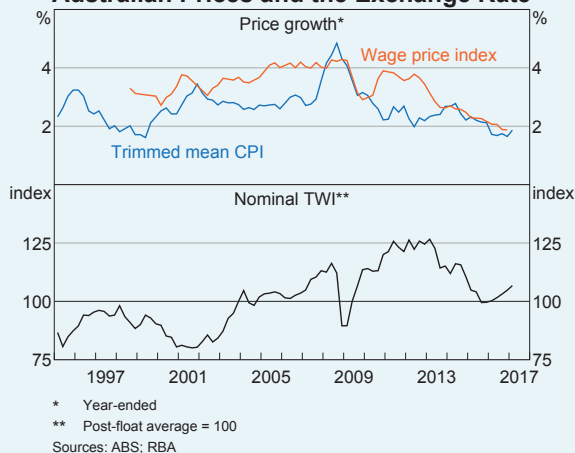


Box A

Australia's Real Exchange Rate

Over the past 15 years or so, the mining boom and its aftermath have led to large movements in Australia's real exchange rate. As has been widely documented, the significant rise in global commodity prices over the decade or so to 2011 resulted in both a significant appreciation of the Australian dollar and a pick-up in general price and wage inflation (Graph A1).¹ This increased the prices of the goods and services the country produced compared with those in other countries. It also increased Australia's relative labour costs, reducing the attractiveness of Australia as a place to invest in productive capacity. In other words, there was a reduction in Australia's international competitiveness. This encouraged resources to move from the non-mining sector to the mining sector, which was benefiting from the higher global commodity prices. So, while the non-mining trade-exposed industries were adversely affected, the real appreciation contributed to more stable macroeconomic outcomes – output growth closer to potential and inflation closer to target – than would have been the case otherwise. Since commodity prices peaked in 2011 and the nominal exchange rate started to depreciate in 2013, Australia's competitiveness has improved. The extent of these swings in the real exchange rate depends on the different measures used.

Graph A1
Australian Prices and the Exchange Rate



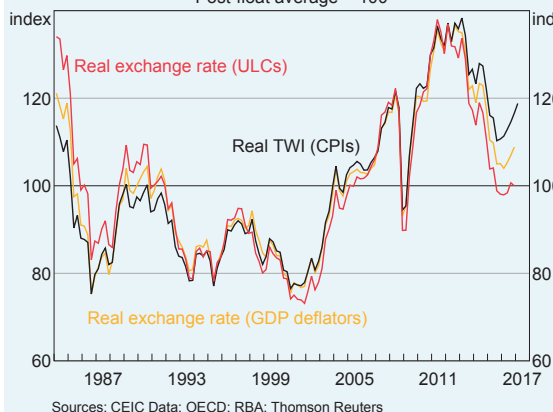
Real exchange rates are often based on the relative prices of a basket of goods and services across countries (expressed in a common currency); measures of consumer price indices or GDP deflators are frequently used for this purpose. Most real exchange rates are measured as a (geometric) average of real bilateral exchange rates for the country's major trading partners, weighted by their trade shares (real *effective* exchange rates).² The measure most commonly used by the Reserve Bank is based on core CPIs and is referred to as the real trade-weighted index, or real TWI.

For Australia, the real TWI peaked in March 2013. Since then, Australia's real TWI has depreciated by as much as 20 per cent, reversing up to one-third of the move over the previous decade (Graph A2). Although inflation in Australia has

¹ See, for example, Davis K, M McCarthy and J Bridges (2016), 'The Labour Market during and after the Terms of Trade Boom', RBA Bulletin, March, pp 1–10.

² Australia's real effective exchange rate based on unit labour costs includes a newly constructed estimate of Chinese unit labour costs.

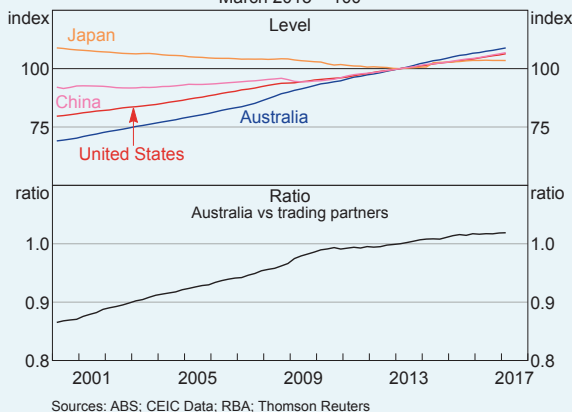
Graph A2
Australian Real Exchange Rates
Post-float average = 100



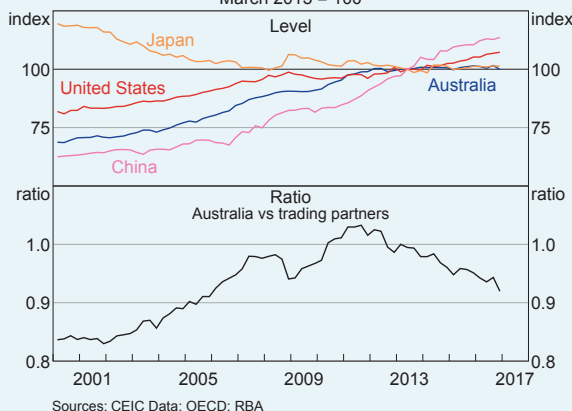
been relatively low since 2013, inflation has also been low in most of Australia's trading partners, as a number of advanced economies have been slowly absorbing the spare capacity created by the global financial crisis (Graph A3). Hence, all of the real depreciation in this measure has occurred via the depreciation in the nominal exchange rate. The real exchange rate based on GDP deflators has depreciated by a little more than the real TWI over this period (consistent with the large fall in prices of Australia's commodity exports).

Another way to measure the real exchange rate is to base it on the relative cost of labour required to produce a unit of output, that is, unit labour costs. In contrast to the broadly similar rates of inflation in goods and services prices in Australia's major trading partners over the past few years, trends in unit labour costs have diverged somewhat (Graph A4). Unit labour costs in Australia have been little changed since the terms of trade peaked in 2011, largely reflecting historically low wage growth since that time. In contrast, unit labour costs in most of our major trading partners have risen since then, and Chinese unit labour costs have increased noticeably. This is consistent with continued

Graph A3
Core Consumer Price Indices
March 2013 = 100



Graph A4
Nominal Unit Labour Costs
March 2013 = 100



strong growth in Chinese labour income, which has more than doubled on a per employee basis since 2010 (compared with productivity growth of about 50 per cent over the same period).

These differences in the growth rates of Australia's unit labour costs versus those of its trading partners have led to a more marked improvement in Australia's labour market competitiveness than in the competitiveness of the prices of its goods and services. Australia's real effective exchange rate based on unit labour costs has depreciated by around 25 per cent since March 2013. The latest observation

(December quarter 2016) was around its average since the Australian dollar floated in 1983 and at a level last seen in early 2005 (excluding the global financial crisis period). In contrast, the real TWI is noticeably above its post-float average and in the December quarter 2016 was at a level last seen in late 2007.

By any measure, Australia's real exchange rate has depreciated since the end of the terms of trade boom. This has helped the economy adjust to the significant reduction in income from the terms of trade decline and the associated fall in mining investment by boosting activity in the tradeable sector. An appreciating real exchange rate would complicate that adjustment. ✖

