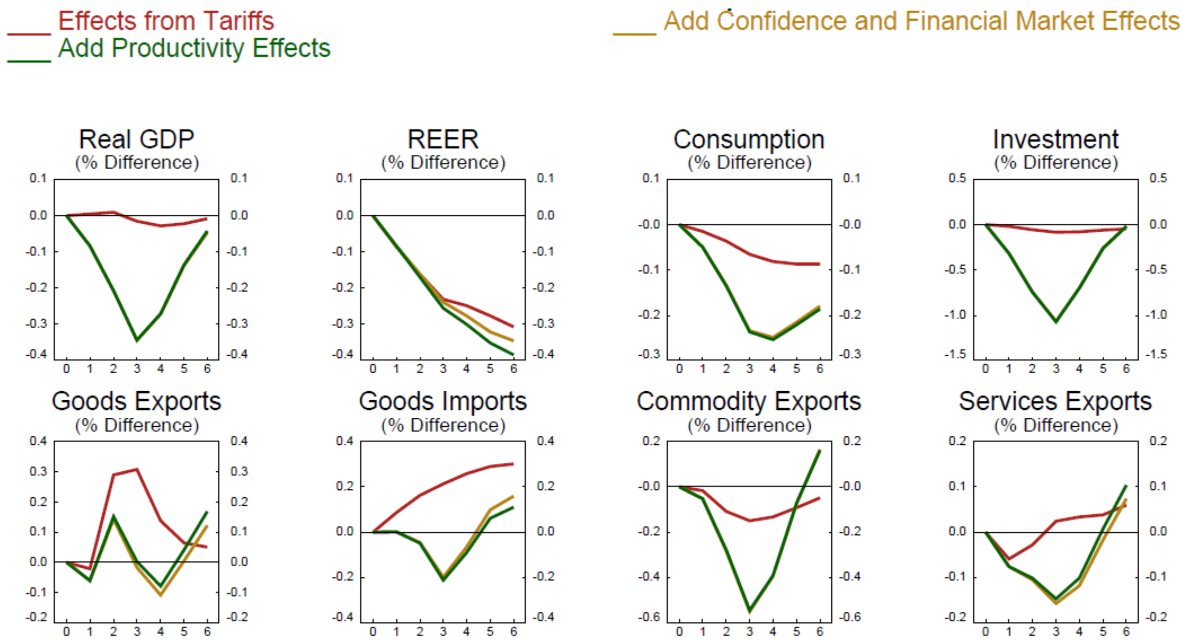


Source: IMF staff calculations.

7. Tariff effects can differ substantially between countries, but business confidence, financial market and productivity effects are a drag on all economies. For Australia and the other major Asian markets shown here, the tariff actions between the United States and China lead to small positive effects, which are trade diversion effects to fill unmet demands in both the United States and China after imposing tariffs on one another. Over half of the negative short-term effects for the United States and China are driven by negative impacts from business confidence and financial markets. For Australia and the large Asian economies, the real GDP losses are fully attributable to the business confidence and financial market effects.[2] Productivity effects are largest on those countries (United States and China) that must adjust their production structures in face of the direct and indirect distortive impacts of tariffs, often shifting to sectors where the country holds less of a comparative advantage.

[2] This quantification of trade policy uncertainty through business confidence and financial market effects differs from that of the accompanying Selected Issues Paper on business investment. These trade policy uncertainty effects are quantified for the tariff actions that were taken (or were expected to be taken) over 2018 and 2019. The Selected Issues Paper considers the risks from potential further business confidence and financial market effects using shocks estimated from the current trade policy uncertainty episode.

The Impact of U.S.-China Trade Tensions on Australia, 2018 to 2023
(Deviations from April 2018 WEO Baseline)



Source: IMF staff calculations.

8. The impact on Australia's real GDP masks the rebalancing that occurs between the domestic and external sectors (figure above)**.** Because of Australia's flexible exchange rate regime, the real effective exchange rate (REER) would depreciate in face of falling demand from China by 0.4 percent by 2023 (Year 6). Therefore, in the external sector, Australia can export more to other countries and shift more into exports of services. This helps offset declines in Chinese demand for Australian commodities. The domestic sector is harder hit, because of the direct impacts of the business confidence and financial market shocks on investment, and lower consumption from the wealth and income shocks from the commodities sector.

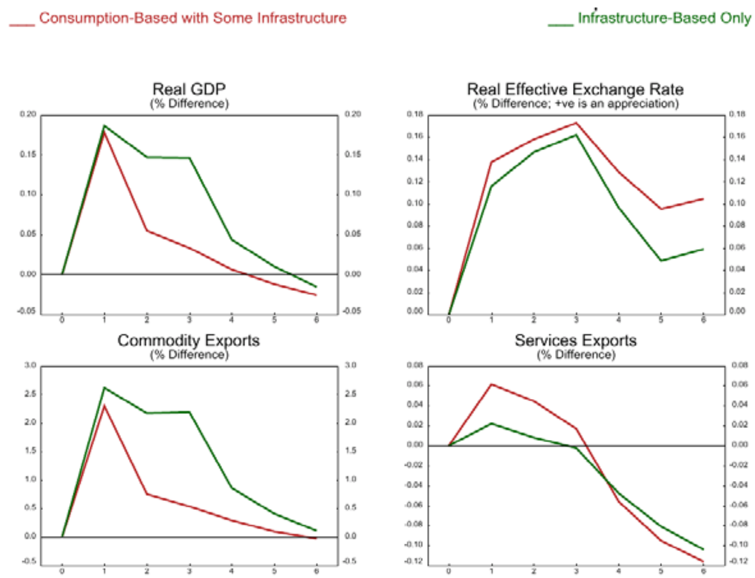
9. Australia might be further affected depending on the nature of China's fiscal stimulus.[3] In 2019, China's stimulus was not only focused on infrastructure investment, but also on

