

Fannie Mae & the US Housing Finance System: A Model for Others?

By Bernard Sharfman

In this article I would like to describe Fannie Mae, its purpose; its history; its structure; its main lines of business; and its capital raising abilities. Also, I would like to provide a few thoughts on the potential transferability of the United States housing finance experience to other countries. But first, I would like to provide a very brief overview of the United States housing finance system.

Introduction: Housing Finance in the United States

There are two levels of financial intermediation for housing finance in the United States. The first level is a primary mortgage market consisting mainly of savings and loan institutions, mutual savings banks, commercial banks, and mortgage companies. They make both government insured and conventional mortgage loans directly to home buyers. Conventional loans are those mortgages not insured by the Federal government and represent about 80% of current mortgage loan origination.

The second level is the secondary mortgage market. The dominant institutions in this market are creations of our federal government: Fannie Mae, Freddie Mac, and Ginnie Mae. The United States Congress has given these institutions a public purpose: to provide a consistent source of housing funds for Americans at all times.

These institutions accomplish their public purpose by buying residential mortgage loans from primary lenders for their own portfolios and funding them with unsecured debt (Fannie Mae), or by packaging loans into pools for sale to investors as

securities (all three). Investors in unsecured debt and mortgage loan securities include commercial banks, thrift institutions, pension funds, insurance companies and state and local governments. Thus, primary lenders have available a constant source of liquidity. Without the liquidity provided by Fannie Mae and the others, money for mortgage loans in the United States would be less plentiful and more expensive.

Besides providing liquidity, secondary market institutions serve various functions: they provide a constant flow of capital, especially during times of general capital shortage; assist the flow of capital from surplus areas to deficit areas; reduce the geographical spread in interest rates; allow for portfolio diversification among investors; and promote standardization in the operations of primary lenders.

History of Fannie Mae

Fannie Mae was established in 1938 in response to the "Great Depression." At that time, the United States mortgage markets were characterized by a large number of foreclosures as illiquid lenders refused to rollover "balloon" loans, and heavy losses on defaulted loans occurred as unemployment soared. To stimulate housing demand, the federal government established a program to insure long term, fully amortizing mortgages and created Fannie Mae as a government-owned secondary market institution to purchase them.

Within its first year Fannie Mae authorized and purchased over 26,000 mortgages valued at over US\$100 million with only

25 foreclosures. Fannie Mae bought only government insured mortgages on new homes. This would be the start of Fannie Mae's historical role of being the largest investor in mortgage loans in the United States. At present Fannie Mae holds 2.7 million mortgage loans in its US\$110 billion mortgage portfolio and administers another 3.5 million mortgage loans that it has securitized.

Fannie Mae's history has been marked by events gradually moving it away from government ownership and expanding its ability to participate in the private market place. In 1954, part of the ownership of Fannie Mae passed to the primary lenders who sold it mortgage loans. In 1956, Fannie Mae started borrowing in the domestic bond market for its primary source of funding, supplanting the U.S. Treasury as its source. In 1968, Fannie Mae became 100% privately owned. Its stock now trades actively on the New York Stock Exchange. In 1970, Fannie Mae was authorized to purchase conventional (non-government insured) mortgages. This was a milestone for Fannie Mae since it greatly expanded the market in which it could participate. In 1981 Fannie Mae entered the Mortgage Backed Securities (MBS) business, the fastest growing sector of the U.S. mortgage finance market during the 1980s.

At the end of the second quarter 1990, Fannie Mae held approximately US\$110 billion of unsecuritized mortgage assets in its investment portfolio and had over US\$263 billion in MBS outstanding. All told, Fannie Mae is presently helping to finance approximately US\$365 billion in

US home mortgage debt, around 15% of home mortgage debt outstanding, in the United States. Even more, Fannie Mae enhances the secondary market by simply being there. The confidence of primary lenders is bolstered knowing that Fannie Mae will buy mortgage loans if needed.

The Structure of Fannie Mae

Over time, Fannie Mae has been moving away from government involvement in its operations. However, it still retains a number of government ties. Chart I, illustrates that Fannie Mae still retains a government charter even though it is privately owned. The Charter Act contains provisions, as a result of which the credit markets in the US treat Fannie Mae obligations as "US agency" securities. In return, it fulfills an essential public mission for the American people. That mission is to be the USA's housing partner in consistently providing financial products and services that increase the availability and the affordability of housing for low, moderate, and middle-income Americans.

Fannie Mae is regulated by the Secretary of Housing and Urban Development (HUD). The Secretary of HUD is granted general regulatory power over Fannie Mae. In addition, the Secretary of the Treasury must approve the issue of Fannie Mae securities.

