The 2006 HMDA Data

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Since 1975, the Home Mortgage Disclosure Act (HMDA) has required public disclosures from most mortgage lending institutions with offices in metropolitan areas. The release of the information, including the geographic location and other characteristics of the home mortgages lenders originate or purchase during a calendar year, is intended to help the public determine whether institutions are adequately serving their communities' housing finance needs; it is also intended to facilitate enforcement of the nation's fair lending laws and guide public- and private-sector investment activities.

For a calendar year, lenders covered by HMDA publicly release their loan data beginning on March 31 of the subsequent year; in the following September, the Federal Financial Institutions Examination Council (FFIEC) releases summary tables pertaining to each lender and lending activity in each metropolitan statistical area, along with a file consolidating virtually all the reported information.[1] The nearly 8,900 lenders currently covered by the law account for an estimated 80 percent of all home lending nationwide. Because of its expansive coverage, the HMDA data likely provide a broadly representative picture of home lending in the United States.

Note: The authors would like to express their appreciation for the late Edward M. Gramlich, member of the Federal Reserve Board from November 1997 to August 2005. His vision and persistence in seeking what became the 2002 amendments to the Board's HMDA regulations yielded the loan pricing information that has so enriched the value of the HMDA data.

[1] Between March and September, the FFIEC member agencies systematically check the data for errors or omissions. To protect the identity of borrowers, the public data exclude the dates of loan applications and the dates of credit decisions.

After briefly summarizing previously published assessments of the 2004 and 2005 HMDA data and reviewing some prominent issues surrounding pricing in the mortgage market, this article analyzes the 2006 data.[2] As in the analyses of the previous two years, this review focuses primarily on the pricing information included in the HMDA data and differences observed across lending institutions, geographic areas, and population groups. The article concludes with an assessment of factors that account for the variation in rates of serious delinquency on mortgage loans across counties as of March 31, 2007, including information drawn from the HMDA data on the incidence of higher-priced lending and from a data file of credit scores by geographic area.

Increases in market interest rates over the course of 2004 and 2005 were an important contributor to the substantial increase between those years in the reported incidence of higher-priced lending as measured by the HMDA data. For the 2006 data, changes in market interest rates were more subdued, an aspect of the reported incidence of higher-priced lending for 2006 that will be discussed below. The current disturbances in the subprime sector of the mortgage market emerged primarily in the later portions of 2006. The effects of those disturbances and the associated changes in the regulatory environment will be reflected primarily in the HMDA data for 2007 and subsequent years.

At the outset, HMDA disclosures were limited to summary totals covering loan extensions by type of loan for each census tract but included no information on loan pricing or applications for loans that were denied by the lender. Over the years, the Congress has extended the reach of the law to a broader range of institutions and expanded the types of information that must be reported and disclosed. The most sweeping of the legislative

[2] Refer to Robert B. Avery, Glenn B. Canner, and Robert E. Cook (2005), "New Information Reported under HMDA and Its Application in Fair Lending Enforcement," *Federal Reserve Bulletin*, vol. 91 (Summer), pp. 344-94; and Robert B. Avery, Kenneth P. Brevoort, and Glenn B. Canner (2006), "Higher-Priced Home Lending and the 2005 HMDA Data," *Federal Reserve Bulletin*, vol. 92 (September 8), pp. A123-66.

amendments to HMDA, adopted in 1989, required disclosure of the disposition of applications for home loans and the income, sex, and race or ethnicity of the individuals applying for those loans.

That new information prompted widespread public discussion about the fairness of mortgage lending decisions, as analyses of the disclosures revealed wide disparities in the rates of approval of loan applications across racial and ethnic lines.[3] Since the 1989 amendments, the HMDA data have formed a basis of public scrutiny of mortgage lending with regard to fairness and have become an important aspect of fair lending enforcement.

In response to significant changes in the mortgage market during the 1990s, particularly the emergence and growth of subprime lending, the Federal Reserve Board in 2002 revised its Regulation C, which implements HMDA (for details, refer to the appendix).[4] The revision substantially increased the type and amount of public information available about home lending in HMDA reports, beginning with data for 2004. The most important change was the requirement that lenders identify and disclose information about mortgages with annual percentage rates (APRs, which encompass interest rates and fees) above designated thresholds, mortgages referred to here as "higher-priced loans."[5] Other new disclosures included lien status (whether a loan is a first lien, a junior lien, or unsecured home improvement loan) and whether a loan is secured by a manufactured home or is subject to the protections of the Home Ownership and Equity Protection Act of 1994 (HOEPA).

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[3] For example, John Goering and Ron Wienk, eds. (1996), *Mortgage Lending, Racial Discrimination, and Federal Policy* (Washington: Urban Institute Press).

[4] Home Mortgage Disclosure Act (12 U.S.C. §§ 2801-11), Regulation C (12 C.F.R. pt. 203), and the staff commentary accompanying Regulation C (12 C.F.R. pt. 203, Supp. I).

[5] For loans with spreads above designated thresholds, revised Regulation C requires the reporting of the spread between the APR on a loan and the rate on Treasury securities of comparable maturity. The thresholds for reporting differ by lien status: 3 percentage points for first liens and 5 percentage points for junior, or subordinate, liens. Further details are in note 12, p. A126, of Avery, Brevoort, and Canner, "Higher-Priced Home Lending and the 2005 HMDA Data."

HIGHLIGHTS OF THE 2004 AND 2005 DATA

For both the 2004 and 2005 HMDA data, nearly 80 percent of the reporting institutions were depositories (commercial banks, savings associations, or credit unions); independent mortgage companies or mortgage companies affiliated with banking institutions or their holding companies accounted for the rest. Although mortgage companies represented only 22 percent of the reporting institutions, they submitted information on more than 60 percent of all the reported loans and applications.

Most lenders reported relatively little home lending. The most active lenders (those providing information on 5,000 or more loans or applications) accounted for about 5 percent of the reporting institutions and nearly 90 percent of all the reported loans and applications.

A comparison of the HMDA data for 2004 and 2005 with those from earlier years documented a number of trends, including a growing share of lending to non-owner-occupants, the growth of "piggyback" lending (homebuyers simultaneously obtaining a first lien and a junior lien loan to finance the purchase of a home), and a substantial decline in the share of all lending insured by the Federal Housing Administration (FHA).

Because of its importance, the new information on loan pricing was the focus of much of the analyses of the 2004 and 2005 data. The reviews found that the incidence of higher-priced lending increased substantially from about 16 percent of all loans in 2004 to 26 percent in 2005. The substantial narrowing of the difference between short- and long-term interest rates in 2005 explained part of the increase in the share of reported loans that exceeded the pricing thresholds established by Regulation C.[6] Estimates suggested that the

[6] For additional research on the possible reasons for the increase in reported higher-priced lending from 2004 to 2005, refer to Michael LaCour-Little (2007), "Economic Factors Affecting Home Mortgage Disclosure Act Reporting," paper prepared for the American Real Estate and Urban Economics Association Mid-Year Meeting, Washington, May 29-30. The study finds that, after controlling for the mix of loan types, for credit-risk factors, and for changes in the relationship between short- and long-term interest rates, there was no

changes in interest rates accounted for about 15 percent of the increase in reported higher-priced lending for conventional *fixed-rate* home-purchase loans and about 20 percent of the increase for similar loans for refinancings. Another portion of the increase in higher-priced lending was attributable to the effects of the narrowing spread between short- and long-term interest rates on *adjustable-rate* lending, but available data limited the ability to quantify this effect. Besides changes in market interest rates, other factors—changes in borrower credit-risk profiles and changes in lender business practices such as an increased willingness to accept higher-risk borrowers—may also have led to increased higher-priced lending from 2004 to 2005; but again, quantifying the influences was impeded by data limitations.

Analysis of the 2004 and 2005 pricing information also found that the incidence of higher-priced lending varied substantially by geography, by loan characteristic, and across borrower groups. The incidence of higher-priced lending was found to be elevated for borrowers residing in census tracts characterized by larger proportions of individuals with lower credit scores and lower high-school graduation rates; and in census tracts with larger proportions of lower-income households, minority households, and shares of loan applicants that were denied credit.[7] The incidence of higher-priced lending was also elevated for smaller-size loans or piggyback loans, for loans made by depository institutions outside their local communities, and for independent mortgage companies regardless of location.

Results of an analysis along racial and ethnic lines were consistent with the results by geography: Blacks and Hispanic whites were more likely, and Asians somewhat less likely, to have received higher-priced loans than non-Hispanic whites. Information included in the HMDA data on characteristics of borrowers and loans—such as income, amount borrowed,

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statistically significant increase in the volume of higher-priced lending for loans originated directly by lenders, but there was an increase for such loans originated through indirect channels.

[7] The term "minority" as used in this article refers to any racial or ethnic identity other than non-Hispanic white.

and property location—do not account fully for the variation in loan pricing across geographies and groups. However, many factors routinely used by lenders to underwrite and price loans—including loan-to-value (LTV) ratios and measures of borrower credit history (for example, a credit history score)—are not included in the HMDA data and, consequently, cannot be included in an analysis of pricing differences that relies on the HMDA data alone.

The expanded HMDA data have both raised concerns about the fairness of the lending process and created new avenues for lenders, regulators, and the public to address fairness. Lenders are responsible for ensuring compliance with fair lending laws, and the HMDA data can both encourage and facilitate the improvement of their compliance efforts. Likewise, the regulatory agencies have been using the expanded data in their fair lending enforcement activities. The expanded data also increase transparency in the marketplace by identifying lenders active in the higher-priced segment of the market and by allowing a wide variety of analyses that more fully describe higher-priced lending.

LOAN PRICING IN THE MORTGAGE MARKET

Mortgage markets have changed greatly over the years. Historically, mortgage lenders offered consumers a relatively limited array of loan products. The prices (interest rates, points, and fees) at which they offered their loans varied mainly by

- loan type—for example, conventional or government-backed
- loan characteristic—including amount borrowed, term to maturity, and LTV ratio
- type of structure securing the loan—traditional “site built” home, factory-manufactured unit, or multifamily units
- ownership status—owner occupied or non-owner occupied

The prices did not, however, vary to any great degree by the creditworthiness of the borrower; effectively, borrowers either did or did not meet the underwriting criteria for a particular loan product, and the borrowers who met the criteria all paid about the same price.

In the past quarter century, advances in technology, improvements in access to the credit histories of individuals, and the emergence of a robust secondary market for loans over the full spectrum of credit risks have helped spur remarkable changes in the mortgage market. The most prominent of those developments has been the explicit risk-based pricing of credit. Over this period, more so than in the past, differences in the creditworthiness of different borrowers lead to different prices for the same product.[8] Less creditworthy applicants, or those either unwilling or unable to document their creditworthiness or income, found it increasingly less likely that they would be turned down for a loan; rather, they were offered credit but at higher prices.

Explicit risk-based pricing has expanded opportunities for homeownership and allowed individuals, including those who otherwise have little access to credit, to more readily purchase homes or borrow against the equity they have accumulated in their homes. Recent developments in mortgage markets have caused some lenders to tighten underwriting and charge higher prices to compensate for perceived risk. However, risk-based pricing continues to be a feature of the mortgage market. Although risk-based pricing has broadened opportunities for many consumers, it has been accompanied by growing concerns some of which are noted below.

[8] Refer, for example, to Souphala Chomsisengphet and Anthony Pennington-Cross (2006), "The Evolution of the Subprime Mortgage Market," Federal Reserve Bank of St. Louis, *Review*, vol. 88 (January/February), pp. 31-56.

Segments of the Market

Broadly, borrowers in the higher-priced mortgage market generally fall into one of two "nonprime" market segments: "subprime" and "near prime." Individuals in the subprime category pay the highest prices because they are considered to pose the greatest risk of default or prepayment.[9] Such borrowers may also impose higher costs of origination as it can be more difficult and time consuming to assess their credit profiles. Borrowers in the prime market pay the lowest prices for loans and near-prime borrowers pay rates between those paid by subprime and prime borrowers. In practice, the dividing line between subprime and near prime is somewhat amorphous, as is the line between the prime and nonprime markets. The distinctions between all these market segments change over time as market interest rates move, as lenders' appetite for interest rate, prepayment, or credit risk changes, and as the ability to price risk more exactly is changed.

Industry sources provide some data on the relative sizes of these market segments. For example, in 2006 about 20 percent of mortgages were subprime, and about 13 percent were near prime (often referred to as alt-A).[10]

Nontraditional Loan Products

Sharp increases in home values in many areas of the country over the first half of this decade, along with competitive pressures to innovate, moved lenders to develop loan products that were intended to hold down required monthly payments, at least for the first few years of the loan. These products, such as interest-only loans, adjustable-rate loans with discounted ("teaser") initial rates, and payment option loans, increase the affordability of home

[9] Prepayment penalties are a common feature of loans in the subprime market and are intended to address the elevated risk of prepayment.

