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STRUCTURING ISSUES FOR COMMERCIAL MORTGAGE- BACKED SECURITIES IN AUSTRALIA

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ABSTRACT

This paper presents survey results of factors considered by originators/issuers and arrangers of Australian Commercial Mortgage-Backed Securities to obtain high credit ratings and those considered in the pricing of the issues to ensure their success. Rating of issues was found to be the main reason why investors invest in CMBSs and provision of funds at attractive rates as the main motivation behind CMBS issuance. Furthermore, asset quality was found to be the most important factor necessary to obtain a high credit rating supporting the previous industry view that assets backing securitisation are its fundamental credit strength.

Keywords:

Commercial mortgage-backed securities, structuring, credit rating, issuers, arrangers

INTRODUCTION

The ultimate goal of structuring Commercial Mortgage-backed Securities (CMBS) transactions is to obtain a high credit rating as this has an impact on the yield obtainable and the success of the issue. Credit rating agencies recognise the use of both quantitative and qualitative techniques in arriving at their CMBS credit ratings (Fitch Ratings 2005; Moody's Investor Service 2001). Furthermore, some rating agencies and some researchers have emphasized the importance of subjective judgement in the bond rating process and criticized the use of simple statistical models and other models derived from artificial intelligence to predict credit ratings, although they agree that such analysis provide a basic ground for judgement in general (Huang et al. 2004).

Qualitative judgement, which includes accounting quality, operating efficiency, financial flexibility, industry risk, and market position, is difficult to measure. However,

other researchers like Kim (2005) contend that most of these qualitative factors are likely reflected in the quantifiable data such as financial and non-financial variables, and could be assessed indirectly from analysing these quantifiable data. Literature on bond rating prediction has demonstrated that statistical models and artificial intelligence models (mainly ANNs) achieved remarkably good prediction performance and largely captured the characteristics of the bond rating process.

Using artificial neural networks (ANN) and ordinal regression (OR) as alternative methods to predict CMBS credit ratings, Chikolwa and Chan (2008) examined the role that various financial and industry-based variables have on CMBS credit ratings issued by Standard and Poor's from 1999 – 2005. Based on their OR results, they contend that rating agencies use only a subset of variables they describe or indicate as important to CMBS credit rating as some of the variables they use were statistically insignificant. In addition, they show how ANNs have superior results to OR in predicting CMBS credit ratings.

To obtain a deeper understanding of factors considered in structuring CMBSs, a triangulation approach is adopted. Triangulation is broadly defined by Denzin (1978 :291) as “the combination of methodologies in the study of the same phenomenon”. Levy and Henry (2003) contend that a growing number of academics are now recognising the advantages of integrating both qualitative and quantitative research methods by way of triangulation. In support of triangulation, Gallimore and McAllistair (2004; 2005) state that judgemental intervention is often a necessary and desirable element of the forecasting process and that subjectivity is intrinsic to the application of econometric methods.

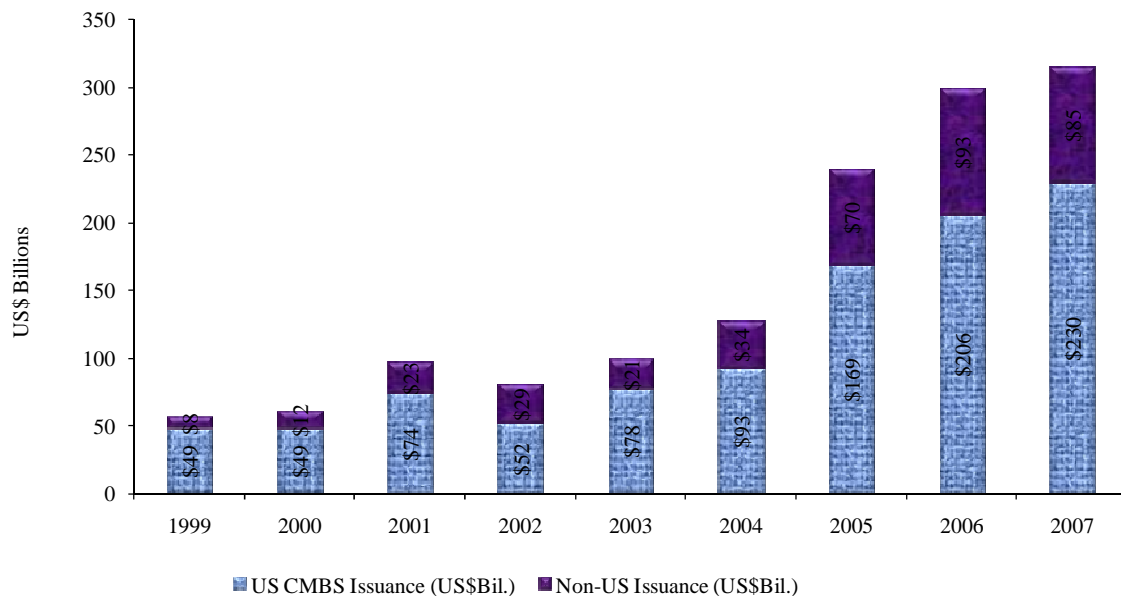
As such, the purpose of this paper is to building on the work of Chikolwa and Chan (2008) by undertaking a qualitative analysis of factors considered necessary to obtain a high CMBS credit rating and pricing issues necessary for the success of CMBS issues through mail surveys of arrangers and issuers. Arrangers are defined as investment bankers responsible for structuring CMBSs. Issuers or originators are commercial property owners seeking to use their properties as security for structured financing via CMBS issuance.

