

Inertia in the U.S Housing Finance Market: Cases and Causes

Andrew Caplin¹

New York University

1. Introduction

The current U.S housing finance market is in some respects a wonder of computer age efficiency, and in other respects an almost stone age anachronism. My focus is on the anachronistic aspects. What explains the inefficiency and the slow pattern of change in housing finance markets in the U.S? In this paper I use two detailed case studies to illustrate the nature of the inefficiency and inertia, and the remainder expanding on possible causes, costs, and cures.

The paper begins in section 2 with an idealistic theoretical sketch (no more) of a perfectly functioning market in housing services. If one wishes to argue that the desperately spare structure of the U.S market is optimal, one must incorporate some strange constraints. The remainder of the paper reflects a search for just such constraints, and for causes of inefficiency, with special focus on market inertia.

Sections 3 and 4 presents two case studies of market underdevelopment. The first is the reverse mortgage, a product designed to allow elderly households to borrow against their homes without risk of defaulting on their loan. The second is the shared appreciation mortgage, a product designed to allow all households to cut their mortgage expenses by giving up a share of appreciation in their homes. However theoretically promising these

¹ Paper prepared for 2000 joint AEA/AREUEA session, New Orleans. I thank Clark Blasdell and Sam Masucci for their valuable guidance.

products might appear, neither market has yet grown to anything like the scale that one might have anticipated.

There are strong candidate explanations for slow market development on both the demand and supply sides of the market. On the demand side, both markets expose consumers to high transactions costs, and to high risk. On the supply side, it may be very hard for commercial enterprises to profit from the kinds of innovation needed to develop these markets. Much of the innovation lies in introducing novel contractual clauses, and if the contracts succeed, they are easy to imitate.

While one can make some mileage in understanding inertia by focusing on standard forces of supply and demand, there is no way to avoid discussing institutional causes. Two sets of institutions that hamper innovation are the legal and fiscal systems. When one introduces a new consumer finance contract, one almost inevitably raises a host of unanswered legal and fiscal questions. The required rulings are public goods, and it is hard to see why a firm would be willing to invest in writing early contracts with clauses that get interpreted in a negative light. That is no way to build a valuable reputation. On the other side of the market, contractual ambiguities may help explain the high level of consumer resistance to contractual innovation.

Given that the picture of inertia that I present is so institutionally based, the question arises as to why the institutions are so maladapted to the environment. If some institutional change would lead to a more efficient market outcome, why do we not get some grand Coasian bargain in which that outcome is realized, with the surplus being divided among us winners? Why don't consumers who would benefit from market reform apply pressure on politicians to remove institutional barriers to reform? Part of the

answer doubtless lies in the realm of personal psychology: change that appears beneficial when looked at by an economist in the abstract raises all forms of discomfort for the supposed “beneficiary”. This may be particularly so in the housing arena, where most worthwhile changes may be seen as threatening the sanctity of the American Dream of home ownership.

Taking this kind of psychological inertia rationale to the extreme, one might argue that the supposed inefficiency of the markets is an economic theorist’s illusion based on an insufficient willingness to take account of private inertia. But there are externalities involved. One period’s uncomfortable change is the next period’s status quo. It is at least debatable whether or not one should suspend reform efforts on the grounds that they cause present discomfort.

While the central focus of the paper is on inertia, the reader will note that there are many signs that change is in the air. The reverse mortgage market is growing faster than it has before, and there are new signs of life in the market for shared appreciation mortgages. Of course, the same could have been said twenty years ago, and it remains hard to be seen whether or not this is another false dawn.

2. Housing Consumption and Housing Investment over the Life Cycle: An Idealization

To open up this idealistic discussion, we imagine a world with complete contingent markets. For each physical unit of housing, which we take to be entirely indivisible in use, there would be markets for contingent “certificates of occupation”. Ownership of the appropriate state specific certificate of occupation would convey the corresponding right

of occupation. The current certificate of occupation would have to be owned in its entirety by the current occupant. Yet with regard to future occupation rights, the ownership could in principle be more widely held, with individuals owning shares in the occupancy rights. When the eventuality in question was realized, the actual occupant would have to buy all outstanding shares from the current holders. In essence, the non-occupying owners would be receiving current “rental payments” from the actual occupant. The contingent certificates of occupation would trade continuously in a market, and everyone would in this way be able to bid for any contingent share of the occupation rights/rental payments on any unit of housing in the economy.

If we assume that there would be fluctuations in the relative value of occupying different units of housing, then it is clear that there would be a diversification benefit to wide ownership of the rental certificates. On the other hand, there are also risks involved in **not** owning the future occupation rights on the currently occupied unit. To avoid being hit by an unexpected rent increase, the household occupying the current unit should buy up a sufficient portion of the future occupation rights that correspond to states in which they expect to remain in occupation of the unit in question. The household would always be balancing the insurance motive against the price of the contingent claims. After all, there would be other households who wished to move to the area, who may choose to hedge by investing in some of the rental claims, while if other individuals became convinced they would leave the area, they would sell the claims.

