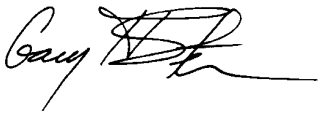
President's Message

A policy priority in the United States is to increase the rate of homeownership. To achieve that objective, policymakers rely on a host of policies and programs that reallocate billions of dollars of resources. Several of these policies and programs try to increase homeownership by reducing mortgage rates. More specifically, federal sponsorship for Fannie Mae and Freddie Mac is one of the major tools that policymakers rely on to reduce mortgage rates.

Given the public resources involved, many aspects of Fannie Mae's and Freddie Mac's activities have been subject to vigorous public discussion. As part of that discussion, we think it important to examine if the mortgage rate reduction produced by Fannie Mae and Freddie Mac is likely to increase homeownership. In the following essay, we contribute to the discussion by reviewing evidence on the effect of mortgage rate changes on people's ability and desire to buy a house. Most of the evidence we review finds that mortgage rate changes need to be around 2 percentage points before they have what many would consider a modest, but not trivial, effect on homeownership.

Because Fannie and Freddie likely have an effect on mortgage rates considerably lower than 2 percentage points, the effect of their mortgage rate reductions on homeownership is likely to be quite modest although, again, not trivial. Moreover, the evidence in the essay also suggests that a more direct method of subsidizing potential homeowners would have a larger effect on homeownership, while using the same amount of resources, than the reductions in mortgage rates attributed to Fannie and Freddie.

Of course, an analysis of homeownership and mortgage rates is complicated by a number of factors, including the complexity of the decision to own and weaknesses in data. As a result, the studies we summarize in the essay all have important weaknesses, many of which we highlight. Fannie Mae and Freddie Mac also do more than alter rates and have broader goals than an increase in homeownership. In short, this essay is surely not the last word on the topic, which we view as a welcome outcome. A lively discussion of one of the nation's top policy priorities serves the public interest.



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Mortgage Rates, Homeownership Rates, and Government-Sponsored Enterprises

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I. Summary

Mortgage rates influence a household's ability and desire to buy a home. The mortgage rate determines, in part, the monthly mortgage payment of borrowers and therefore their ability to meet debt-to-income standards used by mortgage lenders. Rates also affect ownership costs and the desire of households to become homeowners.

A small number of simulations have tried to quantify how a change in mortgage rates affects the number of potential homeowners. Most of the simulations find that a shift—generally a reduction— in mortgage rates of roughly 2 percentage points changes the percentage of households that can buy a house by around 50 basis points.[1] Most of the simulations found that a similar swing in mortgage rates would alter the percentage of black households that could buy a house by around 10 basis points.[2] Some research examining the variation in homeownership rates more directly suggests that small mortgage rate changes do not explain much of the variation.

The simulations also measure the relative effect of a mortgage rate reduction on homeownership by comparing it to other changes in mortgage qualification standards and/or policy options. The simulations find that shifting from mortgages with a 5 percent down payment to a 0 percent down payment would increase the percentage of all households that could buy a house by between 2 and 4.5 percentage points. The increase in ownership for black households for the no-down- payment policy was between 1 and 5 percentage points. These findings indicate that an inability to pay standard down payments and closing costs could have a larger effect on homeownership than mortgage-rate–related factors.

Two of the simulations also examine the effects on homeownership of a policy of providing cash assistance to renters that they could use to pay for down payments, closing costs and/or, in some cases, to retire debt. They find that cash assistance on the order of $5,000 to $10,000 per household would lead to a three-to-ten times greater increase in the percentage of renting households that could qualify to purchase a lower-cost home than an elimination of down payments.

The simulations have several attributes and limitations worth noting. First, the simulations may produce inflated results because they do not take into account all of the factors that lenders consider when funding mortgages. Second, the data used in

[1]One basis point is 1/100 of a percentage point. In addition, one simulation found a much larger effect from a smaller increase in rates. An increase in rates of 50 basis points reduced the percentage of households likely to become homeowners by 1 percentage point.

[2]Again, one study found a much larger effect from a smaller increase in rates. An increase in rates of 50 basis points reduced the percentage of black households likely to become homeowners by 3 percentage points.

the simulations may not accurately reflect the true condition of households. In particular, the data can understate wealth and therefore the ability of households to make down payments and the like. Third, the results do not indicate how shifts in mortgage rates or down payments alter the timing of homeownership. Even if such shifts do not have a large effect on the ability of households to purchase a house at a point in time, a reduction in down payments can accelerate homeownership for some households, while a small increase in mortgage rates may slow home purchase for only a short time. Fourth, the assumptions used in the simulations (for example, the level of mortgage rate at which the change in the rate occurs) influence the results. Finally, some of the simulations do not account for all of the factors that influence the decision of a household to own a house.

The simulation results—keeping the aforementioned caveats in mind—provide context for the federal policy to increase homeownership in the United States by sponsoring the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). The implied support of the federal government reduces Fannie Mae's and Freddie Mac's cost of funds, and they can pass on the savings in the form of lower mortgage rates for borrowers whose mortgages they fund. Estimates indicate that Fannie and Freddie reduce mortgage rates by around 20 to 50 basis points, with estimates from more recent research analyzing more current data tending toward the lower end. A reduction in mortgage rates of around 20 to 50 basis points is, of course, considerably lower than the 2 percentage point rate change just discussed and thus should have a smaller effect on homeownership. In addition to reducing mortgage rates, Fannie Mae and Freddie Mac fund special "affordable" mortgages that have reduced down payment requirements and offer other relaxed terms. The activities of Fannie Mae and Freddie Mac could also have led to lower down payments and relaxed terms on the standard mortgage.

Additional research in two areas would inform future discussions of Fannie's and Freddie's mortgage rate reductions. A widespread reduction in mortgage rates can end up increasing home prices. The higher home prices would offset, at least in part, the effect of lower rates. In addition, Fannie and Freddie finance rental properties. Subsidizing both forms of housing can limit their ability to reduce the relative price of ownership. Quantifying the importance of these potential outcomes should assist policymakers and analysts.

II. Mortgage Rates and Homeownership

We first discuss how mortgage rates affect homeownership. We then summarize two types of analyses that quantify the effect of mortgage rate changes on homeownership. (Appendix 1 provides background on trends and features of the homeownership rate.) Following the distinction made by Rosenthal (2001, p. 6), we discuss studies that quantify the number of households that "have the *ability* to purchase a home under different underwriting criteria" as well as studies that quantify the number of households that "would *choose* to own a home under different underwriting criteria." We call the former *underwriting simulations* and the latter *tenure choice simulations.* In addition to summarizing findings, we discuss factors to consider when interpreting simulation results. We briefly reference a third type of analysis that tries to explain changes in the homeownership rate more directly.

