Alternative Assessments of GSE Performance, Influence, and Impact 1993-2003

U.S. Department of Housing and Urban Development
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Executive Summary

Chapter 1. Conceptual Overview and Study Design

- The benefits of homeownership to both individuals and society are well known. It is not surprising, then, that policymakers have adopted a variety of approaches to promote homeownership in the United States. Among these approaches are the special rights and privileges given to the government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac. The GSEs are expected, indeed mandated, to "lead the mortgage finance industry in making credit available for low- and moderate-income families" (Lind 1996).

- Most studies have argued that the GSEs did not lead the market during the 1990s. The U.S. Department of Housing and Urban Development (HUD) (2000a) itself said that, "Obviously, the GSEs are not leading the industry in financing units that qualify for the housing goals," and that, "A wide variety of quantitative and qualitative indicators demonstrate that the GSEs have ample, indeed robust, financial strength to improve their affordable lending performance."

- It is particularly important to determine what changes, if any, have occurred in the GSEs' underserved market performance since new affordable housing goals were adopted in 2000. This study, therefore, replicates and extends previous work (Williams and Bond 2002; Williams, McConnell, and Nesiba 2001) to cover the years after the new affordable housing goals were established. Via three different approaches, we ask if the GSEs are leading and how is this leadership manifested in the real world? We do not claim that any one strategy alone can provide definitive proof one way or the other of GSE leadership, but, although alternative explanations may be possible for any single finding, the body of evidence as a whole provides a clear picture.

- First, we compare the GSEs' performance with that of the primary market, with the rest of the secondary market, and to each other. We employ alternative definitions of the primary market lenders that the GSEs should be compared with, definitions that both include and exclude government-insured, subprime, and manufactured housing lending. Although the GSEs have argued for more restrictive definitions of the primary market, we argue that more inclusive definitions are justified because (1) the GSEs themselves say many subprime loans go to borrowers who could go elsewhere; (2) many FHA loans could have been underwritten as conventional prime loans; (3) qualified buyers who do not go to the GSEs and their partners likely pay higher interest rates, receive less favorable loan terms, and are sometimes subject to predatory and abusive practices; and (4) it may be possible that the failure of the GSEs and their partners to effectively target and market to these groups is what is causing them to go elsewhere.

- Second, we evaluate how the GSEs meet their affordable housing goals. We examine whether they are serving all members of underserved markets well or whether they tend to focus on the least underserved of the underserved. This analysis considers

whether the creation of subgoals or alternative goals would help to better meet the needs of underserved markets.

- Finally, we examine the direct effects of GSE leadership and influence on the primary market. We consider the extent to which the GSEs deal directly with the primary market as opposed to buying their loans from other secondary market entities. We then replicate and extend Williams and Nesiba's (1997) Models of Community Reinvestment Market Share. Through a longitudinal analysis, we determine whether the effects of the GSEs on their partners have become more positive (or at least less negative) over time.

- Five types of underserved markets are examined in this study: very-low-income families, low-income families in low- to moderate-income areas, targeted (underserved) areas, African Americans, and Hispanics. The 1993–2003 period is studied, with a particular emphasis on changes that have occurred in recent years. Home Mortgage Disclosure Act (HMDA) data for metropolitan statistical areas is examined. The Public Use Data Base that HUD compiles from GSE data (File B) is also employed for analyses of the entire nation. Separate analyses that include and exclude FHA loans and loans from subprime and manufactured housing lenders are done.

- We caution that evaluating/assessing GSE performance is not necessarily the same as explaining it. Many factors could have affected GSE performance—an improved economy, lower interest rates, better risk assessment procedures, pressure from HUD, and so on. Although we may speculate, we do not claim that we can disentangle all these influences. Nonetheless, we can show what the net impact of these influences has been, and we can identify areas for possible improvement. Furthermore, we argue that it is not enough for the GSEs simply to show that they are doing the best they can; to justify their special rights and privileges, they must also show that they are being effective.

Chapter 2. Descriptive Comparisons of Nationwide Trends in Primary and Secondary Market Lenders' Underserved Market Performance, 1993–2003

- Underserved markets received more loans from traditional lenders in 2003 than in 1993. Between 1993 and 2000, however, most borrowers from underserved markets did not experience any consistent gains or declines in terms of their share of primary market loans from traditional lenders or GSE purchases. Similarly, between 1993 and 1998, no consistent pattern emerged of the GSEs either gaining ground or losing ground relative to the primary market. Beginning around 1999, however, trends have generally been positive, with underserved markets making gains among traditional primary market lenders and even greater gains in GSE purchases.

- The mixed record with traditional lenders, however, disguises the gains that underserved markets made thanks to subprime and manufactured housing lenders, with whom the GSEs do very little business. After these lenders are considered, underserved markets are revealed to have made steady and clear gains throughout the period studied.

- Very-low-income borrowers constitute the group that has made the most consistent progress over time, among both traditional primary market lenders and the GSEs. This group's share of all traditional primary market loans increased from 10.93 percent in 1993–96 to 13.15 percent in 2001–03. Its share of GSE purchases improved even more, rising from 8.15 percent of all purchases in 1993–96 to 13.45 percent in 2001–03.

- Most measures from both HMDA data and the GSEs' own data indicate that the GSEs have never been "leading the market." The percentage of loans they purchase from underserved markets has almost always been lower than the percentage of such loans that were made in the primary market. The GSEs have also consistently trailed behind their secondary market competitors. Underserved market loans that others were willing to buy or hold in portfolio were loans that the GSEs were either unwilling or unable to purchase.

- There are indications, however, that GSE performance has recently improved. The GSEs made greater gains in 1999–2003 than did traditional primary market lenders. The GSEs also made gains against their secondary market competitors between 1998 and 2003, and after 1999 they actually had a lead with very-low-income borrowers. Conversely, although the GSEs have increased their purchases from Hispanics, GSE gains have not been as great as those made by the primary market with Hispanics.

- It is, of course, difficult to know whether increased GSE purchases were a cause or simply a reflection of activity in the primary market. Nonetheless, it is worth noting that, as the GSEs made disproportionately large gains with underserved markets, the primary market did a better and more consistent job of serving those groups.

- A factor contributing to GSE gains in recent years has been the greater improvement in Fannie Mae's underserved market performance. For much of the decade, Freddie Mac trailed Fannie Mae in most underserved markets. By 2000, however, Freddie Mac was close to parity with Fannie Mae in most categories and actually had slight leads in a few others. After 2000, however, Fannie Mae's gains among underserved markets were larger and more consistent.

- In short, although the GSEs may still not "lead the market," they have made clear gains in recent years. Even the narrowest definitions of the primary market rarely show the GSEs leading, but even the most inclusive definitions show them making progress over time.

Chapter 3. Goals, Subgoals, and Alternative Goals for Underserved Markets

- Since 1997, seasoned loans have had a modest but fairly consistent positive impact on the GSEs' gains in underserved markets. Seasoned loans may be less risky than other underserved market loans because the borrowers have established a record of payment; indeed, in some cases, the borrower may no longer belong to an underserved market. Hence, by purchasing seasoned loans, the GSEs may not be serving the most underserved of the underserved. The impact of seasoned loans on the GSEs' overall performance is modest, however, and the purchase of such loans declined in recent years.

- Between 1993 and 1998, the GSEs appeared to be serving the least underserved of the underserved. The underserved market loans they purchased tended to come from borrowers who had higher incomes, were less likely to be minorities, and were more likely to live in higher income neighborhoods and metropolitan statistical areas. By 2001–03, however, these differences had greatly diminished.

- For most underserved markets, little change occurred between the 1993–98 and 1999–2000 periods in the likelihood that the GSEs would purchase a loan from that market. Underserved markets did make clear gains in one key area, however. Having a very low income went from being the greatest obstacle to the GSEs purchasing a loan to being almost no obstacle at all. Furthermore, after 2000, the effects of all underserved market characteristics (except for being Hispanic) declined, meaning that most underserved groups were more likely to have their loans purchased by the GSEs than had been the case in the past. Also, regional differences in income, although important in 1993–98, had almost no effect on GSE purchases after that period.

- Unmeasured variables unrelated to anything the GSEs did, such as improved credit scores, might account for these developments. More flexible GSE underwriting guidelines and the implementation of programs aimed at underserved market borrowers, however, are also plausible explanations for the improvements that occurred. Changes in the affordable housing goals also likely spurred improvements in GSE performance.

Chapter 4. Direct Effects of GSE Leadership and Influence

- Over time, the GSEs have increasingly come to rely on other sellers, rather than primary market lenders, for their loan purchases. Large numbers of purchases from other sellers appeared to be a historical aberration in 1998, but subsequent numbers of GSE purchases have been much closer to the 1998 levels than to those of earlier years. These loans tend to disproportionately come from underserved markets. Whether these other sellers then use these funds to reinvest in home mortgage lending is unclear, but, in any event, their impact on overall GSE underserved market performance has generally been minor.

- If GSE policies and programs are beneficial to underserved markets, then the lenders who do the most business with the GSEs should be the lenders who make the most loans to underserved markets. We find that, between 1993 and 2003, just the opposite is almost always true: the greater the number of its conventional home purchase loans a lender sells to the GSEs, the fewer of its loans go to underserved markets.

- For every underserved market, this negative effect of the GSEs was significantly smaller in 1999–2003 than it was in 1993–98. Furthermore, for very-low-income borrowers, the GSE effect is actually slightly positive after 1998: the greater the number of its loans a lender sells to the GSEs, the more likely it is to make loans to very-low-income borrowers. Although it may be disappointing that the GSEs did not make additional gains after 2000, it is also reassuring that the gains seen in 1999 and 2000 were not just a temporary aberration.

- Factors unrelated to anything the GSEs did could account for these findings. Nonetheless, one possible explanation for the improved performance of lenders over time is that GSE policies and programs became more beneficial (or at least less harmful) to underserved markets than they had been in the past.

Chapter 5. Assessing GSE Performance

- Previous studies have concluded that the GSEs were not leading the conventional, conformation market. The ultimate conclusion of this study is the same; however, by virtually every criterion examined in this study, it is also clear that in recent years the GSEs have made noteworthy progress.

- Even the narrowest definitions of the primary market never showed the GSEs leading, but even the broadest definitions showed the GSEs making gains. In recent years, the GSEs have been much less likely to serve the least underserved of the underserved. Obstacles to underserved market purchases by the GSEs have diminished, albeit not disappeared altogether. With the GSEs doing a better job of serving all members of underserved markets, the need for subgoals or alternative goals is perhaps less great now than it was a few years ago. Lenders that do the most business with the GSEs are also doing a better job of serving underserved markets.

- Concerns persist, however, that government regulators, lenders, and the GSEs themselves should consider. The GSEs have made significant gains with underserved markets, but, for the most part, they still do not lead. Exercising greater influence on their partners, expanding their efforts in the subprime and manufactured housing arenas, reaching out to Hispanics, and making stronger efforts (by Freddie Mac, in particular) are all possible means by which the GSEs could better serve underserved markets.

Chapter 1. Conceptual Overview and Study Design

Overview

The government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, are expected, indeed mandated, to "lead the mortgage finance industry in making credit available for low- and moderate-income families" (United States Congress 1996: 653). Because the GSEs are so important for homeownership in the United States, the U.S. Department of Housing and Urban Development (HUD) has been charged with monitoring their ongoing activities. It is particularly important to determine what changes, if any, have occurred in the GSEs' underserved market performance since new affordable housing goals were adopted in 2000. This study, therefore, replicates and extends our previous work (Williams and Bond 2002; Williams, McConnell, and Nesiba 2001) to cover the years after the new affordable housing goals were established. It also introduces several important new innovations, such as an examination of regional variability in GSE performance, a more indepth evaluation of the extent to which the GSEs either are or are not focusing on the least underserved of the underserved, and a broader comparison of the GSEs with all primary market lending. These analyses yield new insights that will help guide policymakers and the GSEs in the future.

To accomplish our goals, we ask: If the GSEs are leading, how is this leadership manifested in the real world? Rather than being limited to the strengths and weaknesses of any one approach for our analysis, we pursue three different strategies for assessing GSE performance and impact. We do not claim that any one strategy alone can provide definitive proof of GSE leadership one way or the other, but, although alternative explanations may be possible for any single finding, the body of evidence as a whole provides a clear picture.

- First, we compare the GSEs' performance with that of the primary market, the rest of the secondary market, and each other. We employ alternative definitions of the primary market lenders that the GSEs should be compared with, definitions that both include and exclude government-insured, subprime, and manufactured housing loans. Our goal here is to determine how the GSEs are doing relative to the primary market lenders with which they have been traditionally compared. Beyond that determination, we want to know how much impact the GSEs are having relative to all primary and secondary market lenders; that is, we want to examine the GSEs' overall effectiveness. We argue that, even if the GSEs are doing as much as they can, if they play a relatively small part in lending to underserved markets, policymakers may want to consider whether alternative approaches are called for. In addition, we argue that many of the borrowers who go to lenders that are not GSE partners could be brought into the prime lending markets, to both their benefit and the GSEs.

- Second, we evaluate how the GSEs meet their affordable housing goals. We examine whether they are serving well all members of underserved markets or whether they tend to focus on the least underserved of the underserved. As part of this evaluation, we also examine regional variability in GSE performance to determine whether, for example, the GSEs are more likely to purchase loans from wealthier metropolitan

statistical areas (MSAs). This analysis considers whether the creation of subgoals or alternative goals would help to better meet the needs of underserved markets.

- Finally, we examine the direct influence of GSE leadership on the primary market. Here, we try to measure not only where the GSEs stand relative to the primary market but also the actual impact the GSEs are having on lenders and their lending. First, we examine the extent to which the GSEs deal with the primary market as opposed to buying their loans from other secondary market entities. We then replicate and extend Williams and Nesiba's (1997) Models of Community Reinvestment Market Share, which assess how lender characteristics are related to the proportion of a lender's business that is done with underserved markets. Specifically, we examine how the amount of business a lender does with the GSEs affects its underserved market performance. Through a longitudinal analysis, we determine whether the effects of the GSEs on their sellers have become more positive (or at least less negative) over time.

The rest of this chapter proceeds as follows.

- First, we begin by reviewing the research literature on, and the rationales behind, strategies that have been used to assess whether the GSEs, Fannie Mae and Freddie Mac, are leading the mortgage finance industry in making credit available to low- and moderate-income families.

- Second, we describe the databases and types of samples that will be employed in our work. We note how different types of sample selections can lead to a fuller understanding of GSE performance.

- Third, we describe the specific methods we will use for each of our evaluation strategies. These methods include a longitudinal extension and replication of past work as well as new approaches that will make each type of evaluation stronger.

- Fourth, we discuss why some plausible assessment strategies were *not* pursued. By understanding why some strategies were rejected, the case for the alternatives we did pursue will be stronger. In some cases, we thought the alternative strategy had weaknesses that made it inferior to the strategies we did pursue. In other instances, practical limitations of the data kept us from testing the alternative.

- Finally, we discuss the limitations of what our assessment strategies can do. In particular, we note that assessing GSE performance is *not* necessarily the same as explaining it. Many factors could affect GSE performance; we cannot disentangle them all here. We can, however, determine what the factors' net effects have been and identify those areas in which the GSEs have improved as well as the areas in which their performance might yet be made stronger.

The Evaluation Controversy—Review of Past Work

The benefits of homeownership to both individuals and society are well known. Homeownership is one of the primary means for accumulating wealth in the United

States. Homeowners enjoy better living conditions than renters do and have a higher sense of overall well-being (Turner and Skidmore 1999). Homeowners tend to be more involved in their communities, helping to promote strong neighborhoods and good schools (HUD 1999; Turner and Skidmore 1999). Homeownership contributes to economic growth through the construction of new homes and the rehabilitation of old ones and by creating demand for household goods and services (HUD 1995).

It is not surprising, then, that policymakers have adopted a variety of approaches to promote homeownership in the United States. Among these approaches are the special rights and privileges given to the GSEs, Fannie Mae and Freddie Mac. These GSEs are exempt from Securities and Exchange Commission regulations and state securities laws, pay no state or local income tax, and have a $2.25 billion line of credit with the U.S. Treasury (HUD 2004a). A recent Congressional Budget Office study (Crippen 2001) estimated the value of these benefits as being worth $13.6 billion to the GSEs in 2000, $3.9 billion of which was retained by them.

Given the importance of homeownership in America and given the benefits that the GSEs receive, policymakers are, of course, interested in assessing GSE performance. The way that leadership should be defined and evaluated, however, has been a subject of considerable controversy. One way to evaluate GSE leadership is simply to determine whether the GSEs have met the goals established for them under law. For the most part, the GSEs have met those goals. This approach has been criticized, however, on the grounds that (at least before 2000) GSE goals have not been very demanding and have been relatively easy to meet. A study by the General Accounting Office (now the Government Accountability Office) (GAO 1998) noted that HUD had set goals that were below HUD's estimates of targeted mortgage lending that was already occurring in the primary mortgage market. June O'Neill (1998) from the Congressional Budget Office argued that the goals set for the GSEs were not difficult to achieve and it was not clear how they had affected the GSEs' actions. HUD apparently agreed with these criticisms. In proposing new and higher standards for the GSEs that were adopted in 2000, HUD said that "…the GSEs play a much smaller role in the goals-qualifying markets than they do in the overall market… Obviously, the GSEs are not leading the industry in financing units that qualify for the housing goals" (HUD 2000a: 65126.).[1] HUD further argued that—

> A wide variety of quantitative and qualitative indicators demonstrate that the GSEs have ample, indeed robust, financial strength to improve their affordable lending performance. For example, the combined net income of the GSEs has risen steadily over the last decade, from $677 million in 1987 to over six billion dollars in 1999. This financial strength provides the GSEs with the resources to lead the industry in making mortgage financing available for families and neighborhoods targeted by the housing goals (HUD 2004b: 65054).

[1] In response to the concerns raised by the General Accounting Office and others, HUD also issued new goal targets and home purchase subgoals in November 2004 (HUD 2004b) after the period covered by this study. The new goals are designed to guarantee that the government-sponsored enterprises will lead the market. Future analysis will need to assess the effectiveness of the new goals and subgoals.

Because a simple examination of whether the GSEs have met their legal obligations has limited utility in evaluating their performance, at least three other major methods of evaluation have been pursued in past research. We consider each one in turn.

Evaluation Alternative 1—Comparisons of the Primary and Secondary Markets

Some researchers have argued that GSE performance should be assessed in relative terms (see Bunce 2002; Williams and Bond 2002; Williams, McConnell, and Nesiba 2001): How do the GSEs compare with the primary market lenders that make the loans in the first place? Here, the general strategy has been to compare GSE purchases of underserved market loans with the proportion of those loans that were made in the primary market.[2]

Most studies adopting this approach argue that the GSEs are not leading the market or at least they were not for the years that were studied. Drawing on work from Canner, Passmore, and Surrette (1996), Blalock (1996) observed that GSEs take no more risks with loans to low-income or minority homebuyers than do private companies. Likewise, Lind (1996) found that, for most types of underserved markets, the GSEs are not leading the home mortgage industry. In testimony before Congress, HUD's General Deputy Assistant Secretary for Housing at the time, Ira G. Peppercorn (1998), noted that only a small portion of the GSEs' 1997 purchases supported minorities and that, in 1996, the GSEs lagged behind commercial banks in funding affordable housing loans for very-low-income borrowers and underserved neighborhoods. Peppercorn further noted that, among the GSEs, Federal Housing Administration (FHA), depositories, and private mortgage insurers, Fannie Mae and Freddie Mac together provided only 4 to 5 percent of the credit support for lower income and minority borrowers and their neighborhoods. Williams, McConnell, and Nesiba (2001) found that, in Indiana during the 1992–96 period, rather than leading the market, GSE performance for conventional home purchase lending to underserved markets almost perfectly mirrored that of mortgage companies, the primary market lenders that consistently trailed the rest. Similarly, in their followup nationwide study of the years 1993 to 2000, Williams and Bond (2002) found that most measures from both Home Mortgage Disclosure Act (HMDA) and the GSEs' own data indicate that the GSEs have never been "leading the market." The percentage of loans they purchase from underserved markets has almost always been lower than the percentage of such loans that were made in the primary market. Indeed, the gap between the GSEs and the primary market has actually increased when subprime and manufactured housing loans are considered. Burnett and Fosburg (2001) also argued that the GSEs were not leading in the multifamily market, while Case, Gillen, and Wachter (2002) found that the GSEs did not lead in the underserved markets mandated by HUD for GSE purchases. Whether these gaps between the GSEs and the primary market have narrowed or been eliminated since higher affordable housing goals were adopted by HUD in 2000 remains to be seen.