The paper is structured as follows. Section 2 shows the significance of the Australian CMBS market. Next, Section 3 presents a distillation of factors considered in structuring CMBS. Section 4 discusses the methodology. The results and their analyses are shown in Section 5. Finally, we conclude in Section 6.

SIGNIFICANCE OF THE AUSTRALIAN CMBS MARKET

According to the Reserve Bank of Australia (2006), the increased supply of Commercial Mortgage-Backed Securities (CMBS), with a range of subordination, has broadened the investor base in real estate debt markets and reduced the commercial property sector's dependence on bank financing. The CMBS market has been one of the most dynamic and fastest-growing sectors in the capital markets, for a market which was virtually non-existent prior to 1990 (Richardson 2003). The global CMBS market issuance which stood at US\$4 billion in 1990 had grown to US\$314.7 billion (AU\$357 billion)¹ by the end of 2007 (Commercial Mortgage Alert 2008); see Figure 1.

Figure 1: Global CMBS Issuance (2000 – 2007)

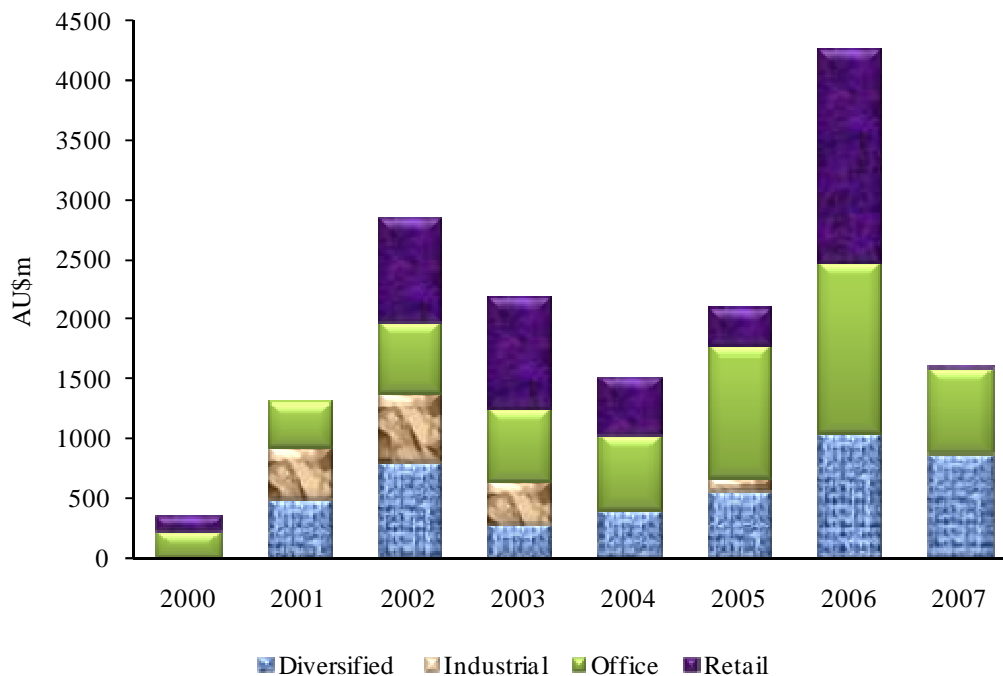


Source: Commercial Mortgage Alert

¹ For ease of comparison, the RBA daily exchange rate of US\$1=AU\$1.34 as at December 31, 2007 has been used.

In Australia, a total of over 75 CMBSs with nearly 180 tranches totalling over AU\$19.0 billion had been issued to December 2007 from when they were first introduced in 1999. Figure 2 presents CMBS issuance by sector from 2000 to 2007, excluding credit lease and small ticket transactions. Over this eight year period, the most dominant CMBS issues have been in the office sector (AU\$5.7 billion), followed by the retail and the diversified sectors at AU\$4.5 billion each. The industrial sector had AU\$1.4 billion worth of CMBS issuance.

Figure 2: Australian CMBS Issuance by Sector (2000 – 2007)



Source: Author's compilation from various Standard and Poor's CMBS presale reports

Over 2000-2007, retail property-backed issues had the most tranches at 33%, followed by diversified property-backed issues at 29% and office property-backed issues at 26%. The least number of tranches were in the industrial property-backed issues at 12%.

Chikolwa (2007; 2008) shows the development of the Australian CMBS market and how property risk is assessed in Australian CMBSs. An overview of the Australian CMBS market is further shown in Appendix 1.

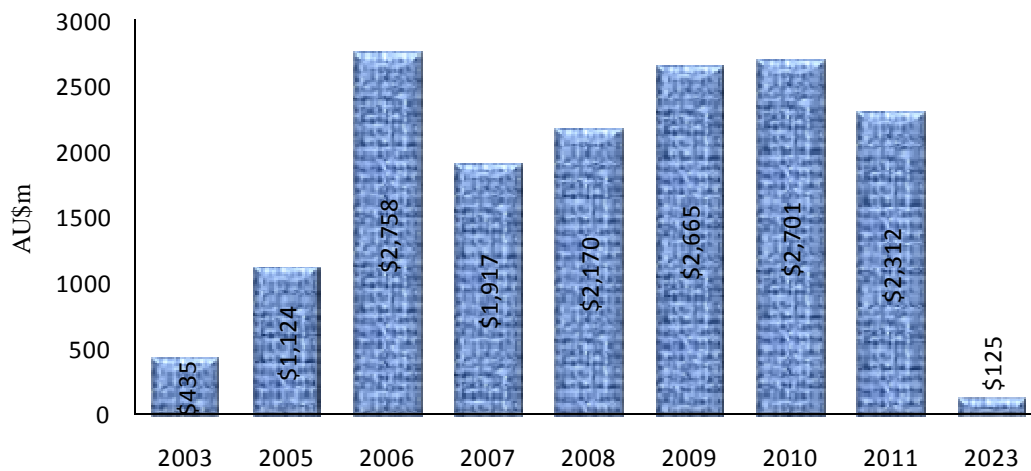
Events in the LPT share market are of importance to the growth and development of the Australian CMBS market, it being one of the main LPT debt funding options². Though the value of LPTs fell by 2.5% a year to December 2007, in line with the recent falls in share prices in Australia and overseas, as well as by the difficulties of several large property companies in recent months, there have been no announcements more recently of severe stresses in the sector (Reserve Bank of Australia 2008).