Effect of Mortgage Rates on Homeownership

A mortgage rate reduction can increase the homeownership rate in two ways. First, a reduction can make it feasible for a household to qualify for a mortgage by lowering the monthly mortgage payment and allowing the household to meet the originators' debt-to-income standard. In a standard mortgage, monthly mortgage payments cannot exceed 28 percent of monthly income. (Total debt cannot exceed 36 percent of income.) Second, a reduction can induce a household that has already qualified for a mortgage to decide to own instead of rent. A number of factors beyond mortgage qualification standards influence the ownership decision, including income, the relative price of ownership, and demographic factors such as age and family structure.

In terms of mortgage standards, at least two other factors can prevent a household from qualifying for a mortgage. To the degree that these other factors constrain a household from qualifying for a mortgage, a mortgage rate reduction will be insufficient by itself to permit a household to buy a house. First, a borrower can have insufficient cash to make a down payment and pay for the closing costs associated with the mortgage. The standard minimum down payment has fallen over the years and is now 5 percent.

Second, a borrower's credit quality can be too weak. Mortgage underwriters make use of credit scores and other measures of credit quality when assessing the ability and propensity of households to repay the mortgage completely and in a timely fashion. A borrower with a high score has a greater chance of making full and timely payment than a borrower with a low score. Fair Isaac—a firm that calculates credit scores—reports that 40 percent of individuals have a score higher than 745 and 40 percent have a score lower than 690. Fair Isaac's basic score ranges from 300 to 850. (See myfico.com for data on the distribution of credit scores.)

A borrower can have such a low credit score that a lender will not make a loan under any condition. More likely, a lender will require the borrower to have a higher down payment or mortgage rate to compensate for low credit quality. The higher down payment or mortgage rate could lead the borrower to become wealth- or income-constrained. For example, Fair Isaac reports that as of early April 2002, a borrower with a score between 500 and 559 would typically have a mortgage rate of 10.2 percent, while a borrower with a score between 675 and 699, all else equal, would have a rate about 2.5 percentage points lower. The difference in rates remains at 2 percentage points when the score rises to between 560 and 619. (See myfico. com for data on the relationship between mortgage rates and credit scores.)

Underwriting Simulations

Some analysts simulate the loan underwriting process to determine how mortgage rates affect the ability of households to qualify for a mortgage. In the underwriting simulation approach, analysts choose a *reference house*. They then review financial data to determine the percentage of households or families that would qualify for a mortgage on the reference house using specified mortgage qualification criteria and a prevailing mortgage rate. The analysts can then adjust the qualification criteria and the mortgage rate to examine how the change alters the number of households or families that can qualify for a mortgage on the reference house.

The U.S. Bureau of the Census regularly prepares underwriting simulations, and the most recent examines data from 1995. (See Savage 1999.) To determine a household's ability to qualify for a mortgage, the Census uses the standard mortgage qualification ratios from conventional mortgage underwriting guidelines (for example, 5 percent down payment, 28 percent mortgage debt-to-income ratio, and 36 percent total debt-to-income ratio). The Census then determines the number of renters who could qualify for a mortgage to buy a house with a price at the 25th percentile (that is, 75 percent of all houses would sell for a higher price than this "modestly priced" house). The Census then estimates the effects of lower mortgage rates on the percentage of renters who could qualify for the mortgage on the modestly priced house.

The Census finds that mortgage rate declines of up to 3 percentage points would have zero effect on the percentage of black renters who could become owners and close to zero effect on Hispanic renters. (See Table 1.) Mortgage rate reductions would have an effect on the percentage of all renters who could purchase the modestly priced house. A 1 percentage point reduction would raise the percentage of renters who could buy the modestly priced house by 30 basis points, while a 2 percentage point reduction would raise it by 60 basis points.

As part of a larger analysis, Listokin et al. (2001) follow the Census approach and examine how a wide range of mortgage qualification standards and policy options affect the ability of renting families to become owners. They report the effect of reducing mortgage rates by 3.05 percentage points and 5.55 percentage points and by eliminating mortgage rates altogether (that is, charging mortgage rates of 0 percent). A reduction of mortgage rates to 0 percent increases the percentage of black and Hispanic renters who can purchase the modestly priced house by 30 basis points. The 3.05 percent-

Table 1
Underwriting Simulation Results: Mortgage Rate Reductions

	Percentage of Renters Who Can Buy		
	All	Black	Hispanic
Results from Savage 1999			
Baseline[1]	10.2	3.4	2.6
Percentage Point Change When Interest Rates are Reduced by [2]			
1 Percentage Point	.3	0	0
2 Percentage Points	.6	0	.1
3 Percentage Points	.9	0	.1
Results from Listokin et al. 2001			
Baseline Situation[1]	9.2	2.7	1.8
Percentage Point Change When Interest Rates are Reduced by[3]			
3.05 Percentage Points	.8	0	.3
5.55 Percentage Points	1.4	0	.3
8.05 Percentage Points	2.0	.3	.3

[1]Assumes a fixed-rate, 30-year mortgage with a 5 percent down payment.
[2]Assumes an interest rate of 8.67 percent.
[3]Assumes an interest rate of 8.05 percent.

age point reduction increases the percentage of all renters who can purchase the modestly priced house by 80 basis points. (See Table 1.)

By way of context, 1 percent of renting households in 2000 equaled roughly 360,000. (See factfinder.census.gov for data.) The average annual change in homeownership rates from 1960 to 2001 is 20 basis points. The average annual change in homeownership rates from 1995 to 2001 is 80 basis points. [U.S. Bureau of the Census (2001b, Table 12) reports homeownership data.]

Finally, the effects of mortgage rate reductions of 2 to 3 percentage points are small relative to other policy changes the Census tests (discussed in Section IV). According to the Census, the results from the mortgage rate simulations reflect the fact that renting households typically have both wealth and income constraints. In the Census sample, 70 percent of renters have an inability to pay a down payment and/or closing costs and too little income to meet debt service requirements. Only 2 percent of renters are constrained by income alone.

The underwriting simulations just discussed do not account for the likelihood that a household will buy the reference house.[3] Some renters may not want to own the home even if they could qualify for a loan. Other renters may qualify for a loan prior to the mortgage rate reduction but choose not to buy until the rate reduction induces such behavior. The affordability approach does not try to model or account for such preferences.

We now turn to simulations that more fully model the decision to rent or own.

Tenure Choice Simulations

Following the approach of Linneman and Wachter (1989), a number of analysts have modeled the probability of a household owning a home as a function of factors such as the relative price of owning versus renting, income, demographic factors that serve as proxies for the preferences of the household, and the constraints imposed by mortgage qualification standards.[4] The approach is generally more econometrically complex than the underwriting simulations. The approach can also vary it its implementation between studies. The following review, as a result, provides only a high-level summary of this complex approach.