[2] As noted in the following text, one reviewer thought this approach was seriously flawed and argued for an alternative strategy based on the absolute performance of the government-sponsored enterprises. We deal with those objections later in this chapter.

This approach, however, has also been controversial. Historically, the GSEs have almost exclusively bought conventional loans. Because FHA, Department of Veterans Affairs (VA), and Farmers Home Administration (FmHA) loans are government backed and often targeted at first-time homebuyers who could not qualify for conventional loans, the GSEs maintain that it would be unfair to expect the loans they purchase to be as good as the government-backed loans they do not purchase. The GSEs have also said they need time to develop the expertise needed to move into the subprime and manufactured housing markets. The GSEs therefore maintain that government-insured loans, subprime loans, and manufactured housing loans should be excluded when assessing GSE performance. Furthermore, even when studies attempt to include these loans (for example, Williams and Bond 2002), the GSEs contend that these studies fail to adequately control for difficult-to-measure subprime lending.

A counter argument can be made, however, that, if anything, a more *inclusive* definition of the primary market should be used instead of a narrower one. As Williams and Bond (2002) noted, subprime and manufactured housing loans were key contributors to gains made by underserved markets during the 1990s.[3] Although, historically, most subprime loans have been for refinance, subprime lenders are starting to focus increasingly more on home purchase loans. As Bunce (2002) noted, the share of subprime lender loans that were for home purchase went from 20 percent in 1998 to 33 percent in 2000. Williams, Nesiba, and McConnell (2005) found that subprime and manufactured housing loans accounted for as much as half or more of the gains made by underserved markets between 1993 and 2000. To simply ignore these loans would miss this critical influence.

Furthermore, although the GSEs claim they should not be compared with these other types of loans and lenders, Peter Wallison (2003) of the American Enterprise pointed out that the GSEs justify their special benefits on the grounds that they can and that they do, nonetheless, effectively serve underserved markets.

> Implicitly, [the GSEs] are claiming that they deserve continued support because they are doing good—providing financing to people who might not otherwise be able to get it. People who wonder whether the government should be backing Fannie and Freddie might think twice, or become supporters, when they believe that government backing is being used for a worthwhile purpose. So, even though Fannie and Freddie may not have a statutory mission to serve minority and low income homebuyers, they have assumed this burden by soliciting our continued support on the basis that they do. (Wallison 2003)

If the overall impact of the GSEs on underserved markets is relatively small, however, the question then becomes whether the benefits the GSEs receive in exchange for promoting underserved market lending might not be put to some more effective use (for

[3] HUD estimates that home mortgage subprime lending increased from $20 billion in 1993 to $150 billion in 1998. Because the Home Mortgage Disclosure Act (HMDA) data do not specifically identify loans as being either subprime or manufactured housing, HUD's list of lenders specializing in such loans provides only an approximation of the number of such loans made. Sources independent of HMDA, however, confirm the dramatic growth of subprime lending during the 1990s. Indeed, Davidson (1995) and Merrick (1999) provided even higher estimates of subprime lending growth than HUD does. Similarly, the Manufactured Housing Institute (2000) estimated that shipments of manufactured homes increased 113 percent between 1991 and 1996.

example, government programs for the purchase of low-income housing). That is, if the GSEs are going to justify their special privileges based on how well they serve underserved markets, it is not enough for them to show that they are doing the best they can; they must also show that their actions are effective.

Another argument for taking a more inclusive look at the primary market is that many borrowers who do not go to the GSEs' partners for their loans could and/or should do so, to both their benefit and the GSEs.

- The GSEs themselves admit that many of these loans go to qualified buyers. For example, Franklin Raines, former chief executive officer of Fannie Mae, estimated that about half the borrowers in the high-cost subprime market could qualify for lower cost conventional financing (Raines 2000). HUD (2000a) also noted that many creditworthy borrowers are in the subprime market.

- Similarly, Jonathan Brown (2003) of Essential Information argues that "a significant percentage of FHA-insured loans could have been underwritten as conventional prime loans and these loans should be viewed as a market that the GSEs can and do, in fact, penetrate" (Brown 2003: 3). Brown estimated that, "roughly 15% to 20% of FHA-insured borrowers could qualify for prime conventional mortgage loans" (Brown 2003: 4). Such a shift could be highly beneficial to borrowers. As Williams, McConnell, and Nesiba (2001) pointed out, even though many FHA loans go to members of underserved markets, the beneficial impact of these loans has been hotly disputed. For borrowers who can qualify for a conventional loan, an FHA loan is generally less desirable because FHA relies on insurance premiums paid by lower risk borrowers to cross-subsidize the costs imposed by those who are at higher risk (Canner, Passmore, and Surrette 1996).

- HUD (2000a) noted that the manufactured housing market includes a high concentration of underserved market loans. HUD suggested that "goal performance could be enhanced substantially if the GSEs were to play an increased role in the manufactured housing mortgage market" (HUD 2000a: 65053). Congressman Barney Frank (Mortgage Marketplace 1998) argued that manufactured housing owners are generally not wealthy, and they deserve the same types of benefits that the GSEs provide to other segments of the American housing finance system.

- Qualified borrowers who do not go to the GSEs and their partners likely pay higher interest rates, receive less favorable loan terms, and are sometimes subject to predatory and abusive lending practices. GSE involvement in the subprime market could help alleviate abuses that sometimes exist there. For example, Lind (2000) argued that the entry of the GSEs into subprime markets should be beneficial because the GSEs attach conditions to their purchases that curb predatory lending. HUD (2000a) suggested that greater GSE involvement in subprime markets could help standardize mortgage terms and could possibly lower interest rates.

- The fact that so many qualified borrowers choose to turn to lenders who provide less favorable loan terms than those offered by the GSEs and their partners is a

> questionable excuse for lowering our expectations for GSE performance. Indeed, it may be the failure of the GSEs and their partners to effectively target and market to these groups that is causing them to go elsewhere. In any event, given that the GSEs and their partners have a superior product to offer, it is not unreasonable to believe that they could eventually serve many of these borrowers.

A final argument for a more inclusive approach is that the GSEs claim they have been reaching out to the borrowers who have been being served by subprime lenders. They have created more flexible programs to reach those most likely to go for subprime mortgages (Yin 2003) and are working with lenders such as Washington Mutual to steer people to prime loans (Morgan Stanley 2002). By taking a broader look at home mortgage lending, we can determine what kinds of inroads, if any, the GSE efforts are making.

Evaluation Alternative 2—Goals, Subgoals, and Alternative Goals for Underserved Markets

Another alternative approach evaluates how the GSEs meet the affordable housing goals; Williams and Bond (2002) said this approach looks at the GSEs' "secrets of success" (2002: III-1) This approach argues that, depending on how members of underserved markets meet their goals, not all of them will necessarily receive the benefits they could or should get from GSE activity. If this argument is the case, then it may be desirable to develop subgoals or alternative goals for GSE performance. At least two concerns can be raised here.

First, an examination of whether the GSEs meet the goals set for them leaves open the question of whether the GSEs serve all members of underserved markets equally or whether their benefits primarily go to the least underserved of the underserved. Several studies have suggested that the latter scenario may be the case. For example, Williams and Bond (2002) found that the GSEs were increasingly purchasing seasoned loans. Such borrowers may be less risky because they have an established record of payment and may, in some cases, not even be members of underserved markets anymore. Bunce (2002) found that the GSEs purchased a disproportionately large number of loans with large down payments. Ambrose, Thibodeau, and Temkin (2002) noted that their findings are "consistent with the GSEs seeking to mitigate risk in underserved areas by purchasing loans from higher income borrowers located in underserved areas" (2002: 31). They also found that "GSE minority purchases are concentrated in nonunderserved areas" (Ambrose, Thibodeau, and Temkin 2002: 39).

Second, the affordable housing goals for the GSEs set standards for their nationwide performance. These standards leave open the possibility that not all regions of the country will benefit adequately from GSE activity. Brown (2003) of Essential Information points out—

> The most dramatic example of broadly-defined GSE housing goal categories lacking subgoals for important subsectors is the fact that all existing housing goal requirements apply only at the national level. There are no subgoals for local geographies, such as individual MSAs or states. This housing goal structure gives the GSEs carte blanche to

> trade-off strong housing goal performance in some local geographies for weak housing goal performance in others. Under the current system, the performance of the GSEs within individual states or MSAs lies beyond the reach of regulatory control or even regulatory encouragement. (Brown 2003: 10)

If the GSEs are indeed primarily serving the least underserved of the underserved, or if the goals are achieved in ways that have relatively little impact on underserved market lending, or if some parts of the country are benefiting less than are others, then the development of subgoals or alternative goals may be warranted. For example, the GSEs might be required to meet subgoals or alternative goals for different regions of the country, minority borrowers in minority areas, a more detailed classification of income groups, and so on.

Evaluation Alternative 3—Direct Effects of GSE Leadership and Influence

Still, a third strategy argues that none of the previous approaches may be really adequate for assessing GSE "leadership" and impact. Implicit in these methods of evaluation—and, for that matter, in the goals that HUD set in 1995 and the higher goals HUD adopted in 2000—is that more GSE purchases of underserved market loans will result in more such loans being made. This assumption is certainly reasonable. A primary market lender may be unwilling or unable to make a loan unless some other entity is willing to buy it. *Nevertheless, the assumption is not necessarily correct*. The GSEs could increase their purchases of underserved market loans without causing more such loans to be made; for example, they could simply redistribute the ownership of underserved market loans or make other types of purchases that do little to stimulate new lending.

Hence, a third alternative approach tries to directly examine the influence of the GSEs on lenders and their lending. In our own past work, we have done this examination in various ways.

First, we have examined the extent to which the GSEs deal with the primary market directly. Spurred by the congressional mandate to "lead the market" or by other factors, the GSEs may be purchasing underserved market loans that otherwise would have been bought by other entities in the secondary market or else held in portfolio by primary market lenders. These purchases could shift the ownership of such loans around without necessarily increasing their number. Indeed, Williams and Bond (2002) found that the GSEs' relatively strong performance with underserved markets in 1998 was due to their purchases of loans from other investors and secondary market entities. We do not know what these other sellers do with the proceeds from their sales, but it seems reasonable to assume that they will be less likely to reinvest in the home mortgage market than will entities such as banks and mortgage companies.

Second, we have pointed out that several reasons are possible for believing that, for better or for worse, the underserved market performance of lenders will be affected by how many of their loans they sell to the GSEs (see Williams and Bond 2002).

- The more dependent a lender is on selling loans to the GSEs, the more affected it will be by GSE underwriting guidelines. If these guidelines encourage underserved market

loans, the lender should be more likely to make such loans, but, if the guidelines discourage underserved markets loans, then such loans should be made less often.

- The more business a lender does with the GSEs, the more willing and able it should be to participate in GSE programs designed to promote underserved market lending. Hence, if these programs are truly effective, their effects should be most evident among those lenders who work with the GSEs the most.

- A study by Ambrose, Thibodeau, and Temkin (2002) implied additional reasons for expecting a lender's underserved market performance to be related to the extent to which it does business with the GSEs. In a study of eight MSAs, Ambrose, Thibodeau, and Temkin found that homeownership rate changes for low-income families increased more in those MSAs where GSE market share was greater. A study of 80 MSAs found that "the liquidity created when GSEs purchase loans originated to low income families is recycled into more lending targeted to lower income homebuyers" (Ambrose, Thibodeau, and Temkin 2002: x). By way of analogy, if underserved markets benefit most in those MSAs where GSE market share is greatest, they should also benefit most with the lenders who sell the largest share of their loans to the GSEs.[4]

Building also on work by Williams and Nesiba (1997) and Williams and Bond (2002), we have argued that characteristics of lenders affect their underserved market performance. For example, lenders have different legal obligations and financial interests, and these obligations and interests may affect their commitment to underserved markets. We have extended the Williams-Nesiba models to consider another type of lender characteristic: the percentage of its conventional home purchase loans that the lender sells to the GSEs. The greater the number of its loans that it sells, the more heavily influenced that lender should be by GSE policies and programs. Hence, if the GSEs encourage underserved market lending, we should determine (after controlling for other variables) that those lenders who do the most business with the GSEs also make the most loans to underserved markets. Or, we may at least determine that these lenders become more active with underserved markets over time, as GSE programs and policies designed to promote underserved market lending start to have an effect.

Williams and Bond (2002), however, found that, between 1993 and 2000, just the opposite was almost always true: the greater the number of its conventional home

[4] The flip side of the Ambrose, Thibodeau, and Temkin (2002) findings is that when government-sponsored enterprises (GSEs) are less active in a metropolitan statistical area, the underserved markets in those areas benefit less. Ambrose, Thibodeau, and Temkin (2002) were careful to point out that they were not addressing the controversy over whether the GSEs "lead the market," and we think that caution should be taken seriously. We interpret the Ambrose, Thibodeau, and Temkin (2002) findings as showing that areas can benefit from GSE activity, but, rightly or wrongly, significant regional disparities are present in how those benefits get distributed, with the GSEs being much more active in some areas than they are in others. Ambrose, Thibodeau, and Temkin (2002) also noted other disparities between served and underserved markets. For example, on page 31 they noted that "One of the most striking results is that the average GSE underserved market shares are significantly lower than the total market." Similarly, tables presented on pages 29–32 of their report show that the GSEs' share of the minority market is consistently less than their share of the total market.

purchase loans a lender sells to the GSEs, the fewer of its loans go to underserved markets. For every underserved market, however, this negative effect of the GSEs was significantly smaller in 1999–2000 than it was in 1993–98. Furthermore, for very-low-income borrowers, the GSE effect is actually slightly positive in 1999–2000: the greater the number of its loans a lender sells to the GSEs, the more likely it is to make loans to very-low-income borrowers. These positive trends, perhaps stimulated by HUD's higher affordable housing goals adopted in 2000, raise the possibility that the GSEs may be having a more beneficial effect on their lending partners today than they were just a few years ago.

Problem Summary

The previous discussion makes clear that GSEs can be evaluated in several ways. In the rest of this chapter, we explain how this study replicates and extends each of these methods. We will also introduce several important new innovations, such as an examination of regional differences in GSE performance, a more indepth examination of the extent to which the GSEs either are or are not focusing on the least underserved of the underserved, and a broader comparison of the GSEs with all primary market lending.

Data, Variables, and Sample Selection

This section describes the data, variables, and sample selection used in this report. We define the different types of underserved markets to be studied. We describe the various data sets that will be employed. We outline the types of loans that will be studied and the types of sample selection that will be employed.

Types of Underserved Markets

In the December 1995 Final Rule (*Federal Register* No. 60: 61846-62005), HUD laid out goals for GSE lending with regard to owner-occupied housing for three types of underserved markets:

1. Very-low-income families—income is not in excess of 60 percent of area median income.

2. Low-income families in low- to moderate-income areas—income is not in excess of 80 percent of area median income and the median income of the census tract does not exceed 80 percent of the area median income.

3. Targeted (or underserved) areas—central cities, rural areas, and other underserved areas. More specifically, a "central city" or "other underserved area" is a census tract with a median income at or below 120 percent of the metropolitan area and a minority population of 30 percent or greater or a census tract with a median income at or below 90 percent of the median income of the metropolitan area.[5]

[5] In metropolitan statistical areas, the definition of underserved is based on census tracts, but, in rural areas, the definition is based on counties. Nonmetropolitan areas are classified as underserved if they are located

The three underserved markets listed in the Final Rule primarily emphasize economic factors in defining markets. To these, we add two race-related underserved markets that are often examined in studies of home mortgage lending:

4. African Americans—this definition is not straightforward. We define a loan application as "African American" if the applicant is African American and the co-applicant (if any) is not White.[6]

5. Hispanics—similar to African Americans, we define a loan application as "Hispanic" if the applicant is Hispanic and the co-applicant (if any) is not White.

Data

Both primary and secondary market lenders provide data that can be used to assess GSE performance. Supplementary data sources also are available that provide valuable information not available elsewhere. Following are key highlights:

1. Data are used for the years 1993 through 2003, and 1993 is the first year for which the GSE Public Use Data Bases (PUDBs) (described in the following text) are available. In addition, the coverage of the HMDA data was greatly improved in 1993, when additional lenders were required to file for the first time. The period covered is also appropriate because it enables us to determine what effect, if any, changes in HUD's affordable housing goals in 1995 and 2000 had on GSE performance.

2. The HMDA loan application registers are one of the two main data sets used. Starting in 1990, most lenders were required to provide information on every home mortgage application they received from metropolitan statistical areas. The information included the type of loan (conventional, FHA, or VA); the requested amount; the final disposition of the application (for example, approved, denied, withdrawn, or not accepted); the census tract in which the desired property was located; the income, race, and gender of the applicant(s); and the ultimate purchaser of the loan (for example, not sold, sold to Fannie Mae or Freddie Mac, or sold somewhere else). The HMDA data also include key information on census tracts, making it possible to determine whether a neighborhood is low-income or minority. HMDA is primarily a metropolitan data set and has limited usefulness for studying nonmetropolitan areas (Scheessele 1999); hence, analyses using HMDA will be limited to MSAs.

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in counties where the median family income does not exceed 95 percent of the greater of the state nonmetropolitan median income or the nationwide nonmetropolitan median income, or if minorities comprise 30 percent or more of the residents and the median family income does not exceed 120 percent of the state nonmetropolitan median income.

[6] Previous analyses of ours have shown that, with regards to denial rates and other important factors, "joint" applications (African-American and White co-applicants) are much more similar to "White" applications (both applicants White) than they are to "African-American" applications (African-American applicant and African-American or other minority co-applicant). Our decision to code race in this way is also influenced by a desire to make results from the Home Mortgage Disclosure Act and government-sponsored enterprise (GSE) data sets as comparable as possible. As explained in the following test, GSE File B limits the ways in which race and national origin variables can be operationalized.

3. The other main data set used is the GSE PUDB File B. The GSEs have been providing HUD with loan-level data on each of their mortgage transactions since the beginning of 1993. This data has several strengths but also has major weaknesses that limit its usefulness.

    - The GSE data sets include a few key pieces of information not otherwise available from HMDA. This information includes additional information on sellers of loans as well as information on whether the loan was purchased in the same year in which it was originated.

    - For proprietary reasons, the GSE data sets are divided into three unlinkable data sets. Only one of the GSE PUDBs, the census tract file, has information that makes it possible to distinguish between metropolitan and nonmetropolitan loans.[7] Unfortunately, the census tract file does not make the critical distinction between home purchase and refinance loans, which makes it inappropriate for our purposes. Hence, analysis using the GSE PUDBs (specifically File B) will have to be for the entire nation rather than metropolitan statistical areas alone.

    - The GSE data sometimes lack key variables that are available in HMDA. For example, HMDA includes information on the race and national origins of both the applicant and co-applicant (if any). This information allows the concept of race to be operationalized in various ways. GSE File B, on the other hand, offers only a single race and national origins variable for both applicants. One of the categories of this variable is "borrower/co-borrower of different race/national origin." When purchases are so coded, it is impossible to tell whether either co-applicant was African American or Hispanic. Also, the GSE data sets do not include information on targeted tracts before 1996, and, because File B does not include census tracts, that information cannot be added as it can be with HMDA.

