Australian Residential Mortgage-Backed Securities: The PUMA Story

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INTRODUCTION

The Australian mortgage-backed securities market has seen significant growth in recent years. It has become one of the largest in the world, with issuance of more than A$18.5 billion in 2000 and A$22.6 billion forecast for 2001. Although the market in Australia is relatively new compared to the United States, over half the Australian MBS issues have occurred outside Australia.

The purpose of this article is to provide a high level description of the Australian mortgage industry and structure of Australian MBS with a focus in particular on Macquarie Bank Limited's PUMA program.

AUSTRALIAN MORTGAGE INDUSTRY

The Australian mortgage market is large– A$271 billion, or US$137 billion– and growing at 10% to 15% per year. Approximately 500,000 new mortgage loans are originated each year.[1]

Traditionally, commercial banks have controlled the Australian mortgage market. However, in the early 1990s, several non-bank lenders, entered the market and introduced revolutionary changes, including lower lending margins and increased product functionality, capturing a significant slice of the market.

Macquarie Bank is an independent full-service Australian licensed investment bank.

Non-bank lenders typically securitize 100% of their portfolio and, in recent years, banks have increasingly used the securitization process as a balance sheet management and fund raising tool. Over the last three years, significant securitization programs have been established by Westpac, Commonwealth Bank, Citibank, St. George, Adelaide Bank and Bank of Queensland. ANZ and National Australia Bank have also recently securitized part of their mortgage portfolio.

AUSTRALIAN BORROWER PROFILE

Australians have a strong homeownership culture, with Australians on average turning over property every eight years. The strong ownership culture combined with the non-deductibility of interest payments means that Australians are eager to build equity in their property.[2] Combine this with the fact that there is no capital gains tax on owner-occupied property, and the family home becomes the primary investment vehicle for most Australians.

- **Income:** The typical Australian borrower earns approximately A$45,000 per year. Dual-income households earn about A$70,000 and the average mortgage size is A$175,000. Over 70% of the population own their own homes.[3] Almost 40% of the people own their home without a mortgage.
- **Housing Type:** The majority of Australian housing is owner-occupied and detached (63% of the market).[4]
- **Demographic Location:** Over 64% of the Australian population live in the capital cities of Australia's six states and two territories. Household growth in Australia is strong, at 1.4% compared to 0.6% for the United Kingdom and 1.1% for the U.S.[5]
- **Bankruptcies:** Based on 1998 figures, the personal bankruptcy rate of 1.5% is far lower than the rate in the U.S. (5.2%).[6]

PRODUCT TYPES

Competition in the Australian marketplace has resulted in a diverse range of products with a variety of features being offered to attract borrowers. Apart from competing on rates, product innovation is the key strategy for many lenders in the market.

Approximately 90% of mortgage loans are variable-rate loans, similar to discretionary adjustable-rate loans in North America.

Although the variable rates are set at the discretion of the lender, the rates in general tend to move with changes in the cash rate set by the Reserve Bank of Australia (RBA).[7] When the RBA changes its official cash rate, mortgage variable rates generally change by the same amount to maintain competitiveness.

The mortgage products generally available on the market are as follows:

- **Variable-Rate Loan:** The most popular type of loan in Australia. Variable rate loans generally come with features such as: redraw, checkbook facilities and linked credit cards. The loan amortizes in 25 to 30 years and there are no charges involved if borrowers wish to make partial prepayments. Most loan repayments are made electronically, via either direct debit or salary crediting.

- **Fixed-Rate Loans:** The interest rate is fixed for a specified period (maximum of 10 years, although most lenders only offer up to five years). During the fixed-rate period, prepayments cannot be made without a "break cost"[8] fee being charged to the borrower.

- **Split Loans:** This type of product allows borrowers to split the loans into variable- and fixed-rate portions. The proportion of the split is usually at the discretion of the borrower.

- **Interest-Only Loans:** For interest-only loans, the interest-only period is at the borrowers' discretion and can be up to 10 years of the life of the loan.

- **Construction Loans:** These loans are provided to borrowers wishing to construct a new home, with funding gradually being released in line with progress in construction. Such loans commence as interest only, usually for a maximum period of two years, converting to principal and interest thereafter.

- **Line of Credit:** This type of loan allows borrowers to draw down any amount at any time up to the predetermined credit limit. Borrowers often use these loans to facilitate their other investment activities.

