

Review of the Commonwealth Government Securities Market

Submission by UBS Warburg

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Summary

- ◆ The prospect of the retirement of the Commonwealth Government Securities (“CGS”) market raises many issues, many of these take the form of the questions posed by the Commonwealth in the *Discussion Paper*. In this submission, we provide responses to the key questions which UBS Warburg is positioned, by virtue of its standing in the domestic debt markets, to provide insight on.
- ◆ There is no clear precedence for the winding down of the CGS market and consequently there is no definitive answer to many of the proposed questions. We have structured our response to focus on the practical operations of the market and the balance of risks that a winding down of the CGS market may pose to those operations.
- ◆ CGS currently represent the backbone of the domestic debt markets. The CGS’s central position in the market is evidenced by its role as the:
 - default risk-free Commonwealth sovereign debt issuer
 - current benchmark for the pricing and trading of other debt securities
 - current underlying for the Australian bond futures contracts which are the principal point of price discovery for term interest rates and are used for wholesale trading of other interest rate products.
- ◆ At a practical level, there are potential replacements for the current role of CGS in the market. Within the submission we consider some of these including:
 - consolidation of all government debt to provide an equivalently liquid and efficient benchmark and as an underlying for the futures market
 - increased use of the swap market as a benchmark for pricing and trading other debt instruments and as an underlying for the futures market
 - other potential alternatives to provide debt securities with characteristics similar to CGS in terms of credit quality, liquidity and tenor to meet the requirements of investors
- ◆ While there are practical alternatives, we consider that none of these are likely to be as efficient as the current CGS framework. Furthermore, there are possible consequences for market efficiency if the migration from the CGS market framework to any alternative is not conducted quickly and smoothly. The potential re-emergence of the Commonwealth as a borrower in the future could present additional costs if the market was forced to revert back to the current regime.
- ◆ We conclude, as the IMF did in their analysis of the U.S. treasury market¹, that Government securities have characteristics which are difficult or impossible to replicate and any move to a private sector benchmark may have efficiency costs, plus may raise systemic risks.
- ◆ The potential efficiency costs of eliminating CGS must be viewed in the context of potential costs incurred by maintaining the CGS market in the absence of a debt requirement. One alternative to this may be for the government to continue to reduce net debt by accumulating assets that closely match the liability of outstanding CGS. Such an approach would minimise balance sheet risk and budget volatility.

¹ International Capital Markets Developments, Prospects and Key policy issues. August 2001.

Pricing other financial products

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **whether CGS is used extensively as the primary benchmark for pricing the debt securities of other issuers**
- ◆ **whether the interest rate swap curve is used widely for pricing debt securities. If not, are there obstacles to using the swap curve in the future?**
- ◆ **what other options are available for pricing debt securities? How effective are they?**

CGS are currently used as the pricing benchmark for the majority of debt instruments in the Australian capital markets. Central to the role of CGS is their role as the underlying for the 3-year and 10-year bond futures contract (although not deliverable, the cash settled Australian bond futures contracts are based on a basket of 3-year and 10-year CGS).

The futures contracts are the base for price discovery in the term interest rate markets (i.e. most *outright* interest rate trading occurs in the futures rather than CGS) and both CGS and swaps are often priced and quoted as a *spread* to the 3-year and 10-year futures contract (i.e. on an "Exchange Futures for Physical" or "EFP" basis). This is different from many other global markets (e.g. US Treasury, UK Gilt) where active outright trading occurs in the actual underlying government securities.

Semi-government debt is benchmarked to CGS and this is the typical means of quoting prices and trading in the wholesale market, although bond futures are also used. Relative value in the semi-government market is assessed on a combination of spread to CGS and spread to swap reflecting the diverse nature of investors in the semi-government sector.

Corporate debt in Australia is benchmarked to CGS (and again this is the typical means for quoting prices in the wholesale market), but the swap market is used extensively for relative value assessment as the swap curve is a more appropriate credit benchmark. In the primary and secondary market for corporate securities, issuers and investors are focused on the difference between the yield of the corporate security and the yield of an equivalent swap. This is most commonly referred to as the *credit spread*.

- **For issuers.** Most will benchmark their cost of funds on a floating (or BBSW) basis and will swap all fixed-rate debt issuance to a floating rate liability via an interest rate swap at the time of issue, as part of their funding/liability management. Balance sheet interest rate risk management is typically a separate decision and will be executed by separate swap transactions. International accounting standards (IAS39/FASB133) promote the separation of these funding/liability and interest rate management decisions. These accounting standards will be adopted in Australia on 1 January 2005.
- **For Investors.** Investors use the swap curve as the basis for assessing relative value in corporate debt securities. The difference between CGS yields and corporate debt yields is made up of a *swap spread* and a *credit spread*. The *swap spread* is the difference between the CGS curve and the swap curve and is independent and equal for all credit/corporate issues. The swap spread may be influenced by relative demand-supply of CGS and other non-credit specific factors. By assessing corporate debt against a swap benchmark (i.e. looking at the *credit spread*) investors are comparing a corporate credit to a credit benchmark.
- **For intermediaries.** Given both issuers and investors are focused on the credit spread, primary/new issuance of corporate debt in Australia is largely benchmarked to the swap curve. Only at the time of pricing a new fixed rate corporate debt issue will the spread being offered to swap be converted to a spread to CGS, futures and an outright interest rate/coupon.

Trading in semi-government and corporate securities in the wholesale market often occurs on a switch basis so as to minimise outright interest rate risk when transacting in these securities. This practise increases the efficiency of the market as participants' take only basis risks rather than outright interest rate risk. Investors and intermediaries use CGS or futures contracts in such switch transactions. To this extent, the CGS and bond futures play a crucial role in minimising transaction costs and increasing efficiency in the semi-government and corporate debt securities markets.

