

**AN ANALYSIS OF GSE PURCHASES OF MORTGAGES  
FOR AFRICAN-AMERICAN BORROWERS AND THEIR NEIGHBORHOODS**

**ABSTRACT**

This study examines the record of Fannie Mae and Freddie Mac in providing mortgage funds for African-American borrowers and their neighborhoods. The study has four main findings. First, Fannie Mae has traditionally out-performed Freddie Mac in purchasing loans for African-American borrowers and their neighborhoods; however, between 1997 and 1999, there was a shift in the relative performance of the two GSEs, as Fannie Mae's performance declined and Freddie Mac's performance increased. Second, both GSEs lag the conventional conforming market in funding mortgages for African-American borrowers and their neighborhoods. Third, the GSEs' shares of mortgage originations for both upper-income and lower-income African-American borrowers appear low. The GSEs' market shares for loans to upper-income African-American borrowers are similar to their market shares for loans to very low-income White borrowers. Finally, the market share data reported in this paper illustrate the relatively small role that the GSEs play in funding loans for African-American borrowers in the overall (conventional and government) mortgage market.

# AN ANALYSIS OF GSE PURCHASES OF MORTGAGES FOR AFRICAN-AMERICAN BORROWERS AND THEIR NEIGHBORHOODS<sup>1</sup>

## I. Introduction and Main Findings<sup>2</sup>

### A. Background and Purpose

The problems African-American borrowers face obtaining access to mortgage credit have been well documented in the economics literature. Studies have used Home Mortgage Disclosure Act (HMDA) data to show that African-American applicants experience higher mortgage denial rates than white applicants, even after controlling for the income of the applicant (Scheessele, 1999). Econometric and testing studies have presented evidence of discrimination against African-American borrowers on the part of primary lenders.<sup>3</sup> In addition, there is a concern that overly rigid underwriting standards reduce the likelihood that lower-income and minority borrowers can obtain home loans in the conventional portion of the mortgage market (Urban Institute, 1998a; 1999). Other studies have shown that cash-constrained African-American and Hispanic families seeking their first home purchase must rely primarily on the low down payments and flexible underwriting standards offered by FHA.<sup>4</sup> Recent studies have shown that subprime lenders, rather than prime conventional lenders, provide most of the refinance loans in African-American neighborhoods; prime conventional lenders, on the other hand, operate mainly in predominantly white neighborhoods.<sup>5</sup> Thus, it appears that African-American families seeking a first home as well as those seeking to refinance an existing loan often do not have access to the less expensive financial terms offered in the prime conventional market.

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<sup>2</sup> The paper's main findings are provided on pages 5-8.

<sup>3</sup> See Munnell *et al.* (1996) for econometric evidence that lenders discriminate against African-American mortgage applicants in the Boston metropolitan area. Based on an audit study and a review of the existing literature, the Urban Institute (1998b) concludes that minority borrowers in the United States face discrimination from mortgage lending institutions. The remaining literature on discrimination in mortgage lending is voluminous, with the various studies often reaching different conclusions. See Berkovec *et al.* (1996a,b), Bostic (1997), Calomiris *et al.* (1992), Goering and Weink (1996), Horne (1994), Hunter (1995), LaCour-Little (1996, 1999), Ladd (1998), Lang and Nakamura (1993), Myers (2000), Yezer *et al.* (1994) and Yinger (1996). The best overview of studies of lending discrimination is provided by The Urban Institute (1998a, b).

<sup>4</sup> See Bunce *et al.* (1995) and U.S. General Accounting Office (1998). For analyses arguing that conventional lenders steer minorities to higher-cost FHA loans, see Bradford (2000a), Green and Associates (1998) and National Training and Information Center (1997).

<sup>5</sup> See ACORN (2000), Immergluck and Wiles (1999), National Training and Information Center (1999), Scheessele (1999), U.S. Department of HUD (2000e), and Bunce *et al.* (2000). For a useful summary of research on the subprime market, see the HUD-Treasury report, *Curbing Predatory Home Mortgage Lending: A Joint Report*, June 2000.

But there is also a body of evidence that presents a more optimistic picture of affordable lending performance of conventional lenders. During the 1990s, conventional lenders introduced and marketed special lending programs to lower income families and their neighborhoods, they revamped their underwriting standards to deal with the special circumstances of lower-income families, and they attempted to prevent mortgage defaults by offering borrower counseling programs and developing innovative loss mitigation programs. Other actors in the conventional market, including private mortgage insurers, Fannie Mae and Freddie Mac, also played a role in what one study termed a revolution in affordable lending (Rutgers University, 1998). HMDA data show substantial growth in conventional lending to African-American and other minority borrowers during the 1990s, which suggests that these new affordable lending initiatives are having an impact. Between 1993 and 1999, the number of loans to African-American and low-income borrowers more than doubled (while loans to white and upper-income borrowers increased by about 50 percent). Most observers generally agree that in addition to low interest rates and economic expansion, stronger regulation of depositories' Community Reinvestment Act (CRA) obligations and the affordable housing goals that HUD established for Fannie Mae and Freddie Mac also contributed to this renewed emphasis on minority and low-income lending in the conventional market (Litan *et al.*, 2000). Evidence is also growing that lending to lower-income families can be profitable, particularly when combined with intensive loss mitigation efforts to control credit risk.<sup>6</sup>

This study examines the record of Fannie Mae and Freddie Mac in providing mortgage funds for African-American borrowers and their neighborhoods. Fannie Mae and Freddie Mac are the two major government-sponsored enterprises (GSEs) in the secondary mortgage market. They purchase mortgages from primary lenders and either hold the mortgages in portfolio or sell them to other investors as mortgage-backed securities, with a guarantee that the investors will receive full and timely payment of principal and interest.<sup>7</sup> Several studies have documented the dominant role that the GSEs' purchase guidelines and underwriting standards play in determining the types of loans that primary lenders will originate in the conventional conforming market.<sup>8</sup>

In 1992, Congress expressed concern about the GSEs' funding of affordable loans for lower-income families, particularly those living in neighborhoods that had historically been underserved by the

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<sup>6</sup> While there is limited information on borrower defaults associated with the new affordable lending programs, there are some encouraging signs. For example, in a recent survey conducted by the Federal Reserve, lenders reported that most CRA loans are profitable although not as profitable as the lenders' standard products (Board of Governors, 2000). For an overview of the early default performance of the new affordable programs and of industry efforts to control default risk, see U.S. Department of Housing and Urban Development (February 2000).

<sup>7</sup> During the past few years, the GSEs have also started purchasing and holding in portfolio their own mortgage-backed securities. For explanations of the overall role of Fannie Mae and Freddie Mac in the mortgage market, see the four Congressionally-mandated privatization studies conducted during 1996 by the U.S. Congressional Budget Office (1996), U.S. General Accounting Office (1996), U.S. Department of Housing and Urban Development (1996), and U.S. Department of Treasury (1996).

<sup>8</sup> For a discussion of the GSEs' underwriting standards, see Rutgers University (1998), The Urban Institute (1999), and Van Order and Schnare (1994).

conventional market. To encourage the GSEs to increase their purchases of these loans, Congress established three affordable housing goals that the GSEs must meet: the Low- and Moderate-Income Goal, the Special Affordable Goal, and the Underserved Areas Goal. HUD, which has general regulatory authority over the GSEs, was tasked to establish specific targets for these three goals. Explanations of these goals are provided in HUD's recently issued final GSE rule, which calls for an increase in the levels of the three housing goals (U.S. Department of HUD, 2000d).

There have been several studies by HUD staff and other researchers concerning the GSEs' performance in purchasing loans for lower-income and minority families.<sup>9</sup> These studies focus on whether or not the GSEs are leading or lagging the market in funding affordable loans. Leading or lagging the market is typically determined by comparing the percentage of a GSE's purchases accounted for by a particular affordable lending category (say loans for low-income families) with the corresponding percentage for loans originated in the overall conventional conforming market. Most of these studies conclude that while the GSEs have improved their affordable loan purchases under the housing goals, their performance lags that of primary lenders (such as banks and thrifts) in the overall conventional market.<sup>10</sup>

In 1992, Congress expressed concern about the GSEs' purchases of loans for African-American and other minority borrowers. In its report on the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (FHEFSSA), the Senate Banking Committee found "troubling" HMDA statistics that indicated a low level of GSE purchases in neighborhoods with a high minority population.<sup>11</sup> Congress was also concerned about the effects of the GSEs' underwriting standards on minority groups.<sup>12</sup> Two of the main objectives of the affordable housing goals are to encourage Fannie Mae and Freddie Mac to introduce new affordable lending programs in underserved areas and to make prudent adjustments to their underwriting standards that recognize the special circumstances of lower-income families and others who have been underserved by the mortgage market.<sup>13</sup> The importance of the GSEs' purchases under the housing goals for African-

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<sup>9</sup> See Bunce and Scheessele (1996, 1998), Canner and Gabriel (1992), Lind (1996a,b; 2000), Manchester (1998), Manchester *et al.* (1998), and U.S. Department of HUD (1996; February 2000; March 2000). The GSE grant studies that HUD recently funded used a variety of data bases and analytical techniques to examine the GSEs' affordable lending performance; in particular, see Boxall and Silver (2000), Bradford (2000b), Case and Gillen (2000), and Williams (2000).

<sup>10</sup> Fannie Mae and Freddie Mac have each conducted similar analyses but reached different conclusions -- they conclude that they match or exceed the primary market in funding affordable loans for lower-income families. Their analysis is reported in their comments on HUD's proposed GSE rule; see Fannie Mae (2000) and Freddie Mac (2000) as well as Freddie Mac (1995). For HUD's response to the GSEs' comments, see HUD (2000d).

<sup>11</sup> 102d Congress, S. Rep. No. 282, page 33.

<sup>12</sup> *Ibid.*, page 31 and pages 42-43.

<sup>13</sup> HUD's definition of "underserved areas" is based on the minority share of the census tract population, as well as the level of census tract income. This definition is based on research by HUD and others, which has shown that such tracts have high mortgage denial rates and low mortgage origination rates, and thus are presumably what Congress had in mind in calling for goals for the GSEs for purchases of mortgages in underserved areas. For a

Americans can be seen from the data. Because African-Americans are more likely than others to have low incomes and live in underserved neighborhoods, they can be important beneficiaries of goals-qualifying purchases by Fannie Mae and Freddie Mac. For example, in 1998, 55 percent of the GSEs' purchases of loans for African-American borrowers qualified for the underserved areas goal, compared with only 22 percent of their purchases of loans for White borrowers. Thus, the issue of the GSEs' purchases of loans for African-Americans is linked to their performance under the affordable housing goals.