To get some more insight into how this idealized market might function, it is useful to think of a life cycle model of search and matching. Households are born in a housing unit located on a particular island, which is characterized by a particular set of job

opportunities. Islands are also subject to idiosyncratic productivity shocks so that the relative prices of housing units on the various islands fluctuates. The household has an initially unknown set of skills, and spends the early part of life trying to find the correct job on the correct island. In this period of search, there is a great deal of uncertainty about where the household will wish to live. Correspondingly, while the insurance motive may call for owning the vast majority of the certificates of occupation on the currently occupied house, the fact that tenure on the island may be short would reduce the optimal shareholding.

Uncertainty about tenure and a correspondingly low insurance motive would likely continue until the days of job and location search were in the past. In the middle period of life, the household would be likely to settle down, and have an ever greater desire to remain in the current location. Correspondingly there would be a need to buy up a larger share of the outstanding certificates of occupation, and for a longer horizon. Finally, in the later years of life, the household would not bother to buy many certificates that went beyond their life expectancy. At any stage, if the household foresaw moving to a different part of the country, they would be likely to divest themselves of occupation rights in the current home, and invest in a mutual fund comprising rental claims for the places and times in question.

There is a vast gulf between the complex vision of ownership of housing that would result in this complete market “Arrow-Debreu” world, and the all-or-nothing structure of the current ownership market, in which a single owner occupant has to own 100% of the occupation rights in a house in all future contingencies in order to be the current occupant. One possible factor explaining why households are so constrained in

their ownership choice is moral hazard. In the ownership scheme described above, it appears that the occupant may have no interest in the value of the home once they have left it. Yet a simple amendment to the certificates of occupation would appear to reduce the impact of the moral hazard problem: along with the right to occupy would come a possible charge for deterioration in the physical quality of the unit. At the same time, there would be insurance contracts available to lessen the impact of natural events and simple misfortune in damaging housing units.

There are three important caveats to this hypothetical solution to the moral hazard problem. First, it is costly and difficult to ascertain the condition of housing. A monitoring technology would be needed, and this would interact with the sophistication of the contingent payment scheme. Second, issues of moral hazard impact not only the quality of the housing itself, but also the quality of the neighborhood. One of the reasons for the strong tax bias in favor of ownership in the U.S. is the view that only by having ownership can one ensure that the citizenry will get involved in the nurturing the community. Hence optimal contracts might have to make mention of community quality in addition to housing quality. Finally, since an optimal scheme may involve the occupant posting bond against damage that may be uncovered at a future inspection, the issue of liquidity constraints comes up: what can one do to ensure payment by an individual who is liquidity constrained, if one also acknowledges that human capital is inalienable?

Once one acknowledges the importance of liquidity constraints, one gets a somewhat different picture of the nature of the housing market and the housing finance market. Liquidity constrained households who might otherwise try to buy up a significant share of the future occupancy rights on their current house might constrain themselves to

hold a smaller amount, in line with their current asset position. In light of the imperfections of the monitoring and bonding technology, this might influence their actual choice of housing unit, and possibly even restrict the household to living in an otherwise suboptimal location, or at least in a less convenient unit on the island in question (the long commute).

Another set of issues that account for differences between the current market structure and the idealized picture above are various forms of transactions cost. The market requires such a fine detail in the contracts that it may seem to be simply unworthwhile in light of the small nature of individual housing assets. It is one thing to allow for a complex contingent pattern of ownership for a corporation such as IBM, and quite another thing to allow for it on my apartment.

While it is possible to argue that the presence of transactions costs makes the simple all-or-nothing division of the market a constrained optimum, the argument appears highly strained. Most of the underlying variables defining the household's situation, such as age and wealth, have a continuous nature. The efficient solution to the allocation problem should share this continuity, rather than have the all-or-nothing flavor of the current market. In the final years of life, households have increasingly short expected tenures in their homes. Why shouldn't they be able to sell some of the occupation rights, especially if they can be written contingent on the length of their lives? Younger households who are liquidity constrained in a market in which ownership is an all-or-nothing affair may be far less constrained in a world in which they did not have to buy up all of the future occupation rights on the home in which they will live, especially while they are in the younger and more mobile life phase. And why should those in the middle

of the life cycle be forced to hold such a large part of their portfolio in a single housing asset with very high levels of idiosyncratic risk? One argument as to why the stock exchange has risen so much in value concerns the gradual spread of ownership, and the consequent ability to take advantage of gains from diversification. How much larger are these potential gains in the case of trading ownership claims on real estate, which are currently completely un-diversified?