The removal of CGS, and the implied removal of the bond futures contract, would likely lead to reduced efficiency in the trading of semi-government, swaps and corporate securities unless a substitute to the CGS or futures contracts was developed. Such substitutes would need to have largely similar properties to the existing CGS or bond futures contracts:

- standardised specification
- deep liquidity
- transparency
- low transaction costs
- credit risk free
- efficient and low risk settlement
- multiple tenors or maturities

Below we consider two potential alternatives to the current system of quoting the debt securities of other issuers to CGS. Firstly, a potential consolidated semi-government benchmark (possibly including CGS), and secondly, a potential standardised swap benchmark.

Alternative 1: Consolidated Semi-government as benchmark

Semi-government bonds currently demonstrate, albeit to a lower extent, many of the characteristics of CGS:

- they are near default risk-free (and 0% risk weighted by APRA)
- they have significant outstandings (currently \$59 billion in the UBS Warburg Semi-government Index)
- they are liquid (total turnover of \$308 billion in 2001-02 versus \$552 billion for CGS according to *AFMA Australian Financial Markets Report 2002*)
- the issuers have demonstrated a long term commitment to the market.

There are, however, several inhibitors to the use of the current semi-government market as a replacement benchmark for CGS:

- each issuer is separate and in some cases credit ratings differ
- each issuer has a separate curve with duplicated coupon and maturities reflecting their existing funding profile

One potential solution to these problems would be to consolidate the semi-governments under one umbrella issuer (possibly including CGS as well) that establishes a curve of benchmarks (this is Option 2 discussed later in this paper). The major issues to be overcome to achieve this include:

- loss of individual issuer identity
- approach to credit exposure and management of individual members
- agreement on borrowing arrangements for individual members
- mechanism for transfer pricing between individual members

One major advantage of a consolidated semi-government (and CGS) borrowing entity in the context of reducing liquidity in CGS is that the bond futures contract could migrate to a new, but very similar, underlying. This would be a more incremental change for the market than other possible alternatives and could increase the success of such a migration.

Alternative 2: Using the swap market as the benchmark

The swap curve is the primary reference point for conducting relative value analysis between securities. There are a number of factors that prevent swaps from being the core hedging and investment tool for the market:

- they are a derivative contract, not an asset
- they carry an implied bank credit rating
- they are credit intensive – given they are a bilateral agreement, each party to the transaction has a potential credit exposure to the other
- they are priced differently to debt securities and require different IT systems

The existing market practise of quoting corporate securities to CGS could potentially be replaced by a system of quoting securities to a standardised swap benchmark. Note that interest rate swaps, unlike CGS, semi-government or corporate securities, are not investments but are contracts without principal exchange (i.e. they are similar to futures contracts in that cash in not actually invested). As such they are not a direct substitute for CGS but could be utilised to create a futures contract which replaced the existing bonds futures contract.

Given the swap market exists as a specialised over-the-counter market several issues would need to be addressed in moving to such a platform. These are discussed further elsewhere in the submission.

Capital index bonds

CGS Capital Indexed Bonds (CIB's) are used as the benchmark for pricing in the index-linked bond market. The semi-government authorities no longer issue such securities and in fact have been attempting to retire debt in the face of changing asset-liability mixes. To date, neither a liquid corporate CIB market or index-linked swap market have emerged. The retirement of CGS CIB's would remove a separate asset class for investors that provides unique investment opportunities:

- long tenor (the CIB curve extends to 2020)
- perfect inflation hedge via CPI indexation

As the savings industry increasingly shifts from asset accumulation (under the compulsory superannuation arrangements) to retirement income streams (long dated, low volatility, inflation hedged and ideally amortising annuity-like cash flows) the loss of this sector of the market could present an increase in risk to self-funded retirees.

The absence of the CGS CIB market would not otherwise prevent the establishment of a non-government CIB or inflation indexed annuity market should the investing community drive sufficient demand for such a market to grow. However, the absence of a CGS CIB market could reduce the efficiency of such a market. Unlike nominal CGS, there is not an obvious alternative for CGS CIB given the more immature development of a semi-government or swap alternative.

Referencing other financial products

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **whether the yield on CGS is commonly used as a reference benchmark for comparing the yields on other debt securities**
- ◆ **whether any major obstacle hampers the interest rate swap curve or some other benchmark being used as a reference benchmark**

See also the previous discussion – the wholesale market uses the CGS as a pricing reference or benchmark for other securities, but not typically as a means of assessing relative value in the corporate securities markets and to a lesser extent the semi-government. The removal of the CGS market, and the implied removal of the bond futures market, would lead to inefficiency in the trading of corporate securities if a suitable alternative was not developed.

The critical requirements for a replacement benchmark for pricing non-CGS securities are:

- standardised specification
- deep liquidity
- transparency
- low transaction costs
- efficient and low risk settlement

A consolidated semi-government benchmark could offer an alternative benchmark to CGS. A futures contract based on a consolidated semi-government benchmark or swap curve could potentially offer an alternative to the existing futures contracts (see further discussion below).

Managing financial risk

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **whether there is scope for the Treasury bond futures market to be replaced by a futures market based on alternative instruments. What could hamper an alternative futures market from developing?**

The existing bond futures contract plays a central role in promoting efficient debt capital markets by providing

- term interest rate price discovery
- interest rate risk management
- benchmark for pricing other debt securities

The 3-year futures contract is the most liquid interest rate instrument in Australia. It is also the fourth most liquid futures contract globally. It has reached this liquidity level because of its relevance to all users of interest rate product. The majority of interest rate instruments – CGS, semi-governments, supranational bonds, corporate bonds, swaps, LTFX and options use the bond futures as a base hedging and trading tool.

