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The FHA in the New Millennium

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Abstract

The first challenge in attempting to predict the future of FHA is understand why it is still here. No other depression-era mortgage-market institution has survived without substantial modification. Overall, we conclude that the key to survival has been the ability of FHA to invent new purposes. For example, it changed from a replacement for failed private mortgage insurance using economic soundness as an insurance criterion to an innovator in high-risk lending based on an acceptable risk criterion. FHA has been able to develop special programs to serve the needs of specific groups. We believe that this pattern of changing purposes is the key to FHA survival in the next millennium.

In reviewing possible future purposes for FHA, we find that several, particularly maintaining mortgage credit flows in declining regional housing markets, will require a substantial FHA presence in mortgage markets. This is important because it implies that a marginalized FHA cannot serve several of the important purposes that it is likely to be asked to serve in the next millennium. Accordingly, we believe that FHA market share will be maintained, and perhaps expanded, in the next millennium even in the face of increasing competition from conventional lending.

Keywords: FHA, mortgage credit, housing policy

FHA in the New Millennium

I. Introduction

FHA mortgage insurance was established in the Housing Act of 1934 as one of a triad of Federal initiatives in the housing finance market. Since that time it has experienced periods of great success and failure. Its outstanding characteristic has been its resilience, a tribute to the willingness of apparently high risk borrowers with little equity to repay their mortgages. Most recently, it has survived substantial efforts at reorganization and reinvention in spite of a fairly dismal fiscal performance.

This paper considers the reasons for the apparent programmatic inertia that has characterized FHA in an environment of substantial change in other housing programs, on both the real and financial side. The stability of FHA contrasts with change in the Federal Home Loan Bank System, Freddie Mac, Fannie Mae, and a plethora of supply side housing programs. Furthermore, the private sector with which FHA interacts and competes has changed substantially over time, particularly the resurrection of private mortgage insurance. At its inception, FHA was conceived as a program to fill an incomplete market, i.e. to complement rather than compete with the private sector. Today, it is clear that FHA competes with conventional lenders and this is a major problem for its continued growth in the next millennium.

Based on a historical analysis of FHA, we argue that its stability is due to an ability to reinvent new purposes for its basic product, high risk mortgage insurance. Will FHA continue to reinvent its purposes so that it stays ahead of those who question its relevance? If it does reinvent its purpose, what does this imply for its organization and operation? Can it succeed without competing significantly with conventional mortgage lending?

This paper addresses these difficult questions by first reviewing the history of FHA. Then a framework for discussing alternative purposes is developed, a laundry list of purposes is considered,

and the ability of FHA to adopt them successfully is analyzed. For the most part, the discussion presented here is positive rather than normative. A model of FHA innovation and development is advanced in order to consider what is likely to happen within a framework consistent with lessons from FHA history. Inevitably, some normative content does enter because we were not able to discuss what FHA has done and might do without comment on how well it is likely to perform and whether the net benefit from the activity is likely to exceed zero.

II. Brief History of the FHA - Changing Purposes from Depression Era to Present

This historical perspective on FHA is designed to emphasize the process of adopting new purposes and taking new initiatives, reaction of markets to those initiatives, and the implications market reactions for FHA. The general patterns are not surprising. New FHA purposes that generate initiatives producing revenues in excess of costs tend to provoke private imitation that limits the size of the FHA program. In contrast, initiatives that require subsidies tend to experience increasing subsidy over time and this, in turns, limits program expansion, and may even cause the program to be retracted or substantially revised.

Prior to the Great Depression, there was very little federal intervention in or supervision of mortgage lending transactions, which were viewed as essentially local in character. That changed dramatically in view of the failure of the private mortgage insurance industry under the weight of a default rate approaching 50% and foreclosures exceeding 1,000 per day in 1933. From this emergency, FHA was born. Its purpose was dictated by the failure of private mortgage markets. There was no reason to assume that such a birth would result in the longevity that we have observed. The Federal Home Loan Bank System (1932), Fannie Mae (1938), and the Homeowner's Loan Corporation (1933) are examples of sister organizations that had significant success but not without substantial modification in

the first two cases and elimination in the latter. The original purpose of FHA as part of the economic recovery program was to restore mortgage lending and fill the gap created by the failure of private mortgage insurance. This should not have sustained it for long.

One of the first examples of new purposes that resulted in innovations by FHA occurred during the 1940's with programs in support of war and then veterans' housing. These were subsequently taken over by the Veteran's Administration. This is a notable example of an FHA innovation that was transferred to another agency. While this episode was unimportant in terms of economic significance, its example to policy makers may have been significant because the two decades after the war saw a steady stream of new purposes and innovations.