While the cost of bank lending rates has risen in the past few months, the increase has not been as large as the rise in CMBS spreads. Lenders are clearly reluctant to issue CMBS at current spreads as doing so would be unprofitable. With the bank bill spread itself having increased, the interest rate on a new AAA-rated CMBS would be likely to be over 150 to 200 basis points (bps) above the cash rate, compared with an average of 25 bps over recent years (Reserve Bank of Australia 2008). Issues of how risk is assessed and reported for adequate pricing of CMBSs are going to be important in reviving this market.

The sub-prime mortgage market events in the US have resulted in a “credit crunch” in the global financial system due to an increased perception of risk on the part of lenders. This has had an impact on the refinancing prospects for maturing CMBSs and further resulted in no new issuances since the second half of 2007 due to high spreads on securitisable financial receivables and unsecured debt offerings. Over AU\$4.6 billion worth of CMBSs are set to mature in 2008 – 2009; see Figure 3 and Table 1.

² Chikolwa (2007) and Standard and Poor’s (2005) show that LPTs command 65% market share of CMBS issuance.

Figure 3: Maturity Profile of Australian CMBS Issued Between 2000 - 2007



Source: Author's compilation from various Standard and Poor's CMBS presale reports

Table 1: Maturity Profile of Australian CMBS Issued Between 2000 - 2007

Year	Rating										Total (AU\$m)	
	NR	BB+	BBB	BBB-	BBB+	A-	A-1	A	AA	AAA		Aaa*
2003									56	379		435
2005	99		42		55			148	47	734		1,124
2006			38		39	38		226	302	1,965	150	2,758
2007	0		81	2				126	176	1,532		1,917
2008			51	28				88	135	1,868		2,170
2009		23	168	61				272	141	2,002		2,665
2010			160	30			455	122	118	1,817		2,701
2011			125	58	53			298	222	1,558		2,312
2023										125		125
Total (AU\$m)	99	23	664	178	147	38	455	1,278	1,196	11,979	150	16,207

Source: Author's compilation from various Standard and Poor's CMBS presale reports

Already a number of LPTs have had problems refinancing their debt or have had to refinance at high costs. For instance, part of the problems faced by Centro Property Group is a result of their inability to refinance debt³, which includes CMBSs.

³ Refer to letter by Centro Group to its investors dated 17 December 2007 (<http://www.centro.com.au/NR/rdonlyres/C0D34A17-F5F0-4AAE-8663-E7CC8E0FFB46/0/CentroEarningsRevisionandRefinancingUpdate.pdf>)

However, in the broader bond market, investor sentiment is projected to be favourable by the end of 2009. Despite these adverse conditions, bond issuance is still achievable. For instance, in May 2008 Suncorp-Metway issued AU\$850 million worth of senior domestic unsecured bonds⁴. The offering consisted of AU\$600 million three year fixed-rate bonds and AU\$250 million three year floating-rate bonds, priced at 130 bps over three mid-swap and three month bank bill swap (BBSW) rates respectively. This shows that demand is likely to rebound somewhat – at least for well structured CMBSs with high quality collateral and good credit ratings.

DISTILLATION OF FACTORS CONSIDERED IN STRUCTURING CMBS

The purpose of this section is to review literature to identify the key factors for use in the survey. The survey questions are arrived at as follows:

Structuring Details

(i) Debt funding options

CMBS are one of the many available debt funding options. Arrangers and issuers are asked to rank the importance of CMBSs as a debt funding tool. This forms a basis for deducing motivating factors behind its use as a funding tool and also impacts on the growth of the CMBS market.

(ii) Credit enhancement techniques used

In asset-backed securitisation/CMBS, credit enhancement is undertaken to act as a “ring-fence” around the assets to avoid insolvency and also results in a higher rating of the bonds issued. Therefore, questions are posed on the various credit enhancement techniques that are used in order to answer questions like, “Do CMBSs backed by certain property classes require specific credit enhancement techniques or are the techniques generic? What is the impact of using different credit enhancement techniques on the rating?”

⁴<http://www.asx.com.au/asxpdf/20080521/pdf/3197ncqvpshfpc.pdf>

(iii) Preferred tranching and size of tranches

Certain institutional investors, such as superannuation funds, are only mandated to undertake “investment-grade” rated investments (Newell 2006) . However, though the majority of the tranches in Australian CMBSs issued are AAA-class rated, BBB to B-class tranches are becoming common. This shows the growth/maturing of the market, increased acceptance of the investment asset and the increased participation of more knowledgeable investors (Chikolwa 2007). Therefore, questions on the preferred tranching and their sizes are important to the growth of the CMBS market.