[10] Inside Mortgage Finance (2007), *The 2007 Mortgage Market Statistical Annual*, vol. 1: *The Primary Market* (Bethesda, Md.: Inside Mortgage Finance Publications).

purchases and mortgage refinancings, at least in the short term. However, these loan products sometimes are accompanied by minimal down payments (or a piggyback loan), and the limited or zero repayment of principal in the amortization schedule of many of these loan products means that mortgage payments generate little or no additional equity in the first few years. These loans also generally involve an increase in monthly payments at some point later in the life of the loan. Recently, however, there is some evidence that these so-called nontraditional loan products have elevated incidence of default and foreclosure, particularly when extended in combination with other indicators of elevated credit risk, such as a low credit score or no documentation of income. They have also drawn considerable attention from regulatory authorities, which have provided guidance to banking institutions on the risks posed by such loan products and the importance of providing clear disclosure of the terms and conditions of such loans.[11]

The Role of Brokers

Another notable development in the mortgage market has been the emergence of brokers as the intermediary through which the majority of individuals now obtain a mortgage.[12] Historically, prospective borrowers visited an office of a local banking institution to apply for a loan. Today, mortgage brokers, often working as independent entities, take loan applications on behalf of a banking institution or other mortgage lender and often provide the only direct contact with the borrower until closing, when the loan documents are signed and

[11] For example, on September 29, 2006, the federal financial regulatory agencies (Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, National Credit Union Administration, Office of the Comptroller of the Currency, and Office of Thrift Supervision) issued the press release "Interagency Guidance on Nontraditional Mortgage Product Risks," www.federalreserve.gov/boarddocs/press/bcreg/2006/20060929/default.htm.

[12] Industry sources indicate that mortgage brokers initiated 58 percent of the mortgage originations in 2006, down somewhat from 63 percent in 2005 (Lew Sichelman, 2007, "Broker Market Share Down to 58%," *National Mortgage News*, July 9, p. 1).

the mortgage is issued. Mortgage brokers play an important role in pricing the loan, and frequently the compensation they receive is based, in whole or in part, on the interest rate and fees paid by the consumer.

The central role played by brokers in the lending process has gained increased attention in the past year or so as delinquencies, defaults, and foreclosures have increased, particularly in the subprime portion of the mortgage market. A number of facets of their role have drawn increased scrutiny, including whether they provide consumers sufficient information to make sound choices in selecting a mortgage product and whether fraud has sometimes been involved in the broker's characterization of the borrower's creditworthiness or in the appraisal of the home being purchased. Also, brokers and, many times, the lenders originating the loan do not bear the credit risk of the loans they sell but share in the profits from originating the loan. This means that the broker or other originating party may not have the incentive to fully pass along to the loan purchasers all relevant information needed to monitor adequately the accuracy and completeness of the information used to underwrite and price the loan.[13]

Concerns about Loan Pricing

As price flexibility has emerged in the mortgage market, so have concerns about the fairness of pricing outcomes. Such concerns generally fall into four broad categories. First are concerns about possible discrimination based on the race or ethnicity of the borrower. Such concerns are heightened because loan prices are not always determined strictly on the basis of credit risk or cost factors but can involve elements of discretion, in which loan officers or

[13] In some cases, brokers and loan originators may be subject to forced repurchase of a loan that was sold if it performs poorly soon after loan origination, or if representations and warranties were violated; but in practice, brokers and some of the firms they sometimes work with have limited capacity to fund a repurchase.

loan brokers may seek prices that differ from those on rate sheets or other techniques used by lenders to establish baseline prices.

Second are concerns about whether borrowers in the higher-priced segment of the loan market are sufficiently informed and whether they are willing or able to shop effectively for the loan terms most appropriate to their circumstances. For example, it may be difficult for borrowers to determine where they fit along the credit-risk spectrum. Also, some borrowers may fail to shop or negotiate for the best available rates and terms because they need funds immediately; such borrowers tend to focus primarily on the amount they can borrow and the size of the monthly payment. Such borrowers may not fully appreciate the potential longer-run consequences of certain loan terms such as prepayment penalties, adjustable interest rates, negative amortization, and balloon payments. Such borrowers may be more easily exploited by loan officers or brokers. Also, such borrowers may be susceptible to aggressive marketing tactics that may confuse borrowers about the cost and terms of loans.

Third, concerns have been raised about whether competition is adequate to ensure that borrowers in the higher-priced segment of the loan market have access to the full range of credit opportunities. Some believe that prime-market lenders are not present or do not offer or promote their prime products sufficiently in certain geographic markets, including neighborhoods that have larger minority populations. In this view, reduced access to prime lenders and their products limits the opportunities for borrowers in affected communities to access lower-priced loans.

Finally, the elevated default and foreclosure rates currently experienced in the higher-priced portion of the loan market have raised concerns about the sustainability of homeownership, the adverse effects on neighborhoods with higher concentrations of these

loans, and the hardship on borrowers who are losing their homes. Recognizing these concerns the federal and state financial institution regulatory agencies have encouraged lenders and servicers of loans to work with mortgage borrowers facing financial difficulties.[14]

These various concerns about the functioning of the mortgage market raise important public policy issues that are beyond the scope of this article. Nonetheless, the expanded HMDA data provide information that has proven useful in understanding and addressing many of these issues.

GENERAL FINDINGS FROM THE 2006 HMDA DATA

For 2006, lenders covered by HMDA reported information on 27.5 million applications for home loans. Almost all the applications were for loans to be secured by one- to four-family (so-called single-family) houses, as follows: 10.9 million applications to purchase a home, 2.5 million to make home improvements, and 14.0 million to refinance an existing home loan. The balance (about 0.1 million) was for loans secured by multifamily dwellings—those for five or more families (table 1 [tables appear after main text]). These applications resulted in nearly 14 million loan extensions. Lenders also reported information on 6.2 million loans they purchased from other institutions and on 411,000 requests for pre-approvals of home-purchase loans; the pre-approval requests either were turned down by the lender at the time

[14] On April 17, 2007, the federal financial regulatory agencies issued guidance to encourage supervised institutions to work constructively with homeowners who are financially unable to continue meeting their mortgage payments (www.federalreserve.gov/boarddocs/srletters/2007/SR0706). On September 4, 2007, the federal financial regulatory agencies and the Conference of State Bank Supervisors (CSBS) issued a statement encouraging federally regulated financial institutions and state-supervised entities that service securitized residential mortgages to determine the full extent of their authority under pooling and servicing agreements to identify borrowers at risk of default and pursue appropriate loss mitigation strategies designed to preserve homeownership ("Federal Financial Regulatory Agencies and CSBS Issue Statement on Loss Mitigation Strategies for Servicers of Residential Mortgages," www.federalreserve.gov/newsevents/press/bcreg/20070904a.htm).

the pre-approval was sought or (not shown in table) were granted but not acted on by the applicant.

The total number of reported applications and purchased loans fell 2.3 million, or 6 percent, from 2005; most of the decline was for refinancings. The number of applications for loans to refinance an existing loan fell 1.9 million, or about 12 percent; the number declined most likely because short-term interest rates increased from the end of 2005 through much of 2006 and thereby reduced the number of existing loans that could be refinanced at a lower rate. Slower house-price appreciation and, in some areas, outright declines in property values also likely diminished the attractiveness of refinancing or the borrower's ability to refinance.

For 2006, HMDA reporting requirements covered 8,886 institutions—including 3,900 commercial banks, 946 savings institutions, 2,036 credit unions, and 2,004 mortgage companies (table 2). Of the mortgage companies, two-thirds were independent entities—that is, they were neither subsidiaries of depository institutions nor affiliates of bank holding companies (data derived from table). The total number of reporting institutions was about the same as that in 2005, as was the distribution of reporters by type of institution.

Activity and Size of Lender

As in earlier years, most of the institutions reporting HMDA data are small regardless of whether they are measured by asset size or by some indicator of lending activity such as the number of reported applications or loans (table 3). For 2006, 60 percent of the reporting institutions, each of which provided information on fewer than 250 loans or applications, accounted for just 1.7 percent of all the reported data. At the other extreme, 5 percent of reporting institutions, each of which provided information on 5,000 or more loans or applications, accounted for 87 percent of all the reported data.

Many HMDA reporters are affiliated with each other. If individual HMDA reporters are aggregated to their highest level of corporate organization (such as a bank or thrift institution holding company), the concentration of mortgage lending nationwide is evident. The twenty-five organizations reporting the largest number of applications and loans accounted for 54 percent of the 2006 data, roughly the same proportions as in the 2004 and 2005 HMDA data (data not shown in tables).

Disposition of Applications, Loan Types, and HOEPA-Related Activities

For purposes of analysis, loan applications and loans can be grouped in many ways; here the analysis focuses on twenty-five distinct product categories characterized by loan and property type, purpose of the loan, and lien and owner-occupancy status. Each product category contains information on the number of total and pre-approval applications, application denials, originated loans, loans with prices above the thresholds, loans covered by the HOEPA, and the mean and median APR spreads for loans priced above the designated reporting thresholds (tables 4 and 5).[15]

Disposition of Applications

HMDA data are the only publicly available source of information on the disposition of individual applications for home loans. The data include information on the race, ethnicity, and sex of applicants as well as the type and purpose of the loan and the location of the property, so the disposition of applications can be assessed along many dimensions.

[15] Transition rules governing the reporting of the expanded HMDA data created problems for assessing the data on loan pricing, manufactured-home lending, and pre-approvals. The transition rules had a large influence on the data reported for 2004 and a much smaller effect on the 2005 data. In the 2006 data, transition rules affected only about 6,000 applications and 1,100 loans; the analysis here excludes those applications and loans for analyses that pertain to pricing, manufactured-home lending, and pre-approvals.

The HMDA data for 2006, like those from earlier years, indicate that lenders approve most of the applications they receive, although the proportion approved or denied varies by loan purpose, type of loan and property, and lien status. In general, denial rates are higher for refinancings and for home-improvement loans than for home-purchase loans, perhaps because of the prequalification and financial counseling activities that many prospective borrowers go through before purchasing a home (table 4). Denial rates are lower for government-backed loans than for conventional loans but are especially high for loans to purchase manufactured homes. Overall, the denial rate for all home loans in 2006 was 29 percent, compared with 27 percent in 2005.

Conventional and Government-Backed Loans

Consistent with earlier years, most reported home loan activity in 2006 involved conventional loans—that is, non-government-backed loans (table 4). Such loans accounted for about 95 percent of all loan extensions in 2006. FHA-insured loans accounted for about three-fourths of the government-backed loans, and most of the rest involved guarantees by the Department of Veterans Affairs (VA) (data not shown in tables). The share of all HMDA-reported loans backed by the FHA has fallen over the past several years, from about 16 percent in 2000 to less than 3 percent in 2005 and 2006 (data not shown in tables). (The FHA share of first-lien home-purchase loans has also been trending down and in 2006 was about 5 percent.) The development of a wide range of conventional loan products in recent years, including many nontraditional products involving more-flexible and quicker underwriting, has attracted borrowers who, in the past, might have sought FHA backing. Among the newer conventional loan products are those intended to serve borrowers seeking to minimize their down payment or initial monthly payments and those who are unable or

unwilling to document their incomes. Also, in some areas of the country, high home prices have diminished the attractiveness of the FHA program, as increases in the maximum loan value that the FHA will insure have failed keep pace with increases in local home values.

For each loan made, the HMDA data show the amount borrowed and the incomes of the borrowers. The analysis that follows immediately considers four loan categories: (1) conventional loans that met the threshold for reporting as higher-priced loans under HMDA, (2) all other conventional loans, (3) FHA-insured loans, and (4) VA-guaranteed loans. The analysis is limited to site-built, owner-occupied, one- to four-family units, and the four categories are applied separately to home-purchase loans and refinancings.

As noted, distinguishing higher-priced loans from others is one way to differentiate lending activity. A second approach is to distinguish loans that fall within the size limits set for loans that Fannie Mae and Freddie Mac are permitted to purchase (conforming loans) and those above those limits (nonconforming, or jumbo). Fannie Mae and Freddie Mac are government-sponsored enterprises that focus on conventional loans that meet certain size limits and other underwriting criteria. Fannie Mae and Freddie Mac hold some of their purchased loans in their own portfolios, but they convert most of them into securities, which they sell to investors. For 2006 the conforming loan size limit was $417,000 for a single-unit property, with limits 50 percent higher for such properties in Alaska and Hawaii. The conforming loan limits are higher for structures accommodating two, three, or four families; however, the HMDA data do not distinguish among properties with fewer than four units, so the discussion here focuses on the $417,000 limit.[16]

For 2006, about 90 percent of conventional loans for purchase and likewise for refinancing, whether higher-priced or not, were within the conforming loan limit (table 6).