According to the *AFMA Australian Financial Markets Report 2002* turnover of the 3-year and 10-year bond futures contract totalled \$2,173 billion in 2001-02. In comparison, turnover in physical CGS was \$552 billion in the same period.

Given these central functions a viable alternative is critical to maintaining overall efficiency in the interest rate markets. An alternative instrument could replace the bond futures contract, but to maintain efficiency, any alternative should replicate the characteristics of the existing contracts:

- standardised specification
- deep liquidity
- transparency
- low transaction costs
- efficient and low risk settlement

Given the previous discussion, we would again consider that a consolidated semi-government or standardised swap benchmark could potentially replace CGS as the underlying for the interest rate futures contracts in Australia.

Irrespective of chosen underlying, one major potential impediment to the development of an alternative futures market is management of the changeover process. Under a scenario of gradual decline in CGS outstandings the existing futures market is likely to suffer a drop in liquidity while the replacement contract will not be immediately accepted. Recent attempts in Australia and elsewhere to introduce new interest rate futures contracts to supplement rather than replace existing contracts have not been particularly successful (e.g. 5yr Australian bond futures, US swap spread, Australian semi-government spread). An accelerated changeover process could mitigate this risk.

The BIS noted these problems in developing futures contracts for instruments that have not gained acceptance as benchmarks². They note that, “despite favourable trends in cash markets, activity in futures markets suggests that the [non-government] securities have yet to gain broad market acceptance as benchmark instruments. After an initial period of rapid growth, the turnover of futures contracts traded on Fannie Mae and Freddie Mac securities quickly peaked at little more than 1% of turnover of US Treasury futures.” Similarly, “futures contracts on Pfandbriefe met with a similar experience after their (short-lived) introduction in 1998”.

The absence of an immediately successful alternative to the existing futures contract would hamper efficiency in the wider debt markets.

Alternative 1: Consolidated Semi-government for futures contract

Under the scenario discussed elsewhere, a consolidated semi-government (and CGS) futures contract could provide a potentially quite direct replacement of the existing CGS based futures bond contract. The structure of such a futures contract could mirror closely that of the existing contract.

The issues that could hamper the development of such a market include:

- relevance of semi-government curve to some users of the futures contracts
- the ongoing size and liquidity of the semi-government market
- comparison to other global markets

The first two issues are already encountered in some form by users under the existing CGS based futures. Given the high correlation of semi-government rates to CGS rates and other interest rate benchmarks (e.g. the swap curve) this is unlikely to be a material issue.

As other benchmark futures markets are based on government debt, there could be an issue for offshore users of the futures markets. Currently, offshore users are able to benchmark Australian futures quite directly to their offshore equivalents; moving to a semi-government or swap based contract would introduce a basis risk in such comparisons. There is no clear evidence that a move to a non-CGS based futures contract would materially impact offshore activity in the contracts; the key risk to offshore activity in the Australian futures is more likely to relate to a fall in liquidity from existing levels.

Alternative 2: Swap benchmark for futures contract

The swap market is used increasingly by corporates, debt issuers, investors and intermediaries as a means of managing interest rate risk. Standardisation of the swap market through futures contracts on underlying swaps could greatly increase the efficiency of the swap market and significantly reduce systemic risk by reducing the markets aggregate credit exposure through swap contracts. However, the tailor-made nature of the swap market along with accounting issues for corporate users of the swap market (IAS39/FASB133) could hamper the development of a standardised market.

The Sydney Futures Exchange (SFE) introduced a 3-year and 10-year interest rate swap futures contract in November 2002. To date, the contract has not been actively traded. As at 9 December, the open positions in the 3-year and 10-year interest rate swap futures contract were 645 lots versus 702,526 lots for the bond futures contracts.

² *The emergence of new benchmark yield curves*, Phillip D Wooldridge, BIS Quarterly review, December 2001.

◆ **whether the interest rate swap market is sufficiently liquid at maturities longer than five years to facilitate interest rate risk management;**

Turnover in interest rate swaps has grown strongly over the last 5 years. According to the AFMA *Australian Financial Markets Report 2002*, turnover in fixed rate swaps in 2001-02 was \$821 billion, an increase of 27% on the previous year. This is larger than the turnover in CGS in the same period of \$552 billion.

According to AFMA *Australian Financial Markets Report 2002*, 86% of all outstanding swaps have a maturity of 5-years or less. Only 7% have a maturity greater than 7 years. CGS and semi-government in comparison have a much more even spread of activity; in particular primary issuance has been dominated in the 10-year tenor. The concentration of swap market activity in shorter maturities reflects the hedging requirement of major users of the swap market – Australian corporates and banks – as well as the more credit-intensive nature of swaps. Despite the concentration of turnover, liquidity in longer dated swap maturities still occurs at competitive levels. This is driven by some extent by liquidity in the 10-year futures contract against which swaps are traded in the wholesale market.

◆ **whether the viability of the interest rate swap market would be affected significantly by winding down the CGS market; and**

CGS play an important role in the current interest rate framework in Australia as they are the basis for the futures contract from which both CGS and swaps are quoted. Removing the CGS from this role would require a re-assessment of how swaps were quoted in the wholesale market and could lead to a significant increase in transaction costs and consequent fall in market efficiency. One solution would be to quote swaps versus a new futures contract based on either consolidated semi-government or interest rate swap futures. To take this central role, any new futures contract would need to be successful in replicating the liquidity of the existing CGS based contracts.

◆ **if alternate risk management tools were not available, what would be the likely impact of this on the cost of capital for corporate bond issuers?**

CGS themselves are not, in the most, currently used by corporate bond issuers for risk management – this role is assumed by the swap market and to a lesser extent to futures market.

