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**HMDA COVERAGE OF THE MORTGAGE MARKET**

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# HMDA Coverage of the Mortgage Market<sup>1</sup>

## I. Introduction and Main Findings

HMDA data is increasingly relied on by policy analysts to examine patterns of affordable lending at the national and local levels. At the national level, for example, HUD relied on HMDA data for estimates of the number of mortgages originated for low- and moderate-income families and in underserved areas when setting affordable housing goals for Fannie Mae and Freddie Mac, the two major government sponsored enterprises (GSEs) in the secondary mortgage market.<sup>2</sup> At the local level, advocacy groups and researchers are increasingly using HMDA data to measure the relative performance of local lenders and the GSEs in the provision of mortgages for low-income and minority borrowers and their neighborhoods.<sup>3</sup>

An important issue in these analyses concerns the accuracy and coverage of HMDA data. HMDA coverage of the primary and secondary market has been debated for several years. Berkovec and Zorn (1996) conclude that 1992 and 1993 HMDA data cover 66 percent and 70 percent of Freddie Mac purchases. *Inside Mortgage Finance* (September 6, 1996), however, reports that 1995 HMDA numbers are within one percent of originations reported by HUD's *Survey of Mortgage Lending*. Recently, Fannie Mae stated that "HMDA data is seriously flawed" and "notoriously unreliable in tracking secondary market activity".<sup>4</sup>

We disagree with Fannie Mae's harsh criticism of HMDA data. Bunce and Scheessele (1996), *The GSEs' Funding of Affordable Loans*, provide a good discussion of the limitations of HMDA data and include a discussion of HMDA's under-reporting of GSE purchases. Bunce and Scheessele conclude that HMDA is the most comprehensive data base available for estimating the market shares for primary and secondary mortgage market activity.

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<sup>1</sup> The author appreciates the many suggestions and insights provided by Harold Bunce. The author would also like to thank John Gardner and Brian Doherty for comments on a previous version of the paper. Any errors can be credited to the author.

<sup>2</sup> See U.S. Department of Housing Development (1995).

<sup>3</sup> See Bunce and Scheessele (1996, 1998), Canner and Passmore (1995, 1996), Bunce et al (1995), Freddie Mac (1995), and Canner and Stuart (1992) for studies at the national level and Lind (1996a and 1996b) for studies at the local level.

<sup>4</sup> See February 19, 1998 letter from James Johnson, Chairman of Fannie Mae, to Marc Smith, President of the Mortgage Bankers Association.

This paper examines the coverage of HMDA data by taking advantage of loan-level data reported to HUD on mortgages insured by FHA and mortgages purchased by the GSEs. The FHA and GSE data bases provide an accurate standard against which HMDA data on FHA and GSE loans can be measured. The results of this paper provide background for using HMDA data to estimate the market share of loans for FHA and the GSEs by reporting HMDA coverage rates for FHA originations and GSE acquisitions of owner-occupied home purchase mortgages for 1993 through 1996.

**Main Findings.** HMDA is an important data base for measuring market shares for mortgage market participants. The main findings of this paper include:

- (1) HMDA coverage of FHA loans and GSE acquisitions has increased since 1993. In 1996, HMDA covered 93.3 percent of FHA loans and 81.6 percent of GSE acquisitions; HMDA covered 84.7 percent of Fannie Mae acquisitions and 77.7 percent of Freddie Mac acquisitions. HMDA under-reports overall mortgage activity because HMDA is largely a metropolitan data base and does not adequately measure mortgage market activity in non-metropolitan areas. For example, loans in non-metropolitan areas account for 7.7 percent of FHA loans in 1996 which is approximately the percentage of FHA loans that were unreported to HMDA.
- (2) HMDA coverage varies by type of lending institution, with mortgage companies reporting a higher percentage of their loans than banks and thrifts. Banks and thrifts are more likely to be exempt from HMDA reporting because they fail to meet minimum asset requirements or because they do not loan in metropolitan areas while non-depository lenders must report to HMDA if they originate at least 100 loans in metropolitan areas.
- (3) HMDA under-reports GSE acquisitions mainly because a few large lenders fail to correctly report the sale of a significant number of their loans to the GSEs. Supervisory agencies should pay more careful attention to lenders incorrectly reporting the "Type of Purchaser" field. Fannie Mae and Freddie Mac should make public the number of purchases by seller institution so that regulators and community groups have an accurate benchmark to measure HMDA accuracy. HUD already makes this information available for FHA loans.

The paper is organized as follows. Section II provides background on HMDA and its limitations. Section III compares HMDA coverage for FHA loans and GSE acquisitions and discusses possible reasons for HMDA covering a higher percentage of Fannie Mae acquisitions than Freddie Mac acquisitions. Section IV discusses HMDA coverage of the overall conventional mortgage market. Section V concludes the paper.

## **II. Background on HMDA Data**

HMDA data is the most comprehensive source of information on primary mortgage originations and secondary market loan purchases. HMDA provides information on the borrower (income, race and ethnicity, and sex) and locational (census tract, metropolitan area) characteristics of lending institutions' originations and purchases of mortgages.