(iv) Structuring costs and duration

Han (1996) points out that for a CMBS transaction to be commercially viable in the US, issues have to be US\$50 million and above to cover the high structuring costs. Henderson and ING Barings (1997) and Ooi et al. (2003) reinforce Han’s assertion that the major drawback with CMBS issuance are the high structuring costs. As such, we seek to establish average structuring costs for Australian CMBSs that make CMBSs a viable debt funding tool.

(v) Pricing details

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 et al. 2003). Arrangers and issuers are asked how they price their issues to ensure their success.

Motivating Factors behind CMBS Issuance

According to Henderson & ING Barings (1997) factors that support securitization are:

- Funds can be provided at attractive rates
- Provision of an alternative source of funding
- Ability to tap large sources of funds
- Provision of matched funding for medium term and long-term receivables
- An improved company’s return on capital

Therefore, we seek to find out which of these factors are considered beneficial for CMBS issuance by arrangers and issuers.

Factors Attractive for Investors to Invest in CMBS

Sing et al. (2004) in their study on the development of CMBS market in Singapore asked respondents on the following factors which investors find attractive to invest in CMBS:

- Rating of issues
- Market liquidity
- Term to maturity
- Credit enhancement / guarantee
- Denomination of tranche
- Information efficiency
- Correlation with other assets
- Issuing agents and underwriting banks

We follow a similar approach in our study to investigate factors which investors find attractive to invest in Australian CMBSs.

Factors Considered to Obtain a High Credit Rating

The following factors have been identified as being important for obtaining a high CMBS credit rating (Fitch Ratings 2005; Moody's Investor Service 2003; Roche 2002; Standard & Poor's 2001):

- Asset quality: Location; Age; Condition; Tenant retention rate
- Tenant / Lease details: Credit quality of income; Tenancy concentration; Lease expiry profile
- Portfolio composition: Total number of assets; Diversification (asset, geographic, sector)
- Financials and other details: Refinancing risk; Transaction support mechanisms / credit enhancement; gearing (DSCR and LTV ratio)
- Management: Quality and experience; Growth strategy

Issuers and arrangers are asked to rank the importance of these factors in obtaining a high credit rating.

A detailed discussion of other secondary risk factors such as legal risk relating to issues such as insolvency and bankruptcy and third party risk involving the credit rating of support parties such as security trustees, interest rate providers and liquidity facility providers, is outside the realms of this study. Common structural mechanisms have been set up to mitigate secondary risk in all CMBS issues; we refer readers to Standard and Poor's, (2005), Clayton UTZ (2003) and Moody's Investor Service (2003).

METHODOLOGY

A mail questionnaire survey of issuers and another of arrangers of Australian CMBSs was undertaken in order to better understand the structuring issues they consider necessary to obtain a high credit rating and the pricing issues they consider necessary for the success of an issue. The sample of CMBS issuers and arrangers selected for this study is taken from various Standard and Poor's CMBS presale reports issued over the study period, 2000 - 2006. Due to the small population, invitation letters were sent out to twelve CMBS issuers and eight CMBS arrangers in August 2007 and January 2008, respectively. The first survey (August 2007) was done at the infancy of the "credit crunch crisis" and the second (January 2008) when its effects were being fully felt. The difference in the state of the market between the two survey periods may influence the survey results.

While the number of respondents in these surveys is small, they represent a significant coverage of the market. The author checked the contact details of each survey participant to ensure the invitation letter would be mailed to the correct person in the corporation.

To maintain confidentiality, the identity of the respondents will not be disclosed and the survey results will be presented in an aggregated format.

Description of Respondents - Issuers

For the period 2000 - 2006, a total of fifteen CMBS issuers were identified. Of these, twelve were selected for survey after establishing a target respondent. The identified respondents were fund managers in CMBS issuer firms. The twelve presented a market share of 93%, with a combined CMBS issuance of AU\$16.3 billion. In the remaining three CMBS issuer firms, no clear respondent could be identified as the issuing decisions were spread in various departments and attempts to identify a respondent were not responded to.

The surveys were posted out during the month of August 2007 and responses were received in the following month. A total of five issuers responded, giving a response rate of 42%. The five respondents had issued a combined total of AU\$5.1 billion worth of CMBSs or 29% of total issuance from 2000 to December 2006.

Description of Respondents - Arrangers

During the same study period, a total of eight CMBS arrangers were identified, representing 100% market share. CMBS arrangers are international investment banks and the investment banking wings of major Australian banks, with target respondents in this group being investment bankers. They had arranged a combined CMBS issuance of AU\$17.4 billion from 2000 to December 2006. A total of three responded, giving a response rate of 37.5%. The three respondents had arranged a combined total of AU\$12.4 billion worth of CMBSs or 71% of total issuance from 2000 to December 2006.

These response rates and CMBS market coverage for both issuers and arrangers ensure the quality of the survey results.

Methods of Analysing Responses

A 5-point Likert scale is applied in the questionnaire to determine the importance of a factor with score 1 = Not Applicable, 2 = Not Important, 3 = Important, 4 = Very Important, and 5 = Essential. Arithmetic means of the Likert scale scores were done to

determine the ranking in importance attributed to various factors motivating issuance and investing in CMBSs, and in obtaining a high CMBS credit rating. Further, the percentage attributable to the 'very important' and 'essential' categories in the responses was determined as a percentage of the overall factor score. In addition, one-way ANOVA tests were applied for each of the factors for both the issuer and arranger groups to determine whether there were any statistically significant differences. Finally, the ranking of responses of factors from each of the issuers and arranger groups were analysed to test the overall degree of association between the ranks using Spearman's rank-correlation test (Croucher 1997; Kohler 1993).