It is critical that in a winding down or removal of the CGS market that there is no follow through impact on the efficiency of the swap and futures markets. As discussed elsewhere, there are possible practical solutions to operating these markets in a non-CGS environment, but there are potentially significant risks in managing the transition to this framework.

In the absence of appropriate risk management tools, the cost of debt capital could be expected to rise as issuers of debt have limited control over the timing or management of the debt that is raised. From a primary corporate debt issuance perspective, the failure of a viable alternative interest rate framework for pricing and hedging issuance could lead to a reversion to the brokered-style market of the 1980's. This type of market, which more directly links issuers and investors, is significantly less efficient than the existing market for both issuers and investors.

Providing long term investment vehicle

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

◆ the significance of CGS as a long-term investment vehicle, particularly for institutional investors such as superannuation funds and life offices;

The majority of fixed income assets in Australia are managed against the UBSW Composite Bond Index. Typically, the trustees and advisers of superannuation funds allocate a portion of their total investable assets to the domestic fixed income asset class (typically 20-25%) and these amounts are managed against the index.

The UBS Warburg indices are market-value weighted indices; therefore, other things being equal, as more securities are issued, investors are required to hold more of them and visa-versa. The focus on market-value weighted indices creates a self-fulfilling prophecy that greater or less supply will create greater or less demand. Individual fund managers assume tracking risk if they deviate from the weightings/duration etc of the index.

As fixed rate CGS outstandings have fallen from \$79.5 billion to \$51.1 billion over the last five years, the weighting of CGS in the UBS Warburg Composite Index has fallen from 60% to 33% (the fall in index weighting has been more significant because of the emergence of non-government securities market).

It is the role of trustees and advisers of superannuation funds to consider whether the falling allocation to CGS as a function of their falling weightings in the indices is appropriate in the context of overall portfolio risk. If not, it would require a deviation from the existing market-weight indexation to a more optimal or specified portfolio indexation. This could break the nexus between supply and demand and could cause excess demand for long-term risk-free investments above that available as CGS.

The CGS market is far more liquid in longer tenors than alternative investments such as the corporate debt market. Issuance by the Commonwealth in recent years has focused on 10-12 year maturities and one may argue that this has potentially crowded out issuance by other issuers into the longer part of the yield curve. Australian corporations have been able to access a greater pool of long dated funding from offshore bond markets, which are deeper and more price efficient in longer tenors than the domestic corporate bond market. The absence of the Commonwealth in issuing long dated debt could remove any such crowding out to the extent that it has existed.

At appropriate pricing levels, supranational issuers could provide near default risk-free long dated fixed income securities for the superannuation and life industries. Alternatively, the industry could consider increasing the portfolio weighting to equivalent offshore securities. Increasing the weighting of offshore securities could introduce additional financial risks to these portfolios given the underlying liabilities are in Australian dollars. Hedging the foreign currency and interest rate exposures in such investments could partially mitigate this risk assuming that such hedging (which requires liquid interest rate and cross currency swap markets) could be efficiently executed.

The UK government saw providing a secure, long-term investment vehicle for pension and insurance funds as a key reason to sustain liquidity in the gilt market during their period of net negative issuance

(1998-2001)³. They were concerned that private sector pension funds require a long-dated risk-free asset to match their liabilities. This in turn reduces the long-term contingent risk to the government of a private sector pension crisis. There is currently a debate in the UK surrounding the appropriate asset allocation mix for pension funds which could possibly increase demand for long dated fixed income assets.

◆ **whether there is currently an unmet demand for CGS within the superannuation sector; and**

There is little evidence of unmet demand for CGS despite the fall in outstandings over recent years. This is likely in part to be due to the relationship between outstanding CGS and the CGS weightings in bond indices. The increased liquidity of the repo market in CGS over recent years may also have impacted the supply-demand equilibrium for CGS by increasing the synthetic supply of CGS in the market through increased velocity of the outstandings. According to the AFMA *Australian Financial Markets Report 2002* repo turnover of CGS in 2001-02 was \$4,359 billion; a 72% increase over the previous year.

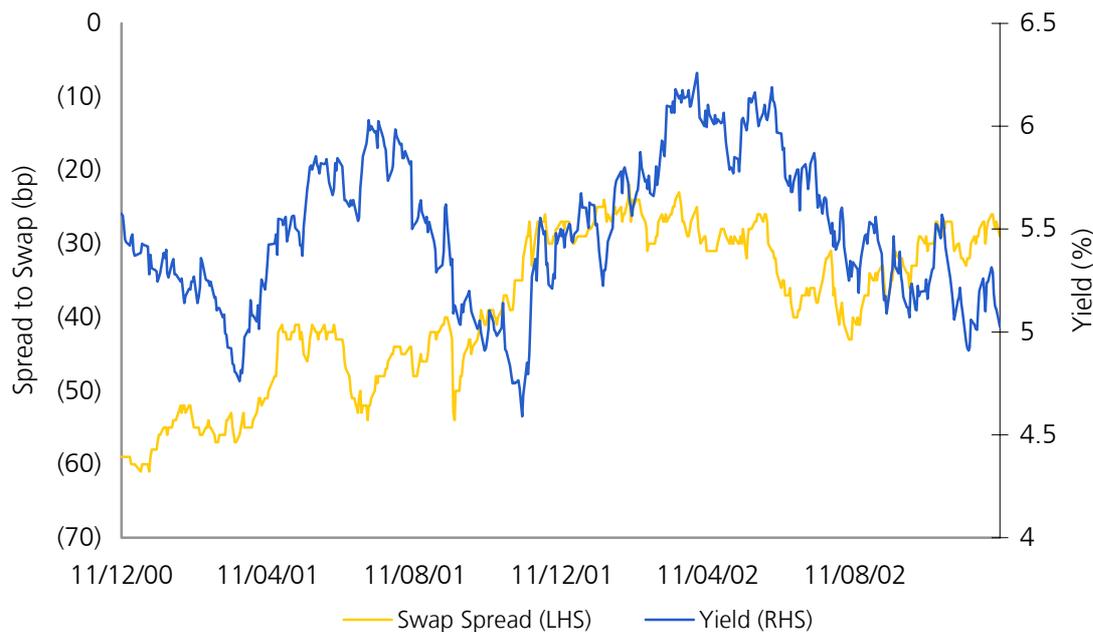
In assessing the impact of falling outstandings on the relative price of debt it is appropriate to compare the move in outright interest rates and the move in the difference between CGS and swap rates. Other things being equal, a fall in supply of CGS should lead to lower interest rates and a greater differential between CGS yields and swap yields. In recent history, while the first is true, the second is not.

