Adjusting to reduced government securities in Australia and the Euro-zone

Julie Gerstman, Economics Lecturer, Faculty of Business and Enterprise, Swinburne University of Technology, Box 218, Hawthorn, Australia, 3122

Anthony Karaminas, Economics Honours student, Swinburne University of Technology, Box 218, Hawthorn, Australia, 3122

Abstract

The structure of financial markets in the USA, Euro-zone and Australia have undergone significant changes in response to the reduced need for their central banks to issue government securities. For example, the adoption of an Economic and Monetary Union (EMU) has required a high degree of consistency in a number of policy areas including rules to restrict the size of budget deficits. In the early 2000’s adjusting to reduced government securities was a key consideration in US finance literature (Reinhart and Sack, 2000; Journal of Money, Credit and Banking, 2002, 2), but has become less important with the resurgence of large domestic deficit budgets in the US since 2002.

The continued surplus budgets in Australia have meant that the implications of less government bonds outstanding on financial markets continues to be discussed. Most of the EMU countries have run moderate budget deficits (% GDP), so the absolute amount of euro-denominated government securities outstanding has fluctuated and tended to grow slowly. Therefore fear of a severe liquidity squeeze has not eventuated but some aspects of changed and restricted issuance have continued to be relevant.

The Australian Treasurer adopted a medium term commitment to achieve and then maintain surplus budgets (from 1997), reducing the need for government bond issuance in the Australian financial market. In an Australian Government initiated Review on the Commonwealth Government Securities Market (Review) (2002), stakeholders views were sought on the extent to which government bonds offer unique financial market characteristics. The Review invited discussion of alternative instruments to replace the dominant role of government securities.

This research paper investigates developments in the Australian financial market since the Review (2002), and considers whether a rapid growth of corporate bonds has allowed adequate availability of low risk securities with benchmark status and liquidity, as existed in a government bond dominated fixed interest security market. The paper compares Australian experience with EMU markets, where growth of an interest rate swap market and credit derivatives have helped manage credit risk as well as supplement market liquidity. The research makes a preliminary assessment of how these financial markets have adapted to changed availability of government security issuance.
**Introduction**

Government securities (GS) have traditionally formed the cornerstone of debt markets in financially developed economies. Governments have been the largest issuers of long-term, low risk securities. GS are used by governments to finance deficit budgets, by central banks to achieve economic stability, by markets for liquidity and as a benchmark interest rate and by investors as a low risk asset class.

As market liquidity developed, government bonds became benchmarks for pricing other securities, provided means of hedging and positioning in both duration and volatility (McCauley, Remolona, 2000:53)

They are also used as vehicles for managing liquidity, as instruments for investment, as collateral for secured borrowing, as a base for futures market contracts, and as a safe-haven during periods of market turmoil (OECD, 2002:4)

This paper sets out to make a preliminary assessment of the impact on financial markets in Australia, and the Economic and Monetary Union (EMU) of changed rules and conditions affecting government securities issuance. The Australian government moved towards sustaining surplus budgets (except for periods of severe recession) since 1997 and has used surpluses to reduce government’s net debt ever since. In the euro-zone, public finances have been affected by government commitment to the Maastricht Treaty and the Stability and Growth Pact (SGP) signed in 1998, limiting their fiscal deficits to 3% GDP (BIS, 2001:2).

These developments have raised the following question;

Will these worldwide shifts from deficits to surpluses, and the consequent declines in government debt, have important economic consequences? (Reinhart, and Sack, 2000:164)

**Methodology**

The task in this study is firstly to investigate the implications of Australia’s reduced issuance of government securities made possible by surplus budgets. The study considers recent responses to pressure for limited issuance of government securities in the euro-zone and compares the Australian experience with that of the euro-zone financial market since they have adhered to fiscal discipline specified in the GSP (1998).

Literature relating to the characteristics of government securities, the impact of a reduced need for their issuance and the subsequent structural effects for financial markets are reviewed, and the alternatives available for a substitute or complementary security are investigated.