[16] For all the 2006 limits, refer to Fannie Mae (2005), "Fannie Mae Announces 2006 Conforming Loan Limit of $417,000," press release, Nov. 29, www.fanniemae.com/newsreleases/2005/3649.jhtml.

Higher-priced loans tended to be somewhat smaller than others; for example, among conventional home-purchase loans, the mean size of higher-priced mortgages was $209,000, compared with $246,000 for others (table 6, memo item).

By their nature, FHA-insured loans tend to be considerably smaller than conventional loans; the difference reflects the relatively low insurance limits of the FHA and the focus of the program on lower- and middle-income borrowers. For 2006, the mean size of FHA-insured home-purchase loans was $133,000, and nearly half of such loans were for less than $125,000, whereas only about one-fourth of the conventional loans were in that size range.

Borrower incomes differ substantially by loan product (table 7). Not surprisingly, the mean income of borrowers with conventional loans was about double that of borrowers with FHA-insured loans. Among those obtaining conventional home-purchase mortgages, the mean income of individuals with a conforming loan was $82,400, versus a mean income of $258,000 for those with a jumbo loan. And, again among borrowers using conventional loans, those using higher-priced loans either to purchase a home or to refinance had a mean income about 20 percent lower than borrowers not paying higher prices.

Non-Owner-Occupant Lending

Part of the strong performance of housing markets over the first half of this decade can be traced to the growth in sales of homes to investors or individuals purchasing second or vacation homes, units collectively described as “non-owner occupied.” HMDA data can document the role of investors and second-home buyers in the housing market because the data indicate whether the subject property is intended as the borrower’s principal dwelling (that is, as an owner-occupied unit).[17] A limitation on this type of analysis is that some

[17] An investment property is a non-owner-occupied dwelling that is intended to be continuously rented.

buyers do not use home mortgages to finance their purchase; rather, they pay cash for the properties or, in some instances, take out commercial loans. After declining in the early 1990s, the share of non-owner-occupant lending among first-lien loans to purchase one- to four-family site-built homes began rising in 1994, and it has risen in every year between 1996 (when it was 6.4 percent) and 2005, when it reached 17.3 percent (table 8). For 2006, the share fell somewhat, to 16.5 percent. Further, in line with the experience for home-purchase loans to owner-occupants, the number of conventional first-lien loans to purchase homes by non-owner-occupants fell about 17 percent from 2005.

Piggyback Lending

Many first-time homebuyers have relatively limited assets and thus cannot qualify for other than a mortgage with a high LTV ratio. Other borrowers have the financial capacity to make a large down payment but prefer not to do so. Lenders and secondary-market purchasers often require loans with high LTV ratios to be protected with private mortgage insurance (PMI), carried at the expense of the borrower, to indemnify them, at least in part, against the elevated risk of default on such loans.

In recent years, so-called piggyback loans have emerged as an alternative to PMI.[18] In piggyback lending, borrowers simultaneously receive a first mortgage and a junior-lien (piggyback) loan. The piggyback loan finances the portion of the purchase price not being financed by the first mortgage and sometimes any cash payment that might have been made; the junior loan may amount to as much as 20 percent of the purchase price. Some borrowers

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Non-owner-occupied units—vacation homes and second homes—that are for the primary use of the owner are not considered investment properties. The HMDA data do not, however, distinguish between these two types of non-owner-occupied dwellings.

[18] Some individuals take out piggyback loans so that the first-lien mortgage can meet the conforming loan size limits.

have chosen a piggyback loan instead of a loan backed by PMI in part because, until recently, borrower payments for PMI could not be itemized for federal income tax purposes, whereas the interest paid on piggyback loans could be. Also, without the piggyback loan, some home purchases might not have been possible because the underwriting standards applied by PMI companies may have been more conservative than those used by the lender providing the piggyback loan.

The expanded HMDA data document substantial growth in piggyback lending since 2004 and, together with data reported by PMI companies, suggest that such lending played an important role in home sales over the past few years.[19] In 2006, lenders covered by HMDA reported on 1.43 million junior-lien loans to purchase homes, almost all conventional loans and a number about 4 percent greater than in 2005 (data not shown in tables). About 22 percent of the 2006 first-lien home-purchase loans on owner-occupied site-built homes for one to four families involved a piggyback loan as identified here, a proportion that was unchanged from 2005 data. The overall increase in the number of reported junior-lien loans taken out to finance a home purchase from 2005 to 2006 is notable because the number of reported conventional first-lien home-purchase loans fell nearly 12 percent from 2005 to 2006. Further, in 2006 piggyback lending apparently continued to gain market share at the expense of PMI, as the number of home-purchase loans backed by PMI declined about 6 percent from 2005 to 2006.[20]

[19] Piggyback loans are not identified explicitly in the HMDA data. However, by matching junior-lien home-purchase loans with first-lien home-purchase loans extended at the same time to borrowers with the same characteristics and census tract location, an estimate of the incidence of piggyback loans, at least for those originated by the same lender, can be derived. About 85 percent of junior-lien loans reported in the HMDA data can be matched in this manner.

[20] Refer to the annual PMI data published by the FFIEC at www.ffiec.gov.

Manufactured Home Lending

Manufactured homes, which often sell for less than site-built homes, are an important option for many homebuyers.[21] However, the credit risks associated with manufactured-home lending also tend to be higher than for site-built homes, and consequently, loans backed by manufactured units carry relatively high interest rates.

Beginning with the 2004 data, HMDA has required lenders to include a code to identify applications and loans involving manufactured homes.[22] The 2006 data indicate that 4,477 lenders extended about 256,000 manufactured-home loans, a loan volume little changed from 2005 (data not shown in tables). Despite the large number of lenders extending at least one mortgage for a manufactured home, such lending is relatively concentrated: 83 percent of the reported manufactured home loans were reported by just ten lenders. About three-fifths of reported manufactured-home loans were used to purchase homes and a relatively large portion of those mortgages were FHA-insured (18 percent, versus about 5 percent on the purchase of site-built homes).

Delinquency rates on manufactured homes tend to be higher than for other types of home loans, and the resulting lender caution is reflected in very high denial rates for home-purchase applications on such properties (table 4). (The elevated credit risk also is reflected in elevated loan prices, discussed below.) Because the use of manufactured homes varies greatly across populations and geographies, analyses of denial-rate differences across groups should differentiate between site-built and manufactured housing.

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[21] Unlike site-built homes, manufactured homes are generally assembled in factories and shipped to a home site.

[22] In the years preceding 2004, the Department of Housing and Urban Development (HUD) helped users of the HMDA data identify, albeit imperfectly, applications and loans related to manufactured homes by producing each year a list of reporting institutions (typically about twenty) that it believed were primarily in the business of extending such credit. Refer to www.huduser.org/datasets/manu.html.

Loans Covered by HOEPA

Under the Home Ownership Equity Protection Act of 1994 (HOEPA), certain types of mortgage loans that have rates or fees above specified levels require additional disclosures to consumers and are subject to certain restrictions on loan terms.[23] Under the 2002 revisions to Regulation C, the expanded HMDA data include a code to identify whether a loan is subject to the protections of HOEPA.

Coverage under HOEPA is determined by a two-part test that considers both the APR and the dollar amount of points and fees. The APR portion of the coverage test is similar to that used to determine which loans are higher priced under HMDA. In the case of HMDA, however, identifying higher-priced loans requires using the Treasury security of comparable maturity for the fifteenth day of the month preceding *the date on which the loan rate was set*. For HOEPA, the APR portion of the coverage test requires using the Treasury security of comparable maturity for the fifteenth day of the month preceding *the month in which the application was received*. Another difference is that the APR spreads for determining HOEPA coverage are higher than for determining which loans must be reported as higher-priced under HMDA. HOEPA coverage is based on spreads that exceed 8 percent and 10 percent for first- and junior-lien loans, respectively, versus minimum spreads of 3 percent and 5 percent, respectively, in HMDA higher-priced loans.

Before the release of the 2004 data, little information was publicly available about the extent of HOEPA-related lending or the number or type of institutions involved in that activity. Although the expanded HMDA data provide important new information, the data fail to capture all HOEPA-related lending. Some HOEPA loans are extended by institutions not covered by HMDA, and some HOEPA loans made by HMDA-covered institutions are

[23] HOEPA is implemented by the Federal Reserve Board's Regulation Z (www.federalreserve.gov/regulations/default.htm).

not reported under Regulation C, which implements HMDA. Most notably, if the proceeds of a home-secured loan are not used to refinance an existing home loan or to finance home improvements, then the loan may be covered by HOEPA but is not reportable under Regulation C. The extent of HOEPA-related lending not reported under HMDA is unknown.

For 2006, roughly 1,200 lenders reported extending about 15,200 loans covered by HOEPA (table 4). Only 17 lenders made 100 or more HOEPA loans, and most lenders did not report any such loans (data not shown in tables). A majority of the HOEPA loans involved a refinancing, and about two-thirds of these were first-lien loans. In the aggregate, HOEPA-related lending accounts for a very small proportion of the loan market: HOEPA loans accounted for less than 0.1 percent of all the originations of home-secured refinancings and home-improvement loans reported for 2006 (data derived from table 4).

THE 2006 HMDA DATA ON LOAN PRICING

The sections that follow analyze the loan-pricing information in the 2006 HMDA data by lender, loan product, geography, and characteristics of borrowers and their neighborhoods.

Incidence of Higher-Priced Lending

As in 2004 and 2005, most loans reported in 2006 were not higher-priced as defined under Regulation C. Among all the HMDA reported loans, 28.7 percent were higher-priced in 2006, up from 26.2 percent in 2005 (table 4). Later sections of this article focus on the changes in the incidence of higher-priced lending from 2005 to 2006; this section focuses on 2006 pricing patterns across loan products.

The incidence of higher-priced lending differs by loan product (table 4). For example,

- Loans backed by the government—either insured by the FHA or guaranteed by VA—have a much lower incidence of higher-priced lending than do conventional loans used for the same purpose.
- First-lien home-purchase loans have a lower incidence of higher-priced lending than do junior-lien loans used for that purpose.
- Manufactured-home loans exhibit the greatest incidence of higher pricing regardless of purpose.
- First-lien home-purchase loans extended to non-owner occupants have a higher incidence of higher-priced lending than do comparable loans to owner occupants.

Rate Spreads for Higher-Priced Lending

Variation in APR spreads between home-purchase loans and loans used in refinancings is much smaller than the variations in incidence noted above. For example, for higher-priced conventional first-lien loans for an owner-occupied site-built home, the mean APR spreads were about 5 percentage points above the yields on comparable treasuries both for purchase loans and refinancings (table 4). A similar pattern is found for conventional junior-lien loans: They show a mean spread of about 7 percentage points whether used for home purchase or refinancing.

As noted, loans backed by manufactured homes are substantially more likely to be higher-priced than loans backed by site-built properties. However, for each of those two products, the mean spreads paid by those with higher-priced loans are roughly the same whether the loan is for home purchase or refinancing.

As in 2004 and 2005, only a relatively small proportion (about 10 percent) of first-lien loans have very large spreads—7 percentage points or more. Similarly, only a relatively small proportion of junior-lien loans have spreads of 9 percentage points or more.

Lenders and Higher-Priced Lending

The concentration of higher-priced lending among institutions covered by HMDA fell somewhat in 2006, although it remains fairly high. About 5,000 of the nearly 8,900 lenders covered by HMDA in 2006 reported extending fewer than 10 higher-priced loans (data not shown in tables). At the other end of the spectrum, the roughly 1,250 lenders that reported making at least 100 higher-priced loans in 2006 accounted for 97 percent of all such loans. The share of such lending attributable to the 10 lenders with the largest volume of higher-priced loans dropped from 59 percent in 2005 to 35 percent in 2006.

Another aspect of concentration is the extent to which institutions that extend higher-price loans may be considered to be "specialists" in that activity, that is, to have a large proportion of their lending in the higher-priced category. Such specialized institutions can have a business orientation that is quite different from that of other lenders.[24] Taking 60 percent of loans as a benchmark for defining higher-priced specialists, about 25 percent of the roughly 1,250 lenders reporting at least 100 higher-priced loans, or about 4 percent of *all* reporting institutions, were specialists. The HMDA data on pricing can only approximately indicate the extent to which a lender specializes in *subprime* loans because some prime loans are higher-priced, and some subprime loans are not.

