

## Box D: The 'Neutral' Real Interest Rate

The level of real interest rates is one indicator of the stance of monetary policy. Monetary policy may be regarded as expansionary when the real policy rate is below some 'neutral' level, which is one consistent with stable inflation and output growing at its potential rate. This box discusses the concept of the 'neutral' rate, and describes some of the factors that may cause it to vary over time. While historical experience can provide some guidance, the effect of these influences is difficult to pin down. Consequently, the value of the neutral real interest rate is subject to considerable uncertainty.

The idea of a neutral interest rate has its underpinning in the 'natural' rate of interest explained by the Swedish economist Knut Wicksell at the end of the 19<sup>th</sup> century. For Wicksell, the natural rate was that real rate of return on physical capital at which the supply of saving and the demand for investment funds were equal. Wicksell distinguished between this natural rate and the so-called 'money' rate of interest which was able to be influenced by monetary policy. When the money rate was below the natural rate, there would be a tendency for credit and investment to undergo a cumulative expansion, so boosting the economy and prices. The reverse would occur when the money rate was higher than the natural rate. When the money rate and the natural rate were the same, monetary policy would be exerting neither an expansionary nor contractionary force on the economy.

While Wicksell's model was highly simplified, there is a strong similarity between these basic ideas and those common in modern discussion of monetary policy. The central bank influences interest rates in the short-term money market, but it is the

relationship between these financial market rates and the (unobservable) expected returns on other assets which drives the processes which affect the economy, with the credit process playing an accommodating role. When the setting of money market interest rates is such as to exert neither contractionary nor expansionary forces on the economy, policy can be said to be 'neutral'.

On average, the natural rate can be thought of as anchored by the economy's long-run fundamentals, such as productivity performance, saving and so on. Common usage of the term 'neutral' tends to assume that the neutral rate is constant, but the factors that affect the supply of saving and the rate of investment will drive movements in the neutral rate through time, although these are likely to be very gradual. Given that Australia's financial markets are highly integrated with global markets, global developments in saving and investment will also influence the neutral real rate in Australia.

The increased rate of productivity growth enjoyed in the United States and Australia over the 1990s is likely to have put upward pressure on the neutral rate in both countries.<sup>1</sup> A sustained increase in the rate of productivity growth raises the rate of return to investment. The consequent rise in investment requires a rise in the neutral rate to bring saving and investment back into balance.

The size of government deficits can influence the neutral rate by increasing or decreasing the public sector's call on the supply of funds. The increase in budget deficits in many countries through the 1970s and 1980s is likely to have placed upward pressure on the neutral rate. Conversely, the

1. See remarks by Federal Reserve Board Governor Laurence Meyer in April 2000, <http://www.federalreserve.gov/boarddocs/speeches/2000/20000412.htm>.

fiscal consolidation around the world over the 1990s (with the exception of Japan) is likely to have put downward pressure on the neutral rate.

Demographic factors affect both the supply and demand for funds. Early in their working lives, households tend to save relatively little, but this increases as they approach retirement age. The 'baby boomers' are now reaching the peak saving age, which might be expected to be placing downward pressure on the neutral rate, although there is little evidence at this stage that the measured saving rate is increasing due to this factor. On the demand side, an increase in the rate of growth of the labour force will lead to a rise in the neutral rate, as there is a need for more investment to provide the necessary capital to employ the larger labour force.

When the rate of inflation is highly variable, suppliers of funds (savers) require a premium to be paid to compensate them for the uncertainty about future inflation, which threatens the erosion of their savings. The increased stability in the rate of inflation over

the past decade is likely to have contributed to a lower neutral rate in Australia.

Changes in these determinants of the neutral rate over time imply that it is difficult to pin down the level of the neutral rate at any point in time. Two other issues further complicate the determination of the neutral setting of the real policy interest rate. Firstly, the compression of lending margins over the past decade means that a given level of the policy interest rate is now associated with a lower cost of borrowing than in the past and hence provides a greater incentive to invest. This suggests that the neutral policy rate may be higher than in the past. Secondly, the above discussion has been in terms of the neutral *real* interest rate, but the policy rate is set in nominal terms. As inflation expectations change, the nominal policy rate setting that corresponds to the neutral real rate will also change. Over the past decade, most measures of inflation expectations have declined which suggests that the neutral *nominal* policy rate is likely to be lower than it was in the past. ∞