The paper monitors developments since the Australian Government Debt Review (Review) (2002) and compares them with developments in the EMU. The task required reviewing financial literature from a wide range of sources, explaining data and financial reports relevant to these markets. The research used an inductive approach to source relevant commentary to induce if Australia’s financial market has adapted to the significant drop in Commonwealth Government debt and its reduced issuance of Commonwealth Government securities (CGS). It also assesses if the corporate bond market has been able to develop into a sustainable complement to the CGS market. The approach adopted uses a grounded theoretical approach consisting of accessing and analysing data to enable explanations of collected materials (Charmaz, 2000:514). Two researchers systematically sorted through data allowing independent assessment of the meaning and interpretation of collected data (Stemler, 2001: 6).
Issues for financial markets with a declining government securities market

The major problem facing financial markets with reduced government securities issuance is to continue to provide sufficient low credit risk securities and market liquidity for smooth market operations. The low risk and liquid characteristics of securities are interrelated in that if there are insufficient low credit risk securities it will limit secondary market trading at predictable prices. Similarly, if there are less liquid debt markets then the status of securities eligible as benchmarks is reduced. To explain and explore related issues, the following specific questions will be addressed in this paper:

1. What is the impact of less Australian government security issuance on providing the financial market with
   - low credit risk securities to provide benchmarks
   - market liquidity?

2. What has been the response to pressure of restricting issuance of Government securities (GS)? Have changes had an impact on providing the financial market with
   - low credit risk securities to provide benchmarks
   - market liquidity?

3. Compare the Australian adjustments with the experience of the euro-zone countries in the EMU.

1 Australian financial market developments

Provision of low credit risk securities in the Australian financial market

It's the tendency for government securities to be considered riskless combined with their liquidity that allows them to provide a benchmark yield (Greenspan, 2001:3). Government securities (GS) issued by stable governments are considered to be free of default (credit) risk, and thus yields on these securities proxy for risk-free interest rates. They also act as a benchmark or standard for pricing other debt securities (Gravelle, 2002:840).

GS are a preferred asset among conservative investors such as retirees and their agents who typically invest in funds that have allocations of fixed interest securities. GS usually represent the largest single credit exposure within a fixed interest or balanced portfolio and their representation in portfolios increases in periods of financial market instability.

In response to findings of the Review, it was reaffirmed in 2003 that the Australian government would maintain a CGS market that would continue to provide a benchmark for financial markets. CGS bond issuance since 1996-97 were declining (Figure 1). The developments that prevented a severe shortage of low risk securities were the institutional investors becoming more tolerant of corporate issued securities and as the corporate collapse era abated (Enron 2001, World Com. 2002), funds that had previously been required to invest in securities rated A- or above widened their investment tolerance (RBA, 2004). Corporate securities return a higher yield, but the market initially preferred to replace CGS with low risk, highly rated corporate securities. Increased holding of a range of corporate securities has occurred since the UBS Composite bond index (widely regarded as the benchmark for the performance of local fixed income fund managers), announced in September 2004 that it would
allow local fund managers to invest in lower rated corporate bonds (down to BBB−) from previously only allowing down to A (Baker, 2004).

Demand for corporate bonds has increased from superannuation funds preferring them to more volatile equity securities. The weighting of corporate bonds in portfolios is nearly 30% and expected to rise to 40% in the medium term. This compares with a weighting of 10%, 4 years ago (Baker, 2003). As corporate bonds increased in availability and acceptability, assessment of an issue became more reliable, transparent and based on more objective information.

**Market liquidity in the Australian market**

It’s in the large secondary market of government securities that provide liquid markets (OECD, 2002; 6). The ease of trading GS has made them a source of liquidity for funds and portfolios. Liquid markets are those where participants can make large transactions without having a significant effect on price (BIS, 1999). Strong demand for low risk securities ensures that GS are bought and sold constantly, reducing the risk of security prices being bid down with less liquidity. Liquidity is important to investors because it affects costs of trading assets. A liquid market has lower liquidity risks-the ease and time in which prices revert to their original levels following buying and selling activity. Information costs tend to be reduced with large government security issues that are normally widely analysed, and allow investors and fund managers access to cheap information. The fungibility (interchangeability) of various government securities is a characteristic that contributes to the high liquidity levels of GS. An adequate level of bonds outstanding generally relates positively to turnover of securities in the secondary market. The higher the turnover, the better the liquidity, as measured by the bid-ask spread of 10-year issues (McCaul, Remolona, 2000:54).

Liquid markets support maturity transformation of government’s borrowing for long periods as investors prefer short-term investments when they are confident of predictable bond prices and easy purchase and sale conditions.

Measuring market liquidity is very difficult and there is not a consistent measure or indicator available. Typical estimates include bid-ask spreads (the more liquid the smaller the spread), and trading volumes. Neither of these measures is without problems, but in this study, bonds outstanding and turnover data are used as indicators of financial market liquidity when available.

