Effectiveness of HUD's Housing Goal Incentives for Freddie Mac and Fannie Mae: Small Multifamily & Certain Single-Family Rental Properties

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1. HUD's Responsibilities as GSE Regulator

HUD is currently the "mission regulator" for Freddie Mac and Fannie Mae, government-sponsored enterprises (GSEs) in the secondary mortgage market. Mission regulation involves:

- review of new program requests, to determine whether or not such programs are authorized by the GSEs' charters, and, if authorized, whether such programs would be in the public interest;

- periodic review and comment on the GSEs' underwriting guidelines, including their automated underwriting systems;

- general regulatory authority;

- review of the GSEs' activities to make certain that they are consistent with the Fair Housing Act; and

- establishment of <u>affordable housing goals</u> for the GSEs.

Safety-and-soundness regulation of the GSEs is carried out by the Office of Federal Housing Enterprise Oversight (OFHEO), an independent office within HUD.

2. Affordable Housing Goal Categories Established by Congress

HUD was established as the regulator for Fannie Mae in 1968, after it became a fully-private corporation, with the retirement of stock held by the Federal government. Freddie Mac was created by the Emergency Home Finance Act of 1970. Major changes were made in the structure of Freddie Mac by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) in August 1989. Freddie Mac's stock became publicly traded, and it was given essentially the same purposes and charter as Fannie Mae. FIRREA also made HUD the regulator for Freddie Mac in 1989, with identical powers for the Department's oversight over both Fannie Mae and Freddie Mac.

The current GSE regulatory structure was established by the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (FHEFSSA). This legislation called for three broad categories of affordable housing goals for the GSEs, to be established by regulation by HUD:

- A <u>low- and moderate-income goal</u>, for families with incomes below area median income;

- A special affordable goal, for very low-income families and low-income families in low-income areas;

- An underserved areas goal, initially established by Congress as a central cities goal, with authority for HUD to broaden the definition of underserved areas.

HUD has refined the definition of underserved areas to include families living in low-income census tracts (or counties in nonmetro areas, prior to 2005; nonmetro underserved areas are now also defined at the tract level) and in high-minority, middle-income census tracts (also defined in terms of counties in nonmetro areas prior to 2005), excluding high-income, high-minority census tracts.

3. Details of Housing Goals Established by HUD

All three of the broad housing goals are expressed as minimum goal-qualifying percentages of all units financed by each GSE in a calendar year, except some (relatively few) units are excluded altogether from certain goal calculations. Thus multifamily properties are weighted much more heavily than single-family properties in determining goal performance.

The GSEs calculate their performance on each of the goals and they also submit loan-level data to HUD, which HUD then analyzes to determine "official goal performance." Goal performance is calculated annually, with quarterly reports by the GSEs to HUD on performance for the year to date. Congress established certain penalties for failure to attain a goal, including submission of a housing plan and civil money penalties.

GSE housing goals were first established for 1993-95. They were subsequently revised for 1996-2000, 2001-04, and, most recently, for 2005-08.

HUD has also established dollar-based special affordable multifamily subgoals, starting in 1996. And most recently, in 2004 HUD established home purchase subgoals, for GSE acquisitions of home purchase mortgages on owner-occupied single-family homes, for each of the categories covered by the overall housing goals.

4. Goals for 1996-2000

HUD established the GSEs' housing goals for 1996-99 on December 1, 1995, and these goals continued in effect for 2000, as follows:

The low- and moderate-income (LM) goal: at least 40 percent of the dwelling units financed by each GSE had to be for LM families in 1996, and the goal rose to 42 percent for 1997-2000.

The special affordable (SA) goal: at least 12 percent of the units financed by each GSE had to be for SA families in 1996, and the goal rose to 14 percent for 1997-2000.

The underserved areas (UA) goal: at least 21 percent of the units financed by each GSE had to be for families in UAs in 1996, and the goal rose to 24 percent for 1997-2000.

The special affordable multifamily (SAMF) subgoals: for each year 1996-2000, Freddie Mac had to finance at least $0.99 billion in special affordable multifamily housing, and Fannie Mae had to finance at least $1.29 billion.

5. GSE Housing Goals for 2001-04

On October 31, 2000, HUD raised the housing goals for 2001-04 from the levels established for 1997-2000 as follows:

The low- and moderate-income goal was increased from 42 percent for 1997-2000 to 50 percent for 2001-04.

The special affordable goal was increased from 14 percent for 1997-2000 to 20 percent for 2001-04. The dollar-based special affordable multifamily subgoals were also increased for both GSEs.

The underserved areas goal was also increased, from 24 percent for 1997-2000 to 31 percent for 2001-04.

6. GSE Housing Goal Incentives for 2001-03

In addition to increasing the levels of the housing goals, HUD established certain incentives for 2001-03, to encourage the GSEs to be more active in certain segments of the mortgage markets. These included “bonus points,” applicable to both GSEs, and a “temporary adjustment factor,” applicable to Freddie Mac only.

A. Bonus points

“Bonus points” were established for purchases of two types of mortgages:

i. Small multifamily properties. Each goal-qualifying unit financed in a 5-50 unit multifamily property counted as two units in the numerator, and one unit in the denominator, in calculating goal performance (“double credit”.)

ii. Single-family rental properties. Above a moving threshold, each goal-qualifying unit financed in a 2-4 unit property with at least one owner-occupied dwelling unit (and 1-3 rental units) counted as two units in the numerator, and one unit in the denominator, in calculating goal performance.

B. Temporary adjustment factor

In response to Congressional direction, HUD also established a "temporary adjustment factor" (TAF) for Freddie Mac. Under the TAF, each goal-qualifying unit financed by Freddie Mac in a large multifamily property (i.e., one containing more than 50 units) counted as 1.35 units in the numerator, and one unit in the denominator, in calculating goal performance. The TAF did not apply to Fannie Mae, because Congress felt that Freddie Mac was disadvantaged by its absence from the multifamily mortgage market in the early-1990s, and that properties financed during that period would be seeking refinancing during the 2001-03 period.