PUMA PROGRAM

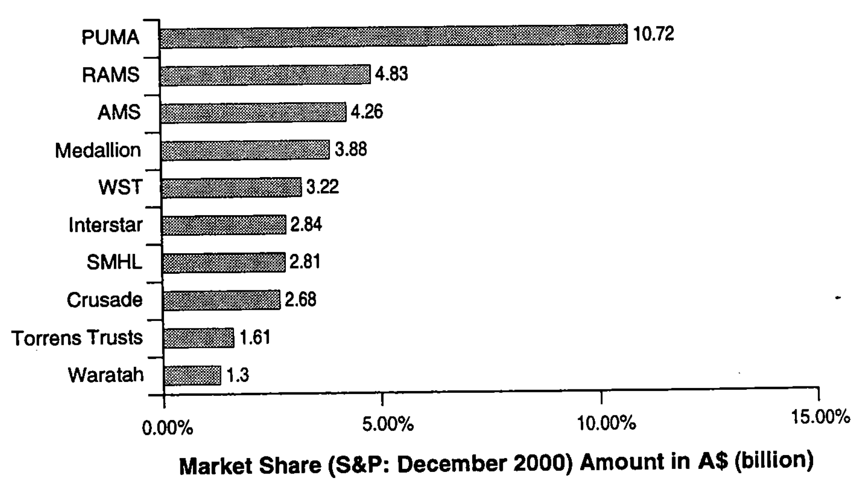
The PUMA program was established in 1991 by Macquarie Securitization Limited (MSL), a wholly-owned subsidiary of Macquarie Bank Limited (MBL).[9] PUMA is currently the largest issuer of Australian MBS, enjoying 14% market share as at December 2000.[10] (See Figure 1 below.) With a total of 17 issues, MSL has issued A$10.72 billion in MBS, with five issues or 49% of the aggregate size being placed in the Euro market, with the remainder in the Australian market. MSL acts as master servicer, program manager and arranger of the PUMA program.

PUMA originates its mortgage assets through a network of independent originators, referrers and a direct retailing arm, Macquarie Mortgages Limited (a wholly-owned subsidiary of MBL). One of the originators is Aussie Home Loans (AHL), Australia's largest non-bank mortgage originator.

MSL sets the mortgage underwriting standards for the PUMA program and determines the levels of delegated authority to approve loans.

Delegated authorities are given to designated employees of the originator. However, the work from these individual officers is subjected to an extensive compliance audit program undertaken by MSL. Any unacceptable level of error will result in 100% auditing of the individual officer and any continued in-

Figure 1 Australian MBS Market Share



Source: Standard & Poor's

stances of error will result in the delegation being withdrawn from the officer.

MSL settles all mortgages after they are approved. A "pre-settlement check" is undertaken on all loans approved to ensure the approved mortgages have met the approval criteria and origination standards set by MSL. As a master servicer, MSL also owns the computerized mortgage management system (a proprietary system) and carries out daily maintenance of the loans, such as statement production, interest calculations, discharges and foreclosure. All cashflows generated by the program are managed by MSL (although all cash is received and controlled by the trustee).

PUMA FUNDING PROCESS

Unlike commercial banks in Australia, which securitize their mortgages through an equitable assignment, PUMA mortgages are originated directly into the special purpose vehicle in the name of the trustee.[11] As a result, certain legal issues and some cash management risks associated with equitable assignment programs are avoided.

All loans initially reside in a settlement warehouse. Loans are periodically refinanced once an economic volume of loans has been accumulated either through an interim warehouse arrangement (typically provided by a third party) or through a bond issue into the public markets.

To date PUMA has issued bonds domestically (i.e., into the Australian market) through a series of bonds denoted with a "P" prefix (namely, P-1 through P-7) and into the Euro markets through a series of bonds denoted with an "E" prefix (namely, E-1 through E-3).

In March 1997, PUMA placed its first overseas issue "E-1" in the Euro market. This was also the first Australian MBS issued outside Australia. Up to that time, the PUMA issues were exclusively focused on the domestic capital market. PUMA has issued more than A$5 billion MBS in Australia. PUMA placed further issues into the Euro markets in December 1997 and August 1998 through its E-2 structure, and in March and July 1999 through E-3.

PUMA started to tap the Euro capital market in 1997 for two key reasons, namely:

1. Issuing outside Australia achieves funding diversification for PUMA.

2. The larger European market can create more liquidity for PUMA products.

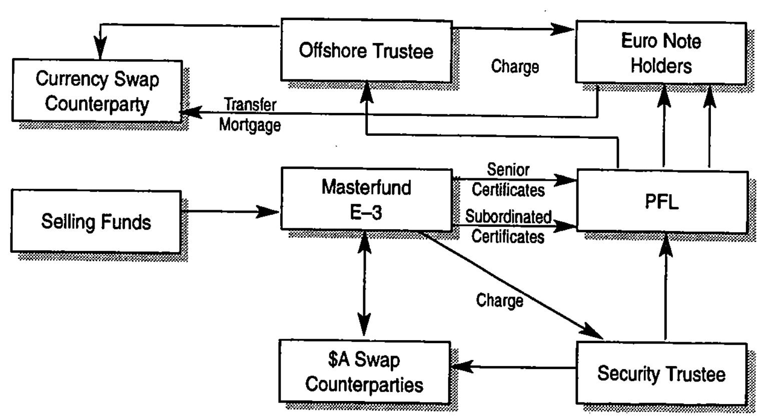
Under the PUMA E-3 program, the mortgages are held in the "E-3 Masterfund" which issues A$ denominated senior and subordinated masterfund certificates to PUMA Finance Limited (PFL). (See Figure 2.) PFL in turn issued US$-denominated senior and subordinated notes, each of which have identical terms and conditions to the E-3 masterfund certificates, to the Euro markets. Currency risk between the A$ certificates and the US$ notes is managed by the use of currency swaps.

Two security trust arrangements exist; one to secure the obligations of PUMA Masterfund E3 under the certificates in favor of, inter alia, PFL, and one to secure the obligations of PFL under the Euro notes in favor of, inter alia, the Euro note holders.

STRUCTURE

Lenders Mortgage Insurance: Lenders mortgage insurance provides the majority of the external credit enhancement in a typical Aussie MBS structure. Using E-3 certificates as an example, 100% primary mortgage insurance is effected at the time of origination of each mortgage regardless of loan-to-value ratio (LVR). In the situation that default occurs, the primary mortgage insurance policy provides 100% loss coverage against the loan balance, unpaid interest, break costs for fixed-rate mortgages and any loss occurred after sale of the property. The PUMA E-3 program uses all five Australian mort-

Figure 2 Masterfund E-3 Structure



gage insurers to achieve diversification.[12] (See Table 1 below.) Other Australian issuers typically insure mortgages with LVR's above 80% at the time of their origination, taking out a pool policy over the remainder of the loans at the time of the securitization.

Subordinated Notes: The E-3 notes consist of senior and subordinated tranches. The senior notes are rated AAA/AAA/Aaa by Standard & Poor's, Fitch and Moody's; and the subordinated notes are rated AA-/AA- by S&P and Fitch. The credit enhancement for the senior tranches is primarily provided by the subordinated bonds, the mortgage insurance policies and the subordination of manager's fees, while the subordinated bonds are supported by the mortgage insurance policies and subordination of the manager's fee.

Security Trust Deed: The security trustee holds a first ranking floating charge over all of the underlying assets of the E-3 certificate in favor of the secured creditors. This arrangement secures the obligations of the fund trustee and provides greater assurance to creditors.

Cashflow Cover: LMI policies also provide cashflow cover. Insurers are required to pay within 14 days after claims from the manager are received. This provides installments of principal and interest to the fund trustee in the event of any default occurrences. The maximum period of cashflow cover varies between one and two years.

Subordinated Manager's Fee: Although LMI provides 100% coverage against mortgage default losses, there are certain claim exclusions. The manager's fee can be deferred and used to cover any shortfall which may arise in interest and/or principal payments. In addition to acting as a form of credit enhancement, managers fees can also be subordinated to improve short-term liquidity. Any managers fee so subordinated can only be repaid to the manager in a subsequent period after interest and principal payments payable under E-3 certificates have been met in full.

Principal Cash Balance: A small amount of bond principal (the amount can not exceed 2% of the total principal balance) can be retained in cash (or short-term, liquid investments) to provide funding for redraws, principal increases during the substitution period and to satisfy any shortfalls in interest collections over interest payments.

Substitution Period: A two-year substitution period has been incorporated into the E-3 structure. This feature allows the manager to reinvest principal received from loan repayments during the first two years in newly originated housing loans. During this period, no repayments will be made to bondholders, swap counterparties and interest rate managers.

Table 1 Insurers' Exposure in E-3 Certificates and Their Rating by S & P

Mortgage Insurer	*% Mortgage Insurance of Pool*[13]	*Rating (M/S&P/Fitch)*[14]
CGU	19.3	A2/AA-/AA
Royal & Sun Alliance	16.6	A2/AA-/-
HLIC	3.6	Aaa/AAA/AAA
PMI	31.7	A1/AA-/AA
GE Mortgage	28.8	Aa1/AAA/AAA

Source: S & P, Moody's, Fitch.

Cross Currency Basis Swap: To issue into the Euro market, PUMA must enter into a prepayable cross currency basis swap which serves two purposes: (1) to convert the A$-denominated cashflows generated from the housing loans into US$ to pay interest and principal to bondholders and, (2) to convert the US$ LIBOR interest rate liability on the notes into an A$ BBSW basis which more closely matches the interest rate basis on the housing loans. The swap is also prepayable to mitigate against the uncertainty of principal passthroughs. The specialized nature of the swap – particularly its prepayability—means the cost of such a swap can be high and therefore is a major consideration for PUMA when weighing the option of issuing domestically or offshore. It should be noted that the swap counterparty assumes the risk of currency controls being imposed by the Australian government.

