US housing credit agencies forge an international connection

New instruments from government-sponsored agencies have helped familiarise overseas investors with US housing finance securities, as Leland C. Brendsel reports

HOUSING credit agencies sponsored by the US government — Fannie Mae, Freddie Mac, and the Federal Home Loan Banks — have done some trailblazing abroad over the past two years. They have issued a wide variety of securities overseas, some of which were totally new instruments to the international market.

These offerings have broadened the agency financing base and helped reduce costs, but, more importantly, they have served to familiarise overseas investors with US housing finance and mortgage securities. As a result, agency efforts are clearing the way for other institutions to attract international capital to the US housing market.

Fannie Mae, the Federal Home Loan Banks and Freddie Mac — who are they?

These agencies, established by the US government to enhance mortgage credit availability and to establish the secondary mortgage market, must seem peculiar animals to most overseas investors. They are neither public nor private entities, but uniquely combine public and private features.

Each of the agencies is privately owned and financed, but has close ties to the US government. These include a direct or indirect line of credit with the US government, exemption from Securities and Exchange Commission registration requirements, and favourable treatment of their securities held by depository institutions.

'Debt issues targeted to foreign investors'

Despite the fact that agency securities are not guaranteed by the federal government, investors perceive them to be virtually as safe as US Treasuries because of federal sponsorship. This results in lower borrowing costs than would be available to similar private institutions, generally 15 to 30 basis points above yields on similar maturity US government securities.

There are, however, costs associated with agency status. These entities are subject to supervision by the US government, and must adhere to numerous constraints on business operations and financing techniques.

Fannie Mae was created in 1938 to provide a secondary market in federally underwritten mortgages. Originally part of the federal government, it was converted to private ownership in 1968. Fannie Mae is now a federally chartered private corporation whose shares are traded on the New York Stock Exchange.

Fannie Mae has developed the secondary mortgage market primarily by investing in mortgages. It purchases mortgages (today both conventional and federally underwritten) from originators, and finances these purchases by issuing debt on the private capital markets, thereby providing the mortgage market with additional funds from the capital market. Fannie Mae has become the largest single investor in home mortgages in the US. At the end of 1985, its mortgage holdings totalled $95 billion, and comprised 96% of Fannie Mae's assets.

Fannie Mae's long-term, generally fixed-rate, mortgage portfolio has typically been financed by debt of much shorter duration. When interest rates rose sharply during the early 1980s, this mismatch resulted in substantial portfolio losses, and led Fan-

→ 22

← 20

nie Mae to make significant changes in its operating strategy.

The corporation now places greater emphasis on shorter-term and interest-sensitive mortgage investments (second mortgages and adjustable-rate mortgages (ARMs)), the issuance of mortgage-backed securities, and long-term fixed-rate financing. A substantial part of its recent long-term debt issues have been targeted to foreign investors, especially to the Japanese.

The 12 regional federal home loan banks are operational arms of the Federal Home Loan Bank Board (FHLBB), an independent federal agency responsible for regulating US thrift institutions. The Banks carry out FHLBB policies and provide credit facilities for member thrifts, by whom they are owned. US thrifts are primarily mortgage lenders. Consequently, the federal home loan banks, their source of back-up credit, are considered to be a housing credit agency.

'Freddie Mac has purchased $145 bn in mortgages'

Loans to thrifts (termed advances) form the largest category of federal home loan bank assets — $89 billion of $112 billion in total assets at year-end 1985. Since advances are available in a wide range of maturities, thrifts use them both for short-term liquidity and for long-term objectives such as business expansion and maturity matching of fixed-rate mortgage investments. Most advances are collateralised, typically with mortgage loans.

The federal home loan banks accept deposits from member institutions, but their principal source of funds is the sale of consolidated obligations, which are "the joint and several obligations of all 12 federal home loan banks." The bulk of these obligations are bonds with typical maturities of six months to 10 years. At the end of 1985, outstanding consolidated obligations totalled $76 billion.

Freddie Mac was created by the Federal Home Loan Mortgage Corporation Act of 1970 to develop a secondary mortgage market for conventional mortgage loans. The corporation is regulated by a three-member board of directors, who also serve as the FHLBB. Its stock is owned by the federal home loan banks and by member thrift institutions.

Freddie Mac has built the secondary mortgage market in a manner quite different from Fannie Mae. Rather than acting as a mortgage portfolio investor, Freddie Mac buys mortgages, pools them, and sells mortgage securities backed by these loans. Fannie Mae has served as a source of mortgage funds, while Freddie Mac has concentrated on developing tradeable mortgage securities.

