# Simplicity Versus Complexity in the Evolution of Housing Finance Systems

## by Alex J Pollock

A recent estimate puts total world wealth at $44 trillion, of which approximately half is real estate.[1] The study does not break out residential real estate on a global basis, but does in the United States, where 60% of real estate value is in the form of owner-occupied homes. If we extrapolate this relationship, it would suggest that residential real estate represents about 30% of total world wealth, making it the largest single component. By comparison, total equities represent about 19% of the world wealth and cash about 3%. The second largest component of total wealth is bonds, which represent about 27%. Thus in very round numbers, the largest sources of aggregate wealth in the world seem to be represented by perhaps $13 trillion of residential real estate and $12 trillion of bonds. This paper is concerned with how the markets for these two principal asset classes should be linked.

Two ways to make this linkage are securitization of mortgages and the Home Loan Bank model, which we wish to contrast. Expansion of securitized mortgage markets in the United States has led many commentators and consultants to recommend this technique to other countries in other economic situations. Part of the financial romance of securitization lies in the baroque complexity which has evolved from the original idea of simply passing through payments from pools of mortgages to investors. It is no wonder that theoreticians, both academic and corporate, should love the efflorescence of mortgage-backed security varieties, accomplished through "slicing and dicing" mortgage cash flows through collateralized mortgage obligations, planned amortization classes, Z tranches, interest only and principal only strips, and the related mathematically interesting problems of options valuation. It is not surprising that investment banking houses should promote such complex structures, because they represent a huge source of profit for them.

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Securitization links residential mortgages and the bond market, but does so in a way which is financially complicated. Its development assumes a society which has already made massive investments in information systems, computing technology, and securities market infrastructure - in short, has highly developed capital markets. The assumption that all this infrastructure does exist, can rapidly be created, or even should be a priority to create is dubious for most of the world.

The U.S. Home Loan Bank model, on the other hand, accomplishes this linkage through much simpler means. The Home Loan Banks make loans, collateralized by mortgages, to lending institutions financed by the issuance of general obligation bonds sold in the capital markets. Both the technology and the investment necessary for this form of intermediation are far less than that required for securitization.

The debate over which model is appropriate or desirable frequently focuses on the sophistication of securitization and loses sight of the fundamentals.

What are the fundamentals? We believe there are two:

- Widespread property ownership is a desirable goal for every society.
- Achievement of this is significantly enhanced by an effective and economically efficient link between residential mortgages and the bond market.

The first point is a matter of basic philosophy. Thomas Jefferson, that giant of the Enlightenment, wrote in 1785, "The small landholders are the most precious part of a state."[2] To the American founding fathers, the combination of liberty and property was clear. Jefferson suggested a broadened vision: that the goal should be widespread property ownership throughout the society. We cannot improve upon this insight, except by updating it from his agrarian day to our industrialized, urban times, in which the most logical form of the goal is home ownership. However, widespread home ownership cannot be achieved without robust housing finance.

This brings us to consideration of the second point: that linking residential mortgages to the bond market makes housing finance more effective. In order to understand this point, it is necessary to view the relation-

ship from a variety of perspectives: investors, borrowers, financial institutions, and society. We need to state what may seem obvious, for understanding advances further with what is fundamental and obvious than what is fashionable and obscure.

### Investors

Bonds are among the most basic financial instruments and the earliest to develop in any financial system, thus accounting for their position as the second largest asset class in the world. The bond market by definition deals with investors who are looking to commit capital to long term uses at a variety of interest rates, but most importantly at fixed rates of interest. Bonds are a basic investment of institutions key to economic development, including banks, insurance companies, and trust funds of various kinds. Such institutions will always seek among their assets high quality instruments, having reliable debt servicing capacity. Experience clearly shows that diversified portfolios of amortizing residential mortgages are very good credits and thus are among the safest forms of collateral in the world. Furthermore, the form of the bonds can be tailored to the needs of issuers and investors. Bond markets, for example, regularly price and trade optional call features which are present in most mortgage contracts.

