Dislodgement of Commercial Property Public Debt Markets:

The Case of U.S. and Australia

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ABSTRACT

The paper investigates if there are any discernible trends in the U.S. and Australian commercial property public debt markets with the onset of the global financial crisis (GFC). Commercial mortgage-backed securities and unsecured bonds issued by real estate investment trusts for the period 2000 to Q3:2009 are reviewed. It is shown that events in the equity markets have an impact on the pricing of these two instruments. Furthermore, the impact of subdued activity in these financing instruments on the commercial property market is discussed.

Keywords: REITs, A-REITs; Commercial mortgage-backed securities; unsecured bonds; Global financial crisis

Introduction

Commercial mortgage-backed securities (CMBS) and unsecured bonds issued by real estate investment trusts (REITs) are vehicles which connect the public global fixed income market with the real estate capital markets. Bonds provide an important mechanism by which firms obtain new funds to finance new and continuing activities and projects. Bond issuance has been recognised by REITs as an important debt funding tool. A range of sophisticated debt products, including CMBSs, property trust bonds, hybrids and off-balance sheet financing have been used by A-REITs (Chikolwa 2008a). The stature of CMBS, with a range of subordination, is further reinforced as being essential for broadening the investor base in real estate debt markets and reducing the commercial property sector's dependence on bank financing (Reserve Bank of Australia 2006).

The global commercial real estate market was estimated at US$12 trillion at the end of 2008, of which 58% was the commercial real estate debt market (RREEF Research 2009a). DTZ (2009) estimated that debt accounted for 70% of the U.S. commercial real estate market and that 20% of it was CMBS. An earlier study by Higgins (2007) had put the Australian commercial property market at nearly AU$305 billion and delineated its composition as equity 67% and debt 33%[1]. Chikolwa (2007) and Fitch Ratings (2007) showed the Australian CMBS market to be around 7% of the total AU$70 billion structured finance market at the end of 2006.

As such, the purpose of this paper is to investigate if there are any discernible trends in the U.S. and Australian commercial property public debt markets with the onset of the global financial crisis (GFC). Given the stature of commercial property markets and the significant role that debt plays in their operation and development, the GFC has resulted in ceasing or contraction of commercial property public debt markets. Some of the evident results are fewer commercial property transactions, both within countries and across borders; abandonment or postponement of development projects; increased bankruptcies and delinquencies; and distress asset sales to pay down debt.

[1] The current figure should be higher than this with increased commitments in the first half of 2007.

The study builds on earlier studies done by Chikolwa (2009) on the development and structuring of CMBSs and unsecured bonds issued by A-REITs. The current study differs from previous studies as it considers market developments after 2007, in particular the GFC and its impact on the two commercial property public debt funding instruments.

The paper is structured as follows. Section 2 reviews literature on corporate and CMBS spreads. Section 3 discusses the data and methodology. The study results and discussion are shown in Section 4. Property market implications are shown in section 5. Conclusions are shown in Section 6.

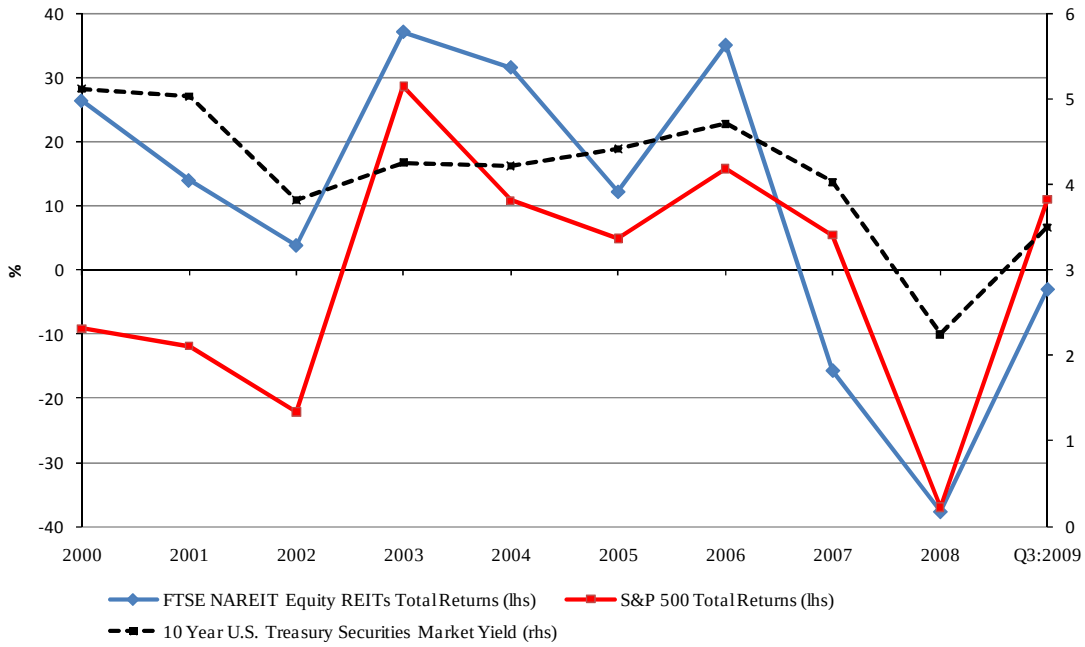
Credit Spread Literature

Understanding corporate bond spreads is important because the spreads reflect market participants' aggregate perceptions about the relative financial health of corporate issuers. Other things being equal, wider corporate spreads increase the cost of capital, which may lead firms to postpone or scale back investment projects, whereby reducing aggregate demand and muting inflationary pressure in the short run (Webber 2007). Corporate borrowers pay higher yields on the bonds they issue than government pay on bonds of the same maturity. Elton et al.(2001) explain the spread between spot rates on U.S. corporate and government bonds in terms of three elements: (1) compensation for expected default of corporate bonds, (2) compensation for state taxes since holders of corporate bonds pay state taxes while holders of government bonds do not, and (3) compensation for the additional systematic risk in corporate bond returns relative to government bond returns. Corporate default risk is driven by volatility, leverage, and interest rates.

A number of recent studies (Collin-Dufresne, Goldstein & Martin 2001; Huang & Huang 2003) indicate that neither levels nor changes in the yield spread of corporate bonds over Treasury bonds can be fully explained by credit risk determinants, with illiquidity considered as adding to the variation (Longstaff, Mithal & Neis 2005; Van Landschoot 2008) . Corporate bond holders require additional compensation for bearing the risk that they might not always be able to sell their claim immediately without incurring a substantial price discount. Chen et al. (2007) state that liquidity alone can explain as much as 7% of the cross-sectional variation in bond yields for investment grade bonds and 22% for speculative grade bonds.

Van Landschoot (2008) show that U.S. dollar yield spreads are significantly more affected by changes in the level and the slope of the default-free term structure and the stock market return and volatility. This finding, which holds for both financial-sector and industrial-sector bonds, indicates that the S&P500 is seen as an important and meaningful indicator for the U.S. bond market. Campbell and Taksler (2003) assert that equity volatility explain movements in corporate yield spreads and their longer-term upward movement. In their study, 22% of the actual change in spread is due to equity volatility. This result supports an earlier study by Kwan (1996) that changes in the firm's stock price are negatively correlated with contemporaneous and future changes in the yields of its bonds. Figure 1 shows an inverse relationship between NAREIT Equity total returns/S&P 500 total returns index and 10-year U.S. treasury yields. It further shows how NAREIT equities underperformed the S&P 500 index for much of 2007.