Mortgage purchases are financed primarily by issuing Mortgage Participation Certificates (PCs), which represent undivided interests in a pool of mortgages, and provide for monthly pass-through of principal and interest to the investor. Freddie Mac guarantees the timely payment of interest and ultimate repayment of principal. In addition to its staple product, the standard 30-year fixed PC, Freddie Mac now issues PCs backed by 15-year mortgages, ARMS, and multifamily mortgages.

In 1983, Freddie Mac introduced a new financing vehicle — the Collateralised Mortgage Obligation (CMO) — designed to attract new investors to the mortgage market. These mortgage-backed instruments feature multiple classes, each with a different coupon and maturity. Interest on each tranche is paid semi-annually, but all principal repayments flow to the shortest outstanding tranche until it is fully repaid.

This tiered structure gives investors a choice of maturities, and a measure of call protection. The CMO has become an extremely popular instrument. In addition to the $6 billion sold by Freddie Mac, private firms have issued approximately $35 billion in CMOs.

Freddie Mac's impact on the mortgage market is inadequately measured by its asset size because the sale of PCs removes pooled mortgages from the corporation's balance sheet. Although total assets at the end of 1985 were only $16 billion, mortgage purchases during that year alone were $44 billion. Since its inception, Freddie Mac has purchased $145 billion in mortgages, and has issued $132 billion in mortgage securities.

Agency entry into foreign capital markets

The July 1984 repeal of the 30% withholding tax on interest paid to foreign investors encouraged both private firms and US housing agencies to seek foreign funds. However, unlike private companies, the agencies were prohibited from issuing bearer securities abroad.

'A new class of securities was created'

Instead, the US Treasury Department created a new class of securities, "targeted registered", for use by the US government and federally sponsored agencies. While these issues require some certification of non-US ownership in order to hamper tax evasion efforts, the Treasury hoped that the structure would allow sufficient anonymity to appeal to foreign investors.

Since tax repeal, these three agencies have tapped overseas markets for approximately $3.5 billion through both regular registered and targeted-registered offerings (see table). Their immediate objectives have been much the same as those of private firms issuing securities abroad — cost savings and diversification of funding base. But these agencies are also keenly aware that their current efforts are serving a broader, long-run goal, that is, global access to capital for US housing finance.

Securities issued by US housing agencies

The three agencies exhibit dramatic differences, both in the type and volume of foreign security issuance. These result from the fact that each agency has unique needs and operating strategies.

Fannie Mae has utilised the international market far more extensively than have either Freddie Mac or the federal home loan banks. Its foreign issues have been an important means of lengthening debt maturities, thus reducing the duration gap between its assets and liabilities.

'Focus on the Japanese investor'

Fannie Mae entered the overseas market in 1984 with two global issues of long-term zero coupon bonds. During 1985, the corporation issued $1.2 billion in securities targeted to foreign investors, comprising a wide array of instruments — Eurodollar and Euroyen bonds, dual-currency Euroyen bonds, Samurai bonds and a yen-syndicated loan. It issued the first yen-denominated security in the US securities market in 1985, and this year was the first company to offer a dual-currency Shogun bond. All these issues have featured a fixed rate and a seven or 10 year maturity.

Fannie Mae's international focus has clearly been on the Japanese investor, who has a preference for the

→ 24

Foreign-targeted and non-dollar denominated securities issued by United States housing agencies

Date	*Instrument*	*Amount (Currency Units in millions)*	*Term in Years*	*Coupon %*
	Federal Home Loan Banks			
Dec 1984	Euro-dollar bond	$200	5	11.00
Feb 1986	ECU bonds (domestic)	100 ECU ($90 equivalent)	10	8.75
April 1986	Dual-currency yen redemption bonds	25,000 yen ($140 equivalent)	10	7.50
	Freddie Mac			
Sept 1985	Multifamily Plan B Mortgage Participation Certificates	$100	15	10.75
Nov 1985	Collateralised Mortgage Obligations, Series I, Class I-5	$100	10[1]	10.00
	Class I-6	$250	13[1]	10.125
April 1986	Collateralised Mortgage Obligations, Series K, Class K-5	$83.925	26[1]	7.76
April 1986	Collateralised Mortgage Obligations, Series L, Class L-5	$200	15[1]	7.90