The CGS market has traditionally been highly liquid with its turnover levels above the levels of corporate bond market issues. For example, in 1996/97 the turnover of government debt securities was $AUD1,387 billion and non-government securities was $AUD62b. By 2003-04 the government debt securities turnover was $AUD874b and non-government securities was $AUD34lb. From 1996-97 to 2003-04, the CGS market turnover fell by 37% and non-government securities turnover increased by 450% (See Table 1). Even though there has been a significant reduction in CGS outstanding and turnover and a huge growth in turnover of corporate securities, the former is still over twice the size of the latter. The liquidity difference between CGS and corporate securities is explained by the existence of only one central government issuer and normally identical coupon payments dates. This means that GS are more homogeneous and face less competition than private sector bond issues (Mylonas, 2000: 6). This, in turn explains why reduced levels of government securities have implications for the risk and liquidity profile of bond markets.

To answer the first research question, the extent to which developments in other security types have provided low credit risk and liquidity levels to satisfy financial markets are considered. After the Review, uncertainty about the ability of GS to provide adequate liquidity subsided when data showed GS liquidity as measured by market turnover fell gradually in 2001 to 2003 and actually increased in 2003-04, from
a very much higher level in the 1990’s. One explanation for the moderate reductions and possible increases in liquidity is the continued appeal of CGS as a low risk portfolio asset leaving market players who found insufficient government securities available at tender, and encouraged more robust competition in secondary markets. This has meant that corporate bonds have needed only to complement a government securities market, rather than replace them as was considered in one scenario of the Treasury’s options in the Review. The less than expected reduction in the liquidity for CGS meant that the corporate securities market needed to grow and provide additional liquidity only to a limited extent.

Much of the increased demand for corporate bonds has come from government related entities. The Reserve Bank of Australia has widened the range of securities it accepts as collateral when it deals in repurchase agreements (repos) in the domestic market. The Australian government has switched from a reliance on short-dated securities to repos, reflecting the greater liquidity in the latter market. This has had a significant impact on the structure of the Reserve Bank’s domestic portfolio (RBA,2003). The Australian Government has provided demand for a further $90b of retirement liabilities from $40b in 2002 and is likely to reach $100b by 2008. The Treasurer announced plans in the election campaign (2004) to continue its activities with a Future-fund. High quality corporate debt will receive much of the fund as managers are advised to adopt a low risk approach. The Fund is expected to ultimately make up 12.5% of retirement funds. The additional source of sovereign demand could lower the cost of borrowing in Australia-making it more attractive to international issuers, and local issuers may also look more favourably on issuing in the Australian market (Dow Jones, 2004). The supply has also increased from the issuance of foreign bonds, the market has been filled with opportunistic global issuers taking advantage of local conditions and banks. A large % of the local market comes from supranationals issuing kangaroo bond ($12b first 10 months of 2004) eg European Investment Bank, Eurofima, and credit-wrapped deals.¹

2 Developments and features of recent financial markets in the EMU

Introduction

The EMU exists between 12 of the 25 member states of the European Union which has adopted the euro as their single currency. Because of the existence of the European Central Bank (ECB) and 12 independent central banks, data indicating liquidity is difficult to quantify. Less systematic reduction in euro-denominated GS outstanding² than expected in the EMU has avoided a crisis in insufficient low quality securities and insufficient liquidity in secondary markets. A major difference between Australia and the euro-zone is that the European private sector market has traditionally relied on bank credit rather than issuing securities.

The growing acceptance of direct debt markets has led to increased depth in European secondary markets. The growth in corporate bond markets has been uneven, showing rapid growth of 78.9% in the first three quarters of 1999, in Germany, France, Spain and Italy, compared with only 9.2% in the remaining EMU countries. The market is still relatively small compared with the market for public sector debt.

¹ Credit wrapped bonds contain an unconditional promise from a private sector guarantor-often an insurer and normally securities rated AAA

² Data on euro denominated bonds outstanding includes all non private sector issuers including supranationals
Retaining sufficient low risk securities in the EMU

As shown in Table 3, the fear of reduced availability of GS has not eventuated. An insufficiency of low risk securities has also been averted with a growing acceptability of corporate bonds. Since the EMU adopted the euro (1999), pension funds, insurance companies joined banks as significant buyers of corporate bonds as choice of bonds increased in response to much lower foreign exchange and transaction risks of trading securities. This coincided with an increased issuance of corporate securities facilitating pension funds increasing their holding of A credit rated euro denominated corporate securities from 22% of 1998 to 42% in 1999. Previously AAA and AA rated quasi-sovereign and financial bonds dominated European direct debt markets. The historically low yields on government securities and the need and availability of higher yielding alternatives with acceptable risk provided a relatively smooth transition for investors (CEPR Bulletin, 2000).