#### **A. HMDA Reporting Requirements**

Lenders are required to report the action taken on all loan applications that they receive in a given calendar year. For example, lenders are required to report if a loan was denied or originated. In addition, lenders are required to report the purchases of loans that were originated by another lender. Therefore, a lender reports two types of loans to HMDA each calendar year - loans originated directly by the lender and purchases of loans originated by other lenders.<sup>5</sup> For the remainder of the paper, we refer to purchases of loans originated by other lenders as “purchased loans”. As the next paragraph explains, these “purchased loans” of lenders should not be confused with loans that lenders sell to the GSEs, which are of course, “purchased by” the GSEs. These latter loans will be referred to as “GSE acquisitions” or “loans purchased by the GSEs.”

Lenders are required to report the “Type of Purchaser” for all originated and purchased loans. For example, lenders report if a loan was sold to a GSE or an affiliate institution, or was not sold in the current calendar year. Estimating GSE purchases using HMDA requires using the “Type of Purchaser” field on HMDA to identify GSE purchases of both originated and purchased loans.

Loans originated in a prior year (“seasoned” loans) but purchased by another lending institution in the given calendar year are also reported to HMDA. There is no way to identify purchased loans that were originated in a prior year. Therefore, GSE purchases reported to HMDA include seasoned loans that are first purchased by a lending institution and then resold to a GSE in the same calendar year.

To summarize, HMDA’s treatment of GSE purchases includes: (1) GSE purchases of current year originations from the originating lender, (2) GSE purchases of current year originations that are sold by the originating lender to another lending institution in the current year and then resold by the purchasing lender to a GSE, and (3) GSE purchases of loans originated in a prior year that are purchased by a lending institution in the current year and then resold to a GSE.

#### **B. HMDA Under-Reporting**

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<sup>5</sup> Lenders report HMDA data to their supervisory agency (i.e., Federal Reserve, OCC, FDIC, HUD, OTS, and NCUA). The Federal Financial Institutions Examination Council (FFIEC) compiles and releases the data to the public.

HMDA is not a complete census of mortgage origination and secondary market activity in the United States. HMDA may under-report GSE purchases for several reasons. First, a lender may not be required to report to HMDA. Depositories that originate loans in metropolitan areas and have assets below \$10 million are exempt from HMDA<sup>6</sup>, as are independent mortgage companies that originate fewer than 100 applications in metropolitan areas and lenders that originate loans only in non-metropolitan areas. Second, lenders may fail to report the sale of a loan to a GSE. A HMDA lender may report a new origination to HMDA but fail to update the HMDA record to reflect the sale of the loan to a GSE. To summarize, HMDA under-reports GSE acquisitions of current year originations because of the following exclusions:

- 1) GSE acquisitions of originations and purchased loans from lenders that are not required to report to HMDA.
- 2) GSE acquisitions of loans that the lender fails to report as sold to a GSE.

**Type of Secondary Market Purchaser.** As noted earlier, lenders are required to report to HMDA whether they hold an originated or purchased loan in portfolio or sell the loan on the secondary market during the calendar year. Lenders, however, may not accurately report a sale of a loan to a secondary market participant. In 1995, two of the largest lenders, Countrywide and Prudential, reported very few loans sold to the GSEs.<sup>7</sup> After being questioned about this, the lenders stated that they had recently changed their data systems and these systems had failed to correctly account for loan sales to the GSEs. We noticed similar patterns for other major lenders for 1993-1995 HMDA. After calling 50 of the top major lenders that appeared to misreport loan sales, we concluded that HMDA's coverage of secondary market activity is incomplete because some lenders do not accurately report loan sales.

Lenders gave three reasons for under-reporting loan sales. First, lenders noted that their HMDA reporting systems and secondary market data systems were not properly coordinated and loan sale information on their HMDA records was not refreshed when the loan was subsequently sold. Second, many small lenders stated that they used software and data collection vendors to compile their HMDA reports. If these lenders do not inform the vendors of a loan sale then it goes unreported to HMDA. Finally, some lenders stated that they do not report the sale of a loan unless the servicing rights are also sold.

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<sup>6</sup> The \$10 million dollar threshold applies to HMDA data prior to 1997. The threshold was increased beginning with 1997 data. For 1998 data, a depository is required to report if its assets total more than \$29 million dollars on the preceding December 31.

<sup>7</sup> Countrywide and Prudential submitted corrected data for the "Type of Purchaser" field for originated loans before the tape release of the 1995 HMDA data. The CD ROM version of the 1995 HMDA data, however, does not contain the corrected data. Countrywide also reported very few sales of purchased loans to the GSEs during 1995. These errors regarding purchased loans were not corrected before the tape release of the data. Countrywide does not appear to have made the same error in 1996 although Prudential reports a low percentage of purchased loans sold to a GSE during 1996.