[3] In the first scenario, China's baseline fiscal stimulus is 1.5 percent of GDP in 2019, and 0.8 percent of GDP in 2020 and 2021, reinforced by the central bank not raising interest rates to offset any inflationary effects. The stimulus is composed of 0.7 percent of GDP on infrastructure investment in 2019, with the rest of the stimulus focused on consumption through VAT cuts, PIT cuts and other transfers targeted to lower-income households, consistent with the IMF baseline forecast for 2019 and suggestions for stimulus under an adverse scenario by IMF staff (see IMF 2019a). The second scenario is exclusively an increase in infrastructure investment such that the outcomes for real GDP are the same as in the first scenario, requiring stimulus of roughly half the size of the first scenario. China's steel demand increases by about 0.2 percent of GDP in 2019 and 0.1 percent of GDP in 2020 and 2021, of which half is produced by imports of Australian coal and iron ore.

consumption. This stimulus, along with expected further consumption-based stimulus in 2020 and 2021 in line with the IMF's 2019 Article IV consultation (IMF 2019a), would have been supportive for Australia mainly through the Chinese infrastructure investment in 2019, but would be much weaker afterwards, relying on Chinese consumer demand for Australian services (red lines). By contrast, a scenario based on Chinese stimulus focused primarily on infrastructure investment throughout (green lines), more in line with China's historical pattern (but not expected for 2020 and afterwards given China's ongoing rebalancing) would lead to more sustained benefits, mainly through Australian exports of commodities for steel production.

The Impact of China's Fiscal Response on Australia, 2019 to 2024

(Deviations from the U.S.-China Trade Tensions Scenario)

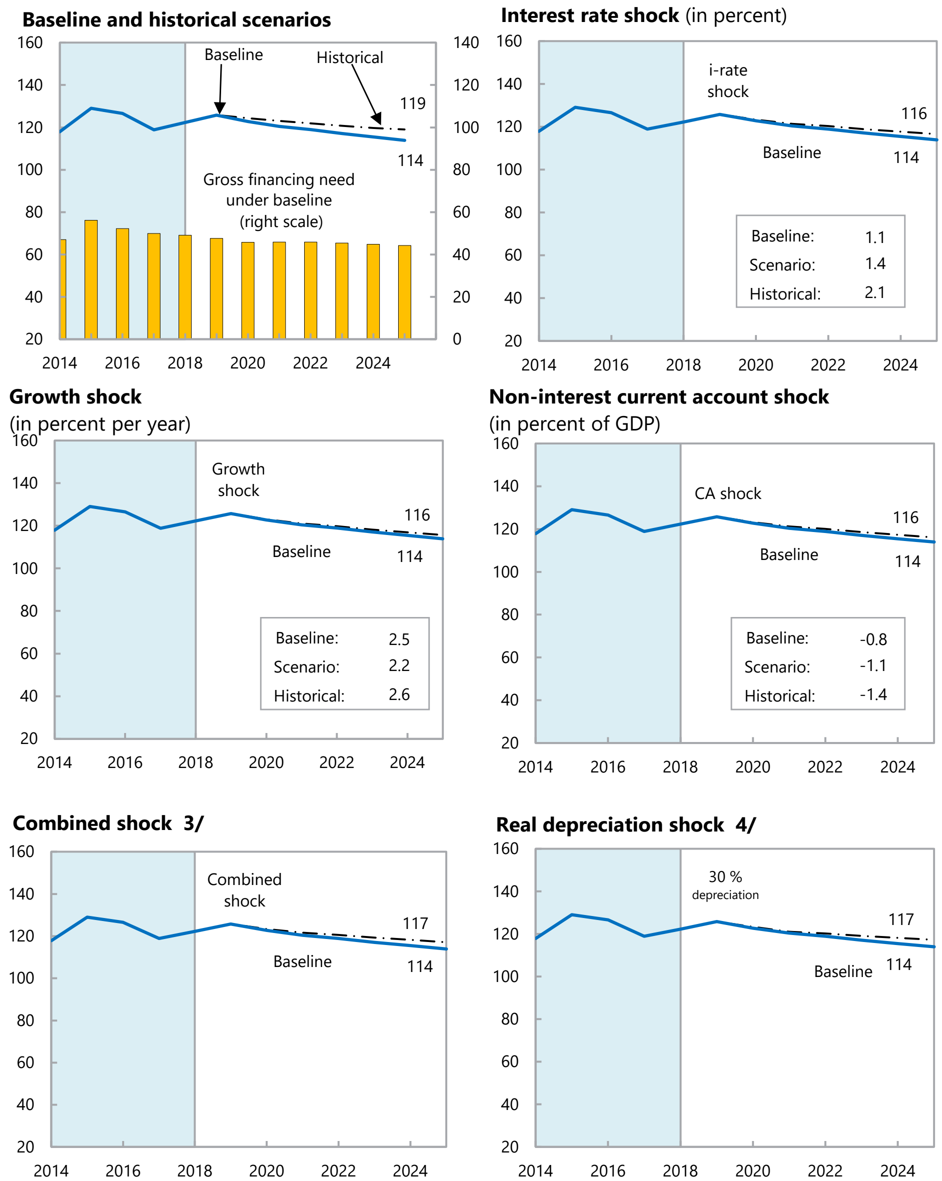


Source: IMF staff calculations

Annex V. Debt Sustainability Analysis

Figure 1. Australia: External Debt Sustainability: Bound Tests 1/ 2/

(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.

2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.