    - Both the HMDA and GSE data sets have some missing data on race, income, and other variables. In general, our practice has been to delete cases with missing data. Based on published reports, we believe our handling of missing data is similar to HUD's (for example, see Bunce 2002), and, where our analyses overlap, our estimates are generally quite consistent with HUD's.

    - A few major inconsistencies are present in how Fannie Mae and Freddie Mac handle missing data in the data that they provide which HUD releases in PUDB File B. For example, Williams and Bond (2002) found that, on one key income variable, "affordability category" (field 15 in File B), Fannie Mae distinguishes between cases in which data are missing and cases in which the loan did not fall into an underserved market category. Freddie Mac, on the other hand, combines

[7] These regional limitations of the government-sponsored enterprise (GSE) data are in marked contrast to the Home Mortgage Disclosure Act (HMDA) data, which have often been used by citizen groups to assess the performance of lenders in their communities. Given that HMDA provides similar but supposedly flawed data compared with that provided by the GSEs, we find it puzzling that Fannie Mae and Freddie Mac data cannot be released by HUD in a more usable form that would presumably make it possible for others to validate claims that the GSEs are "leading the market."

these two cases and codes them all as "not available." Because Freddie Mac's coding makes it impossible to distinguish between cases in which data on income are missing and cases in which income does not place them into an underserved market, we will treat all cases coded as "not available" as *not* being low or very low income. By including these cases, slightly lower estimates of underserved market lending are likely produced than would be if those cases were excluded from the calculations.

- The GSEs have been critical of studies that relied on HMDA rather than GSE data to assess GSE performance (Inside Mortgage Finance 1999). Given the severe limitations of the GSEs' own data, it is not surprising that more researchers have not made use of it. Luckily, various studies (for example, Bunce 2002; Bunce and Scheessele 1996) have found that, nationwide, both GSE-based and HMDA-based reports of GSE activity tend to give similar results. The appendix of Williams, McConnell, and Nesiba (2001) elaborates further.

4. HUD has compiled lists of lenders specializing in subprime lending and manufactured housing loans. Using these lists, we will either exclude such lenders from our analyses or explicitly consider their effects.

5. Several other minor data sets provide valuable information that can be merged with the ones discussed previously. For the years before 1997, a supplementary HMDA data set, the Expected Reporter Panel, makes it possible to code each lender as being either a commercial bank, credit union, mortgage company, or savings and loan. For later years this information is already incorporated into the HMDA data. The Federal Financial Institutions Examination Council provides free annual listings of MSA median family income, which can be used to classify applicants as low income, moderate income, and so on. The GSE data include information on targeted tracts from 1996 on (but not earlier). We merged listings of these tracts with the HMDA data. Because targeted tracts were not defined before 1996, we use the 1996 listings for earlier years.

Types of Loans/Sample Selection

For reasons outlined previously and in the following text, we do not think it would be appropriate to include every type of home mortgage loan possible in all parts of our analysis. The following criteria were therefore used when selecting loans for inclusion in our sample.

1. For parts of the analysis, only conventional loans will be selected; government-backed loans (FHA, VA, FmHA) will be excluded. This criterion is very common in home mortgage studies, particularly those involving GSEs. To examine the overall impact of the GSEs on home mortgage lending to underserved markets, however, both conventional and government-insured loans are considered in other parts of the analysis.

2. Subprime and manufactured housing lenders will receive special treatment in our analyses. Their loans will be excluded from some of the analyses while their effects will be explicitly considered in others.

3. Records with high loan-to-income ratios (6 or above) will be excluded. Bunce (2002) and Bunce and Scheessele (1996) made the same restrictions in their studies, noting that high loan-to-income mortgages appear to be data errors in HMDA (for example, lenders reporting monthly rather than yearly income).

4. All loans will be for owner-occupied home purchases. This restriction is very common. Although refinancing and home improvement loans are important, the most critical concern for most people is whether they can get a home at all. Furthermore, the factors that affect a home purchase are likely very different from the factors that affect home refinance and home improvement.

5. When using HMDA, cases selected will be from MSAs. HMDA is primarily a metropolitan data set and has limited usefulness for studying nonmetropolitan areas (Scheessele 1999). Unfortunately, when using the GSE data sets, limitations of the data make it necessary to analyze the entire nation.

6. "Jumbo" loans are excluded. Dollar limits are present on the size of the loans GSEs can purchase ($323,000 in 2003).

7. Due to the large size of the data sets, we use a 10-percent random sample of the HMDA data. No sampling is done with the GSE data sets. Our previous analyses suggest that it makes little difference whether one uses a 1-, 10-, or 100-percent sample, which is not surprising given the millions of records contained in HMDA.

Analytic Methodology and Techniques

We previously outlined three general strategies for evaluating GSE performance. In this section, we outline specifically how these strategies will be pursued in this report. For all three strategies, although we provide results for the entire 1993–2003 period, our greatest emphasis is on how the 2001–03 period compared with the years immediately before it.

Analytic Strategy for Evaluation Alternative 1—Descriptive Comparisons of Nationwide Trends in Primary and Secondary Market Lenders' Underserved Market Performance

This strategy involves a replication and extension of the Williams, McConnell, and Nesiba (2001) analysis of Indiana and the Williams and Bond (2002) nationwide analysis. These studies compared the underserved market performance of both primary and secondary market lenders. By examining primary and secondary market lenders simultaneously and over time, this approach determines which types of lenders were "leading the market" and which were merely following behind. Employing such an analysis has several advantages.

First, such descriptive analyses show whether the GSEs "lead the market" in terms of underserved market share. Second, these analyses also provide insights as to whether the GSEs lead in a second way: Do their activities encourage primary market lenders to make more underserved market loans than they would have otherwise? Several possible patterns exist that such analyses may reveal. For example, improvements in GSE performance may tend to precede improvements in the primary market, suggesting that the GSEs are leading. On the other hand, improvements in GSE performance may tend to be unrelated to improvements in the primary market, suggesting the GSEs have no effect. Another pattern suggests that improvements in the primary market may tend to come first, implying that the GSEs are simply mirroring the primary market rather than leading it.

Analytic Strategy for Evaluation Alternative 2—Goals, Subgoals, and Alternative Goals

Our second strategy is to analyze the exact source from which any progress by the GSEs in underserved markets came. Specifically, we do the following:

- Again, using the GSEs' own data, we will examine whether the GSEs tend to purchase the loans of those who may be the least underserved of the underserved. Williams and Bond (2002) primarily focused on seasoned loans, in which the borrower has a proven record of payment and may not even belong to an underserved market anymore. We will broaden their analyses to also consider other possible indicators of whether the GSEs are focusing on the least underserved of the underserved, such as minority borrowers in nonminority areas and high income borrowers in low-income areas.

- Using HMDA data, we will also examine whether *changes occurred in the determinants* of GSE purchases over time. For example, we might find that, over time, income becomes less important as a factor in whether a loan becomes purchased by the GSEs. This finding would suggest that GSEs are weighing income less heavily or have successfully developed programs that make a low income less of a barrier to GSE purchasing. More generally, changes in the effect of any variable over time may mean that, one way or another, barriers to purchase that existed in the past were now being surmounted. As part of this analysis we will also examine regional differences in GSE performances, paying particular attention to whether the GSEs focused their efforts in wealthier areas.

Analytic Strategy for Evaluation Alternative 3—Direct Effects of GSE Leadership and Influence

Finally, we examine whether and how GSEs directly affect lenders and their lending.

First, using GSE PUDB File B, we examine whether and how the sources of GSE purchases have changed over time. Williams and Bond (2002) argued that the sources of loan purchases might be important because some sellers may be less likely to reinvest in home mortgages than other types of sellers.

Second, building on work by Williams and Nesiba (1997), we estimate multivariate models that show how characteristics of lenders affect their underserved market performance. If the GSEs encourage underserved market lending, we should determine (after controlling for other variables) that those lenders who do the most business with the GSEs also make the most loans to underserved markets, or we may at least determine that these lenders become more active with underserved markets over time, as GSE programs and policies designed to promote underserved market lending start to have an effect.

The specific approach (patterned closely after Williams and Bond 2002) is as follows. We run five separate logistic regressions, one for each of the five underserved markets. Because Williams and Bond (2002) saw improvements over time, models are estimated separately for 1993–98, 1999–2000, and 2001–03. In each case, the dependent variable is coded 1 if the loan went to a member of the underserved market being studied, 0 otherwise. The independent variables include the following:

- The percentage of a lender's conventional home purchase loans that were sold to the GSEs. This percentage is the key independent variable and reflects the possible influence GSEs have on lenders. If the GSEs are having a beneficial impact on their partners, we should determine that these coefficients are positive or at least become less negative over time.

- The legal structure of the lender, as represented by three dummy variables: Thrift (coded 1 if the lender is a thrift, 0 otherwise), Mortgage Company (coded 1 if the lender is a mortgage company, 0 otherwise), and Credit Union (coded 1 if the lender is a credit union, 0 otherwise). The reference category is Commercial Banks. Hence, negative coefficients for these lender variables indicate that this type of lender is less likely to make loans to underserved markets than are commercial banks, while a positive coefficient means that this type of lender is more likely to make loans to underserved markets than are commercial banks. Including these variables helps to control for the legal and financial factors that may affect a lender's underserved market performance.

- Assets of the lender, coded 1 if assets are more than $1 billion dollars, 0 otherwise. The lending industry has become increasingly consolidated over time, with fewer but larger lenders. As Williams, McConnell, and Nesiba (2001) noted, some affordable housing advocates view this trend as disturbing because it may lead to lenders who are less responsive to the needs of local communities and underserved markets. Others, however, argue that larger lenders may have more resources and expertise to deal with the needs of low-income and minority neighborhoods and individuals. Whatever the effect is, the inclusion of this variable helps to control for it.

Roads Not Followed—Rejected Alternatives for GSE Assessment

Reviewers of this report criticized some of our assessment strategies and suggested a few alternatives. Explaining why we chose not (or were unable) to go those routes will make the justification for the choices we did make clearer.

One reviewer argued that our use of relative comparisons in evaluating alternative 1 was flawed and instead argued for absolute standards. According to this reviewer,

> …a more accurate analysis (in order to determine whether the GSEs are "leading") would focus on the percentage of "targeted" mortgages purchased by the GSEs. Under this definition, the authors could definitively state that the GSEs either are, or are not, leading the market. For example, if the GSEs purchase less than 50% of all "targeted" mortgages originated in a given year, then this would indicate that the GSEs did not "lead the market" in that year. However, if the GSEs actually purchase more than 50% of all "targeted" mortgages in any given year, then this would indicate that the GSEs actually did "lead the market."

Although we readily admit that other criteria are present by which the GSEs can be evaluated, we disagree with this opinion. According to this viewpoint, if the GSEs bought 90 percent of the loans from the served markets and 51 percent of the loans from underserved markets, they would be "leading the market," even though members of served markets were far more likely to benefit from GSE activity than were members of underserved markets. Conversely, if the GSEs bought 20 percent of the loans from served markets and 40 percent of the loans to underserved markets, they would not be viewed as "leading the market." As we have just argued, part of the problem with past methods of evaluation is that they were based on absolute standards, standards which may have been too low and not that difficult to meet. Without some basis for comparison, it is impossible to know whether a figure such as 51 percent sets too low or too high of a standard.

The reviewer also argued that—

> The problem with this type of comparison for determining whether the GSEs are "leading the market" is that the analysis is guaranteed to find that the GSEs are not leading the market. Unless every primary mortgage lender agrees to sell their "targeted" mortgages to the GSEs, then the summary statistics (by definition) will indicate that the GSEs are not leading the market. That is, the market share percentage of loans sold to the GSEs will be less than the percentage of loans originated.

Again, we disagree. Using that same logic, the GSEs could not lead in the served market unless every primary market lender was willing to sell all of their served-market loans to them. Certainly, the willingness of primary market lenders to sell their loans can affect GSE performance, but that does not mean that every loan made needs to be available for purchase.

A reviewer also suggested modifications in our third assessment strategy for looking at the direct effects of GSE leadership and influence on lenders. This reviewer said that, "the logistic regressions reported [in chapter 4] are also incorrectly specified. The correct specification should incorporate the lag of the percent of loans sold to the GSEs." For our second assessment strategy on goals and subgoals, this reviewer also suggested we break down GSE activity by month. The reviewer said,

> If the purchases of mortgages from "Other" institutions increase during the fourth quarter, for example, then this would indicate that the GSEs are actively purchasing seasoned targeted mortgages in order to meet their target goals due to the lack of targeted mortgages in the primary market.

For three reasons, two practical and one theoretical, we have not done as the reviewer suggested. First, it is extremely difficult to do cross-year lags with the HMDA data because lenders can differ greatly from one year to the next. Some lenders will go out of business; new lenders will enter the market; and lender identification codes will sometimes change, but, even when they remain the same, mergers and other factors can cause the lender to be quite different than it was the year before. A smaller scale analysis that examined a few lenders in depth might be more appropriate for what the reviewer suggests.

Second, within-year lags or seasonal analyses are not possible, either. Unfortunately, in the HMDA and GSE data sets, we only have the year the loan was made or purchased, not the specific date.

Third, it is theoretically unclear what the lag should be, if any. Are lenders more likely to be influenced by what the GSEs did last year or by what they have done in recent months? Perhaps it takes a while for lenders to respond to GSE influence, but it is also possible that the responses are very quick.

In short, we agree that it would be desirable to at least have the option to do the sort of temporal analysis suggested by the reviewer, but unfortunately we do not have this option. Even if we did have this option, however, it is not clear that such analysis would be superior to our analysis.

Finally, one other assessment strategy that we chose not to pursue is worth noting. Implicit, in at least our first two strategies, is the assumption that the GSEs need to be purchasing underserved market loans in order for the GSEs to be leading the market. This point is actually debatable. Ambrose, Thibodeau, and Temkin (2002) pointed out that, in theory at least, underserved markets may benefit from GSE activity even if the GSEs do not purchase any underserved market loans. This benefit occurs because GSE purchases increase the supply of credit that is available to all borrowers; that is, the more active the GSEs are, the less credit rationing that has to occur and the more borrowers that can benefit. This finding might suggest that our first two assessment strategies are misguided and that instead we should simply examine how overall GSE activity is related to lending to underserved markets.

This is an interesting argument, and it might well be worth further study. We note, however, that Ambrose, Thibodeau, and Temkin (2002) also argued that, in theory, targeted groups should benefit even more when the GSEs do purchase loans from them. Furthermore, empirically they found that, “While the statistical results are weak, they provide some indication that only GSE purchases of low- and moderate-income loans reduce the spread between rates of homeownership for all households and for low- and moderate-income households” (Ambrose, Thibodeau, and Temkin 2002: 61). In addition, we note that the GSEs themselves stress their purchases of underserved market loans and their direct efforts to encourage underserved market lending. Finally, we note that our third assessment strategy focuses not on GSE purchases but on whether the GSEs influence lenders to make loans to underserved markets.

A Cautionary Note—The Limitations of Assessment

It is important to understand that evaluating GSE performance is not necessarily the same as explaining it. If GSE performance has improved in recent years, then HUD's affordable housing goals, and the changes the GSEs have made in response to them, are obvious possible explanations. Conversely, the rise of subprime lenders might account for declines in GSE underserved market performance. As Williams, McConnell, and Nesiba (2001) point out, however, many others factors can affect GSE performance.

> While GSEs may be a cause of primary market lending, they are also a reflection of it. If the primary market changes, it is likely that the secondary market will change too. Hence, GSE performance could appear to worsen or improve across time for reasons totally unrelated to anything the GSEs are doing. For example, an improved economy and lower interest rates could make loans accessible to members of underserved markets that previously could not afford them. GSE portfolios would improve, not because GSEs had made loans more accessible to underserved markets, but because more members of underserved markets could meet GSE criteria.
>
> Indeed, even the most ardent supporters of GSEs would probably not claim credit for all the improvements that have occurred in recent years. What other positive influences might be at work? The most important may be the CRA [Community Reinvestment Act]. While this law has been around for some time, it has perhaps become especially effective in recent years. A change in Presidential administrations may have led to stricter enforcement (or the fear of stricter enforcement) of the law. More detailed HMDA reporting requirements likely made it easier for citizen groups to monitor how well lenders were meeting the needs of their communities. Further, as Williams and Nesiba (1997) argue, increased merger activity may have created more opportunities to bring CRA pressure to bear; since lenders want their merger plans to be approved by regulatory agencies, they may have modified their practices to keep CRA objections from standing in the way. (Williams, McConnell, and Nesiba 2001: 16).

Several other factors can be added to this list. The Community Reinvestment Act (CRA) may have affected not only the willingness of primary market lenders to make loans but also their willingness to sell them to the GSEs; that is, for CRA reasons, primary market lenders might feel it is beneficial to hold at least some of their underserved market loans in portfolio. Conversely, primary market lenders may be more willing to sell underserved market loans that were a direct result of GSE influence and encouragement. The rise of different types of mortgages, (for example, adjustable-rate mortgages) may have affected the GSEs' willingness to buy those loans. Automated underwriting may have made risk assessment more accurate (Gates et al. 2002), and programs aimed at individuals with nontraditional credit histories (Arellano 2003) may have broadened the range of borrowers whose loans qualify for GSE purchase. Numerous other factors might be responsible as well.

Although we may sometimes speculate about what has caused changes in GSE performance, ultimately, we do not claim that we can disentangle all these separate influences. We do claim, however, that we can show what their net effects have been and that doing so is very useful. If we can identify areas in which the GSEs have not done as well, we can also identify areas in which they may have room for improvement. Furthermore, as argued previously, if the GSEs are going to justify their special

privileges based on how well they serve underserved markets, it is not enough for them to show that they are doing the best they can; they must also show that their actions are effective.

Outline for the Rest of the Report

Chapters 2, 3, and 4 present the analyses for each of the three evaluations methods. In chapter 5, we discuss the findings and present our overall conclusions and recommendations.

Chapter 2. Descriptive Comparisons of Nationwide Trends in Primary and Secondary Market Lenders' Underserved Market Performance, 1993–2003

For our first method of evaluation, we examine primary and secondary market lenders simultaneously and over time to determine which types of lenders were "leading the market" and which were merely following behind. Three types of comparisons are made: the government-sponsored enterprises (GSEs) versus the primary market, the GSEs versus the rest of the secondary market, and the GSEs versus each other. We use both the Home Mortgage Disclosure Act (HMDA) and GSE Public Use Data Base (PUDB) data sets and different sample selections to provide multiple perspectives on developments in the primary and secondary markets. Because of limitations of the data sets, analyses using the HMDA data are limited to metropolitan statistical areas while analyses using the GSE PUDBs are for the entire nation. For those areas in which Williams and Bond (2002) already performed similar analyses for 1993–2000, we focus our greatest attention on the changes that occurred in later years.

The GSEs Compared With the Primary Market

Tables 2-1 and 2-2 use metropolitan HMDA data to describe the lending to underserved markets of primary and secondary market lenders. The numbers indicate, for any given year, the percentage of loans made to or purchases from a particular underserved market. In Table 2-1, the sample is limited to traditional (that is, nonsubprime and nonmanufactured housing) lenders. The GSEs buy most of their loans from this group. In Table 2-2, these alternative lenders are included. Table 2-3 takes an even broader view of the primary market and includes Federal Housing Administration (FHA) and other government-insured loans.

