

## **Financial Markets Group**

Telephone (02) 9551 8200

<http://www.rba.gov.au>

Facsimile (02) 9551 8034

Email [debelleg@rba.gov.au](mailto:debelleg@rba.gov.au)

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9 August 2007

Mr Joe Dimasi  
Executive General Manager  
Australian Competition and Consumer  
Commission  
GPO Box 520  
MELBOURNE VIC 3001

Dear Mr Dimasi

I refer to your letter of 28 June 2007 seeking our comments on a report prepared by NERA concerning the Commonwealth Government bond market. There are three issues raised in the report:

- Are there significant distortions in the Commonwealth Government securities (CGS) market? Would those distortions invalidate the use of CGS bond yield as a proxy for a risk-free rate?
- Similarly, are there significant distortions in the indexed bond market which would invalidate its use in deriving a real risk-free interest rate?
- Could the use of information from credit default swaps (CDS) and the corporate bond market provide a more reliable proxy for a risk-free rate?

To summarise our response, the Reserve Bank does not believe there are distortions in the CGS market and hence the CGS bond yield remains the best proxy for a risk-free rate. This is not true, however, of the indexed bond market and hence this market may no longer be providing a suitable benchmark. We do not believe that a risk-free rate can be derived from the corporate bond market.

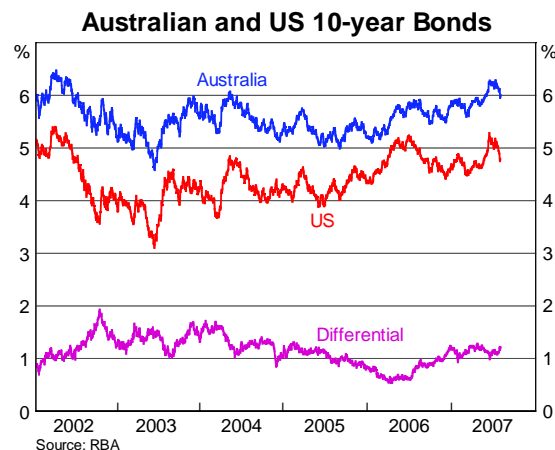
These arguments are explained in more detail below.

### **1. Distortions in the CGS Market**

The view put in the NERA paper is that there are significant distortions in the CGS market because the supply of CGS has been declining. This has resulted in artificially low yields. We disagree with this assessment.

As is typical in any market, we would not dispute that the price is determined by the interaction of supply and demand. We would also agree that the supply of CGS has been relatively low in recent years. However, the effect of this decreased supply cannot be determined in isolation from the other factors that influence supply and demand in the government bond market.

One way of assessing whether the decreased supply has had a disproportionate effect on the Australian market is to examine the spread between long-term bond yields in Australia and the United States. The yield differential between Australia and the US has generally fluctuated between 50 and 170 basis points over the past six years around an average of 110 basis points. The fluctuations within this range primarily reflect the variation in macroeconomic conditions between Australia and the US. The current level of the differential is near the middle of this range, suggesting that if a significant bias exists in Australia, then it must also exist in the US. We think it is difficult to make such a case given that the US market is viewed as the most liquid bond market in the world.



More generally, the debate about why long-term bond yields have been so low over recent years is not unique to Australia. Rather, it should be seen within a global perspective. The consensus view that has emerged from this debate is that low global bond rates largely reflect the excess of savings (ex ante) relative to investment, particularly in the Asian region. These factors are simply a reflection of the regular operation of market forces, and the preference that Asian investors appear to have for government paper.

In the CGS market, it is important to recognise the role of the futures market in setting the prices for government securities and establishing a benchmark curve for those securities. By way of background, in 2003, the Government committed to maintaining outstandings of CGS – not including indexed bonds – at around \$50 billion. This amount was considered to be a viable level in order to maintain the efficient functioning of the futures market – futures contracts on 3-year and 10-year CGS are traded on the exchange. The vast bulk of turnover now occurs on the futures exchange, in other words, price discovery for CGS is effectively done on the futures market. The importance of maintaining a viable amount of outstanding stock is that these securities can, if desired, be used to settle the futures contracts at the time of expiry of those contracts. As in other futures contracts, however, physical delivery is fairly rare. The combination of the physical CGS market and the futures market

ensures that the government bond market provides a risk-free benchmark curve from which market participants are able to price riskier assets.

### *Indexed bonds*

The issue of insufficient supply is relevant, however, for the indexed bond market. In contrast to the regular issuance of nominal bonds that underpins the futures market contracts, there have been no indexed bonds issued since February 2003. Outstandings are now limited to just three issues, just one of which has maturity in excess of 10 years. Moreover, demand for these bonds has increased as supply has fallen. Turnover in the bonds is low and the market is fairly illiquid.

An indication of this problem can be gleaned from the measure of inflation expectations derived from the indexed bond market. This is the break-even rate calculated from the yield on a nominal bond and the indexed bond of a similar maturity. These calculated break-even rates have tended to rise in recent years. In contrast, other measures of expected inflation, such as those collected from surveys, have remained relatively stable, as has inflation itself. As the NERA paper notes, the Reserve Bank has stated on many occasions that these break-even rates may not be providing an accurate reading of inflation expectations within the community. Such an observation would also imply that the indexed bond yield may no longer offer be the best estimate of a risk-free real rate. Given inflation expectations have been firmly anchored by the Bank's inflation-target regime for some time, a rough estimate of a real risk-free rate would be the nominal government bond yield less the centre of the inflation target band (ie the nominal yield less 2½ per cent).

## **2. Using the Corporate Bond Yield and the CDS**

The paper proposes estimating the risk-free rate as the difference between the corporate bond yield and the corresponding CDS premium. The argument is that as a CDS provides insurance against default, then an investor purchasing a corporate bond and a CDS on the bond's issuer is the same as an investment in a risk-free asset.

This approach is questionable because it assumes that the CDS is a perfect hedge for the default risk of the corporate bond. Although a CDS may protect the principal of a corporate bond against default, it does not protect the promised coupon payments against default; therefore, contrary to the paper's assumption, a CDS is not a perfect hedge against default risk. When a bond defaults the investor loses not only part of the principal, but also the remaining coupons. In order to match the initial risk-free investment, the investor needs to reinvest the principal that is recovered from the CDS when the corporate bond defaults. However, the rate at which the principal is reinvested is the risk-free rate prevailing at the time of default and not the initial risk-free rate. The reinvestment rate may very well be higher or lower than the initial rate.

Consequently, risk-averse investors would demand compensation for the risk that the reinvestment rate is different from the initial rate. The compensation for this risk will be reflected in the higher cash flows from the investment in the corporate bond that is hedged with the CDS relative to the initial risk-free rate. Therefore, the difference between the corporate bond yield and the CDS premium will be always higher than the risk-free rate.

As well, the spread between the corporate bond yield and the CDS premium may move independently of the risk-free rate for many other reasons:

- Changes in the liquidity premium in either market (CDS tend to be relatively more liquid than corporate bonds) will alter the spread.
- Corporate bonds are subject to covenants. CDS may react to certain events, such as rumours of the company being a takeover target, but the protection offered by the covenants mean that bond yields may not.
- CDS are subject to counterparty risk. This is the risk that the insurance seller will not be able to pay if the corporate were to default on a bond payment.

Should you have any further questions, please do not hesitate to contact me.

Yours sincerely

Guy Debelle  
Assistant Governor  
(Financial Markets)