This study seeks to contribute to this issue by describing recent trends in the GSEs' purchases of loans for African-American borrowers and their neighborhoods. This study analyzes the loan-level data that the GSEs report to HUD on the characteristics of loans that they purchase. Several analyses of these data are presented in order to fully characterize the loans that the GSEs' have purchased. The analyses, however, are conducted at a very aggregated level, as the GSEs' purchases are reported either for the nation as a whole or for all metropolitan areas. Hopefully, this aggregated, descriptive approach will identify useful research topics and provide a framework for follow-up research of a more disaggregated nature.

## **B. Organization of the Paper**

The next subsection of this introduction presents the paper's main findings. Section II briefly reviews some special issues with the GSE data base that HUD maintains. Section III begins the analysis by presenting basic information on the borrower racial and ethnicity characteristics of the GSEs' purchases in 1997, 1998, and 1999. Section IV compares the performance of the GSEs and primary market lenders in funding loans for African-American borrowers and their neighborhoods during the years between 1995 and 1999. Then, the paper takes a more detailed look at the role of the GSEs in the mortgage market by comparing GSE purchases with market originations of loans for minorities at different income levels (Section V) and by comparing GSE purchases with market originations of loans in white and African-American neighborhoods (Section VI). Finally, Section VII considers the downpayment characteristics of loans that the GSEs purchase for both minorities and non-minorities.

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summary of research on underserved areas, see U.S. Department of Housing and Urban Development (2000c,d).

### C. Main Findings

There are several findings from this descriptive analysis of the GSEs' purchases of loans for African-American borrowers and their neighborhoods. The main findings are the following:

**(1) The GSEs purchase significant numbers of loans for African-American borrowers and even more loans for Hispanic and Asian-American borrowers.**

In 1999, the GSEs acquired 116,507 single-family (home purchase and refinance) loans for African-American borrowers, 184,050 loans for Hispanic borrowers, and 140,660 loans for Asian-American borrowers.

**(2) Loans for African-Americans account for a small share of each GSE's business.**

During 1999, 3.2 percent of Freddie Mac's single-family purchases and 3.0 percent of Fannie Mae's purchases were loans for African-American borrowers.

**(3) Fannie Mae has traditionally out-performed Freddie Mac in purchasing loans for African-American borrowers; however, recently, there has been a shift in the relative performance of the two GSEs, as Fannie Mae's performance has declined.**

The share of Fannie Mae's single-family business going to loans for African-American borrowers declined from 3.8 percent in 1997 to 3.0 percent in 1999, while the corresponding share for Freddie Mac increased from 2.8 percent in 1997 to 3.2 percent in 1999.

**(4) The GSEs lag the conventional conforming market in funding home purchase loans for African-American borrowers living in metropolitan areas. Since 1995, Fannie Mae's performance has declined relative to the market, while Freddie Mac's performance has increased slightly relative to the market.**

This issue is examined using GSE and HMDA data for metropolitan areas for the period 1995 to 1999; Table A summarizes the results. In 1995, African-American borrowers accounted for 5.2 percent of Fannie Mae's purchases and 5.5 percent of the conventional conforming home purchase market (without estimated B&C loans), yielding a "Fannie-Mae-to-market" ratio of 0.95.<sup>14</sup> By 1999, the market share had dropped modestly to 5.0 percent, while Fannie Mae's share had fallen to 3.4 percent, which reduced the "Fannie-Mae-to-market" ratio to 0.68.

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<sup>14</sup> As explained in Section IV, this paper deducts an estimate of B&C loans from mortgage originations in the conventional conforming market. The less risky A-minus portion of the subprime market is included in the market definition.

As shown in Table A, the "Freddie-Mac-to-market" ratio for African-American borrowers increased only slightly between 1995 to 1999, from 0.69 (i.e., 3.8/5.5) to 0.70 (i.e., 3.5/5.0). Thus, the convergence between Fannie Mae and Freddie Mac has been due mainly to Fannie Mae's decline in performance, rather than to Freddie Mac's increase in performance relative to the market.<sup>15</sup>

**(5) Market share data illustrate the relatively small role that the GSEs play in funding African-American borrowers in the conventional conforming market.**

In 1999, Fannie Mae's purchases represented 23.0 percent of all (home purchase and refinance) conventional conforming loans originated for African-American borrowers versus 36.0 percent of all loans originated for white borrowers. (See Table B.) The corresponding market shares for Freddie Mac were 17.8 percent and 27.1 percent, respectively.

Thus, on a combined basis, the GSEs' purchases accounted for about 40.8 percent of the loans for African-American borrowers and 63.1 percent of the loans for White borrowers.

**(6) The GSEs' shares of mortgage originations for both upper-income and lower-income African-American borrowers appear low. The GSEs' market shares for loans to upper-income African-American borrowers are similar to their market shares for loans to very low-income White borrowers.**

In 1999, the GSEs' purchases represented 28.2 percent of conventional conforming loans originated for very low-income African-American borrowers and 51.6 percent of loans originated for upper-income African-American borrowers.<sup>16</sup> By comparison, the GSEs accounted for 50.4 percent of market originations for very low-income white borrowers and for 66.7 percent of market originations for upper-income white borrowers. Thus, the GSEs' role in the upper-income African-American market (51.6 percent) is about the same as their role in the very low-income white market (50.4 percent).

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<sup>15</sup> The patterns are similar when total (both home purchase and refinance) loans are considered. African-American borrowers accounted for 3.4 percent (3.7 percent) of Fannie Mae's (Freddie Mac's) total purchases, compared with 5.7 percent of market originations.

<sup>16</sup> Very low-income borrowers have incomes less than or equal to 60 percent of area median income; upper-income borrowers have incomes greater than 120 percent of area median income.

- (7) The GSEs also lag the conventional conforming market in funding home purchase loans in African-American neighborhoods. Since 1995, Fannie Mae's performance has declined relative to market, while Freddie Mac's performance has increased.**

In 1995, African-American neighborhoods (census tracts where African-Americans comprise more than 30 percent of the population) accounted for 4.5 percent of Fannie Mae's purchases and 4.9 percent of the conventional conforming home purchase market (without estimated B&C loans), yielding a "Fannie-Mae-to-market" ratio of 0.92. By 1999, the market had dropped to 4.4 percent while Fannie Mae had fallen to 3.0 percent, which reduced the "Fannie-Mae-to-market" ratio to 0.68.

The share of Freddie Mac's business in African-American neighborhoods was 3.0 percent in 1995 and 3.4 percent in 1999. This produced an increase in the "Freddie-Mac-to-market" ratio for African-American neighborhoods from 0.61 in 1995 to 0.77 in 1999. Thus, the convergence between Fannie Mae and Freddie Mac has been due both to Fannie Mae's decline in performance and to Freddie Mac's increase in performance relative to the market.

- (8) Market share data show that the GSEs play a much larger role in "predominantly white" neighborhoods than they do in majority African-American neighborhoods.**

In predominantly white census tracts, the GSEs' purchases of total (both home purchase and refinance) loans during 1999 accounted for 66.0 percent of the conventional conforming market (without B&C loans) compared with only 41.1 percent of the market in majority African-American census tracts. As shown in Table B, this pattern of the market share declining as the African-American composition of tract population increases was similar for both Fannie Mae and Freddie Mac.

- (9) The analysis in this paper, as well as other studies, raises questions about the overall performance of the conventional conforming market in financing homeownership for African-American borrowers. Thus, the conventional conforming market may set a rather low standard for evaluating the minority lending performance of the GSEs.**

Specifically, the paper notes that African-American borrowers accounted for only five percent of the home purchase loans originated in the conventional conforming market in metropolitan areas, compared with almost 15 percent of the loans insured by FHA. FHA, which accounted for only 23 percent of home purchase loans in 1997, accounted for 45 percent of all home purchase loans to African-American and Hispanic borrowers. There is evidence that some FHA borrowers might qualify for a conventional-GSE loan. In addition, some studies conclude that conventional lenders steer minority borrowers to higher-cost FHA loans. However, as discussed later, more research is needed before definitive conclusions can be reached about mortgage steering and the overlap between FHA and conventional loans.



**(10) Because FHA's main focus is assisting first-time home buyers who have difficulty raising cash for a large down payment, direct comparisons between FHA and the GSEs must be interpreted with caution. Still, this paper offers comparisons between FHA and the GSEs as a means of providing more perspective on the GSEs' role in the overall mortgage market. In some cases, important data (such as downpayment information) are only available from FHA and the GSEs.**

During 1997 and 1998, Fannie Mae purchased 67,943 home purchase loans for African-American borrowers, Freddie Mac purchased 37,127 such loans, and FHA insured 193,346 such loans. Thus, while each GSE funds a significant number of home purchase loans for African-American borrowers, FHA is the more important provider of homeownership opportunities for African Americans.

**(11) GSE purchases of loans for low-income and African-American borrowers typically have high down payments, which has raised questions about the contribution of the GSEs to increasing homeownership for these borrowers.**

In 1999, over 70 percent of GSE single-family loans qualifying for the Special Affordable Goal (which targets very low-income families) had a down payment greater than 20 percent, as did 68 (56) percent of the GSEs' purchases of loans for minority (African-American) borrowers.

Considering loans with a less-than-ten-percent down payment, Fannie Mae purchased 31,497 loans for African-American borrowers during 1997 and 1998 while Freddie Mac purchased 17,848 of these loans and FHA insured 174,578 loans. The combined GSE purchase volume of 49,345 is only 28 percent of FHA's volume.

The above findings present a picture of relatively poor performance by the GSEs in funding loans for African-American borrowers and their neighborhoods. These findings highlight the need for further research into factors that might explain the GSEs' performance, such as the credit risk characteristics of lower-income and minority borrowers. The relative default performance of various borrower groups may be an important consideration behind the purchase patterns identified above. Research on default rates of lower-income and minority borrowers is limited, although studies are beginning to focus on this issue.<sup>17</sup>

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<sup>17</sup> HUD (2000a,b) summarizes the limited research that exists on the early default experience of loans originated as part of the new affordable lending programs. On a positive note, HUD's review suggests that lenders, private mortgage insurers and the GSEs have increased their loss mitigation efforts to control the higher credit risks of these loans. As noted earlier, the Federal Reserve Board (2000) recently surveyed lenders about delinquencies and profits from CRA loans and found that CRA loans were profitable but less so than standard program loans.