Quercia et al. 2000 is one of the most recent additions to this literature and takes two related approaches to estimating the effect of a change in mortgage rates on homeownership. In the first approach, the authors develop a model to quantify the probability of a household owning a house. Variables used in the model include estimates of the relative price of housing; an estimate of the permanent income of the household; demographic variables such as household size, age, race, and gender; and an estimate of whether a household was prevented, or *constrained*, from buying a desired house

[3] Other types of analyses by Listokin et al. (2001) rely on a reference house that reflects household preferences using an approach similar to that of Linneman and Wachter (1989) and Calhoun and Stark (1997), which we discuss. Listokin et al. (2001) also examine how changes in mortgage rates and mortgage qualification standards affect the "purchasing power" of renting households.

[4] Jones (1989) and Zorn (1989) also provide important contributions to the analysis of income and wealth and homeownership.

because it could not meet a variety of underwriting guidelines. Like many of the other variables in the model, the borrowing constraint variables result from a multistep estimation process. Essentially, the authors calculate the price of the house that a household desires to purchase based on the variables just discussed. They then determine whether the household qualifies to purchase the desired house based on its ability to meet mortgage qualification standards.

After estimating all of the necessary variables, the authors calculate the probability of ownership using various down payment requirements, housing debt-to-income requirements, and mortgage rates. They then compare the probability of ownership resulting from the various scenarios. The comparisons indicate how changes in mortgage standards and mortgage rates affect the probability of ownership.

The authors test two cases where mortgage rates fall by 2 percentage points. (See Table 2.) In the first case, the 2 percentage point drop in mortgage rates increases the probability of homeownership for black households by 10 basis points. In the second case, a similar drop in rates increases the probability of ownership by 20 basis points. The effect on the probability of homeownership for all households is similar. In the first case, the increase in the probability of ownership is 40 basis points, and in the second case, the probability of ownership actually declines by 10 basis points. The decline in ownership probabilities in the second case may reflect the link between wealth and income constraints in this analysis. The lower the mortgage rate and higher the mortgage debt-to-income standard, the more expensive the house for which the household can meet debt-to-income standards. However, the more expensive the house, the greater the down payment, and the more likely that the household will become wealth-constrained.

As is the case in the affordability simulations, Quercia et al. (2000, pp. 14–15) find that limited wealth prevents lower rates from having a large effect on homeownership. The authors note, "Consistent with the literature, the downpayment requirement is a greater detriment to home purchase than the income requirement. Thus, lowering the cost of borrowing does not necessarily allow more people to purchase once the downpayment requirement becomes binding. For instance, although the percentage of income-constrained households decreases as a result of a 200 basis point drop from 8 percent to 6 percent in the interest rate, the percent of people that could actually buy a house remained the same because the percentage of downpayment constrained households remained unchanged. This implies that there is a significant overlap between the two constrained measures. Because lack of wealth to meet the necessary downpayment is the dominant constraint, most households that are income constrained are also wealth constrained. However, the reverse is not the case."

In the second approach, Quercia et al. (2000) update Wachter et al.'s (1996a) test of how an increase in the mortgage rate of 50 basis points

Table 2
Tenure Choice Simulation Results: Mortgage Rate Reductions

	Change in Mortgage Rates From	Change in Homeownership Propensity (Percentage Points)	
		All	Black
Results from Quercia et al. 2000: Main Approach	8% to 6% (20 percent down payment)[1]	.4	.1
	8% to 6% (3 percent down payment)[2]	–.1	.2
		(Percent)	
Results from Quercia et al. 2000: Replication of Wachter et al. 1996	8% to 8.5%	–1.1	–1.8
		(Percent and [Percentage Points])	
Results from Wachter et al. 1996a	10.12% to 10.62%	–1.8 [–1.1]	–6.5 [–2.8]
		Change in Expected Homeownership Rate (Percentage Points)	
Results from Linneman et al. 1997	7% to 8%	–.07	N/A
	7% to 9%	–.11	N/A
	7% to 10%	–.22	N/A

[1] Mortgage debt-to-income ratio constant at 28 percent.
[2] Mortgage debt-to-income ratio increases from 33 percent to 38 percent.

affects the probability of ownership.[5] Wachter et al.'s (1996a) general description of their approach is largely similar to the first approach taken by Quercia et al. (2000). (We note one important difference below.) Wachter et al. (1996a) estimate the probability of ownership using the same four types of variables (the relative cost of ownership, income, demographic factors, and income and wealth constraints). Using these estimates, Wachter et al. (1996a) estimate the probability of ownership for households under various mortgage rate and down payment requirements.

We report the results for this second approach for Quercia et al. 2000 and for Wachter et al. 1996a. (See Table 2.) To provide comparability to the underwriting simulations, we highlight the results for all households and black households, although both analyses also examine central city households and low- and moderate-income households. In their second approach, Quercia et al. find that an increase in mortgage rates from 8 percent to 8.5 percent decreases the ownership probability of all households by 1.1 percent and decreases the probability of ownership of black households by 1.8 percent. (Results in percentage points are not provided.) Wachter et al. (1996a) find an increase in mortgage rates from 10.12 percent to 10.62 percent decreases the ownership probability of all households by 1.8 percent and decreases the probability of ownership of black households by 6.5 percent.[6]

Quercia et al. note two reasons why the updated results might be lower than the earlier findings. They argue that changes in mortgage rates have a larger effect on homeownership when rates are higher. The smaller effect of rate increases in the updated simulation may reflect the lower assumed level of mortgage rates. They also hypothesize that an "increased bifurcation in the national income distribution" has left fewer households at the income level where a small reduction in mortgage rates produces more homeownership (Quercia et al. 2000, pp. 15–16).

In addition, Quercia et al. note a fairly technical difference in methodology between their first and second approaches that would lead Wachter et al.'s (1996a) approach to overestimate the effect of a change in mortgage rates. In their first approach, Quercia et al. estimate the probability of homeownership in simulations using the actual individual probabilities of homeownership for each household. This approach is apparently not taken by Wachter et al. (1996a). As a result, Quercia et al. (2000, p. 16) report that their first approach provides more accurate estimates.

The results from the first and second approaches in Quercia et al. 2000 may also differ because the second approach examines an increase in mortgage rates, while the first approach reviews a decrease in mortgage rates. As noted, a decrease in rates in their analysis can make the wealth constraint more binding because it can lead the household to demand a more expensive house with a larger down payment. The effect from the more binding wealth constraint can outweigh the greater number of households that can meet the debt-to-income standard with the lower mortgage rate. In contrast, an increase in rates makes the income constraint more binding while relaxing the wealth constraint as the price of the desired house decreases. If the income effect outweighs the wealth effect, the increase in rates can have a larger effect on a household's propensity to own than the decrease in rates.