Bonus points and the TAF both expired at the end of 2003. This, in effect, amounted to an increase in the housing goals in 2004 by the value of these incentives to the GSEs.

7. Microeconomic Theory of Incentives

In analyzing the likely effectiveness of bonus point incentives, it is useful to look at the algebra of housing goals and also at the income and substitution effects of bonus points. Perhaps surprisingly, it is not clear a priori that bonus point incentives will lead to significant increases in the GSEs' roles in these mortgage markets.

A. Algebra of housing goals

Taking the example of small multifamily bonus points, let:

SMFQ = goal-qualifying small multifamily units
SMFE = goal-eligible small multifamily units
gsm = goal-qualifying share of small multifamily units = SMFQ/SMFE

OQ = all other goal-qualifying units
OE = all other goal-eligible units
go = goal-qualifying share of all other units = OQ/OE

Q = all goal-qualifying units = SMFQ + OQ
E = all goal-eligible units = SMFE + OE
g = overall goal performance = Q/E

sm%e = small multifamily share of all eligible units = SMFE/E
o%e = other share of all eligible units = OE/E

Then

g = Q/E = [SMFQ + OQ]/[SMFE + OE] = [SMFQ/SMFE]*[SMFE/E] + [OQ/OE]*[OE/E]

or <u>g = sm%e * gsm + o%e * go</u>

<u>That is, g = weighted average of gsm and go</u>

To take a specific example – suppose that there are no bonus points and:

sm%e = 10%, o%e = 90%

gsm = 40%, go = 30% [that is, small MF properties are more "goal-rich" than other properties]

then g = 10% * 40% + 90% * 30% = 4% + 27% = 31%

Now if policymakers award double-credit (bonus points) for goal-qualifying small multifamily properties, in effect, gsm = 80% and in the absence of any change in the GSE's behavior:

g = 10% * 80% + 90% * 30% = 8% + 27% = 35%

So in the absence of any change in behavior, goal performance rises from 31% to 35%
But the aim of bonus points is to <u>increase</u> sm%e above the base level of 10%

For example if, as a result of bonus points, sm%e doubles to 20%:

g = 20% * 80% + 80% * 30% = 16% + 24% = 40%

<u>Whether or not bonus points lead to an increase in the small multifamily share of purchases (sm%e) presumably depends on the level of the housing goal set by policymakers:</u>

- If the housing goal <u>exceeds</u> 35%, the GSE, with goal performance g = 35%, falls short of goal even with bonus points, and it is likely to increase the small multifamily share of its purchases (sm%e) to meet the goal;

- If the housing goal <u>equals</u> 35%, the GSE just meets the goal with bonus points without changing its behavior, but it is still somewhat likely to increase the small multifamily share (sm%e), to provide a "cushion" over the goal; but

- If the housing goal <u>is less than</u> 35%, the GSE exceeds the goal with bonus points, even without changing its behavior, and it is <u>less likely</u> to increase its small multifamily share (sm%e).

In the third case, the GSE might not want to increase the small multifamily purchase share (sm%e) in order to exceed the housing goal by a wider margin, for several reasons:

1. This might increase risk and/or reduce profitability for the GSE.

2. Exceeding goals by a wide margin might lead policymakers to believe goals are "too low" and increase the goals for future years.

The conclusion of this analysis is that if policymakers want bonus points to have an effect, they should set high goals, to make GSE "stretch their efforts" to reach the goals. In effect, bonus points provide the "carrot" and high goals provide the "stick" to achieve the desired result.

7. Microeconomic Theory of Incentives

<u>B. Income and Substitution Effects: Theory of Labor Supply</u>

The familiar microeconomic theory of labor supply is shown in terms of income (y-axis) vs. leisure (x-axis) indifference curves. In this framework, a higher wage makes work more attractive (<u>substitution effect</u>), encouraging the worker to work <u>more</u> hours. On the other hand, a higher wage increases a worker's income from working the same number of hours (<u>income effect</u>), encouraging worker to work <u>fewer</u> hours, as long as the income elasticity of leisure exceeds zero. The net effect from this theory is uncertain.

Empirical studies have suggested that in some cases the income effect is stronger than the substitution effect, leading to a backward-bending supply of labor curve.[1] [In the extreme case, the worker's goal is a fixed given level of income (Y), in which case a 10% increase in the wage rate (w) leads to an offsetting reduction in hours worked (h)—that is, the labor supply curve takes the hyperbolic form: hours worked = target income/ hourly wage; i.e., h = Y/w.]

7. Microeconomic Theory of Incentives

<u>C. Income and Substitution Effects: GSE Bonus Points</u>

Bonus points can be analyzed in the same indifference curve framework used in the labor supply question. For the housing goals, as shown in **Figure 1**, the x-axis is number of <u>credits</u> toward the goals from goal-qualifying small multifamily (SMF) units financed. [As you move out along the x-axis, you finance more SMF units and get more credit toward the goals.]