One does not have to believe in the complete contingent contract vision to believe that major improvements are possible. In Caplin, Chan, Freeman, and Tracy [1997], we argue that there are relatively technologically straightforward procedures available to loosen the 0-1 constraint on home ownership, and allow for individuals to own less than 100% of the future occupation rights on their home. While these markets remain theoretical, there are a number of moves afoot to change the traditional vision of home ownership in similar directions. Yet all efforts at change are proceeding at a snail's pace, especially in contrast with more innovative U.S. markets, such as the technology sector, and even the market for commercial real estate. In the next two sections we argue by example that the current market is more of a historical artifact than a technological necessity. That this is so is suggested by even a shallow reading of the historical record. After all, the most important product in the U.S. housing finance market, the thirty year fixed rate mortgage, was initiated by the federal government, as was the secondary mortgage market.

3. The Reverse Mortgage Market

Reverse mortgages are designed to allow older homeowners to reduce their housing equity. Unlike standard home equity loans, a reverse mortgage never requires the

home owner to make interest payments, and only becomes due when the owner moves out of the house or dies. The most important and long-lived reverse mortgage on the market is the Home Equity Conversion Mortgage (HECM) offered by the Department of Housing and Urban Development (HUD).

Congress first authorized the HECM as a HUD pilot program in 1989. Five years into the pilot program in July 1994, HUD had issued only 8,000 HECM loans, despite being authorized for up to 25,000 (HUD [1995]). The numbers have recently increased more rapidly, and by October 1999 a total of some 39,000 HECM loans had been issued out of an authorization of 125,000 units (HUD [2000]). Yet this remains far below most estimates of market potential. Rasmussen, Megbolugbe, and Morgan [1995] estimated that there are 3 million households sixty-nine or older with income less than \$30,000 whose income would rise by at least 25 percent from appropriate use of a theoretical, actuarially fair, reverse mortgage.

There are some obvious demand and supply side factors that help to explain the slow take-off of the market (Caplin [2000]):

- (a) High expenses: transactions costs are high, and can easily mount to 10-15% of the loan amount (HUD [1995]). Much of the cost is due to moral hazard. The target households are prime candidates to let their homes run into serious disrepair. Of course the contract contains a provision that declares that failure to maintain the house constitutes a default on the loan. But will HUD try to enforce this clause? Even if HUD should be so bold as to try to enforce the contract, would the courts let them? Rosenbaum, Goren, and Jacobs [1995] argue: "The contract provisions by which a reverse mortgage lender seeks to bind seniors to home maintenance

liability fly in the face of reality” (p. 22-23). The maintenance problems are further compounded by the possibility that the house will end up being sold at below market value. If the loan balance ultimately exceeds the value of the home, the house sale will wind up being handled either by disinterested relatives, or by the probate court.

- (b) Small loan size: For a house with an appraised value of \$150,000, and with an interest rate of 8 percent p.a., the maximum loan amount increases from roughly \$50,000 at age 65, to \$70,000 at age 75, to \$105,000 at age 90 (Scholen [1996]). One would have to be 70 years old before one could borrow 40% of house value.
- (c) Low sales incentives: HUD is less than aggressive in offering mortgage brokers incentives to issue reverse mortgages, maybe because of (a) above. These incentive problems may account for the recent fall in the number of lenders offering these mortgages (HUD [2000]).
- (d) Bad interaction with health problems: when an elderly individual has a prolonged hospitalization, the end result may be a technical default on the reverse mortgage, either by being kept in convalescence out of the home for too long, or by falling behind on taxes or house repairs.
- (e) Bad press and other psychological factors. There are cases of elderly households being contacted by "home repair" companies offering to fix up problems with no cash down, if only the owner will sign the following small document. The document turns out to be a reverse mortgage, in which the contractor charges exorbitant fees. Partly as a result of the resulting bad press, reverse mortgages are no longer aggressively pushed by the AARP. Such bad press may rationalize a

psychologically natural resistance to debt, which after all the household spend so many years trying to get out from under. In line with O'Donoghue and Rabin [1999] on procrastination, households may be disinterested in reverse mortgages, at least until they appear to be the answer to a pressing current problem. As suggested by Skinner [1996], reverse mortgages may be more important in providing funding for emergencies, rather than for funding day-to-day consumption. The recent HUD report provides some data gathered from focus groups, and notes that the majority of participants were interested in the HECM program because it would "allow them to remain in their homes" (HUD [2000], p.90).

In addition to these standard forces, there are a number of institutional barriers to market growth. Some of these barriers are legal. One important problem is that the lien priority given to reverse mortgages is not settled (HUD (1995) p. 5-13):

"the Department remains concerned about the uncertainty of state laws that may affect enforcement of HECM as a first mortgage..... HUD has attempted to ensure that all HECM loan advances will be regarded under state law as mandatory or obligatory advances that, under the law prevailing in most states, would also have a first lien priority, but there remains some legal risk in some states."

Hammond [1997], p. 176, asserts more broadly:

"... a number of legal issues remain as a hurdle to reverse mortgages. These include priority of liens, mortgage-recording taxes, restrictions on terms and rates of mortgages, limitations on use of proceeds, and mandatory counseling requirements."