3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

4/ One-time real depreciation of 30 percent occurs in 2018 and 80 percent of fx denominated external debts are assumed to be hedged to local currency.

Figure 2. Australia: Public Sector Debt Sustainability Analysis (DSA) – Baseline Scenario

(In percent of GDP unless otherwise indicated)

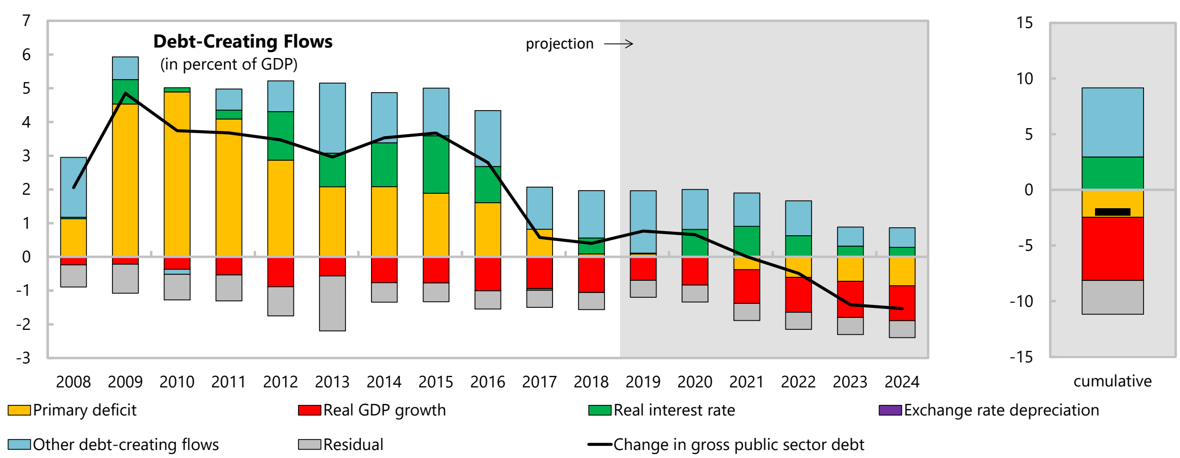
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2008-2016 [2/]	2017	2018	2019	2020	2021	2022	2023	2024
Nominal gross public debt	27.0	41.1	41.5	42.2	42.9	42.9	42.4	41.0	39.5
Public gross financing needs	3.4	1.8	1.0	3.7	3.7	3.5	3.6	3.3	3.9
Real GDP growth (in percent)	2.6	2.5	2.7	1.8	2.0	2.4	2.5	2.6	2.6
Inflation (GDP deflator, in percent)	2.0	3.7	2.2	3.3	1.2	0.8	1.3	2.0	2.2
Nominal GDP growth (in percent)	4.7	6.2	5.0	5.1	3.3	3.3	3.9	4.7	4.9
Effective interest rate (in percent) [4/]	5.6	3.6	3.5	3.4	3.2	3.0	2.9	2.9	3.0

As of January 29, 2020		
Sovereign Spreads		
5Y CDS (bp) 3/		29
Ratings	Foreign	Local
Moody's	Aaa	Aaa
S&Ps	AAA	AAA
Fitch	AAA	AAA

Contribution to Changes in Public Debt

	Actual			Projections							
	2008-2016	2017	2018	2019	2020	2021	2022	2023	2024	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	3.4	0.6	0.4	0.8	0.7	0.0	-0.5	-1.4	-1.5	-2.0	
Identified debt-creating flows	4.2	1.1	0.9	1.3	1.2	0.5	0.0	-0.9	-1.0	1.0	
Primary deficit	2.8	0.8	0.1	0.1	0.0	-0.4	-0.6	-0.7	-0.9	-2.5	-0.2
Primary (noninterest) revenue and grants	32.8	34.5	35.3	35.3	35.4	35.5	35.2	34.8	34.8	211.1	
Primary (noninterest) expenditure	35.6	35.3	35.4	35.4	35.4	35.1	34.6	34.1	34.0	208.6	
Automatic debt dynamics [5/]	0.3	-1.0	-0.6	-0.7	0.0	-0.1	-0.4	-0.8	-0.8	-2.7	
Interest rate/growth differential [6/]	0.3	-1.0	-0.6	-0.7	0.0	-0.1	-0.4	-0.8	-0.8	-2.7	
Of which: real interest rate	0.9	-0.1	0.5	0.0	0.8	0.9	0.6	0.3	0.3	3.0	
Of which: real GDP growth	-0.6	-0.9	-1.1	-0.7	-0.8	-1.0	-1.0	-1.1	-1.0	-5.7	
Exchange rate depreciation [7/]	0.0	0.0	0.0	…	…	…	…	…	…	…	
Other identified debt-creating flows	1.2	1.3	1.4	1.8	1.2	1.0	1.0	0.6	0.6	6.2	
Net privatization proceeds (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Stock-flow adjustment, incl. asset changes	1.2	1.3	1.4	1.8	1.2	1.0	1.0	0.6	0.6	6.2	
Residual, including asset changes [8/]	-0.8	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-3.0	



Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data.