The findings of Quercia et al. (2000) in their first approach are consistent with findings from the tenure choice simulations of Linneman et al. (1997), which updated Linneman and Wachter 1989 and added simulations on the effects of changes in mortgage rates on expected homeownership rates. In contrast to the results from the second approach of Quercia et al., Linneman et al. find that a 2 percentage point increase in mortgage rates (from 7 percent to 9 percent) would lead to about a 10 basis point decrease in homeownership. (See Table 2.) Although Linneman and Wachter (1989) do not simulate changes in mortgage rates on homeownership, they do find that due to financing innovations, "the income constraint had little impact on homeownership propensities" by the

[5]Unlike the other simulations discussed, Wachter et al. (1996a) specify the cause for the change in mortgage rates. They intend their simulation to capture the effects of removing sponsorship from Fannie Mae and Freddie Mac. This sponsorship and its effects on mortgage rates are discussed in Section III.

[6]These simulations are performed on a full data set and on two more narrowly focused data sets. We follow the authors' example and focus on results from the full data set.

1981 to 1983 period, while wealth constraints continued to matter (Linneman and Wachter 1989, p. 399).

Calhoun and Stark (1997) combine features of the two types of simulations we have discussed. They determine whether a renter would prefer to own, estimate the type of house the renter would prefer to own, and compare the value of the preferred home to the mortgage for which the borrower could qualify. A ratio below one indicates that the renting household cannot qualify for the house it would prefer. Drops in mortgage rates of up to 6 percentage points lead to relatively small changes in the ratio for all renters and almost never push it above one.

Interpreting the Simulations

Several observations should be kept in mind when considering the results of the simulations. First, some simulations may overstate the effect of mortgage rate reductions because they do not account for important standards used to determine whether a borrower qualifies for a mortgage. Quercia et al. do not consider qualification standards related to nonmortgage debt outstanding. The Census finds that excessive nonmortgage debt is the single largest reason that renters do not qualify for mortgages. (See Savage 1999, p. 5.)

In addition, none of the simulations considers credit quality. As a result, some of the renting households that qualify for a mortgage with the lower rate in the simulation may not actually qualify because of a low credit score, for example. The data to directly determine the importance of omitting credit scores from the simulations are not readily available. Some publicly available data from 1996 suggest that households without a mortgage, a proxy for renters, have worse scores than households with a mortgage: 26 percent of households with a mortgage had scores below 660 while 15 percent had scores below 621, and 39 percent of households without a mortgage had scores below 660 while 25 percent had scores below 621.[7] Confirming the potential importance of credit quality to homeownership, Rosenthal (2001) finds that removal of credit constraints could increase the homeownership rate by as much as 4 percentage points.[8] (See Duca and Rosenthal 1994 for an earlier estimate.) In addition, poor credit history is the most frequently cited reason by mortgage originators for the denial of single-family mortgages (Collins 2002, p. 10).

Second, the income and wealth data used in the analysis come from surveys and/or econometric estimates. Households can report their incomes or wealth incorrectly on such surveys.[9] An underestimate of wealth can lead to underestimates of the number of renting households that qualify for a mortgage. Wachter et al. (1996a) and Quercia et al. (2000) estimate household wealth, and these estimates may be inaccurate.[10] Quercia et al. (2000, p. 11) note, for example, that their estimate of wealth does not include assets held in pensions.

Third, simulations reflect how mortgage rate changes or mortgage qualification standards affect households at a point in time. An increase in mortgage rates or a down payment requirement delays, but may not prevent, a household from becoming an owner. As noted, Wachter et al. (1996a) find that a 50 basis point increase in mortgage rates lowers predicted homeownership rates for all households by about 1 percentage point. However, they report that this result would probably be "much less" if calculated on an "ever-own" basis (Wachter et al. 1996a, p. 354). That is, the increase in rates may simply delay some households from purchasing homes but may not prevent them from doing so in the future. Goodman and Nichols (1997) similarly find that, at best, the Federal Housing Administration (FHA) loan guarantee program accelerates ownership.

Moreover, simulation results may reflect assumptions related to the environment at the time the simulation was conducted. As noted, the effect of mortgage rate changes on homeownership can depend on the prevailing mortgage rate used in the

[7] These are the author's calculations based on data in Avery et al. 1996, pp. 640–41, and Avery et al. 2000, p. 529.

[8] Credit constraints are measured by past credit denials, partial credit approvals, or expected credit denials.

[9] The underwriting simulations discussed in this paper rely on data from the Survey of Income and Program Participation conducted by the U.S. Bureau of the Census.

[10] These studies rely on data from the U. S. Bureau of the Census 2000. Linneman and Wachter (1989) and Linneman et al. (1997) rely on data from the Survey of Consumer Finances sponsored by the Board of Governors of the Federal Reserve System.

simulation: A change in mortgage rate from a higher level potentially leads to a larger effect on homeownership than a change from a lower rate.

Homeownership Rate Analysis

Instead of modeling qualification standards directly, some analysts examine the factors that influence the trend in and differences across homeownership rates. Painter and Redfearn (2001) examine how changes in mortgage rates affect short-run and long-run homeownership rates. The analysts develop and test models quantifying the relationship between mortgage and homeownership rates over time and across regions. The models account for other explanatory factors, such as income, age of households, house prices, and population. The authors find that mortgage rates are not statistically significant in explaining changes in rates of homeownership. The general fact that homeownership rates vary a great deal across geographic regions while mortgage rates are set in national markets may also suggest that mortgage rates play a secondary role in determining the ability of households to become owners. (See Coulson 2000 for an analysis of the factors that help explain regional variations in homeownership.)

More indirect evidence comes from recent analyses of how demographic changes over the last decade or two have affected homeownership rates. Segal and Sullivan (1998) find that demographic changes explain the changes in the homeownership rate from 1977 to 1997. The authors infer from this result that the effect of other potential influences on homeownership rates, such as fluctuating mortgage rates, either was constant or was offset by other factors. The authors also argue that the upswing in homeownership rates from 1995 to 1997 relates to factors such as rising income rather than "a response to any special change in housing policy. …" [In a similar fashion, Green (1996) finds that the stagnating homeownership rate of the 1980s is explained largely by demographic factors and changes in household tastes.] This analysis also seeks to examine the role of demographic trends in examining the homeownership gap between whites and blacks. In contrast to the overall homeownership rate, demographic factors do not explain the gap, or the changes in the gap, very well.

Bostic and Surette (2001) segment households by their incomes in their analysis of homeownership rates. While the authors find that demographic factors explain a substantial portion of the change in homeownership for families with incomes in the upper quintiles of the income distribution, they find that such factors do not account very well for changes in the homeownership rate of families with incomes in the lower quintiles. Because the authors cannot attribute the changes in homeownership for lower-income households to demographic factors, they see a potential explanatory role for changes in regulation that encourage financial institutions to make mortgage loans to minority families and families with low incomes. However, the authors note that the evidence supporting their interpretation is suggestive rather than conclusive. In his comment on the paper, LaCour-Little (2001) notes the difficulty in attributing the unexplained increase in homeownership to policies that encourage increased mortgage lending to certain groups.

