# Australia's Experience with Indexed Bonds

*This paper was presented by Mr Peter McCray, Assistant Secretary, Debt Management Branch, Treasury to a BZW Investor Forum in New York on Tuesday, 10 June 1997. The presentation included a history of Australia's Treasury Indexed Bond program, the current state of the Australian indexed market and observations on the outlook for the Australian indexed market, focussing particularly on the Commonwealth's own issuance intentions.*

## INTRODUCTION

It is a pleasure to be with you to discuss Australia's experience with indexed bond issuance. I'll be covering three issues in my presentation:

- a brief history of the Australian Treasury's indexed bond program;
- a snapshot of the current state of the Australian market for Treasury indexed bonds, and more generally; and
- some concluding observations on the outlook for the Australian indexed market focussing, in particular, on Treasury's own intentions.

## HISTORY OF AUSTRALIA'S INDEXED ISSUANCE

The development of an indexed securities market in Australia dates from the early 1980s, with Treasury among the earliest issuers into the new market. A variety of factors attracted Treasury to the new market. Prominent among them were the prospects for savings in debt service costs through avoiding the inflation risk premium implicit in nominal bonds, the opportunity to issue longer-term funding than was available in the nominal market and the possibilities for risk diversification, including through a broadening of the investor base.

Following a period of extensive investor liaison, Treasury came to the market with a debut auction of $100 million of capital indexed bonds in July of 1985. Bond capital was indexed to the CPI, with coupons paid quarterly. Two stocks were offered, a ten year and a twenty year security, with the auction being conducted on the standard multiple price basis that we continue to employ to this day for all our debt securities. These two original stocks were regularly reopened at successive tenders over the following couple of years.

It would be fair to say that auction results in those early days were uneven as investors came to terms both with the price discovery process in an environment where there was very little in the way of relevant pricing benchmarks as well as the appropriate portfolio treatment of the new type of security. Domestic banks and institutions made up the bulk of the investor base at that stage, with demand motivated mainly by broad portfolio diversification objectives. However, the indexed product remained very much a niche element of investors' fixed interest portfolios.

Cautious bidding from investors in those early tenders, uncertain as to the market clearing price and wary of the proverbial 'winner's curse', saw wide ranges in accepted auction bids. Real yields drifted up to well over 6 per cent after stock at the initial auction had been cleared at yields between 4½ and 5 per cent.

Gradually though, after a couple of challenging years, auction results improved as the market began to come to terms with the singular features of the new instrument. By early 1988, though the secondary market remained underdeveloped, more consistent demand contributed to yields moving back under 5 per cent, with auctions regularly being taken out with comparatively narrow ranges in accepted bids.

By this time too, the semblance of a real yield curve for Treasury indexed paper existed. By early 1988, just under $1 billion of Australian Government capital indexed bonds had been issued in the three years since the debut auction, with that issuance spread, via regular reopenings, across 7, 10 and 17 year securities.

A sharp turnaround in the Government's borrowing requirement in 1988 as the federal budget moved from deficit to sustained surplus proved to be a watershed for Treasury's indexed issuance program.

In the three years since the debut auction, indexed securities had continued to play very much a subsidiary funding role to conventional Treasury Bonds and Notes. In light of the Government's much reduced funding requirement, it was decided to suspend the indexed program and concentrate issuance, and hence liquidity, into the more established instruments. It was to be five years before the Government returned to the indexed market.

Despite Treasury's absence from the market, the indexed sector continued to develop through this period. There were a number of notable developments highlighting the increasing depth and sophistication of the market.

A number of successful State Government indexed issues — though not all in capital-indexed form — marked a growing investor interest in the sector. Partly, this reflected growing demand for long term inflation linked securities from the emerging superannuation or pension fund industry. For superannuation funds, this form of security was proving an ideal balance sheet asset to offset the real exposures in their accumulating liabilities. Increasing recognition by investors of indexed securities as a discrete asset class was a further notable advance,

marked by the establishment of a new Inflation-linked Composite Bond Index in March 1991.

In early 1993, with the federal budget by now returned to significant deficit, and recognising the opportunity presented by the greater depth and sophistication of the domestic indexed market, Treasury resumed issuance of capital indexed securities.

The cost saving and risk diversification potential of the indexed product continued to underpin Treasury's support for the program. The potential that the instrument offered to support the Government's objectives for the development of the superannuation savings sector was a further factor influencing the decision to return to the market.

All that being said, it was not quite business as usual on return. Mindful of the volatile pattern of auction results that marked the initial period of indexed issuance in the mid-1980s, and of the still developing nature of the investor base, it was decided that, for an initial period, a more managed issuance mechanism might be more apposite.