3/ Long-term bond spread over U.S. bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as $[(r - \pi(1+g) - g + ae(1+r)]/(1+g+\pi+g\pi))$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi (1+g)$ and the real growth contribution as $-g$.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

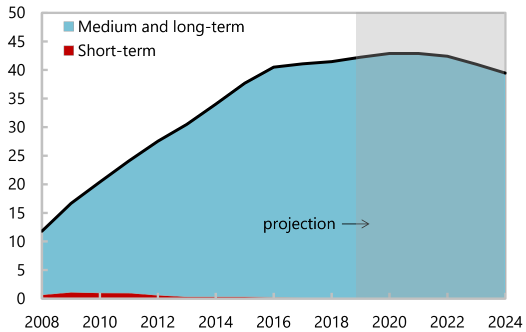
8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

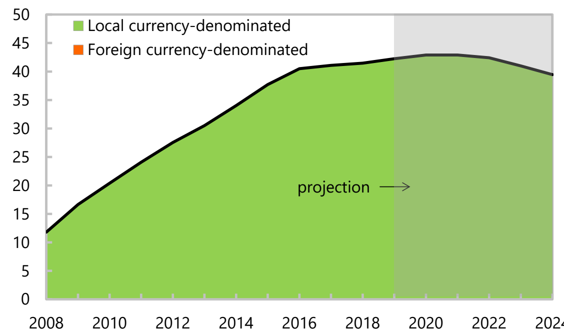
Figure 3. Australia: Public DSA – Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

By Maturity
(in percent of GDP)



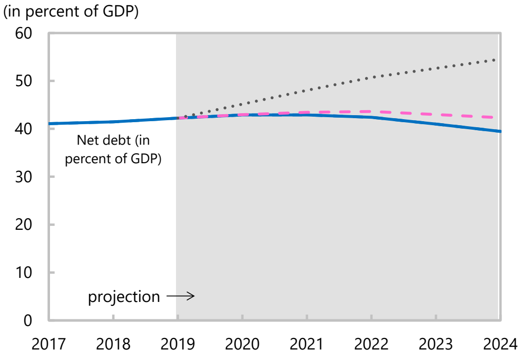
By Currency
(in percent of GDP)



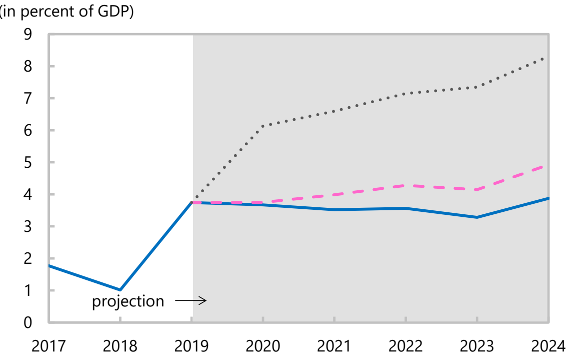
Alternative Scenarios

Baseline Historical Constant Primary Balance

Gross Nominal Public Debt
(in percent of GDP)



Public Gross Financing Needs
(in percent of GDP)



Underlying Assumptions
(in percent)

Baseline Scenario	2019	2020	2021	2022	2023	2024
Real GDP growth	1.8	2.0	2.4	2.5	2.6	2.6
Inflation	3.3	1.2	0.8	1.3	2.0	2.2
Primary Balance	-0.1	0.0	0.4	0.6	0.7	0.9
Effective interest rate	3.4	3.2	3.0	2.9	2.9	3.0
Constant Primary Balance Scenario						
Real GDP growth	1.8	2.0	2.4	2.5	2.6	2.6
Inflation	3.3	1.2	0.8	1.3	2.0	2.2
Primary Balance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Effective interest rate	3.4	3.2	3.0	2.8	2.8	2.9

Historical Scenario	2019	2020	2021	2022	2023	2024
Real GDP growth	1.8	2.6	2.6	2.6	2.6	2.6
Inflation	3.3	1.2	0.8	1.3	2.0	2.2
Primary Balance	-0.1	-2.5	-2.5	-2.5	-2.5	-2.5
Effective interest rate	3.4	3.2	3.2	3.2	3.3	3.5

Source: IMF staff.

Annex VI. Selected Key Macroprudential Policy Measures, 2014-19

<table>
<tr><th>Date</th><th>Measures</th></tr>
<tr><td>Dec 2014</td><td>Speed limit curtailing annual growth in a bank's investor housing lending to 10 percent;
Serviceability assessments for new mortgage lending to include interest rate buffers of at least 2 percentage points above the effective variable rate applied for the term of the loan, and a minimum floor assessment rate of at least 7 percent; and
Supervisors would be alert to high levels of higher-risk mortgage lending with:
high LVR and/or loan-to-income ratio
owner-occupier loans with lengthy interest-only periods</td></tr>
<tr><td>Jul 2015</td><td>Announced an increase in capital adequacy requirements for residential mortgage exposures for ADIs accredited to use the internal ratings-based (IRB) approach to credit risk, effective from July 1, 2016. This change requires an increase of average risk weights to at least 25 percent from about 16 percent, equivalent of increasing minimum capital requirements for major banks by approximately 80 basis points.</td></tr>
<tr><td>Jan 2016</td><td>Countercyclical capital buffer (CCyB) (Basel III) was incorporated into the capital standards for locally incorporated ADIs. The Australian jurisdictional CCyB applying from January 1, 2016 will be zero percent of risk-weighted assets until APRA determines otherwise.</td></tr>
<tr><td>Mar 2017</td><td>Limit the flow of new interest-only lending to 30 percent of new residential mortgage lending, and within that:
Strict internal limits on the volume of interest-only lending at loan-to-valuation ratios (LVRs) above 80 percent; and
Strong scrutiny and justification of any instances of interest-only lending at an LVR above 90 percent; and
Restraint on lending growth in higher-risk segments of the portfolio, e.g. high LTI loans, high LVR loans and very long-term loans.</td></tr>
<tr><td>Apr 2018</td><td>The 10 percent investment lending growth benchmark will no longer apply from July 1, 2018 where an ADI has been operating below it for at least the past 6 months, and the ADI's Board has provided the required assurance to APRA on both lending policies and practices:
Interest rate buffers above 2 percentage points over the loan product rate, and interest rate floors above 7 percent;
application of these interest rate buffers and floors to both a borrower's new and existing debt commitments;
discounts on uncertain and variable income, with haircuts of at least 20 percent for most types of non-salary income and expected rental income;
for interest-only loans, an assessment of serviceability for the period over which the principal and interest repayments apply;
prudently managing overrides to lending policies, with risk tolerances set by the Board on the extent of exceptions to serviceability policy (negative serviceability) and serviceability verification waivers; and
developing internal risk appetite limits on the proportion of new lending at very high debt to income levels (where debt is greater than 6 times a borrower's income), and policy limits on maximum debt to income levels for individual borrowers.</td></tr>
</table>