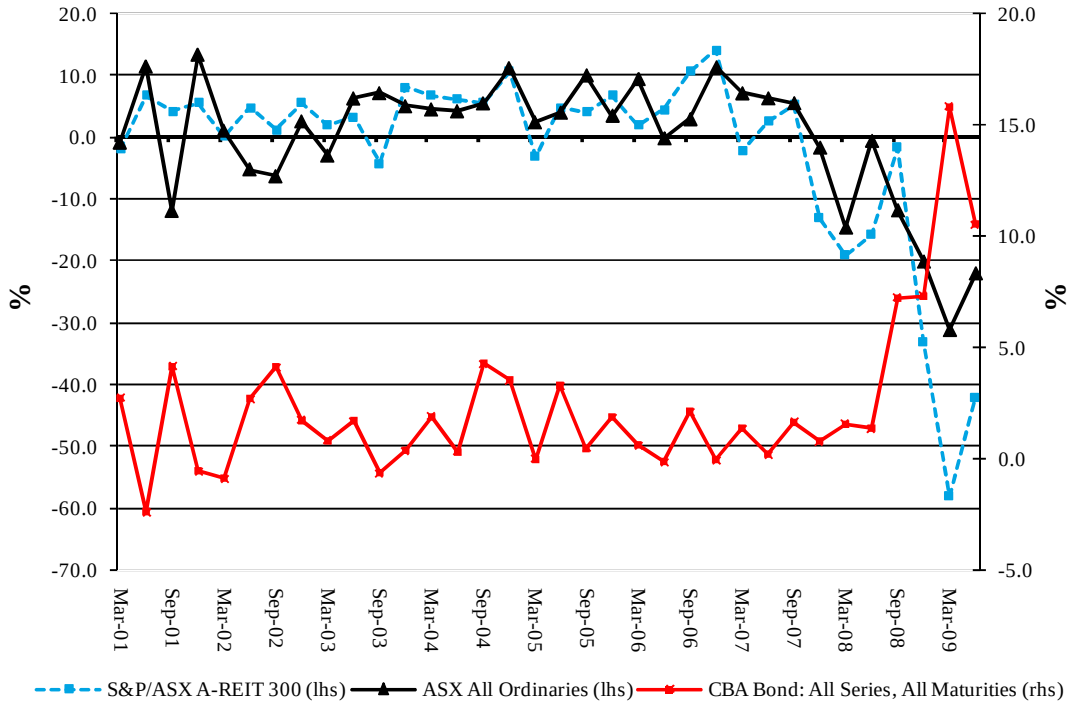
Figure 1: NAREIT Equity Total Returns, S&P 500 Total Returns, and 10-Year U.S. Treasury Yields



Source: NAREIT

Batten et al. (2005) show that changes in credit spreads of Australian dollar denominated Eurobonds are negatively related to both changes in the return on All Ordinaries stock index and changes in the Government bond yield. Figure 2.2 shows similar results to those of the U.S. of real estate investment trust and stock exchange returns having an inverse relationship to all series-all maturity bonds. It further shows how listed property trusts (LPTs), now re-branded Australian Real Estate Investment Trusts (A-REITs), under-performed the share market from the second half of 2007 and have just started showing consistent signs of recovery.

Figure 2: S&P/ASX A-REIT 300, ASX All Ordinaries and CBA Bond Returns



Source: PCA/IPD, ASX and CBA

Credit and liquidity risk premia increased abruptly during the recent financial market turmoil. The fundamental uncertainty surrounding the value of some credit derivative instruments appears to have been reflected in corporate bond spreads as higher compensation for unexpected default losses. Alongside these increases, corporate bond illiquidity premia also appears to have risen – consistent with the recent drying up of liquidity in money markets (Webber 2007). Collin-Dufresne et al (2001) present a contrary view that the dominant component of monthly credit spread changes in the corporate bond market is driven by local supply-demand shocks that are independent of both changes in credit-risk and typical measures of liquidity.

Corporate bond ratings inform the public of the likelihood of an investor receiving the promised principal and interest payments associated with the bond issue (Shin and Han, 2001). The assigned ratings are important due to the implications they contain regarding the bond issue. Lower credit ratings command higher spreads (Duffee 1998). Market yields correspond to bond ratings, which indicate an association between rating and risk. The higher the credit quality the lower will be yield and the more successful will be the issue (Alles 2000; Kose, Lynch & Puri 2003). Furthermore, any credit revisions will have an impact on the yield obtainable on corporate bonds. Hite and Warga (1997) reveal that a significant announcement effect to downgraded firms in both the announcement month and pre-announcement period, with the magnitude of the downgrading effects increasing drastically moving from investment-grade to non-investment grade firms. For instance, this partially explains why the downgrade of Lehman Brothers' bonds by Standard and Poor's in September 2008 had a contagion effect on the entire bond market and exacerbated turmoil in the financial markets.

In their study on the determinants of CMBS yield spreads, Titman et al. (2005) assert that mortgages on property types that tend to be riskier and have greater investment flexibility exhibit higher spreads. Spreads widen and mortgage terms become stricter after periods of poor performance of the real estate markets and after periods of greater default rates of outstanding real estate loans. Xu (2007) further adds that the required returns on CMBS are positively driven by the changes in credit spread, but this positive effect is much stronger for high-yield CMBS than for investment-grade CMBS. She also adds that changes in the amount of CMBS issuance show a significant negative lag effect on CMBS excess returns.

Methodology and Data

The study surveys commercial property public debt markets in the U.S. and Australia, focussing on CMBSs and REIT unsecured bonds, to investigate any discernible trends with the onset of the GFC. The following sources of data are utilised:

United States

- REIT stock: SNL database; NAREIT.
- Treasury rates and corporate bond rates: Federal Reserve
- Investment returns: FTSE NAREIT US Real Estate Index Series; S&P 500 Index.
- CMBS: Trepp; Commercial Real Estate Direct database; Commercial Mortgage Securities Association database; *Commercial Mortgage Alert* magazine*;* Realpoint database.
- REITs unsecured bonds: NAREIT; *Commercial Mortgage Alert* magazine.

Australia

- A-REIT stock: AspectFin database; S&P Ratings Direct database; SNL database.
- Treasury rates and corporate bond rates: Reserve Bank of Australia
- Investment returns: PCA/IPD Property Index; S&P/ASX A-REIT 300; ASX All Ordinaries; CBA Bond: All Series, All Maturities.
- CMBS: S&P CMBS presale reports.
- A-REITs unsecured bonds: PCA/CBA database.

Answers to the following questions are the focus of this study:

- How has the GFC affected the development and performance of financing prospects of REITs/A-REITs using CMBSs and unsecured bonds?
- Is there a relationship in the pricing of CMBSs and unsecured bonds and events in the broader stock market?
- What are commercial property market implications of the ‘thawed’ CMBS and unsecured bonds markets?

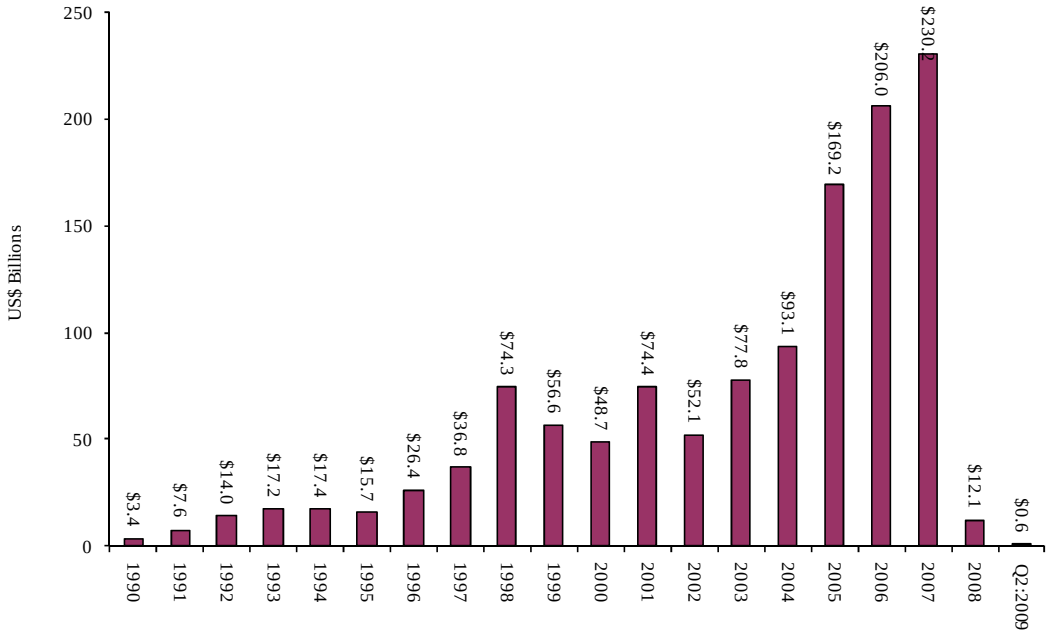
This interpretive historical approach (Baumgarter & Hensley 2005) provides a cogent review and explanation of features of U.S. and Australian commercial property public debt markets. This helps to understand the changing nature of these markets and provides better understanding of the present and suggests possible future directions.