Accordingly, Treasury appointed a so-called 'dealer panel' or syndicate to assist in the placement of its indexed paper. The judgement was that the dealer panel could make an important contribution to the development and stability of the market via the specialised marketing role that panel members could play in introducing new investors to the product, educating potential investors and contributing, more generally, to the dissemination of information about the benefits of the indexed instrument.

This dealer panel selected by Treasury comprised five well credentialled institutions, including BZW, who were both active in the market for indexed securities and had a considerable institutional knowledge of the market to draw on. The panel was commissioned by Treasury to undertake regular and wide-ranging market consultations and analysis before putting recommendations to Treasury on indicative issuance volumes, the potential timing of new issuance and the ultimate price at which indexed stock should be placed.

Under the dealer panel arrangement, stock was provided to panel members in equal allotments for on-selling to investors. There was no underwriting element and, in principle, panel members were free to return unsold stock to a central pool, although in practice that never occurred. Fees were paid to individual members commensurate with the amount of stock each member placed.

The fact that indexed stock could be issued in volume and at a single market clearing price both enhanced the liquidity of the market and, by addressing the winners' curse problem, provided investors with greater confidence to participate in the market. The panel also enhanced Treasury's capacity to launch new indexed benchmarks with greater confidence, and in greater volume. New 2010 and 2015 Treasury indexed bonds were launched via the panel.

The panel played a very useful role over the eighteen months or so of its existence, both in broadening the investor base and in establishing the beginnings of a viable secondary market for indexed paper. But judging that the market had advanced to a new level of maturity, in July 1994 Treasury announced that future indexed issuance would return to the standard multiple price auction basis that existed for other Government securities and had applied in the earlier period of indexed issuance.

We have been very satisfied with auction results since that time. After some initial volatility, auctions over the last two to three years have generally been very well supported, clearing with narrow ranges of accepted bids and at close to mid-market levels.

A notable design feature of the auction program over the past couple of years has been a deliberate move on Treasury's part to tailor issuance volumes and the timing of issuance to market demand. In the interests of market development, there is no regular issuance calendar as such. Rather, Treasury issues only when our market liaison indicates that there is an appetite for stock.

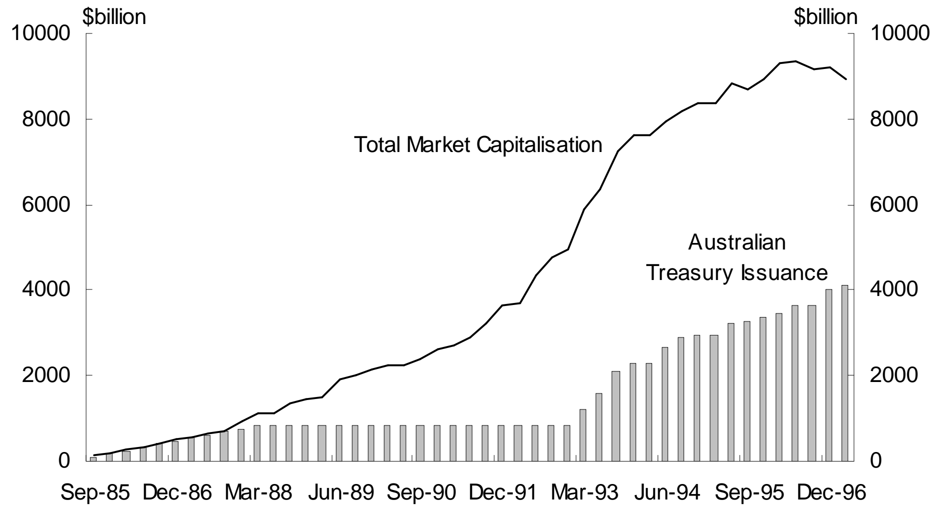
On average over the last few years, auction volumes have typically been around $100 million of a single line, reopenings into either 2015 or 2020 maturities, with around five or six auctions conducted annually. In the current financial year, which concludes at the end of this month, we have issued around $620 million of indexed bonds, a very respectable near ten per cent of aggregate new debt raisings in the year.

Treasury indexed bonds have come a long way since the experimental days of 1985.

## THE CURRENT INDEXED MARKET IN AUSTRALIA

As at end May 1997, aggregate Treasury indexed bonds on issue amounted to some $4½ billion dollars. While that represented only about 4 per cent of the Government's total debt portfolio, this stock of Treasury indexed bonds accounts for almost half of all indexed securities on issue in Australia.

**Chart 1: Market Capitalisation (face value)**




Treasury paper is very much the dominant force in the domestic indexed market.