Table 2-1 is a direct national longitudinal replication of the work previously done by Williams, McConnell, and Nesiba (2001) and Williams and Bond (2002). We use HMDA data to compare the over-time underserved market performance of the GSEs with that of the primary market. Subprime and manufactured housing loans are excluded from the comparisons. Figures are presented for each year. Separate estimates are provided for loans that were not sold to the GSEs, loans that were sold to the GSEs, and for all loans (that is, the total activity of primary market traditional lenders). Because some up and down fluctuation occurs from year to year, we also present pooled figures for the years 1993–96, 1997–2000, and 2001–03.

Table 2-1. Underserved Conventional Market Trends, HMDA Metropolitan Statistical Area Data, Traditional Lenders*

Type of Underserved Market	Type of Purchaser	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Not sold to GSE	4.21	5.23	5.53	5.05	4.96	4.64	4.75	5.02	4.79	4.80	5.23	5.06	4.84	4.96	4.95
	Sold to GSE	2.85	4.21	4.28	3.79	3.29	2.79	3.20	3.81	3.56	4.00	4.72	3.73	3.25	4.13	3.69
	All loans	3.57	4.88	5.11	4.56	4.30	3.78	4.13	4.53	4.27	4.44	5.01	4.55	4.18	4.60	4.43
Hispanic	Not sold to GSE	4.81	5.43	5.91	5.25	5.13	5.17	5.99	6.92	7.99	8.12	8.42	5.39	5.84	8.19	6.42
	Sold to GSE	3.79	5.60	5.46	5.25	4.72	4.23	5.01	6.59	6.07	7.56	7.98	4.97	5.12	7.27	5.81
	All loans	4.33	5.49	5.76	5.25	4.97	4.73	5.60	6.78	7.18	7.86	8.23	5.23	5.54	7.79	6.17
Very low income	Not sold to GSE	12.81	12.52	12.31	13.09	13.15	13.51	13.48	12.94	13.54	13.79	13.54	12.67	13.27	13.62	13.20
	Sold to GSE	7.27	8.56	8.17	8.72	8.55	9.00	11.24	12.02	12.23	13.70	14.27	8.15	10.28	13.45	10.81
	All loans	10.15	11.14	10.93	11.38	11.31	11.39	12.55	12.56	12.97	13.75	13.86	10.93	11.99	13.55	12.20
Low-income borrower in low/moderate-income tract	Not sold to GSE	5.70	5.85	6.12	5.69	5.51	5.33	5.35	5.39	5.21	5.07	6.40	5.85	5.39	5.60	5.60
	Sold to GSE	2.80	3.68	3.54	3.58	3.06	2.77	3.13	3.75	3.56	3.99	5.93	3.37	3.18	4.54	3.71
	All loans	4.31	5.09	5.26	4.86	4.53	4.13	4.43	4.71	4.50	4.57	6.20	4.89	4.45	5.13	4.81
Targeted tract	Not sold to GSE	24.00	24.85	26.09	25.17	25.27	24.77	24.94	25.86	26.06	26.47	26.76	25.11	25.22	26.45	25.58
	Sold to GSE	18.14	21.43	21.06	20.82	19.90	18.52	19.85	21.80	21.41	23.27	24.03	20.28	19.99	22.97	21.12
	All loans	21.18	23.65	24.41	23.47	23.12	21.84	22.84	24.16	24.05	25.00	25.59	23.25	22.99	24.92	23.71

* Not including subprime or manufactured housing lenders.
GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.

Several major trends stand out. First and foremost, for every underserved market category, the GSEs did more of their business with that group in 2001–03 than they had done in previous years. For African Americans, the percentage of purchases involving this group increased from 3.25 percent in 1997–2000 to 4.13 percent in 2001–03. For Hispanics, the gains were even greater: 5.12 percent in 1997–2000 to 7.27 percent in 2001–03. Very-low-income borrowers saw the most dramatic increase of all, with the percentage of purchases increasing from 8.15 percent in 1993–96 to 10.15 percent in 1997–2000 to 13.45 percent in 2001–03. The 1997–2000 and 2001–03 figures were 3.18 and 4.54 percent, respectively, for low-income borrowers in low-income tracts and 19.99 and 22.97 percent, respectively, for targeted tracts.

Although pooling years together helps prevent possibly misleading impressions created by short-term fluctuations, it is interesting to note that a clear upward trend also occurred throughout the years 2001–03, with 2003 consistently showing the strongest GSE performance.

Of course, it is important to note that the primary market also made more loans to each of the underserved market categories. As Williams and Bond (2002) noted and as these tables again show (see the rows labeled "All Loans"), African Americans, low-income borrowers in low- to moderate-income tracts, and targeted tracts actually had smaller primary market shares in 1997–2000 than they had in 1993–96. In 2001–2003, however, every underserved market received more loans than it had received in 1993–96 or 1997–2000. Indeed, examining the year-by-year figures, 2003 was the best year for every underserved market except African Americans, who trailed slightly behind their peak year of 1995. In short, after a somewhat inconsistent record during the 1990s, underserved markets seemed to make steady gains starting around 2000 or 2001.

Looking specifically at the GSEs, *in every category, in 2001–03 the GSEs continued to trail the primary market as a whole* (see the rows labeled "All loans" and the rows labeled "Sold to GSE"). Recall, too, that subprime and manufactured housing loans are excluded from this analysis. For example, in 2001–03, 4.13 percent of GSE purchases involved African-American borrowers and 4.60 percent of all loans were made to African Americans by the primary market. For other underserved markets, the corresponding figures were 7.27 percent of GSE purchases and 7.79 percent of primary market loans for Hispanics; 13.45 and 13.55 percent, respectively, for very-low-income borrowers; 4.54 and 5.13 percent, respectively, for low-income borrowers in low-income tracts; and 22.97 and 24.92 percent, respectively, for targeted tracts.

Although the GSEs continued to trail the primary market in 2001–03, it is also worth noting that (1) for every underserved market except Hispanics, the GSEs narrowed the gap between themselves and the primary market between 2001 and 2003 and (2) for very-low-income borrowers, the gap between the GSEs and the primary market during 2001–03 was extremely small; in fact, in 2003, the GSEs actually led the primary market, with market shares of 14.27 to 13.86 percent, respectively.

In short, the Williams and Bond (2002) analysis suggested that the GSEs were starting to make gains on the primary market during the late 1990s and speculated that those trends might continue. This analysis shows that was indeed the case. Although the GSEs still trailed the primary market in most underserved market categories during 2001–03, they made steady gains and actually had a lead in 2003 with very-low-income borrowers. Williams and Bond (2002) had

also noted that no clear and consistent pattern of the GSEs either losing or gaining ground relative to the primary market occurred during 1993–2000. From 2001 on, however, the GSEs have generally gained ground on the primary market.

Of course, these analyses exclude subprime and manufactured housing loans. To gain a clearer picture of how the GSEs compare with the primary market as a whole, the next two tables use more inclusive definitions of the primary market. Table 2-2 again uses HMDA data, but we expand the sample to include subprime and manufactured housing loans.[8] Several similarities and some key differences are present in Table 2-1.

[8] Bunce (2002) referred to this as the "total conforming market." The "total market," as defined by Bunce, also includes Federal Housing Administration loans, which we add in Table 2-3. Bunce also did analyses of the "conventional conforming market," both with and without manufactured housing and subprime loans included.

Table 2-2. Underserved Conventional Market Trends, HMDA Metropolitan Statistical Area Data, Traditional and Alternative Lenders*

Type of Underserved Market	Type of Purchaser	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Not sold to GSE	4.32	5.39	5.81	5.51	5.77	6.13	6.45	6.89	6.40	6.77	7.42	5.34	6.34	6.91	6.22
	Sold to GSE	2.86	4.19	4.29	3.79	3.30	2.79	3.22	3.82	3.57	4.05	4.79	3.73	3.26	4.17	3.71
	All loans	3.64	4.99	5.33	4.90	4.89	4.76	5.31	5.79	5.32	5.67	6.46	4.75	5.20	5.86	5.28
Hispanic	Not sold to GSE	4.85	5.48	5.98	5.49	5.61	5.88	6.75	7.75	8.77	10.03	11.68	5.50	6.55	10.29	7.44
	Sold to GSE	3.81	5.62	5.50	5.27	4.79	4.25	5.05	6.62	6.08	7.63	8.12	4.99	5.16	7.35	5.85
	All loans	4.37	5.53	5.83	5.41	5.32	5.21	6.15	7.34	7.75	9.06	10.37	5.31	6.04	9.16	6.85
Very low income	Not sold to GSE	13.76	13.52	13.69	15.23	15.67	16.44	17.15	16.21	15.18	14.44	13.83	14.09	16.41	14.43	15.08
	Sold to GSE	7.29	8.57	8.18	8.70	8.60	8.99	11.23	12.01	12.23	13.68	14.26	8.16	10.28	13.45	10.81
	All loans	10.72	11.85	11.95	12.89	13.12	13.35	15.02	14.70	14.05	14.13	13.99	11.91	14.12	14.05	13.48
Low-income borrower in low/moderate-income tract	Not sold to GSE	5.99	6.16	6.60	6.50	6.51	6.89	7.00	7.05	6.15	5.86	7.43	6.34	6.89	6.54	6.62
	Sold to GSE	2.80	3.68	3.55	3.58	3.09	2.78	3.14	3.75	3.57	4.01	5.94	3.38	3.19	4.56	3.72
	All loans	4.49	5.32	5.63	5.45	5.28	5.19	5.61	5.86	5.16	5.11	6.88	5.25	5.50	5.78	5.53
Targeted tract	Not Sold to GSE	24.93	25.82	27.63	27.67	28.24	28.89	29.08	29.86	28.82	29.59	30.60	26.67	29.07	29.74	28.62
	Sold to GSE	18.13	21.49	21.13	20.88	20.01	18.59	19.99	21.85	21.44	23.36	24.16	20.33	20.08	23.06	21.20
	All Loans	21.73	24.36	25.57	25.24	25.27	24.62	25.81	26.98	25.97	27.06	28.24	24.35	25.71	27.17	25.83

* Including subprime and manufactured housing lenders.
GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.

In Table 2-1, we saw that underserved market gains with primary market lenders have been inconsistent over time. After subprime and manufactured housing loans are included, we see a steadier pattern of gains over time. As the rows for "All loans" show, all underserved markets had more loans in 1997–2000 than they had in 1993–96, and only very-low-income borrowers failed to do better in 2001–03 than they did in 1997–2000. These trends reveal how important it is to consider subprime and manufactured housing lenders. Indeed, Williams, McConnell, and Nesiba (2001) argued that market trends in Indiana suggest that these lenders may have actually stolen away borrowers who could have qualified for lower cost loans from traditional lenders.

Not surprisingly, the percentages of GSE purchases in Table 2-2 are virtually identical to those in Table 2-1, never changing by more than a few one-hundredths of a percentage point. This similarity reflects how few subprime and manufactured housing loans the GSEs purchased. Also not surprisingly, the gap between the GSEs and the primary market is larger after subprime and manufactured housing lenders are included in the mix. Nonetheless, it is important to note that, once again, for every underserved market except Hispanics, the gap between the GSEs and the primary market was smaller in 2001–03 than it had been in 1997–2000.

As noted in chapter 1, the gains made by subprime lenders are a matter of potential concern. By the GSEs' own admission, many subprime borrowers could qualify for better deals elsewhere. The GSEs, working with their primary market partners, might reasonably be expected to do more to attract people to their products. Nonetheless, it is encouraging that, after losing ground thanks to subprime and manufactured housing lenders during the 1997–2000 period, the GSEs were able to be much more competitive in 2001–03.

Table 2-3. Underserved Conventional Market Trends, HMDA Metropolitan Statistical Area Data, All Lenders*

Type of Underserved Market	Type of Purchaser	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Not sold to GSE	7.23	8.22	8.98	8.67	9.05	8.97	9.29	9.77	9.10	8.92	8.77	8.33	9.28	8.93	8.88
	Sold to GSE	2.98	4.30	4.48	3.96	3.40	3.11	3.52	3.90	3.66	4.15	4.85	3.88	3.47	4.25	3.85
	All loans	5.84	7.22	7.93	7.45	7.60	7.15	7.75	8.20	7.55	7.40	7.57	7.14	7.68	7.51	7.46
Hispanic	Not sold to GSE	6.28	6.93	7.54	8.07	8.51	8.83	9.64	10.68	11.45	12.13	12.61	7.27	9.46	12.08	9.57
	Sold to GSE	3.83	5.64	5.59	5.39	4.89	4.53	5.34	6.69	6.23	7.67	8.19	5.05	5.35	7.43	5.96
	All loans	5.48	6.60	7.08	7.38	7.59	7.50	8.50	9.62	9.96	10.71	11.26	6.68	8.33	10.67	8.55
Very Low Income	Not sold to GSE	14.52	14.43	14.40	16.20	17.23	18.00	18.83	17.94	17.92	17.84	16.59	14.94	18.04	17.43	16.92
	Sold to GSE	7.39	7.23	8.22	8.98	8.67	9.05	8.97	9.29	9.77	9.10	8.92	8.28	10.42	13.53	10.92
	All loans	12.15	2.98	4.30	4.48	3.96	3.40	3.11	3.52	3.90	3.66	4.15	13.15	15.90	16.23	15.21
Low-income borrower in low/moderate-income tract	Not sold to GSE	7.21	5.84	7.22	7.93	7.45	7.60	7.15	7.75	8.20	7.55	7.40	7.49	8.25	8.05	7.96
	Sold to GSE	2.86	6.28	6.93	7.54	8.07	8.51	8.83	9.64	10.68	11.45	12.13	3.45	3.29	4.62	3.80
	All loans	5.77	3.83	5.64	5.59	5.39	4.89	4.53	5.34	6.69	6.23	7.67	6.40	6.86	6.99	6.77
Targeted Tract	Not sold to GSE	29.24	5.48	6.60	7.08	7.38	7.59	7.50	8.50	9.62	9.96	10.71	30.58	32.66	32.26	31.92
	Sold to GSE	18.34	14.52	14.43	14.40	16.20	17.23	18.00	18.83	17.94	17.92	17.84	20.55	20.41	23.20	21.43
	All loans	25.64	7.39	8.66	8.31	8.86	8.70	9.16	11.48	12.06	12.33	13.78	27.89	29.22	29.48	28.92

* Including subprime, manufactured housing, and Federal Housing Administration lenders.

GSE = government-sponsored enterprise.

HMDA = Home Mortgage Disclosure Act.

Finally, in Table 2-3, we use our most inclusive definition of the primary market and include FHA and other government-insured loans in the analysis. Not surprisingly, the GSEs trail the primary market even more after FHA loans are considered. Examining the row for "All loans," we see that every underserved market group, except African Americans, made at least slight gains between 1997 and 2000 and 2001–03. Comparing the rows for "Sold to GSE" and "All loans" we again see that, except for Hispanics, the GSEs narrowed the gap between themselves and the total market over time. For example, for very-low-income borrowers, the gap between the GSEs and the total market was 5.48 percent in 1997–2000 (GSEs had a market share of 10.42 percent and the total market had a market share of 15.90 percent). In 2001–03, the gap decreased to 2.70 percent (GSEs had a market share of 13.53 percent and the total market had a market share of 16.23 percent). For low-income borrowers in low- to moderate-income tracts, the gap between the GSEs and the total market was 3.57 percent in 1997–2000 and only 2.37 percent in 2001–03. The corresponding gap figures were 8.81 percent in 1997–2000 and 6.28 percent in 2001–03 for targeted tracts and1.94 percent in 1997–2000 and 1.69 percent in 2001–03 for African Americans. For Hispanics, a gap of 0.88 percent in 1997–2000 more than doubled to 1.81 percent in 2001–03.

Hence, even the narrowest definitions of the primary market rarely show the GSEs leading, but even the most inclusive definitions show them making progress over time.

It is, of course, difficult to determine whether increased GSE purchases were a cause or simply a reflection of activity in the primary market. Nonetheless, it is worth noting that, as the GSEs made disproportionately large gains with underserved markets, the primary market did a better and more consistent job of serving those groups.

The GSEs Compared With the Rest of the Secondary Market

Another way of assessing the GSEs is by comparing their underserved market performance with that of their competitors in the secondary market. The HMDA data indicate whether a loan was sold to the GSEs, sold to someone else (for example, another secondary market entity), or not sold at all (held in portfolio). Table 2-4 compares these three categories. Subprime and manufactured housing lenders are excluded from these calculations; if they were included, the GSEs' relative performance would again appear weaker than it does in the table.

Table 2-4. Underserved Conventional Market Trends, HMDA Metropolitan Statistical Area Data, GSEs Compared With the Secondary Market

Type of Underserved Market	Type of Purchaser	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Sold to GSE	2.85	4.21	4.28	3.79	3.29	2.79	3.20	3.81	3.56	4.00	4.72	3.73	3.25	4.13	3.69
	Sold to other entity	4.08	5.32	6.22	6.15	5.46	4.87	4.78	5.06	4.74	4.84	5.28	5.56	5.01	4.99	5.14
	Loan not sold	4.26	5.20	5.23	4.50	4.67	4.46	4.73	4.99	4.82	4.76	5.16	4.84	4.72	4.92	4.82
	Total	3.57	4.88	5.11	4.56	4.30	3.78	4.13	4.53	4.27	4.44	5.01	4.55	4.18	4.60	4.43
Hispanic	Sold to GSE	3.79	5.60	5.46	5.25	4.72	4.23	5.01	6.59	6.07	7.56	7.98	4.97	5.12	7.27	5.81
	Sold to other entity	3.73	4.84	5.44	5.79	5.92	5.57	5.95	6.83	7.49	8.25	8.69	5.06	6.10	8.21	6.63
	Loan not sold	5.24	5.70	6.12	4.98	4.65	4.85	6.03	6.99	8.38	7.99	8.12	5.54	5.66	8.17	6.28
	Total	4.33	5.49	5.76	5.25	4.97	4.73	5.60	6.78	7.18	7.86	8.23	5.23	5.54	7.79	6.17
Very low income	Sold to GSE	7.27	8.56	8.17	8.72	8.55	9.00	11.24	12.02	12.23	13.70	14.27	8.15	10.28	13.45	10.81
	Sold to other entity	8.51	9.72	11.76	12.41	10.47	12.21	12.81	11.87	12.22	12.38	12.54	10.79	11.93	12.40	11.84
	Loan not sold	14.53	13.81	12.55	13.43	14.79	14.52	13.96	13.82	14.56	15.13	14.69	13.52	14.25	14.78	14.13
	Total	10.15	11.14	10.93	11.38	11.31	11.39	12.55	12.56	12.97	13.75	13.86	10.93	11.99	13.55	12.20
Low-income borrower in low/moderate-income tract	Sold to GSE	2.80	3.68	3.54	3.58	3.06	2.77	3.13	3.75	3.56	3.99	5.93	3.37	3.18	4.54	3.71
	Sold to other entity	3.87	4.73	6.15	5.50	4.72	4.77	4.99	4.89	4.42	4.51	5.73	5.16	4.85	4.97	4.97
	Loan not sold	6.43	6.36	6.11	5.78	5.99	5.77	5.60	5.81	5.82	5.60	7.17	6.16	5.79	6.20	6.04
	Total	4.31	5.09	5.26	4.86	4.53	4.13	4.43	4.71	4.50	4.57	6.20	4.89	4.45	5.13	4.81
Targeted tract	Sold to GSE	18.14	21.43	21.06	20.82	19.90	18.52	19.85	21.80	21.41	23.27	24.03	20.28	19.99	22.97	21.12
	Sold to other entity	18.73	21.62	25.20	24.92	23.75	23.74	23.82	24.68	24.67	25.87	26.23	23.00	24.03	25.68	24.42
	Loan not sold	26.12	26.34	26.48	25.29	26.20	25.59	25.74	26.84	27.13	27.03	27.36	26.06	26.09	27.18	26.39
	Total	21.18	23.65	24.41	23.47	23.12	21.84	22.84	24.16	24.05	25.00	25.59	23.25	22.99	24.92	23.71

GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.