Lenders continued to misreport the type of secondary market purchaser in 1996. After conversations with several lenders, we conclude that the main reason for HMDA under-reporting of GSE purchases is not that the loans are unreported but that the sale of the loans are unreported. We discuss this problem further in the next section.

**Third-Party Originations.** There is some confusion about how HMDA treats third-party originations. For example, Fannie Mae states that HMDA data “reflects only the first sale of a loan,” and loan purchases “by lending institutions from third-party originators and subsequently sold to Fannie Mae and Freddie Mac are excluded from the HMDA data.”<sup>8</sup>

Third-party or wholesale lending involves a mortgage broker or correspondent. A mortgage correspondent typically funds the loan through its warehouse line of credit while brokers often rely on table funding to originate the loan. Table funding is on a loan-by-loan basis while correspondent loans may be sold individually or in bulk.<sup>9</sup>

Third-party originations are not necessarily excluded from HMDA even though a third-party originator may not have to report the loan to HMDA. Loan originations must be reported by the institution that makes the credit decision and, by prior agreement, acquires the loan after closing. Brokered or correspondent loans can be included in HMDA through the following channels:

- 1) If a loan is closed in a correspondent or broker’s name without prior agreement for resale to another institution, then the correspondent or broker is subject to the same reporting requirements as other non-depository institutions.
- 2) If a broker or correspondent closes a loan in the name of an affiliate lending institution, then the affiliate should report the loan as an origination.

There is no loan-level data on brokered and correspondent loans that can be used to estimate HMDA’s coverage of these loans. As we show below, however, FHA originations reported to HMDA covered over 90.0 percent of FHA loans in 1996. Lamalfa and Clifford (1997) estimate that 28.7 percent of dollar loan volume in 1996 is originated by brokers and correspondents. If we assume that brokers and correspondents account for a similar share of FHA business then it is unlikely that there is significant under-reporting of brokered or correspondent loans in HMDA.

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<sup>8</sup> See February 19, 1998 letter from James Johnson, Chairman of Fannie Mae, to Marc Smith, President of the Mortgage Bankers Association.

<sup>9</sup> For a good discussion of wholesale lending and a list of the major wholesalers, see Lamalfa and Clifford (1997).

There is debate whether brokered and correspondent loans are reported as originations or purchased loans. *Inside Mortgage Finance* (September 6, 1996) reports that correspondent and broker loans are generally not reported as originations but as purchased loans under HMDA; further, it reports that HMDA numbers are within one percent of originations reported by HUD's *Survey of Mortgage Lending* after counting all purchased loans as originations.<sup>10</sup> Federal Reserve staff, on the other hand, state that including purchased loans leads to double-counting since the majority of these loans have also been reported to HMDA as loan originations.

We believe that counting purchased loans as originations leads to double-counting. We believe that most brokered loans are reported as originations to HMDA by the lending institution that table funds the loan and we believe that most correspondent loans are reported to HMDA as originations by the correspondent lending institution and as purchases by the purchasing institution. According to Lamalfa and Clifford (1997), Countrywide was the largest wholesaler in 1996. Countrywide stated to us that they report retail and brokered loans as originations and correspondent loans as purchased loans.<sup>11</sup>

We matched (a) HMDA origination records for FHA and conventional loans that were reported as sold to a non-GSE with (b) HMDA records for loans reported as purchased (i.e., not originated by the reporting lender) to determine how many loans are reported more than once to HMDA.<sup>12</sup> In 1996, there were 815,616 current-year originations that lenders reported were sold on the secondary market to a purchaser other than Fannie Mae, Freddie Mac, or Ginnie Mae. We matched 33.7 percent (274,841 loans) of these current-year origination records with a purchased loan record.<sup>13</sup> Therefore, counting purchased loans as additional current-year originations would lead to significant double-counting.

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<sup>10</sup> In 1996, HMDA covered 109.2 percent of dollar loan volume reported to the *Survey of Mortgage Lending* if purchased loans were included suggesting that there is double-counting of loans in HMDA when purchased loans are included as originations.

<sup>11</sup> Homeside Lending also reports correspondent loans as purchased loans. HUD has contracted out a study that examines the accuracy of HMDA data by (1) comparing the HMDA files of a few lenders with the lending institution's own loan level files, and (2) interviewing lenders about how they fill out their HMDA Loan Application Register (LAR) by questioning lenders on specific topics. One of the topics that HUD will ask lenders is how they report loans from brokers and correspondents.

<sup>12</sup> We matched on the following variables: MSA, county, state, census tract, income, loan amount, race, and type of loan.

<sup>13</sup> The match rate would have been higher but borrower race and income are not reported for the majority of purchased loans. Furthermore, a significant number of the unmatched loans were likely sold to the GSEs but the lender incorrectly reported the "Type of Purchaser" field. Section III discusses lenders' errors when reporting this field in more detail.

We believe that third-party originations are reported as originations in HMDA. Brokered loans are reported to HMDA as originations by the lender that makes the credit decision while correspondent loans are reported to HMDA by the correspondent lender. We believe that HMDA covers most brokered and correspondent loans through one of these channels. As we show below, HMDA does not under-count GSE purchases because third-party originations go unreported; rather, HMDA under-counts GSE purchases because a few large lenders do not report their GSE sales.