One may argue that outright interest rates are determined by the level of short-term official interest rates and inflation expectations rather than the absolute or relative supply of government debt. Our modelling of CGS 10-year bond yields shows that they are a function of short term rates (as measured by 90 day bank bills), the budget balance (headline as a % of GDP) and US 10 year bond yields. We do not find a role for the level of debt.

The measure of yield differential between CGS and swap neutralises the level of outright interest rates in the analysis. It does however introduce factors that are specific to the swap market such as credit risk (as swaps are a measure of credit) and exogenous factors specific to the swap market (e.g. the large amount of swap receiving in 2002 as a function of Uridashi issuance).

The chart below shows the yield and the swap spread for the CGL 10% 15/10/07 being the near current 5 year CGS. It shows that over last 2 years, while fixed rate CGS outstandings have fallen, yields have traded in a range while the "price" of CGS relative to swap (i.e. the swap spread) has actually cheapened from 60 basis points to 30 basis points.

³ Insights and Tools From Selected Nations, United States General Accounting Office, November 2001

CGL 10% 15 October 2007

SOURCE: UBS Warburg

◆ **the potential to develop alternative long-term investment instruments.**

The experience of the development of the corporate market in Australia has seen issuance focused on the short-to-intermediate rather than long-term maturities. Several factors may be behind this:

- institutional investors are benchmarked to the index rather than driven by the requirement to hedge specific long-term liabilities
- Governments have dominated issuance in long-term maturities as they have managed falling net debt portfolios while maintaining gross issuance.
- the relationship between the CGS and swap curve across maturities (the swap spread) has historically been very flat. Given the risk-free credit characteristics of CGS versus the bank credit characteristics of swaps one would expect the differential should widen as tenor increases. Other things being equal, investors are not additionally compensated for taking credit risk in longer maturity corporate securities. For a given swap spread, only by seeking wider credit margins – which reduce the attractiveness of issuing term debt to issuers – can investors be compensated for longer-term credit risk.

For several years, the Australian market has looked outside Australia for potential replacements for the falling levels of CGS and semi-government securities; most noticeably through issuance by AAA supnationals. To date, only limited issuance has occurred. Issuance of supranational assets as a replacement for CGS has been limited by:

- although near default risk-free credits (sovereign/government AAA), supranational issues have not traded as efficient alternatives to CGS, limiting investor demand
- because the issuers benchmark their funding against swap (particularly \$US floating rate) the supranational issues have exhibited higher correlation with strongly rated corporate issuers rather than CGS or semi-government issuers (e.g. in periods of widening swap spreads supranational spreads will tend to under-perform both CGS and semi-government securities)
- liquidity, even in the largest issues (e.g. A\$1.0b ADB, IBRD) has not matched the liquidity of CGS

-
- while the RBA has widened the universe of securities eligible as collateral for repurchase transactions with the central bank, supranational issues are 20% risk-weighted by APRA versus a 0% risk-weighting for CGS and Semi-government securities
 - the supranationals have not been able to meet their funding targets (which are deeply sub-libor) and, unlike the Commonwealth and semi-government issuers have not demonstrated a commitment to issuer in the market on a regular basis given these funding targets
 - supranational issuers fund at a level equivalent to or better than the Commonwealth on an international basis. Australia does not carry the highest rating by all credit ratings agencies for foreign currency debt whereas the Supranationals do and thus the supranational have not found the Australian market competitive for issuance on an ongoing basis.

The removal of the CGS market could lead to an increased demand for supranational assets if the market has demand for near risk-free AAA securities and pricing adjusts to meet issuer requirements. Several markets around the world have developed deep non-government AAA markets that are a proxy to government debt. Issuers such as ADB, EIB, IADB and IBRD have been able to offer investors a near default risk-free asset with benchmark size and liquidity in \$US and Euro. An efficient interest rate market, in particular interest rate and cross currency swap market, would be critical to the emergence of such an alternative in Australia.

Implementing monetary policy

The Government would appreciate views from stakeholders on the declining importance of CGS in the operation of monetary policy.

The RBA has already increased the range of assets it is willing to use in conducting its monetary policy. CGS makes up a little under half of assets that are eligible collateral for RBA domestic market operations. The elimination of CGS will require the RBA to expand the assets it is willing to deal in, which will require some increase in credit risk. In normal circumstances, this is probably not a major issue. But, as with a lot of the issues that arise with eliminating CGS, the more interesting question is how does it affect the RBA's ability to conduct policy at times when the financial system is under significant stress.

The existence of a liquid CGS market does provide a potential "unconventional" policy weapon in circumstances of deflation. As outlined by Fed Governor Bernanke in a recent speech⁴ a large, liquid government bond market provides one of the key policy weapons that central banks have to fight deflation once official short term interest rates have gone to 0%. The existence of the bond market could allow the central bank to lower rates further out along the government bond curve, once the policy rate has fallen to 0%, by announcing explicit ceilings for yields on longer-maturity Treasury debt. In practise, before an economy was confronted by this dynamic economic growth it is likely to have been weak for some time resulting in budget deficit(s) and increased bond supply.