As Williams and Bond (2002) previously noted and as Table 2-4 again shows, in almost every year between 1993 and 2000 and for almost every underserved market, the GSEs purchased relatively fewer underserved market loans than were purchased by others or held in portfolio by the original lender. Underserved market loans that the GSEs' secondary market competitors were willing to purchase or that primary market lenders are willing to hold in portfolio were loans that the GSEs were apparently unwilling or unable to buy. Williams and Bond (2002) also noted, however, that gaps narrowed during the latter part of the 1990s and that the GSEs were making especially strong gains with very-low-income borrowers.

The data for 2001–03 show that these trends continued after 2000. The GSEs still trailed the others for African Americans, Hispanics, low-income borrowers in low-income tracts, and targeted tracts, but the gaps were a percentage point or more smaller in most cases (except for Hispanics). Furthermore, for very-low-income borrowers, the GSEs actually led the others in 2001–03 by nearly a percentage point (with market shares of 13.45 and 12.40 percent, respectively) after trailing by 1.65 percentage points in 1997–2000 (when the respective market shares were 10.28 and 11.93 percent). For most underserved markets, although they were still trailing, the GSEs narrowed the gap between themselves and the loans that were not sold (that is, held in portfolio by the primary market).

In short, the GSEs do not and have not led their secondary market competitors in purchases of most types of underserved market loans. Beginning in 1999 and continuing through 2003, however, they narrowed the gaps considerably. Indeed, in 2001, they actually took a very small lead among very-low-income borrowers and then widened that lead in later years.

The GSEs Compared With Each Other

Most of our analysis focuses on the joint performance of the two GSEs. To better understand the developments of recent years, it is also helpful to examine how the GSEs' performances compare with each other.

As Table 2-5 shows, important differences have occurred in the gains the two GSEs have made. Here, we use the GSEs' own reports of their performance as contained in GSE PUDB File B. When viewing the results from File B, it is again important to remember that it includes home purchase loans for the entire nation, not just metropolitan statistical areas. Hence, the GSE PUDB numbers are not directly comparable with the HMDA numbers.[9]

[9] Using published HUD reports for 1992–2000 that included information not available to other researchers, Williams and Bond (2002) found that, in particular, nonmetropolitan areas are more likely to be defined as underserved, causing the nationwide GSE Public Use Data Base figures for targeted tracts to be higher than the corresponding Home Mortgage Disclosure Act figures for metropolitan statistical areas.

Table 2-5. Fannie Mae's Performance Compared With Freddie Mac's (GSE Public Use Data Base File B, National Data)

Type of Underserved Market	GSE	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Fannie Mae	2.77	4.17	4.53	3.68	4.12	3.54	2.99	3.53	4.61	5.08	5.12	3.75	3.53	4.96	4.12
	Freddie Mac	2.01	2.83	3.24	2.92	2.75	3.60	2.99	3.68	3.30	2.98	2.96	2.76	3.31	3.09	3.08
	Total	2.48	3.62	4.00	3.36	3.56	3.57	2.99	3.60	4.04	4.29	4.44	3.34	3.43	4.26	3.70
Hispanic	Fannie Mae	3.97	5.89	6.33	5.74	5.18	5.02	5.06	6.49	7.34	8.87	9.29	5.43	5.42	8.59	6.60
	Freddie Mac	3.28	4.23	4.25	3.97	4.11	3.93	4.40	5.53	5.88	5.62	5.58	3.93	4.51	5.70	4.73
	Total	3.71	5.21	5.47	4.99	4.74	4.53	4.78	6.05	6.71	7.65	8.11	4.82	5.02	7.51	5.84
Very low income	Fannie Mae	5.57	7.87	8.08	7.61	8.78	12.37	11.13	10.26	11.77	13.27	13.70	7.19	10.80	12.98	10.62
	Freddie Mac	4.80	6.13	6.00	6.79	7.20	12.54	10.12	11.37	11.30	12.55	12.66	5.95	10.64	12.15	9.89
	Total	5.28	7.17	7.21	7.26	8.16	12.44	10.71	10.74	11.57	12.97	13.35	6.68	10.73	12.66	10.32
Low-income borrower in low/moderate-income tract	Fannie Mae	2.05	3.43	3.53	3.35	3.55	4.38	3.43	3.39	3.97	4.57	4.56	3.03	3.72	4.39	3.78
	Freddie Mac	1.64	2.12	2.31	2.38	2.57	4.19	3.10	3.75	3.64	4.36	3.04	2.12	3.50	3.72	3.20
	Total	1.89	2.90	3.02	2.93	3.16	4.30	3.29	3.55	3.83	4.48	4.05	2.66	3.63	4.13	3.55
Targeted tract*	Fannie Mae				23.86	25.38	27.97	23.80	25.12	26.11	29.25	28.77	23.86	25.68	28.13	26.64
	Freddie Mac				21.66	21.64	27.20	23.88	23.97	24.31	28.87	26.63	21.66	24.47	26.64	25.13
	Total				22.92	23.91	27.65	23.84	24.62	25.35	29.09	28.05	22.92	25.17	27.55	26.03

GSE = government-sponsored enterprise.

*Before 1996, a central cities-based definition was in effect for the geographically targeted goal. It excluded nonmetropolitan areas. Therefore, the goal percentages for 1993, 1994, and 1995 are not consistent with post-1995 goal percentages.

The table shows that considerable fluctuation has occurred over time in the GSEs' relative performance. As the combined statistics for 1993–96 show, in the first part of the decade, Fannie Mae had clear leads over Freddie Mac in every category of underserved markets. By the latter part of the decade, Freddie Mac greatly narrowed the gap. For example, a 1-percentage-point gap for African Americans in 1993–96 (when Fannie Mae's share was 3.75 percent and Freddie Mac's was 2.76 percent) decreased to only a 0.22-percentage-point gap in 1997–2000 (when the GSEs' respective shares were 3.53 and 3.31 percent). Indeed, in 2000, Freddie Mac actually did slightly better than Fannie Mae did with African Americans, low-income borrowers in low- to moderate-income neighborhoods, and very-low-income borrowers.

Hence, the very small gains the GSEs made in the late 1990s with African Americans and Hispanics were primarily due to improvements made by Freddie Mac. The somewhat larger gains the GSEs made, with regard to the three Final Rule underserved markets, were disproportionately driven by Freddie Mac. After having relatively weak performance in the early part of the decade, Freddie Mac was able to come close to parity and even sometimes take slight leads over Fannie Mae with underserved markets.

The 2001–03 period, however, showed Fannie Mae once again widening its lead over Freddie Mac. Fannie Mae led Freddie Mac in every underserved market category and, furthermore, its lead was wider in every category than it had been in 1997–2000. Fannie Mae showed clear improvement in every category. Freddie Mac, on the other hand, did slightly worse with African Americans (indeed, it declined every year after 2000), made only a very slight gain with low-income borrowers in low-income tracts, and made smaller gains than Fannie Mae did with Hispanics, very-low-income borrowers, and targeted tracts. An examination of the year-by-year figures shows that, starting in 2000, Fannie Mae usually did better each year than it had in the previous year, whereas Freddie Mac's record was more sporadic, sometimes reflecting better and sometimes reflecting worse performance.

In short, Fannie Mae has usually led Freddie Mac in most of the underserved markets studied here. In the late 1990s, Freddie Mac narrowed that lead in many areas. In the early 2000s, however, although both GSEs made gains with most underserved markets, Fannie Mae's gains were larger and more consistent than Freddie Mac's.[10]

Summary

Underserved markets received more loans from traditional lenders in 2003 than they did in 1993. Between 1993 and 2000, however, most borrowers from underserved markets did not experience any consistent gains or declines in terms of their share of primary market loans from traditional lenders or GSE purchases. Similarly, between 1993 and 1998, no consistent pattern occurred of the GSEs either gaining ground or losing ground relative to the primary market. Starting around

[10] In addition, HUD's (2004b) own analysis (which uses government-sponsored enterprise data not available to other researchers) shows slightly stronger performance by Fannie Mae than our corresponding Home Mortgage Disclosure Act analysis does. According to HUD, Fannie Mae led the market for special affordable and low- to moderate-income borrowers in 2002 and 2003.

1999, however, trends have generally been positive, with underserved markets making gains among traditional primary market lenders and even greater gains in GSE purchases.

The mixed record of traditional lenders, however, disguises the gains that underserved markets made thanks to subprime and manufactured housing lenders, whom the GSEs do very little business with. After these lenders are considered, it is apparent that underserved markets made steady and clear gains throughout the period studied. Indeed, declines in underserved market share experienced by traditional lenders may reflect the great success of these alternative lenders.

Very-low-income borrowers constitute the group that has made the most consistent progress during the 1990s with both traditional primary market lenders and the GSEs. This group's share of all traditional primary market loans increased from 10.93 percent in 1993–96 to 13.15 percent in 2001–03. Its share of GSE purchases improved even more, rising from 8.15 percent of all purchases in 1993–96 to 13.45 percent in 2001–03.

Most measures from both HMDA and the GSEs' own data indicate that the GSEs have never been "leading the market." The percentage of loans they purchase from underserved markets has almost always been lower than the percentage of such loans that were made in the primary market. The GSEs have also consistently trailed behind their secondary market competitors. Underserved market loans that others were willing to buy or hold in portfolio were loans that the GSEs were either unwilling or unable to purchase.

Indications reveal, however, that GSE performance has recently improved and that it may have even occasionally matched or surpassed the performance of traditional primary market lenders. In most underserved markets, the GSEs made greater gains in 1999–2003 than did traditional primary market lenders. The GSEs also made gains against their secondary market competitors between 1998 and 2003, and after 1999 they actually had a lead with very-low-income borrowers. Conversely, although the GSEs have increased their purchases from Hispanics, their gains have not been as great as those made by the primary market.

It is, of course, difficult to determine whether increased GSE purchases were a cause or simply a reflection of activity in the primary market. Nonetheless, it is worth noting that, as the GSEs made disproportionately large gains with underserved markets, the primary market did a better and more consistent job of serving those groups.

A factor contributing to GSE gains in recent years has been the greater improvement in Fannie Mae's underserved market performance. For much of the decade, Freddie Mac trailed Fannie Mae in most underserved markets. By 2000, however, Freddie Mac was close to parity with Fannie Mae in most categories and actually had slight leads in a few others. After 2000, however, Fannie Mae's gains among underserved markets were larger and more consistent than Freddie Mac's.

In short, although the GSEs may still not "lead the market," they have made clear gains in recent years. Even when loans from subprime and manufactured housing lenders are included, the GSEs have managed to somewhat narrow the gap between themselves and the primary market, a major reversal of the trends from the late 1990s, when the GSEs were losing ground thanks to

such lenders. Even the narrowest definitions of the primary market rarely show the GSEs leading, but even the most inclusive definitions show them making progress over time.

Chapter 3. Goals, Subgoals, and Alternative Goals for Underserved Markets

The previous chapter showed that, during the late 1990s and early 2000s, the government-sponsored enterprises (GSEs) made gains with most underserved markets. At this point, however, it is unclear how those gains were achieved. Did the GSEs serve all members of underserved markets, or did their benefits primarily go to the least underserved of the underserved? If the latter scenario is true, then it may be desirable to set up subgoals or alternative goals for the GSEs. In this chapter, we therefore examine more closely how the GSEs achieved their success and then consider the implications this purchasing behavior may have for goal setting in the future. Specifically, we examine the following factors:

First, did the GSEs tend to purchase loans that came from the least underserved of the underserved? Here we consider several factors:

- To what extent did the GSEs use *seasoned loans* to improve their performance? Underserved market loans that, for whatever reason, the GSEs failed to purchase in earlier years but that have since established at least some record of steady payment may be attractive to the GSEs. Purchases of such loans could improve the GSEs' underserved market performance while adding less risk than new loans would. Furthermore, the relatively weak underserved market performance of the GSEs in earlier years may have made such loans fairly plentiful. Also, it may be that, because of pressure from the Community Reinvestment Act, primary market lenders may be holding their underserved market loans in portfolio longer, hence forcing the GSEs to turn more to seasoned loans.[11] These underserved market borrowers may not be as needy as others, however; indeed, in some cases, they may not even fall into an underserved market anymore if, for example, their incomes have increased since their loans were granted.

- More directly, we consider whether borrowers who belong to one underserved market also tend to fall into others. For example, when GSEs purchase loans made to African Americans, do these borrowers tend to have higher incomes than the African Americans whose loans are not purchased by the GSEs? Here, we consider several factors, including the income of underserved applicants and the racial and economic characteristics of the neighborhoods they moved into. As part of this analysis, we also examine regional disparities in GSE purchases. In particular, were the GSEs disproportionately likely to serve higher income areas?

Second, we examine whether *changes occurred in the determinants* of GSE purchases over time. For example, we might find that, over time, income becomes less important a factor in whether a loan becomes purchased by the GSEs. This finding would suggest that GSEs are weighing income less heavily or have successfully developed programs that make a low income less of a barrier to GSE purchasing. More generally, changes in the effect of any variable over time may mean that, one way or another, barriers to purchase that existed in the past were now being

[11] We thank an anonymous reviewer for suggesting this latter possibility to us. The reviewer also suggested that, during periods of heavy refinancing, underserved markets may be less likely to refinance than others; hence, the government-sponsored enterprises (GSEs) may turn to seasoned home purchase loans as a way of improving their overall underserved market performance. Regardless of what motivates the GSEs, however, the question still remains of whether seasoned loan purchases benefit underserved markets as much as same-year purchases do.

surmounted. Particularly if such improvements occurred for most or all underserved markets, then the need to establish subgoals or alternative goals might be lessened.

A series of descriptive and multivariate analyses will help shed light on each of these possibilities. First, we use the GSEs' own data to determine the extent to which they rely on seasoned loans and how much impact such loans have on their overall underserved market performance. Our other analyses require that we make comparisons between the loans the GSEs purchased and those they did not; for these comparisons, we rely on Home Mortgage Disclosure Act (HMDA) data because the GSEs' own data contain no information on the purchases they did not make.

Serving the Least Underserved of the Underserved—Seasoned Loans

A factor that may have affected GSE underserved market performance is a changing reliance on loans made in the same year they were purchased and seasoned loans made in earlier years. Tables 3-1 and 3-2 assess the impact that purchases of seasoned loans have had on GSE performance.

Table 3-1. Nationwide GSE Purchases by Seasoned and Unseasoned Loans, by Year (GSE Public Use Data Base File B)

Type of Underserved Market	Type of Loan	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Same year	2.43	3.74	4.03	3.31	3.01	3.11	2.76	3.28	3.42	3.71	4.25	3.33	3.04	3.82	3.41
	Seasoned	3.01	3.10	3.83	3.55	5.58	5.36	3.78	4.53	6.36	7.16	5.51	3.42	4.77	6.37	4.95
	All	2.48	3.62	4.00	3.36	3.56	3.57	2.99	3.60	4.04	4.29	4.44	3.34	3.43	4.26	3.70
Hispanic	Same year	3.73	5.14	5.36	5.00	4.48	4.22	4.73	5.83	6.48	7.38	7.82	4.76	4.79	7.27	5.67
	Seasoned	3.47	5.52	5.99	4.96	5.70	5.71	4.94	6.66	7.56	8.95	9.80	5.14	5.80	8.66	6.55
	All	3.71	5.21	5.47	4.99	4.74	4.53	4.78	6.05	6.71	7.65	8.11	4.82	5.02	7.51	5.84
Very low income	Same year	6.09	7.59	7.54	7.63	7.82	12.27	10.66	10.76	11.16	12.72	13.23	7.17	10.63	12.43	10.36
	Seasoned	2.03	5.54	6.08	6.08	9.16	13.04	10.86	10.69	13.06	14.06	13.95	4.94	11.06	13.66	10.19
	All	5.28	7.17	7.21	7.26	8.16	12.44	10.71	10.74	11.57	12.97	13.35	6.68	10.73	12.66	10.32
Low-income borrower in low/moderate-income tract	Same year	2.14	3.10	3.23	3.02	2.79	3.97	3.12	3.40	3.45	4.11	3.85	2.84	3.38	3.82	3.40
	Seasoned	0.92	2.15	2.30	2.66	4.25	5.42	3.82	3.97	5.26	6.09	5.10	2.03	4.38	5.50	4.08
	All	1.89	2.90	3.02	2.93	3.16	4.30	3.29	3.55	3.83	4.48	4.05	2.66	3.63	4.13	3.55
Targeted tract*	Same year				22.40	21.99	26.36	22.64	23.91	24.56	27.35	27.55	22.40	23.96	26.57	25.04
	Seasoned				24.57	29.49	32.05	27.54	26.63	28.27	36.65	30.72	24.57	28.90	31.87	29.59
	All				22.92	23.91	27.65	23.84	24.62	25.35	29.09	28.05	22.92	25.17	27.55	26.03

GSE = government-sponsored enterprise.

*Before 1996, a central cities-based definition was in effect for the geographically targeted goal. It excluded nonmetropolitan areas. Therefore, the goal percentages for 1993, 1994, and 1995 are not consistent with post-1995 goal percentages.

Table 3-2. Percent of GSE Nationwide Purchases Coming From Seasoned Loans, by Year (GSE Public Use Data Base File B)

Type of Underserved Market	Percent per Year or Period														
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
All loans	20.09	20.74	22.10	24.15	25.65	22.68	24.52	26.09	21.34	18.75	15.63	21.80	24.61	18.50	21.66
African American	11.49	15.94	16.25	21.95	33.93	30.56	27.84	32.42	33.36	28.08	17.88	16.82	31.18	25.88	25.31
Hispanic	8.87	19.71	18.57	20.63	26.06	25.67	22.74	28.40	23.91	19.67	17.38	17.52	25.88	19.98	21.24
Very low income	7.73	16.04	18.62	20.24	28.80	23.77	24.88	25.97	24.10	20.31	16.34	16.12	25.37	19.97	21.37
Low-income borrower in low/moderate-income tract	9.79	15.35	16.80	21.93	34.48	28.60	28.46	29.21	29.27	25.47	19.68	16.60	29.71	24.63	24.93
Targeted tract*				25.81	31.56	26.27	28.29	28.19	23.77	23.61	17.11	25.81	28.21	21.38	24.79

GSE = government-sponsored enterprise.

*Before 1996, a central cities-based definition was in effect for the geographically targeted goal. It excluded nonmetropolitan areas. Therefore, the goal percentages for 1993, 1994, and 1995 are not consistent with post-1995 goal percentages.

As Williams and Bond (2002) previously noted and as Table 3-1 again shows, between 1993 and 1996, seasoned loans were sometimes more likely to come from underserved markets but sometimes were not. Starting in 1997, seasoned loans were almost always more likely to come from underserved markets than were their same-year counterparts. Furthermore, as Table 3-2 shows, the proportion of all GSE purchases that were seasoned loans increased only modestly during the 1990s, going from 20.09 percent of all purchases in 1993 to 26.09 percent in 2000. For underserved markets, however, the gains were much greater. For example, in 1993, 11.49 percent of all African-American borrower loans were seasoned loans, while in 2000 the proportion was 32.42 percent.

The 2001–03 period saw at least two noteworthy changes. First, with regard to underserved markets, Table 3-1 shows that the differences between same-year and seasoned loans continued to increase. For African Americans, in 1997–2000 3.04 percent of same-year purchases involved this group compared with 4.77 percent of seasoned loans, a difference of 1.73 percent. In 2001–03, however, 3.82 percent of all same-year purchases involved African Americans compared with 6.37 percent of seasoned loans, a difference of 2.55 percent. Similarly, the differences between same-year and seasoned loans for Hispanics were 1.01 percent in 1997–2000 and 1.39 percent in 2001–03. The corresponding figures for these periods were 0.43 and 1.23 percent, respectively, for very-low-income borrowers; 1 and 1.68 percent, respectively, for low-income borrowers in low- to moderate-income tracts; and 4.94 and 5.30 percent, respectively, for targeted tracts.