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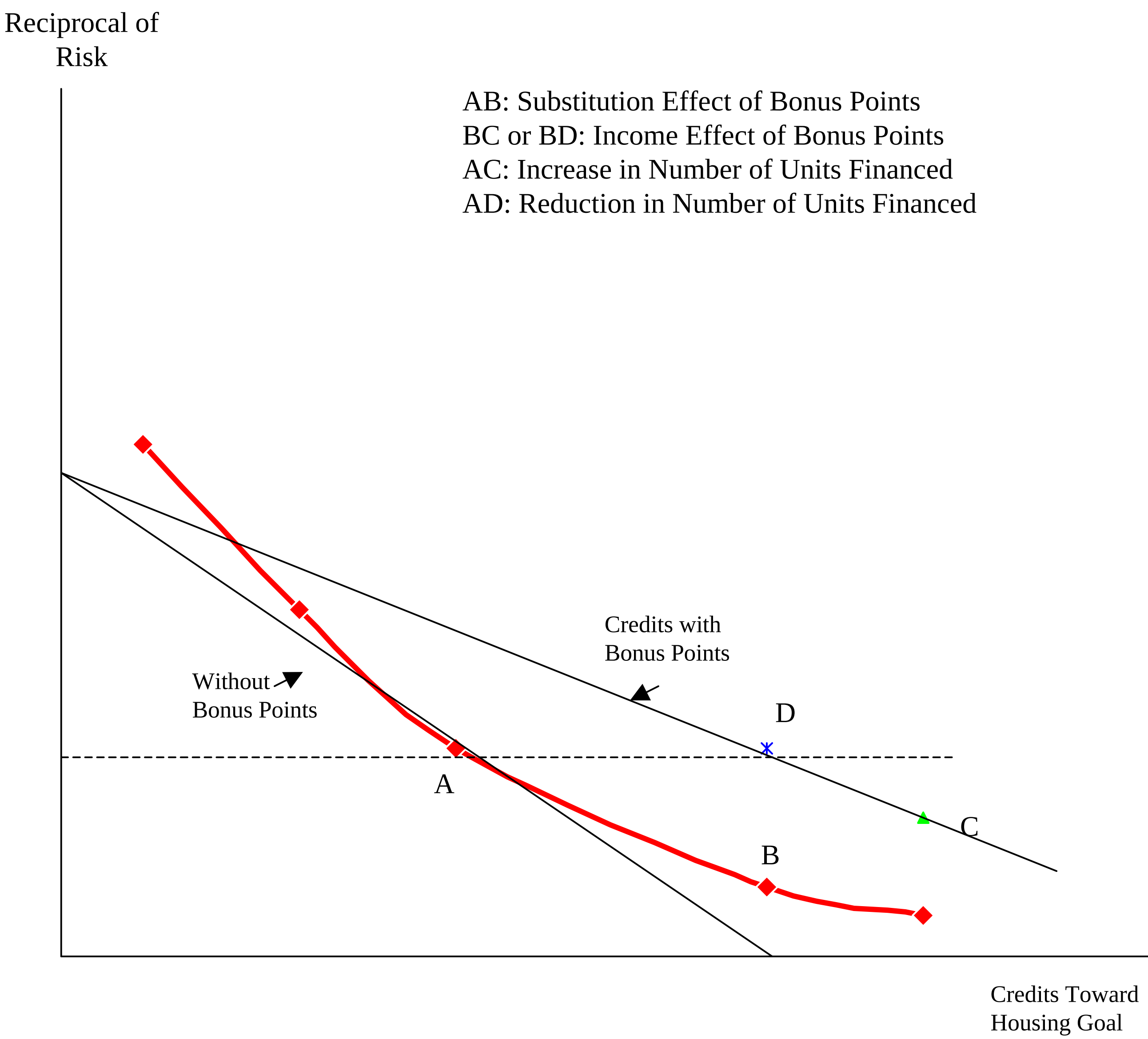
[1] See, for example, M. F. Bognanno, J. S. Hixson, and J.R. Jeffers, "The Short-Run Supply of Nurse's Time," *Journal of Human Resources*, Winter 1974, and Paul B. Manchester, "Comment," *Journal of Human Resources*, Spring 1976.

Figure 1
Indifference Curve
Analysis of Bonus Points



If we assume that small multifamily mortgages are riskier (or less profitable) than other mortgages, then the y-axis is the reciprocal of the amount of risk associated with the number of SMF units financed. [As you move out along the y-axis, risk falls, thus the reciprocal of risk rises, a desirable outcome.]

The GSE is assumed to have indifference curves between the number of goal-qualifying SMF units financed and the risk from such units. That is, as the number of SMF units financed increases, it is assumed that risk increases [the reciprocal of risk falls] and you move down the y-axis and the indifference curve between SMF units financed and risk.

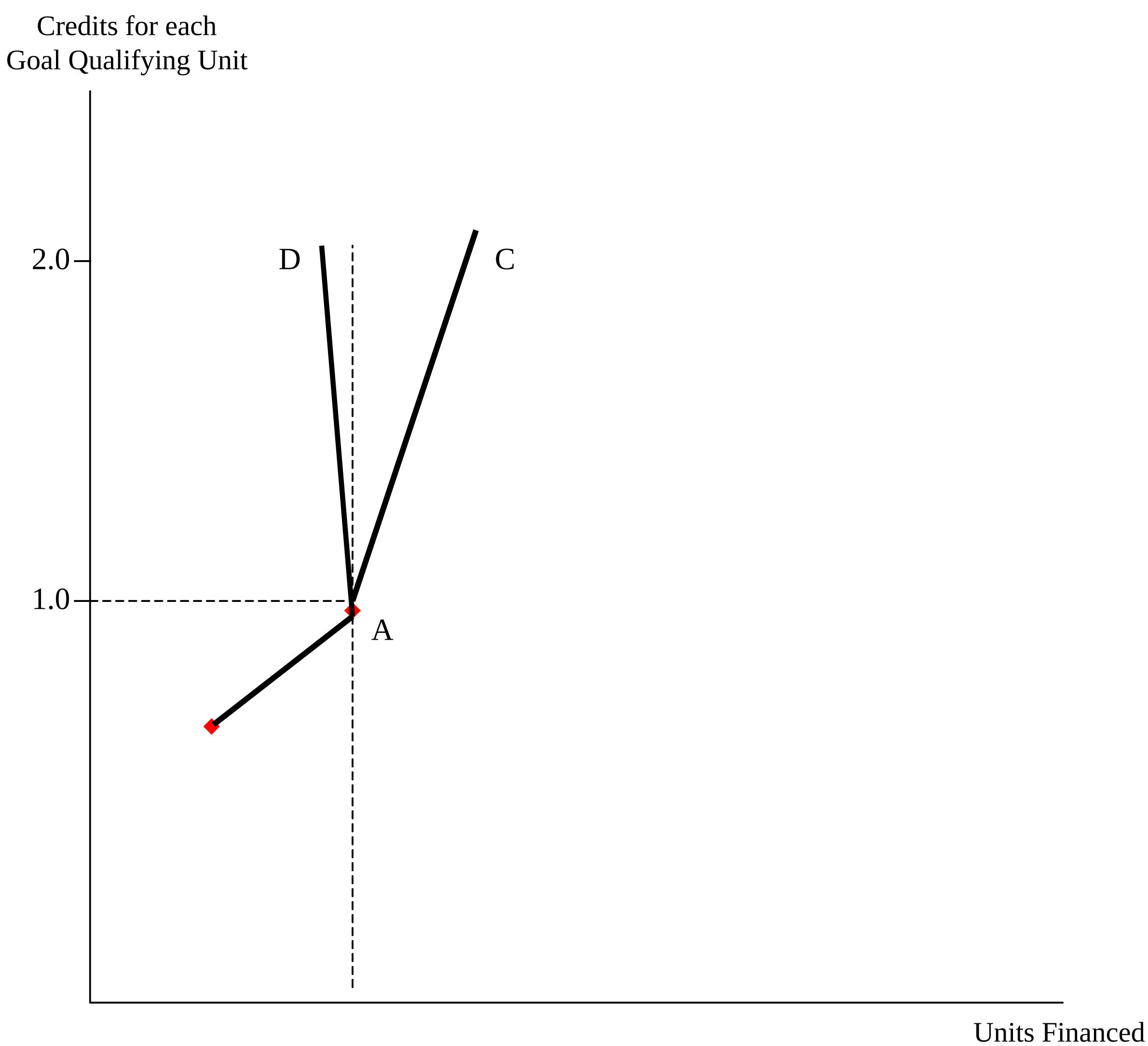
The budget constraint line shows the opportunities available to the GSE. It intersects the x-axis at the maximum number of SMF units the GSE could finance, which would be the maximum number available in the primary market. The budget constraint line intersects the y-axis at the [reciprocal of] the amount of risk associated with financing no SMF units. [This assumes that risk increases at a steady rate-i.e., the reciprocal of risk falls at a steady rate as the number of SMF units financed increases.]