Retaining market liquidity in the EMU

Liquid public sector debt markets helped the development of corporate debt markets, as the GS yield curve provided a benchmark for corporate bond pricing (OECD 2002: 2). Since the start of the EMU, compliance with the SGP (1998), stated that members' budgetary position were required to be close to balance or in surplus as a medium-term objective, allowing members to deal with cyclical fluctuations by permitting a maximum of a fiscal deficit making up 3% of GDP. This measure taken under the Financial Services Action Plan (FSAP) has encouraged the integration of the government bond market and to a lesser extent the corporate bond market. In practice, the SGP has failed to preclude excessive deficits, so it was predictable that in April 2005, the Pact rules became more 'flexible' across a range of areas. For example, member states will avoid an excessive deficit procedure (EDP) if they experience any negative growth at all (previously -2%), and may use more "relevant factors" to avoid an EDP and will have longer deadlines if they do move into an EDP. This signals a breakdown of the original Pact by recognizing the difficulties of achieving uniformity. The breakdown may also reduce the potential problems of liquidity in the EMU by extending the circumstances in which deficit budgets are acceptable.

In the EMU, the interest rate swap markets in German marks and French francs were already large and growing before the adoption of the euro. It has become much more active and liquid since then. Swapping from euros into dollars is more cost effective than swapping from the euros predecessor currencies. With the euro, incentives for swapping fixed-interest assets or liabilities across the euro area are stronger by virtue of low transaction costs (BIS, 1999:5). Improved swap market issuance, investment and liquidity in euros have resulted.

3 Comparing the Australian and EMU experience

Raising finance by issuing debt securities has become quite accepted in Australia. For example, the huge privatisation programs since the 1990’s, widespread use of securitization and the reliance on direct finance by financial institutions all supported Australian private sector issuing securities at home and abroad. The problem at the time of the Review was thought to be for funds to find enough highly rated, low risk securities. The proportion of highly rated issuers has risen and has been assisted by a growing tolerance by investors for lower rated securities to balance their fund assets. Credit risk is much greater with a growth in corporate relative to government bonds.
The growth in credit derivatives has helped although how appropriately they are priced has not yet been tested in an economic down-turn.

Data in Table 3 shows that despite pressures for reduction, euro denominated bonds issued by agencies, central governments, municipals, regions and supranationals since 2001 have risen (OECD, Financial Market Trends various issues). The use of derivatives, credit enhancing and wrapping to manage credit and interest rate risk have provided ways of managing the higher risks of a more significant corporate component of debt markets. Although the pricing of swaps includes a premium according to the counterparty, they carry very little credit risk, as there is no exchange of principal. The only payment is the net interest obligation of each side of the swap at maturity (BIS, 2003). Already developed swap markets strengthened the incentive to switch to swaps for hedging and speculating on interest rate movements.

Corporate bonds are less liquid than GS and associated derivative markets. Table 2 shows that the CGS liquidity ratio has not fallen dramatically and increased in 2003-04. The trend has shown a convergence between the liquidity of government and corporate security markets. The support of government in expanding the range of acceptable securities such as repurchase agreements (repos) and setting up a Future fund has helped the market accommodate the changed structure.

Swap turnover is greater than GS physical turnover (AFMA,2004). However the unique ‘over the counter’ (OTC) nature of each swap transaction ensures the swap market is inherently less liquid than the homogeneous CG market. In the early 1990’s, participants in the European Monetary System began to use interest rate swaps to hedge their holdings of non- government bonds before other markets adopted the technique (BIS, 2003:48).

In the euro-zone, the lid on budget deficits as a proportion of real GDP has not resulted in GS outstanding falling in absolute terms. This has helped preserve historically acceptable liquidity conditions.

Conclusions

Financial markets in Australia and the EMU have taken different directions in adapting to periods of actual and pressures for reduced government securities issuance. The circumstances in the EMU adjustment have been more complex as the ECB facilitates the merger of twelve financial markets whilst retaining some areas of autonomy within their individual central banks.

GS provide functions for a range of stake-holders. They are used by governments to finance deficit budgets, by central banks to achieve economic stability, by markets for liquidity and as a benchmark interest rate and by investors as a low risk asset class. EMU economies have been required under the provision of the SGP to adopt capped deficit budgets since 1998. The recent loosening of conditions for running larger deficits may loosen liquidity condition.