Analysis and Discussion

U.S. CMBS Market 1990 – Q2:2009

The U.S. has been leading the way in global issuance of CMBSs. For the period 1990 to Q2:2009, CMBSs totalling over AU$1,394.1 billion (US$1,233.7 trillion)[2] had been issued in the US. Figure 3 shows the total amount of CMBS issuance per year since 1990.

Figure 3: US CMBS Issuance 1990 – Q2:2009



Source: Commercial Mortgage Alert (2009)

Although the U.S. CMBS issuance rose from AU$3.8 billion (US$3.4 billion) in 1990 to AU$260 billion (US$230 billion) in 2007, the market drastically fell to AU$13.7 billion (US$12.1 billion) in 2008 and AU$722.3 million (US$639 million) in 2009, respectively, due to turmoil in the financial markets alluded to earlier.

Table 1 shows over US$1,769 billion worth of CMBSs are set to mature between 2009 and 2018. With the current GFC, refinancing maturing CMBSs is a major concern as most credit markets are currently either shut or operating at dramatically reduced levels. Deutsche Bank (2009) note that at least two thirds of the loans maturing between 2009 and 2018 (US$410 billion) are unlikely to qualify for refinancing at maturity without significant equity infusions from borrowers and that for the 2007 vintage, well in excess of 80% of the loans are unlikely to qualify.

[2] For ease of comparison, the interbank exchange rate of US$1=AU$ as at 30 September 2009 has been used.

Table 1: Annual Maturities in U.S. CMBS, Banks and Life Companies

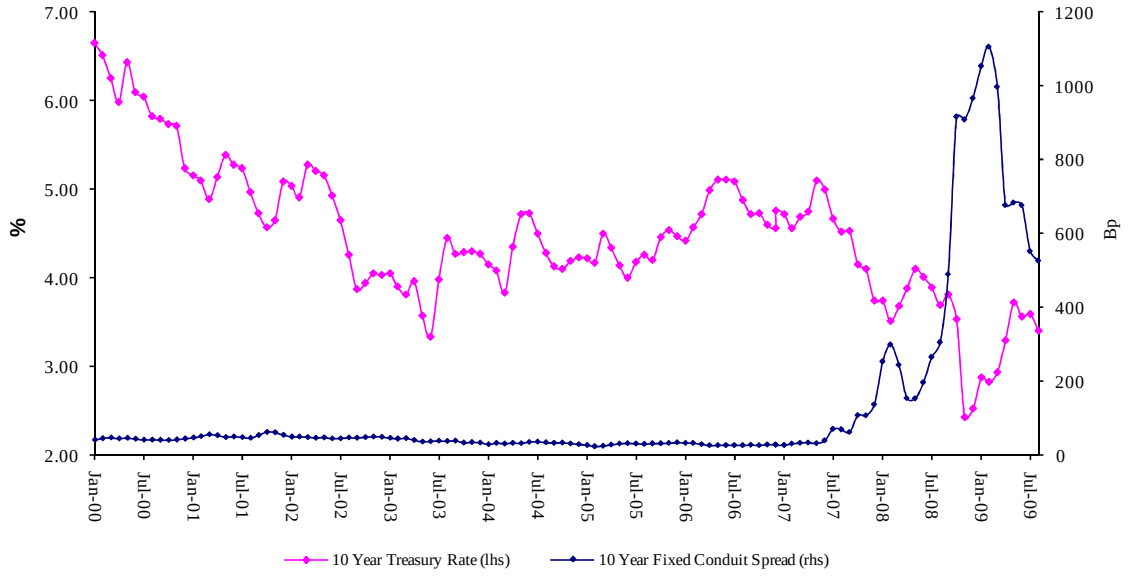
Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2009-2018	% of Total
CMBS -Fixed Rate	17.6	32.2	44.1	57.6	40.9	54.2	104.5	133.9	148.2	6.1	639.3	32%
CMBS - Floating Rate	1.5	6.2	17.8	17.7	0.7	20.6	25.7	27.3	21.4	16.3	155.2	8%
Insurance Company	16.8	19.8	23.1	26.1	24.8						110.6	6%
Bank/Thrift	168.1	188.3	210.9	236.2	264.6						1,068.1	54%
Total (US$ billion)	204.0	246.5	295.9	337.6	331.0	74.8	130.2	161.2	169.6	22.4	1,973.2	100%

Source: Deutsche Bank (2009)

US CMBS Pricing

Historically, conduit transactions have had strong investor appeal as evidenced by contraction in spreads until July 2007. Figure 4 shows the 10-year fixed conduit spreads between January 2000 and September 2009. From 2001, spreads fell from a high of 53bp to just less than 30bp as at the end of 2006 (Commercial Mortgage Alert 2007). They remained stable around 30bp until the advent of turmoil in the financial markets from July 2007, reaching an all time high of just under 1,109bp in March 2009, breaking the previous record of 111bp following the Russian bond market default crisis in 1998.

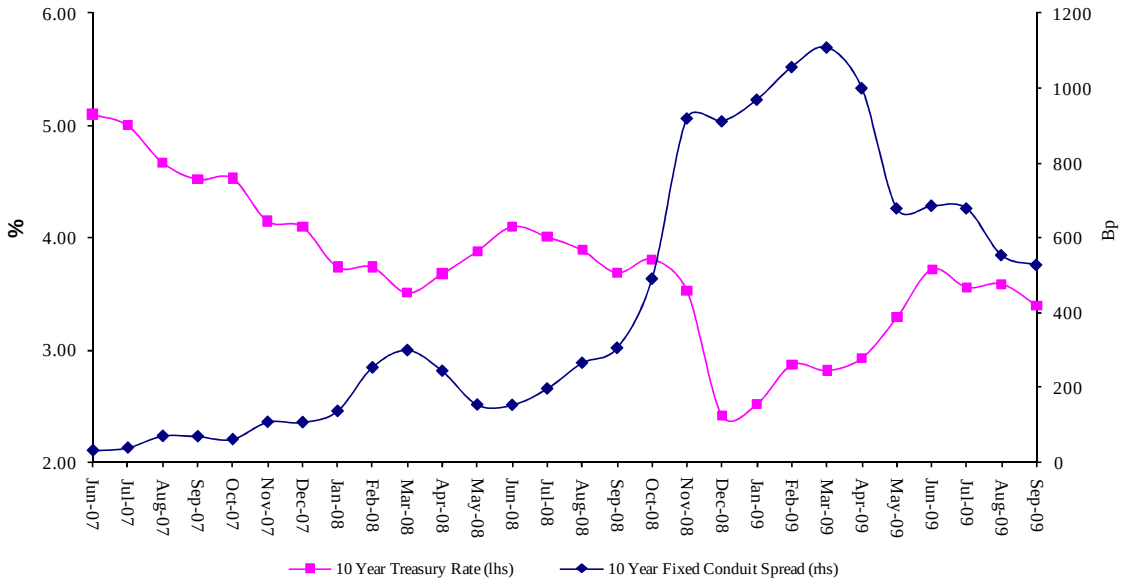
Figure 4: U.S. 10-Year Fixed Conduit Spreads and 10-Year Treasury Rates January 2000 – September 2009



Source: Commercial Mortgage Alert (2009)

To further highlight the rapid deterioration of the market, spreads rose by 128% from just above 30bp from January to December 2007 and 627% from June 2008 to March 2009, respectively; see Figure 5.