RESULTS AND ANALYSIS

Arranger and Issuer Perspectives Regarding CMBS Structuring Details

The following comparisons can be made between issuers and arranger perceptions of structuring details in CMBSs:

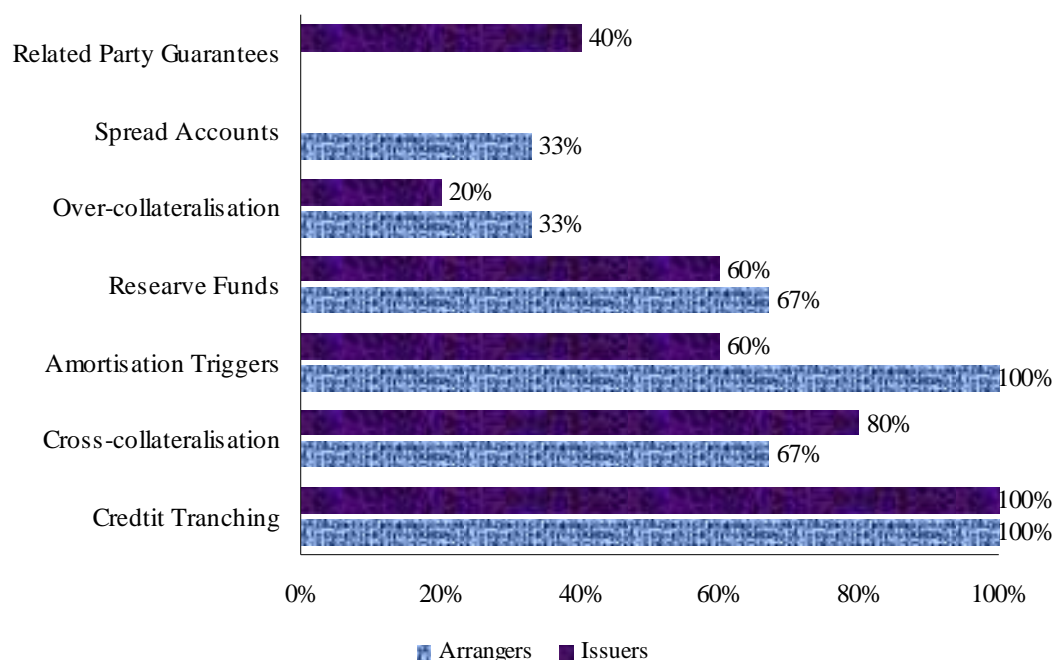
(i) Debt funding options used

Issuers had an even preference of debt funding options they used at 50% each of further CMBS issuances and bank debt, whereas no preference pattern could be established for arrangers. These results are not surprising with bank lending for commercial property being buoyant. For instance, it increased by 27% over the year to March 2007, with lending to the industrial property market growing by 31% (Reserve Bank of Australia 2007). This is attributable to the strong property performance supported by improving business climate. Prime office property prices rose by 22% over the year to December 2006, the strongest annual growth since December 1988, while industrial property prices rose by 12% over the same period. The NAB Business November 2007 Survey (National Australia Bank 2007) states that business conditions remain at record levels despite financial market turbulence and that though confidence has edged down, it is still at robust levels.

(ii) *Credit enhancement techniques used*

Both issuers and arrangers considered credit tranching as main credit enhancement technique at 100%. Cross-collateralisation, amortisation triggers and reserve funds feature prominently between the two respondent groups. Over-collateralisation, spread accounts and related party guarantees, though used, are not as prominent. This is shown in Figure 4. Monoline insurance, multiline insurance and letters of credit are not used by the respondents.

Figure 4: Credit Enhancement Techniques Used



The results show that both respondent groups have nearly the same perception of the most relevant credit enhancement techniques to use in order to get a high credit rating. Furthermore, no evidence was established of any preferred credit enhancement techniques for specific property types.

(iii) *Preferred tranching and size of tranches*

Both groups of respondents indicated that only tranching from AAA to BBB was viable to attract investors, but had differences in the ideal tranche size; issuers indicted a range of AU\$51 - 200 million and arrangers indicated AU\$100 million. The results are

comparable to the US (Han 1996) and Singapore (Sing et al. 2004) where US\$50 million and S\$500.1 million respectively were deemed to be optimal tranche sizes to provide liquidity in the market. The ideal subordination levels for AAA notes were reported as ranging from 80% - 85% and 65% - 85% for issuers respectively.

(iv) *Structuring costs and duration*

The duration of structuring CMBSs ranged from 4 - 6 months for the arrangers and 4 – 9 months for the issuers, with several activities running in tandem such as compiling documentation and the rating process. Significant differences were noted for the average all-in-all structuring costs (excluding margins), which ranged between 0.1% - 1% for arrangers and issuers at 0.21 – 0.5%. These differences attributable to the two groups are not readily explainable.

(v) *CMBS refinancing options*

Both issuers and arrangers stated further capital market debt issues and refinancing using bank debt as their preferred refinancing option when the CMBSs matured. The least considered refinancing option considered was asset sales.

As explained earlier, bank lending to the commercial property market has been favourable and demand for securitised debt securities has been strong, hence making it easier to refinance CMBSs using the two methods.

(vi) *Pricing details*

The two groups generally were of the view that ideal pricing for AAA notes should start at 20 bp and over 50 bp for BBB notes. Further, the differences in the survey period between issuers (August 2007) and arrangers (January 2008) showed in their interpretation of market conditions. At the time arrangers were surveyed, the CMBS market had literally shutdown due to the effects of the US sub-prime mortgage crisis. They indicated that pricing of AAA notes could range between 60 – 80 bp and BBB notes between 200 – 300 bp under current market conditions.