In what may seem to be a paradox, however, the overall impact of seasoned loans on underserved market performance was about the same in 2001–03 as it was in 1997–2000; that is, the differences between the rows labeled “Same year” and “All” are about the same in 2001–03 as they were in 1997–2000. Table 3-2 makes clear why. In every category examined, the GSEs were getting a smaller proportion of their purchases from seasoned loans in 2001–03 than they were in 1997–2000. For example, during 1997–2000, 24.61 percent of all GSE purchases were seasoned loans compared with only 18.5 percent in 2001–03. Each underserved market category saw similar drops in the range of 5 to 7 percent. Hence, even though seasoned loans were more likely to come from underserved markets in 2001–03 than they were in 1997–2000, the fact that relatively fewer seasoned loans were purchased limited their impact on overall GSE performance.

These trends suggest that, after the 1995 Final Rule was adopted, the GSEs turned to seasoned loans as one way of meeting their obligations. The impact is made clearer when we examine Table 3-1 and compare the 1993–96 and 1997–2000 entries for “Same year” and “All” loans. These figures show that during 1993–96, seasoned loans had a small and inconsistent impact on GSE underserved market performance. During 1997–2000, the purchase of seasoned loans consistently made the GSEs’ performance at least a few tenths of a percentage point higher than it otherwise would have been, sometimes even more than a full point (for example, 23.96 percent of the GSEs’ 1997–2000 same-year loans were from targeted tracts compared with 25.17 percent of all the loans they purchased). Hence, the purchase of seasoned loans had a modest but positive impact on the GSEs’ underserved market performance after the Final Rule was adopted. After 2000, the GSEs overall underserved market performance continued to be enhanced by the purchase of seasoned loans, but, because such loans were relatively fewer in number in 2001–03 than they were in earlier years, their impact on overall GSE performance stayed about the same.

By purchasing seasoned loans from underserved markets, the GSEs help make funds available for future home purchases. We hope future borrowers from underserved markets will benefit. Nevertheless, it should be noted that the GSEs are probably taking less risk with seasoned loans than same-year loans. Indeed, a borrower may not even be a member of an underserved market anymore if his or her income has risen.

Serving the Least Underserved of the Underserved—Multiple Underserved Markets

Another way of assessing whether the GSEs tend to serve the least underserved of the underserved is by examining the extent to which their underserved market purchases involve two or more underserved markets simultaneously. For example, when the GSEs purchase loans issued to African-American borrowers, do the borrowers tend to have higher incomes than African-American homebuyers in general, or are the borrowers less likely than other African Americans to purchase their homes in targeted or minority neighborhoods? If so, this latter scenario would indicate that the GSEs tend to purchase loans from the least underserved of the underserved (for example, higher income African Americans or higher income individuals who choose to move into targeted areas). Table 3-3 examines such possibilities and shows how GSE purchasing patterns have changed over time.[12] Here, we use HMDA data and exclude subprime and manufactured housing loans from the analysis.

[12] A similar analysis did not appear in Williams and Bond (2002); hence, we will pay greater attention to the results from earlier years than we have elsewhere in this report.

Table 3-3. GSE Purchases From the Most Underserved of the Underserved Markets, HMDA Metropolitan Statistical Area Data, Traditional Lenders*

Type of Underserved Market	Type of Market	Percent per Period								
		1993–1998			1999–2000			2001–2003		
		Not purchased	Purchased	Difference	Not purchased	Purchased	Difference	Not purchased	Purchased	Difference
African American	Very low income	28.1	14.0	14.1	27.7	18.5	9.2	25.0	22.0	3.0
	Low-income borrower in low/moderate income tract	21.7	10.5	11.3	18.1	10.0	8.1	17.0	13.4	3.6
	Targeted tract	57.9	44.8	13.2	52.0	40.6	11.4	50.2	43.1	7.1
	MSA median family income ($)	46,850	48,317	(1,467)	56,871	57,695	(824)	62,912	62,992	(79)
		Not purchased	Purchased	Difference	Not purchased	Purchased	Difference	Not purchased	Purchased	Difference
Hispanic	Very low income	22.8	15.1	7.6	23.9	20.2	3.6	20.7	18.6	2.1
	Low-income borrower in low/moderate income tract	18.1	11.7	6.4	16.6	10.3	6.4	15.0	11.8	3.2
	Targeted tract	57.3	49.2	8.1	54.0	45.7	8.3	53.0	46.4	6.6
	MSA median family income ($)	45,180	45,849	(668)	53,967	53,358	608	57,664	57,566	99
		Not purchased	Purchased	Difference	Not purchased	Purchased	Difference	Not purchased	Purchased	Difference
Very low income	African American	10.8	5.6	5.1	10.0	5.4	4.6	8.9	6.6	2.3
	Hispanic	9.3	8.5	0.8	11.4	9.8	1.6	12.2	9.8	2.3
	Low-income borrower in low/moderate income tract	26.5	19.4	7.1	23.6	16.4	7.3	23.4	18.9	4.5
	Targeted tract	47.5	39.0	8.5	44.4	36.0	8.4	42.4	36.0	6.5
	MSA median family income ($)	46,591	48,661	(2,070)	56,416	57,373	(958)	62,471	63,042	(572)
		Not purchased	Purchased	Difference	Not purchased	Purchased	Difference	Not purchased	Purchased	Difference
Low-income borrower in low/moderate-income tract	African American	18.8	11.1	7.7	16.2	10.0	6.2	14.8	11.9	2.9
	Hispanic	16.8	17.2	-0.4	19.6	16.9	2.7	21.5	18.4	3.1
	Very low income	59.9	51.2	8.7	58.1	55.3	2.8	57.0	56.1	0.9
	Targeted tract	100.0	100.0	0.0	100.0	100.0	0.0	96.0	95.0	0.9
	MSA median family income ($)	47,036	49,060	(2,024)	57,373	58,175	(802)	63,248	64,016	(768)
		Not purchased	Purchased	Difference	Not purchased	Purchased	Difference	Not purchased	Purchased	Difference
Targeted tract	African American	11.5	7.8	3.8	9.9	6.7	3.2	9.4	7.7	1.7
	Hispanic	12.1	11.8	0.3	13.6	12.5	1.1	16.3	14.6	1.7
	Very low income	24.4	16.6	7.9	23.1	20.1	3.0	21.9	21.1	0.8
	Low-income borrower in low/moderate income tract	22.7	16.0	6.7	21.1	16.5	4.6	20.3	18.8	1.5
	MSA median family income ($)	46,715	48,253	(1,538)	56,547	56,612	(65)	61,649	61,724	(75)

* Not including subprime or manufactured housing lenders.
GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.
MSA = metropolitan statistical area.

In Table 3-3, separate analyses are done for each of the five underserved markets included in our analysis. So, for example, the first panel examines all the loans that were made to African Americans between 1993 and 2003. The table shows what percentage of those African Americans fell into additional underserved market categories, both for the loans the GSEs did not purchase and the loans they did, and then shows the differences among those percentages. Positive differences indicate the extent to which the GSEs purchase loans from the least underserved of the underserved.

To examine regional differences, Table 3-3 also includes average metropolitan statistical area (MSA) median family income to determine whether GSE underserved market purchases tended to come from higher income areas. For example, the table shows that, during 1993–98, of the loans issued to African-American borrowers that the GSEs did *not* purchase, 28.1 percent were also issued to very-low-income borrowers. In contrast, of the loans issued to African-American borrowers that the GSEs did purchase in 1993–98, only 14 percent were also issued to very-low-income borrowers. So, during 1993–98, the loans issued to African-American borrowers that the GSEs did purchase were much less likely to be issued to very-low-income borrowers than the loans issued to African-American borrowers that they did not purchase. The table shows similar patterns for other African-American underserved market subcategories. This similarity implies that, during 1993–98, the African Americans who were served by the GSEs tended to be better off financially, less likely to live in a low-income tract, and less likely to live in a targeted or minority neighborhood than were African Americans whose home mortgage loans were not purchased by the GSEs. They also tended to live in MSAs that had higher median incomes. With only a few exceptions, this pattern repeated itself for all of the underserved market categories. Hence, during 1993–98, the GSEs did indeed tend to serve the least underserved of the underserved.

A comparison of 1993–98 with 1999–2000 shows that this trend continued to occur in the latter years of the decade. In some cases, the gaps between the loans purchased and those not purchased declined (for example, GSE purchases of loans issued to African-American borrowers were generally more likely to involve African Americans in other underserved market categories in 1999–2000 than they were in 1993–98. In other instances, the pattern was much more mixed, making it difficult to make a clear statement about whether the GSEs were doing a better job of serving the most underserved of the underserved in 1999–2000 than they had done earlier.

In 2001–03, however, the picture was generally much clearer. It continued to be the case that loans not purchased by the GSEs were more likely to involve multiple underserved markets than the loans they did purchase, but the gaps were often much smaller. For example, the 14.1-percent difference between loans issued to African-American borrowers and very-low-income borrowers in 1993–98 became only a 3-percent difference in 2001–03, and African Americans made gains in all the other underserved market categories as well. Although the results were not 100-percent consistent, an examination of the difference columns for 1999–2000 and those for 2001–03 makes it apparent that, in most cases, GSE purchases of loans from Hispanics, very-low-income borrowers, low-income borrowers in low- to moderate-income tracts, and targeted tracts were relatively more likely to involve the most underserved of the underserved in 2001–03 than they were in earlier periods.

Also worth noting is that regional differences in income in GSE purchases declined over time. In 1993–98, the underserved market loans the GSEs purchased consistently had higher average MSA median incomes than the loans they did not purchase. By 2001–03, these differences were always much smaller and, in some cases, virtually nonexistent, sometimes amounting to $100 or less.

In short, a charge that the GSEs were serving the least underserved of the underserved would seem to have had considerable merit in 1993–98. Of all the underserved market loans made by the primary market in those years, the ones the GSEs purchased tended to involve those borrowers who had higher incomes, were less likely to be minorities, were less likely to live in low-income or targeted or minority neighborhoods, and were more likely to live in MSAs with higher median incomes. By 2001–03, however, although differences continued to occur, they were far less pronounced than they had been earlier. Now, the underserved market loans the GSEs purchased were almost as likely to involve individuals who were also low income or minority or who lived in more low-income or targeted or minority neighborhoods as the loans the GSEs did not purchase. These purchasing patterns might suggest that HUD needs to set up subgoals or to otherwise make sure that the GSEs are not simply serving the least underserved of the underserved.

Changing Determinants of Loan Purchases

For this part of the analysis, we examine the effect of all underserved market characteristics on GSE purchases simultaneously. Because individuals often belong to more than one underserved market, this analysis will help identify which underserved markets, if any, are most in need of additional GSE help. We caution that many variables probably affect whether the GSEs purchase a loan. Unfortunately, many of these variables (for example, credit ratings) are not available in the HMDA data. Nevertheless, by examining changes in the estimated effects of the variables we do have, we can get suggestive evidence of how the determinants of GSE purchases changed over time.

In Tables 3-4a and 3-4b, the dependent variable is whether a GSE purchased the loan. In Table 3-4a (a direct replication and extension of Williams and Bond's [2002] earlier work), the independent variables are the five types of underserved markets studied in this analysis. To examine the effects of regional differences in MSA income, Table 3-4b adds a new variable, the MSA median family income. Given that our other analysis has indicated that the GSEs made their clearest gains after 1998, we estimate models separately for 1993–98, 1999–2000, and 2001–03.[13] The results for the three models are provided in Table 3-4a in columns M1, M2, and M3, respectively. We are particularly interested in how the coefficients changed between the three periods.[14] In Table 3-4a, column M4 provides the differences in the coefficients between models M2 and M1 and column M5 examines the differences in the coefficients between models

[13] From a substantive standpoint, the 1993–98 versus later year splits may reflect program innovations the government-sponsored enterprises (GSEs) made. For example, the GSEs increasingly turned to automated underwriting during the latter part of the 1990s. See Temkin, Johnson, and Levy (2002) for a discussion of the possible impact of automated underwriting on lending to underserved markets.

[14] The coefficients for the logistic regressions tend to be statistically significant, which is not surprising given the very large sample size. We therefore focus on what we regard as the substantive significance of the coefficients; that is, are changes large enough to be regarded as substantively significant?

M3 and M2. Because results are similar in the tables, we focus our attention on Table 3-4b. We again use HMDA data excluding subprime and manufactured housing loans.

Table 3-4a. Logistic Regressions of Determinants of GSE Purchases, Underserved Market Variables Only, HMDA Metropolitan Statistical Area Data, Traditional Lenders[1]

Type of Underserved Market	Model				
	M1: 1993–1998	M2: 1999–2000	M3: 2001–2003	M4: M2–M1	M5: M3–M2
African American	–0.253***	–0.272***	–0.157***	–0.0194	0.116***
	(0.011)	(0.017)	(0.012)	(0.020)	(0.021)
Hispanic	–0.00752	–0.0468***	–0.0886***	–0.0393*	–0.0418*
	(0.0097)	(0.014)	(0.0095)	(0.017)	(0.017)
Very low income	–0.365***	–0.0467***	0.0393***	0.318***	0.0860***
	(0.0072)	(0.010)	(0.0075)	(0.013)	(0.013)
Low-income borrower in low/moderate-income tract	–0.247***	–0.264***	–0.0934***	–0.0169	0.170***
	(0.012)	(0.018)	(0.013)	(0.022)	(0.022)
Targeted tract	–0.187***	–0.174***	–0.155***	0.0124	0.0189
	(0.0055)	(0.0085)	(0.0063)	(0.010)	(0.011)
Constant	–0.299***	–0.309***	–0.209***	–0.0101*	0.100***
	(0.0024)	(0.0039)	(0.0030)	(0.0046)	(0.0049)
Pseudo R^2	0.00629	0.00310	0.00151		

[1] Not including subprime or manufactured housing lenders.
GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.
* p<0.05.
** p<0.01.
*** p<0.001.
Note: Standard errors are in parentheses.

Table 3-4b. Logistic Regressions of Determinants of GSE Purchases, Metropolitan Statistical Area Median Income Added, HMDA Metropolitan Statistical Area Data, Traditional Lenders[1]

Type of Underserved Market	Model				
	M1: 1993–1998	M2: 1999–2000	M3: 2001–2003	M4: M2–M1	M5: M3–M2
African American	–0.258***	–0.273***	–0.157***	–0.0147	0.117***
	(0.011)	(0.017)	(0.012)	(0.020)	(0.021)
Hispanic	0.0209*	–0.0443**	–0.0884***	–0.0651***	–0.0441**
	(0.0097)	(0.014)	(0.0096)	(0.017)	(0.017)
Very low income	–0.372***	–0.0478***	0.0391***	0.324***	0.0869***
	(0.0073)	(0.010)	(0.0075)	(0.013)	(0.013)
Low-income borrower in low/moderate-income tract	–0.254***	–0.265***	–0.0936***	–0.0106	0.171***
	(0.012)	(0.018)	(0.013)	(0.022)	(0.022)
Targeted tract	–0.197***	–0.175***	–0.155***	0.0221*	0.0199
	(0.0055)	(0.0085)	(0.0063)	(0.010)	(0.011)
MSA median income	0.0164***	0.00105**	0.0000759	–0.0154***	–0.000975*
	(0.00025)	(0.00034)	(0.00022)	(0.00042)	(0.00040)
Constant	–1.066***	–0.367***	–0.214***	0.699***	0.154***
	(0.012)	(0.019)	(0.014)	(0.022)	(0.024)
Pseudo R^2	0.00961	0.00312	0.00151		

[1] Not including subprime or manufactured housing lenders.
GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.
MSA = metropolitan statistical area.
* p<0.05.
** p<0.01.
*** p<0.001.
Note: Standard errors are in parentheses.

Not surprisingly, almost all of the underserved market coefficients for all three periods are negative. This finding means that the GSEs were less likely to purchase loans from underserved markets than they were loans from served markets. Nevertheless, several key findings exist that suggest the GSEs have made significant progress in recent years.

First, an important trend noted by Williams and Bond (2002) continued after 2000. In 1993–98, after controlling for other variables, very-low-income borrowers were the *least* likely of the underserved markets to have their loans purchased by a GSE (that is, the coefficient for very low income was the largest in magnitude). By 1999–2000, however, the effect of being very low income was only slightly negative; in other words, very-low-income borrowers were almost as likely to have their loans purchased by a GSE as were borrowers who were not very low income. Furthermore, in 2001–03, the effect of being very low income actually became slightly positive.

Hence, between the three periods, a loan characterized as very low income went from being the greatest barrier to GSE purchase (after controlling for other variables) to actually being a slight advantage.

Second, as Williams and Bond (2002) also noted, the effects of other underserved market variables changed little between 1993–98 and 1999–2000. During 2001–03, however, the effect of every underserved market variable (except being Hispanic) became less negative. That is, after only making progress with very-low-income borrowers during the 1990s, the GSEs made progress with almost every underserved market group during the early years of the 21st century.

Third, in 1993–98, those living in wealthier MSAs were more likely to have their loans purchased by the GSEs. After 1998, however, the effect of regional differences in income disappeared.

These changes could, of course, be due to important variables that are omitted from the model. For example, thanks to sustained prosperity, the very-low-income borrowers of 1999–2003, although still having low incomes, may have had better credit scores and fewer debt problems than their counterparts of 1993–98. Also, declining interest rates made houses more affordable as monthly payments decreased.

The difference, however, could also reflect changes in the policies and programs of the GSEs. More flexible underwriting programs might have helped underserved market borrowers, causing income to weigh less heavily in GSE decisions during the latter part of the decade. Indeed, based on their analysis of several years of mortgage lending data, Gates et al. (2002) argued that automated underwriting has helped underserved markets. According to the authors, automated underwriting results in more accurate assessment of risk and enables the GSEs and primary market lenders to create flexible mortgages that offer reduced points and fees and low or no downpayment or other ways may have been found to overcome financial and other barriers to purchase. For example, Arellano (2003) noted efforts to help people with nontraditional credit histories (for example, immigrants and Hispanics), such as Fannie Mae's willingness to allow its lenders to qualify borrowers as long as they have three or four items of proof that they are paying their bills on time.

Of course, changes in the affordable housing goals probably also played a major part in the GSEs' deeper reach into underserved markets. The GSEs were required to buy relatively more loans from underserved markets in later years. Hence, they likely modified their policies and efforts to achieve these goals.

In short, we cannot be sure why the GSEs became more likely to purchase loans from underserved markets. The changes may reflect changes in unmeasured variables, such as credit history, or they may reflect increased flexibility or innovative programs on the part of the GSEs that caused underserved market characteristics to be less of a factor in their purchasing decisions. It is certainly reasonable to suspect that changes in the affordable housing goals motivated the GSEs to do better. Regardless of the cause, however, the weakened relationship between underserved market membership and GSE purchasing is one of the reasons GSEs made gains in underserved markets.

Summary

Part of the GSEs' improvements in underserved market lending during the 1993–2003 period was due to their turning to different types of loans. At least as reported in their own data, seasoned loans have been a source of the GSEs' progress since the Final Rule was adopted. Before 1997, seasoned loans were sometimes more likely to come from underserved markets and sometimes not. Since 1997, seasoned loans have had a modest but fairly consistent positive impact on the GSEs' gains in underserved markets. In the latter part of the 1990s, an increasing proportion of the GSEs' underserved market loans were made in years other than when they were purchased. This trend has helped to raise the overall percentage of underserved market loans held by the GSEs. Seasoned loans may be less risky than other underserved market loans because the borrowers have established a record of payment; indeed, in some cases, the borrower may not even belong to an underserved market anymore. Hence, by purchasing seasoned loans, the GSEs may not be serving the most underserved of the underserved. Even if that is the case, however, the impact of seasoned loans on the GSEs' overall performance is modest, and the purchase of such loans has declined in recent years.