Higher-priced lending activity may also be described by type of lender. Four groupings are provided here—depository institutions and three types of mortgage company,

[24] For example, specialists in higher-priced lending may use different marketing practices and may rely quite heavily on the ability to sell loans to secondary-market purchasers.

namely, independents, direct subsidiaries of depository institutions, and affiliates of depository institutions. Regarding conventional first-lien loans for site-built homes in both 2004 and 2005, independent mortgage companies originated about 50 percent of the higher-priced loans and about 30 percent of all such loans; in contrast, depository institutions originated about 25 percent of the higher-priced loans and about 45 percent of all such loans (table 9).

The overall market shares across the four categories of lender are virtually unchanged from 2005 to 2006. However, there are changes in market shares of higher-priced lending across groups of lenders. Depository institutions have increased their share of the higher-priced loan market while the market share of independent mortgage companies has fallen by about the same number of percentage points. Notably, the incidence of higher-priced lending for independent mortgage companies is unchanged from 2005, which suggests that the increase in market share for depositories is not caused by independent mortgage companies abandoning that segment of the market.

The recent turmoil in the subprime sector has caused a number of lenders, primarily independent mortgage companies, to cease operations, curtail their activities, or transfer or sell their business to others. As a consequence, the 2007 HMDA data may reveal a notable change in the sources of higher-priced lending, likely with a diminished share coming from independent mortgage companies.

Factors that Influence Higher-Priced Lending

As described in our assessment of the 2005 data, three basic factors may cause the share of lending that is reported under HMDA as higher-priced to change from year to year: (1) changes in the interest rate environment, particularly increases in short-term interest rates; (2)

changes in the business practices of lenders, particularly in the products offered and the willingness or ability of lenders to bear credit risk; and (3) changes in the borrowing practices or credit-risk profiles of consumers. Among the borrowing practices at issue are the relative preference for adjustable-rate versus fixed-rate loans and for interest rate reduction versus cash-out equity when refinancing; a change in credit-risk profiles would include changes in the distribution of credit scores among borrowers, in the down payments they make, and their levels of monthly mortgage payment relative to income. Our previous analysis suggested that all three factors were likely responsible for the very large increase from 2004 to 2005 in the reported incidence of higher-priced lending. Quantifying the precise contribution of each of these factors to the change in higher-priced lending proved difficult, however, largely because of a lack of available information within the HMDA data.[25]

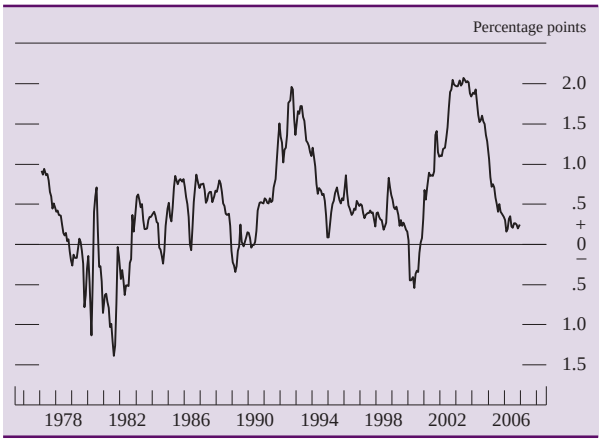
As noted, the incidence of higher-priced lending increased about 2.5 percentage points overall from 2005 to 2006. However, the incidence of higher-priced lending by loan product differed considerably over the two years. The most notable changes were increases in the incidence for conventional first-lien refinancings for owner-occupied properties, home-improvement lending, and lending to non-owner occupants.[26] The following sections analyze those increases in the incidence of higher-priced lending from 2005 to 2006 in terms of the three factors listed above.

[25] LaCour-Little, "Economic Factors Affecting Home Mortgage Disclosure Act Reporting."

[26] The increase from 2005 to 2006 in the incidence of higher-priced lending for home-purchase loans on non-owner-occupied properties was notable—from 20.3 percent to 28.6 percent. In contrast, the incidence for the purchase of owner-occupied properties increased only slightly over the period, from 24.6 percent to 25.3 percent.

The Changing Interest Rate Situation

1. Spread between interest rates on thirty-year and five-year Treasury bonds, 1977–2006



NOTE: The data are monthly. After March 2002, the spread is between twenty-year and five-year Treasury bonds.
SOURCE: Federal Financial Institutions Examination Council, "FFIEC Rate Spread Calculator," www.ffiec.gov/ratespread/default.aspx.

The yield curve shows the relationship between the yield on debt instruments and their term to maturity (figure 1, right; and box "The Yield Curve," next page). Changes in the relationship between long-term and short-term interest rates as reflected in the shape of the yield curve affect the reporting of higher-priced loans under HMDA. Most mortgages prepay in a relatively short period (typically well before the stated term of the loan is reached) because the individual moves and prepays the loan, or refinances, or defaults. Because mortgages tend to prepay before their stated maturity, lenders use relatively shorter-term interest rates to help set mortgage rates. Regulation C does not direct lenders to compare the APR on a loan with the yield on a Treasury security that matches the *expected duration* of the mortgage but, rather, that matches the *stated maturity* of the loan. Thus, the regulation effectively requires lenders to use longer-term rates to determine whether to report a loan as higher priced because the stated maturity of most home loans, particularly first-lien loans, typically exceeds twenty years.

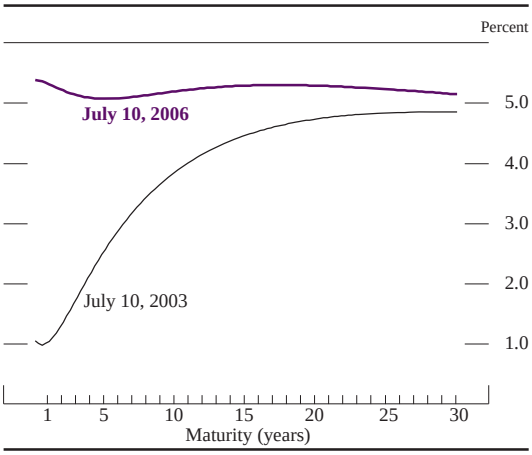
A consequence of the mismatch between the yields used to set mortgage prices and the approach adopted for determining higher-priced lending under HMDA is that a change from one year to the next in the relationship between short- and long-term rates can cause a change in the proportion of loans that are reported as higher priced, all other things being equal. Most notably, if shorter-term interest rates increase relative to longer-term rates, both

[Box]

The Yield Curve

The yield curve describes the relationship between interest rates on financial instruments of different maturities (figure A).

A. Yield curves on Treasury securities, July 10, 2003 and 2006



NOTE: Smoothed yield curves estimated from off-the-run Treasury coupon securities. Yields shown are those on notional par Treasury securities with semiannual coupons.

The yield curve is typically upward sloping because longer-term investments ordinarily involve greater risk (credit risk, market interest rate risk, and inflation premium), and consequently investors require a higher return to be willing to invest their funds for longer periods. Over the past twenty years, longer-term interest rates (for example, as represented by the annual yield on thirty-year Treasury securities) have almost always exceeded shorter-term interest rates (for example, as represented by the yield on five-year Treasury securities). Figure 1, in the main text, portrays this relationship with the spread, or difference, between the yields on thirty-year and five-year Treasuries. As shown there (and as illustrated by the selected dates shown in figure A), the yield curve was especially steep in the 2002-04 period, when short-term rates were quite low by historical standards but has become much flatter since then and has in fact inverted for short periods.

[end box]

the number and proportion of loans that exceed the HMDA price-reporting thresholds will rise even if there is no change in lender business practices or in borrower behavior.

Fixed-rate lending and the incidence of higher-priced lending. The changing interest rate environment from 2005 through 2006 likely explains part of the increase from 2005 in the

share of reported loans that exceeded the pricing thresholds established by Regulation C. Throughout 2004 and 2005, long-term rates exceeded short-term rates (the yield curve was upward sloping), but the difference narrowed over this period as shorter-term rates increased rather steadily (the slope of the yield curve flattened). The yield curve continued to flatten over much of 2006 as shorter-term rates increased, further narrowing the gap between short- and long-term rates.

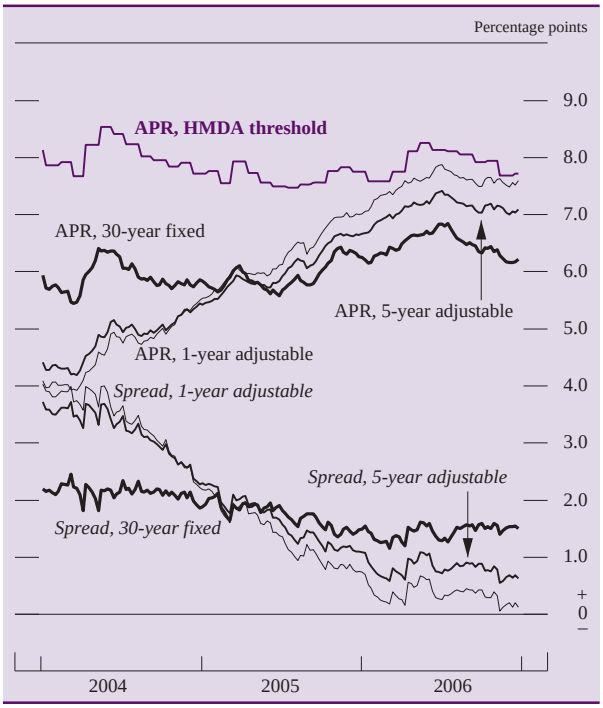
Using the methodology similar to that described in our analysis of the 2005 data, we estimate that, if all loans were fixed-rate loans, the flattening of the yield curve would have made the 2005-06 rise in the incidence of reported higher-price lending *higher* than it would have been in the absence of the yield-curve flattening, as follows (data not shown in tables): The flattening would have made the rise for conventional first-lien home-purchase loans 1.9 percentage points higher, and it would have made the rise for similar loans for refinancings about 2.3 percentage points higher.[27] Without adjusting for the yield-curve effect, the actual increase in incidence in from 2005 to 2006 was 0.7 percentage point for those home-purchase loans and 5.3 percentage points for those refinancings. Those unadjusted figures imply that if all of the loans reported in HMDA were fixed-rate loans, the change between 2005 and 2006 in the incidence of high-priced lending for first-lien home-purchase loans would have been a modest decline of about 1.2 percentage points (0.7 less 1.9), as opposed to a modest increase. The increase in the incidence for similar refinancing loans would have been about half of the actual reported increase in higher-priced lending (5.3 less 2.3). Overall, our estimate of the roughly 2 percentage point effect on fixed-rate loans was of a similar magnitude to what we estimated for the change between 2004 and 2005.

[27] The methodology is described on pp. A147-50 in Avery, Brevoort, and Canner, "Higher-Priced Home Lending and the 2005 HMDA Data."

Additional analysis suggests that another portion of the increase in higher-priced lending arises from the effects of the flattening of the yield curve on *adjustable-rate* lending. Evidence provided below suggests that the effects of the flattening of the yield curve on adjustable-rate lending might be larger than on the effect on fixed-rate lending.

Adjustable-rate lending and the incidence of higher-priced lending. When the yield curve is steep, it suggests that the market expects short-term interest rates to rise, yet the method of calculation specified under Regulation Z for deriving the APR for adjustable-rate loans assumes that interest rates will stay the same. Because of this regulatory construct, a positively sloped yield curve causes the APRs for adjustable-rate loans to be below those for fixed-rate loans of similar term and credit risk. Thus, the flattening of the yield curve can have two effects. First, it can narrow the gap between the longer-term rates used for the HMDA reporting threshold and the shorter-term rates used to price loans. Second, flattening of the yield curve can narrow or even invert the APR gap between adjustable- and fixed-rate loans because, as short-term interest rates increase, it reduces the effect of the comparatively low APR calculations for adjustable-rate loans. The APR gap can be inverted because the expected duration of adjustable- and fixed-rate loans differ—adjustable-rate loan are expected to be outstanding for shorter periods of time. The APR calculations assume the durations are the same for both adjustable- and fixed-rate loans and thus underweight the value to the consumer of low teaser rates offered on many adjustable-rate loans. For these reasons, a likely result of a flattening (or inversion) of the yield curve is an increase in the proportion of adjustable-rate loans that exceed the HMDA price-reporting thresholds.

2. APRs of three selected loan types, and the spread between them and the HMDA price-reporting threshold, 2004–06



NOTE: The data are weekly. Threshold and annual percentage rates (APRs) are for prime, conventional, first-lien mortgages amortized on thirty years. For explanation of threshold, refer to text.
SOURCE: APRs are estimated from Freddie Mac, *Primary Mortgage Market Survey*.