Arranger and Issuer Perspectives Regarding CMBS Issuance, Attractiveness and Credit Rating

Responses by arrangers and issuers to potential factors behind issuance, attractiveness of and rating of CMBSs are presented below:

(i) Motivating Factors behind CMBS Issuance

The most important factor is provision of funds at attractive rates, with all the arrangers (100%) and 80% of the issuers considering it as a very important/essential motivating factor behind CMBS issuance. Only 33% of the arrangers and 80% of issuers stated alternative funding source as being a very important/essential motivating factor, whereas 100% of the arrangers and 20% issuers respectively found ability to tap large sources of funds as being very important/essential. Although, there was a large variation in factor scores between arrangers and issuers at 3.6 and 1.4 respectively for improvement in a company's return on capital, the difference in the very important/essential consideration was much narrower at 68% for arrangers and 80% for issuers. Both respondents groups stated provision of matched funding of medium and long-term receivables as not being an important consideration behind the decision to issue CMBSs.

(ii) Factors Attractive for Investors to Invest in CMBS

All the arrangers (100%) and 80% of the issuers stated that they regard rating of CMBS issues as being the most important attraction factor for investors to invest in CMBSs. Another very important/essential consideration identified by 100% of the arrangers was term to maturity, which had only rated at 40% for issuers. Market liquidity and credit enhancement/guarantee had 68% each for arrangers and 40% and 20% respectively for issuers. Perceptions of very important/essential consideration for denomination of tranche and information efficiency were almost even for both respondent groups at 33% each for arrangers and 20% and 40% respectively for issuers. Correlation with other assets was only considered by 33% of the respondents as being very important/essential and unimportant by the issuers. Both respondent groups considered the involvement of agents and underwriting banks as an unimportant factor for attracting CMBS investors.

These results are similar to those found by Sing et al. (2004) in their study on the development of the CMBS market in Singapore. They listed rating of issues and market liquidity as the two most important factors, followed by term to maturity and credit enhancement.

(iii) Factors Considered to Obtain a High Credit Rating

Financials and transaction support details and portfolio composition had the highest factor scores for arrangers at 4.6 and 4.3 respectively, with each having a 100% very important/essential consideration to obtain a high credit rating. However, for the two factors, issuers had factor scores of 3.0 and 3.2 and 80% and 40% for the very important/essential consideration respectively. Both respondent groups had 80% very important/essential consideration and factor scores of 4.0 and 3.7 respectively for asset quality. Although, the factors scores for tenant\lease details were close at 3.7 and 3.6 for arranger and issuers respectively, the two groups had divergent views about their very important/essential consideration at 33% and 80%. Management quality is regarded by the two respondent groups as being unimportant to obtain a CMBS high credit rating.

Arranger results are different and issuer results are consistent with criteria set by the rating agencies for CMBS credit rating (Moody's Investor Service 2003; Standard & Poor's 2003c, 2005b) and other researchers (Roche 2002) who regard asset quality and tenant / lease details as the two most important factors needed to obtain a high credit rating. This can be partly explained by stronger emphasis placed by arrangers on solid company financials in order to issue CMBSs in a tightened investor risk perception market as a result of the US sub-prime mortgage market meltdown. A probable reason for the low consideration of management is that most of the issuers are highly successful in running their LPTs and it is this same expertise that is being used in managing their CMBS issuances with no extra requirements needed.

Furthermore, ANOVA is used to test the differences of perceptions between groups with respect to each of the eighteen factors at 5% level of significance for arrangers and issuers. The results of the analysis are presented in Table 4.

Table 4: Descriptive Statistics of Perceptions of All Respondents

	Group Average Factor Score		
	Arranger*	Issuer*	Significance
Motivations Behind CMBS			
Issuance			
Provision of funds at attractive rates	5.0	3.8	ns
Improved company's return on capital	3.6	1.4	*
Alternative funding source	3.3	3.6	ns
Ability to tap large sources of funds	4.0	3.4	ns
Provision of matched funding	2.6	2.0	ns
Factors Investors Find Attractive to Invest in CMBS			
Rating of issues	5.0	4.0	ns
Term to maturity	4.0	3.2	ns
Market liquidity	4.0	3.4	ns
Credit enhancement / guarantee	3.6	3.0	ns
Denomination of tranche	3.6	3.0	ns
Information efficiency	3.6	3.0	ns
Correlation with other assets	3.0	2.4	ns
Issuing agents and underwriting banks	2.3	2.0	ns
Factors Considered to Obtain a High Credit Rating			
Financials and other details	4.6	3.0	*
Portfolio composition	4.3	3.2	ns
Asset quality	4.0	3.7	ns
Tenant\Lease details	3.7	3.6	ns
Management	3.0	2.8	ns

* = significantly different (P < 5%); ns = not significantly different

♣ Score 1 = Not Applicable, 2 = Not Important, 3 = Important, 4 = Very Important, and 5 = Essential.

The significant differences between the two respondent groups were:

- Improved company's return on capital, for motivating factors behind CMBS issuance; and
- Financials and other details, for factors needed to obtain a high credit rating.

The differences indicate a perception by one group or other group of greater relevance of these factors. The issuer group found improved company's return on capital to be the least important of all the factors motivating CMBS issuance, unlike the arranger group who considered it more favourably.

For financials and other details, the arranger group ranked these more than the issuer group in terms of relevance in obtaining a high CMBS credit rating.

One possible explanation for these differences is that arrangers consider a stable or solid financial standing of a company issuing CMBSs and its ability to meet its debt obligations to be critical in credit rating. This view can be reinforced by the recent "credit crunch" induced problems in the capital markets, meaning that only companies with more stable financial standings are able to issue debt securities.