We also examined more directly whether the GSEs were serving the least underserved of the underserved. It appears that, in 1993–98, they were. The underserved market loans they purchased tended to come from borrowers who had higher incomes, were less likely to be minorities, and were more likely to live in higher income MSAs. By 2001–03, however, these differences had greatly diminished.

Finally, we find that, for most underserved markets, little change occurred between 1993–98 and 1999–2000 in the likelihood that the GSEs would purchase a loan from that market. Underserved markets did make clear gains in one key area, however. Having a very low income went from being the greatest obstacle to the GSEs purchasing a loan to being almost no obstacle at all. Furthermore, after 2000, the effects of all underserved market characteristics (except for being Hispanic) declined, meaning that most underserved groups were more likely to have their loans purchased by the GSEs than had been the case in the past. Also, regional differences in income, although important in 1993–98, had almost no effect on GSE purchases after that period. Unmeasured variables unrelated to anything the GSEs did, such as improved credit scores, might account for this finding. Nevertheless, more flexible GSE underwriting guidelines and the implementation of programs aimed at underserved market borrowers are also plausible explanations for the improvements that occurred. Changes in the affordable housing goals likely motivated the GSEs to strengthen their efforts over time.

Chapter 4. Direct Effects of GSE Leadership and Influence

In the previous chapters, we focused on developments and trends that provide indicators of the possible influence the government-sponsored enterprises (GSEs) are having on the primary market. In this chapter, our third assessment strategy offers analyses that examine GSE influence more directly.

First, we examine the extent to which the GSEs even deal with the primary market. The GSEs obtain their loans from a variety of sellers. Some of those sellers are themselves secondary market entities. We do not know what these other secondary market sellers do with the proceeds from their sales, but it seems reasonable to assume that they will be less likely to reinvest in home mortgage loans than will entities such as banks and mortgage companies.

Second, we examine the direct influence the GSEs have on the primary market lenders they do deal with. To perform this examination, we build on models and techniques initially developed by Williams and Nesiba (1997). Williams and Nesiba (1997) examined how characteristics of lenders were related to their underserved market performance. We expand their models to consider another type of lender characteristic: the amount of business a lender does with the GSEs. We use Home Mortgage Disclosure Act (HMDA) metropolitan data because the GSE Public Use Data Bases do not identify the specific primary market lenders that originate loans.

Sources of Loans—"Other" Secondary Market Sellers

GSEs purchase their loans from primary market lenders (for example, banks, mortgage companies, thrifts, and, occasionally, credit unions). Most of these lenders also report mortgage loans to HMDA. Another source of loans identified in the GSE data is called "other." These others include insurance companies, investment banks, finance companies, and housing finance agencies, other entities that are also active in the secondary market. (Lind 2000). Table 4-1 compares the characteristics of loans sold to the GSEs by these types of sellers.

Table 4-1. Nationwide GSE Purchases by Type of Seller, by Year (GSE Public Use Data Base File B)

Type of Underserved Market	Type of Seller	Percent per Year or Period														
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
African American	Lenders	2.47	3.58	3.99	3.34	3.52	3.28	2.88	3.58	3.90	4.20	4.21	3.32	3.30	4.11	3.59
	Other sellers	3.38	5.70	4.64	6.73	9.28	11.96	6.84	4.18	8.23	5.71	8.11	4.89	7.85	7.23	7.15
	All sellers	2.48	3.62	4.00	3.36	3.56	3.57	2.99	3.60	4.04	4.29	4.44	3.34	3.43	4.26	3.70
Hispanic	Lenders	3.65	4.99	5.40	4.90	4.66	4.36	4.75	6.10	6.62	7.48	7.81	4.72	4.96	7.32	5.70
	Other sellers	7.48	16.03	9.94	21.08	14.54	9.38	5.67	4.65	9.16	10.36	12.93	12.65	7.15	11.17	10.06
	All sellers	3.71	5.21	5.47	4.99	4.74	4.53	4.78	6.05	6.71	7.65	8.11	4.82	5.02	7.51	5.84
Very low income	Lenders	5.28	7.15	7.21	7.23	8.01	10.45	9.81	10.70	11.45	12.79	13.03	6.67	9.86	12.42	9.84
	Other sellers	5.02	7.89	7.73	8.87	18.88	29.84	21.09	11.47	13.71	14.13	16.11	7.18	22.72	14.78	17.25
	All sellers	5.28	7.17	7.21	7.26	8.16	12.44	10.71	10.74	11.57	12.97	13.35	6.68	10.73	12.66	10.32
Low-income borrower in	Lenders	1.88	2.86	3.00	2.91	3.07	3.52	2.97	3.53	3.79	4.15	3.78	2.64	3.30	3.90	3.32
low/moderate-income tract	Other sellers	2.31	4.49	4.43	4.32	10.00	11.12	7.01	3.73	4.73	6.57	6.36	3.78	8.21	6.19	6.78
	All sellers	1.89	2.90	3.02	2.93	3.16	4.30	3.29	3.55	3.83	4.48	4.05	2.66	3.63	4.13	3.55
Targeted Tract*	Lenders				22.54	23.71	24.92	22.60	24.61	25.11	27.46	26.97	22.54	24.01	26.51	24.96
	Other sellers				49.65	38.81	51.42	38.26	24.72	29.70	39.30	37.45	49.65	41.07	37.03	38.90
	All sellers				22.92	23.91	27.65	23.84	24.62	25.35	29.09	28.05	22.92	25.17	27.55	26.03

GSE = government-sponsored enterprise.
*Before 1996, a central cities-based definition was in effect for the geographically targeted goal. It excluded nonmetropolitan areas. Therefore, the goal percentages for 1993, 1994, and 1995 are not consistent with post-1995 goal percentages.

Examining the table, it is clear that the purchases from "other sellers" are generally much more likely to be from underserved markets than are the loans purchased from primary market lenders. For example, examining the totals for all years, 3.59 percent of the loans purchased from lenders were for African-American borrowers compared with 7.15 percent of the loans bought from other sellers. Similar ratios—sometimes a little more, sometimes a little less—are found for other types of underserved markets. This pattern has been true for almost every underserved market in almost every year.

It is also clear, however, that, despite these differences, sales from other sellers usually had little impact on overall GSE purchases for the 11-year period. For example, by examining the last column, we see that 3.59 percent of the purchases from lenders are for African-American borrowers, while the total for all sellers is only slightly higher, 3.70 percent.

An examination of across-year variation, however, yields important insights. Between 1993 and 1997, the differences between the lenders-only and all-sellers figures were generally very small. In 1998, however, the differences were quite pronounced, increasing to almost 3.0 percent for targeted tracts. In 1999, the differences declined, and by 2000, the figures for lenders only and for all sellers were again virtually identical. Then, in 2001–03, the impact of purchases from other sellers on overall GSE again increased, generally increasing the GSEs' overall performance somewhere between 0.1 and 1.0 percent.

In short, even though purchases from other sellers were more likely to be from underserved markets, in most years, these purchases had little impact on the GSEs' overall underserved market performance; however, 1998 and, to a lesser extent, 1999, are noteworthy exceptions to this finding. Williams and Bond (2002) explained the 1998 anomaly by noting that the GSEs bought far more loans from other sellers in 1998 than they had in previous years. This fact, and the developments since then, are illustrated in Table 4-2.

Table 4-2. Percent of Nationwide GSE Purchases Coming From Other Sellers, by Year (GSE Public Use Data Base File B)

Type of Underserved Market	Percent per Year or Period														
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993–1996	1997–2000	2001–2003	Total
All loans	2.06	2.30	1.71	1.42	1.36	10.30	7.92	5.85	5.19	13.78	10.34	1.86	6.81	9.88	6.57
African American	2.00	3.09	1.63	1.14	2.17	11.20	6.33	4.44	6.81	7.75	10.67	1.93	6.41	8.55	6.11
Hispanic	2.96	6.04	2.56	2.40	2.55	6.92	3.28	2.94	4.57	7.88	9.31	3.47	3.99	7.49	5.45
Very low income	1.96	2.53	1.83	1.74	3.15	24.69	15.60	6.25	6.15	15.01	12.48	2.00	14.41	11.53	10.97
Low-income borrower in low/moderate-income tract	2.52	3.56	2.50	2.09	4.30	26.62	16.87	6.15	6.40	20.18	16.24	2.64	15.40	14.80	12.55
Targeted tract*				3.04	2.21	19.14	12.72	5.87	6.08	18.61	13.79	3.04	11.11	13.27	11.49

GSE = government-sponsored enterprise.

*Before 1996, a central cities-based definition was in effect for the geographically targeted goal. It excluded nonmetropolitan areas. Therefore, the goal percentages for 1993, 1994, and 1995 are not consistent with post-1995 goal percentages.

Several things stand out. Before 1998, other sellers provided only a small portion of the GSEs' purchases, typically less than 2 percent of the overall total. A somewhat higher, but still small, portion of the GSEs' underserved market loans came from these sellers.

In 1998, however, a dramatic change occurred. Other sellers suddenly accounted for more than 10 percent of the GSE purchases. Furthermore, the jump was much greater for several of the underserved markets, with more than 25 percent of GSE purchases in some categories coming from other sellers. The jumps for African Americans and Hispanics, however, only matched or even trailed the overall increases for other sellers.

In 1999 and 2000, however, other sellers substantially declined as a source of GSE loans. Because, as Table 4-1 shows, these loans also became much less likely to come from underserved markets, by 2000, sales from other sellers once again had virtually no impact on the GSEs' overall underserved market performance.

Williams and Bond (2002) explained the peculiar behavior of 1998 by drawing on insights provided by Lind (2000). As Lind (2000) explained, in 1998, for the first time ever, the GSEs purchased significant numbers of loans from non-HMDA sources (for example, insurance companies, investment banks, finance companies, housing finance agencies), which were not included in the HMDA primary market database. The international financial crisis of Southeast Asia and Russia forced these entities to sell assets. According to Lind (2000), the GSE purchases provided needed liquidity at a critical point in time. Although the GSEs may have provided a valuable service with their purchases, whether this reshuffling of ownership resulted in more loans to underserved markets is unclear.

In 2002 and 2003, however, other sellers once again grew as a source of GSE purchases, with the percentages generally at least double what they were in 2000 (for example, African Americans went from 4.44 percent in 2000 to 10.67 percent in 2003, Hispanics went from 2.94 percent in 2000 to 9.31 percent in 2003, very-low-income borrowers went from 6.25 percent in 2000 to 12.48 percent in 2003, low-income borrowers in low-income tracts went from 6.15 percent in 2000 to 16.24 percent in 2003, and targeted tracts went from 5.87 percent in 2000 to 13.79 percent in 2003).

As the row for "All loans" shows, starting in 1998, the GSEs were in general more likely to make purchases from other sellers (both from served and underserved markets) than they were in early years. In 2001–03, almost 10 percent of all GSE purchases were from other sellers compared with less than 2 percent in 1993–96 and less than 7 percent in 1997–2000. In most cases, however, the increases have been greater for underserved markets.

Hence, although 1998 was somewhat of an anomaly during the 1990s, it was not that different from the years that have followed it. The GSEs were buying many more loans from other sellers in the early 2000s than they had in the early 1990s. This finding was especially true for very-low-income borrowers, low-income borrowers in low-income tracts, and targeted tracts. The indirect nature of these purchases makes it unclear how much primary market lending was influenced. Nevertheless, although purchases from other sellers were much more likely to

involve loans from underserved markets, their impact on overall GSE performance in most years was usually fairly minor.

Models of Community Reinvestment Market Share

In a study of home mortgage lending in St. Joseph County, Indiana, Williams and Nesiba (1997) introduced the idea of Models of Community Reinvestment Market Share. Models of Community Reinvestment Market Share assess how lender characteristics are related to the proportion of a lender's business that is done with underserved markets. Specifically, the strategy is as follows: all approved loan applications are included in the analysis. The dependent variable is coded 1 if the loan was for the underserved market being studied, 0 otherwise. The dependent variable is then regressed on the lender's characteristics (for example, the assets of the lender and the legal structure of the lender [bank, credit union, thrift, or mortgage company]). In these models, a positive coefficient means that this type of lender does relatively more of its business with the underserved market in question while a negative coefficient indicates that it does relatively less.

Williams and Nesiba (1997) (see also Kim and Squires 1995) noted several reasons these lender characteristics may be important. Lenders have varying economic interests. Depository institutions have many options for investing their funds (for example, other types of loans, stock, real estate), whereas the choices for mortgage companies are much more limited. The legal obligations of lenders also differ. Commercial banks and thrifts are subject to the Community Reinvestment Act (CRA) (which requires lenders to reinvest in the communities from which they draw their deposits) while credit unions and mortgage companies are not. Lenders also report to different federal agencies and may serve different types of clienteles.

These lender characteristics may have become even more important with time. Stricter enforcement of the CRA may have made lenders subject to its provisions (commercial banks, thrifts) more inclined to make underserved market loans. Mergers and industry consolidation may also have affected how receptive lenders are to the needs of underserved markets (Williams, McConnell, and Nesiba 2001).

Williams and Bond (2002) extended the Williams-Nesiba models to include another type of lender characteristic: the amount of business a lender does with the GSEs. Several reasons are possible for believing that, for better or for worse, the underserved market performance of lenders will be affected by how many of their loans they sell to the GSEs.

- The more dependent a lender is on selling loans to the GSEs, the more affected it will be by GSE underwriting guidelines. If these guidelines encourage underserved market loans, the lender should be more likely to make such loans, but, if the guidelines discourage underserved markets loans, then such loans should be made less often.

- The more business a lender does with the GSEs, the more willing and able it should be to participate in GSE programs designed to promote underserved market lending. Hence, if these programs are truly effective, their effects should be most evident among those lenders who work with the GSEs the most.

- A recent study by Ambrose, Thibodeau, and Temkin (2002) implies additional reasons for expecting a lender's underserved market performance to be related to the extent to which it does business with the GSEs. In a study of eight metropolitan statistical areas (MSAs), Ambrose, Thibodeau, and Temkin (2002) found that homeownership rate changes for low-income families increased more in those MSAs where GSE market share was greater. A study of 80 MSAs found that "the liquidity created when GSEs purchase loans originated to low income families is recycled into more lending targeted to lower income homebuyers" (Ambrose, Thibodeau, and Temkin 2002: x). By way of analogy, if underserved markets benefit most in those MSAs where GSE market share is greatest, they should also benefit most with the lenders who sell the largest share of their loans to the GSEs.[15]

Williams, McConnell, and Nesiba (2001) tested a variation of these ideas in Indiana during 1992–96. Their analysis found little evidence that the GSEs' influence on their sellers had been beneficial. In their national analyses of GSE performance during 1993–2000, however, Williams and Bond (2002) did find evidence that GSE influence on lenders was, if not positive, at least becoming less negative than it had been. The current work extends their results through 2003.

Table 4-3 presents the results of this analysis. As previously explained, we run five separate logistic regressions, one for each of the five underserved markets. Models are estimated separately for 1993–98 (column 2), 1999–2000 (column 3), and 2001–03 (column 4).[16] In each case, the dependent variable is coded 1 if the loan went to a member of the underserved market being studied, 0 otherwise. The independent variables (column 1) include the following:

- The percentage of a lender's conventional home purchase loans that were sold to the GSEs. This percentage is the key independent variable and reflects the possible influence GSEs have on lenders.

[15] The flip side of the Ambrose, Thibodeau, and Temkin (2002) findings is that when government-sponsored enterprises (GSEs) are less active in a metropolitan statistical area, the underserved markets in those areas benefit less. Ambrose, Thibodeau, and Temkin (2002) were careful to point out that they were not addressing the controversy over whether the GSEs "lead the market," and we think that caution should be taken seriously. We interpret the Ambrose, Thibodeau, and Temkin (2002) findings as showing that areas can benefit from GSE activity, but, rightly or wrongly, significant regional disparities exist in how those benefits get distributed, with the GSEs being much more active in some areas than they are in others. Ambrose, Thibodeau, and Temkin (2002) also noted other disparities between served and underserved markets. For example, on page 31, they noted that, "One of the most striking results is that the average GSE underserved market shares are significantly lower than the total market." Similarly, tables presented on pages 29–32 of their report show that the GSEs' share of the minority market is consistently less than their share of the total market.

[16] As in the last chapter, the coefficients for the logistic regressions tend to be statistically significant, which is not surprising given the very large sample size. We again focus on what we regard as the substantive significance of the coefficients; that is, are changes large enough to be regarded as substantively significant?

Table 4-3. Logistic Regressions of GSE Influence on Lenders (HMDA Metropolitan Statistical Area Data)

Type of Underserved Market African American	Model				
	M1: 1993–1998	**M2: 1999–2000**	**M3: 2001–2003**	**M4: M2–M1**	**M5: M3–M2**
Percent of loans sold to GSEs	–0.480***	–0.174***	–0.178***	0.307***	–0.00474
	(0.017)	(0.026)	(0.019)	(0.031)	(0.032)
Thrift	–0.248***	–0.334***	–0.112***	–0.0856**	0.222***
	(0.015)	(0.026)	(0.021)	(0.030)	(0.033)
Credit union	–0.140***	–0.176**	–0.0361	-0.0358	0.140*
	(0.038)	(0.056)	(0.041)	(0.068)	(0.069)
Mortgage company	0.144***	0.0450*	0.140***	–0.0994***	0.0955***
	(0.013)	(0.020)	(0.016)	(0.024)	(0.026)
Assets > $1 billion	0.329***	0.296***	0.229***	–0.0328	–0.0670**
	(0.010)	(0.017)	(0.013)	(0.020)	(0.022)
Constant	–3.102***	–3.174***	–3.166***	–0.0722**	0.00802
	(0.011)	(0.020)	(0.016)	(0.023)	(0.025)
Pseudo R^2	0.00544	0.00354	0.00168		
Hispanic	**M1: 1993–1998**	**M2: 1999–2000**	**M3: 2001–2003**	**M4: M2–M1**	**M5: M3–M2**
Percent of loans sold to GSEs	–0.221***	–0.0979***	–0.306***	0.123***	–0.208***
	(0.015)	(0.022)	(0.015)	(0.027)	(0.027)
Thrift	0.256***	0.0658**	0.267***	–0.190***	0.202***
	(0.014)	(0.020)	(0.015)	(0.024)	(0.025)
Credit union	–0.275***	–0.241***	–0.351***	0.0341	–0.111
	(0.040)	(0.050)	(0.039)	(0.064)	(0.063)
Mortgage company	0.252***	0.0486**	0.315***	–0.204***	0.267***
	(0.013)	(0.018)	(0.013)	(0.022)	(0.022)
Assets > $1 billion	0.120***	0.257***	0.360***	0.136***	0.103***
	(0.0094)	(0.015)	(0.011)	(0.017)	(0.018)
Constant	–3.085***	–2.869***	–2.790***	0.216***	0.0791***
	(0.011)	(0.017)	(0.013)	(0.020)	(0.021)
Pseudo R^2	0.00201	0.00229	0.00547		

GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.
* p<0.05.
** p<0.01.
*** p<0.001.
Note: Standard errors are in parentheses.