III. Mortgage Rate Reductions by GSEs

One aspect of federal policy to increase homeownership rates is to reduce mortgage rates through interventions in secondary mortgage market activity. The secondary mortgage market is where mortgages are bought and sold after origination. The federal government uses two distinct types of institutions active in secondary mortgage markets to lower mortgage rates. The first is a government-owned corporation, Ginnie Mae, that guarantees timely payment on securities backed by a group of mortgages that already have a guarantee of payment from federal government organizations. These securities are issued by private firms.

We focus on a second type of institution called *government-sponsored enterprises* (GSEs), specifically Fannie Mae and Freddie Mac, because of the greater scope of their activities. Fannie and Freddie have financed more mortgages than Ginnie Mae and guarantee both full and timely repayment of funds to investors.[11] Fannie Mae and Freddie Mac

[11] Fannie and Freddie held 41 percent of the mortgage debt on one- to four-family residences while Ginnie Mae held 10 percent as of the third quarter of 2001 (FR Board 2002, p. A35).

are privately owned, publicly traded firms. The federal government does not own stock in either firm. At the same time, the firms have many attributes of public entities. (See Appendix 2 for a discussion of these public attributes.) Observers see Fannie and Freddie as "sponsored" by the federal government because of these attributes. Sponsorship leads many investors who buy securities issued by the GSEs to believe that the federal government will protect them from loss if Fannie and Freddie cannot make good on their financial obligations. This protection is referred to as the GSEs' *implied guarantee.*

Sponsorship and the implied guarantee reduce the GSEs' costs by, for example, exempting the GSEs from certain taxes. The implied guarantee also reduces the cost to the firms of raising cash by making their securities safer and more liquid. Investors will accept a lower rate of interest on securities that pose a low risk of loss and that can be sold with minimal costs. Because of the implied guarantee, the GSEs can also hold fewer financial resources to absorb losses than can competitors, which reduces their costs.

These cost advantages come to bear when the GSEs borrow funds to buy or otherwise fund mortgages that "conform" to size and risk criteria. (See Appendix 2 for the major restrictions on the GSEs' activities.) Because they have lower costs of raising funds, the GSEs can pay a higher price for mortgages than non-GSE competitors, thereby reducing the interest rate on mortgages while still earning sufficient returns to attract capital. In this way, the lower cost made possible by federal sponsorship can work its way into lower mortgage rates for households.[12]

To estimate the degree to which the GSEs lower mortgage rates, analysts examine the difference in rates between *conforming* mortgages and those loans above the conforming limit (*jumbo* mortgages) while trying to hold other factors constant. The CBO (2001a, pp. 12–13, 26–32) summarizes estimates of how much Fannie and Freddie reduce mortgage rates.[13] These estimates generally range between 20 and 50 basis points, with more recent estimates analyzing more current data generally falling toward the lower end of the range. A reduction in mortgage rates of around 20 to 50 basis points is, of course, considerably lower than the 2 percentage point rate change discussed in Section II and thus should have a smaller effect on homeownership.

Table 3
First-Time Home Buyers, 1997–99

First-Time Home Buyers	As a Percentage of All Home Purchases	As a Percentage of FHA-Insured Home Purchase Loans	As a Percentage of GSE-Financed Home Purchase Loans
All	41	81	25
Black and Hispanic	11	27	3

Source: Author's calculations based on data in Bunce 2002, Table 10.

We note that analysts look to the difference in overall mortgage rates on two large classes of mortgages (conforming and jumbo) when estimating the mortgage rate reduction induced by the GSEs. This approach reflects the widespread distribution of assistance by the GSEs, which, in turn, helps to explain why the estimated mortgage rate reductions are relatively small per household. GSEs do not, for example, provide assistance solely to renters unable to become homeowners without GSE help. Data and analysis on first-time home buyers from the U.S. Department of Housing and Urban Development (HUD) is suggestive in this regard. The percentage of home purchase loans financed by the GSEs that go to first-time buyers, particularly blacks or Hispanics, is smaller than the percentage in the overall market and for FHA-insured loans. (See Table 3.) The GSEs' limited role in the first-time home buyer market may reflect the fact that the majority of mortgages Fannie and Freddie

[12]Other aspects of the GSEs' operations can reduce the cost of buying a house, but we focus on mortgage rate reduction unless specifically noted. Fannie Mae (1996) discusses how the GSEs serve home buyers beyond reductions in mortgage rates and describes objectives for the GSEs besides increases in homeownership. Appendix 2 lists the public purposes of the GSEs from their congressional charters.

[13]In addition, the forthcoming *Journal of Real Estate Finance and Economics* (vol. 25, issue 2) includes several articles examining the effect of GSE activity on mortgage rates.

finance have down payments equal to or exceeding 20 percent, even when borrowers have lower incomes (Bunce 2002, pp. 37–38).

IV. Simulation Evidence on Cash Assistance and Down Payment Reductions

To provide additional context for the relationship between mortgage rate changes and homeownership, the simulations compare the effect of mortgage rate reductions to other policy alternatives. Both underwriting and tenure choice simulations review how reducing mortgage down payments can affect the number of households that own homes. They find that down payment reductions have larger effects than mortgage rate reductions. The underwriting simulations examine how providing lump-sum cash assistance to renters affects their ability to qualify for a mortgage. They find that such assistance can have a larger effect than either a down payment reduction or a mortgage rate reduction.

Lower Down Payments

The literature on the effect of mortgage standards on homeownership finds that wealth constraints play a larger role than income constraints in preventing households from becoming owners. Thus, one might expect a policy of reducing down payments to have a greater effect on the ability of families to purchase a house than mortgage rate reductions. Both the underwriting and tenure choice simulations confirm this hypothesis. In terms of the underwriting simulations, the Census finds that a no-down-payment standard increases the percentage of all renters who can become owners by 2.5 percentage points, the percentage of black renters by 2.3 percentage points, and the percentage of Hispanic renters by 60 basis points. Listokin et al. (2001) find generally similar results. (See Table 4.)

In terms of the tenure choice simulations, Quercia et al. (2000) estimate the effect of moving from a 5 percent to a 0 percent down payment. The probability of ownership moves up 4.5 percentage points for all households and 5 percentage points for black households. However, not all reductions in down payments in their simulation have as large an effect. Linneman et al. (1997) find that shifting from a 20 percent down payment to a 5 percent down payment raises the expected homeownership rate by between 2 and 3 percentage points. (See Table 5.)

Table 4
Underwriting Simulation Results: Down Payment Reductions

Percentage Point Change When Down Payment is Reduced From	Percent of Renters Who Can Buy		
	All	Black	Hispanic
Results from Savage 1999[1,2]			
5% to 2.5%	1.1	1	.3
5% to 0%	2.5	2.3	.6
Results from Listokin et al. 2001[1,3]			
5% to 3%	.6	.1	.2
5% to 0%	2.1	1.3	.6

[1]Assumes a fixed-rate, 30-year mortgage with a 5 percent down payment. Baseline information is in Table 1.
[2]Assumes an interest rate of 8.67 percent.
[3]Assumes an interest rate of 8.05 percent.