**Metropolitan versus Non-Metropolitan Loans.** Lenders that do not originate loans in metropolitan areas are not required to report to HMDA. Loans for properties located in non-metropolitan areas are included if originated by a lender that is required to report in metropolitan areas. HMDA coverage of the metropolitan mortgage market is probably higher than HMDA coverage of the overall mortgage market because non-metropolitan lenders are not required to report to HMDA.

We cannot estimate the effects of non-metropolitan loans on HMDA coverage of the overall mortgage market because of HMDA and GSE data limitations. Estimating HMDA coverage of FHA loans and GSE acquisitions is complicated by non-geocoded loans since we are unable to identify whether the property is located in a metropolitan area where the lender does not have a home or branch office or in a non-metropolitan area where the lender is not required to report the property location. Furthermore, when using GSE data, we are unable to break out GSE purchases by metropolitan and non-metropolitan areas because the data is proprietary except for a GSE data file that includes GSE purchases of seasoned loans. We will discuss the limitations of using GSE data because of its proprietary nature below.

Lenders are not required to geocode loan application data for properties located in metropolitan areas in which they do not have a home or branch office or for properties in non-metropolitan areas. Lenders must report the location of the property for loans that it purchases if the lender has a home or branch office in the MSA where the property is located even if the loan was purchased from an institution that did not have a home or branch office in the MSA and did not collect the property location information.

Beginning in 1996, banks and savings associations with total assets of \$250 million or more and bank and savings associations that are subsidiaries of holding companies with banking or thrift assets of \$1 billion or more as of December 31 for each of the immediately preceding two years must report the property location of all loans, both metropolitan and non-metropolitan loans.

In 1996, 8.1 percent of FHA loans and 10.7 percent of GSE acquisitions did not have geocodes that identified property location. The FHA percentage has remained around 8.0 to 9.0 percent since 1994. The GSE percentage was around 13.0 percent from 1993-1995 and fell to 10.7 in 1996. The decrease in the percentage of GSE purchases in HMDA that have missing geocodes most likely reflects the requirement that larger



depositories must now report the geocodes for loans in metropolitan areas where they do not have a branch office.<sup>14</sup>

The effect of the requirement that large depositories must report the geocode for all loans can also be illustrated by looking at the increase in the number of non-metropolitan loans reported to HMDA that get purchased by the GSEs. In 1996, there were 78,119 non-metropolitan home purchase loans reported to HMDA as sold to the GSEs. In the past, the majority of these loans would not have been geocoded.

### **III. HMDA Coverage of FHA Loans and GSE Acquisitions**

This section reports HMDA coverage of FHA loans and GSE acquisitions. We can only estimate HMDA's coverage of GSE purchases because of peculiarities associated with HMDA and GSE data. Subsection A discusses using HMDA and GSE data to measure HMDA coverage of GSE purchases, subsection B reports HMDA coverage for FHA loans, and subsection C reports HMDA coverage for Fannie Mae and Freddie Mac purchases.

#### **A. HMDA and GSE Data**

With respect to HMDA data, we include all HMDA loan records - originated and purchased loans - that have been reported as sold to the GSEs since the origination year of purchased loans cannot be identified in HMDA. We cannot determine the number of purchased loans that were resold to the GSEs that were originated in the prior year. Therefore, HMDA data overstates the number of GSE purchases of current year originations.

With respect to GSE data, we are unable to directly measure GSE purchases of current year originations because a significant amount of GSE data reported to HUD is considered proprietary by Fannie Mae and Freddie Mac. HUD has released three data files created from the GSE data to the public: the census tract level file, national file A and national file B.

**Census Tract Level File.** The census tract level file is a file of individual mortgages that can be linked to census tract data. The advantage of the census tract level file is metropolitan and non-metropolitan purchases can be separated. The disadvantages of the census tract level file are owner-occupied loans cannot be separated from investor loans, home purchase loans cannot be separated from home refinance loans, and purchases of current year originations cannot be separated from purchases of loans originated in a

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<sup>14</sup> The percentage of FHA loans that are not geocoded did not change significantly because the majority of FHA loans continue to be originated by independent mortgage companies.

prior year (seasoned loans).<sup>15</sup> Although HMDA identifies investor and home refinance loans, the inability to identify seasoned loans on the census tract level file leads to a lower HMDA coverage ratio since HMDA only includes indirect GSE purchases of seasoned loans (loans that are first purchased by a lender and then resold to the GSEs) while the GSE census tract file includes all GSE purchases of seasoned loans.

**National File A.** The National File A includes information on mortgages for owner-occupied one-unit homes. The advantage of National File A is it identifies owner-occupied mortgages.<sup>16</sup> The disadvantages of this file are it leaves out mortgages for 2-4 units, does not identify seasoned loans, does not separate home purchase loans from home refinance loans, and does not separate metropolitan loans from non-metropolitan loans.