Date	Measures
Dec 2018	For ADIs that have provided the necessary assurances on their lending standards and are no longer subject to the investor loan growth benchmark of 10 percent, the interest-only benchmark will also no longer apply, effective from January 1, 2019. For other ADIs, it will be removed concurrently with the removal of the investor loan growth benchmark.
July 2019	Removal of the quantitative serviceability floor rate of at least 7 percent, given the prevailing low interest rate environment and introduction of differential pricing for mortgage products. Increase the level of the serviceability buffer to at least 2.5 percentage points over the loan's interest rate from 2 percentage points.

Annex VII. Follow-Up on Key Recommendations of the 2018 FSAP

Recommendation	Time Frame	Developments and Implementation
Banking and Insurance Supervision		
Strengthen the independence of APRA and ASIC, by removing constraints on policy making powers and providing greater budgetary and funding autonomy; strengthen ASICs enforcement powers and expand their use to mitigate misconduct (Treasury, APRA, ASIC).	ST	**In process.** • ASIC's industry funding model, under which it recovers regulatory costs from industry and charges fees for service, came into full effect on July 4, 2018. • The Australian Government has also made a number of changes to ASIC's enforcement powers: (i) on April 6, 2019, ASIC was granted a product intervention power. ASIC has already used this power in the area of short-term credit and has also consulted on proposals to use the power in relation to the sale of binary options, CFDs and add-on financial products by car yards; and (ii) on February 18, 2019, Parliament passed legislation to significantly increase penalties for corporate misconduct. • On November 28, 2019, the Government introduced legislation to strengthen ASIC's licensing and banning powers and enhance ASIC's investigatory capability. The Government has also committed to introduce legislation in Parliament to enhance ASIC's regulatory and supervisory tools such as breach reporting requirements and direction powers by June 2020. • APRA is provided A$150 million in additional funding in the 2019/20 Budget and the Government will consider additional funding need in the 2020/21 Budget process. • APRA's new Enforcement Approach, published on April 15, 2019, set out the future role and use of enforcement activities in achieving its prudential objectives.
Enhance APRA's supervisory approach by carrying out periodic in-depth reviews of governance and risk management (APRA).	ST	**In process.** • Conducting in-depth reviews, both regulated-institution specific and industry wide, of governance and risk management, is a key part of APRA's approach to transforming the Governance, Culture, Remuneration and Accountability (GCRA) of regulated institutions—an important community outcome in APRA's 2019-2023 Corporate Plan. • On November 19, 2019, APRA released its information paper *Transforming Governance, Culture, Remuneration and Accountability: APRA's Approach* outlining APRA's plan to strengthen policy frameworks, sharpen supervisory practices and share insights.

Recommendation	Time Frame	Developments and Implementation
Strengthen the integration of systemic risk analysis and stress testing into supervisory processes (APRA, RBA).	I	**In process.** • APRA is strengthening its systemic risk analysis and stress testing into supervision processes. The key element is the revised Supervision Risk and Intensity (SRI) model that will be replacing the current PAIRS and SOARS ratings and assessments. This model incorporates an External Factors category that will focus on the systemic impacts of the economy and competition on an entity. In addition, the capital section requires supervisors to consider the results of recent stress tests in determining the appropriate rating of capital. This model has been widely tested in APRA and is due to be launched in June/July 2020. • APRA has revised its stress testing strategy to allow for the implementation of industry focused stress test cycles; efficient and repeatable annual stress testing of ADIs; and the expansion of existing data collections to facilitate greater internal modelling and stress testing reconciliations. The implementation of this strategy will enhance the assessments made through the revised SRI model.
Financial Stability Analysis		
Commission and implement results of a comprehensive forward-looking review of potential data needs. Improve the quantity, quality, granularity and consistency of data available to the CFR agencies to support financial supervision, systemic risk oversight and policy formulation (CFR agencies).	MT	**In process.** • A Multi-Agency Data Collection Committee has been established which includes APRA, ASIC, RBA, Treasury and the Australian Bureau of Statistics. • The Committee will review the potential data needs of agencies in a forward-looking way and explore opportunities to streamline activities associated with the collection and use of data. It will improve the quantity, quality, granularity and consistency of data available to support the CFR agencies to perform their functions and exercise their powers, and allow for a unified and strategic approach to data across the agencies.
Enhance the authorities' monitoring, modeling and stress testing framework for assessing solvency, liquidity and contagion risk. Draw on the results to inform policy formulation and evaluation (CFR agencies).	ST	**In process.** • APRA is implementing a new stress testing strategy. Key activities underway include the 2019 Authorized Deposit-Taking Institutions (ADI) Stress Test and the ADI Internal Capital Adequacy Assessment Process (ICAAP) review.
Encourage further maturity extension and lower use of	I	**In process.** • The CFR discussed banks' offshore funding at its September 2019 meeting. Its post-meeting statement