Table 4-3. Logistic Regressions of GSE Influence on Lenders (HMDA Metropolitan Statistical Area Data) (continued)

Very-low-income borrowers	**M1: 1993–98**	**M2: 1999–2000**	**M3: 2001–2003**	**M4: M2–M1**	**M5: M3–M2**
Percent of loans sold to GSEs	–0.231***	0.0946***	0.0982***	0.326***	0.00358
	(0.011)	(0.015)	(0.011)	(0.019)	(0.019)
Thrift	–0.294***	–0.482***	–0.344***	–0.188***	0.138***
	(0.0088)	(0.014)	(0.012)	(0.017)	(0.018)
Credit union	–0.370***	–0.408***	–0.204***	–0.0383	0.204***
	(0.023)	(0.031)	(0.022)	(0.039)	(0.038)
Mortgage company	–0.496***	–0.433***	–0.341***	0.0631***	0.0923***
	(0.0086)	(0.012)	(0.0088)	(0.015)	(0.015)
Assets > $1 billion	0.195***	0.0479***	–0.00321	–0.147***	–0.0511***
	(0.0065)	(0.0100)	(0.0075)	(0.012)	(0.013)
Constant	–1.782***	–1.689***	–1.639***	0.0935***	0.0495***
	(0.0067)	(0.011)	(0.0088)	(0.013)	(0.014)
Pseudo R^2	0.0112	0.00575	0.00296		
Low-income borrowers in low/moderate-income tracts	**M1: 1993–98**	**M2: 1999–2000**	**M3: 2001–2003**	**M4: M2–M1**	**M5: M3–M2**
Percent of loans sold to GSEs	–0.379***	–0.127***	–0.119***	0.252***	0.00808
	(0.017)	(0.025)	(0.017)	(0.030)	(0.030)
Thrift	–0.364***	–0.515***	–0.299***	0.152***	0.217***
	(0.013)	(0.023)	(0.018)	(0.026)	(0.029)
Credit union	–0.404***	–0.419***	–0.176***	–0.0150	0.242***
	(0.034)	(0.050)	(0.034)	(0.061)	(0.061)
Mortgage company	–0.467***	–0.431***	–0.245***	0.0355	0.187***
	(0.013)	(0.019)	(0.013)	(0.023)	(0.023)
Assets > $1 billion	0.299***	0.232***	0.232***	–0.0674***	0.000554
	(0.0097)	(0.016)	(0.012)	(0.019)	(0.020)
Constant	–2.723***	–2.812***	–2.819***	–0.0885***	–0.00690
	(0.0099)	(0.018)	(0.014)	(0.020)	(0.022)
Pseudo R^2	0.0125	0.00832	0.00368		

GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.
* p<0.05.
** p<0.01.
*** p<0.001.
Note: Standard errors are in parentheses.

Table 4-3. Logistic Regressions of GSE Influence on Lenders (HMDA Metropolitan Statistical Area Data) (continued)

Targeted tracts	M1: 1993–98	M2: 1999–2000	M3: 2001–03	M4: M2–M1	M5: M3–M2
Percent of loans sold to GSEs	–0.237***	–0.160***	–0.191***	0.0766***	–0.0303*
	(0.0080)	(0.012)	(0.0085)	(0.014)	(0.015)
Thrift	–0.146***	–0.208***	–0.0629***	–0.0622***	0.145***
	(0.0069)	(0.011)	(0.0091)	(0.013)	(0.014)
Credit union	–0.207***	–0.268***	–0.115***	–0.0607*	0.153***
	(0.017)	(0.024)	(0.018)	(0.029)	(0.030)
Mortgage company	–0.235***	–0.215***	–0.0459***	0.0197	0.169***
	(0.0065)	(0.0096)	(0.0071)	(0.012)	(0.012)
Assets > $1 billion	0.0648***	0.0635***	0.125***	–0.00131	0.0616***
	(0.0049)	(0.0078)	(0.0060)	(0.0092)	(0.0098)
Constant	–0.995***	–0.993***	–1.055***	0.00208	–0.0624***
	(0.0053)	(0.0090)	(0.0072)	(0.010)	(0.012)
Pseudo R^2	0.00414	0.00288	0.00134		

GSE = government-sponsored enterprise.
HMDA = Home Mortgage Disclosure Act.
* p<0.05.
** p<0.01.
*** p<0.001.
Note: Standard errors are in parentheses.

- The legal structure of the lender, as represented by three dummy variables: Thrift (coded 1 if the lender is a thrift, 0 otherwise); Mortgage Company (coded 1 if the lender is a mortgage company, 0 otherwise); and Credit Union (coded 1 if the lender is a credit union, 0 otherwise). The reference category is Commercial Banks. Hence, negative coefficients for these lender variables indicate that this type of lender is less likely to make loans to underserved markets than are commercial banks, while a positive coefficient means that this type of lender is more likely to make loans to underserved markets than are commercial banks. Including these variables helps control for the legal and financial factors that may affect a lender's underserved market performance.

- Assets of the lender, coded 1 if assets are more than $1 billion dollars, 0 otherwise. The lending industry has become increasingly consolidated over time, with fewer but larger lenders. As Williams, McConnell, and Nesiba (2001) noted, some researchers and affordable lending advocates view this trend as disturbing because it may lead to lenders who are less responsive to the needs of local communities and underserved markets. Others, however, argue that larger lenders may have more resources and expertise to deal with the needs of low-income and minority neighborhoods and individuals. Whatever the effect is, the inclusion of this variable helps control for it.

Some key points should be kept in mind when reviewing the analysis we present next.

- The underserved market performance of primary market entities is no doubt affected by many other variables that we do not have measures of and hence are not included here. It is possible, then, that any apparent effects of the GSEs on lenders are spurious. The same factors that cause a lender to do more business with the GSEs may also cause it to do less (or more) business with underserved markets. (If so, this outcome raises the question of why these lenders are the ones with which the GSEs do the most business.)

- Nevertheless, the longitudinal design of this analysis does make it possible to present evidence that is at least suggestive of possible GSE influence. Suppose the estimated effects of the GSEs on lenders become more positive (or less negative) over time. This finding would be consistent with the hypothesis that the GSEs have gradually helped to influence lenders to become more active with underserved markets. Again, we do not claim that any single piece of evidence is definitive. The evidence from this analysis, however, combined with everything else we have done, helps us determine what effects, if any, GSEs are having on underserved markets.

As Williams and Bond (2002) noted and as Table 4-3 again shows, in 1993–98, the greater the number of its loans a lender sold to the GSEs, the *less* likely its loans were to be issued to members of underserved markets. This finding is true for every underserved market. Furthermore, for four of the five underserved markets, the effects of the GSEs continue to be negative in 1999–2000, but in each case they are significantly *less* negative than they were in the earlier period. For the fifth underserved market—very-low-income borrowers—the GSE effect shifted from being negative in 1993–98 to being slightly positive in 1999–2000.

Unlike what was found in much of our other analyses, however, the GSEs did *not* continue to improve in 2001–03, but, on the other hand, they generally did not become worse, either. The effect of the percentage of loans sold to GSEs was generally almost identical in 2001–03 as it was in 1999–2000 except for the Hispanic market, in which the negative effect of GSE influence became greater.

Hence, in 1993–98, the evidence suggests that, if anything, the GSEs were having a negative influence on the underserved market performance of their sellers, or, if their influence was positive, it was not enough to overcome whatever other factors were causing their sellers to make relatively fewer loans to underserved markets. This finding was much less true in 1999–2003, and indeed the effect of the GSEs on very-low-income loans actually became slightly positive.

These findings are generally consistent with our earlier results. As we have seen repeatedly, in recent years, the GSEs have made some progress with African Americans, low-income borrowers in low- to moderate-income tracts, and targeted tracts. The previous analysis suggests that part of the reason why this progress occurred was because the lenders who sell the most loans to the GSEs started making relatively more such loans in recent years.

Also, we have repeatedly seen that the GSEs' greatest progress over time has been with very-low-income borrowers. Our models of GSE influence showed the most dramatic gains for this group. In 1993–98, the more business a lender did with the GSEs, the less likely it was to make loans to very-low-income borrowers. In 1999–2003, however, this trend reversed itself, as those lenders who did more business with the GSEs actually became slightly more likely to make loans to very-low-income applicants. Although it may be disappointing that the GSEs did not make additional gains after 1999, at least most underserved markets continued to benefit from the gains that had been made by then and that continued into later years.

Again, we must keep in mind that several factors, many of them unmeasured in these data, could be affecting the underserved market performance of primary market lenders. It may be that other factors caused those lenders who do the most business with the GSEs to also improve their underserved market lending, or the GSEs could have started doing more business with lenders who were more active in underserved markets. The trends reported here are also consistent with the hypothesis that GSE influence on lenders moved in a more positive, or at least less negative, direction over time. Increased emphasis by the GSEs on underserved market lending, a greater willingness to buy loans from such markets, and programs designed to generate loan applications from these markets are all possible explanations for the trends reported here. If so, these changes by the GSEs were likely motivated, at least in part, by the higher standards of HUD's new affordable housing goals.

Although not of primary interest for our purposes, the coefficients for the other lender variables are also worth briefly commenting on. Although some changes have occurred in these effects in recent years, our conclusions are generally the same as those reached by Williams and Bond (2002). For the three Final Rule underserved markets, the coefficients for thrifts, credit unions, and mortgage companies are consistently negative over time. This trend means that these types of lenders make relatively fewer conventional loans to these underserved markets than do the reference category of commercial banks. Williams, McConnell, and Nesiba (2001) noted similar patterns in Indiana lending. They speculated that, because thrifts and commercial banks are both

covered by the CRA, thrifts may be using less risky FHA loans rather than conventional loans to meet their CRA obligations. Williams, McConnell, and Nesiba (2001) argued that if this is the case, it may be unfortunate because Federal Housing Administration (FHA) loans carry higher costs than do conventional loans. The magnitude of these coefficients is smaller in 2001–03, however, than it was in 1999–2000, indicating that thrifts, credit unions, and mortgage companies narrowed the gap between themselves and commercial banks in recent years.

Mortgage companies also rely heavily on FHA loans, and the table shows that they are relatively more likely than commercial banks to make loans to African Americans and Hispanics. Williams, McConnell, and Nesiba (2001) speculated that the use of FHA loans helps give mortgage companies inroads with minority markets which carry over into their conventional lending. The mortgage companies' advantage has fluctuated over time but was greater in 2001–03 than it was in 1999–2000.

Finally, Williams, McConnell, and Nesiba (2001) found little evidence that a trend toward larger lenders was hurting Indiana's underserved markets. The analysis presented here does not pursue this issue in as much depth and hence the results should be viewed with caution. Nevertheless, the fact that the coefficients for assets greater than $1 billion are almost always positive suggests that, if anything, larger lenders do a better job with underserved markets than smaller lenders do. This finding may reflect the greater resources and expertise and the ability to manage risk that larger companies possess. The one noteworthy exception is very-low-income borrowers in 2003; lender assets had virtually no effect on this group. As we have seen many times, very-low-income borrowers seem to be the underserved market in which the greatest gains have been made over time. These results suggest that this finding may be partly because the types of lenders who had neglected this group in the past made greater efforts to serve it in the more recent years analyzed.

Summary

This chapter examined GSE influence on the primary market in two ways. First, we considered the extent to which the GSEs even deal with the primary market directly. We found that, over time, the GSEs have increasingly come to rely on other sellers for their loan purchases. Large numbers of purchases from other sellers appeared to be a historical aberration in 1998, but subsequent numbers of GSE purchases have been much closer to the 1998 levels than to those of earlier years. These loans tend to disproportionately come from underserved markets. Whether these other sellers then use these funds to reinvest in home mortgage lending is unclear, but, in any event, their impact on overall GSE underserved market performance has generally been minor.

Second, we examined the ways in which the GSEs affect primary market lenders directly. Williams and Nesiba (1997) examined how characteristics of lenders were related to their underserved market performance. We expand their models to consider another type of lender characteristic: the amount of business a lender does with the GSEs. We hypothesize that, after controlling for other characteristics of lenders that may also affect their performance, those lenders who do the most business with the GSEs should also be the lenders who are most influenced by GSE policies and programs. If GSE policies and programs are beneficial to

underserved markets, then the lenders who do the most business with the GSEs should be the lenders who make the most loans to underserved markets.

We find that, between 1993 and 2003, just the opposite is almost always true: the greater the number of its conventional home purchase loans a lender sells to the GSEs, the fewer of its loans go to underserved markets. For every underserved market, this negative effect of the GSEs was significantly smaller in 1999–2003 than it was in 1993–98. Furthermore, for very-low-income borrowers, the GSE effect was actually slightly positive after 1998: the greater the number of its loans a lender sells to the GSEs, the more likely it is to make loans to very-low-income borrowers. Although it may be disappointing that the GSEs did not make additional gains after 2000, it is also reassuring that the gains seen in 1999 and 2000 were not just a temporary aberration.

The exclusion of other relevant variables that can affect lenders means that these results must be treated with caution. Factors unrelated to anything the GSEs did could account for these findings. Nevertheless, one possible explanation for the improved performance of lenders over time is that GSE policies and programs became more beneficial (or at least less harmful) to underserved markets than they had been in the past.

Chapter 5. Assessing GSE Performance

The government-sponsored enterprises (GSEs) receive special rights and privileges that have been estimated as being worth billions of dollars to them. Government regulators and legislators are therefore justified in engaging in an ongoing cost-benefit analysis. They need to ask, should near parity with traditional primary market lenders be considered enough to justify those benefits? As good as it has been, has GSE progress been adequate?

Although the questions in the previous paragraph involve value judgments that research alone cannot provide the answers to, our research can and does provide important insights into the current status of GSE performance. The author has done two previous studies of GSE performance—one in Indiana during 1992–96 (Williams, McConnell, and Nesiba 2001) and one nationwide for the 1993–2000 period (Williams and Bond 2002). Both studies concluded that the GSEs were not leading the market. The ultimate conclusion of this study is the same, but, by virtually every criterion examined herein, it is also clear that in recent years the GSEs have made noteworthy progress.

Our first assessment strategy compared the GSEs' performance with that of the primary market, the rest of the secondary market, and with each other. Even the narrowest definitions of the primary market never showed the GSEs leading, but even the broadest definitions showed the GSEs making gains. Particularly encouraging is that, after losing ground to subprime and manufactured housing lenders during the latter part of the 1990s, the GSEs gained ground in the early 2000s. The GSEs also narrowed the gap between themselves and their secondary market competitors, and, after 1999, the GSEs actually led with very-low-income borrowers. It is, of course, difficult to determine whether the GSEs affected primary market performance or simply reflected it, but it is useful to note that, after the GSEs started making disproportionate gains in their underserved market performance, the primary market did a better and more consistent job of serving these groups as well.

Our second assessment strategy examined whether the GSEs tended to serve the least underserved of the underserved, possibly indicating a need for alternative goals or subgoals. We argued that seasoned loans may be less risky and less likely to come from the most underserved of the underserved. We found that, since 1997, such loans have had a modest but fairly consistent impact on the GSEs' underserved market performance. Still, this impact is limited, and the GSEs purchased relatively fewer seasoned loans in 2001–03 than they had purchased just a few years earlier.

Other evidence suggested that the GSEs were indeed serving the least underserved of the underserved during 1993–98. The underserved market loans they purchased tended to come from borrowers who were wealthier, less likely to be minorities or live in targeted or minority neighborhoods, and more likely to live in higher income metropolitan statistical areas (MSAs) than the borrowers in the underserved markets whose loans the GSEs did not purchase. Although these differences did not totally disappear by 2001–03, they did greatly diminish, and regional differences in MSA income all but disappeared a few years before that.

Our multivariate analyses also suggested that, in recent years, the GSEs were doing a better job of serving most underserved markets. Starting around 1999, having a very low income went from

being the greatest obstacle to GSE purchase to having virtually no effect at all. Furthermore, starting around 2001, other underserved market characteristics (except being Hispanic) also had much less impact on the likelihood of GSE purchase (although it continued to be the case that the impact they did have was negative; that is, GSEs were less likely to buy loans from such markets). Regional differences in income also declined in importance after 1998.

The goal of our second assessment strategy was to determine whether alternative goals or subgoals might be necessary to make sure that the GSEs did not simply serve the least underserved of the underserved. Although these goals or subgoals might be a good idea, it appears that the need for them is not as great now as it was in 1993–98. In most cases, the GSEs have done a better job of covering all members of underserved markets than they did a few years ago.

Our third assessment strategy examined the direct influence of the GSEs on primary market lenders. We found that what appeared to be an anomaly in 1998 had now become fairly standard: in recent years, the GSEs have bought far more of their loans from other secondary market sellers than they had in the early 1990s. The loans bought from these other sellers are disproportionately likely to come from underserved markets. This finding may be a matter of concern because we do not know if these other sellers are as likely to reinvest in new home mortgage loans as are primary market lenders. Nevertheless, although noticeable, the impact of these purchases on overall GSE underserved market performance is generally minor.

Of more critical concern is how the GSEs affect primary market lenders directly. Unlike the results we found in most of our other analyses, we did not find continued GSE improvement after 1998 but we did not see declines, either. We found that, during 1993–98, the more business a lender did with the GSEs, the less likely it was to make loans to underserved markets. This negative effect became much smaller after 1998 for every underserved market. Indeed, after 1998, those lenders who did the most business with the GSEs were actually more likely to make loans to very-low-income borrowers than were others. We do not know what accounts for this improved performance of lenders over time, but one possibility is that GSE policies and programs have become more beneficial (or at least less harmful) to underserved markets than they had been in the past.

In short, almost every facet of this analysis paints a more favorable image of the GSEs' recent performance than previous studies have. Nevertheless, several issues exist that regulators, lenders, and the GSEs themselves should consider for the future.

First, although the GSEs have made progress in virtually every area, it continues to be the case that their performance in every area is still probably less than optimal. Even when the most favorable definitions of the primary market are used, the GSEs purchase fewer underserved market loans than the primary market does. These gaps grow even larger when Federal Housing Administration, subprime, and manufactured housing loans are considered. When GSEs do purchase loans from underserved markets, these loans still tend to come from borrowers who are less likely to belong to multiple underserved markets. Except for very-low-income borrowers, being from an underserved market still reduces the likelihood of a GSE purchase, even when subprime and manufactured housing loans are excluded from the analysis. Finally, lenders who

do the most business with the GSEs are still somewhat less likely to make loans to most underserved markets than are others.

Second, most of the analyses have examined, in one way or another, how the GSEs' performance compares with that of the primary market and the rest of the secondary market. To say that the GSEs are looking better by comparison is not necessarily the same as saying they are doing a good job overall. Are all lending institutions collectively doing a good job of serving underserved markets, and could the GSEs be doing more to spur better performance on the part of others? Of particular concern is the rise of subprime lending. The GSEs themselves say that many subprime borrowers could qualify for lower cost loans elsewhere. The GSEs and primary market lenders should be encouraged to reach out to these borrowers more often. This strategy would be to both the advantage of the lenders, who would lose fewer of these qualified borrowers to others, and, of course, to the individuals themselves.

Third, although the GSEs have recently purchased more loans issued to Hispanic borrowers, this group is the one underserved market in which the primary market has made greater gains, and being Hispanic is also the one underserved market characteristic that has become a greater barrier to GSE purchase over time. These trends may reflect the rapid growth of the Hispanic market and the GSEs' lesser familiarity with this group. Hispanics might be the group in which the GSEs' performance could most be enhanced.

Finally, although both GSEs made gains during 2001–03, Fannie Mae's gains were greater and more consistent than Freddie Mac's. This finding might reflect a short-term cyclical variation because it was Freddie Mac that was making greater gains in the late 1990s. Nevertheless, Freddie Mac has historically trailed behind Fannie Mae in serving underserved markets. Regulators and Freddie Mac should consider whether it is possible for Freddie Mac to come closer to matching Fannie Mae's performance.

In conclusion, this study has shown that the GSEs have made improvement, and it has also shown where more improvement may be possible. The GSEs have made significant gains with underserved markets, but, for the most part, they still do not lead. This study suggests that exercising greater influence on their partners, expanding their efforts in the subprime and manufactured housing arenas, reaching out to Hispanics, and encouraging Freddie Mac in particular to make stronger efforts are all possible means by which the GSEs could better serve underserved markets.

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