As usual, the GSE maximizes welfare where the budget constraint line is tangent to the highest risk-SMF indifference curve attainable, at Point A in Figure 1. Bonus points reduce the slope of the budget constraint line—that is, for any given amount of risk, although you finance the same number of SMF units, you get twice as many credits, since each unit financed counts twice as much toward the housing goals. That is, the GSE can now attain a higher indifference curve between [the reciprocal of] risk and the number of credits from financing SMF units financed.

In this framework the substitution effect of bonus points causes the GSE to increase the number of credits from the SMF units financed—that is, the GSE slides down an indifference curve, financing more SMF units, from Point A to Point B in Figure 1. Under the income effect, the GSE moves outward to a higher indifference curve—that is, it reduces the level of risk [increases the reciprocal of risk] which means that it finances fewer SMF units, though it gets more credit for the units financed, since each SMF dwelling unit financed now counts as two credits. This is shown in Figure 1 as moving from Point B to Point C or Point D.

The net effect from theory is uncertain, but this suggests that if the income effect is greater than the substitution effect, bonus points could actually lead to a reduction in the number of SMF units financed. This is shown in **Figure 2**, as the move from Point A to Point D; the case where the income effect is less than the substitution effect is shown as the move from Point A to Point C in Figure 2. This is a somewhat surprising theoretical result, but the basic idea in this model is that the GSE in effect “spends” some of the bonus points by financing fewer SMF units, in order to reduce risk, just as a worker might “spend” some of his higher wage by working less and taking more leisure.

Figure 2
Goal Qualifying Units Financed Curve



8. Hypotheses to be tested about the effects of bonus points for small multifamily (SMF) mortgages and mortgages on owner-occupied 2-4 unit (OO24) properties

The remainder of this presentation will test seven hypotheses about the likely effects of the bonus points that were in effect for the GSEs during the 2001-03 period. These are:

Hypothesis A: The GSEs will increase their financing of SMF units with bonus points (the common expectation, although contrary to one possible theoretical result).

Hypothesis B: The effects of SMF bonus points will be stronger for Fannie Mae than for Freddie Mac, since Freddie Mac, with the temporary adjustment factor (TAF = goal-qualifying large MF units count as 1.35 units), has less of an incentive to finance small multifamily units relative to large multifamily units.

Hypothesis C: Since only goal-qualifying SMF units count towards the housing goals, the goal-qualifying shares of SMF units financed by the GSEs should increase.

Hypothesis D: The discontinuation of SMF bonus points in 2004 will cause the GSEs to decrease their role in the SMF market, but not to pre-2001 levels, since the GSEs will have had more experience in the SMF market, will have established more relationships with SMF primary market lenders, and will have better guidelines for underwriting such properties.

Hypothesis E: The GSEs will increase their financing of OO24 units with bonus points (the common expectation, although contrary to one possible theoretical result).

Hypothesis F: Since only goal-qualifying OO24 units count towards the housing goals, the goal-qualifying shares of OO24 units financed by the GSEs should increase.

Hypothesis G: The discontinuation of OO24 bonus points in 2004 will cause the GSEs to decrease their role in the OO24 market, but not to pre-2001 levels, since the GSEs will have had more experience in the OO24 market, will have established more relationships with OO24 primary market lenders, and will have better guidelines for underwriting such properties.

9. Results of Tests of Hypotheses A and B

Ideally, annual data on the number of small multifamily units financed in the primary market would be available, and one could measure whether or not the GSEs increased their "market share"—that is, the percentages of such units that they financed. But there is no reliable source of information on SMF units financed in each year.[2]

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[2] Data submitted in accordance with the Home Mortgage Disclosure Act (HMDA) includes information on multifamily properties, but it does not contain the number of units in the property. The 2003 American Housing Survey (AHS) reported that there were 11.5 million dwelling units in 5-49 unit properties, out of 14.5 million multifamily units, but the AHS measures the stock of multifamily units in existence, not the

Thus I have assumed that SMF units financed in the primary market remain the same as a share of all multifamily units financed in the primary market. Then the question is whether the SMF percentage of all multifamily units financed by each GSE is higher in 2001-03 than in the years prior to 2001.

This framework assumes that other market factors do not change—for example, if SMF properties suddenly became much less risky than large multifamily (LMF) properties, the GSEs might increase their role in the SMF market, even in the absence of bonus points.[3]

HUD has data on the number of SMF units and the number of LMF units financed by each GSE for all years since 1993. This data is available from HUD's Public Use Data Base, and from aggregations of such data published by HUD.