The assignment of FHA to the Housing and Home Finance Agency in 1949 signaled the addition of new purposes. As noted in Barth, et al (1983), and Vandell (1995), FHA transformed itself from an emergency stopgap to a successful innovator, insuring mortgages with lower down payments, higher payment-to-income ratios, and longer terms to maturity than had been observed in the pre-depression era. This FHA innovation was so successful that conventional lenders began to imitate terms of FHA-insured mortgages. The surpluses in the MMI Fund weakened the arguments of those who considered mortgages an uninsurable risk and private mortgage insurance was again legalized. Private mortgage insurance (MI) began to compete with FHA insurance. This might be an example of overly successful demonstration as FHA success led to a presumption that mortgage default is an insurable risk.

As concern with inner city housing rose in the 1950's and 60's, the 1954 Housing Act changed the "economic soundness" criterion guiding the Mutual Mortgage Insurance Fund to one of "acceptable risk." This was a departure from the previous position that FHA insurance was to substitute for failed private mortgage insurance. Now the perception was shifted to one that consumption of adequate

housing generated externalities and hence should be subsidized. One form for that subsidy was through mortgage financing. However, under its initial interpretation, the acceptable risk criterion certainly involved little subsidy. There was a perception that, by increasing the maximum loan amount, the share of low-risk mortgages could be increased to compensate for the tendency for the MMI Fund to be increasingly involved in lending with more generous terms to lower income borrowers.

The fiscal soundness of the MMI Fund led to the perception that FHA insurance could support virtually any aspect of housing policy. The 1950's and 1960's were a "golden era" in which new purposes, in the form of narrowly targeted programs, were heaped upon FHA. When urban renewal was seen as "the answer" to what was seen as urban blight, FHA was given a new purpose - to facilitate both relocation of residents and resettlement of new residents. Subsequently special programs for cooperatives, condominiums, nursing homes, home improvement, etc were added to FHA's portfolio. The purpose of FHA was extended beyond specific housing and community development policy to support for piecemeal housing programs being generated by a hyperactive political process. These programs initially had separate insurance funds that were later combined into the GI fund. Given the economic environment of the 1950's they appeared to succeed financially and FHA seemed able to deal with its new multipurpose status successfully. But the success of the insurance fund over the short run does not demonstrate long run viability of mortgage insurance under a full range of economic circumstances. This characteristic of mortgage insurance makes it particularly vulnerable to a political process in which short time horizons tend to anoint immediate success and disregard the possibility of longer-term failure. This mismatch of time horizon appears to have led to additional purposes being imposed on FHA during the 1950's.

The 1960's saw FHA mortgage insurance increasingly combined with other housing programs as the new Department of Housing and Urban Development sought to achieve visible results. FHA

was to serve a HUD the purpose of extending homeownership to an increasing proportion of Americans. This should not be confused with the initial purpose of substituting for a failed PMI industry.

For example, the practice of assessing neighborhood condition as a part of the economic soundness criterion was condemned by critics as a code word for redlining. The acceptable risk criterion allowed underwriters to disregard neighborhood condition beyond its effect on the appraised value of the property. The new FHA approach quickly evolved into the notion of geographically invariant underwriting criteria that ignore local economic conditions. This was a significant development and geographic invariance continues to be an important aspect of FHA mortgage insurance.

By the late 1960's supply side housing policy had identified capital subsidies, usually below market interest rate financing, as a major tool for either extending homeownership or subsidizing multifamily units. FHA's purpose in this was to insure these financial instruments. Recognizing that these efforts could produce future losses, most of these new programs were financed under the Special Risk Insurance Fund. This might well be the point at which FHA moved furthest from its initial purpose. Certainly the underwriting criteria that characterized insurance written under the Section 235 homeownership program were far removed from earlier standards and the FHA property inspection was compromised in support of increasing homeownership. Perhaps in recognition of the change in focus, FHA was integrated into HUD far more completely with separate personnel, procurement, and computer systems eliminated. At the same time, privatization of Fannie Mae and creation of Ginnie Mae tended to move the focus of FHA further into HUD and created new and powerful competition in the private sector.