### Borrowers

The financing of the purchase of a home is the largest and most important financial decision ever made by most households. Financial experience suggests a great advantage to borrowers is the ability to establish debt service with certainty through the alternative of fixed rate mortgage financing. Equally important is the availability of fully amortizing mortgage finance, so that temporary financial dislocations cannot cut off the ability to refinance principal, and trigger a downward spiral of debt deflation. At the same time, it is advantageous for borrowers to have various refinancing options, as opposed to refinancing requirements. (The current popularity in the United States of shorter term mortgages with a "balloon" final payment, requiring refinancing of principal at maturity, is an interesting contrast to the historical lesson of the advantage of fully amortizing mortgage debt.)

Thus, the central characteristics of what bond investors are seeking in assets and what mortgage borrowers seek in liabilities are a good match, but obviously the match can be made only through intermediation.

### Financial Institutions

The most efficient mortgage financing will always be created by private firms which must balance profit and risk. In competitive markets, such firms will have the incentive to innovate and make constantly more productive use of resources. Mortgage lending organizations must operate at local levels, although the local operations may be part of very large organizations. Private depository institutions, in either stock or mutual form, are demonstrably effective creators of mortgage finance. Their deposit base can finance a significant portion of mortgage assets, but does need to be supplemented by access to the bond market. This is because lenders funding mortgages with deposits require:

- Liquidity backup and funding alternatives,
- Long term fixed rate liabilities often not available in deposit markets, and
- Ability to hedge the options embedded in mortgage contracts.

These requirements cannot be met with deposit funding alone. Thus, when financial institutions engage in mortgage finance, they should always have the ability to access the bond market and expand their intermediation capabilities.

### Society

To help achieve the Jeffersonian ideal of widespread property ownership on an efficient economic and financial basis, financial systems should be built on private institutions with market incentives as the principal agents for mortgage finance. Such financial institutions are more basic and more important to have or create than are secondary markets. However, such institutions need to be linked to the bond market. Is there a simple, direct, easily designed way to do that which does not require as a prerequisite complex capital market infrastructure?

### The Home Loan Bank Model

We suggest there is: the Home Loan Bank model. This model meets the requirements of investors, borrowers, financial institutions and society in an elegant fashion.

It begins with the fact that inside the private financial institutions which make mortgage loans are implied assets of very high credit quality: namely, aggregate mortgage loan portfolios. A Home Loan Bank is, in essence, a way to extract the credit quality of widely diversified mortgage loan portfolios and use it to obtain centralized bond market financing at very attractive rates. A Home Loan Bank pools the inherent credit quality of thousands of mortgages in many financial institutions and gives to those institutions, in turn, the advantages of large-scale financing they could not achieve on their own.

An advantage of the Home Loan Bank model is that it works well with the issuance of simple, classic debentures, ranging from short to long term maturities, although more complex forms of debt may also be issued as the bond market develops. The U.S. Home Loan Banks are able to finance in the bond market at very attractive interest rates and terms because of this credit quality, as indicated by their being one of only a handful of AAA/Aaa rated banks in the world.

Home Loan Banks today are doing exactly what they were designed to do in 1932 when the Federal Home Loan Bank Act became law. President Herbert Hoover, introducing the proposed Act, stated, "As a

people we need at all times the encouragement of home ownership," which the Home Loan Banks have provided ever since. The key function is to make advances (loans) to financial institutions to finance their portfolios of residential mortgage loans. To secure the advances, these mortgage loans are pledged as collateral to the Home Loan Banks with wide collateral margins. The advances are often at long term fixed rates and may contain prepayment options.

This financing structure has proved to be so sound that since 1932 no Home Loan Bank has experienced a single dollar of credit loss. This track record has enabled the Home Loan Banks issue very high quality bonds, whose low cost and attractive terms allow the advances to be correspondingly attractive to the borrowing financial institutions. As this structure has developed over six decades, the Home Loan Banks have become one of the largest issuers of publicly-traded debt in the world.

Home Loan Banks are organized as twelve separate, regional corporations throughout the United States, each a cooperative in corporate stock form. Each has its own board of directors, of whom two-thirds are elected by the stockholders and one-third appointed by a federal government agency, the Federal Housing Finance Board. The capital of the Banks is provided by the financial institutions who must purchase it in order to become members and have access to borrowing. The aggregate net worth of the Home Loan Banks is today more than $11 billion. Net profit for 1993 was $895 million. It is essential that the Home Loan Banks themselves operate as for-profit, market-oriented enterprises, not as government departments.