Table 1 shows the total numbers of small and large multifamily units financed by each GSE for 2000-2003.

Clearly both GSEs increased their roles in the SMF market by huge amounts between 2000 and 2003, with Fannie Mae's 2003 purchases 32 times their 2000 level, and Freddie Mac's purchases 61 times their 2000 level. And SMF purchases rose from 2 percent of Fannie Mae's multifamily purchases in 2000 to 29 percent in 2003, and for Freddie Mac, from 2 percent in 2000 to 31 percent in 2003.

Thus Hypothesis A is true, but Hypothesis B (the effect of small multifamily bonus points on Freddie Mac is less than the effect of Fannie Mae) is false.

10. Results of Test of Hypothesis C

Table 2 shows the goal-qualifying shares of small multifamily units for each GSE for each goal, 2000-2003. Hypothesis C is that the goal-qualifying shares of SMF units financed should increase, since only goal-qualifying units receive bonus points. However, the average goals-qualifying shares were lower for all three goals for Fannie Mae in 2001-03 than in 2000.

For Freddie Mac, the average goals-qualifying shares were not significantly higher in 2001-03 than in 2000 for the low- and moderate income goal and the special affordable goal. However, the average share of Freddie Mac's small multifamily units qualifying for the underserved areas goal was 87 percent in 2001-03, which was significantly greater

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flow of mortgages on such properties. (The corresponding AHS figures for newly-constructed multifamily units were that 466,000 of the 580,000 total multifamily units were in 5-49 unit properties.)

[3] Also, this analysis does not distinguish between mortgages financing purchases of multifamily properties and mortgages for refinancing multifamily properties, an important distinction in the single-family mortgage market.

Table 1

GSEs' Multifamily Loan Volume, 2000-03

Year	Category	Fannie Mae Small MF	Fannie Mae Large MF	Fannie Mae Total MF	Freddie Mac Small MF	Freddie Mac Large MF	Freddie Mac Total MF
2003	Units (thou.)	231	578	810	181	413	594
	% Total MF Units	28.6%	71%		30.5%	69%	
2002	Units (thou.)	78	384	461	44	289	333
	% Total MF Units	16.8%	83%		13.2%	87%	
2001	Units (thou.)	37	466	504	50	265	316
	% Total MF Units	7.4%	93%		16.0%	84%	
2001-03	Units (thou.)	346	1,429	1,775	276	967	1,243
Total	% Total MF Units	**19.5%**	80%		**22.2%**	78%	
2000	Units (thou.)	7.2	282	290	3.0	161	164
	% Total MF Units	**2.5%**	98%		**1.8%**	98%	
2001-03 *minus* 2000	% Total MF Units	**17.0%**			**20.4%**		

Conclusions:

Hypothesis A: GSEs will increase their financing of small multifamily units as a share of all multifamily units financed: TRUE*

Hypothesis B: FNM will increase its financing of SMF units more than FRE, because FRE also receives 35% bonus for financing goal-qualifying units in large multifamily properties: FALSE

*Small MF share of all MF units significantly greater in 2001-03 (19.5%/22.2%) than in 2000 (2.5%/1.8%) at <1% significance level for both GSEs.

Table 2

Goal-Qualifying Shares of GSEs' Small Multifamily Mortgages, 2000-03

		Fannie Mae Small MF Units			Freddie Mac Small MF Units		
Year	Category	Low-Mod Goal	Und.Areas Goal	Spec.Aff. Goal	Low-Mod Goal	Und.Areas Goal	Spec.Aff. Goal
2003	Eligible Units (thou.)	215	230	215	178	181	178
	Qualifying Units (thou.)	176	115	90	154	158	96
	Qualifying %	82%	50%	42%	87%	87%	54%
2002	Eligible Units (thou.)	58	77	58	22	22	22
	Qualifying Units (thou.)	52	50	30	19	20	13
	Qualifying %	89%	65%	52%	87%	88%	60%
2001	Eligible Units (thou.)	37	37	37	50	50	50
	Qualifying Units (thou.)	28	24	17	48	43	37
	Qualifying %	75%	64%	46%	96%	86%	73%
2001-03	Eligible Units (thou.)	310	345	310	250	254	250
Total	Qualifying Units (thou.)	256	189	138	222	220	146
	Qualifying %	**82.5%**	**54.9%**	**44.4%**	**88.8%**	**86.9%**	**58.4%**
2000	Eligible Units (thou.)	7.2	7.2	7.2	3.0	3.0	3.0
	Qualifying Units (thou.)	6.3	4.0	4.4	2.6	1.8	1.6
	Qualifying %	**87%**	**56%**	**61%**	**87%**	**61%**	**55%**
2001-03 *minus* 2000	Qualifying %	**-4.5%**	**-1.1%**	**-16.6%**	**1.8%**	**25.9%**	**3.4%**

Conclusions:

Hypothesis C: GSEs will increase goal-qualifying %s of their SMF units:
lower in 2001-03 than in 2000)

Source: *Federal Register*, 11/2/04, pp. 63688-89, 63775, 63804.
FALSE for Fannie Mae (qualifying %s
TRUE for Freddie Mac for underserved areas goal*

*UA share of Freddie Mac's small MF units significantly greater in 2001-03 (86.9%) than in 2000 (61.0%) at 10% significance level; differences not significant for Freddie Mac for the LM and SA goals.

than the figure of 61 percent in 2000, though Freddie Mac only financed 3,000 such units in 2000.

Overall, then, small multifamily bonus points did not appear to increase targeting of such purchases toward goal-qualifying properties.

11. Results of Test of Hypothesis D

Table 3 and **Table 4** present the data from Tables 1 and 2 for the GSEs through 2005.

This hypothesis says that the discontinuation of small multifamily bonus points in 2004 will cause the GSEs to decrease their role in the SMF market, but not to pre-2001 levels.