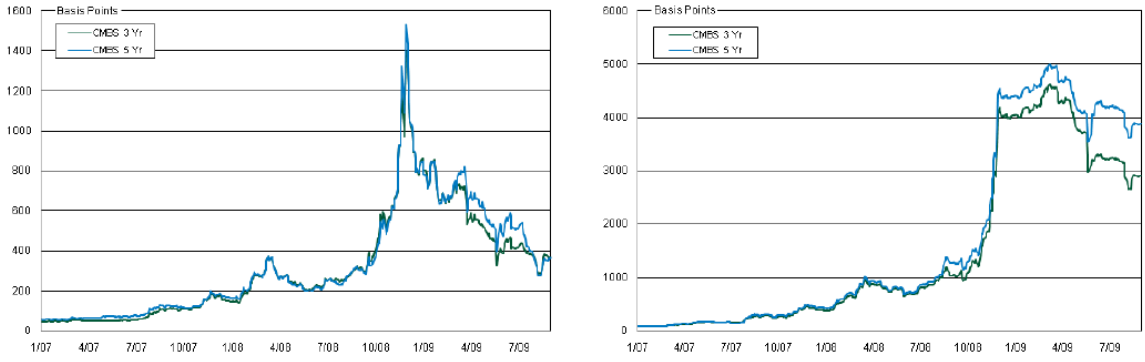
Figure 5: U.S. 10-Year Fixed Conduit Spreads and 10-Year Treasury Rates June 2007 – September 2009



Source: Commercial Mortgage Alert (2009)

Spreads for both BBB rated and AAA rated CMBSs continued to rise in 2008 reaching all time highs in November 2008 and March 2009, respectively. For instance, 5 year AAA rated CMBSs reached a high of 1,500bp and 5 year BBB rated CMBSs reached 5,000bp; see Figure 6. Spreads fell significantly with the inclusion of legacy and new CMBS into the Term Asset-Backed Securities Lending Facility (TALF) program and have been stable closing at just under 400bp for 3 year AAA-rated notes and just under 3000bp for 3 year BBB-rated notes as at September 2009.

Figure 6: U.S. 3-5 Yr AAA CMBS Spreads (lhs) and US 3-5 Yr BBB CMBS Spreads (rhs)



Source: ESF and Trepp LLC

US CMBS Performance

Good measures of CMBS performance are credit rating upgrades and downgrades by the credit rating agencies. Credit rating upgrades depict mainly an improvement in the performance of the underlying asset backing a CMBS issue and downgrades the opposite.

As the U.S. housing crisis continued to deepen in 2007, Fitch's global structured finance rating actions took a decidedly negative turn, driven overwhelmingly by the unprecedented credit deterioration in the U.S. subprime mortgage sector. By year's end, U.S. subprime-related downgrades affected 3,529 tranches, or 77% of the year's 4,570 global structured finance downgrades. Total downgrades readily topped upgrades of 1,790, the first year in recent history to see such a trend in structured finance. However, the nonmortgage ABS and CMBS sectors reported more upgrades than downgrades in 2007 (Fitch Ratings 2008b).

According to Fitch Ratings (2009) by the end of 2007, the ratio of upgrades to downgrades was 10:1 (the highest ratio for structured finance products). Of the nearly 7,166 CMBS deals they rated, the surveillance group upgraded 776 tranches and downgraded 70. In 2008, downgrades exceeded upgrades at 392 and 290, respectively, of the 7,003 CMBS deals rated.

Commercial property values declined sharply in 2008 and are expected to continue to deteriorate in 2009. Not surprisingly, delinquencies on CMBS loans are also on the rise, as the liquidity crunch makes refinancing difficult at best and macroeconomic pressures take a toll on consumer and business spending and, ultimately, on property occupancy rates and rents; see Table 2.

Table 2: U.S. Conduit CMBS Delinquency 1998 – Q3:2009

Vintage	Number of Loans	Number of Transactions	Outstanding Balance (US$bn)	Total Deliquency
1998	1,497	32	6.9	6.87%
1999	2,241	35	10.5	3.88%
2000	3,622	31	19.2	2.50%
2001	4,105	35	26.3	2.40%
2002	3,783	35	27.6	1.43%
2003	5,120	47	41.9	1.01%
2004	6,248	59	63.9	9.80%
2005	10,338	64	130.6	1.24%
2006	11,925	65	160.0	1.75%
2007	12,769	65	197.7	1.68%
2008	819	8	10.7	3.04%
Q3:2009	1,039		11.81	4.31%

Source: DBRS and Trepp LLC

U.S. REITs Bond Issuance

US REITs issued a total of US$125.5 billion unsecured debt and US$12.7 billion secured debt, respectively, from 2000 to Q3:2009. Issuance of these two debt funding instruments has been affected by the GFC, with issuance reducing from 2006 for unsecured debt and no secured debt issuance from 2007; see Table 3.

Table 3: US REITs Debt Issuance 2000 – Q3:2009

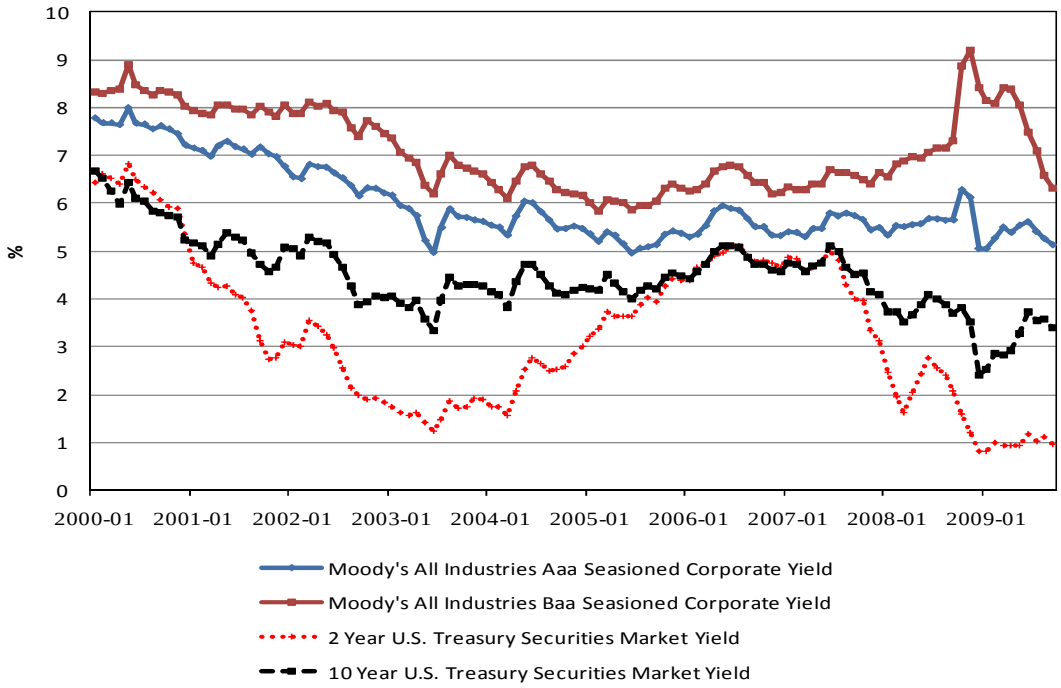
Year	Unsecured Debt		Secured Debt	
	US$ million	No. of Issues	US$ million	No. of Issues
2000	$7,013	70	$529	2
2001	$9,895	44	$2,775	4
2002	$10,638	71	$745	3
2003	$10,894	68	$1,358	6
2004	$17,306	97	$0	0
2005	$16,330	105	$5,758	36
2006	$25,261	82	$1,551	3
2007	$18,155	43	$0	0
2008	$5,173	11	$0	0
Q3:2009	$4,865	17	$0	0
Total	$125,530	608	$12,716	54

Source: SNL Financial, NAREIT®

Spreads increased in response to the turbulent financial markets. For instance, 10 year BBB rated unsecured notes spreads increased from a monthly average of 130bp in January 2007 to 667bp in September 2007.

Figure 7 shows an increase in spreads between U.S. seasoned corporate bond yields and treasury securities from September 2007 to reach an all-time high in November 2008. From then on, spreads started to narrow, though still higher than the pre-GFC average levels.

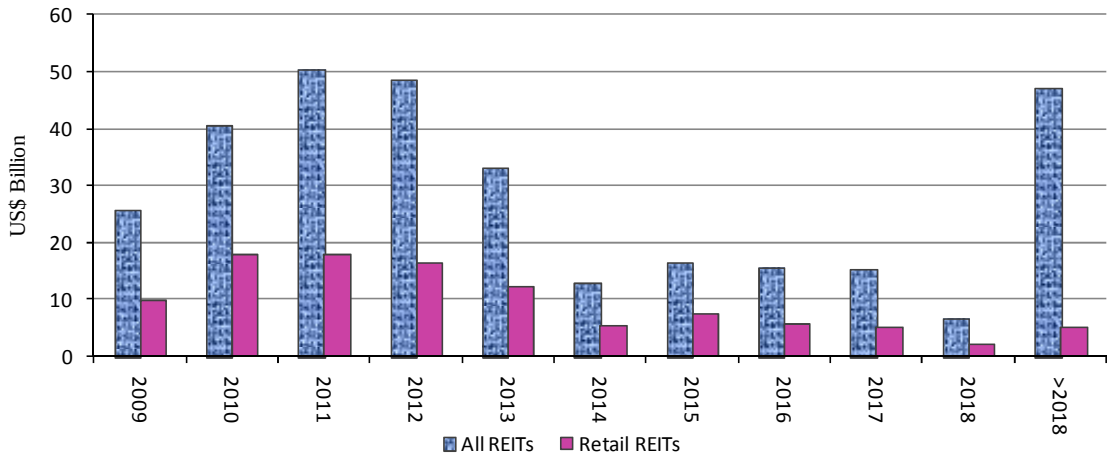
Figure 7: Spread between U.S. Corporate Bond Yields and Treasury Securities Yields January 2000 – September 2009



Source: Federal Reserve

As discussed earlier, refinancing corporate debt securities including those of REITs, is a major concern in the current financial market. US REITs have US$66.5 billion worth of bonds maturing in 2009 - 2010, of which 41% are by Retail REITs; see Figure 8.