The large number of economically unsound mortgages insured in support of Sections 235 and 236 led to a quick retreat by 1973 and accusations of fraud and abuse for FHA. During this period, the relation between mortgage credit and neighborhood quality, once assumed to be monotonic increasing,

was questioned. The phrase "FHA-ing a neighborhood" came to mean making large numbers of unsound mortgages in an area followed by an inevitable round of default, foreclosure, and deterioration of the housing stock. High risk mortgage insurance was seen as capable of producing negative as well as positive neighborhood externalities.

The 1980's saw a change of purpose for the MMI Fund. Given the problems found in the very high risk lending that had characterized the SRI Fund, the Housing and Community Development Act of 1981 established targets for low-income borrowers. This combined with increasing conventional competition produced a substantial rise in the percentage of high loan-to-value lending. Lax underwriting standards and geographically concentrated housing market slumps combined to leave the MMI Fund with a balance below one percent of the insurance in force. FHA cut processing time and cost by introducing direct endorsement but control of fraud and abuse was an issue as few lenders were sanctioned for having high loss rates. The combined purposes of expanding homeownership and maintaining credit supply in declining markets proved too much for the MMI Fund.

Given the condition of the MMI Fund, the major purpose of the 1990's was to restore the capitalization of this fund and to limit subsidies needed to continue the GI and SRI Funds. In spite of increased competition from conventional lenders, prompted by affordable housing goals set for Fannie Mae and Freddie Mac, FHA was able to accomplish these goals by raising premiums and adapting mortgage limits to local area housing costs. FHA cut costs by collapsing 81 field offices into 4 homeownership centers. Although FHA suffered some loss in market share due to increased premiums, these changes, combined with a robust economy, have restored the economic soundness of the MMI Fund although Table 1 reveals that the gap in 90-day delinquencies between FHA and conventional loans continued to grow throughout the 1990's. More recently, premium cuts and further increases in maximum mortgage amount, to \$219,849 in high cost areas, promise to restore lost FHA volume while

increased vigilance should reduce problems with direct endorsement. All of this was accomplished with moderate structural change in FHA, ignoring calls for substantial restructuring or even elimination from politicians.

****Insert Table 1 here ****

Based on this historical record, we conclude that FHA has successfully survived the serious problems of the 1990's and should have little difficulty maintaining itself in the new millennium.

III. Normative Framework for Evaluating FHA's Changing Purpose

The purpose of this section is to establish a framework for making normative statements regarding FHA's role within mortgage markets. Essentially we want to establish when and why we should care about the future purpose of FHA drawing both on welfare economics and the considerable record of achievement by FHA. This effort is similar to previous work by Aaron (1972), Retsinas (1995), and Vandell (1995) although our conclusions differ significantly. This discussion concentrates first on single family mortgage insurance because of the central importance of the homeownership purpose in one form or another throughout FHA history. We then consider multifamily and special situations issues.

Uninsurable Risk

The beginning point of welfare analysis is market failure in the single family mortgage market evidenced in the historic failure of private mortgage insurance in 1933. Unfortunately there is controversy over this initial point. Foster and Herzog (1981) argued strongly that mortgage insurance involves an uninsurable risk because mortgage credit risk is based on the business cycle as well as risks arising from government housing policy. Follain and Szymanoski (1995) made a similar point regarding

FHA's potential role in multifamily mortgage markets. Given that the collateral for mortgage loans is largely real estate, fluctuations in value due to business cycles or changes in government policy, such as the tax expenditure for owner occupied housing, could impose huge losses on the industry. It is unlikely that the current private mortgage insurance industry could survive 1933 level default rates approaching fifty percent. Should private mortgage insurance fail, the implications for GSE's which likely have "too big to fail" protection and depositories with their government guaranteed deposit liabilities would imply substantial costs to the treasury. We will term the rationale for government provision of mortgage insurance to deal with market failures based on catastrophic loss as the "uninsurable risk" purpose. As noted above, there may be controversy over this point as some observers may claim that private mortgage insurance can pass stress tests that consider all likely catastrophic events.