Figure 2 (left) illustrates these effects of a flattening yield curve. The bottom three lines of the figure represent the differences (spreads) between the effective rates (APRs) of three loan types (the top three lines) and the HMDA reporting threshold.[28] As noted earlier, the reporting gap between the typical prime thirty-year fixed-rate loan and the reporting threshold narrowed from 215 basis points at the beginning of 2004 to 144 basis points at the beginning of 2006 and rose or fell some over the remainder of the year. For one-year adjustable-rate loans, the gap narrowed much more, from about 400 basis points at the beginning of 2004 to 52 basis points at the beginning of 2006, and then oscillated somewhat over the course of the year, ending at only 20 basis points. This means that at the end of 2006, a one-year adjustable-rate mortgage with a contract rate of only ¼ percentage point above the Freddie Mac prime rate would have been reported as higher-priced under the HMDA reporting rules.

The differences between the APRs and the reporting threshold decreased for both the fixed-rate and adjustable-rate loans, but the decrease for adjustable-rate loans was much

[28] The rates are from Freddie Mac's *Primary Mortgage Market Survey* for 2004-06. The Freddie Mac series for five-year adjustable rates did not begin until January 1, 2005. For 2004, we estimate five-year adjustable rates from a statistical model using the one-year adjustable rate and thirty-year fixed rate reported by Freddie Mac and the one- and five-year rates for Treasury securities.

larger. Thus, the gap between the APRs on fixed- and adjustable-rate loans, which was substantial at the beginning of 2004, had been virtually eliminated by early 2005; then the relationship between the two loan types inverted, with APRs on adjustable-rate loans somewhat higher than those on thirty-year fixed-rate loans during most of 2005 and all of 2006. The finding suggests that, as an artifact of regulation, geographic areas may have shown differing incidences of higher-priced lending over the past three years merely because they had differing shares of fixed-rate versus adjustable-rate loans. That is, areas with larger shares of adjustable-rate loans likely had fewer higher-priced loans than areas with larger shares of fixed-rate loans in 2004. This effect should have reversed over the course of 2005 and throughout 2006 as APRs on adjustable-rate loans moved above those on fixed-rate loans.

In the analysis of the 2005 HMDA data, we used information on the mix of adjustable- and fixed-rate loans for each state to derive a rough approximation of the differential effect of the flattening of the yield curve on the proportion of adjustable-rate and fixed-rate loans that exceeded the HMDA price-reporting thresholds.[29] The analysis indicated that states with higher levels of adjustable-rate lending had both relatively low levels of higher-priced lending in 2004 and larger increases in such lending from 2004 to 2005, a pattern that would have been predicted from the narrowing of the APR gap between adjustable- and fixed-rate loans.

The data illustrated in figure 2 suggest that the relative mix of adjustable- and fixed-rate mortgages should be related to changes in the incidence of higher-priced lending between 2005 and 2006, although the differences between these two years are substantially smaller than those between 2004 and 2005. The data bear this out for home-purchase loans,

[29] The mix of adjustable- and fixed-rate loans was derived from data obtained from First American LoanPerformance, www.loanperformance.com.

although the effects are very mild. States with the highest proportion of adjustable-rate mortgages showed a greater increase in the incidence of higher-priced lending than other states (table 10). The pattern for refinancings was not consistent: The states with the largest share of adjustable-rate mortgages showed about an average increase in the incidence of higher-priced lending, which suggests that other factors, such as opportunities to extract equity, played a more dominant role in explaining differences between 2005 and 2006 in the incidence of higher-priced lending for refinancings. The role of these factors is discussed below.

Above, we estimated that if all loans were fixed rate, then the effects of the flattening of the yield curve would have been to add approximately 2 percentage points to the reported incidence of higher-priced lending to first-lien loans in the 2006 HMDA data. The mix of adjustable-rate loan types is unknown. Depending upon the mix, we estimate that the yield-curve effect on the reported incidence on adjustable-rate loans would have been on the order of 4 or 5 percentage points. Thus, depending upon the overall mix of fixed- and adjustable-rate loans, the effect of the yield curve flattening on the incidence of higher-priced loans would have been to increase the incidence on the order of 3 or 4 percentage points. This implies that had there been no yield-curve changes, the incidence of higher-priced home-purchase loans would have fallen and the incidence for refinancings would have shown only a modest increase.

Real Effects on the Incidence of Higher-Priced Lending

To the degree that changes in the incidence of higher-priced lending are caused by yield-curve effects, they are not, to that extent, a result of any changes in the business practices of

lenders nor in the credit-risk profiles or preferences of consumers.[30] It is difficult to gauge the importance of the latter two factors in explaining changes in the ‘‘real’’ incidence of higher-priced lending over time.

The housing market, and economic conditions more generally, were favorable in the 2004–05 period. Sales of both new and existing homes in 2005 eclipsed the historic highs reached in 2004. Housing market conditions began moderating in 2006: For the year, home prices rose more slowly in many areas and declined in some others. Nationally, the median price for existing homes increased throughout 2005, reached a high in July 2006, and then fell over the remainder of the year. Overall, the median price of existing homes ended up higher in 2006 than 2005. In addition, a steady climb in short-term interest rates pushed up rates and monthly payments for some existing borrowers with adjustable-rate loans and for those taking out new such loans.[31] Thus, nationally, housing affordability fell from 2005 to 2006, which suggests that more borrowers may have had to stretch financially to purchase or refinance the mortgages on their homes.[32]

Moreover, higher interest rates altered the mix of individuals seeking to refinance their loans. Historically, individuals have refinanced their loans for one or both of the following reasons: to lower the interest rate on the debt or to extract some of the accumulated equity in their home. The latter purpose (sometimes referred to as cash-out refinancing) is accomplished by borrowing more than is needed to cover the closing costs of the new loan plus the existing balance of the old loan. Increases in interest rates during 2005

[30] As discussed in the preceding section, the yield-curve effects are an artifact of the Regulation C definition of a higher-priced loan and the specification in Regulation Z of the method of calculating APRs (particularly for adjustable-rate loans)

[31] Because many adjustable-rate loans have an initial period at a fixed rate (often two or three years from loan origination), some borrowers with such loans do not experience an immediate change in their payments if interest rates increase. For new borrowers, an increase in short-term rates generally results in a corresponding increase in the initial rate on the loan.

[32] Information on the sales, prices, and affordability of homes is in U. S. Department of Housing and Urban Affairs, *U.S. Housing Market Conditions*, www.huduser.org/periodicals/ushmc.html.

and the first part of 2006 reduced the opportunities for individuals to benefit from rate-reduction refinancings, so the proportion of borrowers in the refinance market who were seeking equity extraction likely rose in 2006.[33]

The less-favorable conditions in the housing market and in the interest rate environment in 2006 undoubtedly account for much of the decline in the number of mortgage originations reported in the HMDA data for 2006, particularly with regard to the sharp decline in refinancings (about 15 percent). It also likely explains the increase from 2005 in the proportion of borrowers who obtained higher-priced loans in the market for refinancings. The rise in the incidence of higher-priced lending in the refinance market (particularly when compared with the home-purchase market) seems to have come primarily from the aforementioned rise in the proportion of borrowers in the refinance market who were seeking to raise cash—and equity extraction is a major reason for borrowers in the higher-priced segment market to refinance.[34] In short, the increase in the incidence of higher-priced lending in the refinance market, at least relative to the home-purchase market, appears to have been driven mainly by a decrease in the number of prime borrowers in this market rather than by an increase in borrowers with weaker credit profiles.

Industry data provide additional support for the view that real credit quality declined from 2005 to 2006, albeit modestly. However, most of the change in credit quality seems to have taken place in the near-prime, or ‘‘alt-A,’’ portion of the market. For example,

[33] Data published by Freddie Mac indicate that the share of refinancings involving cash-outs rose steadily over the course of 2005 and through the third quarter of 2006 (www.freddiemac.com/news/finance/refi_archives.htm).

[34] This conclusion follows from the belief that the credit profiles of those extracting equity are, in general, worse than those that refinance purely to benefit from interest rate reductions. Empirical evidence on delinquency rates for refinancings involving equity extraction is generally consistent with this belief. However, in areas that have experienced exceptional increases in home values, the expected credit profiles of those extracting equity may not be worse than others because such borrowers may benefit from relatively low loan-to-value ratios. That condition may explain, for example, the relatively low incidence of higher-priced lending for refinancing in California (table 10), a state with a high incidence of higher-priced lending for home purchases. California had among the largest increases in home values of any state in recent years.

estimates show that from 2005 to 2006, the subprime share of all mortgage originations held steady at about 20 percent, whereas, over the same period, the alt-A portion of the market rose from 12.2 percent to 13.4 percent.[35]

DIFFERENCES IN LENDING OUTCOMES BY RACE, ETHNICITY, AND SEX OF BORROWER

One purpose of the HMDA data is to allow comparisons of lending outcomes across borrowers grouped by their race, ethnicity, or sex. Three types of outcomes often assessed are the incidence of higher-priced lending, the spreads paid by those with higher-priced loans, and denial rates. Analysis of the 2004 and 2005 HMDA data found that differences across groups in mean spreads paid by those with higher-priced loans were generally small. However, the analysis revealed substantial differences across racial and ethnic lines in the incidence of higher-priced lending and in denial rates; further, it showed that such differences could not be fully explained by factors included in the HMDA data.

In examining 2006 lending outcomes by the race, ethnicity, and sex of borrowers, the present analysis focuses on (1) home-purchase loans and (2) refinancing loans that, in either case, are conventional first liens on owner-occupied, one- to four-family, site-built homes. Those two loan categories represent, by far, the largest number of reported mortgages in the HMDA data: For 2006, the home-purchase category comprised 6.2 million applications and 3.9 million loans, and the refinancing category comprised 10.4 million applications and 4.3 million loans (table 4).

Although the HMDA data do not include many of the factors directly considered by lenders in credit underwriting and pricing, the data do include some borrower-related items that are likely related to the loan underwriting and pricing process. Among these borrower-

[35] Estimate derived from Inside Mortgage Finance, *The 2007 Mortgage Market Statistical Annual*.

related items are property location, income relied on in underwriting, loan amount, time of year when the loan was made, and presence of a co-applicant. Because of the focus here on specific loan product categories, the analysis already accounts in broad terms for loan type and purpose, type of property securing the loan, lien status, and owner-occupancy status.

In comparing lending outcomes across racial and ethnic groups, one can match for the sex of the applicant and co-applicant. Accounting for sex in the analysis is intended to better distinguish pricing issues related purely to the race or ethnicity of the borrower from those that could be related to sex. In assessing lending outcomes by sex, one can match for race and ethnicity, once again to make comparisons as precise as possible.

The pricing analysis here focuses on both the incidence of higher-priced lending and the mean APR spreads paid by borrowers with higher-priced loans. Comparisons of these outcomes are made across eleven groups—nine racial or ethnic groups and the two sexes. Comparisons of average outcomes for each group are made both before and after modifying the results for (1) differences in the borrower-related factors cited earlier and (2) differences in the borrower-related factors *plus* the specific lending institution used by the borrower.[36] Excluded from the pricing analysis are applicants residing outside the fifty states and the District of Columbia and applications deemed to be business related. The method of controlling for these factors is to gather borrower data into cells or groupings in which borrowers in each cell are similar along the dimensions considered. The methodology used here is the same as that described in the previously cited 2005 and 2006 *Federal Reserve Bulletin* articles assessing, respectively, the 2004 and 2005 HMDA data.

Comparisons for lending outcomes across groups are of three types: gross ("unmodified"), modified to account for borrower-related factors (''borrower modified''),

[36] To recall, the borrower-related factors are income, loan amount, metropolitan statistical area (MSA) of the property, presence of a co-applicant, and (in the comparisons by race and ethnicity) sex.

and modified for borrower- related factors plus lender (‘‘borrower-plus-lender modified’’). For purposes of presentation, the borrower-modified and borrower-plus-lender-modified outcomes shown in the tables are normalized so that, *for the base comparison group* (non-Hispanic whites in the case of comparison by race and ethnicity, and males in the case of comparison by sex), the mean at each modification level is the same as the gross mean. Consequently, the borrower-modified and borrower-plus-lender-modified outcomes for any other group represent the expected average outcome if the members of that group had the same distribution of control factors as that of the base comparison group.

Incidence of Higher-Priced Lending by Race and Ethnicity

The 2006 HMDA data, like the 2004 and 2005 data, indicate that black and Hispanic borrowers are more likely, and Asians borrowers less likely, to obtain loans with prices above the HMDA pricing reporting thresholds than are non-Hispanic white borrowers. These relationships are found for both home-purchase loans and refinancings (table 11).[37] Gross differences in the incidence of higher-priced lending between non-Hispanic whites, on the one hand, and blacks or Hispanic whites, on the other, are large, but borrower-plus-lender-modified differences are substantially reduced. Most of the reduction in the difference in the incidence across groups comes from adding the control for lender to the control for borrower-related factors, an indication that the pricing differences in a given lender’s underwriting are typically smaller than the differences among loans across lenders.