The President of the United States appoints 5 of the 18 member Fannie Mae Board of Directors. The other 13 are elected by the shareholders.

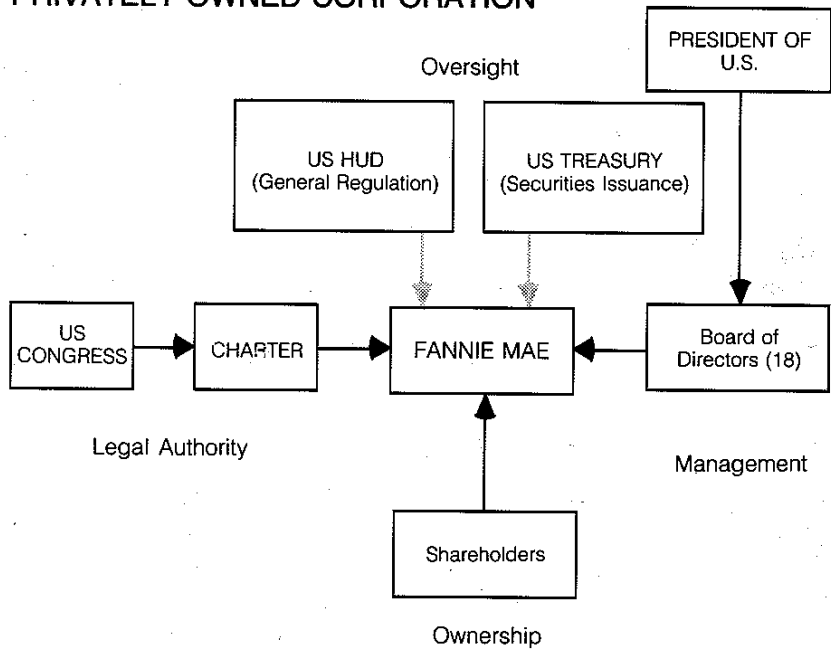
Another tie to the federal government, is the U.S. Treasury's discretionary authority to purchase up to US\$2.25 billion of Fannie Mae securities. This "back-stop" facility, however, has never been used.

Fannie Mae's Business Lines

Fannie Mae has two primary businesses; buying pools of mortgage loans for cash

FEDERALLY SPONSORED, PRIVATELY OWNED CORPORATION

CHART I



to be held in its portfolio and swapping pools of mortgage loans for Mortgage-Backed Securities (MBS).

in general, mortgage loans that Fannie Mae purchases or swaps (to be discussed later) have 15 or 30 year maturities; have monthly payments; are amortizing; have downpayments of 20% or more of the market value of the property (mortgage insurance if less than 20%); have fixed or adjustable rates of interest; and can be paid in full at any time by the borrower (prepayment option). The borrower's ability to prepay during times of volatile interest rates creates a management challenge; by adding call options to our debt securities, however, Fannie Mae can mitigate the risk and safeguard profitability.

Fannie Mae cannot purchase or swap conventional mortgage (non-government insured) loans on single family dwellings if

the loan's original principal balance exceeds US\$191,250. This number is adjusted annually and conforms to our Charter requirement of only purchasing mortgages on homes owned by low to middle income borrowers.

Portfolio Business

Fannie Mae purchases mortgage loans for its portfolio from thousands of approved lenders all over the United States. The transaction is very simple and is shown in Chart II. The rate of interest earned on these mortgages must be sufficient to cover our cost of funds, administrative costs, credit risk, interest rate risk from funding prepayable assets with primarily fixed rate debt or less risky callable debt, and provide an adequate rate of return on our equity investment. The current spread is approximately 100 basis points (1%).

Mortgage Backed Securities (MBS)

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Business

The MBS market has seen substantial growth during the 1980s. From 1981 to mid-year 1990, MBS outstanding grew from less than US\$100 billion (10% of market) to approximately US\$1 trillion (40% of market). At present, MBS are growing at a rate of 15% to 20% in outstandings per year.

MBS are created primarily through Fannie Mae's swap programme. Chart III describes a swap transaction. To begin, a lender, also referred to as the mortgage originator, packages a group of mortgage loans together for sale to Fannie Mae. Fannie Mae makes certain that all loans meet high underwriting standards. Fannie Mae, instead of holding these loans in its portfolio, places them into a legal entity called a grantor trust. Fannie Mae, on behalf of the grantor trust, issues the MBS to the mortgage lender. The lender's asset holdings have now been transformed from a pool of individual mortgage loans to securities representing undivided interests in the loans. The loans are still assets on the books of the lender but they are in security form. Something else has also happened in the transformation. Fannie Mae now guarantees the timely monthly payment of principal and interest to the holder of the MBS. For the services it provides as well as the guarantee it issues, Fannie Mae receives a monthly fee from the lender based on the outstanding principal balance remaining on mortgage loans.