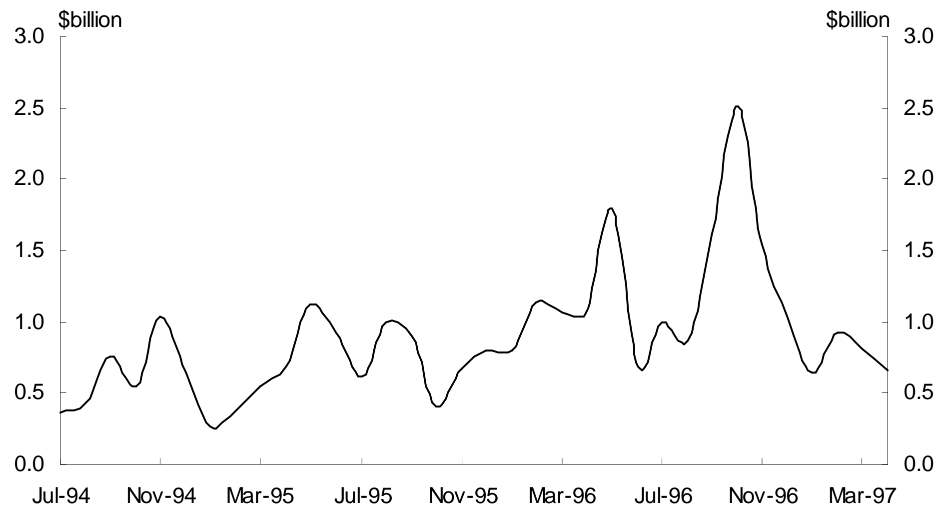
The market itself has developed significantly over the period since Treasury returned to the market in 1993. The Treasury yield curve now extends across five capital indexed securities ranging from 1998 to 2020 lines, albeit only the 2015 and 2020 lines remain open.

**Chart 2: Treasury Indexed Bonds Outstanding as at June 1997**

Whilst liquidity arguably remains the biggest challenge to the further development of the domestic market, it would be fair to say that the liquidity of the domestic market has improved substantially in the past two to three years. The emergence of an active repo market in the most liquid 2010, 2015 and 2020 lines has been an important factor.

Secondary market activity in Treasury indexed bonds has picked up markedly over the past couple of years, with the total stock of Treasury paper turning over on average, once every four months.

**Chart 3: Secondary Market Turnover (all maturities)**




While modest in terms of nominal bond market turnover performance, turnover on this scale represents a considerable advance for the domestic indexed sector.

The past couple of years have also seen the emergence of a modest market for index-linked swaps, though the potential of this form of hedging instrument remains largely undeveloped to date.

The nature of the investor base for Treasury indexed bonds and the style of investor asset management strategies are other important areas of the market where there have been notable developments in recent years.

On asset management strategies, there is now virtually unanimous recognition in Australia of indexed securities as a separate and quite distinct asset class, by investors and consulting actuaries or asset consultants alike.

In part, this reflects that the duration and volatility characteristics of the indexed instrument are quite distinct from nominal fixed interest securities. Likewise, there are a variety of studies that indicate very little correlation between the returns on indexed securities and those on most other asset classes. Finally, no other asset provides the near-perfect hedge against inflation that indexed securities offer.

Reflecting their treatment as a separate asset class, the vast bulk of indexed securities under investment in Australia are managed within dedicated portfolios, with performance benchmarked against specialist indexed market indices.

As to the investor base itself, I mentioned earlier that in the developmental days of the market back in the mid to late 1980s, the major banks and other financial entities were the primary investors in indexed paper. Much has changed since then.

First of all, it is worth noting though that there is not, and never has been, any real retail investor interest in indexed exposure. The Australian market for indexed paper is very much a wholesale market, with three broad investor groups prominent.

Insurance companies and particularly life assurance companies have a natural appetite for indexed exposure as these forms of securities represent an ideal balance sheet asset to offset long-dated real liabilities. As a generalisation, these investors tend towards buy and hold strategies rather than tactical asset allocation within and between different investment sectors.

Offshore investors have also become increasingly prominent in recent years, with British, Canadian and, more recently, US investors in particular seeking out opportunities for real yield pick-up and to play the spread between real yields in Australia and their home market.