[37] Applicants are placed under only one category for race and ethnicity, generally according to the race and ethnicity of the person listed first on the application. However, under race, the application is designated as *joint* if one applicant reported the single designation of white and the other reported one or more minority races. If the application is not joint but more than one race is reported, the following designations are made: If at least two minority races are reported, the application is designated as *two or more minority races*; if the first person listed on an application reports two races, and one is white, the application is categorized under the minority race.

For home-purchase loans in 2006, the gross mean incidence of higher-priced lending was 53.7 percent for blacks and 17.7 percent for non-Hispanic whites, a difference of 36.0 percentage points (table 11, top panel). Borrower-related factors included in the HMDA data accounted for about one-sixth of the unmodified difference. Controlling further for lender reduces the remaining gap to 12.6 percentage points. In comparison, in 2005, the unmodified mean incidence of higher-priced lending for such loans was 54.7 percent for blacks and 17.2 percent for non-Hispanic whites, a difference of 37.5 percentage points. For 2005, borrower-related factors accounted for about one-fifth of the unmodified difference, and controlling further for borrower and lender reduced the remaining gap to 10 percentage points, a somewhat smaller "unexplained" difference than that found in the 2006 data.

For refinancings in 2006, the unmodified difference between blacks and non-Hispanic whites was 27.1 percentage points, and the borrower-plus-lender-related difference was 7.3 percentage points; once again, most of the reduction in differences came from the addition of the control for lender (table 11, bottom panel). In comparison, in 2005, the unmodified difference in incidence between blacks and non-Hispanic whites was 28.3 percentage points, and the borrower-plus-lender-related difference was 6.2 percentage points. As in 2006, most of the reduction in 2005 came from the addition of the control for lender. Relationships are similar when comparisons are made between Hispanic whites and non-Hispanic whites. However, the unmodified difference in the incidence of higher-priced lending between these two groups (12 percentage points in 2006) is notably smaller than between blacks and non-Hispanic whites, and much of the difference is accounted for once borrower-related factors and lender are taken into account.

The situation for Asians differs greatly from that for blacks or Hispanic whites: Compared with non-Hispanic whites, Asians had a *lower* unmodified mean incidence of

higher-priced lending in 2006 for home-purchase and refinance loans. Borrower-related factors plus lender do not alter the gap in incidence but narrow it for refinancings.

Rate Spreads by Race and Ethnicity

The 2006 data indicate that among borrowers with higher-priced loans, the unmodified mean prices paid by black borrowers are moderately higher, and those paid by Hispanic white borrowers are slightly higher, than those paid by non-Hispanic white borrowers (table 12). Asian borrowers with higher-priced loans paid about the same price, on average, as non-Hispanic whites with higher-priced loans. These relationships are generally consistent for both types of loans and are little influenced by borrower-related factors or the specific lender used by the borrowers.

Pricing Differences by Sex

The 2006 HMDA data, like those in previous years, reveal little difference in pricing outcomes by sex. For example, sole female borrowers generally have a slightly lower incidence of higher-priced lending than sole male borrowers for home-purchase loans both before and after accounting for borrower-related factors plus lender (table 11). Similarly, the average spreads paid by females are virtually the same as those paid by males after accounting for the presence or absence of a co-borrower (table 12).

Denial Rates by Race, Ethnicity, and Sex

Analyses of the HMDA data from earlier years has consistently found that denial rates vary by applicant race and ethnicity. For the 2006 home-purchase and refinance loans examined here on an unmodified basis, American Indians, blacks, and Hispanic whites had higher

denial rates than non-Hispanic whites; blacks had the highest rates; and Hispanic whites had rates between those for blacks and those for non-Hispanic whites. The pattern was less consistent for Asians, who had higher denial rates than non-Hispanic whites for home purchase, but lower rates for refinancings (table 13).

For home-purchase lending, controlling for borrower-related factors in the HMDA data reduces the differences in denial rates among racial and ethnic groups. Accounting for the specific lender used by the applicant almost always reduces differences further, although unexplained differences remain between non-Hispanic whites and other racial and ethnic groups. For example, for home-purchase loans, the gross mean denial rate was 31.6 percent for blacks and 13.1 percent for non-Hispanic whites, a difference of 18.5 percentage points (table 13). Borrower-related factors reduce the difference about 4 percentage points, and lender adjustment further reduces the gap to 8.4 percentage points. The reduction for refinance loans is similar, although unmodified differences in denial rates tend to be smaller. The gross difference between denial rates for blacks and non-Hispanic whites for refinancings is 14.3 percentage points, a difference cut about in half by borrower-plus-lender adjustment.

With regard to the sex of applicants, sole male applicants have nearly the same denial rate as sole females. For home-purchase loans, co-applicants, whether male or female, have somewhat lower denial rates than single individuals.

Limitations of the Data on Differences across Groups

The 2006 HMDA data, like those for 2004 and 2005, show that the incidence of higher-priced lending for blacks and Hispanic white borrowers is notably greater than for non-Hispanic whites and, for Asians, that the incidence is fairly close to that for non-

Hispanic whites. The borrower-plus-lender adjustment, discussed above, is insufficient to account fully for racial or ethnic differences in the incidence of higher-priced lending; significant differences remain unexplained. Similar patterns are shown in racial and ethnic differences in denial rates. By contrast, only small differences across groups were found in the mean spreads paid by those receiving higher-priced loans. Regarding the sex of borrowers, only small differences were found in lending outcomes.

In our analysis of the racial, ethnic, and sex differences in the 2005 HMDA data on the incidence of higher-priced lending and spreads paid by those with higher-priced loans, we presented differences across groups in two ways: (1) gross differences and (2) differences after adjusting the APRs to remove the effects of the flattening of the yield curve. Here, for 2006, we present only the gross differences; results with adjusted APRs are similar to the gross differences; but the implied racial and ethnic group differences in incidence between 2005 and 2006 with adjusted APRs are smaller than the gross differences. For example, controlling for borrower-related factors plus lender, the gap in the incidence of higher-priced lending between black and non-Hispanic white home-purchase borrowers rose from 10.0 percentage points to 12.6 percentage points between 2005 and 2006; the comparable differences are 9.0 percentage points and 10.5 percentage points when adjusted APRs are used. For refinancings, the adjusted APR gap between blacks and non-Hispanic whites was unchanged at 5.6 percentage points in both years, in contrast to unadjusted differences, which rose from 6.2 to 7.3 percentage points. These results suggest that at least a portion of the apparent widening of gaps in the incidence of higher-priced lending across racial groups for home-purchase lending is due to the further flattening of the yield curve during 2006. For refinancings, the yield-curve effects may explain all of the changes.

The unexplained differences in the incidence of higher-priced lending and in denial rates stem, at least in part, from credit-related factors not available in the HMDA data, such as measures of credit history (including credit scores), LTV ratios, debt-to-income (DTI) ratios, and differences in choice of loan product. Differential costs of loan origination and the competitive environment also likely bear on the differences in pricing; so may differences in financial literacy, which can lead to differences in credit-shopping activities and negotiating. Differences in pricing and underwriting outcomes may also reflect discriminatory treatment of minorities or other actions by lenders, including marketing practices. Further research is needed to assess the extent to which credit- or cost-related factors account for the unexplained differences in loan pricing and denial rates.

CREDIT SCORES BY AREA AND HIGHER-PRICED LENDING

For some time, the staff of the Federal Reserve Board has been using information on the credit experiences of consumers as reflected in their credit records and by their credit history scores to address public policy and research-related issues. Some of this research has focused on the efficacy of credit scoring and its effects on credit availability and affordability for different populations.[38] Other staff research has considered the relationship between credit-reporting accuracy and access to credit.[39] Most of this research has been undertaken using individual-level nationally representative samples of credit records (with no personally identifiable information in the data). These data include the full range of information

[38] Board of Governors of the Federal Reserve System (2007), *Report to the Congress on Credit Scoring and Its Effects on the Availability and Affordability of Credit* (Washington: Board of Governors, August), www.federalreserve.gov/boarddocs/RptCongress/creditscore/creditscore.pdf.

[39] For a discussion of credit-reporting accuracy and access to credit and for references to research on this subject refer to Robert B. Avery, Paul S. Calem, and Glenn B. Canner, "Credit Report Accuracy and Access to Credit," (2004), *Federal Reserve Bulletin*, vol. 90 (Summer), pp. 297-322; also Robert B. Avery, Paul S. Calem, and Glenn B. Canner (2004), "Consumer Credit Scoring: Do Situational Circumstances Matter," *Journal of Banking and Finance*, vol. 28 (April), pp. 835-56.

included in the credit records of these individuals as assembled by TransUnion LLC (TransUnion), one of the three national credit-reporting agencies.[40]

A second type of credit-record-related information has also been used: summary statistics about the credit scores of individuals aggregated at the census-tract level.[41] These data, also provided by TransUnion, include, for each census tract, information on the mean credit scores and the distribution of credit scores for individuals with an outstanding mortgage and for other individuals for whom TransUnion could calculate a credit score. The statistics were constructed by TransUnion using their TransRisk Account Management Score (TransRisk Score).[42] The data also include the percentage of individuals who have a credit record but could not be scored at the time the data were assembled, most often because their credit accounts were not sufficiently numerous or did not show enough recent activity to calculate a TransRisk Score. The thresholds selected for the different segments of the credit score distribution correspond roughly to the cutoffs that, based on credit scores alone, would place individuals in the prime, near-prime, and subprime price ranges. The census-tract credit-score data are constructed from the credit records of approximately 27 million anonymous individuals drawn from stratified, nationally representative random samples of all the credit records maintained by TransUnion.[43]

With the geographic identifiers included in each data file, the census-tract credit score can be combined with the HMDA data and with information from the 2000 decennial census. For the analysis here, credit scores by census tract (not scores of individuals separately) were

[40] Refer to www.transunion.com. The other two national credit-reporting agencies are Equifax, www.equifax.com; and Experian, www.experian.com.

[41] Refer to Avery, Brevoort, and Canner, "Higher-Priced Home Lending and the 2005 HMDA Data."

[42] The TransRisk Scores were generated by TransUnion using their proprietary model for assessing the credit risk of existing credit accounts. TransRisk Account Management Score is a registered trademark of TransUnion LLC; other trademarks, service marks, and brands referred to in this article are the property of their respective owners.

[43] Information on census tract was not available for all individuals.

obtained for two specific dates: December 31, 2004, and December 31, 2005.[44] Given the large proportion of all outstanding mortgages originated in just the past few years, the census-tract credit-score data for mortgage holders are likely quite representative of the individuals who received a mortgage over this period.[45]

National Distribution of Credit Scores

The analysis here uses the 2005 file of credit scores by census tract because its information is the nearest in time to the 2006 HMDA data and because it is likely a reasonable approximation of the credit scores of individuals taking out mortgages during 2006. Nationally, about 15 percent of individuals with a credit record were unscorable; about 19 percent of individuals had a mortgage, and 66 percent did not (table 14, memo items).[46] The distribution of credit scores differs for mortgage borrowers and others: Overall, about 80 percent of individuals with a mortgage, but only about 61 percent of other individuals with a credit score, had relatively high credit scores, that is, scores that (everything else being equal) would make them eligible for the most attractive interest rates available for home loans. At the other end of the spectrum, about 10 percent of mortgage borrowers and 28 percent of other individuals who could be scored had relatively low credit scores, that is, scores that

[44] The census-tract credit scores do not provide information about the specific credit score that may have been used to assess the credit risk of any individual mortgage borrower included in the HMDA data; that information is proprietary to the lender and is not reported under HMDA. Also, the samples of credit records drawn in 2004 and 2005 were chosen randomly and do not necessarily include the same individuals.

[45] As of December 2006, according to data from First American LoanPerformance, about 80 percent of outstanding first-lien mortgages had been originated in 2003 or later (www.loanperformance.com).

[46] Virtually everyone in the database who had a record of an outstanding mortgage had a credit score. However, although some individuals with credit scores were likely unscorable at the time they took out their mortgage loan, they became scorable as their credit records "thickened" with the reports of payments on their mortgages. The proportion of individuals that are unscorable depends on the credit-scoring model. Model builders differ on the criteria used to determine scorability. One difficulty reconciling these shares with other data sources is that credit records are for individuals, whereas the household is the unit of analysis typically used in statistics on homeownership and mortgage holding.

(everything else being equal) would be consistent with placement in the subprime loan market.