What the lender receives is a high quality security with liquidity, a high yield compared to other securities of similar credit, and flexibility. The yield on Fannie Mae's MBS traditionally has averaged between 100 and 150 basis points over comparable U.S. Treasury bonds.

The lender has the option to sell his MBS into a very liquid market. However, in response to capital requirements which are lower for MBS than for unsecuritized mortgage loans, lenders who are bankers

can also find it economic to securitize loans and hold them in their own portfolios (MBS can also be used as collateral for attractively priced short-term funding).

The guarantee fee Fannie Mae earns on MBS is approximately 20 basis points or .20 percent annually on the monthly outstanding principal balance of mortgage loans. This is much lower than the spread required to be earned on mortgage assets minus cost of funds. This is because Fannie Mae does not take any interest rate risk when it issues MBS. That risk has been transferred to MBS investors. Because Fannie Mae guarantees the timely payment of principal and interest, the only risk that remains is credit risk. With MBS, Fannie Mae's gross income is lower but its risk is lower too permitting Fannie Mae

time when it is not profitable for Fannie Mae to increase the size of its mortgage loan portfolio. For periods of time, Fannie Mae will enter into a "buy-sell" mode. Commitments to buy pools of mortgage loans for cash will be matched off with commitments to sell in security form similar mortgage loans already held in portfolio.

It should be noted that swaps rather than asset sales dominate the process of financing mortgages in the MBS market. All three of the big secondary market players, Fannie Mae, Ginnie Mae, and Freddie Mac have primarily used swaps to create the trillion dollar MBS market.

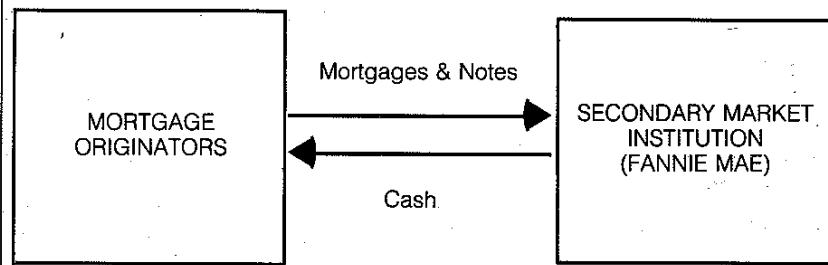
Funding Fannie Mae's Portfolio of Mortgage Loans

(i) Domestic Borrowings

While MBS is Fannie Mae's fastest growing business, the mortgage portfolio still gen-

SECONDARY MARKET SALES (CASH)

CHART II



to help finance many more mortgages than it would if it were only a portfolio investor. MBS investors include commercial banks, insurance companies, pension funds and savings and loans institutions.

Another means by which MBS are created is through asset sales out of Fannie Mae's existing portfolio. Portfolio sales allow Fannie Mae to maintain a cash purchase program even during periods of

erates the bulk of Fannie Mae's income. Proper funding is therefore crucial to its profitability.

Fannie Mae primarily funds its balance sheet of over US\$120 billion through the sale of unsecured debt obligations in the U.S. bond market. To support our residential mortgage portfolio, we typically sell between US\$12 and US\$20 billion a year in debt with a term greater than one year. In addition, over US\$60 billion is

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rolled over in short-term debt making Fannie Mae one of the largest corporate debt issuers in the world.

As a government sponsored enterprise (GSE), Fannie Mae debt securities have a number of features that distinguish them from other corporate debt. One of the most important features is that it is sold at select times on a monthly calendar coordinated by the U.S. Treasury. The Treasury wants to insure that its own auctions and the sale of debt by our sister GSEs do not conflict with major debenture sales by Fannie Mae. Fannie Mae can also undertake "off-calendar" borrowings with Treasury approval when a particular financing objective must be achieved and the market is poised to accept additional

Traditionally, Fannie Mae has funded its mortgage purchases with a maturity mix of fixed rate non-callable debentures. However, over the last two years the mortgage portfolio has been funded with significant amounts of callable debt. The role of options embedded in the debt structure is of course designed to match with the prepayment options embedded in our mortgage assets. Having this approximate match in optionality minimizes swings in our net interest income and portfolio value due to interest rate volatility (interest rate risk). We expect to issue significant amounts of callable debt in the future. As an example, to date in 1990, 60% of the