⁴ "Deflation: Making sure "It" Doesn't Happen Here", Federal Reserve

Providing a safe haven in times of financial volatility

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON

- ◆ **the importance of the CGS market in providing a safe haven during periods of financial instability;**
- ◆ **what evidence there is of the role of CGS as a safe haven?**
- ◆ **what possible alternative safe havens exist and how appropriate they are?**

It is important to distinguish between *internal* and *external* shocks when contemplating the role of the CGS market in periods of financial instability.

The shocks experienced by Australia in the last decade, including the Gulf War, the Asian crisis and the Russian default have been *external* shocks. In these circumstances, the US Treasury market has taken the central role as the safe haven for global capital. The "safe haven" bid for US Treasuries has been transmitted to the CGS market through the strong linkages between Australian and US interest rate markets.

The prospect of an *internal* shock could have significantly greater consequences for domestic capital markets in the absence of a CGS market. Such a shock, emanating from the domestic financial system, could be expected to place significant pressure on the Australian currency and capital markets. The existence of a CGS market could offer a circuit-breaker to prevent capital flight under such circumstances by providing a default risk-free security. Asian economies have recognised that a domestic government bond market could have provided such a circuit breaker during the Asian crisis and have moved to build their domestic bond markets.

If the nature of an internal shock is such that investors are seeking a default risk-free asset, then both the semi-government and supranational alternatives discussed elsewhere could provide an alternative to CGS. In the case of supranational issuers, there is currently only \$5.5 billion of outstandings. While demand for such assets could increase significantly, such that the previously noted point of unattractive pricing for issuers was overcome, the matter of how the issuers could hedge their A\$ liability back to \$US could be problematic if the currency and swap markets were not operating efficiently due to the financial shock.

Attracting foreign capital inflow

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **whether the absence of a CGS market would affect Australia's attractiveness to foreign investors; and**
- ◆ **how important global bond indices are for foreign investment in Australia.**

At a high level, CGS are only one facet of the Australian capital markets. In the debt market, CGS accounts for 33% of total outstandings. Australia's equity market, with market capitalisation of \$670b (AS30), is 10 times larger than the CGS market and 3 times larger than the total domestic debt market

Offshore investors typically have been large holders of CGS; currently estimated at \$23.8 billion or 37% of outstandings (*Review of the Commonwealth Government Securities Market 2002*). These holdings are with central banks (non-G7) as foreign currency reserves and international fund managers who hold CGS on a relative value basis versus other sovereign debt markets (US Treasuries, UK Gilts, Japanese JGB). Decisions on the size of holdings may be a function of the size of the market (i.e. weighting in global indices), but given the relative insignificance of the Australian market in most indices (i.e. weighting of 0.5-1.0%) holdings are more typically based on fundamental views on currency and relative interest rates.

While the size of the weighting in the global government bond indices may relate directly to holdings, there is some evidence that international investors would no longer contemplate investment in CGS if Australia was removed from the indices because the market no longer met inclusion requirements. At a practical level, this issue is correlated with the size of the market as at least one major global government debt index requires a minimum \$US20billion (A\$35billion) for inclusion of the market in the index.

Offshore investors have also been attracted to other A\$ debt instruments, most noticeably the withholding tax-free issues of the New South Wales and Queensland borrowing authorities. These funding programmes have provided efficient funding and diversification of investors for these borrowers. Removal of Australia from global bond indices could impact demand for these securities and increase borrowing costs for these state entities.

Promoting Australia as a global financial centre

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **whether the CGS market plays a significant role in promoting Australia as a global financial centre; and**
- ◆ **whether the absence of a CGS market would affect transaction costs and Australia's attraction as a centre for global financial services**

When considering major world financial centres the key requirements are a:

- highly skilled workforce
- sophisticated and open capital markets
- stable regulatory regime
- attractive taxation regime
- low transaction costs.

Australia's main differentiation points as a competitor in Asia are the sophisticated capital markets and the associated skills of the workforce, plus the strong, stable regulatory regime.

While all G7 economies have a developed domestic treasury debt market, there is no reason to expect that it is a pre-condition to being a global financial centre. Centres such as Dublin, Hong Kong, Singapore have developed their position as financial centres by focusing on issues such as educating the workforce, lowering transaction costs, lowering taxation and other business establishment initiatives.

CGS are only one facet of the Australian capital markets and account for about 5% of the total capitalisation of the domestic debt and equity markets. Importantly, however, all major financial centres have well-developed efficient domestic debt capital markets. While CGS may not be a pre-condition to this, viable alternatives need to exist such that domestic and offshore issuers have access to debt funding. As discussed elsewhere, such alternatives may exist, although transition management and efficiency replication are unquantifiable risks.

Appropriate size of the CGS market

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON THE APPROPRIATE SIZE OF THE CGS MARKET IN THE EVENT THAT THE MARKET IS TO BE MAINTAINED.

Two immediately practical considerations in terms of the size of the CGS market are the size required to maintain the current function as underlying for the futures contract as well as inclusion in offshore bond indices.

To sustain the futures contracts in their current form would probably require CGS hot stock outstandings to at least remain at current levels. Viable futures contracts require at least 3 issues within each basket. For the 3-year futures contract that means ideally 3 bonds that mature in 2, 3 and 4 years. For the 10-year futures contract it would require an 8, 10 and 12-year maturity. As contracts roll out of each futures contract basket there needs to be a new one to roll in. This would then require the existence of a 6 year CGS which would roll in to the 3 year contract when the 2 year CGS rolled out – i.e. when it had less than 18 months to mature. Assuming each hot stock has an outstanding of \$5 billion having 8 lines implies a total market of \$40 billion.