## II. Data on GSE Purchases<sup>18</sup>

Several tables are presented in the text and in the appendices that compare the minority characteristics of single-family mortgages purchased by Fannie Mae and Freddie Mac with mortgages originated in the conventional market as well as mortgages insured by FHA. Many of the tables cover the years 1997, 1998, and 1999; the year 1998 was a period of heavy refinancing volume, which led to a high level of GSE purchases during that year.

The purpose of the tables is to provide basic, aggregate (nationwide) data that highlight the role of the GSEs in funding mortgages for African-American borrowers and their neighborhoods. While the analysis focuses on mortgages originated for African-Americans, many of the tables include information for all racial and ethnic groups, in order to provide a comprehensive picture of the GSEs' minority purchases. No multivariate analyses are attempted here in this initial descriptive analysis; that will be done in follow-up research.

The availability of GSE data – even at the aggregate, national level -- is somewhat limited due to proprietary concerns; this has several implications for this national-level analysis. First, definitions of the single-family mortgage market differ across the various publicly available data bases, which explains why the market definition in the attached tables ranges from owner-occupied one-unit properties to owner-occupied properties (adds owner-occupied 2-4 unit properties) to all single-family properties (owner-occupied and investor-owned). Second, most of the publicly available information is based on total (home purchase and refinance combined) loans, which explains why only a few of the attached tables separately identify home purchase loans. This is a particular problem given the desire to address issues related to homeownership opportunities.

Finally, the definition of minority varies across the GSE Public Use Data Bases. One (the Census Tract File) provides race/ethnicity data for both the primary borrower and the co-borrower; this allows one to define minority status based on the primary borrower. In National Files A and B of the GSE Public Use Data Base, race/ethnicity is identified only if the primary borrower and the co-borrower are of the same race/ethnicity; cases where they are of a different race are grouped together into a “Different Race” category. These considerations explain why varying numbers of minority loans purchased by Fannie Mae and Freddie Mac are reported in this paper. Table 1 presents counts of GSE purchases of mortgages for African-American and other minority groups under several of the data bases that will be used in this paper. Under the “same race” definition, minorities will include “white primary borrower/minority co-borrower” combinations in the “Different Race” category, which leads to higher numbers of minority mortgages (compare columns (1) and (2) in Table 1). On the other hand, African-American counts are lower under the “same race” definition. Column (2) in Table 1, which is based on the “same race” definition, reports 104,154 purchases of owner-occupied one-unit loans for African-American borrowers; column (1), which is based on the “primary borrower” definition, reports 116,507 such purchases. One purpose of this paper is to present the different single-family

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<sup>18</sup> Readers not interested in technical aspects of the GSE data base may want to proceed to Section III.

property and minority definitions with their corresponding minority counts in one place.<sup>19</sup>

### III. Characteristics of GSE Purchases by Race and Ethnicity

#### A. GSE Purchases of Single-Family Mortgages

Table 2 provides minority data for the GSEs' purchases of conventional mortgages on one-unit owner-occupied properties for the years 1999 (Table 2a), 1998 (2b), and 1997 (2c).<sup>20</sup> The minority information is based on the race/ethnicity of the primary borrower. Home purchase and refinance mortgages are combined in these tables.

During 1999, Fannie Mae purchased 63,016 loans for African-American borrowers and Freddie Mac purchased 53,491 such loans. Both GSEs purchased larger numbers of mortgages for Hispanic and Asian-American borrowers -- Fannie Mae purchased 103,213 (81,938) loans for Hispanic (Asian) borrowers, while Freddie Mac purchased 80,837 (58,722) such loans.

Refinancing volume is an important determinant of the overall level of GSE purchases. The GSEs' total single-family purchases more than doubled during the heavy refinancing year of 1998, increasing from 2,495,978 loans in 1997 to 5,355,371 loans in 1998. As shown in Tables 2b and 2c, the GSEs' purchases of mortgages for African-American borrowers increased by only 83 percent, rising from 74,288 loans in 1997 to 136,244 loans in 1998. This pattern of a larger increase in total loans, compared with African-American loans, is not surprising given that a heavy refinancing year such as 1998 is characterized by more middle- and upper-income borrowers in the mortgage market. With the falloff in refinancing activity during the latter half of 1999, the GSEs' overall purchases fell from by 18 percent, from 5,355,371 in 1998 to 4,391,641 in 1999; their purchases of loans for African-Americans fell by 14.5 percent, from 136,244 in 1998 to 116,507 in 1999.

The race/ethnicity of the borrower is not available (or missing) for a large number of the GSEs' mortgages. As shown in Table 2a, 658,071 GSE mortgages -- 15 percent of the GSEs' total mortgage purchases of 4,391,641 loans during 1998 -- were missing the race/ethnicity of the borrower.

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<sup>19</sup> All the attached tables are consistent with either HUD's Public Use Data Base (PUDB) or table shells for aggregated data that HUD has determined to be non-proprietary. Following the procedures in HUD's Proposed GSE Rule (see U.S. Department of Housing and Urban Development, March 2000), the tables below adjust the PUDB data for loans that the GSEs did not actually purchase. In so-called "REMIC" transactions, the GSEs sometimes purchase only a portion (say 80 percent) of the REMIC security, which means that they actually own (or guarantee) only a portion (80 percent in this example) of the mortgage value in the pool. The PUDB gives the GSEs full credit for these loans. Given the desire to accurately count the GSEs' purchases of loans, the attached tables give them credit only for what they actually purchased (in this example, each loan in the REMIC security would be multiplied by 0.8). Adjusting the data reduces the GSEs' 1998 purchases of owner-occupied mortgages by 226,179 and their purchases of minority loans by 23,472.

<sup>20</sup> This technique of referring to a base table ("Table 2") when in fact there are multiple tables ("Table 2a", "Table 2b" and so on) displaying similar data for different years or different GSEs will be used throughout the paper.

Borrowers do not have to provide their race when making a mortgage application by telephone or mail. A reallocation of the GSE data with missing race/ethnicity indicators may provide a better estimate of the number of minority borrowers that the GSEs serve. Reallocating the missing data for 1999 using the proportions (e.g., 3.1 percent for African Americans in Table 2.a) for the non-missing race/ethnicity data would increase the number of loans for African Americans purchased by both GSEs from 116,507 to 136,141.<sup>21</sup>

In addition to providing total counts, Table 2 also reports "share of business" percentages, which measure the percentage share of total loans accounted for by a particular group.<sup>22</sup> For example, African-Americans accounted for 3.0 percent of Fannie Mae's total 1999 purchases. The African-American share of Fannie Mae's business is lower than the share of its business for Hispanic borrowers (5.0 percent) and for Asian borrowers (3.9 percent). African-Americans accounted for a similar percentage (3.2 percent) of Freddie Mac's total 1999 purchases. Freddie Mac's shares of business for Hispanic borrowers (4.9 percent) was also similar to the corresponding percentage for Fannie Mae while its share of business for Asian-American borrowers (3.5 percent) was slightly lower than Fannie Mae's.

Figure 1 summarizes the 1997 to 1999 trend in the "share of business" percentages for each GSE's purchases of African-American loans. Note that in 1997, African-Americans accounted for a larger share of Fannie Mae's business than of Freddie Mac's business (3.8 percent versus 2.8 percent). However, Fannie Mae's percentage dropped sharply to 2.9 percent during the heavy refinancing year of 1998 and then rebounded only slightly to 3.0 percent during 1999. Freddie Mac's percentage, on the other hand, remained constant at 2.8 percent during 1997 and 1998, and then rose to 3.2 percent in 1999.<sup>23</sup> Thus, in 1999, African-American borrowers accounted for a slightly larger share of Freddie Mac's business than of Fannie Mae's business (3.2 percent versus 3.0 percent).

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<sup>21</sup> Unfortunately, it is not clear how to re-allocate the missing data because African-American borrowers may account for a larger percentage of the missing data than they do of the non-missing data. A disaggregation of missing and non-missing GSE data for 1998 by the African-American percentage of the census tract in metropolitan areas yields the following results for the missing and non-missing (in parenthesis) data: 82.7 (87.6) percent in 0-10-percent African-American tracts, 7.7 (6.4) percent in 10-20-percent tracts, 2.7 (2.2) percent in 20-30-percent tracts, 2.5 (1.7) percent in 30-50-percent tracts, and 4.4 (2.1) percent in above-50-percent tracts. The slightly higher concentration of missing data in African-American tracts suggests that African-American borrowers account for a higher percentage of the missing data than of the non-missing data; however, these differentials based on the census tract comparisons are not very large. Obviously, more work to clarify this issue would improve the estimates of minority borrowers served by the GSEs.

<sup>22</sup> Loans with missing racial and ethnicity data are excluded from the share of business calculations; thus, the share of business percentages across all the racial and ethnic groups sum to 100 percent. It should be noted that the term "distribution of business" is sometimes used for "share of business".

<sup>23</sup> As these comparisons show, Freddie Mac maintained its African-American share during the heavy refinancing year of 1998 while Fannie Mae did not. Further analysis of this issue distinguishing between the GSEs' purchases of home purchase and refinance loans will be presented below. In addition, Sections IV and V will compare the GSEs' performance in funding African-American borrowers with the performance of primary lenders in the conventional conforming market.

The data in Table 2 are based on GSE acquisitions of home purchase and refinance mortgages for owner-occupied one-unit properties. Similar data for all single-family mortgages – home purchase, refinance, and second mortgages for investor as well as all owner-occupied properties – are available from the Census Tract File of the PUDB. These data are presented in Appendix A in a format similar to Table 2. The patterns of lending by race and ethnicity mirror those in Table 2 and Figure 1, so there is no need to discuss those results here.

## **B. GSE Purchases of Single-Family Mortgages: Home Purchase versus Refinance**

National File B of the Public Use Data Base allows a separate analysis of the GSEs' purchases of home purchase and refinance loans. The top panels of Table 3 (Fannie Mae) and Table 4 (Freddie Mac) report the GSEs' acquisitions of home purchase loans during 1999 while the bottom panels report their acquisitions of total loans (home purchase and refinance loans combined). These tables report data for all owner-occupied mortgages (rather than just owner-occupied one-unit mortgages as in Table 2) and they use the "same race" definition of minority borrowers (rather than the "primary borrower" classification as in Table 1). After accounting for 61 percent of the GSEs' business in 1997, home purchase loans fell to 39 percent during the heavy refinance year of 1998, and then rebounded slightly to 44 percent in 1999. The discussion in this section first discusses the GSEs' purchases in 1997 and 1998, and then discusses 1999 data.