Regional Stabilization

FHA's failure to consider local housing market conditions, has been shown by Ambrose, et al (1999) to result in rising share of applications, and endorsements in areas experiencing either current downturns or those where the variance in housing price change is higher. This is not surprising given previous work by Duca and Rosentahl (1991) and the demonstration by Canner and Passmore (1995) and Canner, Passmore and Mittal (1996) that private mortgage insurance does not penetrate far into the higher risk mortgage market. What market failure arises due to this behavior? Consider what happens if conventional lenders require lower loan-to-value and payment-to-income ratios in areas experiencing falling wages and rising unemployment. The housing market response should be lower housing prices that result in lower loan amounts and monthly payments. But falling house prices will cause lenders to further lower required loan-to-value and payment-to-income ratios. Clearly, the potential for mortgage underwriting criteria to contribute to instability in housing markets is present. While there is no firm evidence on this point, Caplin, Freeman, and Tracey (1997) have recently argued that mortgage

underwriting criteria may contribute to regional cycles and Ambrose, Pennington-Cross, and Yezer (2000) have demonstrated that FHA market shares of applications and endorsements move as predicted by this theory. Having FHA serve as lender of last resort in declining areas attenuates housing market slumps will be called the "regional stabilization" purpose for FHA.

Information Externalities In Mortgage Scoring Schemes

Credit scoring and automated underwriting, which we will term mortgage scoring, have become important aids to the mortgage underwriting process. FHA loss data has been used in studies of high risk lending. For example, FHA data was used in classic studies of default loss by von Furstenberg (1969) and subsequently by Barth, et. al (1980) and Berkovec, et al (1996). A number of interesting features of mortgage scoring suggest problems with private market provision of credit risk models. First, estimating the statistical models underlying mortgage scoring requires that the econometrician deal with problems of sample selection, i.e. the econometrician can not observe losses on mortgages applications that were rejected. This problem is so serious that credit card companies sometimes give cards to all applicants, with a small credit limit, so that they can observe failure rates for the population. Note that a firm or organization with a relatively high risk portfolio will likely suffer least from this type of selection problem. Second, mortgage scoring schemes must be kept secret. Revelation of the formulas used to score applications invalidates the models themselves because the models are estimated using data from unknowing applicants. If scoring schemes are made public then another form of sample selection must be confronted involving the decision to apply. Third, there are substantial economies of scale in producing mortgage scoring schemes as precision improves with sample size and one model can be used for very large numbers of applications.

One important aspect of credit scoring schemes is the effect of loan terms on credit risk. This is particularly acute when new mortgage products are considered because there is a very substantial

initial cost of creating and testing the new product. Private mortgage lenders are understandably reluctant to incur these costs given that, if the product proves to have unacceptably high credit risk, they cannot be recovered and, if the product has acceptable loss experience, rivals will quickly produce their own version of it and compete away any return from innovation because exclusion is not possible.

Once a mortgage scoring scheme is produced, the cost of disseminating it to underwriters is approximately zero. This creates a classic information pricing problem as marginal cost of providing scoring systems is zero while average cost for high quality systems is substantial. We conclude that private markets are likely to allocate too few resources to mortgage scoring and to price above marginal cost. FHA has a potential "information purpose" in We will term this the "information production" purpose.

Lending Discrimination

Closely related to, yet distinct from, the information purpose argument is the problem created by the possibility of discrimination in mortgage lending. The strongest argument for market failure in this area, as noted by Ferguson and Peters (1995) among others, is that illegal statistical discrimination may be consistent with profit maximization. To the extent that easily observed personal characteristics of the applicant are highly correlated with credit risk and given the high cost of mortgage screening schemes that render these personal characteristics non-significant, there is an economic incentive to use the predictive power of personal characteristics in lending decisions. Thus there is a rational for believing that illegal statistical discrimination is consistent with profit-maximization because of the cost of collecting information needed to assess credit risk. Because it is essential to keep mortgage screening criteria secret and because of the association between personal characteristics and credit risk, it is difficult for applicants, lenders, and regulators to determine the extent to which market failure based on lending discrimination has occurred. By removing incentives for discrimination from its own programs,

FHA provides an alternative source of mortgage credit for minorities fearing discrimination. To the extent that minorities flee to a non-discriminating sector when they perceive possible discrimination, the FHA share of minority lending can potentially serve an anti-discrimination purpose. A number of studies have established the stylized fact that minority participation in FHA programs is unusually high, controlling for observable financial characteristics of the loan transaction. This suggests an important role for FHA in encouraging minority homeownership.

Externalities In Housing Consumption

Private decisions to consume poor quality housing may have externalities for neighborhoods (Rohe, et al (2000)). Again, the precise nature and magnitude of these effects is beyond this paper. Many of the housing programs that FHA has been called upon to support were designed to raise housing consumption above a threshold at which what we will term housing externalities were eliminated. Some of the housing programs were subsequently found to be ineffective. In most cases these problems had little to do with FHA. One exception is low income homeownership programs such as Section 235 where Vandell (1995) and Benston (1995) have both noted that lax underwriting and property inspection efforts resulted in substantial default, foreclosure, and abandonment. Nevertheless, FHA can potentially have a purpose increasing housing consumption.