**National File B.** The National File B includes information on the units purchased by the GSEs. The advantage of the National File B is seasoned loans can be separated from current year originations and owner-occupied units can be separated from investor units. National File B does not identify geocodes so HMDA coverage analyses cannot be easily done at disaggregated levels.<sup>17</sup> We use National File B because it allows us to separate out seasoned loans keeping in mind that estimates of HMDA coverage will be a lower bound for HMDA's actual coverage of Freddie Mac loans.<sup>18</sup>

**Overall HMDA Coverage.** Table 1 reports HMDA coverage rates for 1993-1996. HMDA coverage of FHA loans and GSE acquisitions increased between 1993 and 1996. HMDA's coverage of FHA loans increased from 87.8 percent in 1993 to 93.3 percent in 1996 and HMDA coverage of GSE acquisitions increased from 75.3 percent in 1993 to 81.6 percent in 1996.<sup>19</sup>

The rest of this section has three main findings. First, HMDA coverage of FHA loans is higher than its coverage of GSE loans because HMDA coverage of the primary mortgage market is higher than its coverage of the secondary mortgage market. Second, HMDA coverage of Freddie Mac loans has lagged behind coverage of Fannie Mae loans

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<sup>15</sup> Another disadvantage of the Census Tract File is mortgages for properties with 2-4 units cannot be separated from mortgages for one unit properties. This does not pose a problem when analyzing HMDA coverage because HMDA does not separate one unit from 2-4 unit properties.

<sup>16</sup> Another advantage of National File A is it reports the loan-to-value for the mortgage.

<sup>17</sup> Purchases cannot even be grouped into the broad metropolitan and non-metropolitan classifications.

<sup>18</sup> Another disadvantage of National File B is it counts GSE purchases of units and not mortgages. This distinction is only important for Freddie Mac data since it reports unit level data to HUD which includes the occupancy status of each unit. Fannie Mae reports mortgage level data to HUD which identifies mortgages that have at least one owner-occupied unit. Therefore, National File B leads to a lower HMDA coverage ratio for Freddie Mac mortgages since some 2-4 unit properties may have more than one unit that is owner-occupied.

<sup>19</sup> The GSE and HMDA data include owner-occupied home purchase mortgages for second homes.

because Freddie Mac's portfolio depends more on thrifts than Fannie Mae's portfolio which is more dependent on mortgage companies. The HMDA coverage of loans originated by thrifts is lower than the coverage of loans originated by mortgage companies. Also, Freddie Mac's portfolio has proportionately more non-metropolitan loans and HMDA is predominantly a metropolitan data base. Third, a few large lenders failed to correctly report their loan sales to HMDA.

## **B. FHA Loans**

In 1996, HMDA covered 93.3 percent of FHA loans compared with 81.6 percent of GSE acquisitions (see Table 1). HMDA coverage of FHA loans is greater than its coverage of GSE purchases for two reasons. First, reporting originations such as FHA-insured loans is more straight-forward than reporting secondary market purchases. As discussed earlier, lenders may report originations such as FHA-insured loans to HMDA but fail to report the secondary market disposition of those originations. HMDA under-reporting of secondary market purchases is not unique to conventional loans. According to Ginnie Mae, 96.8 percent of FHA loans are securitized into Ginnie Mae securities. We estimate that HMDA coverage of Ginnie Mae securities was only 67.9 percent in 1996.

Furthermore, HMDA coverage of Ginnie Mae securities has decreased. Two lenders in particular reported significantly less Ginnie Mae securitization in 1996 than in 1995. Norwest Mortgage reported that 81.2 percent of its 91,560 FHA loans in 1995 were securitized into Ginnie Mae securities compared to 20.9 percent of its 128,425 loans in 1996. North American Mortgage Company reported 87.4 percent of its 12,011 FHA loans in 1995 were securitized into Ginnie Mae securities compared to 11.1 percent of its 16,408 loans in 1996. Both firms stated to us that their 1996 HMDA submissions had failed to reflect the sale of the loan on the secondary market.

A second reason for higher FHA coverage is that mortgage companies originate the majority of FHA loans. Table 2 reports the share of FHA mortgages accounted for by mortgage companies and depositories. For each year between 1993 and 1996, mortgage companies originated approximately 83.0 percent of FHA loans.<sup>20</sup> The HMDA reporting requirement for mortgage companies is based on whether the firm received at least 5 applications in at least one MSA and whether it originated more than 100 loans. The HMDA reporting requirement for depositories is the institution must have at least \$10 million in assets and a home or branch office in at least one MSA. Thus, the HMDA reporting requirement for mortgage companies is more stringent than the reporting

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<sup>20</sup> Although mortgage companies originated most FHA loans between 1993 and 1996, there was a shift between independent mortgage company and mortgage company subsidiaries, as the mortgage market became more concentrated due to purchases of independent mortgage companies by banks and thrifts. HMDA coverage could have increased for FHA loans because of the greater concentration of mortgage companies.