**1997 versus 1998.** Insights into the relative performance of Fannie Mae and Freddie Mac can be gained starting with 1997 and 1998 data<sup>24</sup> In 1997, Fannie Mae's performance in funding African-American borrowers exceeded Freddie Mac's both for home purchase loans and for total loans (that is, adding refinance loans to home purchase loans). In 1997, African-American borrowers represented 4.1 percent (3.7 percent) of Fannie Mae's home purchase (total) loans compared with 2.7 percent (2.7 percent) of Freddie Mac's loans -- a differential of 1.4 (1.0) percentage points in favor of Fannie Mae. In 1998, Fannie Mae still held an advantage over Freddie Mac with respect to purchasing home loans, although the differential was smaller: African-American borrowers accounted for 3.4 percent of Fannie Mae's purchases of home loans, compared with 2.8 percent of Freddie Mac's purchases of home loans, a differential of 0.6 percentage points.<sup>25</sup> The differential is further reduced when the analysis switches to total loans. African-American borrowers accounted for 2.7 percent of Fannie Mae's total purchases during 1998, versus 2.6 percent of Freddie Mac's total purchases -- a differential of only 0.1 percentage point.<sup>26</sup> Thus, the differential performance in favor of Fannie Mae was reduced between 1997 and 1998; the heavy refinancing during 1998 seems to have affected the two GSEs differently in terms of

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<sup>24</sup> Similar information to that presented in Tables 3 and 4 is provided in the appendix for 1998 (Table A.5) and 1997 (Table A.6). Table A.4 in the appendix also provides the 1999 data for both GSEs combined.

<sup>25</sup> In this paper, home purchase loans will often be referred to as "home loans".

<sup>26</sup> Of course, the reason that Fannie Mae's differential performance falls from 0.6 percentage points (for home purchase loans) to 0.1 percentage points (for total loans) is that Freddie Mac has a better performance on refinance loans. In 1998, African-American borrowers accounted for 2.4 percent of Freddie Mac's refinance loans compared with 2.2 percent of Fannie Mae's.

the racial characteristics of the borrowers whose loans they purchase.

**1999 Data.** Freddie Mac continued to improve relative to Fannie Mae in funding home loans for African-American borrowers during 1999, when the differential between the two GSEs was essentially eliminated. In 1999, African-American borrowers accounted for 3.0 percent of Fannie Mae's home purchase loans compared with 2.8 percent of Freddie Mac's. In terms of total loans, African-American borrowers accounted for 2.9 percent of Fannie Mae's purchases during 1999 compared with 2.8 percent of Freddie Mac's purchases, maintaining the small differential (0.1 percentage point) in favor of Fannie Mae that existed in 1998.<sup>27</sup>

Comparing the data for 1997 and 1999 summarizes the patterns discussed above. The share of Fannie Mae's home purchase loans originated for African-American borrowers fell from 4.1 percent in 1997 to 3.0 percent in 1999 while the corresponding share for Freddie Mac essentially remained constant, rising slightly from 2.7 percent in 1997 to 2.8 percent in 1999. With respect to total loans, the share of loans for African-American borrowers fell from 3.7 percent in 1997 to 2.9 percent in 1999 while the pattern for Freddie Mac was the same as that for home purchase loans, rising slightly from 2.7 percent to 2.8 percent. Further insights into Fannie Mae's reduced level of purchases of loans for African-American borrowers are provided in the next subsection and in Section IV below, which examines the characteristics of loans being originated in the conventional conforming market.

**"Prior-Year" Loans.** In any particular calendar year, a GSE can purchase mortgages originated in prior years as well as newly-originated mortgages. In 1999, "prior-year" mortgages, which are also called "seasoned" mortgages, accounted for 29 percent of Fannie Mae's total purchases and for 27 percent of Freddie Mac's purchases. Tables 3 and 4 present race/ethnicity information for the GSEs' purchases of "prior-year" mortgages as well as for mortgages originated in the same year as GSE purchases. Fannie Mae's prior-year purchases of home loans have typically had a much higher percentage of loans for African-American borrowers than Freddie Mac's. In 1997, for example, loans for African-American borrowers accounted for 7.2 percent of Fannie Mae's prior-year home loan purchases, versus 3.3 percent of Fannie Mae's purchases of newly-originated home loans. The comparable percentages for Freddie Mac were 3.1 percent (prior-year) and 2.7 percent (newly-originated). In fact, purchasing prior-year mortgages has been one strategy that Fannie Mae has used to increase its affordable lending performance (U.S. Dept. of HUD, 2000d). However, this strategy seems to have changed in 1999, when loans for African-American borrowers accounted for 3.4 percent of Fannie Mae's prior-year home loan purchases -- a figure not much higher than the 2.9 percent for Fannie Mae's purchases of newly-originated home loans (see Table 3). Thus, one factor explaining Fannie Mae's decline in performance between 1997 and 1999 is its reduced purchases of prior-year loans for African-American borrowers during 1999.

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<sup>27</sup> Notice that Fannie Mae's figure for African-American borrowers is slightly larger than Freddie Mac's based on the 1999 data reported in Tables 3 and 4 (2.9 percent versus 2.8 percent), but that Freddie Mac's is slightly larger than Fannie Mae's based on the 1999 data discussed earlier from Tables 2a and 2b (3.2 percent versus 3.0 percent). These different results are due mainly to different race/ethnicity definitions -- the "same race" definition is used in Tables 3 and 4 while the "primary borrower" definition is used in Tables 2a and 2b.

#### **IV. Funding Loans for African-American Borrowers: GSEs Versus the Market**

This section compares the GSEs' purchases of loans for African-American borrowers with loans originated for these borrowers by primary lenders in the conventional conforming market in metropolitan areas. As a useful context for these comparisons, it is important to examine the role of the conventional conforming market in funding loans for African-American borrowers. Therefore, Table 5 reports minority lending data for major market sectors -- FHA, the GSEs, the conventional conforming market, and the total market for owner-occupied properties in metropolitan areas. In this case, the "total" market consists of both the conventional conforming market and the government (mainly FHA and VA loans) market; "jumbo" loans above the conventional conforming loan limit are excluded from this analysis. HMDA is the source of the FHA and market data. Home purchase loans are included in Table 5a and total loans in Table 5b. Minority status is based on the race and ethnicity of the primary borrower. Lending data for African-American, Hispanic, and minority borrowers are provided, as well as data for two types of minority neighborhoods -- one where African-Americans account for more than 30 percent of the census tract population and another where minorities account for more than 30 percent of the tract population. Although our discussion will continue to focus on the more recent years, the tables report minority lending shares for the various market sectors for the five year period, 1995 to 1999. Thus, Tables 5a and 5b offer a summary of major trends in lending to minorities and their communities during the mid- to late-1990s.

##### **A. Share of Business by Major Sectors of the Mortgage Market**

The most striking point in Table 5a concerns the relatively low level of minority lending in the conventional conforming home purchase market, compared with FHA and the total market. In 1999, African-American and Hispanic borrowers accounted for only 12.5 percent of home purchase mortgages originated in the conventional conforming market. These same borrowers accounted for 33.9 percent of FHA-insured loans and for 17.6 percent of total market loans.<sup>28</sup> Given FHA's historic role of serving first-time homebuyers who find it difficult to raise cash for down payments and who also may have a less-well-established or marginal credit record, it is not surprising that African-American and Hispanic borrowers account for a larger percentage of FHA's portfolio than they do of the overall market (Bunce *et al.*, 1999). Still, the particularly low shares for African-American and Hispanic borrowers in the conventional conforming market are consistent with findings of numerous studies which conclude that the conventional market could improve its minority lending performance.<sup>29</sup> Thus, the extent that conventional lenders have set a low standard for funding minority loans raises an important caveat about the analyses reported below that evaluates the GSEs' minority lending performance in terms of the performance of conventional lenders.<sup>30</sup>

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<sup>28</sup> Similar trends are evident for home loans originated between 1995 and 1998 as well as for total (home purchase and refinance) loans originated during this period (see Table 5b).

<sup>29</sup> For example, Green and Associates (1998) conclude that conventional lenders steer minorities to FHA in Montgomery County, Maryland. For similar analyses, see the National Training and Information Center (1997) and Bradford (2000a).

<sup>30</sup> One could argue that the GSEs depend on primary market lenders for their mortgage flow and therefore their performance is constrained by the efforts of these lenders. Of course, this line of reasoning ignores the significant

As explained above, Tables 5a and 5b report minority lending data for the GSEs and the conventional conforming market for owner-occupied properties in metropolitan areas. A second concept of the conventional conforming market is considered in these tables -- the market without B&C loans. Some believe that it is inappropriate to include B&C loans in market data that are used as the basis for evaluating GSE performance.<sup>31</sup> It is felt that these high-risk loans are not likely eligible for purchase by the GSEs.<sup>32</sup> As explained in HUD's Final GSE Rule, HUD(2000d) has adjusted HMDA data for the conventional conforming market by deducting an estimate of the B&C portion of the subprime market. The B&C estimate is equal to one half of the loans originated by lenders included on a list of specialized subprime lenders developed by HUD staff (Scheessele, 1999).<sup>33</sup> Since African-American borrowers account for a large share of subprime loans, it is not surprising that the adjustment for B&C loans reduces the share of the market accounted for by African-American borrowers.<sup>34</sup> In the case of home purchase loans, deducting B&C loans reduces the 1999 market percentage for African Americans only slightly, from 5.4 percent to 5.0 percent. For total loans (including refinance as well as home purchase loans), the reduction in the market share for loans to African Americans is more significant, from 6.5 percent to 5.7 percent. The latter result is due to the fact that about four-fifths of subprime loans are refinance loans. In the remainder of this section, the market data will refer to the "Market Without B&C Loans" in Tables 5a and 5b.<sup>35</sup>

**GSEs' Performance in Home Purchase Market.** The GSEs lag the conventional conforming market in funding home loans for African-Americans in metropolitan areas. During 1999, African-American borrowers accounted for 3.4 percent of Fannie Mae's purchases of home loans, 3.5 percent of Freddie Mac's purchases, and 5.0 percent of newly originated home purchase mortgages (see last column of Table 5a). As recent as 1997, Fannie Mae was very close to the market, when the

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influence that the GSEs' purchase guidelines and new product offerings appear to have on the types of loans originated in the conforming market; see Rutgers University (1998), The Urban Institute (1999), Myers (2000).