This hypothesis is born out by the data. As shown in Table 3, small properties accounted for 8.7 percent of all multifamily units financed by Freddie Mac in 2004, down from 22.2 percent in 2001-03, but above the 1.8 percent share in 2000. And the small multifamily share fell further in 2005, to 3.1 percent, which was not much higher than the pre-2001 share.

The corresponding small multifamily shares for Fannie Mae, shown in Table 4, were 12.5 percent in 2004, 19.5 percent in 2001-03, and 2.5 percent in 2000. But this share rebounded in 2005, to 19.2 percent, comparable to the share in 2001-03. These figures suggest that the GSEs responded quite differently to the expiration of small multifamily bonus points in 2004, with Fannie Mae retaining a significant presence in this market, unlike the case with Freddie Mac.[4]

In general, one might expect that the “goal-richness” of small multifamily units financed by the GSEs would have fallen in 2004-05, due to the expiration of bonus points. But, as also shown in Tables 3 and 4, with the exception of the underserved area share of units financed by Freddie Mac, the goals-qualifying shares in all cases were higher for both GSEs in 2004 than in 2001-03.

12. Results of Test of Hypothesis E

Table 5 shows the total numbers of units financed in owner-occupied 2-4 unit properties (OO24s), in investor-owned 1-4 unit rental properties (IO14s) units, and in owner-occupied 1-unit properties (OO1s) financed by each GSE for 2000-2003. In measuring the effectiveness of bonus points for financing goal-qualifying units in OO24 properties, possible bases for comparison are the GSEs’ role in the overall single-family rental market, and their role in the total single-family mortgage market, including all owner-occupied properties.

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[4] In dollar terms, Fannie Mae reported that its small multifamily mortgage purchases (defined as loans of up to $5 million) increased by 53 percent in 2005, to $5.2 billion, as reported in “Fannie Emphasizes Small MF Loans,” *National Mortgage News*, February 20, 2006, p. 10.

Table 3

Freddie Mac's Multifamily Loan Volume, Goal-Qualifying Shares, 2000-05

Year	Category	Multifamily Units Financed: Small MF	Large MF	Total MF	Category	Small MF Units Financed: Low-Mod Goal	Und.Areas Goal	Spec.Aff. Goal
2005	Units (thou.)	14	434	448	Elig. Units	14	14	14
	% Units	**3.1%**	97%		Qual. Units	13	10	10
					Qual. %	**94.4%**	**71.4%**	**72.2%**
2004	Units (thou.)	47	491	537	Elig. Units	46	47	46
	% Units	**8.7%**	91%		Qual. Units	44	33	27
					Qual. %	**96.5%**	**71.0%**	**60.2%**
2001-03 Total	Units (thou.)	276	967	1,243	Elig. Units	250	254	250
	% Units	**22.2%**	78%		Qual. Units	222	220	146
					Qual. %	**88.8%**	**86.9%**	**58.4%**
2000	Units (thou.)	3.0	161	164	Elig. Units	3.0	3.0	3.0
	% Units	**1.8%**	98%		Qual. Units	2.6	1.8	1.6
					Qual. %	**87%**	**61%**	**55%**
2004 *minus* 2001-03	% Units	**-13.5%**			Qual. %	**7.7%**	**-15.9%**	**1.9%**

Conclusion:

Hypothesis D1: The discontinuation of SMF bonus points in 2004 will cause Freddie Mac to decrease its role in the SMF market, but not to pre-2001 roles. TRUE*

*Small MF share of all MF units significantly less in 2004 (8.7%) and 2005 (3.1%) than in 2001-03 (22.2%) at <1% significance level, but continued to exceed share in 2000 (1.8%).

Table 4

Fannie Mae's Multifamily Loan Volume, Goal-Qualifying Shares, 2000-05

		Multifamily Units Financed				Small MF Units Financed		
Year	Category	Small MF	Large MF	Total MF	Category	Low-Mod Goal	Und.Areas Goal	Spec.Aff. Goal
2005	Units (thou.)	91	385	476	Elig. Units	91	91	91
	% Units	**19.2%**	81%		Qual. Units	68	63	42
					Qual. %	**74.5%**	**69.5%**	**45.8%**
2004	Units (thou.)	55	384	439	Elig. Units	45	55	45
	% Units	**12.5%**	88%		Qual. Units	38	34	23
					Qual. %	**84.4%**	**61.9%**	**51.2%**
2001-03 Total	Units (thou.)	346	1429	1,775	Elig. Units	310	345	310
	% Units	**19.5%**	80%		Qual. Units	256	189	138
					Qual. %	**82.5%**	**54.9%**	**44.4%**
2000	Units (thou.)	7.2	282	290	Elig. Units	7.2	7.2	7.2
	% Units	**2.5%**	98%		Qual. Units	6.3	4.0	4.4
					Qual. %	**87%**	**56%**	**61%**
2004 minus 2001-03	% Units	**-7.1%**			Qual. %	**1.9%**	**7.1%**	**6.9%**

Conclusion:

Hypothesis D2: The discontinuation of SMF bonus points in 2004 will cause Fannie Mae to decrease its role in the SMF market, but not to pre-2001 roles. TRUE for 2004*

*Small MF share of all MF units significantly less in 2004 (12.5%) than in 2001-03 (19.5%) at <1% significance level, but note that small MF share in 2005 (19.2%) returned to 2001-03 level (19.5%).