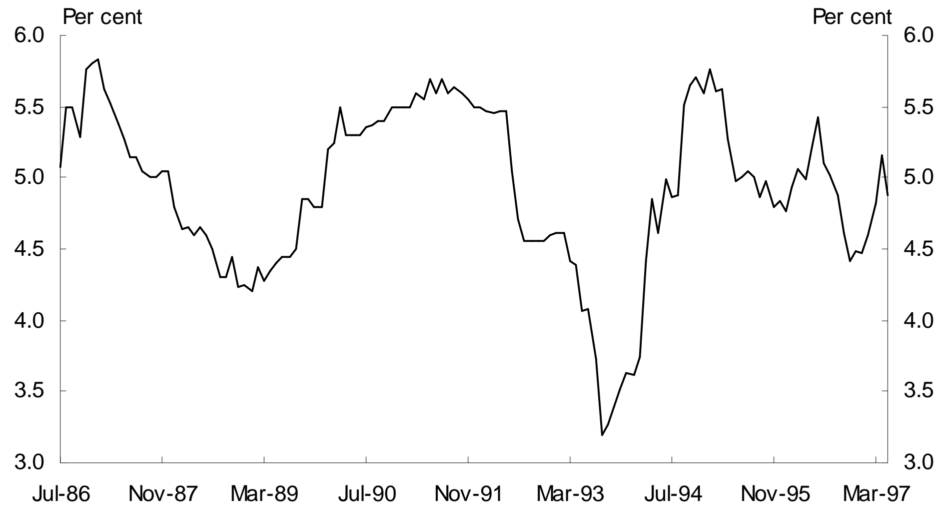
By far the most prominent investor group represented in the indexed market is the superannuation or pension fund sector. In Australia, 'compulsory' employer superannuation contributions and voluntary contributions made by, and on behalf of, employees and the self-employed are enhanced by substantial tax concessions. As a result, Australian superannuation funds control a large and growing level of assets.

Almost any projection you care to look at will point to very rapid growth, of the order of 10 per cent per annum or more, in superannuation funds under investment over the next decade. Much of this will find its way, of course, into other asset classes but growth of this order remains a strong net positive for the domestic indexed sector nonetheless.

In contrast to the insurance sector where buy and hold investment strategies tend to prevail as I mentioned, the superannuation funds in general tend towards more active investment approaches and, along with offshore investors, account for much of the turnover in the indexed market. Prospective growth in superannuation funds under management over the next decade and beyond points, obviously, to a larger pool of investors making asset allocation to the sector, but also to good prospects for continuing enhancement of domestic market liquidity and turnover.

Finally, on the current market, it is worth saying a few very brief words about real yields on Treasury indexed paper and the nature of the yield curve. Over the last couple of years and, in fact, for much of the twelve years that Treasury has been issuing indexed paper, real yields have moved in a fairly narrow range between around 4½ and 5½ per cent.

**Chart 4: Real Yield — August 2005 Treasury Indexed Bond**




That is perhaps not all that surprising when the lower volatility typically exhibited by this asset class is considered.

What is a little more striking is the persistently inverse yield curve for Treasury indexed paper. Whether it is the duration characteristics of the longer-dated stocks that appeals, the arguably greater liquidity at the long end or investor recognition of the increasing value of the effective embedded inflation option as you move out along the curve, this yield inversion appears to be an enduring feature of the Treasury indexed yield curve.

## THE OUTLOOK FOR THE INDEXED MARKET IN AUSTRALIA

Let me conclude with a few very brief words on the outlook for the Australian indexed sector. On the demand side, I've already indicated the positive outlook for growing asset allocation to the sector and for continuing enhancement of domestic market liquidity and turnover associated, in particular, with prospective growth in superannuation funds under management and, potentially, a growing offshore investor base.

As to the supply side, while the various State Governments no longer play a substantive role in indexed issuance, issuance of indexed paper associated with the private financing of major infrastructure projects, such as freeways and power station developments, has picked up significantly over the last few years and appears set to become an enduring feature of the domestic indexed landscape.

However, all indications are that Treasury will continue to be the dominant force over the next few years in bringing new supply to the market. And let me say unequivocally that we continue to be very much committed to the continuing development of this market.

The first of our original indexed benchmarks, the August 1995, has now matured of course. Our ex post analysis demonstrates clearly that, despite the volatility of those early auctions, it proved to be a very cost-effective alternative to conventional nominal fixed rate funding. We continue to appreciate the risk management advantages of having indexed exposure in the debt portfolio, an issue that we are currently exploring in more depth.

We are also currently considering a revision to the framework within which we conduct auctions for Treasury indexed paper. I mentioned earlier a strategy over the past couple of years of tailoring indexed issuance to identified market demand to assist in the steady development of the sector. This approach has been successful.

But with the market having developed further over the past couple of years, we are currently considering proposals from a number of market interests that a move to a more scheduled issuance program might now be appropriate in the interests of providing greater certainty to investors wishing to plan allocations to the sector.

Finally, to put the issue of new supply in context, I should note the commitment by the Government to an ambitious program of fiscal consolidation over the next few years. On current figuring, the fiscal consolidation will deliver large ongoing budget surpluses, much reduced borrowing programs, and a significant decline in the stock of Government debt on issue by the turn of the century.

Nonetheless, in the current year, we are planning on around $500 million to $1 billion of new indexed issuance out of a total borrowing program of around $7 billion and currently envisage issuance on a broadly equivalent scale to this over the next few years.

The fact that within these current and projected much reduced borrowing programs, we are continuing to allocate around 10-15 per cent of new issuance to the indexed program is a very clear statement of both our belief in the product and our commitment to the further development of the domestic indexed market.

Prospects for continuing steady development of the domestic indexed sector appear very soundly based.