<sup>31</sup> Fannie Mae, for example, argues that the market benchmark for evaluating its affordable lending performance should exclude all loans in the subprime market, including A-minus loans as well as B&C loans. See Fannie Mae (May 2000).

<sup>32</sup> Although the GSEs (and particularly Freddie Mac) have purchased mortgage pools that include some B- and C-grade mortgages, they have typically focused on the less risky, A-minus portion of the subprime market. See the HUD-Treasury (2000) report, *Curbing Predatory Home Mortgage Lending*, for an analysis of the subprime market.

<sup>33</sup> As used here, the "B&C" portion of the subprime market also includes the very small percentage of risky "D-class" loans in the subprime loans; essentially, "B&C" is synonymous with "non-A-minus".

<sup>34</sup> According to 1999 HMDA data, African-American borrowers accounted for 22 percent of loans originated by lenders that specialize in subprime lending -- a figure over three times the corresponding figure (6.5 percent) for the overall conventional conforming market.

<sup>35</sup> As HUD explains in its Final GSE Rule, there is uncertainty with existing estimates of the number of B&C loans reported in HMDA data. Therefore the adjusted market data reported in Tables 5a and 5b should be interpreted with caution.



comparable percentages were 4.5 percent for Fannie Mae, 3.2 percent for Freddie Mac, and 4.9 percent for the conforming market. While Freddie Mac has recently improved its performance relative to Fannie Mae (discussed next), it has consistently performed below the market in funding mortgages for African-American borrowers.

As discussed earlier, Fannie Mae's performance in purchasing loans for African-American borrowers declined relative to Freddie Mac's between 1997 and 1999. Table 5a allows one to examine GSE data going even back further, to 1995. In 1995, African-American borrowers accounted for 5.2 percent of Fannie Mae's purchases and 5.5 percent of the conventional conforming home purchase market (without estimated B&C loans), yielding a "Fannie-Mae-to-market" ratio of 0.95. By 1999, the market had dropped modestly to 5.0 percent while Fannie Mae had fallen to 3.4 percent, which reduced the "Fannie-Mae-to-market" ratio to 0.68. The "Freddie-Mac-to-market" ratio for African-American borrowers increased only slightly between 1995 to 1999, from 0.69 to 0.70. Thus, the recent convergence between Fannie Mae and Freddie Mac has been due mainly to Fannie Mae's decline in performance, rather than to any increase in Freddie Mac's performance relative to the market.

**GSEs' Performance in Total Mortgage Market.** Table 5b reports somewhat similar patterns for total loans (home purchase and refinance loans combined) as those discussed above for home purchase loans. There was, however, one difference -- the "Fannie-Mae-to-market" ratio for African-American borrowers is lower when total loans are considered (0.83 in 1995 and 0.60 in 1999). Freddie Mac's performance is similar to that discussed above for home purchase loans. For total loans to African-American borrowers, the "Freddie-Mac-to market" ratio increased only slightly from 0.64 in 1995 to 0.65 in 1999. During this same period, the "Freddie-Mac-to-Fannie-Mae" ratio increased from 0.77 (3.7/4.8 percent) in 1995 to 1.09 (3.7/3.4 percent) in 1999.

**Other Minority Groups.** Tables 5a and 5b also report the GSE-versus-market results for other minority groups. With respect to funding home purchase mortgages for Hispanic borrowers, Fannie Mae led the market from 1995 to 1998, before falling behind the market in 1999. In 1999, Hispanic borrowers accounted for about 6.0 percent of Fannie Mae's purchases of home loans compared with 6.9 percent of mortgages originated in the primary conventional conforming market. With respect to total loans for Hispanic borrowers, Fannie Mae led the market between 1995 and 1997 but fell behind the market during 1998 and 1999. For both home purchase and total loans for Hispanic borrowers, Freddie Mac lagged the market throughout the 1995-99 period.

The GSEs' best performance relative to the market involves their purchases of loans for Asian-American borrowers. Since 1995, Fannie Mae has outdistanced the market for loans to Asian-American borrowers. While Freddie Mac has not led the market, its purchase percentages for Asian-American borrowers have been close to market percentages.

When all minorities are considered as a group, the patterns are similar to those discussed above for Hispanic borrowers. As shown in Table 5b, Fannie Mae led the conventional conforming market in total loans from 1995 to 1997 before falling behind the market in 1998 and 1999 (16.3 percent for Fannie Mae in 1999 versus 18.0 percent for the market). Freddie Mac lagged the market in all years.

For example, 15.1 percent of Freddie Mac's 1999 purchases were loans for minorities, compared with 18.0 percent for market originations.

**Neighborhood Data.** Tables 5a and 5b report percentages of GSE purchases and market originations in census tracts where minorities comprise more than 30 percent of the population. The patterns for minority tracts are similar to those discussed above for minority borrowers. For total loans, Fannie Mae led the conventional conforming market from 1995 to 1997 before falling behind the market in 1998 and 1999 (13.6 percent for Fannie Mae in 1999 versus 15.9 percent for the market). Freddie Mac lagged the market in all years, although it did move above Fannie Mae's performance in 1999. In 1999, 14.2 percent of Freddie Mac's purchases included loans for properties located in high-minority tracts, compared with 13.6 percent for Fannie Mae and 15.9 percent for the market.

Tables 5a and 5b also report the percentages of GSE purchases and market originations in census tracts where African Americans comprise more than 30 percent of the population. The patterns for over-30-percent-African-American tracts are similar to those discussed above for African-American borrowers. In 1995, 4.5 percent of Fannie Mae's purchases were in over-30-percent-African-American tracts, compared with 5.7 percent of total market originations; this yielded a "Fannie-Mae-to-market" ratio of 0.79. In 1999, the market continued at 5.7 percent but Fannie Mae was down to 3.5 percent, lowering the "Fannie-Mae-to-market" ratio to 0.61. The "Freddie-Mac-to-market" ratio for over-30-percent-African-American tracts increased between 1995 to 1999, from 0.58 to 0.70. In 1999, both GSEs continued to lag the market in funding mortgages in African-American census tracts. Section VI below will provide a more detailed analysis of the GSEs' purchases of mortgages for properties located in African-American neighborhoods.

## **B. Market Shares in Metropolitan Areas**

The "share of business" percentages discussed above and reported in Table 5 measure the importance of a specific borrower category (such as African-American or Hispanic borrowers) in the business or portfolio of a particular sector of the mortgage market (such as FHA or the GSEs). "Market share" percentages provide another method for examining the performance of different sectors of the mortgage market. The "market share" for a sector measures the portion of all loans for a borrower category accounted for by that sector. Thus, a sector's "market share" percentage indicates the importance of that sector to the overall funding of loans for a particular borrower group. For the borrower categories examined above, the GSEs' "share of business" percentages appeared somewhat low compared with other sectors of the market. However, due to their large size, the GSEs may still be playing a significant role in funding these borrower groups. "Market share" data are intended to pick up this size effect of the GSEs.

Unfortunately, because of differential coverage of various market sectors in HMDA data, "market share" percentages are more difficult to compute than "share of business" percentages – a fact that has limited the research in this area.<sup>36</sup> However, two HUD studies have estimated market

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<sup>36</sup> HUD provides data to calculate "share of business" percentages for both FHA and the GSEs while HMDA provides similar data for depositories and the overall market. For discussion of issues related to market shares and

shares for the GSEs. The most recent HUD study combined GSE and HMDA data for metropolitan areas and estimated that GSE acquisitions totaled 44 percent of all home purchase loans originated during 1997. In addition, GSE acquisitions were estimated to be 24-27 percent of the African-American and Hispanic home loan market. By comparison, FHA's share of the African-American and Hispanic market was 44 percent during 1997, a figure much higher than FHA's share (23 percent) of the overall home loan market.<sup>37</sup>

The contrast between FHA and the GSEs is evident from Table 6, which presents the number of loans for African-American borrowers that the GSEs purchased and FHA insured during 1997 and 1998. During these two years, Fannie Mae purchased 67,943 home loans for African-American borrowers, Freddie Mac purchased 37,127 such loans, and FHA insured 193,346 such loans. Thus, while each GSE funds a significant number of home loans for African-American borrowers, FHA is the major provider of homeownership opportunities for African Americans.

It is recognized, of course, that direct comparisons between the GSEs and FHA may not be appropriate. As noted earlier, FHA's underwriting requirements are much more liberal than conventional requirements, particularly in terms of accepting loans with down payments less than five percent and borrowers with a below-average credit record. As a result, FHA loans exhibit higher default rates than conventional loans. However, there is evidence that some FHA borrowers could qualify for a conventional loan. Bunce *et al.* (1999) report that the median FICO score for FHA applicants in 1996 was 671 and that one in four FHA applicants had FICO scores above 620. The median FICO scores for White, African-American, and Hispanic FHA applicants were 681, 640, and 665, respectively. Thus, many FHA borrowers have established a good credit history. Pennington-Cross and Nichols (2000) conclude that there is considerable overlap in the distribution of FHA and conventional credit scores, particularly for high loan-to-value ratio (i.e., low downpayment) loans. These studies concerning FHA's overlap with the conventional market raise some interesting questions about the appropriate market benchmark that should be used when evaluating the GSEs' performance in affordable lending. As explained earlier, GSE performance is typically evaluated relative to the conventional conforming market. However, if a significant portion of FHA borrowers could qualify for conventional loans, it may be appropriate to include these loans in the market definition when evaluating GSE performance. Obviously, more research on the nature and magnitude of the overlap between FHA and conventional loans is needed to clarify this issue.

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HMDA's differential coverage across market sectors, see Appendix A in Bunce and Scheessele (1998, 1996) and Scheessele (1998).

<sup>37</sup> See U.S. Department of Housing and Urban Development (2000d) for a discussion of the 1997 results. The market share methodology is explained in Bunce and Scheessele (1998). They combined GSE and HMDA data for metropolitan areas to estimate that GSE acquisitions were 34 percent of all home purchase loans originated during 1996 and 21 percent of all home loans originated that year for African-American and Hispanic borrowers. Bunce and Scheessele estimated that FHA accounted for 39 percent of the African-American and Hispanic market during 1996 and 21 percent of the overall home loan market. Both studies defined the market to include all home loans below the conforming loan limit (that is, all loans except jumbo loans).