Distribution of Credit Scores across Census Tracts

The broad differences in the distribution of credit scores for mortgage borrowers and other individuals, noted above, hold across census tracts grouped along a variety of socioeconomic dimensions.[47] However, the distributions of scores differ across census tracts grouped by relative income and racial or ethnic composition. Individuals in higher-income census tracts (in which median family income is 120 percent or more of the broader area median) tend to have higher credit scores than individuals in other areas. These patterns hold both for the population of individuals with a mortgage and for others. For example, on average, 88 percent of scorable individuals with a mortgage who resided in higher-income census tracts had relatively high credit scores, as did 74 percent of other individuals. By comparison, 59 percent of the mortgage borrowers who could be scored who resided in low-income census tracts had relatively high credit scores, as did 35 percent of other individuals (who could be scored) in low-income census tracts. Also, the proportion of individuals in higher-income census tracts who were unscorable was notably smaller than that of individuals in low-income areas—9 percent and 28 percent respectively.

The distribution of credit scores also differs across census tracts sorted by the proportion of census-tract population that is minority. In predominantly nonminority census tracts (less than 10 percent minority population), about 83 percent of the mortgage borrowers

[47] Census tracts differ along a range of socioeconomic metrics. In part, these differences are by design as one of the objectives in defining census tract boundaries is to group smaller geographic areas that have similar population and economic circumstances. According to the Census Bureau, census tracts usually have a population of between 2,500 and 8,000 and, when first delineated, are designed to be homogeneous with respect to population characteristics, economic status, and living conditions (www.census.gov).

and 70 percent of others with a credit score had relatively high credit scores. In census tracts with a minority population exceeding 80 percent, 62 percent of the mortgage borrowers and 39 percent of others with a credit score had relatively high credit scores. Once again, the percentage of individuals without a credit score differs greatly across census-tract groupings. In predominantly nonminority areas, 10 percent of the individuals could not be assigned a credit score; in contrast, 24 percent of the individuals in census tracts with more than 80 percent minority individuals were unscorable.

Note that in considering differences for credit scores across census tracts grouped by racial or ethnic makeup, differences in score arise solely from differences in the content of *credit records*; so, for example, two individuals of different races or ethnicities but with identical credit records will receive identical credit scores. No information on location, race or ethnicity, sex, or other personal demographic characteristic is used in calculating generic credit history scores, such as the TransRisk Score.[48]

Distribution of Credit Scores across Counties

The data on credit scores by census tract can be aggregated to higher levels of geography, including counties, metropolitan statistical areas (MSAs), and states. The South and Southwestern sections of the country and portions of the Midwest stand out because they have relatively low mean credit scores (figure 3 [figures 3-6 appear after tables]). By contrast, mean scores for mortgage borrowers in the Northeast, in the upper Great Plains, and on the West Coast have relatively high mean sores.

[48] Board of Governors of the Federal Reserve System, *Report to the Congress on Credit Scoring and Its Effects on the Availability and Affordability of Credit.*

Credit Scores and the Incidence of Higher-Priced Lending

Individuals with lower credit scores are more likely to receive higher-priced loans.[49] Likewise, the HMDA data show that census tracts with larger shares of individuals who have relatively low credit scores and a mortgage also have larger shares of individuals who received higher-priced loans (table 15). For example, in census tracts in which more than 20 percent of the mortgage borrowers had low credit scores as of the end of 2005, 45 percent of the homebuyers in 2006 using conventional first liens to purchase site-built homes or to refinance such liens had higher-priced loans; in census tracts in which the share of mortgage borrowers with low credit scores was less than 3 percent, the incidence of higher-priced lending was only 14 percent.

Both the relative income of a census tract and the minority percentage are associated with the incidence of higher-priced lending (table 14). Further analysis (not shown in tables) indicates that the incidence of higher-priced lending across census tracts (after accounting for the income and racial or ethnic composition of the census tract) can be further explained by census-tract data on mean credit scores and on the proportion of individuals with credit scores in the categories roughly corresponding to the near-prime and subprime markets. For example, consider arraying census tracts into quintiles ranked by relative income, and, within each quintile, further subdividing tracts by mean credit score: The census tracts with lower mean credit scores have a higher incidence of higher-priced lending in the 2006 data (by about 4 percentage points) than census tracts with the same income level but higher mean credit scores. A similar relationship is found when census tracts are grouped by minority percentage or when the analysis is restricted to non-Hispanic whites.

[49] For example, refer to Board of Governors of the Federal Reserve System, *Report to the Congress on the Effects of Credit Scoring on the Availability and Affordability of Credit.*

LOAN PERFORMANCE AND THE HMDA DATA

As of this writing, conditions in the mortgage market are the subject of considerable concern. Delinquency and foreclosure rates have risen substantially, particularly in the higher-priced segment of the market, and lax underwriting is widely believed to have contributed to the rise in defaults. Also, a significant share of the higher-priced loans apparently involve adjustable rates; such loans carry the potential to significantly increase monthly payments and, hence, to place greater burdens on many mortgage borrowers.

Although the HMDA data are limited, they can be combined with other data to better understand the linkages between loan pricing, economic factors, and mortgage loan performance. We pursue such an analysis here, focusing on variations in rates of serious delinquency (payment overdue for ninety days or more) on mortgages across MSA counties. Specifically, we examine the relationship between the rates of serious delinquency on mortgages as of March 31, 2007, and (1) the incidence of higher-priced lending (from the HMDA data) for 2005 and 2006 and (2) county-level economic indicators measured over the 2002–06 period.

The analysis employs a proprietary database, TrenData, that measures loan performance at a reasonably disaggregated geographic level.[50] TrenData is based on the credit records of individuals, which makes it one of the most comprehensive databases on the performance of mortgages. In particular, the information has been drawn from the credit records of a geographically stratified random sample of about 30 million individuals for each calendar quarter since 1992. The data (available by county, MSA, and state and for the nation as a whole) include more than 200 measures of credit use and loan performance,

[50] TrenData is a registered trademark of TransUnion LLC (http://products.trendatatu.com/faqs.asp).

including the proportion of mortgage borrowers in a county that are at least ninety days delinquent on their mortgages.[51]

Using TrenData we mapped mortgage delinquency rates by MSA county (figure 4). MSA counties are grouped into quintiles ranked by their rate of serious mortgage delinquency as of March 31, 2007. The counties vary considerably in their levels of problem loans, although most areas have rates of serious delinquency that are relatively low. Only 5 percent of the counties have a serious delinquency rate greater than 3 percent, and more than one-third have a serious delinquency rate below 1 percent. Areas of the country with the highest levels of serious delinquency are broad sections of the Midwest, including Ohio, Indiana, Michigan, and western Pennsylvania; sections of the south Atlantic region; the Gulf Coast area; and portions of Texas, Oklahoma and Colorado.

We also mapped the 2006 HMDA data on the incidence of higher-priced lending by MSA county (figure 5). A comparison of figure 4 with figure 5 is revealing. For the most part, MSA counties with elevated rates of higher-priced lending also have elevated rates of serious mortgage delinquency. Notable exceptions in one direction are some counties in Florida, California, and the middle Atlantic region that are in the top quintile of the incidence of higher-priced lending but that have relatively moderate levels of serious delinquency.[52] Notable exceptions in the other direction are many of the counties in Michigan, Indiana, Ohio, Colorado, western Pennsylvania, and the south Atlantic region, which have high levels

[51] All lenders selling their loans to Fannie Mae and Freddie Mac must report loan performance to the three national credit-reporting agencies. Virtually all banking institutions also report loan performance on the loans they service or hold in portfolio. Coverage of other loans, such as those from smaller lenders or seller financings, are less likely to be reported.

[52] Although these areas have average or lower levels of serious delinquency, they are all in the top quintile when measured by the increase in rates of serious delinquency from the last quarter of 2004 through the first quarter of 2007.

of mortgage delinquency but are not in the highest quintile of the incidence of higher-priced lending.[53]

In general, we expect both loan pricing and delinquency to be driven by economic factors. Unfortunately, few high-frequency measures of economic conditions are available at the county level. Available items include the unemployment rate, per capita income, house-price appreciation, and population growth; credit scores and other information drawn from credit records are also available. Each of these factors may influence loan performance and the incidence of higher-priced lending, but no single factor stands out. Consequently, for our analysis, we construct a composite of economic factors (by regressing the TrenData delinquency measure of loan performance against several county-level indicators) as a representative measure of economic circumstances.[54]

The coefficient weights from this regression are used to form the composite economic variable used here. This variable can also be viewed as the expectation—based only on the economic factors described above—of the rate of serious mortgage delinquency for the first quarter of 2007. As expected, each of the factors included in the regression played a role in predicting future mortgage loan performance. The most important factor, however, was house-price appreciation, particularly from 2004 to 2006.[55]

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[53] Not that the delinquency rates presented here are for only a single point in time—March 31, 2007—and some areas of the country that have had relatively low rates of serious delinquency have been experiencing sharp increases in those rates more recently.

[54] The composite measure is constructed by regressing the TrenData delinquency measure of loan performance against the following county-level economic factors: the unemployment rates in 2005 and 2006 and the change in the unemployment rate from 2002 to 2005; the rates of house price appreciation from 2001 to 2004 and from 2004 to 2006; the level of per capita income in 2005 and the change in per capita income from 2002 to 2005; the population growth rate from 2002 to 2005; and the mean credit score of mortgage holders and the percentage of mortgage holders in the two lowest score groupings as described earlier, all measured at the end of 2004. We also include the average share of HMDA loans to non-owner occupants in each county in 2005 and 2006 as a measure of the importance of investor activity. House price appreciation information is from the Office of Federal Housing Enterprise Oversight (www.ofheo.gov); data on unemployment rates are from the Bureau of Labor Statistics (www.bls.gov); and per capita income and population growth are from the Bureau of Economic Analysis (www.bea.gov).

[55] The R-squared value for the regression was 0.40.

Figure 6 shows counties grouped by our composite economic variable. The counties are grouped by their expected level of delinquency, applying the same cutoffs used for the actual delinquency rates in figure 4. Not surprisingly, the patterns in figures 4 and 6 show a high degree of correlation. There are some exceptions: most counties in Colorado, for example, have higher levels of serious mortgage delinquency than would be expected on the basis of economic factors as measured here, and counties in Florida generally have lower-than-expected rates.

FURTHER ANALYSIS RELATING HIGHER-PRICED LENDING TO LOAN PERFORMANCE

The analysis in the previous section does not explicitly link the HMDA data on the incidence of higher-priced lending to mortgage loan performance. The figures show similar patterns for the incidence of higher-priced lending; the economic composite variable and mortgage delinquency rates are suggestive, but they do not identify whether loan pricing data have additional power in predicting delinquency once economic factors are taken into account. To focus on this issue, we estimated a regression similar to that used to create the economic composite described above. But we added to the regression a variable reflecting the average incidence of higher-priced lending on mortgage loans reported in the 2005 and 2006 HMDA data for each county. Other variables were added to reflect the percentage of subprime and prime loans made in each state that had adjustable interest rates (as derived from the First American LoanPerformance data on mortgages).

Results suggest that the incidence of higher-priced lending has independent predictive value for loan performance beyond that of the economic factors. All else being equal, an increase in the incidence of higher-priced lending of 1 percentage point implies an increase in

the rate of serious mortgage delinquency of 0.03 percentage point. Although the effect may seem small, it is, in fact, fairly large given the relatively low level of mortgage delinquency. For example, a county with the median level of serious delinquency (1.27 percent) experiencing an increase in the incidence of higher-priced lending of 10 percentage points, holding economic factors constant, would generally be enough to move a county to the next highest quintile of counties ordered by loan delinquency. This relationship between the incidence of higher-priced lending and the rate of serious delinquency is robust and of a similar magnitude when the change in delinquency rates between 2004 and 2007 is predicted rather than the level of serious delinquency at the end the period. Finally, some evidence indicates that higher levels of adjustable-rate mortgages are associated with higher levels of future loan delinquency, but the effect is small and is found only for prime mortgages. However, the data available here cannot identify which types of mortgages within an area are delinquent. It may be that adjustable-rate mortgages are more prone to delinquency, but their delinquency status is not reflected in the aggregated data used in this study. Also, some evidence indicates that delinquencies in adjustable-rate mortgages are a growing problem that may not be fully reflected in the delinquency rates for March 2007.

The statistical relationship between the incidence of higher-priced lending and future loan performance could be caused by several factors. There may be a direct effect: The higher monthly payments associated with higher-priced lending are a greater burden on borrowers and lead to greater delinquency. It also may be the case that the statistical association we measure reflects the effects of other economic factors, which we were not able to include in our model and that are related both to higher rates of delinquency and to

higher-priced lending.[56] Such factors may include expected changes in home prices, foreclosure laws, the specific types of loans used to buy homes or refinance, and other factors used in underwriting and pricing loans.