Our earlier observations about interpreting simulation results apply to these outcomes as well. The absence of credit risk data in these simulations, for example, may reduce the accuracy of the results. Those bearing the risk of the mortgage may want borrowers to have a higher credit score to compensate for the lower down payment. For example, the GSEs have special programs under which they will fund mortgages with down payments ranging from 3 to 0 percent. (They have also relaxed other mortgage qualification standards.) In 1997, mortgages with down payments of equal to or less than 5 percent equaled 2.5 percent of the home purchase mortgages the GSEs financed. By 2000, the percentage had risen to 5.1 percent of the home purchase mortgages the GSEs financed (author's calculation based on data from Bunce 2002, Table 9a). More generally, the GSEs are credited by some for reducing down payments to current levels from higher historical levels and relaxing other terms. That said, applicants for such special mortgages must meet the credit standards of private mortgage insurers and the GSEs. (See Temkin et al. 1999 and Listokin et al. 2001 for a review of GSE

Table 5
Tenure Choice Simulation Results: Down Payment Reductions

Reduce Down Payment From	Change in Homeownership Propensity (Percentage Points)	
	All	Black
Results from Quercia et al. 2000		
5% to 3%[1]	1.0	.8
5% to 0%[1]	4.5	4.9
3% to 0%[1]	3.5	4.1
	Change in Expected Homeownership Rate (Percentage Points)[2]	
Results from Linneman et al. 1997		
20% to 10%	1.1 to 1.8	N/A
10% to 5%	.85 to 1.1	N/A
20% to 5%	2 to 2.9	N/A

[1] Mortgage rate remain at 8 percent and mortgage debt-to-income ratio remained at 38 percent.
[2] Lower part of range assumes a mortgage debt-to-income ratio of 28 percent. Upper part of range assumes a mortgage debt-to-income ratio of 38 percent.

underwriting standards over time and for the role of credit quality in such standards. Ambrose et al. 2002 also highlight the importance of the GSEs in relaxing underwriting standards.)

In addition, Listokin et al. (2001, pp. 503–6) note that households in practice buy houses which the simulations suggest they cannot. They suggest that underreporting of wealth needed to pay down payments and closing costs may partially explain the discrepancy. Another possible explanation is the ability of households to change behavior such that they can rather quickly afford a house previously considered unaffordable. For example, a household can alter spending and working patterns to bolster savings and income in the short term. However, Haurin, Hendershott, and Wachter (1997) find that mortgage qualification standards reduce the probability of ownership for young households even when accounting for household behavior that could minimize the constraint of mortgage standards.

Quercia et al. (2000, p. 19) also note that the amount of existing competition in providing mortgages with favorable attributes, such as a low down payment, can influence the degree to which the simulation results accurately capture the effect of offering such mortgages. Specifically, the simulations can overstate the effect on homeownership of the GSEs' provision of mortgages with low down payments and relaxed mortgage debt-to-income ratios because the simulations do not account for the presence of competing products, such as those offered by FHA. Yezer (1996) also questions the degree to which the simulations take into account the dynamic responses of borrowers and participants in mortgage markets to a change in mortgage terms and rates.

Lump-Sum Cash Assistance

The underwriting simulations review the effect on mortgage qualification of providing renters with cash they can use to make a down payment, pay closing costs, and/or, in the Census simulations, to retire current debt. Cash payments starting around $5,000 have larger effects than other options on the ability of renting households to purchase a modestly priced home. Savage (1999) finds that a $5,000 payment increases the percentage of all renters who can buy the modestly priced home by 11 percentage points. (The percentage point increases are 13 and 7 for black and Hispanic households, respectively.) A payment of $10,000 per household has an effect almost twice as large. Listokin et al. (2001) find larger effects, although the cash assistance they examine can only be used for down payment and closing costs. (See Table 6.) In a similar vein, Green and Vandell (1999, pp. 441–42) find that shifting the tax-favored treatment of housing from its current status to more of a lump-sum payment could increase its effect on homeownership.

Of course, the same observations about interpreting these results hold (for example, concerns about data and lack of tenure choice models in these simulations). It is also not clear from the affordability simulations how a program providing cash assistance might operate. Appendix 3 provides an illustrative description of a cash assistance program.

V. Additional Research

Future discussion of the relationship between the mortgage rate reductions induced by the GSEs and the homeownership rate would be informed by

Table 6
Underwriting Simulation Results: Cash Assistance

Percentage Point Change From Cash Assistance of	Percentage of Renters Who Can Buy		
	All	Black	Hispanic
Results from Savage 1999[1,2,3]			
$1,000	.8	.8	.3
$2,500	2.4	1.8	.7
$5,000	11.0	12.7	7.3
$7,500	17.5	19.2	12.1
$10,000	21.7	22.1	16.0
Results from Listoken et al. 2001[1,4,5]			
$1,000	.7	.3	.5
$5.000	7.0	5.8	2.0
$10,000	26.4	27.1	18.3

[1]Assumes a fixed-rate, 30-year mortgage with a 5 percent down payment. Baseline Information in Table 1.
[2]Assumes an interest rate of 8.67 percent.
[3]Cash assistance can be used to pay down payment or closing costs and/or retire debt.
[4]Assumes an interest rate of 8.05 percent.
[5]Cash assistance can be used to pay down payment and/or closing costs.

additional research in two areas. First, mortgage rate reductions could affect, or be *capitalized* into, house prices. Second, GSE activity could reduce mortgage rates on the financing of both rental properties and owner-occupied properties, leading to a potentially ambiguous effect on the relative cost of ownership.

Capitalization

An overall decrease in mortgage rates may simply increase housing prices. Buyers may be willing to pay more for a house if mortgage rates are lower, all else equal, because the combination of lower rates and higher house prices leaves them as well off as they were previously (with higher rates and lower house prices). Because the GSEs spread their subsidy so widely, they may end up encouraging a very large group of home buyers to bid up home prices. For example, Freddie Mac (1996, p. iii) argues that "if Freddie Mac's and Fannie Mae's charters were repealed, higher mortgages rates would cause home values to decline." Although capitalization of the favorable tax treatment of mortgage rates has been subject to much analysis (Cappoza, Green, and Hendershott 1999), the question of how much of the GSEs' mortgage rate subsidy ends up as higher prices has received less attention.

Effect on Relative Cost of Ownership

The GSEs fund rental properties. Their funding for such housing has risen considerably. The GSEs held 20 percent of outstanding multifamily mortgage debt as of third-quarter 2001, nearly double their level from 1990 (author's calculation based on data from FR Board 1992, p. A37, and FR Board 2002, p. A35). Moreover, those purchasing a house can rent it out. Through both methods, the GSEs' activity can affect the price of rental housing. As a result, Yezer (1996) argues that the degree to which the GSEs change the relative price of owning versus renting is not clear. If the mortgage rate changes do not lower the relative costs of owning, then their effect on homeownership is unclear. At least as of 1996, some analysts believed that the GSEs' activity in the rental market was too small to have a material effect on the rental market. (See Wachter et al. 1996b, p. 382.)