Legal uncertainty spills over to the borrowers. They must sign a certificate disclosing that a HECM "may have tax consequences, affect eligibility for assistance under Federal and State programs, and have an impact on the estate and heirs of the borrower". In addition, all reverse mortgage borrowers are required to go through a counseling program prior to taking out the loans.

Beyond the legal uncertainty are various regulatory and accounting issues. These issues have had real impact on private market development. Much of the market development in the U.S. is due to the work of Ken Scholen, who founded the National Center for Home Equity Conversion in 1978 in an effort to stimulate market development. At first it seemed as if the private sector might take the lead in product development. Indeed the first reverse mortgages in the U.S. were issued privately in the mid-1980's. Unfortunately the private market stalled, in part for regulatory reasons (Caplin [2000]), and it was only at this stage that the federal government stepped in.

4. The Shared Appreciation Mortgage

While the Arrow-Debreu complete market vision is artificial and ignores important realities, it helps highlight the potential efficiency gains involved in relaxing the 0-1 constraint on ownership. Indeed this is the common goal of the many appreciation and/or equity sharing schemes under discussion. In this section, we tell the unfolding story of the best developed such product: the shared appreciation mortgage (SAM).

The SAM was initially proposed in the 1970's (see Dougherty, Van Order and Villani [1982] for an introduction, and Murphy [1991] for a more recent discussion) as a way to reduce the very high interest payments caused by the high nominal interest rates

and the failure to adopt price level adjusted mortgages. The proposed SAM contracts were unattractive to lenders at low rates of inflation, and the program did not really take off in large part because the period of discussion extended beyond the period of inflation.

While very few SAM contracts were actually issued, the IRS was called in to rule on a thorny question. Is a SAM really a mortgage, or does it involve the lender becoming involved in a joint ownership arrangement? The importance of this question is that the answer impacts the fiscal, legal, and regulatory approach to the market. If the IRS ruled that this was a form of joint ownership, it would not only have put the mortgage interest deduction in jeopardy, but also exposed the joint owner to high levels of legal risk. In the end, the IRS decided (somewhat reluctantly, if one reads between the lines) that both the fixed and contingent interest payments on a specific SAM product were indeed deductible (IRS [1983]). The SAM in question had a ten year term, reduced the interest rate from 18% to 12% rate, in exchange for which the household paid contingent interest amounting to 40% of appreciation. The SAM placed no unusual contractual constraints on the borrower (e.g. requiring maintenance to be performed) and involved no sharing of depreciation. The ruling closed with a warning that the conclusions should not be considered to apply to all other SAM agreements, particularly those in which:

“the lender acquires greater rights with respect to the borrower or the mortgaged property than are described in the facts section of this ruling; in which the parties evidence the intention to create a relationship other than debtor and creditor; or if other circumstances indicate that the SAM loan represents in substance an equity interest in the mortgaged property.”

What contractual changes can be undertaken without going beyond the “fact situation set forth above”? Not surprisingly, various parties interested in writing SAM loans have looked for clarification. Unfortunately, the IRA has twice since that time announced that it will not issue rulings or determination letters for SAM mortgages, most recently in 1996 (IRS [1996]).

One reason that the IRS continued to get enquiries about shared appreciation mortgages is that they seem like a natural solution to problems of housing affordability for employers such as universities. Stanford University is one of a number that runs a shared appreciation program, and their product is structured based on a close reading of the IRS ruling (Stanford University [2000]). There are several other appreciation-sharing instruments that have been developed to help with housing affordability on the lower end of the market: in particular the CASA scheme developed by National Ecumenical Homebuilders (NEH) (Ward [1997]). In developing their scheme, NEH ran into a second set of obstacles to market development. There are complex securities laws, and unless the money for the shared appreciation mortgages was organized so that those providing external funds were themselves lenders rather than investors, the scheme would have been derailed by the high costs of complying with the security laws.

The Stanford and NEH SAM schemes are both “non-market”, in that the SAM is used as a subsidy. Do SAMs have any potential in the for-profit sector? There is some positive evidence available from the U.K., where the Bank of Scotland pioneered private shared appreciation mortgage products in 1996 and 1997. The Bank of Scotland’s operation was supported by securitization services offered by the Swiss Bank Corporation (SBC).

The Bank of Scotland offered two different types of SAM loans to households: a zero interest SAM in which the borrower pays back a high proportion of appreciation at the termination of the loan, and a SAM bearing a positive (below market) rate of interest, and a correspondingly lower share of appreciation at the termination of the loan. The more radical zero interest loan allows households to borrow any proportion up to 25% of the current appraised value of their homes, based on a promise to pay back the original loan amount and a share of the house price appreciation amounting to three times the initial LTV. At most, with the maximum LTV of 25%, the borrower is required to pay 75% of the appreciation to the lender. The less radical loan involved an interest rate of roughly 2/3 of prevailing rates, and requires the borrower to pay appreciation in a proportion precisely matching the initial LTV ratio, up to a maximum of 75% (SBC Warburg Dillon [1998a, 1998b]).

