

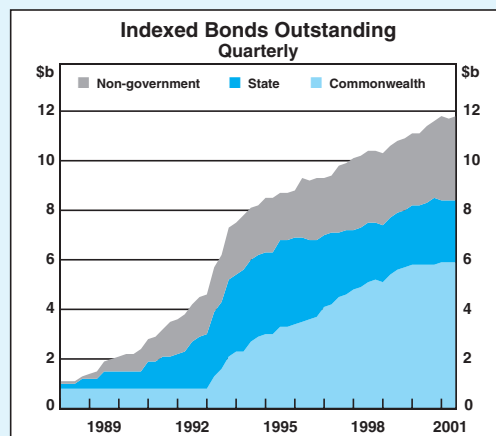
Box C: Inflation-indexed Bonds and Swaps

Uncertainty about inflation represents a risk for anyone contracting to receive or pay a fixed nominal amount of money at some date in the future. In pursuing the goal of medium-term price stability, the Reserve Bank has adopted the objective of keeping inflation between 2 and 3 per cent, on average, over the cycle. This helps to narrow the range of likely future inflation rates and to provide reasonable certainty about the price level over the sorts of horizons relevant for most wage and price-setting decisions. But even when average inflation remains low, small variations in the rate of inflation can have a significant effect over the longer term – for example, on a 20-year bond. The two principal financial market instruments that allow companies to manage their exposure to movements in inflation are inflation-indexed bonds and inflation swaps.

Most conventional (‘nominal’) bonds promise the holder a fixed dollar flow of payments over the life of the bond. The price of conventional bonds declines when inflation rises as inflation erodes the real value of their nominal coupon and principal payments. In the case of inflation-indexed bonds, however, the bond’s payments are indexed to movements in a price index, such as the Consumer Price Index (CPI), ensuring the value of interest payments and the bond’s principal amount are fixed in real terms.

The indexed bond market is small relative to the overall bond market (indexed bonds make up 6 per cent of all bonds outstanding). Nevertheless, in recent years the inflation-indexed bond market has grown steadily, with the market increasing in size by almost 30 per cent over the past five years. As at end June 2001 total outstandings amounted to just under \$12 billion (Graph C1). The development of an indexed securities market in Australia dates from 1985 when the Commonwealth issued

Graph C1



\$100 million of capital-indexed bonds. Subsequently State governments and non-government borrowers have also issued indexed bonds. At present, the Commonwealth government accounts for 50 per cent of indexed bonds, the states a further 21 per cent and non-government issuers 29 per cent.

In recent years, much of the corporate issuance of indexed bonds has come from utility companies, whose revenues are linked to the inflation rate. Under the regime administered by the Victorian Office of the Regulator General, for example, the distribution prices charged by electricity generators in Victoria are capped, and the cap is indexed to the CPI. As a result, when such utilities issue nominal bonds, movements in inflation impact on their profits by affecting the margin between their revenues (which are indexed to inflation) and their debt-servicing costs (which do not move in line with inflation). As well as electricity distributors, a number of infrastructure projects, such as the LoyYang Power stations and the Sydney Harbour Tunnel, have borrowed by using inflation-indexed bonds to manage their exposure to fluctuations in inflation.

As an alternative to inflation-indexed bonds, companies whose revenues are linked to inflation can issue nominal bonds and hedge the resulting exposure to inflation by using inflation swaps. An inflation swap takes the form of an exchange of a regular stream of inflation-indexed payments for a stream of nominal interest payments. The nominal payments may be based on either a fixed interest rate or a variable interest rate such as the bank bill rate. This set of transactions is illustrated in Graph C2. Combining the swap with the nominal bond results in the same net cash flows as if the utility company had issued indexed bonds.

The inflation swap market emerged in Australia in the mid 1990s. Like the indexed bond market, the inflation swap market is small in comparison to the overall market for interest-rate swaps. The size of the Australian market for inflation swaps is estimated to be around \$500 million nominal principal outstanding, compared with around \$500 billion in the nominal swaps market. Unlike the nominal swaps market, where only around 2 per cent of swaps have a maturity of ten years or longer, more than half the inflation swaps outstanding in the Australian market have a maturity of ten years or more.

In terms of those looking to enter into swaps that pay an inflation-indexed rate and receive a nominal interest rate, the chief users include utilities, retailers locked into inflation-linked lease payments for their premises, and property trusts.

On the other side of the market (i.e. those who wish to pay a nominal rate in return for inflation-linked receipts), firms with inflation-linked liabilities can use inflation swaps to protect themselves against the risk that inflation, and thus their liability, is more than they expected. For example, inflation swaps can provide an offset to the inflation exposure resulting from insurance and life assurance companies' holdings of inflation-linked liabilities such as indexed annuities. State government borrowing authorities have also used inflation swaps to modify their exposure to inflation that results from mismatches between their inflation-indexed investments and borrowings.

The principal hedge available to financial institutions that act as intermediaries between the various end users of inflation swaps is indexed bonds. As a result, activity in the inflation swaps market is highly dependent on the size and liquidity of the inflation-indexed bond market. ↗

Graph C2: The Use of an Inflation Swap