Homeownership Externalities

The presumption that homeownership, as opposed to housing consumption, has positive externalities for neighborhoods has been a major force in housing policy. Ceteris parabus tenure status is said to produce external benefits as owners have greater interest in promoting community welfare. This is not the place to review evidence for and against this presumption but important issues regarding the likely relation between FHA mortgage insurance and homeownership remain. A significant literature including Haurin, Hendershott and Wachter (1996 & 1997), and Linneman and Wachter (1989), has

established that down payment requirements rather than payment to income ratios are the major impediment to homeownership and FHA's low down payments have attracted a disproportionate share of applications from first time homeowners. At the same time, Fortin (1996), Kohlhase (1986), Krum and Kelly (1989) and Goodman and Nichols (1997) have provided evidence that households adjust work and savings behavior in anticipation of underwriting requirements. These results suggest that being able to borrow under FHA's high loan-to-value ratios tends to accelerate homeownership among households who would have purchased homes eventually. Therefore, FHA's role in dealing with the homeownership externality may be modest in fact. Note the contradiction between efforts to advance the housing consumption purpose by lowering rents and efforts to advance the homeownership purpose. Thus far this contradiction has not proved an impediment to popular policy debates which champion FHA's purpose in advancing both these purposes. In this case, the future of FHA may depend on misperception of economic effects.

Income Distribution

Clearly one of the arguments for housing policies has been to modify the ex ante income distribution. While FHA serves relatively low-income homebuyers, this group is, itself, not generally poor as observed by MacRae, et al (1982) and Plaut (1985). It is much more likely that FHA programs in support of low-income multifamily housing entering the SRI Fund can be rationalized as significantly redistributive. Overall the redistributive purpose of FHA does not appear to be important.

Two Caveats Regarding FHA's Ability To Achieve Its Purposes

In normative analysis of the purpose of FHA, it is important to move beyond the observation of potential or even apparent failure of private market forces to achieve an optimum. At least two other criteria are needed to justify an FHA purpose in terms of welfare economics. First is logical consistency of programs. For example, the FHA purpose of lowering the cost of low income rental housing may

help to address the income distribution issues and housing externalities characterizing private market solutions but FHA programs that lower rental costs lower the relative cost of renting compared to owning and hence increase the homeownership externality problem. Another example arises because housing affordability problems are generally most acute in areas where housing prices have been rising significantly. This creates a tension between FHA programs directed at helping owners and the regional stabilization and income distribution purposes that imply programs concentrating on areas where housing prices are declining.

Second, in order for FHA to address a potential market failure, it must be able to direct its efforts toward solution of that problem without affecting resource allocation in areas where there is no market failure. Given the history of FHA, there is a substantial record on which to base judgments about the effectiveness of its programs in targeting problems of market failure. Thus far, successful targeting appears confined to the homeownership externality. FHA's role in regional stabilization has largely arisen accidentally as it has passively accepted the adverse selection inherent in failing to consider local housing market trends. It has taken little or no constructive role in dealing with information or discrimination. Accordingly, it appears that some of the cases of potential market failure discussed above may not be a rationale for FHA remedies because there is little evidence that FHA has addressed these issues appropriately in the past.

This welfare analysis has departed from previous views of possible roles for FHA both in the range of possible market failures considered and in the emphasis on both inconsistencies among roles and the likely ability of FHA to respond in a welfare enhancing manner given its history of operation.

Can FHA Carry Out These Purposes Without Competing With Conventional Lending?

Part of the conventional rationale for FHA is that it should complement but not compete with conventional mortgages and that it is to experiment in high-risk mortgage products. One remarkable

aspect of FHA is that this rhetoric about its relation to conventional lending has persisted over time in spite of overwhelming evidence that it is not true and that FHA could not function if it were true. We will consider these two points in turn. First, a number of studies, including Canner and Passmore (1995) and Ambrose, et al (2000), have found substantial overlap between the households served by FHA and conventional lenders. In some geographic areas, FHA's substantial market share indicates that FHA is seen as a good substitute for conventional lending. This is illustrated in Table 1, which presents tabulations of spatial variation, across states and within states by MSA, in the FHA share of FHA-eligible (under the maximum mortgage amount applying in that area) mortgage originations from 1995 and 1996 HMDA data. Clearly this variation is far larger than could be explained by differences in the percentage of high-risk applicants across locations.