Date	*Instrument*	*Amount (Currency Units in millions)*	*Term in Years*	*All-in Cost[2] %*
	Fannie Mae			
June 1984	Zero-coupon bond (global issue)	$6,000 ($210 proceeds)	30	11.50
Sept 1984	Zero-coupon bond (global issue)	$6,700 ($210 proceeds)	35	10.22
Dec 1984	Euro-dollar bond	$300	7	11.57
Feb 1985	Euro-yen bond	50,000 yen ($192 equivalent)	7	10.93
Sept 1985	Dual-currency Euro-yen bond	50,000 yen ($209 equivalent)	10	10.40
Sept 1985	Samurai bond	25,000 yen ($103 equivalent)	7	10.41
Sept 1985	Euro-dollar bond	$300	7	10.35
Oct 1985	Dual-currency Euro-yen bond	40,000 yen ($182 equivalent)	10	10.54
Oct 1985	Domestic yen bond	30,000 yen ($138 equivalent)	7	10.52
Dec 1985	Syndicated yen loan	16,000 yen ($80 equivalent)	7	9.25
Mar 1986	Dual-currency yen redemption debentures	27,000 yen ($147 equivalent)	10	8.13
Mar 1986	Dual-currency Shogun bond	27,000 yen ($150 equivalent)	10	7.91

(1) Stated maturity is the date by which principal must be fully repaid. The weighted average lives of the CMOs are: Series I, Class I-5, 9.0 years; Series I-6, 11.5 years; Series K, Class K-5, 14.6 years; and Series L, Class L-5, 12.0 years.
(2) All-in cost is currency-swapped cost on non-dollar denominated issues.

← 23

safety of US government and agency issues, for longer maturities, and who does not require bearer form. As the yen's rise has made dollar denominated securities less attractive to the Japanese, Fannie Mae has responded with yen-denominated offerings, simultaneously swapping the proceeds into dollars.

Fannie Mae is also a major player in the international interest rate swap market, which has proven a cost-effective means of extending their debt maturities. Outstanding swap agreements, most with foreign sovereigns or sovereign-related counterparties, totalled $3.4 billion at the end of 1985.

Measured by the volume of issuance abroad, the federal home loan banks have been more cautious

'Cost-effective means of extending debt maturities'

in approaching the international market. Only three issues, totalling approximately $430 million, have been specifically designed for foreign investors. However, two of these were very innovative instruments: a domestic ECU denominated bond and a dual-currency yen redemption bond.

The latter is a version of a "heaven and hell" bond, featuring a premium coupon (heaven), and a redemption price based on the yen-dollar spot rate at maturity, which at very high yen values can mean no principal is returned (hell). For both the ECU and yen issues, currency swaps with high quality counterparties were arranged in advance.

While some Freddie Mac domestic debentures were sold abroad in 1984, the corporation did not issue foreign-targeted securities until September 1985. During the past year, Freddie Mac has launched some landmark securities, including the first mortgage pass-through securities and the first CMO ever offered abroad.

The issuance of pass-through securities abroad was stalled by an

'Version of a heaven and hell bond'

uncertain tax status until August 1985, when the Treasury ruled that these instruments (if backed by mortgages originated after 18 July 1984), were not subject to the 30% withholding tax. Freddie Mac responded by issuing $100 million of an $800 million Multifamily Plan B PC in the Euromarket in targeted-registered form.

These PCs have a shorter maturity and greater call protection than standard pass-throughs, features designed to appeal to the foreign investor. The multifamily mortgages

'Freddie Mac's sights on Japanese investors'

pooled for this issue have an orignal maturity of approximately 15 years, a lockout feature prohibiting prepayments for almost five years, and a provision for penalties on principal prepayments following the lockout period.

In November 1985, Freddie Mac took its CMO product abroad. Of a $1 billion offering, two tranches totalling $350 million, and having maximum average weighted lives of nine and 11.5 years, were targeted to Europe and Japan, respectively. The CMO's tiered maturity structure allows such targeting to the maturity preference of specific international markets. This year Freddie Mac again set its sights on the Japanese investor with overseas issuance of two longer CMO tranches totalling $284 million.

Freddie Mac's issues represent an important first step in creating an international market for mortgage-backed securities, but the process will be lengthy and will require intensive educational efforts. PCs and CMOs are still a "hard sell" abroad, because of their complexity, their seemingly uncertain returns, and, above all because foreign investors remain unfamiliar with US mortgages.

But foreign acceptance will come, helped by the Euromarket's evolution

'Foreign investors unfamiliar with US mortgages'

from a retail investor market to one dominated by sophisticated institutions. It is encouraged by the international market's growing appetite for instruments containing call risk and uncertain returns, such as convertible bonds and bonds with warrants. In addition, the sheer size and growth of the US mortgage securities market creates a force that the international investor cannot long ignore. ■

Leland C. Brendsel was named acting president and chief executive officer for the Federal Home Loan Mortgage Corporation (Freddie Mac) in September 1985. He joined Freddie Mac in August 1982, serving as executive vice-president and chief financial officer.

From 1978 to 1982, Mr Brendsel was vice-president and chief economist of the Federal Home Loan Bank of Des Moines. He served as financial economist for the Farm Credit Banks in Washington, DC from 1976 to 1978. Between 1971 and 1976, he was a member of the finance department faculty at the University of Utah.