requirement for depositories which means that HMDA probably includes most mortgage companies.<sup>21</sup>

### C. GSE Acquisitions

Figure 1 depicts HMDA coverage ratios of GSE loans for 1993 through 1996. HMDA coverage of Fannie Mae purchases increased more than HMDA coverage of Freddie Mac purchases during this period. HMDA coverage of Fannie Mae purchases increased from 75.3 percent in 1993 to 84.7 percent in 1996 - a 9.4 percentage point increase. HMDA coverage of Fannie Mae acquisitions increased from 75.3 percent in 1993 to 92.6 percent in 1995 but decreased to 84.7 percent in 1996. In 1995, the 92.6 percent HMDA coverage rate for Fannie Mae acquisitions exceeded the 89.5 percent HMDA coverage rate for FHA loans. HMDA coverage of Freddie Mac purchases, however, increased only 2.3 percentage points between 1993 and 1996, from 75.4 percent in 1993 to 77.7 percent in 1996. Freddie Mac coverage remained at 75-76 percent for 1993 through 1995 and then increased slightly to 77.7 percent in 1996.

These numbers present a very different picture of HMDA coverage than numbers recently reported by Fannie Mae. Fannie Mae reported that in 1996, “HMDA missed more than one-third of all the loans Fannie Mae purchased or securitized.” Fannie Mae estimates HMDA coverage of GSE purchases by including GSE purchases of mortgages originated in a prior year or “seasoned loans”. As we mentioned earlier, HMDA does not include information on GSE purchases of loans originated in a prior year unless these loans were first purchased by a lending institution that reports to HMDA and then are resold to the GSEs. In 1996, loans originated in a year prior to 1996 comprised 24.1 percent of GSE mortgages.<sup>22</sup>

**Type of Lending Institution.** HMDA coverage of Fannie Mae purchases is higher than its coverage of Freddie Mac purchases because Fannie Mae relies more on mortgage companies than thrifts for its acquisitions and mortgage companies are more likely to report to HMDA than thrifts.<sup>23</sup> Table 2 reports the share of GSE acquisitions accounted for by depositories and mortgage companies. HMDA data shows that in 1996, Fannie Mae purchased 81.2 percent of its loans from mortgage companies, 11.4 percent from thrifts, and 7.0 percent from banks while Freddie Mac purchased 73.9 percent of its loans from mortgage companies, 15.3 percent from thrifts, and 10.5 percent from banks.<sup>24</sup>

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<sup>21</sup> A higher percentage of FHA loans in HMDA have geocodes than GSE purchases most likely because a higher percentage of FHA loans are originated by mortgage companies.

<sup>22</sup> The percentage of units that are mortgaged in a year prior to the current year can be obtained from National File B. As discussed in footnote 15, the difference between units and mortgages is small.

<sup>23</sup> Also, Freddie Mac purchases proportionately more loans from smaller lenders that may not be required to report to HMDA than does Fannie Mae.

<sup>24</sup> Data reported to HUD by the GSEs show a similar distribution - Fannie Mae purchased 80.8 percent of its units from mortgage companies, 12.4 percent from thrifts, and 6.2 percent from banks while Freddie

Table 3 reports HMDA coverage of GSE acquisitions by type of lending institution. Mortgage companies are more likely to report to HMDA than thrifts and less likely to report to HMDA than banks. HMDA covers 93.8 percent of GSE purchases from banks, 83.3 percent of purchases from mortgage companies, and 70.3 percent of purchases from thrifts.<sup>25</sup>

**Seasoned Mortgages.** A large percentage of Fannie Mae’s purchases are for seasoned loans. We can exclude all seasoned mortgages from the GSE data but we are unable to exclude all seasoned loans from HMDA data. Recall that HMDA data includes GSE purchases of seasoned mortgages if a lender purchases a seasoned mortgage and then resells it to a GSE in the same calendar year. In 1996, seasoned mortgages account for 26.9 percent of Fannie Mae purchases and 20.5 percent of Freddie Mac purchases. Given that Fannie Mae purchases proportionately more seasoned loans it is more likely that proportionately more Fannie Mae seasoned loans will be included in the HMDA totals.<sup>26</sup>

**Non-Metropolitan Areas.** The HMDA data base is largely a metropolitan data base. HMDA coverage of Fannie Mae purchases is higher than its coverage of Freddie Mac purchases because Freddie Mac’s portfolio has proportionately more non-metropolitan loans than Fannie Mae’s portfolio. The share of Freddie Mac purchases devoted to non-metropolitan areas is at least 2 percentage points higher than the share of Fannie Mae purchases devoted to non-metropolitan areas for 1993 through 1996. In 1996, for instance, the non-metropolitan share of Freddie Mac purchases was 16.0 compared to 13.2 percent of Fannie Mae purchases.<sup>27</sup>

**Individual Lender Analysis.** HMDA coverage of Fannie Mae purchases is incomplete because a few large lenders fail to accurately report the “Type of Purchaser” of the loan. Two lenders accounted for most of the unreported loan sales in 1996.<sup>28</sup> HMDA data for 1995 and 1996 indicate that these lenders failed to report a large percentage of their loan sales to the GSEs. For example, Norwest reported that it sold 68.1 percent of

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Mac purchased 70.4 percent from mortgage companies, 18.2 percent from thrifts, and 11.0 percent from banks.