****Insert Table 2 here****

Second, and even more important than actual competition between FHA and conventional lenders, is the necessity for FHA to compete with conventional lenders if it is to carry out most of the purposes discussed earlier in this section. For example, the uninsurable risk and regional stabilization purposes require that FHA have a substantial presence in mortgage markets across the country. If there is a sudden economic downturn in an area, it is unreasonable to expect FHA to function as a last resort source of mortgage insurance on a substantial volume of business if its initial market presence is very small. Similarly, the anti-discrimination purpose requires that FHA have a sufficient presence that it is seen as an attractive alternative by minorities and the agents that serve them. Less obvious, is the need for FHA to lend to a range of risk levels if it is to be used as the basis for credit scoring schemes. Inevitably, FHA lending experience suffers from selection bias due to the failure to lend to the highest

risks but, if FHA did not compete with conventional lenders, it would select from a very narrow range of credit risk and inference about credit risk from FHA data would be very difficult because it would suffer from selection bias at both the high and low risk ends.

Clearly FHA has not avoided competition with conventional lending in the past and cannot do so in the future if it is to carry out purposes for which there is some normative rational. What may be different about the future is that high risk conventional lending may make the contradiction between the rhetoric of non-competition and the reality of competition more difficult to maintain and this could affect FHA in the new millennium.

IV. FHA's Purposes for the Next Millennium

We have hypothesized based on historical analysis that FHA's ability to survive relatively intact arises from its ability to adapt to new purposes. In this section, we consider a variety of purposes for the new millennium. Some of these are continuations of the current rational for FHA, others resurrect old purposes, and a third group appear to be new. In each case, we will discuss the purpose briefly, comment on its implications for FHA programs, and consider the welfare implications of pursuit of that purpose in light of the discussion in the previous section. The discussion will be framed in the context of the changing private sector mortgage market.

Promoting Homeownership

The primary program promoting homeownership is Section 203(b) mortgage insurance backed by the MMI Fund. As noted above, reserves in this program now appear to be adequate, indeed FHA currently estimates a positive net worth of \$16 billion for the MMIF. Higher maximum loan amounts and lower premiums promise to grow this program. Major questions concerning the ability of FHA to promote homeownership concern increasing competition from private mortgage insurance which has

lowered down payments to approximate the FHA limits.

In evaluating the effects of FHA on homeownership, one must also consider the substantial literature, including Follain (1990), Leece (1995), Hendershott, et al (1997), suggesting that low down payment mortgages tend allow households that would have owned to buy at a younger age. Goodman and Nichols (1997) have demonstrated that households facing down payment and monthly payment ratios raise earnings and increase savings in order to qualify for mortgages. Taken together, these arguments suggest that FHA may have a greatly reduced role in promoting homeownership in the new millennium as conventional loans overcome the 95% loan-to-value barrier. One contrary finding is the observation by Ambrose, et al (2000), see Table 2, that FHA share is remarkably high in some cities compared to expectations. This suggests a particular "brand loyalty" to FHA mortgage insurance in selected cities. We conclude that promoting homeownership, particularly among younger, first time homebuyers, will be a major purpose of FHA in the new millennium. Based on the discussion in the previous section of this paper, any welfare gains from these attempts to raise homeownership rates are likely to be quite small.

Reinsurance For Private Mortgage Insurance

Given the increasing market share of private mortgage insurance and perception that the industry could not survive a major decline in housing prices, the new millennium could see the purpose of FHA extended to providing reinsurance for the private sector. Vandell (1995) has a thoughtful discussion of the institutional circumstances under which such a reinsurance arrangement might come about. Although the previous section argued that there are substantial welfare arguments in favor of a reinsurance purpose, it seems unlikely that this venture will be pursued unless there is a period of major losses to insurance funds. Of course, under such circumstances, the MMI Fund would also likely require subsidy and political reaction to taking on an additional reinsurance purpose might not be favorable. Similar

political difficulties have confronted attempts to establish reinsurance funds for catastrophic earthquake damage. Curiously the lack of an arrangement in the earthquake insurance market may have serious implications for mortgage insurance markets as uninsured disaster events may, if large enough, trigger serious mortgage insurance problems.