Ranking Average Factor Scores between Arrangers and Issuers

Table 5 shows average factor scores and their ranking of the two respondent groups. It also shows the overall average factor scores and their ranking. The average factor scores are arithmetic averages of all the eight respondents.

Table 5: Arranger, Issuer and Overall Average Factor Scores

	Arranger Factor Score*	Arranger Rank	Issuer Factor Score*	Issuer Rank	Overall Factor Score*	Overall Rank
Motivations Behind CMBS Issuance						
Provision of funds at attractive rates	5.0	1	3.8	1	4.3	1
Ability to tap large sources of funds	4.0	2	3.4	3	3.1	3
Improved company's return on capital	3.6	3	1.4	5	2.3	5
Alternative funding source	3.3	4	3.6	2	3.5	2
Provision of matched funding	2.6	5	2.0	4	2.8	4
Factors Investors Find Attractive to Invest in CMBS						
Rating of issues	5.0	1	4.0	1	4.4	1
Term to maturity	4.0	2	3.2	3	3.5	3
Market liquidity	4.0	2	3.4	2	3.6	2
Credit enhancement / guarantee	3.6	3	3.0	4	3.3	5
Denomination of tranche	3.6	3	3.0	4	3.0	6
Information efficiency	3.6	3	3.0	4	3.4	4
Correlation with other assets	3.0	4	2.4	5	2.6	7
Issuing agents and underwriting banks	2.3	5	2.0	6	2.1	8
Factors Considered to Obtain a High Credit Rating						
Financials and other details	4.6	1	3.0	4	3.6	2
Portfolio composition	4.3	2	3.2	3	3.6	2
Asset quality	4.0	3	3.7	1	3.9	1
Tenant\Lease details	3.7	4	3.6	2	3.6	2
Management	3.0	5	2.8	5	2.9	3

♣ Score 1 = Not Applicable, 2 = Not Important, 3 = Important, 4 = Very Important, and 5 = Essential.

The overall rankings for each of the factors assessed in Table 5 are discussed below:

(i) *Motivations Behind CMBS Issuance*

Both arrangers and issuers ranked provision of funds at attractive rates to be the most important factor behind CMBS issue with an overall factor score of 4.3. There were differences in perception of importance for the remaining factors. However, after getting overall factor average scores, provision of an alternative funding source and ability to tap large sources of funds were ranked second and third respectively. Their average factor scores are 3.5 and 3.1. The fourth ranked factor was provision of matched funding and the least was improvement of company's return on capital, with average factor scores at 2.8 and 2.3 respectively.

(ii) *Factors Investors Find Attractive to Invest in CMBS*

Rating of issues was considered the most important factor attracting investors to invest in CMBS by both arrangers and issuers, with an overall factor score of 4.4. Other factors ranked highly in order of importance are, market liquidity, term to maturity, information efficiency, credit enhancement/guarantee and denomination of tranche, with average factor scores ranging from 3.5 – 3.0. Correlation with other assets and involvement of issuing agents and underwriting banks were considered the least important, with average factor scores at 2.6 and 2.1 respectively; see Table 5 for details.

(iii) *Factors Considered to Obtain a High CMBS Rating*

Average factor score rankings for arrangers and issuers were quite divergent with financials and other details, and asset quality ranked as the most important factors respectively. The reason for this divergent view was earlier discussed in the previous section, under ANOVA. A similar scenario prevailed for the remaining factors except for management which all parties considered the least important.

However, on an overall basis asset quality prevailed as the most important factor at a score of 3.9. Financial details and other details, portfolio composition and tenant/lease details, all had the same score at 3.6. The least was management with a factor score of 2.9.

Our overall results are different from those presented by Roche (2002) for ranking CMBSs in the ABN AMRO model and can only be compared indirectly; see Table 6. In their model, property-based factors added up to 75% (asset quality (15%); refinancing risk (20%); lease expiry profile (15%); credit quality of income (15%); and tenancy concentration (10%)), management (10%), and portfolio composition (15%). On a percentage basis, their order of importance can be ranked as (1) tenant/lease details, (2) financials and other details, (3) asset quality, (3) portfolio composition, and (4) management.

Table 6: Ranking of Factors Considered to Obtain a High CMBS Rating

	Survey Overall Rank	ABN AMRO Rank
Financials and other details	2	2
Portfolio composition	2	3
Asset quality	1	3
Tenant\Lease details	2	1
Management	3	4

Our survey results show that high asset quality will command a high tenant/lease profile, whereas the ABN AMRO model places more emphasis on the latter. In both scenarios, the ability to meet CMBS repayment obligations is impacted by good asset quality and a high tenant/lease profile. Portfolio composition and financials and other details are considered as second tier factors, with management being the least important.

The Spearman's rank correlation co-efficients indicate a strong relationship between arrangers' and issuers' ranking of the factors as shown below:

- Motivations Behind CMBS Issuance: $r_s = 0.50$
- Factors Investors Find Attractive to Invest in CMBS: $r_s = 0.97$
- Factors Considered to Obtain a High Credit Rating: $r_s = 0.45$

CONCLUSION

Qualitative analysis of surveys on arrangers and issuers provide insight into structuring issues they consider necessary to obtain a high credit rating and pricing issues necessary for the success of an issue. Rating of issues was found to be the main reason why investors invest in CMBSs and provision of funds at attractive rates as the main motivation behind CMBS issuance. Furthermore, asset quality was found to be the most important factor necessary to obtain a high credit rating supporting the view by Henderson and ING Barings (1997) that assets backing securitisation are its fundamental credit strength.