Table 5

GSEs' Single-Family Loan Volume, 2000-03

		Fannie Mae					Freddie Mac				
		Single-Family Rental (SFR)					Single-Family Rental (SFR)				
Year	Category	**OO24s**	IO14s	SFR Total	OO1s	Total SF	**OO24s**	IO14s	SFR Total	OO1s	Total SF
2003	Units (thou.)	369	632	1,001	8,283	9,284	159	198	357	4,802	5,159
	% SFR Units	36.8%	63%	100%			44.5%	55%	100%		
	% Total Units	4.0%	7%	11%	89%	100%	3.1%	4%	7%	93%	100%
2002	Units (thou.)	240	464	705	5,196	5,901	150	202	352	3,867	4,219
	% SFR Units	34.1%	66%	100%			42.7%	57%	100%		
	% Total Units	4.1%	8%	12%	88%	100%	3.6%	5%	8%	92%	100%
2001	Units (thou.)	185	299	484	3,906	4,390	98	165	264	2,802	3,065
	% SFR Units	38.2%	62%	100%			37.3%	63%	100%		
	% Total Units	4.2%	7%	11%	89%	100%	3.2%	5%	9%	91%	100%
2001-03	Units (thou.)	794	1,396	2,190	17,385	19,575	408	565	973	11,471	12,443
Total	% SFR Units	**36.2%**	64%	100%			**41.9%**	58%	100%		
	% Total Units	**4.1%**	7%	11%	89%	100%	**3.3%**	5%	8%	92%	100%
2000	Units (thou.)	85	189	274	1,730	2,004	52	87	139	1,375	1,514
	% SFR Units	**30.9%**	69%	100%			**37.2%**	63%	100%		
	% Total Units	**4.2%**	9%	14%	86%	100%	**3.4%**	6%	9%	91%	100%
2001-03	% SFR Units	**5.3%**					**4.7%**				
minus 2000	% Total Units	**-0.2%**					**-0.1%**				

Conclusions:

Hypothesis E: GSEs will increase their financing of rental units in single-family owner-occupied housing:
TRUE for Fannie Mae relative to all SF rental financing; FALSE relative to all SF financing (refi boom effect?)*

*OO24 share of Fannie Mae's SFR mortgages in 2001-03 (36.2%) significantly greater than in 2000 (30.9%) at

5% significance level; difference for Freddie Mac (4.7%) not statistically significant.

Relative to all single-family rental units, OO24s increased for Fannie Mae from 31 percent in 2000 to 37 percent in 2003, and for Freddie Mac, from 37 percent in 2000 to 45 percent in 2003. Thus, based on this measure, Hypothesis E, that the OO24 bonus points would cause the GSEs to increase their role in this market, appears to be true.

But relative to all single-family units, OO24s remained at 3-4 percent for both GSEs between 2000 and 2003. Thus by this measure, the OO24 bonus points do not appear to have stimulated the GSEs to step up their role in this market. The author has analyzed whether or not this result was affected by the unprecedented volume of refinances during the 2001-03 period. Since refinances were as common among OO24 properties as for other single-family properties, the conclusion that the OO24 bonus points were not effective in encouraging the GSEs to increase their role in this market, based on this measure, is still valid.

13. Results of Test of Hypothesis F

Table 6 shows the goal-qualifying shares of OO24 units for each GSE for each goal during the 2000-2003 period. Under Hypothesis F, the goal-qualifying shares of OO24 units should increase as a result of the bonus points. Clearly this was not the case—the goal-qualifying shares of OO24 units in 2003 were at the lowest level of any year for Freddie Mac, and they were not generally higher for Fannie Mae in 2003 than in 2001.

The apparent failure of the bonus points on OO24 properties to stimulate the GSEs' role in this market and to encourage the GSEs' to increase their focus on goal-qualifying OO24 units may have resulted from the somewhat complex threshold feature of this incentive. It may have been more difficult for the GSEs to take this incentive into account than it was for the bonus points on small multifamily units. This conclusion raises the question of whether a smaller multiplier (less than double credit), applied to all goal-qualifying OO24 units, might have been a more effective incentive than double credit for only those goal-qualifying OO24 units above the threshold.

14. Results of Test of Hypothesis G

Table 7 and **Table 8** present the data from Tables 5 and 6 for the GSEs through 2005. Hypothesis G says that the discontinuation of OO24 bonus points in 2004 will cause the GSEs to decrease their role in the OO24 market, but not to pre-2001 levels.

The first part of this hypothesis is born out by the data for Freddie Mac—OO24 properties accounted for 37.1 percent of all single-family rental units financed by Freddie Mac in 2004, down from 41.9 percent in 2001-03. But in fact this share was slightly below the corresponding share of 37.2 percent in 2000, casting doubt on the longer term effects of OO24 bonus points on Freddie Mac's role in this market. The rebound in this share in 2005, despite the absence of bonus points, reinforces the conclusion that Freddie

Table 6

Goal-Qualifying Shares of Units in GSEs' Owner-Occupied 2-4 Unit Rental Property Mortgages, 2000-03

		Fannie Mae OO24 Units			Freddie Mac 0024 Units		
Year	Category	Low-Mod Goal	Und.Areas Goal	Spec.Aff. SA Goal	Low-Mod Goal	Und.Areas Goal	Spec.Aff. SA Goal
2003	Eligible Units (thou.)	356	357	356	156	156	156
	Qualifying Units (thou.)	197	213	104	100	78	49
	Qualifying %	55%	60%	29%	64%	50%	31%
2002	Eligible Units (thou.)	230	232	230	146	146	146
	Qualifying Units (thou.)	130	144	69	101	89	54
	Qualifying %	56%	62%	30%	69%	61%	37%
2001	Eligible Units (thou.)	175	176	175	96	97	96
	Qualifying Units (thou.)	101	106	55	67	54	35
	Qualifying %	58%	60%	31%	69%	56%	36%
2001-03	Eligible Units (thou.)	760	765	760	399	399	399
Total	Qualifying Units (thou.)	428	462	228	268	221	138
	Qualifying %	**56%**	**60%**	**30%**	**67%**	**55%**	**35%**
2000	Eligible Units (thou.)	77	82	65	50	51	50
	Qualifying Units (thou.)	47	49	22	35	29	19
	Qualifying %	**60%**	**59%**	**33%**	**69%**	**57%**	**38%**
2001-03 *minus* 2000	Qualifying %	**-4%**	**1%**	**-3%**	**-2%**	**-1%**	**-3%**

Conclusions:

Hypothesis F: GSEs will increase goal-qualifying %s of their OO24 units:
FALSE for Fannie Mae
FALSE for Freddie Mac

Source: *Federal Register* , 11/2/04, pp. 63688-89, 63775, 63804.