Production of Mortgage Scoring Schemes

Welfare analysis suggested that private market provision of mortgage scoring schemes suffers from classic efficiency problems associated with the economics of information, large fixed cost of development and zero marginal cost of dissemination. Bunce, Reeder, and Scheessele (1999) have recently described FHA attempts to develop a mortgage scoring scheme that is calibrated based on its own loan file. This is, perhaps, the first step in establishing an important new purpose. Several challenges remain for FHA. First, it does not collect or retain detailed information on rejected or withdrawn applications. This is essential if mortgage scoring models are to deal properly with selection bias. Second, a stable protocol for dealing with delinquency, default, and foreclosure must be implemented if default loss estimates are to be meaningful. Third, FHA is in a position to consider experimental relaxation of underwriting standards to determine consequences for losses. Fourth, FHA must become comfortable with the primary assumption under which mortgage scoring schemes are estimated, i.e. that the applicants do not know details of the scoring formula. It is likely that the new millennium will see some period in which FHA attempts to leap forward into a position of technological leadership and production of mortgage scoring schemes becomes a central purpose.

For the research community this would certainly be good news. While the details of mortgage scoring schemes must be confidential, the improved FHA data needed to estimate these models will certainly aid the researchers.

Eliminating Lending Discrimination

One might imagine that the availability of FHA insurance would guarantee that demographic characteristics would play no role in mortgage availability for those seeking mortgages under the maximum mortgage amount. If FHA functions as a non-discriminating supplier, then any group experiencing real or apparent discrimination in conventional lending should apply for FHA insured mortgages. In a test that assumes FHA functions as a classic non-discriminating supplier, Shear and Yezer (1983) use the relation between FHA market shares and demographic characteristics as a indicator of possible discrimination in local mortgage markets. At a slightly higher level of sophistication, it follows that, if FHA is a non-discriminator and conventional mortgages are or are perceived to discriminate, then better risks among those discriminated against will select FHA, either directly or after rejection for conventional mortgages. Barth, et al (1980) and Berkovec, et al (1999) have used this principle to test for discrimination by conventional lenders. They estimate default and/or default loss equations and determine, *ceteris parabus*, the relation between demographic characteristics of the borrower and credit risk.

Overall, there are two purposes that FHA can serve to advance the goal of non-discrimination in mortgage lending. There is a direct role in which demographic characteristics of the borrower are eliminated from the underwriting process. There is also an indirect role in which FHA data are used to test for discrimination in conventional lending using the classic economics of discrimination results that groups discriminated against will flock to the non-discriminating sector affecting both the volume and quality of applicants to that sector. Thus far the first role has received some attention from FHA but most statistical analysis related to the second role has been conducted outside HUD. We believe that this will change in the new millennium and that both potential roles for FHA in preventing discrimination in mortgage lending will be realized. Note there is a relation between the second role of testing for

discrimination here and the previous discussion of FHA's potential new roles in mortgage scoring.

Income Redistribution

Our historical review of FHA programs suggests that the addition of a modest redistributive purpose in switching from economic soundness to acceptable risk criteria in making lending decisions was a success. Certainly the innovative lending made possible by this switch in criteria provided important insights into measurement of credit risk. However, the cross subsidy in the section 203(b) program was achieved at a time when FHA faced relatively little competition. More recently, the MMI Fund has been under significant pressure and FHA programs involving explicit subsidies, secured by the SRI Fund, have been the object of substantial criticism. As Weicher (1995) has observed, multifamily mortgage insurance has absorbed a substantial fraction of all FHA personnel resources without much evidence of success. Yet subsidized multifamily mortgage insurance is likely the major program through which FHA can lower the Gini ratio for the United States. Accordingly, it does not appear that FHA will be given the resources to achieve a significant income redistribution purpose in the new millennium.

This does not mean that FHA will be perceived as having no important redistributive purpose. Because, within the population of homebuyers, FHA differentially serves a lower, but not the lowest, income group, it may be perceived as performing an important redistributive function within this population.

Eliminating Low Quality Housing

FHA programs have been part of a supply side strategy to improve housing quality, and presumably reduce the externalities associated with low quality housing. The FHA property inspection was once an important guarantor of structural soundness. In the attempt to raise homeownership during the 1960's the inspection was compromised. Is it better to have homeowners own low quality housing or rent better housing? There may be a tension between the homeownership and housing quality

purposes. A second tension between the homeownership and housing quality purposes arises when high-risk lending results in delinquency, default, and/or foreclosure. Under these circumstances, there is substantial moral hazard regarding the physical unit. Borrowers have little incentive to maintain, and may even be looting a unit that they are unlikely to retain, particularly given FHA's policy of not pursuing deficiency judgements against defaulting borrowers. Observers as diverse as Benston (1995) and Bradford and Cincotta (1992) have noted that high risk lending carries its own hazards for the condition of the housing stock and neighborhood amenity. It is very difficult to gauge the future importance of raising quality as a future purpose of FHA. Certainly this must be mentioned as a goal for political purposes but the reality is that the relation between FHA programs and housing quality is complex and problematic.