Recommendation	Time Frame	Developments and Implementation
overseas wholesale funding (APRA).		noted that banks manage their risks from offshore borrowing through currency hedging and holding foreign currency liquid assets, and that there are various other factors mitigating the risks. The CFR welcomed the progress that the banks had made in lengthening the maturity of their offshore term debt over recent years and indicated that a further lengthening of the maturity of offshore borrowing would reduce the rollover risk for banks and the broader financial system.
Systemic Risk Oversight and Macroprudential Policy		
Raise formalization and transparency of the CFR and accountability of its member agencies through publishing meeting records as well as publication and presentation of an Annual Report to Parliament by CFR agency Heads (CFR agencies).	I	**In process.** • The CFR has taken a number of steps to increase transparency, including: (i) publishing a statement following regular CFR meetings since December 2018; (ii) increasing coverage of the CFR's work in the RBA's *Financial Stability Review* (released bi-annually); and (iii) updating the CFR website to be more informative about the role and work of CFR. • The Government is ensuring the accountability of APRA and ASIC through the establishment of the Financial Regulator Oversight Authority (FROA), as recommended by the Hayne Royal Commission. The authority, an independently-chaired panel, will report on the regulators' effectiveness in delivering on their mandates. • The Government remains committed to maintaining the independence of the financial system regulators, and accordingly the FROA will not have the power to direct the regulators, or to make, assess or comment on specific regulatory decisions, complaints and like matters.
Undertake a CFR review of the readiness to apply an expanded set of policies to address systemic risks, including data and legal/regulatory requirements; and address impediments to their deployment (CFR agencies).	I	**In process.** • The Housing Market Risk Working Group, under the CFR, actively considers risks to the financial system as well as appropriate policies to address potential risks. The group continues to work on what tools might be available were they needed at some point in the future, the circumstances when they might be suitable, and any restrictions on their use (e.g.: data availability).
Commission analysis by the CFR member agencies on relevant financial stability policy issues, including: policies affecting household leverage; as well as factors affecting international investment flows and their implications for real estate markets (CFR agencies).	MT	**In process.** • The CFR actively considers the impact of policy changes on financial stability. The Housing Market Risk Working Group reports to the CFR quarterly on any risks in the housing market. • The RBA is participating actively in a Committee on the Global Financial System working group studying property price dynamics and, in particular the influence of international investors.

Recommendation	Time Frame	Developments and Implementation
Financial Crisis Management and Safety Nets		
Complete the resolution policy framework and expedite development of resolution plans for large and mid-sized banks and financial conglomerates, and subject them to annual supervisory review (APRA, Treasury).	ST	**In process.** • As set out in its Corporate Plan, APRA will consult on and finalize its prudential framework for recovery and resolution planning in 2020. APRA's strategic initiatives include to uplift capability relating to resolution planning. • Work on major bank resolution planning is ongoing (including through the CFR and Trans-Tasman Council on Banking Supervision (TTBC)).
Extend resolution funding options by expanding loss-absorption capacity for large and mid-sized banks and introduce statutory powers (APRA, Treasury).	ST	**In process.** • On November 8, 2018, APRA released a discussion paper outlining its proposed changes to the application of the capital adequacy framework for ADIs to support orderly resolution in the unlikely event of failure. These changes follow the Australian Government's 2014 Financial System Inquiry recommendation to APRA to implement a framework for minimum loss-absorbing and recapitalization capacity in line with emerging international practice, sufficient to facilitate the orderly resolution of ADIs and minimize taxpayer support. • In early July 2019, APRA released its final position, requiring the D-SIBs to lift Total Capital by three percentage points of RWA by January 1, 2024, and has an overall long-term target of four to five percentage points of loss absorbing capital. Requirements for the mid-sized banks will be settled as part of resolution planning.
Advance mutual understanding between the Australia and New Zealand resolution authorities on cross-border bank resolution modalities, through the Trans-Tasman Banking Council (TTBC) (CFR agencies).	ST	**In process.** • The TTBC continues to discuss and develop mutual understanding of matters relating to cross-border financial stability and bank resolution. To increase awareness of the role of the TTBC, a statement was released in November 2019 following the most recent meeting of the Heads. • Commencing in 2020, APRA, in conjunction with the RBNZ, will be establishing entity specific Crisis Management Group in order to allow for development and evaluation of detailed entity-specific, cross border resolution strategies.
Financial Market Infrastructure		
Strengthen independence of RBA and ASIC for supervisory oversight, enhance enforcement powers and promote compliance with regulatory requirements.	I	**In process.** • The CFR released a consultation paper in November 2019 on proposed enhancements to Australia's FMI regulatory regime. This included proposals for enhanced powers for ASIC and the RBA to support their supervision of FMIs, and their ability to take action to address any identified deficiencies. • The proposals also include the transfer of a range of licensing and supervisory powers from the Minister to