Liquid public sector markets have continued to provide a benchmark for corporate bonds in the euro-zone. There has been enough euro denominated ‘risk free’ securities to avoid a liquidity squeeze. (OECD, 2002). The growth in quality and acceptability of corporate issuers in Australia (RBA, 2004) has meant that interest rate benchmarks are now more spread across both government and corporate securities.

The most significant change is the reduced proportion of a low risk asset class. The Australian corporate bond market has taken up much of the slack left by a dwindling supply of government securities and reduced liquidity. The availability of a wider range of credit rated securities and growing credit risk tolerance in the funds industry has allowed a relatively smooth transition to a changed securities market structure. The issues that may be problematic in different financial market circumstances are that swaps are not securities that can be included in pension funds as investment vehicles.
with regular returns as GS and corporate securities do. Secondly, adjustment has taken place in relatively stable financial markets which have insulated the adjustment and may cause disruption if conditions become unstable. For example, there has been increased tolerance to a range of private sector risk by funds in Australia and the euro-zone. If economic conditions deteriorate this could be a dangerous trend for the increasing proportion of aging people intending to live off the value and returns of these funds.

Despite these reservations it is most likely that both Australia and the euro-zone intend to stimulate their economies when conditions are depressed and the least inflationary way is through the issuance of GS. This combined with pressures for flexibility in the euro-zone is likely to result in GS market issuance not shrinking in the long-term. In both regions, deregulated financial markets will continue to be flexible as has been experienced in the last few years reviewed. Markets tend to respond to unsatisfied demand if government securities are insufficiently available.
Figures and Tables

Figure 1- Australian Corporate and Government Bond Issuance-1990-2004

Adapted from Reserve Bank of Australia- rba.gov.au- Chart Pack
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<tbody>
<tr>
<td><strong>Government Debt Securities</strong></td>
<td>1,387</td>
<td>1,102</td>
<td>1,054</td>
<td>1,043</td>
<td>1,019</td>
<td>929</td>
<td>758</td>
<td>874</td>
<td>-37%</td>
</tr>
<tr>
<td><strong>Non-Government Debt Securities</strong></td>
<td>62</td>
<td>82</td>
<td>150</td>
<td>205</td>
<td>257</td>
<td>222</td>
<td>194</td>
<td>341</td>
<td>450%</td>
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<table>
<thead>
<tr>
<th>Survey Year</th>
<th>Outstandings (AUD million)</th>
<th>Turnover (AUD million)</th>
<th>Ratio</th>
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<tr>
<td>1999-00</td>
<td>77203</td>
<td>623779</td>
<td>8.08</td>
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<tr>
<td>2000-01</td>
<td>68263</td>
<td>606245</td>
<td>8.88</td>
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<tr>
<td>2001-02</td>
<td>64096</td>
<td>552210</td>
<td>8.62</td>
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<tr>
<td>2002-03</td>
<td>61675</td>
<td>400874</td>
<td>6.5</td>
</tr>
<tr>
<td>2003-04</td>
<td>49735</td>
<td>433460</td>
<td>9</td>
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Table 3  
**Euro-denominated bond markets**

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government bond issues</td>
<td>734</td>
<td>812</td>
<td>914</td>
<td>946^</td>
</tr>
</tbody>
</table>

Government comprises bonds of agencies, central banks, municipal regions, cities and supra-nationals.

Adapted from European Commission data (DG ECFIN) in OECD Financial Market Trends-various issues.

^ Data available for 11 months was averaged for the 12th month.
References


Baker Philip, 2004, Corporate bonds top $100b, Australian Financial Review, 30.08.2004


Bank of International Settlements, (BIS) 2000, Quarterly Review, November


Bank of International Settlements, (BIS) 2003, The euro interest rate swap market Quarterly Review, March

CEPR Bulletin, 2000, EMU and Portfolio Adjustment, Issue 75


Dow Jones International News, 15.10. 2004

European Central Bank, 2004. The Monetary Policy of the ECB


Journal of Money, Credit and Banking, 2002, 34.3(2) Special Issue, Declining Treasury Debt

McCauley, R., Remolona, E., 2000, BIS Quarterly Review, Part IV, Special Feature, Size and liquidity of government bond markets, November


OECD, Financial Market Trends, various issues


Stemler, S. 2001, An Introduction to Content Analysis. ERIC Digest, ERICEDRS, 20010601