## V. GSE Purchases of Loans For Low-Income African-American Borrowers

This section examines the income characteristics of the GSEs' purchases of loans for African-American borrowers. The purpose is to determine if the GSEs are purchasing loans across the full spectrum of borrower incomes or concentrating their purchases of African-American loans at certain income levels. The section also reports the GSEs' market share for loans to minorities at different income levels.

### A. GSE Purchases by Minority Status and Borrower Income: Data Issues, Format of Tables, and Results

**Data Issues.** To better understand this section's analysis, it is useful to start by carefully explaining the data and the format of the tables. The GSE data are drawn from the Census Tract File of the Public Use Data Base (PUDB). This was necessary in order to report information on GSE purchases according to the African-American composition of the census tract (see next section).<sup>38</sup> The Census Tract File reports all single-family (1-4 unit) mortgage purchases by the GSEs, thus combining their purchases of home purchase and refinance loans on owner and investor properties.<sup>39</sup> The GSE data include the GSEs' purchases of mortgages originated in prior years as well as mortgages originated during the year of purchase. The GSE purchases will be compared to market data as reported in HMDA. The HMDA market data reported in this section include newly-originated home purchase and refinance loans for owner and investor properties, as well as single-family properties without an owner/investor indicator. Thus, similar to previous sections, the GSE data include both "prior-year" and "current-year" mortgages while the HMDA market data include only "current-year" mortgages.

**Format of Tables.** The top portion of Table 7a provides absolute counts of GSE purchases during 1999 of mortgages for the various racial and ethnic groups disaggregated by the following income categories: less than 60 percent of area median income (AMI); 60-80 percent of AMI; 80-100 percent of AMI; 100-120 percent of AMI; and greater than 120 percent of AMI. For example, Fannie Mae's total purchases of 75,269 mortgages for African-American borrowers included 14,177 mortgages where the borrower's income was less than 60 percent of AMI, 12,278 mortgages where the borrower's income was between 60 and 80 percent of AMI, 12,046 mortgages where the borrower's income was between 80 and 100 percent of AMI, and so on.<sup>40</sup>

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<sup>38</sup> Unfortunately, the Census Tract File does not separately identify the GSEs' purchases of FHA loans, which means that the GSE data reported in this section include these loans. Thus, the various percentages reported for the low-income and minority shares of GSE purchases are slightly higher than they would be if the GSE purchase data had excluded the FHA loans. Of course, the market data reported in this section include only conventional conforming mortgages.

<sup>39</sup> The GSE data also include a small number of second mortgages that the GSEs purchase; these numbers are so small that they do not affect the market share percentages reported in this section.

<sup>40</sup> As discussed in Section III, GSE purchases for different racial and ethnic groups are underestimated because of missing race and ethnicity data. The magnitude of the missing race/ethnicity data by borrower income category

For each racial group, the row percentage in the top portion of Table 7b expresses the borrower income data in Table 7a as a percentage of total loans for that racial group. For example, the 14,177 loans for African-American borrowers with an income less than 60 percent of AMI represents 18.8 percent of Fannie Mae's total (75,269) purchases of loans for African Americans. Comparisons of these row percentages across the various racial groups yield some expected results. For example, a higher percentage of Fannie Mae's purchases of loans for African-American borrowers have a less-than-60-percent-income than their purchases of loans for white borrowers (18.8 percent versus 10.3 percent). Similarly, a smaller percentage of loans for African-American borrowers have a greater-than-120-percent-income than loans for white borrowers (35.2 percent versus 47.7 percent). These results are not surprising given that African-American families typically have lower incomes than white families.<sup>41</sup>

Tables 7a and 7b provide similar data for Freddie Mac and the conventional conforming market. Two sets of market data are provided -- one that includes all loans in the conventional conforming market and one that adjusts the market for B&C loans. As explained below, the number of conventional conforming market loans reported by HMDA have been adjusted upward approximately 15 percent to account for HMDA's undercoverage of the mortgage market.

**Results.** The series of row percentages in Table 7b compare the income distributions of minority borrowers for Fannie Mae loans, Freddie Mac loans, and loans originated in the market. There are several interesting findings:

- The percentages for total loans (the "Total" row) for Fannie Mae, Freddie Mac, and the market (without B&C) confirm the findings of numerous other studies that have shown that Fannie Mae and Freddie Mac lag the market in funding mortgages for lower-income families. In 1999, very-low-income (less than 60 percent AMI) borrowers accounted for 10.9 percent of Fannie Mae's purchases, 11.4 percent of Freddie Mac's purchases, and 14.5 percent of loans originated in the conventional conforming market (without B&C loans).
- Fannie Mae's and Freddie Mac's purchases of loans for African-American borrowers exhibited similar income characteristics. Low-income borrowers (less-than-80-percent AMI) accounted for approximately 36 percent of the GSEs' purchases of loans for African-Americans. The corresponding market percentage was 47 percent.

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can be determined in Table 7a by subtracting the figures in the "Total (W/O Missing)" row from those in the "Total" row. (As explained earlier, it is not clear how to allocate the missing data among the various racial and ethnic groups.) In addition, Table 7a does not include GSE purchases with missing borrower incomes. It should be noted that the same comments made here about the missing GSE data in Table 7a also apply to the market data in the bottom portion of Table 7a.

<sup>41</sup> In fact, observing similar percentages for African-American and white borrowers for each of the income categories would suggest that Fannie Mae was purchasing the "top end" of the African American loans (that is, those with similar incomes to white borrowers).

- Hispanic borrowers in the mortgage market have incomes slightly higher than African-American borrowers. Low-income borrowers accounted for approximately 32 percent of each GSE's purchases of loans for Hispanic borrowers. The corresponding market percentage was 40 percent.
- Asian-American borrowers have much higher incomes than African-American and Hispanic borrowers. As shown in Table 7b, their incomes are similar to the incomes of white borrowers. Upper-income (greater-than-120-percent AMI) borrowers accounted for 45.3 percent the GSEs' purchases of loans for Asian-American borrowers and for 47.7 percent of their purchases of loans for White borrowers. The corresponding percentages for the market were similar (44.7 percent and 44.6 percent, respectively).

### C. GSE Purchases by Minority Status and Borrower Income: Market Share Concept and Results

**Market Share Concept.** As discussed above, Table 7a provides absolute counts of GSE purchases and market originations by minority status and income of the borrower. These data allow one to express each GSE's purchases as a percentage share of mortgages originated in important sub-markets, such as the mortgage market for very-low-income African-Americans. For each minority group, the GSE's share in lower-income sub-markets can be compared to their market share in higher-income sub-markets. In this analysis, lagging (leading) the affordable lending market would be indicated by the GSE having smaller (larger) percentage market shares in the lower-income sub-markets than in the higher-income sub-markets.

Consider the data for Fannie Mae and the conventional conforming market (without B&C loans) in Table 7a. During 1999, Fannie Mae purchased 2,016,201 single-family mortgages and primary lenders originated an estimated 5,649,471 single-family mortgages in metropolitan areas.<sup>42</sup> This translates into a Fannie Mae "market share" of 35.7 percent for total loans; the "market share" percentages are reported in Table 8a. Note also that Fannie Mae purchased 14,177 loans for African-American borrowers with very low incomes and that primary lenders in metropolitan areas originated an estimated 92,384 such loans. In this case, the Fannie Mae "market share" is only 15.3 percent, which is much smaller than Fannie Mae's overall market share of 35.7 percent. Obviously, Fannie Mae does not play the same role in the different markets. In the very-low-income African-American market, it accounts for less than one-sixth of the loans whereas in the overall market it accounts for over one-third of the loans.

**Caveats.** Before presenting the findings with respect to the GSEs' market shares, a few caveats about the data are in order. **First**, the numerator (GSE purchases) and denominator (market originations) of the market share ratio are not defined consistently. As discussed earlier, the GSE data

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<sup>42</sup> For consistent treatment, the number of loans and percentages reported in the remainder of the section will be drawn from the GSE and HMDA data that include race and ethnicity information; thus, the totals reported here are from the "Total (W/O Missing)" rows for Fannie Mae and the Conventional Conforming Market (W/O B&C Loans), respectively.

include their purchases of "prior-year" mortgages as well as "current-year" mortgages while the market data, of course, include only "current-year" mortgage originations. We followed this procedure because the Census Tract File does not distinguish between current-year and prior-year mortgage purchases. Since "prior-year" originations account for about one fifth of the GSE purchases, the market share percentages reported here overstate the GSEs' share of the market for new originations in any particular year by about one fifth. This overstatement of the market shares probably does not affect the market share patterns across the various income and minority groups, which is the subject of interest here.

**Second**, the market data in Table 7a that are used in the denominator of the market share ratios were obtained by adjusting HMDA-reported market figures upward by a factor equal to 1.176; this is equivalent to assuming that HMDA underreports mortgages in metropolitan areas by 15 percent. It is recognized that there is some uncertainty about HMDA's coverage of the mortgage market. However, while the level of the GSE market shares would be different under other assumptions about HMDA coverage, the patterns in GSE market shares across the various income and minority groups would not differ under alternative assumptions.

**Third**, the conventional conforming market data are adjusted for estimates of the B&C market, using the methodology discussed earlier. As discussed in HUD's Final GSE Rule, there is much uncertainty about the size of the subprime market in general, much less the B&C portion of that market. The adjustment in Table 8a deducts half of the loans originated by almost 300 lenders that Randall Scheessele of HUD has identified as primarily originating subprime loans.<sup>43</sup> For comparison purposes, Table 8a includes the market data with and without the adjustment. Table 8a reports GSE purchases as a percentage of the estimated market without B&C loans, while Table 8b reports GSE purchases as a percentage of the market without any adjustment for B&C loans.

**Finally**, the GSEs are evaluated relative to the conventional conforming market, which is the source of most of their mortgage purchases and is also the benchmark that Congress requires that HUD use when establishing affordable housing goals for the GSEs. But as discussed earlier, there is evidence that the conventional conforming market probably sets a low standard with respect to minority lending performance. Characteristics of borrowers who currently use FHA suggest that some of them might qualify for a conventional loan. While more research is needed to gauge the magnitude of this effect, it is probably true that the conventional conforming market offers a minimal standard against which to compare the GSEs' minority lending performance.