To continue to attract offshore investors to our market to help lower the cost of capital it would also be ideal to maintain a weighting within the global indices. At least one major global government debt index requires a minimum \$US20billion (A\$35billion) for inclusion of the market in the index.

Option 1: Wind down the CGS market

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

◆ potential implications of winding down the CGS market

Potential Implication

No risk-free asset potentially increasing the risks for superannuation and annuity funds.

Futures market failure given CGS are the underlying for the current futures which are the basis of all interest rate product pricing and risk management.

Assets lost to offshore in the absence of a viable alternative risk-free long dated asset and a decision by fund trustees and advisers that such as asset was core to domestic portfolios.

Reduced focus as a financial centre.

Increased transaction costs caused by lower liquidity.

Mitigant

Falling CGS will be replicated by index weightings (i.e. it is a circular). Investment industry need to change focus from "market-value" index weightings to "optimal portfolio" index weightings.

A futures market on other underlying instruments. Semi and/or swaps are possibilities. Introduction would require greater success than attempted introduction of non-government futures contracts in Australia and other markets.

Create an alternative to CGS that attempts to replicate credit risk, liquidity, and tenor.

CGS represent 5% of the market capitalisation of the Australian debt and equity market. While not a significant weighting in itself, it is a base for all interest rate markets. Other major financial centres either have a strong and vibrant domestic currency market or are global centres for trading of capital for G3 currencies.

CGS provide the base for the bond futures market which along with CGS themselves are the current pricing reference for most other debt securities. A viable alternative to the CGS and CGS based futures would be required to preserve the efficiency of the market.

In the absence of the CGS market could the Commonwealth efficiently fund a budget deficit.

Other governments have been able to initiate or ramp-up their domestic government debt markets when required. Australia could also consider using offshore debt market (on a hedged basis) to fund a deficit if it was more efficient.

◆ the likely impact on the cost of capital

At a practical level, the winding down of the CGS market should, other things being equal, reduce interest rates for CGS as supply is lowered (i.e. supply curve shifts up/left). This would lead to a reduction in the risk-free rate and potentially reduce the cost of capital (debt and equity).

What is less clear is the effect of a reduction of CGS on the demand curve. Poorer liquidity and the reduced attractiveness of the market (i.e. index weighting etc), particularly for international investors, could cause a commensurate or greater shift in the demand curve down and to the left. The net result could be a decrease in the price for CGS and thus an increase in the risk-free rate. An increase in the risk free rate could flow through to other securities – swap; corporate debt and equity – leading to a general rise in the cost of capital.

◆ the likely re-entry costs (in the form of additional borrowing costs) if the Commonwealth withdraws from the market

This cannot be quantified, but would be influenced by:

- extent to which investment industry had residual demand for A\$ risk-free assets
- extent to which intermediaries had sufficient skills and resources to meet issuing requirement or the extent to which this skill could be quickly built (i.e. including ‘importing’ skill from offshore as other emerging bond markets have done)
- extent to which investors saw the re-emergence of CGS as the liquid benchmark and the basis for price discovery rather than a secondary role in a new financial environment
- potential costs of a steeper yield curve associated with the liquidity premium required to attract investors.

Ideally the re-emergence of the Commonwealth would be well received by the \$A domestic market and international investors. However, if this was not the case, Australia could consider issuing in offshore markets and swap those funds back to A\$. If Australian investment assets had been lost to offshore markets, this would allow such funds to be invested in Australian sovereign debt, albeit in non-A\$ currencies.

◆ the most appropriate approach and timeframe to implement a decision to wind down the market, if this decision is made

A speedy retirement of CGS is critical to the emergence of a viable and efficient alternative to the CGS market, and critically, the futures contracts that represent the base of all interest rate product pricing. While the Commonwealth has stated a preference for a “run-down” option to minimise any cost of redemption, this risks a “slow and painful death” approach where there is little incentive for the market to develop alternatives to the current framework.

The cost and risk of execution is the largest stumbling block to a speedy retirement of CGS and thus a speedy and efficient development of an alternative market framework. The nominal value of outstanding CGS (as measured by the UBS Warburg Treasury Index) is \$48 billion. On a market value basis, the outstandings are \$52 billion. That is, the Commonwealth has issued debt at higher than current yields and thus face a mark-to-market loss on the current valuation. The same is true of Commonwealth CPI Linked issuance. The nominal value of outstandings is \$6.5 billion while the market value of outstandings is \$9.0 billion.

The Commonwealth has approximately \$31 billion of fixed-to-floating interest rate swaps which has a positive net value to the Commonwealth of \$8.6 billion (*AOFM Annual Report 2001-2002*). These swaps have been entered into to maintain the target duration of the Commonwealth's debt portfolio while issuance of long dated CGS would otherwise have increased it. The \$8.6 billion reflects an indebtedness of the swap counterparties to the Commonwealth (the Commonwealth manages this risk by taking exposure to counterparties rated on AA-/Aa3 or better).

The Commonwealth does not have an embedded call option to redeem outstanding debt. Any debt retirement would need to be conducted in the secondary market. This could take many forms including buying in the open market (as the Commonwealth has previously done in short dated maturities) or by reverse tenders as were conducted in the early 1990's.

Any move by the Commonwealth to retire debt over a short period of time by actively engaging the market in redemptions should be expected to lead to a substantial change in the price of CGS. This may be reflected in outright yields, but more appropriately (as outright yields will reflect monetary policy settings and inflation expectations) would be reflected in a larger premium for CGS relative to other instruments (e.g. swaps, corporate securities). Thus, while the market value of the CGS could be expected to move, the market value of the Commonwealth's swaps may not.