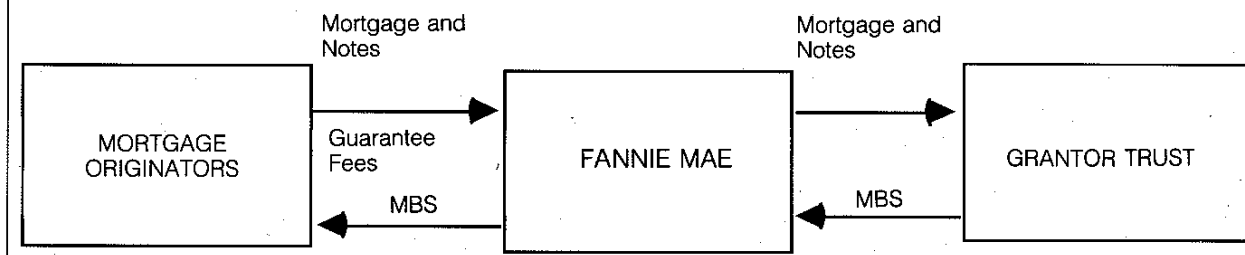
Japanese domestic market.

Recently, Fannie Mae issued a dual currency Samurai bond in Japan. The bonds were purchased primarily by regional agricultural co-operatives and regional credit unions, (institutions that do not normally buy Fannie Mae's U.S. domestic debt offerings). The funds were priced competitively in line with typical domestic borrowing programs.

Fannie Mae's foreign financings supplement the corporation's traditional domestic funding program. The ultimate goal is to get investors in the foreign borrowings programme to buy our domestically issued debt. To date, the corporation has raised almost \$2.7 billion overseas through

SECONDARY MARKET SALES (SWAP)

CHART III



securities readily. Other features include exemption from the Securities and Exchange Commission registration procedures; issuance, payment and settlement by the U.S. Federal Reserve Banks; and approval for unlimited investment by National Banks.

These features plus the inherent financial strength of Fannie Mae allows its debt to price reliably off of the U.S. Treasury curve, typically at very tight spreads in the range of 20-50 basis points. This debt generally trades tighter to the U.S. Treasury curve than the most highly rated corporate debt.

debt we have issued has been callable.

(ii) Overseas Borrowings

Increasingly, foreign investors have been attracted to our domestic debt issues. Fannie Mae estimates that US\$4.5 billion or 25% of domestic debentures issued in 1989 were purchased by foreign investors.

To attract foreign investors who would not normally participate in our domestic debt issues, Fannie Mae has issued targeted overseas underwritten borrowings such as Yen offerings in the Euro-bond market and dual currency Samurai bonds in the

17 public offerings and 3 private placements.

All foreign borrowings denominated in foreign currencies are hedged into U.S. dollars through a currency swap. Fannie Mae has a policy of taking on zero currency risk. Currency swap counterparties are typically AA or AAA rated banks, government sponsored entities, or sovereigns.

Overview of Fannie Mae Operations

Chart IV describes how Fannie Mae interacts with the primary market and operates in the secondary mortgage market. To the left is the primary market where lenders

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make loans to homeowners. Fannie Mae does not get involved in primary lending. Fannie Mae is not permitted to make loans directly to homeowners. To the right is the secondary market, Fannie Mae's domain. At the top right of the flowchart Fannie Mae is shown purchasing mortgages to be held in portfolio and funded by debt obligations. The downward pointing arrow connecting Fannie Mae's mortgage portfolio with its MBS shows mortgage purchases being turned into MBS. To the bottom right is the MBS swap business. Pools of mortgages are exchanged for MBS with Fannie Mae as issuer and guarantor of the timely payment of principal and interest. Investors are the original lenders or other institutions which have purchased the MBS in the marketplace.

Postscript: Transferring U.S. Housing Finance Experience to Other Countries

This article is based on a speech delivered in Bangkok, Thailand at the 1990

Annual Conference of Asian Pacific Federation of Building Societies and Savings Institutions. Fannie Mae's invitation to that conference was yet another sign of growing interest on the part of overseas markets in the US housing finance model.

During the past year numerous overseas delegations have visited us to learn how the US housing finance system and Fannie Mae, in particular, operate. In addition, we have been asked by housing finance specialists from several countries such as Poland and Turkey to offer more in-depth advice on the basis of first-hand visits by Fannie Mae.

The US model is especially attractive to overseas housing finance specialists because of the way secondary mortgage market interacts with the primary mortgage market and the extensive use of

securitization. The advanced state of our secondary mortgage market has resulted in a number of efficiencies in the operation of our primary mortgage market and in the raising of housing finance capital in general.

Fannie Mae believes that, on a country by country basis, a number of "critical elements" of our housing finance system may be beneficially adapted overseas. We welcome inquiries from those interested in learning about our housing finance system and evaluating what critical elements can be adapted overseas. ■

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