Programs Targeted To Specific Groups

Since the war years, FHA has had programs targeted to housing finance needs of specific groups: veterans, residents of urban renewal areas, service persons, persons impacted near military bases, residents of rehabilitation projects, etc. The sheer number of programs enacted suggests that the ability to support such efforts appears to be a politically attractive feature of FHA. Furthermore, there is ample evidence that lending innovations begun by FHA are often emulated by conventional lenders. Most recently this appears to be the case with FHA's policy of making its scorecard a "glass box." In spite of conceptual difficulties of maintaining the integrity of a credit scoring scheme when its components are known, conventional lenders appear to be following FHA's lead. It is difficult to anticipate the purposes that will be identified in the future. Currently, it appears that subprime lending is getting substantial attention. FHA could certainly develop programs for refinancing mortgages held by persons with significant home equity but high payment-to-income ratios and/or low credit scores. These programs could then serve to demonstrate the dimensions of credit risk inherent in such lending.

V. Conclusions Regarding FHA in the Next Millennium

The FHA has a remarkable history of innovation, both in terms of new mortgage products and purposes that it is said to serve. These two dimensions of change have been responsible for FHA's survival during a period in which other institutions of the mortgage market have either been eliminated or undergone very substantial organizational change. However the pace of change in mortgage markets has been accelerating. The time between a successful FHA innovation and imitation by conventional lenders is has shortened considerably. This means that FHA will face continuing challenges to its status as an important supplement to the private market. We have identified several purposes that will likely be central to the rationale for FHA in the new millennium. It is particularly important that some of these purposes, particularly regional stabilization, information production, and insuring equal credit opportunity, require a substantial FHA presence in national mortgage markets. They require a large and vigorous FHA, even if that means substantial competition between FHA and conventional mortgage lending. Based on this, we believe that FHA's market share will likely be higher in the new millennium than it was at the close of the last millennium.

This discussion has attempted to project what FHA will be asked to do in the next millennium rather than with the way that FHA will be organized. Suggestions for reinvention of FHA range include: retaining its current location within HUD, returning to independent agency status, privatization with or without GSE status or even elimination. The standard response is that these choices will likely depend on the purposes that are given for having a FHA, purposes that have been discussed here. However, it appears to us that any reorganization, short of full privatization or elimination is generally compatible with the bulk of the purposes that have been identified. We conclude that the purposes likely to be assigned to FHA are fairly clear, and that there is a need for a substantial FHA market

share, but the organizational form for the next millennium is very much in doubt.

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Table 1
Comparison Of 90-Day Delinquency Rates

Year	FHA	Conventional	Difference
1986	1.29	0.67	0.62
1988	1.14	0.54	0.60
1990	1.10	0.39	0.71
1992	1.35	0.47	0.88
1994	1.44	0.45	0.99
1996	1.40	0.32	1.08
1998	1.51	0.28	1.23
1999	1.51	0.29	1.22

Sources: U.S. Housing Market Conditions, Spring 2000

Table 2

FHA Share Of FHA-Eligible Originations By State & MSA

State	Average MSA	Lowest MSA	Highest MSA
Alabama	18.4%	6.1%	35.5%
Arizona	30.0	23.3	39.7
Arkansas	33.2	19.2	40.0
California	29.3	0.7	62.0
Colorado	31.7	19.3	43.7
Connecticut	27.7	22.6	31.0
Delaware	24.3	20.6	28.9
Florida	22.9	9.3	34.7
Georgia	23.6	14.8	31.1
Illinois	14.7	5.8	26.3
Indiana	18.3	2.9	38.6
Iowa	15.2	4.6	24.8
Louisiana	22.8	6.5	37.8
Maine	25.0	13.7	35.9
Maryland	30.7	6.7	51.9
Missouri	19.3	6.0	34.8
Montana	44.2	37.2	51.3
New Hampshire	24.6	23.2	26.0
New Jersey	22.4	10.3	48.4
New Mexico	16.0	2.8	29.9
New York	23.9	7.0	38.6
North Carolina	14.7	2.6	25.1

Source: Home Mortgage Disclosure Act 1995 and 1996 Data Sets

Market shares are calculated for loans under the FHA loan limit applicable in each MSA.