Interest Rate Manager: Some of the mortgages in the E-3 fund are fixed-rate mortgages and furthermore, borrowers with variable-rate mortgages can choose to fix a portion of their loans at anytime. The mismatch between fixed-rate cashflows on such loans and the floating-rate exposure on the bonds is managed through the execution of interest rate swaps with one of the interest rate managers to the program.

RELATIVE VALUE OF AUSTRALIAN MBS

Australian MBS are relatively new to overseas markets. The first Australian MBS issued overseas was the PUMA US$700 million E-1 Euro issue of March 26, 1997. The first Australian MBS Global issue was Westpac Bank's US$900 million issue of May 7, 1999. In only four years, more than half of Australian MBS has been issued into offshore markets.

Some aspects that exemplify the favorable relative value story of Australian MBS are as follows:

Proven Track Record

Table 2 shows the proven track record of successful Australian MBS issuances since 1996. The table also shows the strong growth in size of issues over the years and especially with the percentage of offshore issuances increasing rapidly. From 1997 through 2000, there has been a 330% increase in total aggregate size. Macquarie Bank's forecast is for a further 54% increase in 2001 compared to 2000.

Credit

- **Low Delinquency and Default:** Australian mortgages have a low delinquency rate when compared to the U.S. and the U.K.
- **Lender Friendly Environment**: Australian borrowers accept the mortgage as a personal obligation.
- **Tax issues:** In Australia, owner-occupied properties are exempt from capital gains tax. This, combined with the non-deductibility of interest payments on owner-occupied property mortgages, means that Australian mortgage borrowers are more likely to seek to build equity in their properties and are thus less likely to default.
- **Lenders Mortgage Insurance:** 100% coverage from LMI transfers the majority of the credit exposure to mortgage insurers.

Diversification

As the performance of the security doesn't correlate to similar products from Europe or U.S., Australian MBS provides an opportunity for investors to diversify their MBS holdings.

FORECAST FOR 2001

In 2001 the larger issuers in Australia, especially the large non-bank issuers and the major banks, will look to the offshore markets in order to achieve larger volumes. The market is now at a stage where most of the major mortgage writers have come to the market.

Although the demand for MBS securities in the domestic market is continuing strong, increasing offshore exposure is inevitable.

For example, Macquarie Bank's forecast for 2001 is that there will be roughly a 2:1 proportion in offshore versus domestic MBS issuances. (See Table 2 below.)

Macquarie Bank's expectations are that there will be A$14.3 billion in offshore MBS issuances this year, and with nearly A$7 billion issued already this year that forecast seems more than realizable. On the domestic front, the forecast is for A$8.75 billion of issuances this year.

Table 2 Successful Past Issuance of Australian MBS and Expected Issuance in 2001
Amounts in A$ (million)

Summary		*1996*	*1997*	*1998*	*1999*	*2000*		*2001*
Domestic	Minimum						Minimum	7,500
	Actual	4,105	6,382	3,945	6,507	9,280	Expected	8,750
	Maximum						Maximum	11,200
Offshore	Actual		2,126	5,041	8,860	9,230	Expected	14,300
Total		4,105	8,508	8,986	15,367	18,510		23,050

NOTES

1 Morgan Stanley Dean Witter, *Australian Residential MBS,* December 2000.

2 Interest on owner-occupied properties is not deductible, although interest payments on investment properties are.

3 Australian Bureau of Statistics, *Survey of Income and Housing Costs,* 1997–1998.

4 MSDW, *Australian Residential MBS,* December 2000.

5 Australian Bureau of Statistics, June 2000.

6 Fitch IBCA, *Offshore Investors Guide to Australian Residential Mortgages.* September 2000.

7 The Reserve Bank of Australia is the central bank of Australia, and changing the official cash rate is the RBA's principal monetary policy instrument.

8 Break cost fees are charged to borrowers who make prepayments on fixed-rate loans. This fee is to compensate lenders for the cost of adjusting their interest rate hedges.

[9] Macquarie Bank is an independent full-service Australian licensed investment bank, which is regulated by the Australian Prudential Regulation Authority. It has 4,500 employees and 23 offices throughout the world.

[10] Standard & Poor's.

[11] The trustee of the PUMA program is Perpetual Trustees Australia Limited.

[12] There are only four remaining after HLIC was sold to GE.

[13] S & P, *Australian & New Zealand—ABS Performance Watch,* August 2000.

[14] Standard & Poor's, Moody, Fitch, as August 2000.