Figure 8: Maturity Profile of US REIT Bonds 2009 – Post 2018



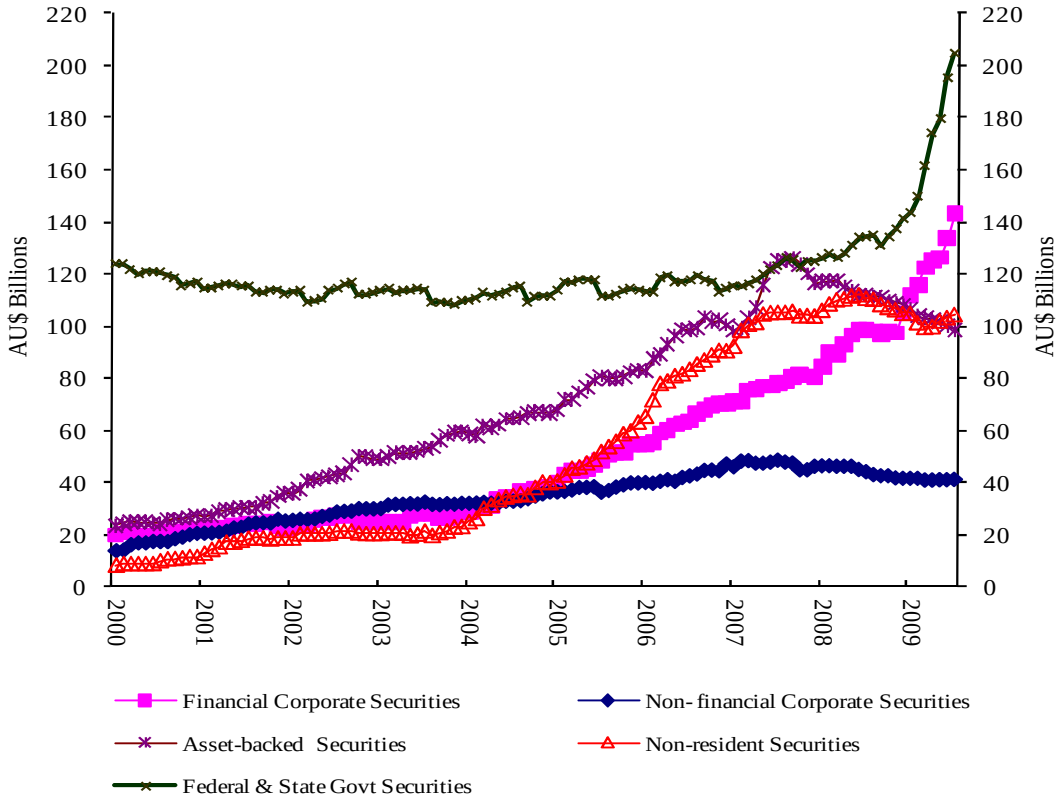
Source: SNL Financial, NAREIT®

Australian CMBS Market 2000 – Q3:2009

With the drop in public bond issuance, unsecured bonds and CMBS issued by A-REITs were an attractive investment option for superannuation funds. Outstanding long-term government securities in Australia were stable averaging around AU$115 billion from January 2000 to September 2007. With the onset of the GFC, federal government

announced economic stimulus packages to counter the GFC, of which bond issuance is one of the main funding tools. As at July 2009, a total of AU$205 billion of long-term government securities were outstanding. On the contrary, outstanding amounts for other debt securities; in particular asset-backed securities3, which had increased from AU$17.5 billion to reach an all time high of AU$126 billion in September 2007, declined to AU$99 billion in July 2009. Figure 9 shows outstanding debt securities from January 200 to July 2009.

Figure 9: Outstanding Debt Securities January 2000 – July 2009

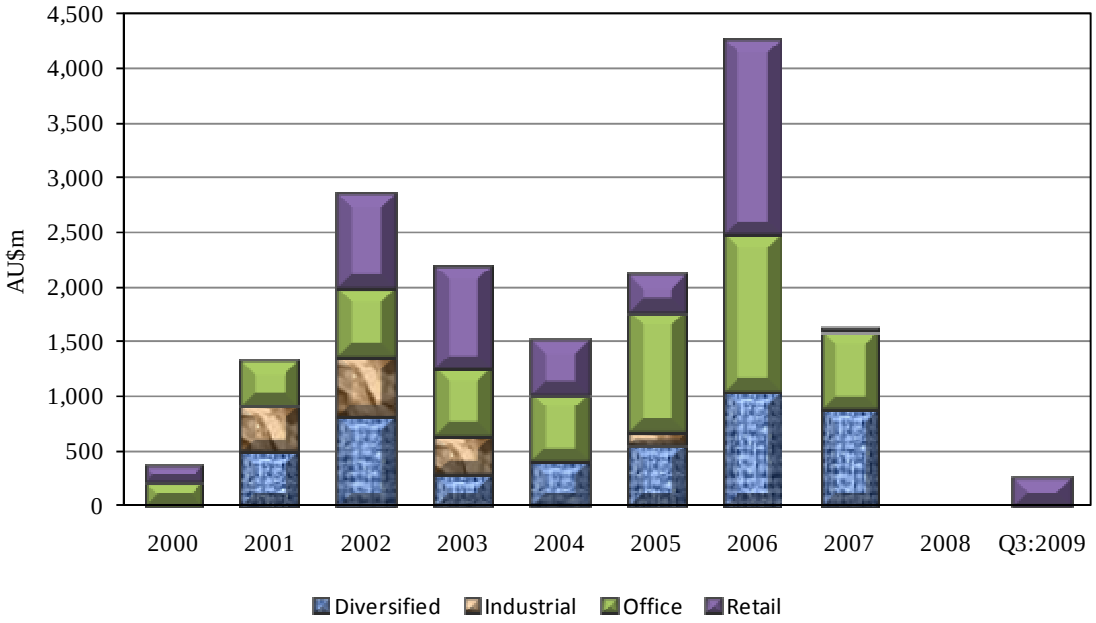


Source: Reserve Bank of Australia (2009)

Over the period 2000 to 2009, a total of 73 CMBSs with over 190 tranches worth over AU$16.7 billion had been issued, excluding credit lease and small ticket transactions. The CMBS market remained closed from Q3:2007 until the Macquarie CountryWide Pty Ltd. AU$265 million AAA-rated CMBS issue in late August 2009. The most dominant CMBS issues from 2000 to date are in the office property-backed sector (AU$6 billion), followed by the retail (AU$4.8 billion) and the diversified property-backed sectors (AU$4.5 billion), respectively. The industrial property-backed sector had AU$1.4 billion worth of CMBS issuance (Figure 10).

[3] These include commercial mortgage-backed securities.

Figure 10: Australian CMBS Issuance by Sector 2000 - Q3:2009



Source: Author's compilation from various S&P CMBS Credit Rating Reports

During the same period, retail property-backed issues had the most tranches at 34%, followed by diversified property-backed issues at 29% and office property-backed issues at 25%. The least number of tranches were in the industrial backed issues at 12%. This is shown in Table 4.