Recommendation	Time Frame	Developments and Implementation
		ASIC and the RBA. Following feedback from stakeholders, the CFR will consider recommending changes to the Government.
Finalize the resolution regime for FMIs in line with the FSB Key Attributes (RBA, ASIC, Treasury).	ST	**In process.** • The CFR released a consultation paper in November 2019 on proposed enhancements to Australia's FMI regulatory regime. This included proposals that would form part of a resolution regime for domestic clearing and settlement facility licensees. Following feedback from stakeholders, the CFR will consider recommending to the Government the implementation of a resolution regime in Australia.
Anti-Money Laundering / Countering the Financing of Terrorism (AML/CFT)		
Expand the AML/CFT regime to cover all designated non-financial businesses and professions (DNFBPs) and strengthen AML/CFT supervision by: improving data collection and risk analysis; increasing oversight of controls and compliance; and undertaking more formal enforcement action in the event of breaches (Department of Home Affairs, Treasury, AUSTRAC).	I	**In process.** • The Government's most recent AML/Counter-Terrorism Financing (CTF) and Other Legislation Amendment Bill 2019 will: (i) strengthen the regime by improving requirements around customer identification, correspondent banking and the sharing of financial intelligence, and (ii) address barriers to the successful prosecution of money laundering offences. • In October 2019, AUSTRAC published its ML/TF risk assessment of Australia's mutual banking sector (including mutual banks, credit unions and building societies). • AUSTRAC received additional Government funding to expand its risk assessment program between 2018-2021. The expansion will see the development of detailed risk assessments of the banking, gambling and remittance sectors. The work will see greater levels of partnership with industry and government Partner Agencies through the mechanism of the Fintel Alliance. • AUSTRAC has taken formal enforcement actions against reporting entities for breaches of the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006*.
I Immediate (within 1 year); ST Short term (within 1-2 years); MT Medium term (within 3-5 years).		
Sources: IMF (2019), Australia, Financial Sector Assessment Program—Financial System Stability Assessment; and the Australian authorities.		

INTERNATIONAL MONETARY FUND

COMMUNICATIONS DEPARTMENT

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International Monetary Fund
700 19th Street, NW
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Appendix I. Draft Press Release

IMF Executive Board Concludes 2019 Article IV Consultation with Australia

On February 21, 2020, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Australia.

Economic growth has recovered gradually in 2019 from the lows in the second half of 2018, supported by accommodative fiscal and monetary policies. Net exports have also contributed to growth, as Australia has largely avoided global trade disruptions. While employment grew significantly, relatively high unemployment and underemployment rates suggest persistent labor market slack. Headline and underlying inflation dipped below the Reserve Bank of Australia (RBA)'s target range of 2-3 percent. Housing prices have experienced a renewed pickup following a marked price correction during 2017-19.

Australian banks have remained adequately capitalized and profitable, with continued reliance on offshore wholesale funding and considerable loan concentration in residential mortgages constituting underlying vulnerabilities. The capital framework for banks has been further strengthened with a higher capital requirement for domestic systemically-important banks from 2024.

A continued gradual economic recovery is expected, subject to downside risks. Growth should continue to recover in 2020, but it will take time for the economy to return to potential and restore inflation to within the target range. Risks to the outlook remain tilted to the downside.

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

External risks include a possible re-escalation of US/China trade tensions and a sharp tightening of global financial conditions, along with near-term risks related to the recent coronavirus outbreak. Domestic risks include a further weakening of private consumption if cooling labor markets squeezed household income. Adverse weather conditions, including a worsening of the bushfires, could affect consumption and tourism in affected urban areas and rural agriculture. By contrast, looser financial conditions could re-accelerate house price inflation, boosting private consumption but also adding to medium-term vulnerabilities given high household debt levels.

Executive Board Assessment[2]

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[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