From 1933 to 1989, the Home Loan Banks were, in addition to being mortgage financing wholesale banks, the regulators of savings and loans. With the benefit of hindsight, this combination was unfortunate. The American savings and loan system ultimately experienced a major debacle in the 1980s, culminated by the failure of one third of the industry. The Home Loan Banks and Home Loan Bank Board as regulator and deposit insurer of the savings and loans could not escape being embroiled in the debacle. Moreover, as savings and loans failed or were merged, this meant a rapid decline in membership and volumes for the banking functions of the Home Loan Banks.

Figure 1 : Federal Home Loan Bank System Membership Composition, December 1991 to December 1993

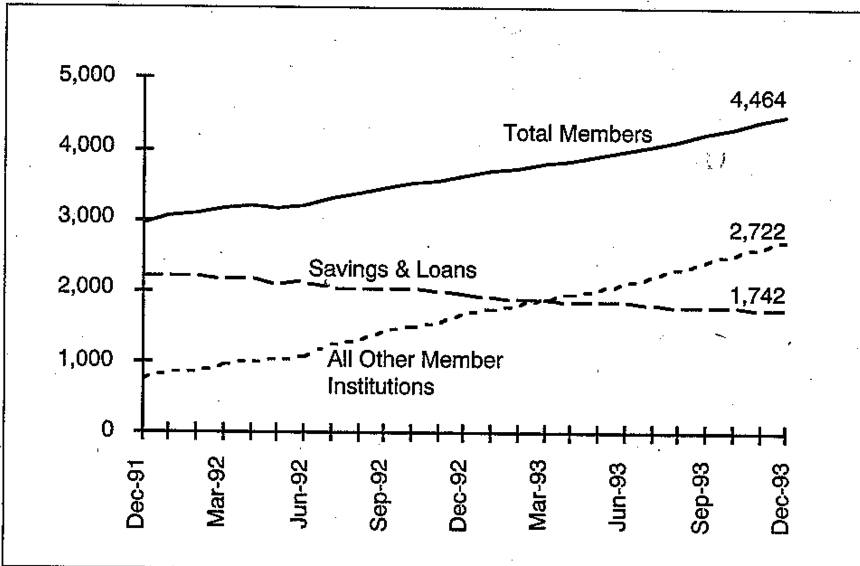


**Figure 2 :** Federal Home Loan Bank System Membership Composition as of December 1993

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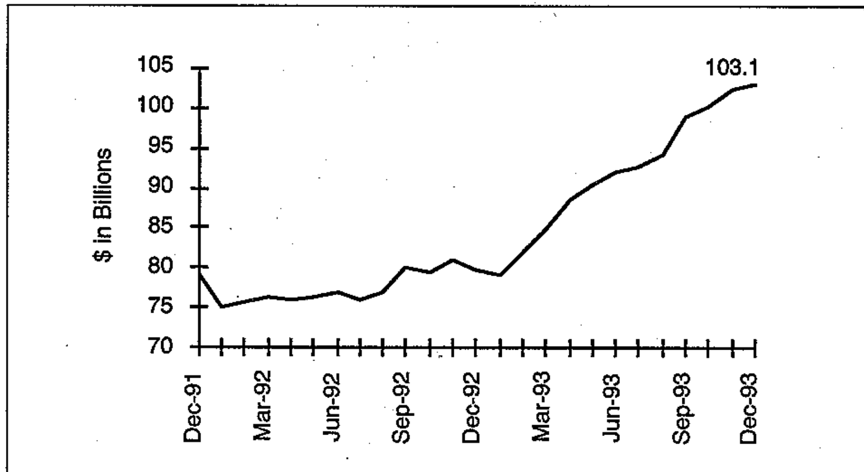
|---|---|
| Savings & Loans | 1,742 |
| Savings Banks | 441 |
| Commercial Banks | 2,208 |
| Credit Unions | 57 |
| Insurance Companies | 16 |
| **Total** | **4,464** |

The 1989 Financial Institutions Reform, Recovery and Enforcement Act was the government's reaction to the problems. Among other provisions, the Act divided the regulatory function and the banking function into two entirely separate organizations. Membership eligibility in the Home Loan Banks was expanded to include commercial banks (as had been the original intent in 1932). Thus was set up a noteworthy experiment in the design of housing finance systems: would the Home Loan Banks as pure wholesale banks for housing finance survive and prosper?