Table 4: Australian CMBS Issuance by Tranche Type and Amount 2000 – Q3:2009

Sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2000-2009	% of Total
Diversified	0	2	11	7	7	14	14	2	0	0	57	29%
Industrial	0	3	6	12	0	3	0	0	0	0	24	12%
Office	1	3	4	5	4	10	11	12	0	0	50	25%
Retail	4		15	9	9	8	18	2	0	2	67	34%
Total	5	8	36	33	20	35	43	14	0	2	198	100%

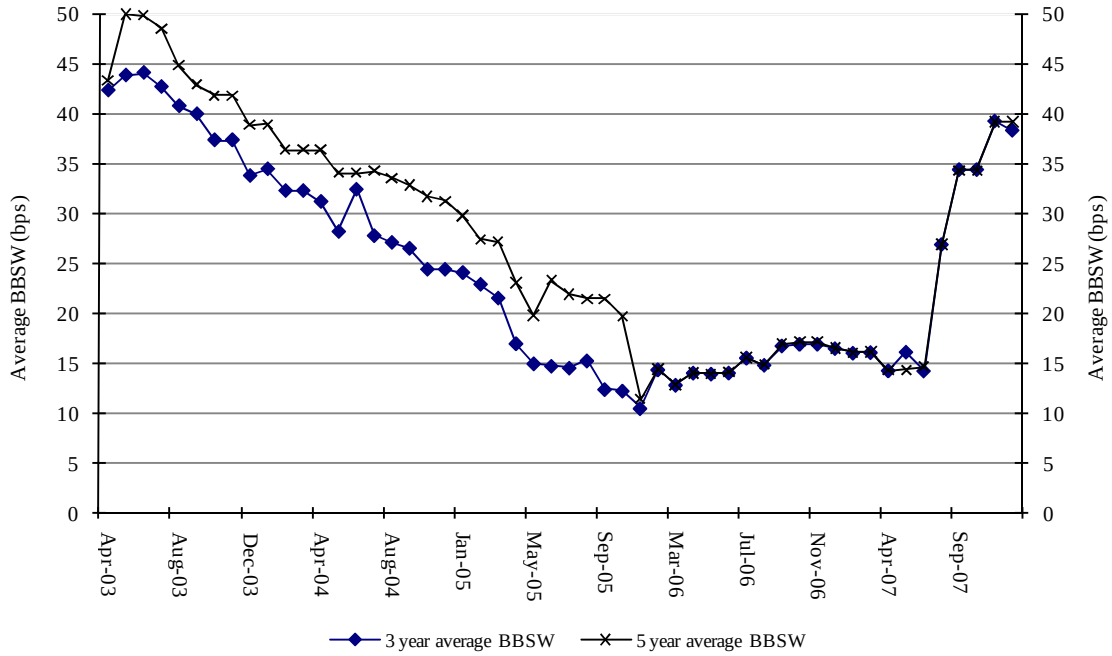
Source: Author's compilation from various S&P CMBS Credit Rating Reports

Australian CMBS Pricing

Given the general appetite for fixed-income securities and the limited supply in the market, CMBS credit spreads were contracting until the end of 2005 and stabilised from the start of 2006 until July 2007 as shown in Figure 11. In 2005, 5-year AAA, interest only notes were priced at 20bps - 25bps over three month bank bill swap rate (BBSW), and three-year, interest-only notes at 17bps - 20bps over three-month BBSW. BBB rated notes were priced at 60bps - 95bps over BBSW. At the beginning of 2006, both 3-year and 5-year AAA-rated notes were trading at average ranges of 8bps - 10bps; as at the end of 2006 they were trading at average ranges of 15bps - 17bps, a trend which continued until July 2007. From then on AAA-rated note spreads increased by 170% to close at 40 bp in January 2008. No spreads were recorded from then on until the Macquarie

CountryWide Pty Ltd. CMBS in September 2009 which was priced at 410bps. This reflects the worsened debt market conditions as a result of the US sub-prime mortgage market events. The resultant credit crunch in the global financial system due to an increased perception of risk on the part of lenders meant that they demanded greater compensation hence increased credit spreads.

Figure 11: Average Spreads on Australian CMBS April 2003 – September 2007



Source: *Author's compilation from PCA (2009)*

The implication of high credit spreads was that it became uneconomical to issue CMBS. For instance as at September 2007, issuance of AU$300 million AAA-rated 5 year CMBS notes with a margin of 35bps over 3 month BBSW and 1% issuance cost, would have not resulted in any saving, using the RBA business weighted-average interest rate of 7.50% as a pricing benchmark. However, CMBS issuance at 20bps could have resulted in a saving of AU$450,000 or 0.15% p.a. This is illustrated in Table 5.

Table 5: Australian CMBS Hypothetical Pricing Sept 2007

	Spread of 35bps	Spread of 20bps
NAB 3 month BBSW (Sept 2007)	6.95%	6.95%
Add expected margin for AAA-rated CMBS	0.35%	0.20%
Add expected issue costs, assumed at 1%, over 5 years	0.20%	0.20%
Total expected cost of CMBS	7.50%	7.35%
RBA business weighted-average interest rate (Sept 2007)	7.50%	7.50%
Expected loss/profit	**0.00%**	**0.15%**
Expected loss/profit on AU$300m CMBS p.a.	**AU$0**	**(+)AU$450,000**

Source: Author's adaption from Debelle (2008)

Furthermore, though CMBS issuance was theoretically possible at a spread 35bps, the drawbacks of complexity and lengthy structuring duration over bank debt (Jones Lang

LaSalle 2001) outweighed the benefits. This view is firmed by the fact that A-REITs had an equal debt funding preference of bank debt and CMBS before Q3:2007 (Chikolwa 2008b) and that all CMBS that matured in 2007 and 2008 were refinanced using bank debt (Fitch Ratings 2008a). This is self-evident in the Macquarie CountryWide Pty Ltd. CMBS issue priced at 410bps, which anecdotal evidence shows is comparable to direct bank lending margins of base rate plus 450bp – 500bps.

In a study on the structuring issues for CMBS in Australia, Chikolwa (2008b) showed that originators/issuers and arrangers of Australian CMBs were of the view that ideal pricing for AAA-rated notes should start at below 20bps and over 50bps for BBB-rated notes. The study presented survey results of factors considered by issuers and arrangers of Australian CMBS to obtain high credit ratings and those considered in the pricing of the issues to ensure their success. CMBS issuers and arrangers were surveyed in August 2007 and January 2008, respectively. The two survey groups further indicated that due to the credit squeeze during the survey periods, pricing of AAA-notes could range between 60bps – 80bps and BBB-notes between 200bps – 300bps. Table 6 shows responses of CMBS issuers, whose identities are not reviewed due to confidentiality issues.

Table 6: Individual CMBS Issuer Responses – Pricing CMBS August 2007

CMBS Issuer	AAA-Rated Notes (bp)			BBB-Rated Notes (bp)		
	3 Years	4 Years	5 Years	3 Years	4 Years	5 Years
Respondent 1	21 - 25	-	21 - 25	71 - 80	-	-
Respondent 2	10 - 20	-	21 - 25	51 - 60	-	61 - 70
Respondent 3	21 - 25	-	21 - 25	61 - 70	-	-
Respondent 4	-	-	10 - 20	-	-	61 - 80
Respondent 5	-	10 - 20	-	-	41 - 50	-

Australian CMBS Performance

Standard and Poor's (2007, 2008, 2009), as part of their half yearly CMBS performance watch for December 2007, December 2008 and June 2009, respectively, show deterioration in commercial property market conditions, though most CMBS programs performed well despite the challenging environment. This is shown below:

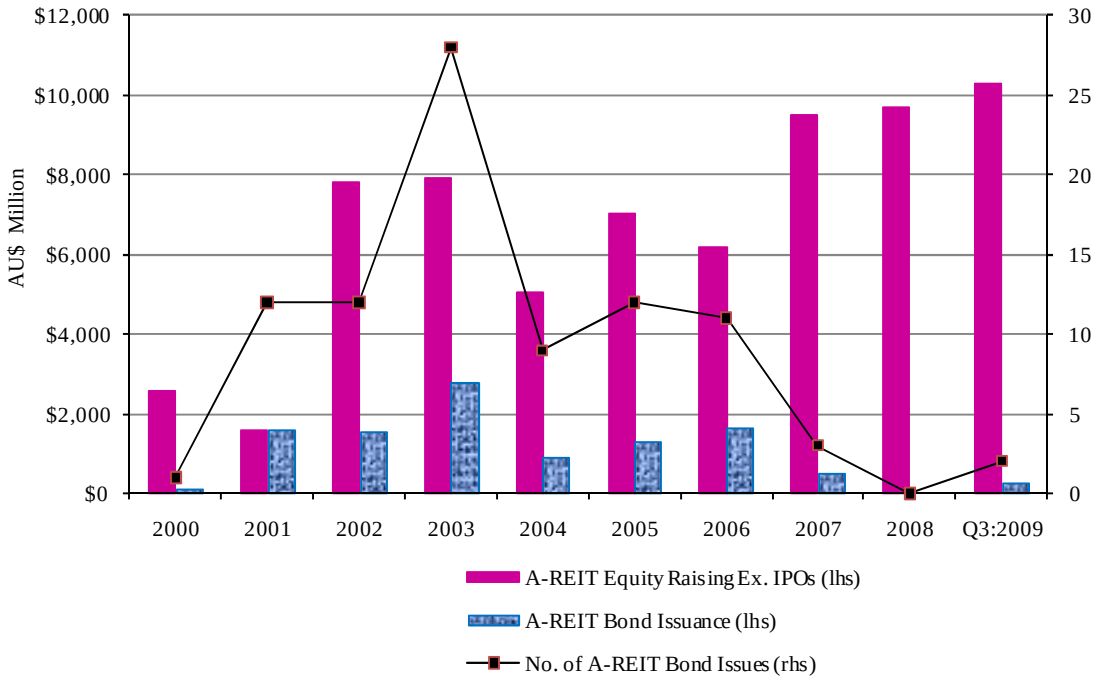
	December 2007	December 2008	June 2009
CMBS credit ratings:	• Stable over the six months with no actions taken. • A large number of rating affirmations in the second half of 2007.	• Five CMBS transactions affirmed and one downgraded. Other downgrades occurred in credit lease transactions.	• Four CMBS transactions affirmed and two downgraded
Commercial property market:	• Good fundamentals, with limited supply, strong occupancy, and reasonable prospects for rental growth. • Capital value increases outpacing the rate of rental growth continued in the December period.	• Investor sentiment deteriorated with institutional investors inactive. • AU$15-AU$20 billion commercial property glut for sale. • Yields softened to 100bps, with rental growth supporting value growth.	• Occupancy levels and rental growth remained fairly stable. • Capital values continued to soften due to limited liquidity and increasing capitalisation rates.
CMBS programs:	• High overall occupancy levels. • Weighted average lease durations (WALDs) in excess of 5.9 years. • Effective management of the lease profiles for each of the programs.	• Vacancy rates were on the increase, though overall portfolio vacancy rates remained low. • Mixed WALDs though higher than 4 years. • 29% of outstanding CMBSs maturing in 2009 to be refinanced outside the securitisation space.	• Reduction in capital values of CMBS programs due to downward revaluation of or sale of some properties. • Decline in WALD due to pending maturities.

Standard and Poor's further stated that the CMBS market will continue to be constrained for the rest of 2009.

A-REIT Bond Issuance

A-REIT bond issuance from 2000 to Q3:2009 reached a cumulative total volume of AU$10.7 billion, with 90 issues as shown in Figure 12. Generally, issuance volumes were on the increase except of the year 2004. With the advent of the GFC in 2007, issuance drastically reduced to AU$490 million in 2007 and all together ceased for the whole of 2008. The market opened again in May 2009 with the AU$125 million CFS Retail Property Trust Medium Term Note (MTN) Issue. This was followed by the AU$160 million Dexus MTN Issue in July 2009. Prior to the thawing of the public debt markets, a good number of A-REITs recapitalised by issuing seasoned equity offerings (SEOs). Between Q2:2008 and Q2:2009, SEOs worth AU$15.9 billion were issued by A-REITs, of which 65% were in the first half of 2009.

Figure 12: Australian A-REIT Bond Issuance and Equity Raisings Ex. IPOs 2000 – Q3:2009



Source: Author's compilation from PCA (2009) and Connect 4 Company Prospectuses database (1999-2006)

Furthermore, some A-REITs have issued unsecured bonds in the deeper U.S. and European bond markets to exploit the longer bond tenures and much more favourable interest rates in comparison to the Australian bond market. Examples are the June 2008 AU$520 (£250 million) Goodman MTN Issue in Europe and issues in the U.S. by Dexus (US$300 million in September 2009) and Westfield (US$700 million in May 2009 and US$2 billion in September 2009, respectively).

To further emphasise the importance of issuance of unsecured bonds by A-REITs as a funding source, they are compared with CMBS[4] from 2000 to Q3:2009; see Table 7. Although more funds have been raised via CMBS (AU$17.1 billion) than A-REIT bonds (AU$10.7 billion), more A-REIT bonds (total number issued 90) have been issued in number than CMBSs (total number issued 73). Furthermore, in certain years (2001 and 2003) more funds where raised via A-REIT bonds than CMBS issuance.

[4] A-REITs and their unlisted wholesale funds have a 85% CMBS market share.

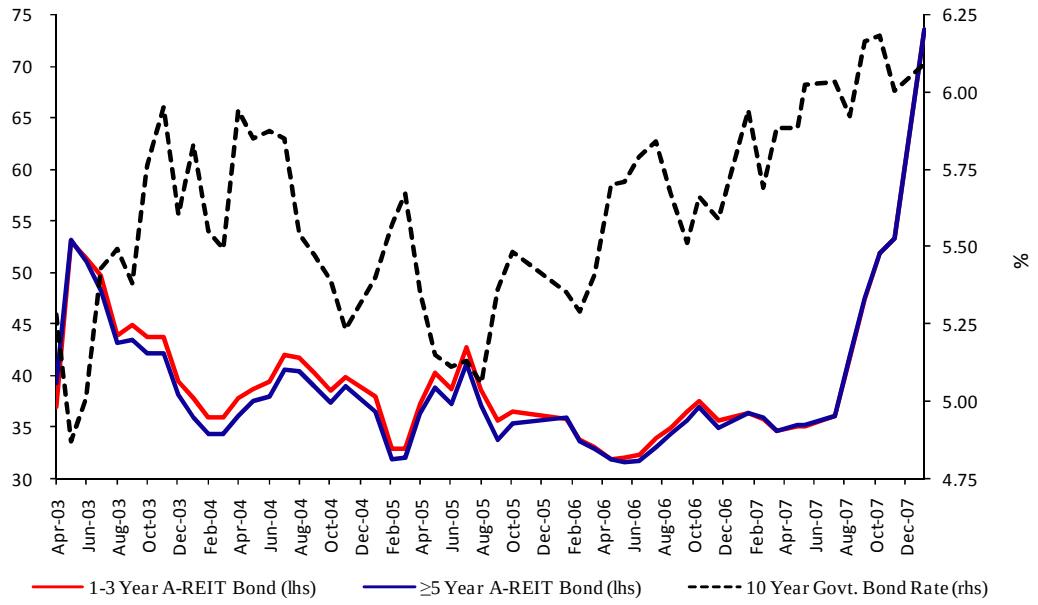
Table 7: Australian A-REIT Bond Issuance and CMBS Issuance 2000 – Q3:2009

Year	Australian CMBS Issuance		A-REIT Bond Issuance	
	AU$ million	No. of Issues	AU$ million	No. of Issues
2000	$357	2	$100	1
2001	$1,320	5	$1,615	12
2002	$2,845	19	$1,570	12
2003	$2,191	14	$2,792	28
2004	$1,513	7	$905	9
2005	$2,102	8	$1,320	12
2006	$4,013	11	$1,650	11
2007	$2,500	6	$490	3
2008	$0	0	$0	0
Q3:2009	$265	1	$285	2
Total	$17,106	73	$10,727	90

Source: Author's compilation from various S&P CMBS Presale Reports and PCA (2009)

Figure 13 shows an inverse relationship between industry spread to swaps and 10-year government bond rates until August 2007 when they rose from 35bp to close at 75bp in December 2007. This upward trend reached crescendo at 1,067bp in May 2009 for two GPT unsecured bond issue. Spreads are lowering; with an average of 350bp in August 2009.

