

## Box E

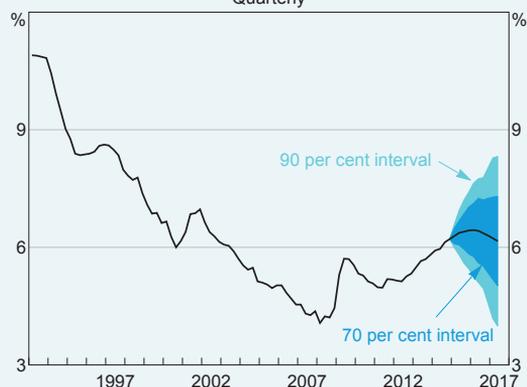
# Unemployment Rate Forecasts and Confidence Intervals

The unemployment rate is a key indicator of activity, spare capacity and inflationary pressures in the economy.<sup>1</sup> The black line in Graph E1 presents the Bank's expectation of the central, or most likely, path of the unemployment rate over the next couple of years consistent with the evolution of other macroeconomic variables, such as output growth and inflation, discussed in the 'Economic Outlook' chapter. As growth in economic activity is forecast to remain below trend in the near term, the unemployment rate is likely to rise a little further over coming quarters. It is expected to decline towards the latter part of the forecast period, once growth picks up to an above-trend pace.

However, many other outcomes for the unemployment rate are possible because these forecasts are conditional on a range of assumptions about macroeconomic variables, such as the path of the exchange rate, and the relationships between them. Some of the reasons that unemployment outcomes could differ from the central forecast are discussed under 'Uncertainties' in the 'Economic Outlook' chapter.

A range of possible outcomes can be estimated by generating the distribution of past forecast errors and confidence intervals around the central forecast. Graph E1 shows 70 per cent and 90 per cent confidence intervals around the central unemployment rate forecast, based on the methodology in Tulip and Wallace (2012) and using the Bank's forecast errors since 1993.<sup>2</sup> These estimates

**Graph E1**  
**Unemployment Rate Forecast\***  
Quarterly



\* Confidence intervals reflect RBA forecast errors since 1993  
Sources: ABS; RBA

assume that the intervals are symmetric around the central forecast although, on average, outcomes for the unemployment rate have tended to be below the forecasts over the sample period. This reflects a number of factors specific to this period, including predictions of rising unemployment that were not fully realised at the time of the Asian financial crisis, the global slowdown of the early 2000s and the global financial crisis. Moreover, the forecasts were conditional on a number of macroeconomic variables, such as productivity growth, that did not evolve as expected.

The estimated confidence intervals suggest that, if the Bank makes similar-sized forecast errors to those made in the past, then there is a 70 per cent probability that the unemployment rate in the June quarter 2017 will fall within a 2¼ percentage point range around the central forecast and a 90 per cent probability of falling within a 4¼ percentage point range. The size of these ranges indicates that there is

1 For more details on estimates of spare capacity see Ballantyne A, D De Voss and D Jacobs (2014), 'Unemployment and Spare Capacity in the Labour Market', RBA *Bulletin*, September, pp 7–20.

2 See Tulip P and S Wallace (2012), 'Estimates of Uncertainty around the RBA's Forecasts', RBA Research Discussion Paper No 2012-07.

always substantial uncertainty about the economic outlook. This is not an unusual result: high levels of uncertainty have also been found in other countries, for other macroeconomic variables and for both private and public sector forecasts. ↗