In addition, analyses of the surveys reveal the following:

- The choice of which debt funding option to use depends on market conditions.
- Credit tranching, over-collateralisation and cross-collateralisation are the main forms of credit enhancement in use.
- On average, the AAA note tranche needs to be above AU\$100 million and have 60 - 85% subordination for the CMBS issue to be economically viable.
- Structuring costs range between 0.1% – 1% of issue size and structuring duration ranges from 4 – 9 months.
- Preferred refinancing options are further capital market issues and bank debt.
- Pricing CMBSs is greatly influenced by factors in the broader capital markets. For instance, the market had literary shut down as a result of the “credit crunch” caused by the meltdown in the US sub-prime mortgage market.

These findings can be useful to issuers as a guide on the cost of going to the bond market to raise capital, which can be useful in comparing with other sources of funds.

Issues discussed in this paper should contribute to the body of knowledge on the Australian CMBS, which should be useful in allaying increased investor risk perceptions as a result of the US sub-prime mortgage market meltdown in order to resuscitate the CMBS market.

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Appendix 1: Overview of the CMBS Market in Australia, US and EU

Feature	Australia	US	EU
<i>Market Size:</i>	<ul style="list-style-type: none"> • AU\$4.9 billion worth issued in 2006; 7% of ABS market. • 65 issues with over 180 tranches, worth over AU\$17.4 billion were issued from 1999 to 2006 	<ul style="list-style-type: none"> • AU\$261 billion (\$US\$206 billion) issued in 2006; around 40% of ABS market. • AU\$1257 billion (US\$990.7 billion) issued from 1990-2006. 	<ul style="list-style-type: none"> • 80 transactions worth AU\$108 billion (€64.75 billion) in 2006. • More than AU\$129 billion (€77 billion) was raised from 124 transactions between 1997 and 2004.
<i>Underlying Collateral:</i>	<ul style="list-style-type: none"> • Issuance backed by various sectors between 2000 and 2006: office 36% (AU\$5.2 billion), retail 31% (AU\$4.5 billion), diversified 23% (AU\$3.4 billion) and industrial 10% (AU\$1.4 billion). 	<ul style="list-style-type: none"> • Retail and office backed issues dominant at 25% each in 2006. 	<ul style="list-style-type: none"> • Office 31%, retail 28% and multi-family 23% in 2006.
<i>Rating Tranche:</i>	<ul style="list-style-type: none"> • 67% in AAA category by 2006; lower B-class tranches becoming common. 	<ul style="list-style-type: none"> • Well matured market with A-rated and B-rated notes issued. 	<ul style="list-style-type: none"> • 60% in AAA category; AU\$7.5 billion (€4.5 billion) worth of non-investment notes by 2005.
<i>Interest Type:</i>	<ul style="list-style-type: none"> • 68% floating rate notes and 32% fixed rate notes in 2005. • 90% floating rate notes and 10% fixed rate notes in 2006. 	<ul style="list-style-type: none"> • 81% floating rate notes and 12% fixed rate notes in 2006. 	<ul style="list-style-type: none"> • 89% floating rate notes and 11% fixed rate notes between 2000 and April 2006.
<i>Tranche Distribution:</i>	<ul style="list-style-type: none"> • 95% single-borrower transactions • Only 1 conduit transaction by end of 2006. 	<ul style="list-style-type: none"> • 88% conduit/fusion transactions and 12% large loans in 2006. 	<ul style="list-style-type: none"> • 50% conduit/fusion transactions and 50% single-borrower transactions in 2006.
<i>Spread Trends:</i>	<ul style="list-style-type: none"> • AAA 5-year spreads at 20-25bp over BBSW and BBB 5-year spreads at 60-95bp in 2005. • AAA 5-year spreads 20bp wider and BBB 5-year spreads 60bp wider in 2002. 	<ul style="list-style-type: none"> • Downward trend; average 10-year AAA conduit spreads at 30bp in 2006, a drop from 53bp in 2001. 	<ul style="list-style-type: none"> • Spreads tightened by approximately 60% in the last three quarters of 2004. • AAA and BBB spreads narrowed from 160 bp to only 58 bp in 2005: a 64% reduction.
<i>Performance:</i>	<ul style="list-style-type: none"> • 15% credit rating upgrades, 14% downgrades and 71% affirmations in 2006. 	<ul style="list-style-type: none"> • 36% credit rating upgrades, 1% downgrades and 63% affirmations in 2006. 	<ul style="list-style-type: none"> • 7.6% credit rating upgrades (highest of any ABS sub-sector; average for ABS 4.5%) and 4.8% downgrades in 2004.
<i>Others features:</i>	<ul style="list-style-type: none"> • Secured mortgage structures used in all transactions. • Typically 3-5 year note tenure. • Average deal size of AU\$400 million for new issues in 2006; two large issues worth AU\$1 billion and AU\$900 million in the last two years. 	<ul style="list-style-type: none"> • True-sale structures dominate. • Typically 5-10 year note tenure. • Average conduit/fusion deal size of AU\$3 billion (US\$2.4 billion) in 2006, up from AU\$ 2.7 billion (US\$2.1 billion) in 2001. 	<ul style="list-style-type: none"> • 90% synthetic and 10% true-sale structures in 2004. • UK traditionally the dominant jurisdiction, accounting for 74% in 2004; Germany is rapidly catching up, with multifamily deals making up 23% of all CMBS and 29% of conduit deals in 2006.

Source: Author's compilation from various Standard and Poor's, Moody's Investor Service and Fitch Ratings CMBS reports.