One remarkable feature of the Bank of Scotland SAMs is that they have no set term. The borrowing household has to pay back only when they sell the house, or upon the death of the last surviving joint borrower. This open-ended contract might be expected to raise all kinds of flags concerning the condition of the property, and the incentives to provide proper maintenance. Of course the contract speaks on these issues. The owner is required to insure the property against many risks: if the owner does not do this voluntarily, then the SAM issuer is entitled to purchase such insurance and add it to the household's indebtedness. There are also several clauses relating to maintenance and additions to the property intended to preserve strong incentives for both.

With respect to maintenance, the borrower must notify the lender of any material or significant damage to the property, and of any repair works to be carried out on the

properties. The borrower is required to carry out these repairs, at which point an appraisal is carried out to calculate whether or not the repairs have changed the value of the home. The proportionate change in house value so caused is determined, and the share of appreciation due at the end of the term is adjusted up or down accordingly. A similar approach is taken with respect to alterations and improvements to the property. If the cost of improvements is under 10,000 pounds sterling, they are to be absorbed by the owner, and no notification is required. If the cost of improvements is above this, then the house is reappraised when the alteration is complete. If the alterations are judged to have increased the value of the house by $x\%$, then the lenders share of appreciation is reduced by $x\%$, and conversely for falls in value.

From the borrower's perspective, the clauses on maintenance and improvements are somewhat cumbersome. In addition, the borrower must pay for all appraisals, and must use an appraiser from a list supplied by the lender. When one combines these factors with the novelty of the contracts, the prospects for the product may appear no better than those for reverse mortgages in the U.S. However the story was very different. The Bank of Scotland started issuing SAM loans in October 1996. The market took off immediately, with roughly 3,000 loans amounting to some \$150 million issued between March and September 1997. In 1998, these loans were bundled by SBC into two mortgage backed securities (SBC Warburg Dillon [1998]). Given the initial success, it must have been a particularly bitter blow to the Bank of Scotland when, as a result of a merger, SBC pulled out of the mortgage business altogether. Lacking a ready secondary market, Bank of Scotland withdrew the SAM loans from the market.

Given the apparent lack of consumer resistance in the U.K., it is little surprise that SAMs have recently been developed for the U.S. market, as noted in a recent article in the New York Times (McDowell, [2000]) “A mortgage type that offers borrowers lower rates in return for sharing any profits with the lender is reappearing around the country. The loan type has been all but unavailable for 20 years except in scattered areas, but now it is being offered nationwide at interest rates one to two percentage points below prevailing market rates. ... In return for the lower rates, borrowers are required to pay the lender 30 to 60 percent of the home’s future appreciation.

The last time such loans were available, they were offered mostly by local lenders and so there was a patchwork of terms and interest rates, but this time around they are available at uniform rates nationwide through about 1,500 banks, mortgage companies, and other financial institutions. Moreover, the loans are backed by the combined strength of several big financial institutions. National Commerce will buy the loans from the individual lenders and sell them to Bear Stearns. In turn, Bear Stearns will create bonds to sell to such institutional investors as insurance companies and pension funds”.

It is clear that the current effort to launch the SAM in the U.S. is far better directed than the earlier efforts. The legal and fiscal issues have been studied at great depth, so that there seems no reason to expect these instruments to be regarded as anything but debt instruments. In addition, this is a soup-to-nuts operation in which the SAM loans, once issued, have a ready secondary market. This offers the market leaders a chance to take one of the most profitable roles in the market: that of market maker. Hence some of the free rider issues with contract innovation are solved. Yet questions remain.

One of the key outstanding tax questions concerns the extent to which the taxpayer can deduct a portion of the ultimate contingent interest in earlier years, as well as the possible consequences if such deductions are taken and the house does not appreciate sufficiently in value. If high deductions have been taken in earlier years, yet the house ultimately falls in value, then the occupant may face a tax bill at the end. Another problematic possibility occurs if the house has risen tremendously in value at the end of the SAM term, and the household has to borrow to finance the contingent interest payment. There may be circumstances in which the household would find it impossible to take out this loan, and would therefore have to sell off the house to pay off the loan.

Seen in isolation, neither of the above tax questions seems to be huge in scale. The first question arises only if the home does not rise a great deal in value: the end result can be a tax bill for the occupant triggered by having taken excess deductions in earlier years. But in many ways this is the best of all possible worlds for the borrower, since in essence the lower interest rate on the SAM had absolutely no cost in terms of foregone appreciation. On the other side, the possibility that a household would be forced to sell the house to pay for the appreciation on the SAM seems remote. For this to occur would require the house to rise in value a great deal, and household income to fall so low that the household would fail to pass the PITI (principal, interest, taxes, and insurance) test on the required new loan. Of course, the better answer is for the household to take out a loan that involves continued sharing of appreciation, possibly in the form of a reverse mortgage (therefore by-passing the PITI test). There is every reason to believe that if the SAM market were to take off, reverse mortgages with SAM features would indeed find their way to the market.