Table 7

Freddie Mac's Single-Family Loan Volume, OO24 Goal-Qualifying Shares, 2000-05

		Single-Family Units Financed						Freddie Mac 0024 Units		
		Single-Family Rental								
Year	Category	OO24s	IO14s	SFR Total	OO1s	Total SF	Category	Low-Mod Goal	Und.Areas Goal	Spec.Aff. SA Goal
2005	Units (thou.)	169	229	398	2,920	3,318	Elig. Units	167	167	167
	% SFR Units	**42.5%**	58%	100%			Qual. Units	62	127	36
	% Total Units	**5.1%**	7%	12%	88%	100%	Qual. %	**37%**	**76%**	**22%**
2004	Units (thou.)	135	230	365	2,616	2,982	Elig. Units	134	133	134
	% SFR Units	**37.1%**	63%	100%			Qual. Units	83	88	44
	% Total Units	**4.5%**	8%	12%	88%	100%	Qual. %	**62%**	**66%**	**33%**
2001-03 Total	Units (thou.)	408	565	973	11,471	12,443	Elig. Units	399	399	399
	% SFR Units	**41.9%**	58%	100%			Qual. Units	268	221	138
	% Total Units	**3.3%**	5%	8%	92%	100%	Qual. %	**67%**	**55%**	**35%**
2000	Units (thou.)	52	87	139	1,375	1,514	Elig. Units	50	51	50
	% SFR Units	**37.2%**	63%	100%			Qual. Units	35	29	19
	% Total Units	**3.4%**	6%	9%	91%	100%	Qual. %	**69%**	**57%**	**38%**
2004 minus 2001-03	% SFR Units	**-4.8%**					Qual. %	**-5.6%**	**10.5%**	**-2.0%**

Conclusion:

Hypothesis G1: The discontinuation of OO24 bonus points in 2004 will cause Freddie Mac to decrease OO24 market.

TRUE for Freddie Mac relative to all single-family rental units, but not relative toall single-family units.*

*OO24 share of Freddie Mac's SFR mortgages significantly less in 2004 (37.1%) than in 2001-03 (41.9%) at 5% significance level.

Table 8

Fannie Mae's Single-Family Loan Volume, OO24 Goal-Qualifying Shares, 2000-05

		Single-Family Units Financed						Fannie Mae 0024 Units		
		Single-Family Rental						Low-Mod	Und.Areas	Spec.Aff.
Year	Category	OO24s	IO14s	SFR Total	OO1s	Total SF	Category	Goal	Goal	SA Goal
2005	Units (thou.)	123	327	449	2,976	3,425	Elig. Units	121	121	121
	% SFR Units	**27.3%**	73%	100%			Qual. Units	61	90	35
	% Total Units	**3.6%**	10%	13%	87%	100%	Qual. %	**50%**	**75%**	**29%**
2004	Units (thou.)	203	365	568	3,828	4,396	Elig. Units	150	149	150
	% SFR Units	**35.8%**	64%	100%			Qual. Units	78	95	43
	% Total Units	**4.6%**	8%	13%	87%	100%	Qual. %	**52%**	**64%**	**29%**
2001-03 Total	Units (thou.)	794	1396	2,190	17,385	19,575	Elig. Units	760	765	760
	% SFR Units	**36.2%**	64%	100%			Qual. Units	428	462	228
	% Total Units	**4.1%**	7%	11%	89%	100%	Qual. %	**56%**	**60%**	**30%**
2000	Units (thou.)	85	189	274	1,730	2,004	Elig. Units	77	82	65
	% SFR Units	**30.9%**	69%	100%			Qual. Units	47	49	22
	% Total Units	**4.2%**	9%	14%	86%	100%	Qual. %	**60%**	**59%**	**33%**
2004 minus 2001-03	% SFR Units	**-0.5%**					Qual. %	**-4.3%**	**3.5%**	**-1.1%**

Conclusion:

Hypothesis G2: The discontinuation of OO24 bonus points in 2004 will cause Fannie Mae to decrease its role in the OO24 market.

FALSE--decrease in OO24 share relative to all single-family rental units from 36.2% in 2001-03 to 35.8% in 2004

not statistically significant.

Mac's role in this market has not been greatly affected one way or the other by the presence or the absence of these bonus points.

However, this hypothesis is not supported by the data for Fannie Mae-- OO24 properties accounted for 35.8 percent of all single-family rental units financed by Fannie Mae in 2004, down only slightly from 36.2 percent in 2001-03, which was above the corresponding share of 30.9 percent in 2000. This suggests that the OO24 bonus points may have had a longer term effect on Fannie Mae's role in this market. However, the data for 2005 indicate a drop in Fannie Mae's role to the pre-bonus point years.

In general, one might expect that the "goal-richness" of OO24 units financed by the GSEs would have fallen in 2004, due to the expiration of bonus points. As also shown in Tables 7 and 8, there is some evidence of such an effect for both GSEs with regard to the low- and moderate-income and special affordable goals, for which the goal-qualifying shares were lower in 2004 than in 2001-03. But the shares of OO24 units qualifying for the underserved areas goal were higher in 2004 than in 2001-03 for both GSEs.

15. Conclusions

Bonus points for GSE purchases of goal-qualifying mortgages on small multifamily properties had a major impact on the GSEs' role in this segment of the mortgage market in 2001-03. Contrary to expectation, the impact appears to have been greater for Freddie Mac than for Fannie Mae.

The discontinuation of small multifamily bonus points appears to have had much more impact on Freddie Mac's role in this market than on Fannie Mae's role. Freddie Mac's role was not appreciably greater in 2005 than in 2000, prior to the establishment of these bonus points. On the other hand, Fannie Mae's role in 2005 was comparable to its role in 2001-03, despite the expiration of small multifamily bonus points. The reasons for the difference between the GSEs' responses to the expiration of bonus points are not known.

Bonus points for GSE purchases of goal-qualifying mortgages on owner-occupied 2-4 unit properties do not appear to have had a major impact on the GSEs' role in this segment of the mortgage market. The complex threshold feature of bonus points for GSE purchases of goal-qualifying mortgages on owner-occupied 2-4 unit properties may have limited its effectiveness. A lower multiplier, applied to all goal-qualifying units financed in OO24 properties, might have been more effective.