<sup>25</sup> The over-reporting of GSE purchases by banks may be due to a few large banks that may report purchases of seasoned loans and a number of mortgage companies in HMDA that report a bank code instead of a mortgage company subsidiary code.

<sup>26</sup> For Fannie Mae, seasoned loans accounted for 22.3 percent of 1995 purchases, 22.2 percent of 1994 purchases and 21.5 percent of 1993 purchases. For Freddie Mac, seasoned loans accounted for 21.8 percent, 18.6 percent, and 17.8 percent of 1995, 1994, and 1993 purchases, respectively.

<sup>27</sup> These breakouts were derived from the census tract level file which is a mortgage based file. Mortgages in non-metropolitan areas are more likely to be single units so these percentages understate the importance of non-metropolitan loans in Freddie Mac’s portfolio.

<sup>28</sup> These findings are consistent with Berkovec and Zorn’s finding that HMDA under-reporting is due to “a relatively small number of HMDA reporters”.

its 96,477 conventional loans to either Fannie Mae or Freddie Mac in 1995 compared to 25.4 percent of its 167,384 conventional loans in 1996. North American Mortgage Company reported that it sold 84.0 percent of its 32,089 originations to the GSEs in 1995 compared to 18.5 percent of its 32,606 originations in 1996.

HUD staff reported these lenders to the Federal Reserve before the completion of the 1996 HMDA tapes but the Federal Reserve was unable to determine at that time whether these lenders had failed to correctly report the “Type of Purchaser” field.<sup>29</sup> We contacted each of these lenders and they stated that the “Type of Purchaser” field was not updated to reflect the sale of a loan to the GSEs.<sup>30</sup>

A few large lenders reported no sales to the GSEs. The largest lender that failed to report any sales to HMDA is the Republic National Bank of New York. The Republic National Bank of New York also failed to update the “Type of Purchaser” field when the loans were sold to the GSEs. Other large lenders that reported few if any sales to the GSEs on HMDA include: First Town Mortgage Corporation, Kaufman and Broad Mortgage, First Franklin Financial Corporation, and USAA Federal Savings.<sup>31</sup>

We also found that some lenders reported loan sales to Fannie Mae or Freddie Mac but did not sell directly to the GSEs. Fifteen lenders stated that they were brokers or correspondents for large lenders such as Fleet or Nations Bank and reported the sale of the loan to a GSE because they knew that the larger lenders would eventually sell the loan to the GSEs.<sup>32</sup>

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<sup>29</sup> For example, another lender that HUD identified, Great Western Mortgage Company, told the Federal Reserve that it sold all of its loans to its parent Great Western Bank, FSB.

<sup>30</sup> The sale of loans to the GSEs is not always straight-forward. For example, prior to 1996, Barnett Mortgage Company purchased loans from its subsidiaries and sold them to the GSEs. In a restructuring venture, Barnett Mortgage Company was sold to Homeside Lending and then through a legal merger, a new entity was formed and given the name Barnett Mortgage Company. The new company channeled loans from its subsidiaries and affiliates into Homeside Lending. Homeside Lending then sold the loans to Fannie Mae. Because of the restructuring, Barnett Mortgage did not have to report to HMDA in 1996. Staff from Barnett Mortgage Company state that approximately 3,600 loans were sold to Fannie Mae through Homeside Lending. We obtained 3,633 loans in HMDA from Barnett Bank and its subsidiaries, Loan America and BancPlus, that were sold to Fannie Mae.

<sup>31</sup> First Franklin staff also told us that after 1996, there would be few loans sold to the GSEs because First Franklin had become a subprime lender.

<sup>32</sup> We contacted United Financial Mortgage Corporation, Fidelity Bank and Trust Company, Unifirst Mortgage Company, Premiere Plus, Fonville Morisey Mortgage Services, Platinum Home Mortgage Corporation, Diversified Mortgage Services, and Summit Mortgage. United Financial Mortgage Corporation reported that it sold 554 loans to other lending institutions like Fleet or Nations Bank but since United Financial knows that most of these loans will be sold to Fannie Mae it reported Fannie Mae as the purchaser on HMDA. Similarly, Summit Mortgage reported that it sold 521 loans to Fannie Mae but it only brokered these loans for Fleet and Nations Bank. Fidelity Bank and Trust Company reported 1,266 loans as sales to Fannie Mae because its bank inspectors said that Fannie Mae is the default designation for the Type of Purchaser field. Unifirst Mortgage Company is a correspondent for Fleet,

#### IV. HMDA Coverage of Mortgage Market

Up to this point we have concentrated on HMDA coverage of FHA loans and GSE acquisitions. This section comments on HMDA's coverage of the entire mortgage market. Although there is an absence of data on mortgage volume, we are able to draw on the discussion in this paper to provide insights on HMDA's coverage of the mortgage market. This discussion concerns HMDA's coverage of the conventional and FHA mortgage market. We do not discuss HMDA's coverage of VA, manufactured home, and subprime loans in this section.<sup>33</sup>

There are few benchmarks with which to measure HMDA's coverage of the mortgage market. HUD's *Survey of Mortgage Lending* (SML) reported \$785.3 billion in mortgages in 1996. HMDA covered \$653.1 billion or 83.2 percent of this total.<sup>34</sup> The coverage rates for conventional and FHA mortgages was 82.6 and 90.5 percent, respectively.