In the end, the objective features of SAM products may indeed be appealing to many home buyers in the U.S, just as they were in the U.K. However there remain significant barriers to market development. One is the predominantly psychological issue of how to get consumer acceptance of this new form of mortgage. Just as with the reverse mortgage, the documentation on the SAM offered by NCBS is likely to be psychologically aversive to the less financially confident among us. In their reverse mortgage handbook, NCBS (NCBS [2000], p. 19) states that: “The application of the federal income tax rules to a SAM is both uncertain and complicated, and the rules will affect each borrower differently. Accordingly, you must talk to your tax advisor about the federal income tax consequences to you of borrowing under a SAM”. Will such statements be seen as unpleasant but largely irrelevant noises, as is (arguably) the case with the warnings that accompany almost all drug advertisements? Or will it mean that only the most financially sophisticated (or financially desperate) individuals will be willing to buy the product?

A second set of unknowns concerning market development involve the institutional investors’ appetite for residential real estate instruments. There is a growing consensus that such instruments may have potentially appealing return structures (Goetzmann [1993], Flavin and Yamashita [1998], and Englund, Hwang and Quigley [2000]), yet the SAM products face additional uncertainty arising from fear of adverse selection and moral hazard. What can be done to reassure investors that these products will not predominantly draw those who know that they are poor at home maintenance? Will the incentives to maintain be adequate even for those who would normally be

perfectly adequate at home maintenance provided the incentives were stronger (Shiller and Weiss [1998])?

All of these questions strongly suggest that the market has to go through a long period of learning by doing and adjustment. In the early days the innovators will be taking risks, and it may take a while for the product to penetrate the market, as the rough edges are knocked off, and the correct methods of monitoring are put in place. The reason that all of this is worthwhile for the market innovator is that there are potentially massive rewards to being the market maker in such an important area. Or are there? Fannie Mae, Ginnie Mae, and Freddie Mac are the 1,000lb gorillas in the housing finance arena, and if they are allowed to use their political and economic clout, they may have the potential to take over this new market segment if it should prove to be successful. If there are any problems uncovered as the market grows, would the agencies claim that it was their role as public servants to rectify the problems caused by unfettered capitalism? Would they set up a competing product (the “FAIR SAM”) and use their considerable political and economic clout to drive the innovators into a small segment of the market?

Individuals, Institutions, and Inertia

I see the two cases above as presenting strong evidence that institutional problems are partly responsible for the lack of innovation in the area of housing finance. The legal code leaves important questions unanswered, exposing innovative producers and consumers to widespread risk. The tax code is also incomplete, and the IRS will not give advance rulings to clarify their decision making process. The regulatory system contains

many complex provisions that mean that as one changes a contract in seemingly natural ways, one can move into an entirely different regulatory category. Contractual innovations are not patentable, and the federal agencies sit in such a privileged position in the market that other potential innovators may not find it worthwhile to invest huge resources in an effort to take the profitable role of market maker. Small wonder large-scale efforts at innovation have been few and far between.

The tax treatment of owner-occupied housing presents its own set of issues, especially when one combines it with the IRS ability to construe ownership any way it so pleases. It is here that rational economic thought runs into a brick wall. Presumably, the favorable tax treatment of owner-occupied housing is designed to accomplish certain goals, such as ensuring neighborhood stability, and ensuring that households have an incentive to maintain their property and fight for the quality of the community. Yet there is no evidence that the IRS has any interest whatever in seeing through the veil of accounting to the underlying economics. Rather, it interprets all new contracts as potential tax dodges, so that all innovation is to be regarded with great suspicion.

This accounting mentality may explain why the IRS set up an asymmetry in which one cannot buy insurance against losses on the house, yet can share the gains. As soon as the value of the house increases, the owner who buys with a SAM would automatically be sharing losses. Has the owner suddenly entered into an equity sharing partnership with the SAM lender, putting the mortgage interest deduction at risk?

A second red flag for the IRS would be any contractual clauses that diluted the sense of home ownership, say by insisting that routine maintenance be carried out: or even offering to provide funds to ensure that such maintenance would be carried out. If

such clauses were present, it would raise joint ownership issues, putting favorable tax treatment at risk, and raising all kinds of partnership tax and legal issues. Yet these clauses would precisely be designed to prevent the house from falling into disrepair. Isn't that one of the goals of the tax subsidy to ownership?