Helpful comments were received from Bob Avery, Raphael Bostic, Harold Bunce, Charles Capone, Edward Demarco, John Duca, Scott Frame, John Gardner, Preston Miller, Wayne Passmore, Marvin Phaup, Art Rolnick, Jason Schmidt, Jenni Schoppers, Robin Seiler, Gary Stern, David Torregrosa, and Mario Ugoletti.

Appendix 1

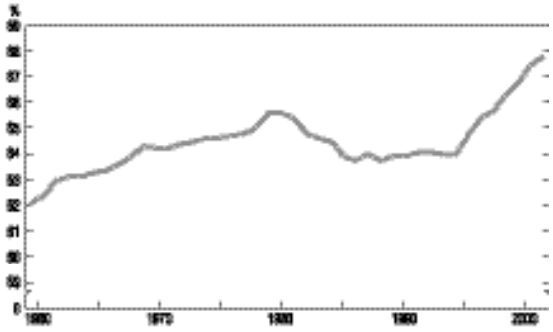
The U.S. Homeownership Rate

A goal of U.S. housing policy is to increase the rate of homeownership. This appendix summarizes major trends and features of the homeownership data.

First, the overall rate of homeownership grew significantly from the 1940s to the 1960s, with slower growth until a recent rapid increase. The decennial data in Table 1 show the homeownership rate fluctuating within a relatively narrow band from 1900 to 1930, followed by a dramatic increase from 1940 to 1960 when it rose by 18 percentage points (from 44 percent to 62 percent). The annual data in Graph 1 show that since that time, the rate has gone through periods of slower growth (a 3.5 percentage point increase from 1960 to 1980), stagnation (1980 to 1995), and more rapid growth recently (rising by 2.4 percentage points from 1996 to 2001).

Second, homeownership rates differ a great deal by the race, ethnicity, and location of the household. Graph 2 shows that the Hispanic and black homeownership rates have been around 63 percent of the white rate from the mid-1970s to the current period. A large gap also exists between nonmetro and suburban households and households in central cities. (See Graph 3.) Significant gaps in homeownership rates also occur by other geographic regions. In 2001, California had a homeownership rate of 58 percent while Michigan's was 77 percent (U.S. Bureau of the Census 2001b).

Graph 1
Annual Homeownership Rate in the United States
1960–2001



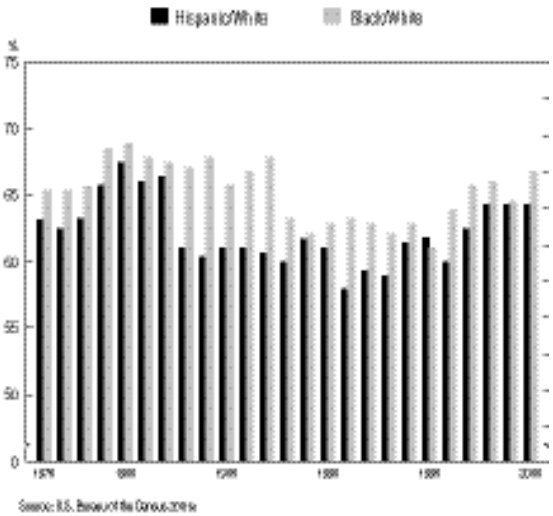
Source: U.S. Bureau of the Census 2001b, Table 12

Table 1
Homeownership Rate by Decade

Year	Rate
1900	46.5%
1910	45.9
1920	45.6
1930	47.8
1940	43.6
1950	55.0
1960	61.9
1970	62.9
1980	64.4
1990	64.2
2000	66.2

Source: 1900 to 1940 from http://www.census.gov/hhes/www/housing/census/historic/owner.html
2000 from http://factfinder.census.gov/bf/_lang=en_vt_name=DEC_2000_SF1_U_QTH_geo_id=01000US.html

Graph 2
Homeownership Rate by Race and Ethnicity
1976–2000



Source: U.S. Bureau of the Census 2001a

Table 3
First-Time Home Buyers, 1997–99

First-Time Home Buyers	As a Percentage of All Home Purchases	As a Perce FHA-Insur Purchase
All	41	81
Black and Hispanic	11	27

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Source: Author's calculations based on data in Bunce 2002, Table 10.

Third, demographic factors such as age and education level of the household and family structure of the household influence the homeownership rate. Households led by people in their late fifties have a homeownership rate 26 percentage points higher than those led by people in their early thirties. (See Graph 4.) The rates of homeownership are also relatively low for families headed by a female with no husband, households with one household member, and households headed by people with lower levels of education. (See Table 2 and Graph 5.)

Table 5
Tenure Choice Simulation Results: Down

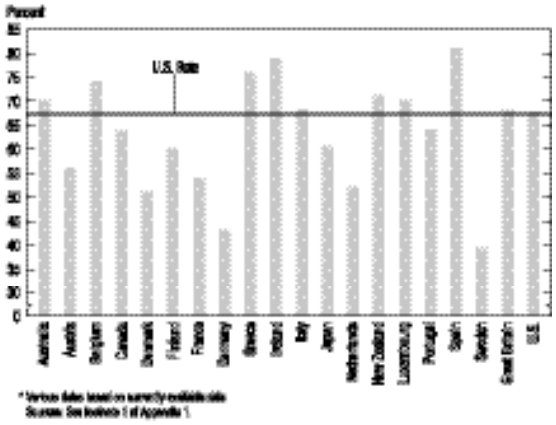
Reduce Down Payment From	Change in
Results from Quercia et al. 2000	
5% to 3%[1]	1
5% to 0%[1]	4
3% to 0%[1]	3

Table 2
Homeownership Rates by Household Size and Education Level
1999

	Homeownership Rate
Household Size	
1 Person	53%
2 Persons	73
3 Persons	69
4 Persons	75
5 Persons	73
6 Persons	68
More Than 7 Persons	68
Education Level	
Less Than High School Degree	58
High School Degree	69
Greater Than High School Degree But Less Than Bachelor's Degree	66
Bachelor's Degree	71
Graduate or Professional Degree	76

Source: Author's calculations based on U.S. Bureau of the Census 2000.