**Findings Based on Fannie Mae's Market Share Curves.** The analysis will focus on the GSE market share percentages reported for the various minority and income groups in Table 8a. Figures 2a and 2b are provided to highlight some of the more interesting patterns in these data. For each racial and ethnic group (i.e., African-American, Hispanic, Asian, and White borrowers), Figure 2a provides a "market share curve" that charts Fannie Mae's market share for the different borrower-income groupings of that racial or ethnic group. As a useful reference, the broad vertical bar at 35.7

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<sup>43</sup> The list of subprime lenders is available at <http://www.huduser.org/publications/hsgfin.html>. See Section 3.a of Appendix D of HUD (2000d) for a numerical example of the B&C adjustment.

percent represents Fannie Mae's share of the overall conforming mortgage market. If Fannie Mae was equally represented in all market segments -- thus accounting for 35.7 percent of all mortgages originated by primary lenders in each income and minority grouping -- then all the "market share curves" would be a horizontal line at 35.7 percent. But as we noted earlier, Fannie Mae's share of the market is much lower (15.3 percent) in the portion of the mortgage market serving very-low-income African-American borrowers.

For the most part, the market share curves have an initial upward slope that flattens at higher levels of income. This means that Fannie Mae's market share rises from a smaller percentage in the lower-income markets to a higher percentage in the moderate-income and upper-income markets. For White borrowers, Fannie Mae's market share increases from 28 percent in the very-low-income market to approximately 38 percent for incomes above the area median.<sup>44</sup> Fannie Mae's market share curve for Hispanic borrowers shows a rising pattern, increasing from 26 percent for very-low-income borrowers to 45 percent for borrowers with incomes above 120 percent AMI.

The most interesting market share curve is that for African-American borrowers, for two reasons. First, the market share curve for African-American borrowers starts at a very low level -- Fannie Mae's share of the African-American market for the two lower income groupings combined is only 17.3 percent, which is substantially lower than its overall market share of 35.7 percent. Second, Fannie Mae's market share for the two higher income groupings of African-American borrowers reaches only 28-30 percent, which is not only below Fannie Mae's overall average market share of 35.7 percent, but also below Fannie Mae's market share for lower income borrowers from the non-African-American groups. That is, Fannie Mae's market share for higher income, African-American borrowers is lower than its market shares for lower-income, non-African-American borrowers.<sup>45</sup>

**Findings Based on Freddie Mac's Market Share Curves.** The data for Freddie Mac are included in the middle portion of Tables 7 and 8 and in Figure 2b. The findings for Freddie Mac are as follows:

- The market share curves for Freddie Mac presented in Figure 2b exhibit somewhat similar patterns to those discussed above for Fannie Mae. Of course, because of its smaller size, Freddie Mac's overall market share (26.5 percent) is lower than Fannie Mae's (35.7 percent).
- Freddie Mac's market share for African-American borrowers increases from 14.3 percent in the two lower income groupings (0-60 of AMI and 60-80 of AMI combined) to 21.4 percent in the two income groupings with above median incomes. Freddie Mac's market share for upper-income (greater than 120 of AMI) African-American borrowers reaches only 21.7 percent, which is not only below Freddie Mac's overall average market share of 26.5 percent,

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<sup>44</sup> Figures 2a and 2b also include a market share curve for all borrowers (i.e., defined over all racial and ethnic groups). Notice that the overall market share curve has practically the same pattern across the various income groups as the market share curve for white borrowers.

<sup>45</sup> An interesting aspect of the market share curve for Hispanics is the sharp increase for upper-income Hispanics -- Fannie Mae's market share jumps from 37.6 percent for Hispanics with 100-120-percent of AMI to 44.9 percent for upper-income Hispanics. Freddie Mac's market shares exhibit a similar pattern of increase.



but is also below Freddie Mac's market share for low-income White borrowers (24.1 percent).

**Additional Findings.** Additional findings can be deduced from Tables 7-8 and Figure 2. A comparison of the data reported in Table 7a for the market definitions with and without B&C loans shows the rather dramatic effect that the B&C adjustment has on the number of African-American loans included in the market. Adjusting the data for B&C loans reduces the number of market loans for African-American borrowers by 70,943 loans, from 398,633 to 327,690 -- a reduction of 18 percent. This compares with a reduction of only 5 percent for total market loans and 4 percent for market loans of the non-African-American groups. These results are consistent with studies showing that subprime lenders originate a high proportion of the refinance loans going to African American borrowers.

To illustrate the effects of the B&C adjustment, Table 8b reports the GSE market shares for the conventional conforming market definition that includes B&C loans. Because B&C loans are concentrated among low-income and African-American loans, the GSE market shares would be much lower if these loans were included in the market definition. For example, the loans purchased by both GSEs for very-low-income African Americans account for 21.8 percent of the conventional conforming market (see Table 8b) compared with 28.2 percent of the conventional conforming markets without the estimated B&C loans.

## **VI. GSE Purchases in African-American Census Tracts**

This section examines Fannie Mae's and Freddie Mac's purchases of mortgages financing properties in census tracts that have a high percentage of African-American residents. This geographic analysis provides an important perspective on the GSEs' performance in serving neighborhoods that have traditionally experienced problems gaining access to prime conventional loans.

**Data and Table Formats.** For both GSE purchases and market originations during 1999, the top portion of Table 9a provides absolute counts of loans disaggregated by the percentage of the census tract population that is African-American. The categories for African-American composition are as follows: 0-10 percent (called "predominantly white tracts"), 10-20 percent, 20-30 percent, 30-50 percent, and 50-100 percent (called "majority African-American tracts"). The bottom portion of Table 9a reports the percentage of GSE purchases and conventional conforming originations in each of the tract categories. Table 9b reports the GSE market shares computed by expressing each GSE's purchases as a percentage of mortgages originated in each of the tract categories. Figure 3 charts the market share curves for Fannie Mae and Freddie Mac for the year 1999.

**Findings for 1999.** There are several findings from these data. As shown in Table 9a, most GSE purchases and market originations are concentrated in "predominantly white" census tracts. In 1999, these tracts accounted for approximately 87 percent of the GSEs' purchases and 84 percent of conforming market originations (without estimated B&C loans). The GSEs lag the conventional conforming market in providing funds for the two highest categories of African-American tracts (30-

50% and 50% plus). In 1999, these tracts combined accounted for 4.6 percent of Freddie Mac's purchases, 4.1 percent of Fannie Mae's purchases, and 6.2 percent of market originations.

The market shares in Figure 3 highlight the contrasting roles the GSEs play in “predominantly white” and African-American neighborhoods. In predominantly white tracts, Fannie Mae's purchases accounted for 38.3 percent of the market (without B&C loans) compared with only 22.5 percent of the market in majority African-American census tracts. This pattern of the market share declining as the African-American composition increases was similar for Freddie Mac. In predominantly white tracts, Freddie Mac's purchases accounted for 27.7 percent of the market compared with only 18.6 percent of the market in majority African-American census tracts.

A comparison of the data reported in Table 9a for the market definitions with and without B&C loans shows the dramatic effect that the B&C adjustment has on the size of the market in African-American neighborhoods. The adjustment for B&C loans reduces the number of market loans in majority African-American tracts from 324,396 to 253,407, a reduction of 22 percent; this compares with a reduction only 7 percent for total market loans. Obviously, the GSE market shares will be lower, particularly in African-American tracts, when B&C loans are included in the market definition. Fannie Mae's purchases accounted for 36.3 percent of the market in predominantly white tracts and 17.6 percent of the market in majority African-American tracts when the market is defined to include all loans (see Table 9b). As reported above, the corresponding shares for Fannie Mae when B&C loans are excluded from the market definition are 38.3 percent and 22.5 percent, respectively.

**1997-99 Trends.** For the years 1997-99, Table 10a reports the percentage distribution of GSE purchases and market originations across the five census tract categories based on African-American composition. These trend data are best analyzed by comparing 1997 with 1999, thus ignoring the heavy refinance year of 1998. Between 1997 and 1999, the percentage of Fannie Mae's purchases in majority African-American tracts declined from 2.9 percent to 2.3 percent while the corresponding percentage for Freddie Mac increased from 2.1 percent to 2.6 percent. Majority African-American tracts accounted for 3.8 percent of the conventional conforming originations in 1997 and 1999.

Table 10b reports the GSEs' shares of the market in each of the census tract categories. Fannie Mae's share of originations in majority African-American tracts declined slightly, from 23.5 percent in 1997 to 22.5 percent in 1999 while Freddie Mac's share increased significantly, from 11.2 percent in 1997 to 18.6 percent in 1999.

## **VI. GSE Purchases of Low-Downpayment Loans for African-American Borrowers**

Lack of funds for a down payment is one of the main impediments to homeownership, particularly for lower-income and minority families who find it difficult to accumulate cash. Several studies have documented a rather surprising pattern among lower-income loans purchased by the GSEs -- the predominance of loans with high down payments (Manchester, 1998; Bunce and Scheessele, 1998). In 1999, over 70 percent of GSE single-family loans qualifying for the Special Affordable Goal (which targets very low-income families) had a loan-to-value ratio less

than 80 percent. Findings such as this have raised questions about whether loans purchased by the GSEs are adequately meeting the needs of lower-income families (U. S. Department of Treasury, 1996). Table 11 gives the loan-to-value characteristics of the GSEs' purchases during 1999 of loans for African-American and minority borrowers. Fifty-six percent of the loans for African-American borrowers had a loan-to-value ratio less than 80 percent while almost 70 percent of minority borrowers and almost 74 percent of all borrowers fell into this category.

A study by three economists -- Glenn Canner, Wayne Passmore and Brian Surette (1996) -- at the Federal Reserve Board showed the implications of the GSEs' focus on high downpayment loans. Canner, Passmore, and Surette examined the degree to which different mortgage market institutions -- the GSEs, FHA, depositories and private mortgage insurers -- are taking on the credit risk associated with funding affordable mortgages for targeted groups. The authors combined market share and downpayment data with data on projected foreclosure losses to arrive at an estimate of the credit risk assumed by each institution for several borrower groups. The study found that Fannie Mae and Freddie Mac together provided only 4 percent of the credit support for African-American and Hispanic borrowers and their neighborhoods. The relatively small role of the GSEs was due to their low level of funding for these groups and to the fact that they purchased mainly high downpayment loans. FHA, on the other hand, provided two-thirds of the credit support for African-American and Hispanic borrowers, reflecting FHA's large market shares for these groups and the fact that most FHA-insured loans have less-than-five-percent down payments.