Table 1. Australia: Main Economic Indicators, 2015-2025

(Annual percent change, unless otherwise indicated)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
							Projections				
NATIONAL ACCOUNTS											
Real GDP	2.3	2.8	2.5	2.7	1.8	2.0	2.4	2.5	2.6	2.6	2.6
Domestic demand	1.0	1.8	3.0	2.9	1.1	1.7	2.4	2.5	2.5	2.5	2.5
Private consumption	2.4	2.7	2.5	2.7	1.4	1.8	2.7	2.7	2.7	2.6	2.6
Public consumption	4.0	5.1	3.9	4.0	5.2	2.9	2.0	2.0	2.0	2.2	2.2
Investment	-4.0	-2.3	3.5	2.4	-2.8	0.3	2.0	2.6	2.8	2.8	2.7
Public	-1.5	14.0	10.4	2.1	1.5	3.4	1.8	1.4	1.2	1.2	1.2
Private business	-9.9	-11.8	4.0	3.2	-0.7	1.0	2.6	3.4	3.8	3.8	3.6
Dwelling	9.1	8.0	-2.2	4.7	-6.9	-5.3	1.0	2.3	2.4	2.5	2.0
Net exports (contribution to growth, percentage points)	0.9	1.4	-0.8	0.2	1.0	0.0	0.0	0.0	0.1	0.1	0.1
Gross domestic income	-0.2	2.8	4.9	3.1	3.4	2.3	1.3	1.3	2.0	2.3	2.4
Investment (percent of GDP) 1/	25.9	24.6	24.2	24.2	22.5	22.3	22.4	22.7	22.8	22.8	22.8
Public	4.4	4.8	5.1	5.1	5.0	5.0	5.0	5.0	5.0	4.9	4.8
Private	21.4	19.7	19.1	19.0	17.7	17.3	17.4	17.6	17.8	17.9	18.0
Mining investment	5.4	3.9	3.1	2.7	2.5	2.7	2.7	2.7	2.7	2.7	2.7
Non-mining investment	16.0	15.8	16.0	16.3	15.1	14.7	14.7	14.9	15.1	15.2	15.3
Savings (gross, percent of GDP)	21.6	20.8	22.0	21.8	22.4	21.9	21.1	20.4	20.2	20.1	20.0
Potential output	2.6	2.5	2.4	2.3	2.2	2.2	2.2	2.3	2.4	2.5	2.5
Output gap (percent of potential)	-1.2	-0.9	-0.8	-0.4	-0.8	-1.0	-0.8	-0.6	-0.4	-0.2	0.0
LABOR MARKET											
Employment	2.0	1.8	2.3	2.7	2.3	2.0	1.8	1.8	1.8	1.8	1.7
Unemployment (percent of labor force)	6.1	5.7	5.6	5.3	5.2	5.2	5.2	5.1	5.0	4.9	4.8
Wages (nominal percent change)	2.1	1.9	1.8	2.1	2.2	2.2	2.3	2.6	3.0	3.3	3.3
PRICES											
Terms of trade index (goods, avg)	88	87	100	103	112	110	105	100	97	95	94
% change	-12.4	-0.4	14.5	3.1	8.6	-2.0	-4.2	-5.2	-3.1	-1.5	-1.1
Iron ore prices (index)	44	46	56	55	74	69	61	56	54	54	54
Coal prices (index)	67	75	101	121	88	83	86	88	88	88	88
LNG prices (index)	61	42	41	55	31	28	35	37	37	37	37
Crude prices (Brent; index)	48	40	50	65	59	60	55	53	52	52	53
Consumer prices (avg)	1.5	1.3	2.0	1.9	1.6	1.9	1.9	2.1	2.3	2.5	2.5
Core consumer prices (avg)	2.3	1.7	1.6	1.6	1.6	1.8	1.9	2.1	2.3	2.5	2.5
GDP deflator (avg)	-0.7	1.0	3.7	2.2	3.3	1.2	0.8	1.3	2.0	2.2	2.3
FINANCIAL											
Reserve Bank of Australia cash rate (percent, avg)	2.1	1.7	1.5	1.5	1.2	0.4	0.3	0.5	1.0	1.5	2.0
10-year treasury bond yield (percent, avg)	2.7	2.3	2.6	2.6	1.4	0.5	0.5	0.9	1.4	1.9	2.4
Mortgage lending rate (percent, avg)	5.6	5.4	5.2	5.3	4.8	4.3	4.3	4.8	5.3	5.8	6.3
MACRO-FINANCIAL											
Credit to the private sector	6.8	5.6	5.2	4.7	2.3	3.4	4.3	4.5	4.8	5.0	5.0
House price index	131	141	148	140	144	149	154	159	163	168	173
% change	8.7	7.7	5.0	-5.1	2.5	3.7	3.4	3.0	3.0	3.0	3.0
House price-to-income, capital cities (ratio)	4.5	4.7	4.7	4.4	4.3	4.3	4.3	4.2	4.2	4.1	3.9
Interest payments (percent of disposable income)	8.8	8.6	8.9	9.0	7.4	6.4	6.3	7.1	7.8	8.5	8.5
Household savings (percent of disposable income)	6.4	5.0	4.1	2.9	3.4	4.3	3.6	3.2	3.2	3.2	3.3
Household debt (percent of disposable income) 2/	173	180	187	187	185	183	181	178	175	172	170
Business credit (percent of GDP)	51	51	50	50	49	49	49	50	50	50	51
GENERAL GOVERNMENT (percent of GDP) 3/											
Revenue	34.2	34.8	34.6	35.5	36.0	35.8	36.0	35.9	35.3	35.3	35.3
Expenditure	37.2	37.5	36.9	36.6	36.8	36.9	36.6	36.1	35.4	35.2	35.1
Net lending/borrowing	-2.9	-2.7	-2.3	-1.1	-0.8	-1.0	-0.6	-0.1	0.0	0.2	0.3
Commonwealth only	-2.6	-2.3	-1.9	-0.3	0.1	0.2	0.2	0.4	0.1	0.3	0.4
Operating balance	-1.7	-1.4	-0.8	0.5	1.0	0.9	1.4	1.7	1.6	1.7	1.8
Cyclically adjusted balance	-2.7	-2.4	-2.2	-1.0	-0.7	-0.9	-0.4	0.0	0.1	0.2	0.3
Gross debt	35.8	39.5	41.0	41.2	41.7	43.0	42.7	43.0	41.7	40.2	38.7
Net debt	16.4	19.0	18.5	19.1	19.8	20.9	20.8	20.1	19.1	17.9	16.7
Net worth	50.9	46.0	50.1	49.5	34.9	42.7	44.4	46.4	47.5	47.1	46.6
BALANCE OF PAYMENTS											
Current account (percent of GDP)	-4.6	-3.3	-2.6	-2.1	0.4	-0.4	-1.3	-2.2	-2.6	-2.8	-2.8
Export volume	6.5	6.9	3.4	5.1	3.5	1.7	2.1	2.1	2.3	2.3	2.5
Import volume	2.0	0.1	7.8	4.1	-1.1	1.6	2.4	2.1	2.0	2.0	2.0
Net international investment position (percent of GDP)	-56	-57	-54	-54	-49	-48	-48	-48	-49	-49	-50
Gross official reserves (bn A$)	63	74	85	76	...	...	...	...	...	...	...
MEMORANDUM ITEMS											
Nominal GDP (bn A$)	1,641	1,703	1,808	1,899	1,995	2,060	2,127	2,209	2,314	2,427	2,547
Percent change	1.6	3.8	6.2	5.0	5.1	3.3	3.3	3.9	4.7	4.9	5.0
Real GDP per capita (% change)	0.8	1.1	0.8	1.1	0.2	0.5	0.9	0.9	1.1	1.1	1.1
Population (million)	24.0	24.4	24.8	25.2	25.6	26.0	26.4	26.8	27.2	27.6	28.0
Nominal effective exchange rate	90	91	94	90	...	...	...	...	...	...	...
Real effective exchange rate	90	91	94	90	...	...	...	...	...	...	...

Sources: Authorities' data; IMF *World Economic Outlook* database; and IMF staff estimates and projections.

1/ Includes changes in inventories.

2/ Reflects the national accounts measure of household debt, including to the financial sector, state and federal governments and foreign overseas banks and governments. It also includes other accounts payable to these sectors and a range of other smaller entities including pension funds.

3/ Fiscal year ending June.