It is noteworthy that many other countries appear to have institutional structures that are more favorable to the development of new mortgage instruments. The U.K has largely removed the tax bias in favor of housing, and Switzerland is even more neutral in this regard, so that the tax definition of ownership loses its importance. The U.S places a minimum limit on the interest rate that can be charged on debt, so that the more innovative of the two Bank of Scotland products could not be offered in the U.S. The U.K. allows open-ended consumer credit, which is why the SAM loans issued by the Bank of Scotland did not need to have a fixed term; in the U.S. this would raise flags. Why is the U.S. system riddled with such archaic constraints? Developing countries which are still setting up their institutions of housing finance could do far better than to mimic the U.S model (see Jaffe and Louziotis [1996] for a survey of institutional factors influencing global real estate markets). Maybe these countries can lead the way in housing finance reform.

Stepping back, it is almost as if most of the major U.S. institutions have been constructed to preserve an archaically structured housing finance market. If this reading is correct, it raises the deeper mystery of why consumers who would benefit from the development of richer markets do not get together and pressure for changes that would improve the functioning of the market. In the case of the reverse mortgage, elderly households looking to increase consumption should pressure for changes in any of the

impeding legal and regulatory barriers. In the case of shared equity products, the incentives are even more broad-based. So why is there so little pressure for change?

The natural starting point for understanding inertia is the free rider problem. Any consumer who spends a great deal of time on the issue of reform is benefiting many beside themselves, so the incentives are strongly diluted. But this cannot be the whole story. Even when individual incentives are weak, consumers can band together and pressure for beneficial changes to be made. It may even be possible for lobbying groups to internalize some of the externalities by charging a membership fee, and insisting on special measures to be taken to benefit their members.

If lobbying groups are indeed able to overcome free rider problems, there would seem to be little preventing them for pressing for reforms that are seen as beneficial for some group of consumers. So if there is a lack of such a reform effort, it leads one to suspect that the members of the group are not convinced that the proposed change is beneficial to them. I believe this to be the case for many of the reverse mortgage and shared equity products described above. One does not see massive internet discussion groups pressing for these markets to be improved. In fact, there seems to be a general state of contentment in the U.S. with the entire arena of housing finance, with proud statements about the rebound in home ownership, and the continued efforts to provide subsidies to help those with lower incomes move into the ownership sector. So why is there so little consumer interest in market reform, and what (if anything) should policy makers do to advance reform efforts?

Psychological forces may be important if we are to understand the lack of demand side pressure for change. Of particular interest are forces that lessen the political

involvement of those who may at some future date benefit from a market reform. Many households may simply find it uncomfortable to contemplate going into debt absent an emergency. At any given time, the only people who may be willing to go on the front lines demanding reform are those with a major emergency need for funds. They probably have more pressing things on their minds, especially since the various impediments to reform ensure that they would not benefit from their own efforts.

This vision suggests that getting even potential beneficiaries to pay attention to a reform question may be very difficult. There may be a socially bad equilibrium in which ignorance begets lack of pressure for reform begets inattention. One possible way out of this equilibrium involves a lobbying group bringing the advantages of product innovation to the attention of its members. One lobbying group in particular that should be able to raise group awareness of the potential benefits of housing finance reform, especially in the area of reverse mortgages, is the AARP. The AARP could devote resources to analyzing the costs of benefits of various possible efforts at housing finance reform, and then report back to members, with the idea that the AARP imprimatur would make a reform effort more likely to catch its members' eyes. In this regard, it is noteworthy that the AARP has recently toned down its efforts to expand the reverse mortgage market, based at least in part on the bad publicity drawn by the various scams that have been uncovered (see e.g. Wong and Paz-Garciapara [1999]). If public attention to the reform effort depends on innovative decisions by lobbying groups, the wait may be long indeed.

The above analysis is based on the premise that market reform is a good idea in principle, in that many would actually benefit once the reform was in place. Of course there is another possible reason for lack of demand side pressure for change. Maybe the

supposed beneficiaries of reform really do not want it! One of the thorniest issues involved in reforming the housing finance arena is that the most important reforms all involve something of a “reframing” of the American Dream of home ownership. In fact, HUD reports that the majority of their respondents who took out reverse mortgages did so despite their own perception that there was “stigma attached to the reverse mortgage” (HUD [2000], p. 94). In principle, it may be that many households are willing to pay a hefty premium to preserve the current definition of ownership, to which they have become psychologically attached.

As a general believer in the principal of consumer sovereignty, psychological attachment to the status quo would seem to me to be just as valid a contributor to personal welfare as any other: it would be hard to argue that reform should be forced on people against their wills. Yet even in this case, I believe that good arguments that can be made in favor of reform. Many market reforms may impose certain psychological adjustment costs on current decision makers, for whom the change may be regarded as more threat than opportunity. Yet there is evidence that many people overstate their own adjustment problems (see the literature on affective forecasting (e.g. Wilson, Gilbert, and Centerbar [2000])). Today’s difficult new choice is tomorrow’s easy to handle status quo, as individuals and society as a whole learn how to incorporate the expanded range of choice into earlier decision making procedures. As we become accustomed to an expanded range of choices, so we find it hard to imagine being sent back to the bad old days in which one could choose a car of any color, provided it was black.