These estimates of HMDA coverage are consistent with the coverage ratios reported earlier for GSE and FHA coverage. The main reason for the discrepancy between the HMDA coverage ratios using SML data and the coverage ratios using the actual FHA and GSE data is the comparison with the actual GSE and FHA data includes only home purchase owner-occupied mortgages while the comparison with the SML data includes all mortgages and occupancy types. The fact that the coverage ratio for the conventional market using SML data is consistent with the coverage ratio for GSE purchases using GSE data is not surprising given the finding above that the main reason for HMDA's under-reporting of GSE purchases is not because lenders failed to report loans to HMDA but because lenders failed to accurately report the "Type of Purchaser" field. Furthermore, we would expect HMDA coverage of all conventional mortgages to

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Chase, and Homeside and knows all of its 318 loans were sold to either Fannie Mae or Freddie Mac. Unifirst has asked how to report the Type of Purchaser field and has been told that it does not matter whether Fannie Mae or Freddie Mac is listed. Premiere Plus also sold its 233 loans to affiliates that subsequently sold the loans to the GSEs. Diversified Mortgage Services stated that it sold its 255 loans to investors that pool the mortgages and it must insure that those mortgages meet Fannie Mae or Freddie Mac standards. Diversified reported the sale of a loan based on the underwriting standard (e.g., Fannie Mae or Freddie Mac) that it is used to underwrite the mortgage.

<sup>33</sup> In a presentation to the GSE Working Group (November 5, 1997), HUD staff reported that the volume of manufactured home and subprime lending is hard to estimate given the absence of consistent and complete reporting of loans. HUD staff concluded that coverage of manufactured home loans is higher than its coverage of subprime lending because the manufactured home loan industry is more consolidated than the subprime market. Furthermore, subprime loans originated by lenders that traditionally originated loans in the prime market cannot be identified in HMDA.

<sup>34</sup> The HMDA and SML data include home purchase, improvement, and refinance mortgages. The SML data does not include subprime and manufactured home loans. The HMDA number includes subprime and manufactured home loans but these loans do not account for a large percentage of the HMDA total.

be lower than its coverage of GSE acquisitions even if lenders correctly reported the “Type of Purchaser” field since lenders that sell to the GSEs tend to be the largest lenders in the primary mortgage market.

## V. Conclusion

HMDA is an important data base for measuring mortgage activity for primary and secondary mortgage market participants. This paper has shown that HMDA coverage of the mortgage market has increased since 1993. Furthermore, this paper has shown that HMDA’s under-reporting of mortgage market activity does not prevent the use of HMDA to estimate mortgage market shares provided careful analyses recognize the limitations of HMDA data.

HMDA coverage of the mortgage market has increased since 1993. HMDA covered 93.3 percent of FHA loans in 1996. In 1996, however, HMDA data continued to under-report secondary market purchases by Fannie Mae and Freddie Mac as indicated by the 81.6 percent HMDA coverage ratio for GSE acquisitions in 1996. The main reason for the under-reporting of GSE acquisitions is a few large lenders failed to report the sale of a significant portion of their loan originations to the GSEs. The under-reporting of the secondary market activity is not unique to the conventional market. The same large HMDA lenders that under-report the sale of loans to the GSEs also under-report the number of FHA loans that are securitized into Ginnie Mae securities.

HMDA data should be more carefully checked to ensure that the sale of loans in the secondary market are reported by lenders. Supervisory agencies should take an active role in identifying lenders that misreport the “Type of Purchaser” field. Fannie Mae and Freddie Mac should make public the number of purchases by seller institution especially since both GSEs have criticized HMDA coverage. HUD already makes this information available for FHA loans and the GSE data would provide a useful benchmark for conventional loans.

We conclude that HMDA coverage of the conventional market is lower than its coverage of GSE loans even after adjusting for those lenders that fail to report correctly the “Type of Purchaser” field. We base this conclusion on comparisons of HMDA data with Survey of Mortgage Lending data. We expect HMDA coverage of FHA loans to be higher than its coverage of the conventional market because FHA loans are more likely to be originated by mortgage companies that must report to HMDA if they originate at least 100 loans in metropolitan areas.<sup>35</sup>

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<sup>35</sup> HUD requires independent mortgage companies to report their FHA loans to HMDA regardless of their HMDA reporting requirements. Most of these lenders must report to HUD anyway because of the 100 loan requirement.



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