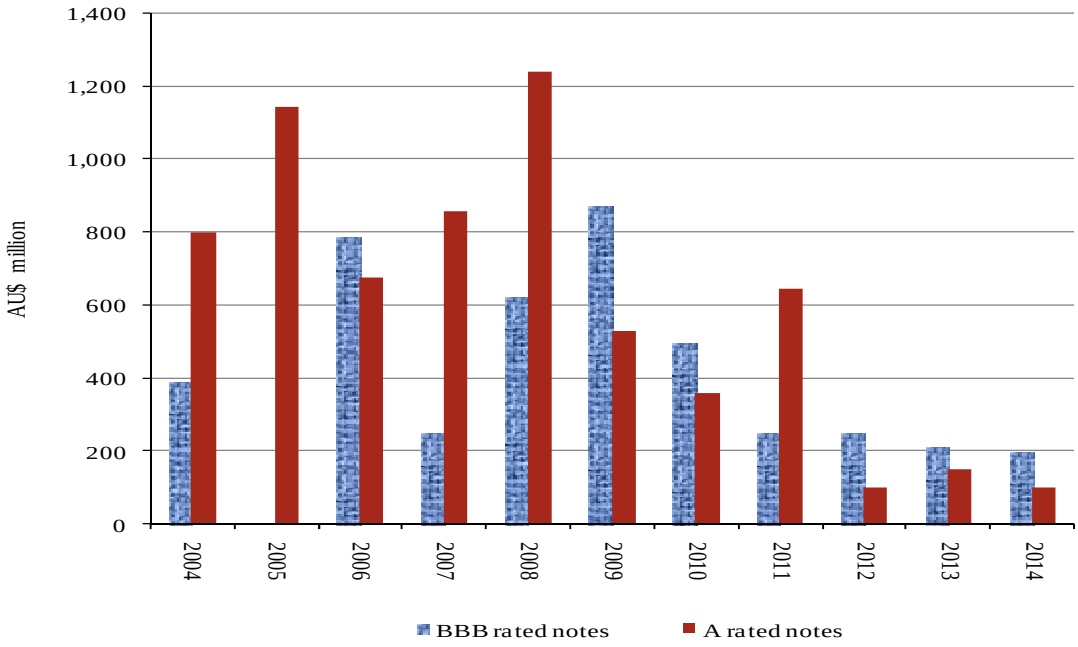
Figure 13: A-REIT Average Industry Bond Spread to 10-year Government Bonds 2003 – 2007



Source: Author's compilation from PCA (2009)

Like all debt securities, refinancing of matured A-REIT bonds has been a major concern following turmoil in the financial markets. Figure 14 presents the maturity profile of all the A-REIT bonds from 2009 onwards. Nearly AU$2.3 billion worth of A-REIT bonds will mature in 2009 - 2010, of which 61% are BBB rated bonds. As investors require greater compensation to invest in BBB rated bonds, refinancing will become more expensive.

Figure 14: Maturity Profile of Australian A-REIT Unsecured Bonds



Source: Author's compilation from PCA (2009)

Implications for the U.S. and Australian Commercial Property Markets

There has been a marked reduction in the number of commercial property sales in the U.S. and Australia. For instance, in Australia CB Richard Ellis reported a 60% fall in sales to AU$3 billion in the first half of 2008 (Condon 2008). Unavailability of or expensive debt funding has contributed to the conundrum. Constraints are not only confined to local borders, but are also international. RREEF (2007) documented the growth in international real estate securities funds, whose goals are to maximise portfolio returns and indeed to acquire quality assets not locally available in investors' localities. Real Capital Analytics (2009a) state that the number of commercial property transactions reached a record high of US$1 trillion in 2007, but fell drastically to US$504 billion in 2008. Australian investment into the U.S. real estate market has moved from 3% (AU$5.5 billion) in 2006, to 32% (US$162 billion) in 2007 and to 2% (US$2.8 billion) in 2008 (DTZ 2007; RREEF Research 2009b), signifying the GFC adverse impact. The market is beginning to rebound with US$233 billion worth of global real estate transactions recorded for the first half of 2009 (Real Capital Analytics 2009a).

Another consequence of funding constraints to the commercial property market has been the postponement and abandonment of development projects. For instance, in Australia commercial office development activity is subdued with only twelve towers being built in five state capitals. These average around 25,000m^2 in size and are due for completion

between 2009 and 2011. As for the U.S, there are classic examples of numerous development projects put on hold or delayed due to lack of funding in cities such as Las Vegas, e.g.: The Echelon, Fontainebleau, St. Regis, and in Chicago e.g.: the Trump International Hotel and Tower. The fact that most traditional lenders to the commercial property sector have explicitly stated their intentions to reduce their exposure to the sector has not helped matters, e.g. Westpac Banking Corporation and Suncorp Metway in Australia. This does not auger well for A-REITs with stapled securities as property development was seen a large contributor to value-growth.

Recognising the importance of the commercial property sector in having a vibrant economy, the Australia government conceived the Australian Business Investment Partnership scheme in January 2009 to provide liquidity to viable major commercial property projects. Though this scheme has not come into effect due to opinion differences in by legislators, it has shown government's willingness to move in to support the commercial property sector in times of dislodgement of debt funding instruments. Similarly, in the U.S. the Term Asset-Backed Securities Loan Facility (TALF) now includes CMBSs. This scheme aims at promoting the flow of credit to businesses and households and to facilitate the financing of commercial property.

In the U.S., some major commercial property investors have filed for bankruptcy protection or defaulted on their CMBSs or unsecured bonds partly due to refinancing difficulties. As earlier discussed, U.S. CMBS delinquency rates are increasing. Similarly, in Australia a number of REITs and property developers have been declared insolvent or are under receivership after falling to re-structure or re-finance their debt, e.g. ABC Learning, Babcock and Brown, Raptis, Record Realty.

To take advantage of the 'funding gap' and the possibility of distressed sales, a number of global opportunistic funds have been set up. Their goal is to buy these assets cheaply and offload them when the market recovers. Examples are Brookfield, Lone Star Real Estate Fund II and Sam Zell. A total of 96 private equity funds worldwide raised US$40.6 billion[5], with 69% having a primary focus on North America, to take advantage of unfolding commercial real estate investment opportunities (Preqin 2010). Other recent developments have been three initial price offerings of mortgage REITs to buy distressed CMBSs and other securities, e.g.: Invesco Mortgage Capital, Starwood Property Trust, and PennyMac Mortgage Investment Trust.

Finally, debate rages in investment circles on how US$542 billion of U.S. CMBS maturating in 2010-2011 will be refinanced and the consequences of the inability to refinance. U.S. commercial real estate debt outstanding is US$3.4 trillion, of which 22% is CMBS. A number of strategies have unfolded, with equity raisings and sale of assets to payment down debt being the most prominent. U.S. REITs issued US$29.8 billion worth of equity in 2008- Q3 2009, and their Australian counterparts, A-REITs, US$18.3 billion (AU$20.7 billion) over 2007:Q2 2009 (PIR 2009a, b). In 2009, Real Capital Analytics (2009b) report asset sales of US$10.1 billion and purchases of US$2.1 billion by U.S public real estate companies over U.S$50 million. Australian companies had sales of US$2.6 billion (AU$2.3 billion) and purchases of US$68.9 million (AU$60.9 billion). In the U.S., policymakers are in support of orderly resolution of commercial real estate debt

[5] At 2.5% market share, Australia has the largest investor base outside of North America and Europe. Majority of these investors are superannuation schemes, e.g. Australia Post Superannuation Scheme (APSS).

default to avoid ‘fire-sales’. The October 30, 2009 Federal Reserve ‘Prudent Commercial Real Estate Loan Workouts’ policy statement encourages loan modifications and extensions for creditworthy commercial real estate borrowers; in some cases, even if a property’s current value is below the loan amount (Federal Reserve 2009).

Conclusion

The paper builds on the earlier work done by Chikolwa (2009) on Australian CMBSs and A-REIT unsecured bonds by investigating the impact of the global financial crisis on the two financial instruments in U.S. and Australia from 2000 to Q3:2009. It is shown that events in the share market have a bearing on the pricing of CMBSs and REIT unsecured bonds.

Similarities are noted in the impact of inactivity in the funding instruments on the U.S. and Australian commercial property market, albeit at different degrees. The constrained commercial property supply in Australia and stronger economic performance, has meant some projects are still be undertaken despite funding problems and property values have not fallen as much as in the U.S. Whereas the Australian commercial public debt markets closed for 2 years from Q3:2007, the U.S. had some activity though at the low levels.

The CMBS and REIT unsecured market are now beginning to thaw in line with the general view that the worst of the global financial crisis is over. Better access to readily available cheaper public debt will result in increased commercial transactions.

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