Graph 6
Cross-Country Homeownership Rates*



Finally, the United States has a homeownership rate a bit above the median of a group of developed countries. Graph 6 reports the most recent homeownership rates for countries in the European Union, Japan, and several English-speaking countries. The rate in the United States rests at the 60th percentile of this group.[1]

[1]Sources for the data are Australian Bureau of Statistics, Housing: Home ownership and renting, accessed at *http://www.abs.gov.au/ausstats/abs%40.nsf/94713ad445ff1425ca25682000192af2/affae0316a2c7090ca256b350014de3e!OpenDocument* on 2/17/02; Netherlands Ministry of Housing (2000, p. 33); Statistics Canada, Selected Dwelling Characteristics and Household Equipment, accessed at *http://www.statcan.ca/english/ Pgdb/People/Families/famil09a.htm* on 2/17/02; Statistics Bureau and Statistics Center of Japan, Housing of Japan, "Home Ownership," accessed at *http://jin.jcic.or.jp/stat/stats/13HSG13.html* on 2/17/02; New Zealand Ministry of Housing, The New Zealand Housing Situation, accessed at *http://www.minhousing.govt.nz/situation.html* on 2/17/02; United Kingdom Department for Transport, Local Government and the Regions, Housing Statistics 2000, accessed at *http://www.housing.detr.gov.uk/ research/hss/hs2000/pdf/hsan_ch1.pdf* on 2/17/02; and U.S. Bureau of the Census 2001b.

Appendix 2

Public Attributes of the GSEs

Fannie Mae and Freddie Mac, or government-sponsored enterprises (GSEs), have several public attributes. They include the following:

First, the financial instruments issued or guaranteed by the GSEs are uniquely similar to financial instruments issued by the U.S. Treasury. Some of these similarities include the following: (1) eligibility for Federal Reserve open market purchase, (2) eligibility to collateralize Federal Reserve bank discount loans, (3) exemption from registration requirements of the Securities and Exchange Commission and the states, and (4) eligibility for unlimited investment by national banks, Federal savings associations, and Federal credit unions (HUD 1996, pp. 26–27).

Second, Fannie Mae and Freddie Mac have a unique organizational structure as well as tax and regulatory treatment, including (1) a charter granted by an act of Congress, (2) appointment of members to Fannie Mae's and Freddie Mac's boards by the president of the United States, (3) exemption of corporate earnings from state and local taxes, and (4) authorization of the Treasury to lend $2.25 billion to both Fannie Mae and Freddie Mac (Frame and Wall 2002, pp. 32–33).

Third, Fannie Mae's and Freddie Mac's charters provide the following statement of public purpose: The GSEs should (1) provide stability in the secondary market for residential mortgages, (2) respond appropriately to the private capital market, (3) provide ongoing assistance to the secondary market for residential mortgages (including activities related to mortgages on housing for low- and moderate-income families involving a reasonable economic return that may be less than the return earned on other activities) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing, and (4) promote access to mortgage credit throughout the nation (including central cities, rural areas, and underserved areas) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing.

Fourth, the GSEs face limits on their activities based on the size and riskiness of the mortgages they can finance. The 2002 cap on mortgages eligible for Fannie Mae/Freddie Mac financing is $300,700. The GSEs cannot finance mortgages where the owner has less than 20 percent equity in the house unless an acceptable credit enhancement such as private mortgage insurance is offered. In addition, the firms can only purchase mortgages that meet the standards of private institutional mortgage investors.

Fifth, legislation passed in 1992 required the U.S. Department of Housing and Urban Development (HUD) to establish housing goals for the GSEs. Under these goals, the GSEs must target some of their funding for families with lower incomes and households acquiring units located in underserved communities. The GSEs also have a goal for funding qualifying multifamily housing. (See HUD 2001 for a discussion of the housing goals.)

Sixth, both firms have a historical connection to the federal government. Fannie Mae was originally a governmental entity. Freddie Mac was originally controlled by a pseudo-governmental organization (Feldman 1996, p. 7).

Finally, the federal government has taken action, or refrained from taking action, to support GSEs. Fannie Mae was not closed when it was insolvent on a market basis. HUD estimated that the market value of Fannie Mae's assets minus the market value of its liabilities equaled –$11 billion in 1981 (CBO 1991, p. 129). Congress has twice taken action that reduced the chance of default of two nonhousing GSEs, the Farm Credit System (CBO 1991, pp. 79–80) and the Financing Corporation (Leggett and Strand 1997).

Appendix 3

An Illustrative Direct Assistance Program

A direct subsidy program providing households with cash that they can use to pay off debt, make a down payment, or pay closing costs appears to be able to help a relatively large number of renters become owners. This appendix illustrates how such a program might work. We touch on the program's ability to increase homeownership, effectively target households, and maximize the resources that reach beneficiaries. This appendix is illustrative and does not review most aspects of a direct subsidy program's design and implementation. (See Calomiris 2001 for another discussion of a direct assistance program to increase homeownership.)

Increasing Homeownership

The direct subsidy program would provide renting households with cash from the government that they could use to pay off debt, make a down payment, or pay for closing costs. For discussion purposes, we assume the funding for the direct program equals the $8.3 billion that analysts estimate was provided on average to the GSEs annually from 1995 to 2000. (See CBO 2001b for the estimate and Toevs 2001 and Pearce and Miller 2001 for a critique of the estimate.) Policymakers must decide how much to give each program participant. Census Bureau analysis suggests that cash assistance must equal $5,000 per recipient household to allow more renting households to qualify for a mortgage than would be achieved by eliminating down payments. (See Tables 4 and 6 in the preceding text.) A program with total funding of $8.3 billion which provides $10,000 per renting household would serve 830,000 households a year. In three years, the direct subsidy program would assist 2.5 million renting households. There were 105 million households in the United States as of 2000, according to the Census Bureau, with 69.8 million homeowners. A direct subsidy program serving 2.5 million households over three years would, all else equal, increase the homeownership rate by 2.4 percentage points. Even if this estimate were overstated by one-third to one-half, the direct subsidy program would achieve material increases relative to historical changes in the homeownership rate over such a short period and to estimates of the effect of small mortgage rate reductions.

Targeting Households

In the preceding illustration, cash assistance is restricted to renting households. Policymakers could come up with other forms of targeting based on easy-to-observe characteristics (for example, income of the borrower). Targeting has a potential downside if it imposes significant cost processes. Policymakers could reduce potential costs by relying on existing processes. The current mortgage origination process should capture and verify all of the information needed to determine if a household qualifies for the cash assistance: current income, price and location of the home being purchased, and location and renter status of the borrower. Moreover, the analytical talents and data required for targeting already exist. The Department of Housing and Urban Development, for example, reports on area median income for metro areas each year.

Minimizing Costs

As just suggested, qualification for the cash assistance program could occur when a borrower applies for a loan in order to minimize costs. Therefore, the government's major administrative expense from the direct assistance program would arise from fund disbursement and accounting, limited participant verification, potential reimbursement to contractors, and other administrative functions. Policymakers could look to the administrative costs of other government programs to gauge potential costs. (See Social Security Administration 2000 and CBO 1993 for the following data.) Large-scale payment systems, such as the old-age survivors insurance part of Social Security, have lower administrative costs (about 50 basis points of total costs). Food stamp and Medicaid programs that require more verification and have a finer level of means testing have administrative costs of 13 percent and 4 percent of total costs, respectively. Programs such as Women, Infants and Children, which include counseling services, have administrative costs of 25 percent of total costs. The program outlined seems to fall between large-scale payment programs and programs that carry out more verification. This would put administrative costs below double-digit levels.

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