Downpayment data disaggregated by race and ethnicity are not available for the conventional conforming market, without conducting a rather complicated analysis such the study by Canner, *et al.* (1996). Thus, a benchmark for evaluating the GSEs' service to cash-constrained minority borrowers is not readily available. Other than the GSE data, the most readily available information on down payments and race/ethnicity comes from FHA. Table 12 provides a comparison of GSE purchases and FHA-insured loans by downpayment category for African-American borrowers as well as all minority borrowers. Considering loans with a less-than-ten-percent down payment, Fannie Mae purchased 31,497 loans for African-American borrowers during 1997 and 1998 while Freddie Mac purchased 17,848 of these loans and FHA insured 174,578. The combined GSE purchases of 49,345 is only 28 percent of FHA's figure. With respect to minorities as a group, the GSEs purchased 166,071 loans with a less-than-ten-percent down payment during 1997 and 1998, which was about one-third of FHA's volume (493,226) of these loans. FHA's focus on first-time home buyers explains the large number of low downpayment loans in its portfolio. However, as discussed earlier, recent studies have concluded that the conventional market could do more to serve cash-constrained minority borrowers and other studies have found that some FHA loans may qualify for a conventional-GSE loan. The GSEs themselves have recently introduced three-percent-downpayment loans that are tied to the borrower's being underwritten through their automated mortgage scoring systems. Thus, depending on the credit risk of these borrowers, the GSEs may be increasing their purchases of

low downpayment loans for minority borrowers. The data presented in this section suggests that there is room for the GSEs to increase their low-downpayment business.

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# Housing Finance

## WORKING PAPER SERIES

- HF-011      **An Analysis of GSE Purchases of Mortgages for African-American Borrowers and Their Neighborhoods**, by *Harold Bunce*, December 2000.

This study examines the record of Fannie Mae and Freddie Mac in providing mortgage funds for African-American borrowers and their neighborhoods. The study has four main findings. First, Fannie Mae has traditionally out-performed Freddie Mac in purchasing loans for African-American borrowers and their neighborhoods; however, between 1997 and 1999, there was a shift in the relative performance of the two GSEs, as Fannie Mae's performance declined and Freddie Mac's performance increased. Second, both GSEs lag the conventional conforming market in funding mortgages for African-American borrowers and their neighborhoods. Third, the GSEs' shares of mortgage originations for both upper-income and lower-income African-American borrowers appear low. The GSEs' market shares for loans to upper-income African-American borrowers are similar to their market shares for loans to very low-income White borrowers. Finally, the market share data reported in this paper illustrate the relatively small role that the GSEs play in funding loans for African-American borrowers in the overall (conventional and government) mortgage market.

- HF-010      **The Property Owners and Managers Survey and the Multifamily Housing Finance System**, by *William Segal*, September 2000.

The HUD Property Owners and Managers Survey (POMS) can be utilized to analyze a number of policy issues relating to financing for rental properties. In this paper, adjustment techniques to correct for the effects of data truncation are developed and are applied to derive estimates of number of units per property, the size of the multifamily mortgage stock, and the magnitude of annual mortgage origination volume, a critical parameter for benchmarking the performance of Fannie Mae and Freddie Mac. Mortgage origination volume for 1995 is estimated using both a "hot-deck" and a regression-based imputation approach. Results from the internal POMS file at the Census Bureau as well from the public-use version of the file are included here. Advantages and shortcomings of POMS in relation to a number of other multifamily data sources are noted, as are possible directions for future research.

- HF-009      **1998 HMDA Highlights**, by *Randall M. Scheessele*, October 1999.

This paper describes home purchase and refinance mortgage market trends at the national level using HMDA data on mortgage denials and originations from 1998 and earlier. An important contribution of the paper is the recognition of manufactured home and subprime lenders that report to HMDA and their effect on mortgage market trends.

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The paper provides a list of 21 lenders that specialize in manufactured home lending and 200 lenders that specialize in subprime lending. The paper finds that manufacture home loan applications and their increasing denial rates were the primary reason for the increasing conventional denial rat since 1993. The paper also finds that conventional prime home purchase lending to minority and lower-income borrowers increased substantially between 1993 and 1994 but growth in lending to these groups since 1994 was attributable to growth in FHA, manufactured home, and subprime lending.

HF-008

**Do FHA Multifamily Mortgage Insurance Programs Provide Affordable Housing and Serve Underserved Areas? An Analysis of FHA's Fiscal Year 1997 Book of Business and Comparison with the GSEs**, by *Edward J. Szymanoski and Susan J. Donahue*, October 1999.

This paper analyzes the rent affordability of about 67,500 unassisted multifamily units, which were insured by FHA during Fiscal Year 1997, and the proportion of these units located in *underserved areas*. In addition, the paper also compares FHA's 1997 multifamily loans purchased by Fannie Mae and Freddie Mac (the government-sponsored enterprises, or GSEs) in regard to rent affordability and proportion of units located in underserved areas. The analysis shows that FHA is providing a substantial amount of modest cost rental housing and serving underserved areas with its unassisted multifamily mortgage insurance programs. About 95 percent of the FHA units in this study (including new construction and existing housing) were affordable at 100 percent of area median income, and over 40 percent were affordable at 60 percent of area median income. About 40 percent of the FHA units in the study were located in underserved areas. In drawing comparison between FHA and the GSEs, the paper first notes the differences as well as similarities between the multifamily programs of these respective agencies- for example, FHA offers higher loan-to-value ratios, lower debt service coverage ratios, and longer fixed-rate mortgage terms than do the GSEs. These underwriting differences notwithstanding, FHA's affordability and underserved area percentages for FY 1997 were very similar to those of comparable Fannie Mae and Freddie Mac mortgage purchases.

HF-007

**HMDA Coverage of the Mortgage Market**, by *Randall M. Scheessele*, July 1998.

This paper examines the coverage of HMDA data by taking advantage of loan-level data reported to HUD on mortgages insured by FHA and mortgages purchased by the GSEs. The FHA and GSE data bases provide an accurate standard against which HMDA data on FHA and GSE loans can be measured. The results of this paper provide background for using HMDA data to estimate the market share of loans for FHA and the GSEs by reporting HMDA coverage rates for FHA originations and GSE acquisitions of mortgages for 1993 through 1996. The paper finds that HMDA data under-reports GSE acquisitions mainly because a few large lenders fail to correctly report the sale of a significant number of their loans to the GSEs. Notwithstanding coverage issues, HMDA data continues to be the most comprehensive data base for measuring primary and secondary mortgage market activity.

HF-006      **Characteristics of Mortgages Purchased by Fannie Mae and Freddie Mac: 1996-97 Update**, by *Paul B. Manchester*, August 1998.

This paper (an update of HF-003) examines the mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The analyses focus on detailed borrower, locational, and loan characteristics of such mortgages in the 1996-97 period. In general, the report is based on the loan-level data that the GSEs submit annually to the Department. The paper finds that the GSEs generally increased their performance on the goals established by HUD in 1995 and that they surpassed all of their 1996-97 goals, with Fannie Mae's performance exceeding Freddie Mac's performance on each of the goals in both years.

HF-005      **The GSEs' Funding of Affordable Loans: 1996 Update**, by *Harold L. Bunce and Randall M. Scheessele*, July 1998.

This paper (an update of HF-001) examines the borrower and neighborhood characteristics of (GSEs) in the conventional secondary mortgage market. The analysis is based on Home Mortgage Disclosure Act (HMDA) data on home purchase loans originated in metropolitan areas between 1992 and 1996. The GSEs' mortgage purchases are compared to all mortgages originated in the conventional conforming loan market, including originations retained in portfolio by banks and thrift institutions. The paper finds that there continues to be room for further increases in purchases of affordable loans by Fannie Mae and, especially, Freddie Mac.

HF-004      **The GSEs' Purchases of Single-Family Rental Property Mortgages**, by *Theresa R. DiVenti*, March 1998.

This paper examines the single-family rental mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. These properties are the "mom and pop shops" of the rental market, meaning they are small and largely individually owned and managed. To date there has been little research on this segment of the rental market. This analysis looks at neighborhood, affordability, borrower, and financial characteristics of the GSEs' mortgage purchases. The study finds that, while single-family rental properties are a small portion of the GSEs' overall business, they are a large and important segment of the rental stock for lower income families.

HF-003      **Characteristics of Mortgages Purchased by Fannie Mae and Freddie Mac, 1993-95**, by *Paul B. Manchester, Sue George Neal, and Harold L. Bunce*, March 1998.

This paper examines the mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The analyses focus on detailed borrower, locational, and loan characteristics of such mortgages in the "1993-95 transition period," established by Congress in the Federal Housing Enterprises Financial Safety and Soundness Act of 1992. In general, the report is based on the loan-level data that the GSEs submit annually to the Department. The paper finds that although there were significant increases between 1993 and 1995 in the GSEs' funding of loans for groups traditionally

underserved by the mortgage market, their support is generally less than that provided by portfolio lenders.

HF-002 **The Multifamily Secondary Mortgage Market: The Role of Government-Sponsored Enterprises**, by *William Segal and Edward J. Szymanoski*, March 1997.

This paper examines the performance of Fannie Mae and Freddie Mac in enhancing the liquidity and efficiency of the affordable segment of the multifamily mortgage market. The paper focuses specifically on the period since 1993, when HUD established affordable housing goals for these two Government-Sponsored Enterprises (GSEs). A private secondary mortgage market has developed to address the finance needs of higher end properties; yet a comparable market for mortgages on properties affordable to lower-income families lags in development. Placed within a wider market context, it is found that the GSEs have been cautious in their affordable multifamily transactions. It is concluded that the GSEs have the potential to do more to enhance the affordable segment of the multifamily mortgage market.

HF-001 **The GSEs' Funding of Affordable Loans**, by *Harold L. Bunce and Randall M. Scheessele*, December 1996.

This paper examines the borrower and neighborhood characteristics of mortgages purchased by Fannie Mae and Freddie Mac, the two major Government-Sponsored Enterprises (GSEs) in the conventional secondary mortgage market. The GSEs' mortgage purchases are compared to all mortgages originated in the conventional conforming loan market, including originations retained in portfolio by banks and thrift institutions. The analysis is based on Home Mortgage Disclosure Act (HMDA) data on home purchase loans originated in metropolitan areas between 1992 and 1995. The paper finds that there is room for further increases in purchases of affordable loans by Fannie Mae and, especially, Freddie Mac.