In summary, the U.S housing finance is (over-) ripe for change, as are housing finance markets worldwide. In fact significant change is already under way, but the time

frame remains uncertain. Will change continue to be slow and incremental, or will policy makers realize how much better things could be if our institutions were held to a higher standard of performance?

Bibliography

- Caplin, Andrew, 2000, "The Reverse Mortgage Market: Problems and Prospects", forthcoming in Olivia Mitchell ed., Pension Research Council, Philadelphia, PA.
- Caplin, Andrew, Sewin Chan, Charles Freeman, and Joseph Tracy, 1997, *Housing Partnerships*, Cambridge, Mass., MIT Press.
- Dougherty, A., Van Order, R. and Villani, K., 1982, "Pricing Shared Appreciation Mortgages," *Housing Finance Review*, 1(4), 361-375.
- Englund, Peter, Min Hwang, and John Quigley, 2000, "Hedging Housing Risk", Working Paper W00-007, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley.
- Flavin, Marjorie, and Takashi Yamashita, 1998, "Owner Occupied Housing and the Composition of the Household Portfolio over the Life Cycle", Working Paper #6389, National Bureau of Economic Research.
- Goetzmann, William, 1993, "The Single Family Home in the Investment Portfolio", *Journal of Real Estate Finance and Economics*, vol. 6, 201-222
- Hammond, Cecilia, 1997, "Reverse Mortgages: A Financial Planning Device for the Elderly", chapter 10 in *Reverse Mortgages: A Lawyer's Guide to Housing and Income Alternatives*, Eds. D. Bridewell and C. Nauts, 1997, American Bar Association.
- Jaffe, Austin, and Demetrios Louziotis, 1996, "Property Rights and Economic Efficiency: A Survey of Institutional Factors", *Journal of Real Estate Literature*, 4: 137-159.
- McDowell, Edwin, 2000, "Lower-rate Mortgage is Returning to Market", *New York Times Metro Section*, December 1, 2000.
- Murphy, J. Austin, 1991, "A Practical Analysis of Shared-Appreciation Mortgages," *Housing Policy Debate*, 2(1), 1991, 43-48.

- National Commerce Bank Services, 2000, *The Shared Appreciation Mortgage Handbook*, NCBS, September 6, 2000.
- O'Donoghue, Ted, and Matthew Rabin, 1999, "Procrastination in Planning for Retirement", chapter 4 in *Behavioral Dimensions of Retirement Economics*, Ed. H.Aaron, Brookings Institution Press, Washington D.C and Russel Sage Foundation, New York, NY.
- Rasmussen, Dennis, Isaac Megbolugbe, and Barbara Morgan, 1995, "Using the 1990 Public Use Microdata Sample to Estimate Potential Demand for Reverse Mortgage Products," *Journal of Housing Research*, 6(1), 1-23.
- Rosenbaum David, Thomas Goren, and Laurence Jacobs, 1995, "Risk and Benefit and Structural Efficiency in Senior Home-Equity Conversion", Walnut Creek, California, Lifetime Security Plan.
- Shiller, Robert, and Allan Weiss, 1998, "Moral Hazard in Home Equity Conversion", *Cowles Foundation Discussion Paper 1177*, New Haven, Ct.
- Skinner, Jonathan, 1996, "Is Housing Wealth a Sideshow?", chapter 8 in *Advances in the Economics of Aging*, Ed. D. Wise, NBER Project Report, University of Chicago Press.
- Stanford University, 2000, *Mortgage Assistance Program*, Stanford University Faculty/Staff Housing Office.
- Swiss Bank Corporation, 1998a, SBC Warburg Dillon Read, BOS (Shared Appreciation Mortgages) No.3 PLC, Offering Circular.
- Swiss Bank Corporation, 1998b, SBC Warburg Dillon Read, BOS (Shared Appreciation Mortgages) No.4 PLC, Offering Circular.
- United States Department of Housing and Urban Development, 1995, *Evaluation of the Home Equity Conversion Mortgage Insurance Demonstration*, Washington, D.C.
- United States Internal Revenue Service, 1983, *Revenue Ruling 83-51*, Washington, D.C.
- United States Internal Revenue Service, 1996, *Revenue Procedure 96-3*, 1996-1 IRB 82, 01/02/96, Washington, D.C.
- Ward, Terry, "Turn-Key Affordable Home Ownership Program: Potential for Rapid Implementation", *Directions in Affordable Housing Finance*, National Association of Affordable Housing Lenders, Fall 1997, Vol. 8, no.3.

Wilson, Timothy, Daniel Gilbert, and David Centerbar, “Why Happiness is Like Food, and Why People Don’t Know it”, in Isabelle Brocas and Juan Carrillo, eds. *Essays in Psychology and Economics*, forthcoming, Oxford University Press.

Wong, Victor, and Norma Paz-Garcia, 1999, *There's No Place Like Home: The Implications of Reverse Mortgages on Seniors in California*, Consumers Union of US.