The experiment has yielded the unambiguous answer that they can and have. Membership by financial institutions in the Home Loan Banks has grown rapidly and now exceeds 4,000 (Figure 1). Members include savings and loans, savings banks, insurance companies, credit unions, and more than 2,200 commercial banks (Figure 2). By 1995, there will be more than 5,000 financial institution members of the Home Loan Bank System, of which more than 60% will be commercial banks. The aggregate advances by the Home Loan Banks to financial institutions secured by mortgage collateral now exceed $100 billion and the total assets of the Home Loan Banks $180 billion (Figure 3). As one example of growth, in the Chicago Home Loan Bank over the two year period 1992-93, financial institution members grew 60%, borrowing mem-

**Figure 3** : Federal Home Loan Bank System Advance History, December 1991 to December 1993




bers grew 97%, and advances grew 147%.

The rapid growth of the Home Loan Banks demonstrates the importance of their central function: linking portfolios of residential mortgages to the bond market.

We draw three lessons from this history:

- The fundamental linkage performed in this fashion works very well. The Home Loan Banks have experienced no credit loss in their entire history; they have demonstrated success in providing long term fixed rate liabilities to match the fixed rate mortgage assets of their members; and as evidenced by the rapid growth in new members and business volumes in the 1990s, provide high value as judged by contemporary financial institutions.

- The Home Loan Bank model works for many kinds of financial institutions which make mortgage loans, including savings and loans, savings banks, commercial banks, credit unions, and insurance companies.

- The organizations created to perform the mortgage-bond market linkage should stick to banking and not dilute their efforts with regulation and politics.

### *FINANCIAL MARKET EVOLUTION*

From the point of view of financial system development, there are three major types of financial systems in the world: highly industrialized economies with advanced financial institutions and capital markets; developing economies and financial systems; and former socialist economies working to create market systems. The importance and size of mortgage finance makes it an important topic in all three. The theoreticians of securitization, drawing on the evolution of capital markets in the most advanced financial systems, often recommend complex structures to developing and newly market-oriented countries. We think it is appropriate to suggest an alternative approach, one that is consistent with historical patterns of financial market evolution. The following evolutionary pattern should guide the development of mortgage finance to success:

- The first requirement is private credit institutions which can create the primary residential mortgage loans. These institutions may have various institutional forms or charters, with corporate stock or mutual ownership, and may be funded by retail deposits or wholesale sources.

- The second requirement is a bond market, the base market of traded securities.

- The third natural step is to link the private credit institutions to the bond market in a Home Loan Bank organizational model. This will both promote the growth of mortgage finance and the development of the bond market, by making long term amortizing mortgage instruments more liquid and giving the market attractive, high credit quality bonds to trade. The Home Loan Bank model has the advantage of demonstrated historical success, in periods as various as the Great Depression, the 1970s inflation, and the restructuring of the 1990s.

In the longer run, as world financial evolution proceeds and more advanced financial systems develop, many forms of mortgage finance will co-exist. For example, in the deep financial markets of the United States today, Fannie Mae and Freddie Mac, mortgage-backed securities and all their complex derivatives operate along side the simpler patterns of Home Loan Banks and local financial institutions. The mortgage financing markets co-exist and interact with markets in equities, futures, options, junk bonds, mutual funds, swaps, and so on. As capital market infrastructure gets built, there is apparently no limit to the variety and complexity of financial instruments or the breadth of investment desires or speculative urges they may satisfy.

However, it is simple organizational common sense to suggest that the development of a financial system will have a far greater probability of success if it starts with primary factors in straightforward ways, and lets the more complex structures evolve later. For housing finance, we believe the Home Loan Bank model can be a very useful element in the fundamental design. ■

### *NOTES*

[1] Roger G. Ibbotson and Gary P. Brinson, *Global Investing*, McGraw-Hill, 1993.
[2] *Macmillian Book of Business and Economic Quotations*, Macmillian Publishing, 1984.