Attempting to quantify this cost is difficult. A 25 basis point move in the relative price of CGS to swap would imply a current cost to the Commonwealth across the entire portfolio of approximately A\$500 million (\$48 billion @ 4yr average duration x 25bp). A 50bp move would cost close to A\$1 billion. At the same time, the Commonwealth would be forced to pay transaction costs to unwind the aforementioned swap liabilities.

Option 2: Consolidate Commonwealth and State Debt

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **whether there is merit in reconsidering the idea of consolidating Commonwealth, State and Territory government debt into one market; and**
- ◆ **whether this option would assist with the transition to reducing the supply of Government debt.**

If the Commonwealth were to proceed down the path of further paying down gross debt, there is merit that a consolidation option would assist the market with the transition. Current market structures and practices would be less affected by the reduction in supply of the old CGS.

In total there would initially be about \$100 billion of debt issued under the one umbrella issuer. This would leave investors with a larger single government risk free asset class – the existence of which has been highlighted as being of significant benefit to the interest rate market. That said, it would still allow the Commonwealth to reduce [existing] CGS on issue without immediately sacrificing the pool of risk free investments or the viability of the futures contracts.

Given the current differential between CGS and semi-government debt pricing (approximately 25bp) and assuming not all of this would be sacrificed in a move to consolidation, lower costs of funding for the State and Territory governments could provide a net benefit to the stakeholders in those entities. At the Commonwealth level, the issue of transfer pricing is one that would need to be addressed.

As discussed previously, there appear to be a number of risks associated with the full retirement of the CGS market. By moving down the consolidation path these risks could be largely mitigated. The market, and particularly the futures market, would be able to continue in its current form. Due to the increase in size of the government market, its relevance in the global bond indices would increase leading to a potentially higher level of offshore investor demand.

Importantly for the Commonwealth, this move would alleviate some of the direct risks associated with debt retirement. By consolidating, the Commonwealth would have greater flexibility to retire debt as funds became available without being subjected to the price pressures that may come about if reducing a much smaller pool of CGS. If indeed at some point in the future the Commonwealth needed to return to the market, the markets continuation, albeit in a different form to the current, could be expected to provide greater certainty and efficiency of funding.

The mechanics of such a structure is something that needs to be addressed by the constituent governments. Major issues that need to be addressed include:

- how existing debt should be consolidated
- credit risk and member liability – should the Commonwealth provide an explicit guarantee
- consequences of variable member ratings
- transfer pricing between member governments
- limits on borrowings of member governments and penalties for excess borrowing requirements
- mechanisms and consequences of member government wanting to opt out of the arrangements

There are hurdles to achieving consolidation. The ideal process would see the following:

- An announcement from Commonwealth that State debt is to be consolidated with CGS. This would result in a closing of the spreads between CGS and semi-government debt. Accompanying this announcement would be the method by which consolidation would take place
- The consolidation process conducted over a period of weeks whereby holders of CGS and semi-government paper can switch existing holdings for new CGS with current market coupons.
- The above provides transparency, a level playing field and the ability to quickly shift to the new government debt curve.

Consolidation creates a significant funding benefit for the States. In on-lending, the Commonwealth could collect a levy that is State ratings based. Should the implied rating of a state fall, the applicable levy would increase commensurately. The size of each levy could be structured so as to ensure continued fiscal responsibility and link to other triggers such as total debt requirement relative to GDP.

Due consideration must be given to the possibility that a State or States may choose to exit the agreement for one reason or another. A mechanism for dealing with this should be considered ahead of time. It would defeat the purpose of the consolidation if the pool were to fall below certain levels as a result of a State or State's cessation from the agreement.

Option 3: Maintain the Commonwealth Government Securities market and fund the Commonwealth's unfunded superannuation liabilities

THE GOVERNMENT WOULD APPRECIATE VIEWS FROM STAKEHOLDERS ON:

- ◆ **governance arrangements for a hypothecated asset fund that stakeholders suggest would insulate investment decisions from direct Government control;**
- ◆ **whether funding the unfunded superannuation liability through a superannuation fund is a good way of dealing with the governance issues associated with substantial Government asset holdings;**
- ◆ **the appropriate limits on holdings of any single instrument if the Government were to invest in debt securities;**
- ◆ **the appropriate limits for equity holdings in any one company if the Government were to invest in equities;**
- ◆ **the likelihood of Government investment distorting asset prices;**
- ◆ **the impact of restricting Government investment to foreign securities; and**
- ◆ **the increased uncertainty for fiscal policy arising from variations in investment returns**

UBS Warburg believe other market participants (funds management industry, advisers etc) are better positioned to answer these issues, but we have suggested a fourth alternative that follows.

Alternative Option: Maintain the CGS market and run a matched investment book

One potential alternative to maintain the gross levels of CGS in the market while allowing the Government's net debt position to fall is to consider running a matched book funding portfolio. Under this alternative, the Government would issue CGS and invest surplus funds in qualifying fixed interest investments. The investments and the management of the risk therein could be structured so as to minimise:

- credit risk, by investing in other sovereign or quasi-sovereign assets rated AAA
- interest rate risk, by investing or hedging all investments so as to neutralise term interest rate risk exposure to predefined levels
- currency risk, by hedging all cash flows on a A\$ basis so as to match the liability of the underlying A\$ CGS.

This alternative has several advantages over the alternative to fund unfunded superannuation:

- minimises potential inter-year budget reporting volatility by investing in AAA debt securities on an interest rate and currency hedged basis (as compared to a typical superannuation-type portfolio that would include equity and fixed interest assets and typically be benchmarked to market-weighted indices)
- is unlikely to cause a distortion in asset prices as the government will be potentially investing in other deep and liquid government and quasi-government bond markets
- avoids potential issues regarding funding future defined benefit public service liabilities in an era of defined contribution superannuation
- can potentially add to the Australian debt markets landscape by promoting the growth of a non-CGS AAA market.

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