Our analysis is largely suggestive and is relatively parsimonious. However, it does suggest that the pricing data in HMDA may be a useful source of information in understanding and predicting loan performance.

[56] Additional analysis shows that the economic factors and the incidence of higher-priced lending are highly correlated. A regression relating the incidence of higher-priced lending in 2005 and 2006 with the economic factors included in the economic composite variables had an R-squared value of about 0.67.

APPENDIX: REQUIREMENTS OF REGULATION C

Under the Home Mortgage Disclosure Act (HMDA), lenders use a ''loan/application register'' (HMDA/ LAR) to report information annually to their federal supervisory agencies for each application and loan acted on during the calendar year. Lenders must make their HMDA/LARs available to the public by March 31 following the year to which the data relate, and they must remove the two date-related fields to help preserve applicants' privacy.[52]

Only lenders that have offices (or, for nondepository institutions, are deemed to have offices) in metropolitan areas are required to report under HMDA. However, if a lender is required to report, it must report information on all of its home loan applications and loans in all locations, including nonmetropolitan areas.

The Federal Reserve Board's Regulation C requires lenders to report the following information on home-purchase and home-improvement loans and on the refinancing of such loans:

For each application or loan

- application date and the date an action was taken on the application
- action taken on the application
  — approved and originated
  — approved but not accepted by the applicant
  — denied (with the reasons for denial—voluntary for some lenders)
  — withdrawn by the applicant
  — file closed for incompleteness
- pre-approval program used (for home-purchase loans only)
- loan amount
- loan type
  — conventional
  — insured by the Federal Housing Administration
  — guaranteed by the Veterans Administration
  — backed by the Farm Service Agency or Rural Housing Service
- pre-approval status
- lien status
  — first lien
  — junior lien
  — unsecured
- loan purpose
  — home purchase
  — refinance
  — home improvement
- type of purchaser (if the lender subsequently sold the loan)

For each applicant or co-applicant

- race
- ethnicity
- sex
- income relied on in credit decision

For each property

- location, by state, county, and census tract
- type of structure
  — one-to four-family dwelling
  — manufactured home
  — multifamily property (dwelling with five or more units)
- occupancy status (owner occupied or non-owner occupied)

For loans subject to price reporting

- spread above comparable treasury security

For loans subject to HOEPA

- indicator of whether loan is subject to HOEPA

In addition, information is also reported on home loans purchased by an institution during the calendar year.

1. Home loan and reporting activity of home lenders covered under HMDA, 1990-2006

Number

Year	Applications received for home loans on one- to four-family properties, and home loans purchased from other lenders (millions)						Reporters	Disclosure reports[2]
	Applications				Loans purchased	Total[1]		
	Home purchase	Refinance	Home improvement	Total[1]				
1990	3.3	1.1	1.2	5.5	1.2	6.7	9,332	24,041
1991	3.3	2.1	1.2	6.6	1.4	7.9	9,358	25,934
1992	3.5	5.2	1.2	10.0	2.0	12.0	9,073	28,782
1993	4.5	7.7	1.4	13.6	1.8	15.4	9,650	35,976
1994	5.2	3.8	1.7	10.7	1.5	12.2	9,858	38,750
1995	5.5	2.7	1.8	10.0	1.3	11.2	9,539	36,611
1996	6.3	4.5	2.1	13.0	1.8	14.8	9,328	42,946
1997	6.8	5.4	2.2	14.3	2.1	16.4	7,925	47,416
1998	8.0	11.4	2.0	21.4	3.2	24.7	7,836	57,294
1999	8.4	9.4	2.1	19.9	3.0	22.9	7,832	56,966
2000	8.3	6.5	2.0	16.8	2.4	19.2	7,713	52,776
2001	7.7	14.3	1.9	23.8	3.8	27.6	7,631	53,066
2002	7.4	17.5	1.5	26.4	4.8	31.2	7,771	56,506
2003	8.2	24.6	1.5	34.3	7.2	41.5	8,121	65,808
2004	9.8	16.1	2.2	28.1	5.1	33.3	8,853	72,246
2005	11.7	15.9	2.5	30.2	5.9	36.0	8,848	78,193
2006	10.9	14.0	2.5	27.5	6.2	33.7	8,886	78,638

Note: Here and in subsequent tables except table 3, applications exclude requests for pre-approval that were denied by the lender or were accepted by the lender but not acted upon by the borrower. In this article, applications are defined as being for a loan on a specific property; they are thus distinct from requests for pre-approval, which are not related to a specific property.

1. Applications for multifamily homes are included only in the "total" columns; for 2006, these applications numbered nearly 52,380.

2. A report covers the mortgage lending activity of a lender in a single metropolitan statistical area in which it had an office during the year.

SOURCE: Here and in subsequent tables and figures except as noted, Federal Financial Institutions Examination Council, data reported under the Home Mortgage Disclosure Act (www.ffiec.gov/hmda).

2. Distribution of home lenders covered by HMDA, by type of institution, 2006

Type	Number	Percent
Depository institution		
Commercial bank	3,900	43.9
Savings institution	946	10.6
Credit union	2,036	22.9
All	6,882	77.4
Mortgage company		
Independent	1,328	14.9
Affiliated[1]	676	7.6
All	2,004	22.5
All institutions	**8,886**	**100**

1. Subsidiary of a depository institution or an affiliate of a bank holding company.

3. Distribution of home lenders covered by HMDA, by type of lender and the number of applications they receive, 2006

Type of lender, and subcategory (asset size in millions of dollars, or affiliation)	1-99		100-249		250-999		1,000-4,999		5,000 or more		Any		MEMO	
	Percent of lender type[1]	Percent of sub-category[2]	Percent of lender type[1]	Percent of sub-category[2]	Percent of lender type[1]	Percent of sub-category[2]	Percent of lender type[1]	Percent of sub-category[2]	Percent of lender type[1]	Percent of sub-category[2]	Percent of lender type[1]	Percent of sub-category[2]	Number of lenders	Percent of applications
Depository institution														
Commercial bank														
Less than 250	75.8	60.5	63.1	28.7	25.4	9.9	6.3	0.7	5.0	0.2	55.6	100	2,170	1.1
250-999	19.2	26.9	32.0	25.4	60.5	41.3	30.9	6.4	0.0	0.0	31.7	100	1,238	1.6
1,000 or more	5.0	17.7	5.0	10.0	14.1	24.2	62.9	32.7	95.0	15.5	12.6	100	492	22.0
All	100	44.4	100	25.3	100	21.7	100	6.6	100	2.1	100	100	3,900	24.7
Savings institution														
Less than 250	84.4	46.9	64.3	34.9	22.5	16.2	6.4	1.4	5.6	0.7	46.4	100	439.0	0.3
250-999	12.7	8.7	33.6	22.4	66.5	58.8	35.1	9.2	5.6	0.8	37.7	100	357.0	0.9
1,000 or more	2.9	4.7	2.1	3.3	11.1	23.3	58.5	36.7	88.9	32.0	15.9	100	150.0	9.9
All	100	25.8	100	25.2	100	33.4	100	9.9	100	5.7	100	100	946.0	11.1
Credit union														
Less than 250	96.0	62.8	82.3	26.8	34.9	10.3	1.5	0.1	0.0	0.0	72.7	100	1,480	0.6
250-999	3.8	8.4	16.8	18.4	57.9	57.1	51.5	16.1	0.0	0.0	21.7	100	441	0.9
1,000 or more	0.2	1.7	0.8	3.5	7.1	27.0	47.1	56.5	100.0	11.3	5.7	100	115	1.3
All	100	47.6	100	23.6	100	21.4	100	6.8	100	0.6	100	100	2,036	2.8
All depository institutions														
Less than 250	83.1	59.9	68.7	28.6	27.4	10.7	4.9	0.6	4.8	0.2	59.4	100	4,089	2.0
250-999	13.6	19.7	27.9	23.4	61.0	47.8	37.5	9.0	2.0	0.2	29.6	100	2,036	3.4
1,000 or more	3.3	12.7	3.4	7.7	11.6	24.4	57.6	37.1	93.2	18.1	11.0	100	757	33.1
All	100	42.8	100	24.8	100	23.2	100	7.1	100	2.1	100	100	6,882	38.5
Mortgage company														
Independent	37.7	12.1	63.6	13.2	77.0	30.2	78.7	28.0	70.7	16.6	66.3	100	1,328	36.7
Affiliated	62.3	39.1	36.4	14.8	23.0	17.8	21.4	14.9	29.3	13.5	33.7	100	676.0	24.7
All	100	21.2	100	13.7	100	26.0	100	23.6	100	15.5	100	100	2,004	61.5
All institutions	**. . .**	**37.9**	**. . .**	**22.3**	**. . .**	**23.8**	**. . .**	**10.8**	**. . .**	**5.2**	**. . .**	**100**	**8,886**	**100**
MEMO														
Percent of all applications, by number reported by lender	. . .	0.5	. . .	1.2	. . .	3.8	. . .	7.5	. . .	87.0	. . .	100	8,886	100

NOTE: Refer to table 2, note 1. As stated in the general note to table 1, applications in the present table include requests for pre-approval that were denied by the lender or were accepted by the lender but not acted upon by the borrower.

1. Lenders, grouped by lender type and number of applications and distributed by lender subcategory; distribution sums vertically. For example, 75.8 percent of commercial banks that received 1-99 applications in 2006 had assets of less than $250 million

2. Lenders, grouped by lender type and subcategory and distributed by number of applications; distribution sums horizontally. For example, 60.5 percent of commercial banks with assets of less than $250 million received 1-99 applications in 2006.

. . . Not applicable.

2006 HMDA Data

4. Disposition of applications for home loans, and origination and pricing of loans, by type of home and type of loan, 2006

Type of home and loan	Applications				Loans originated											MEMO Transition-period applications (those submitted before 2004)					
	Number submitted	Acted upon by lender			Number	Loans with "APR spread" above the threshold[1]										Number submitted	Number denied	Percent denied	Loans originated		
		Number	Number denied	Percent denied		Number	Percent	Distribution, by percentage points of APR spread					APR spread (percentage points)		Number of HOEPA-covered loans[2]				Number	Percent with APR spread above threshold	Number of HOEPA-covered loans[2]
								3-3.99	4-4.99	5-6.99	7-8.99	9 or more	Mean	Median							
ONE- TO FOUR-FAMILY																					
NONBUSINESS RELATED[3]																					
Owner occupied																					
Site-built																					
Home purchase																					
Conventional																					
First lien	6,209,040	5,440,857	1,010,083	18.6	3,893,634	983,350	25.3	24.9	13.6	51.5	9.6	0.5	5.3	5.5	. . .	1,875	123	11.0	527	3.6	. . .
Junior lien	2,092,637	1,858,700	386,435	20.8	1,259,933	575,488	45.7	. . .	. . .	58.9	37.2	4.0	6.8	6.7	. . .	69	4	8.9	23	17.4	. . .
Government backed																					
First lien	518,564	459,083	55,711	12.1	382,091	6,805	1.8	89.9	4.6	2.8	2.4	0.3	3.5	3.2	. . .	129	10	20.0	17	17.6	. . .
Junior lien	808	611	67	11.0	504	16	3.2	. . .	. . .	75.0	25.0	0	6.2	6.3	. . .	0	0	0	0	0	. . .
Refinance																					
Conventional																					
First lien	10,396,764	7,945,231	2,840,921	35.8	4,262,866	1,320,984	31.0	28.5	16.8	44.9	9.7	0.1	5.1	5.2	3,894	2,472	84	7.2	93	4.3	0
Junior lien	2,073,910	1,759,118	531,231	30.2	1,010,349	281,464	27.9	. . .	. . .	55.5	37.1	7.5	6.9	6.8	2,655	33	2	10.5	6	0	0
Government backed																					
First lien	186,746	157,536	34,557	21.9	109,238	3,348	3.1	78.0	12.4	7.8	1.7	0.1	3.7	3.2	16	80	12	21.4	11	9.1	0
Junior lien	524	424	75	17.7	328	14	4.3	. . .	. . .	42.9	42.9	14.3	7.0	7.3	0	0	0	0	0	0	0
Home improvement																					
Conventional																					
First lien	801,434	690,940	280,138	40.5	348,731	103,414	29.7	37.3	19.5	34.3	8.0	0.7	4.9	4.6	1,578	8	0	0	3	0	0
Junior lien	1,120,356	1,017,604	366,647	36.0	545,297	94,234	17.3	. . .	. . .	46.7	35.1	18.2	7.4	7.2	3,720	14	0	0	1	0	0
Government backed																					
First lien	5,955	5,195	1,326	25.5	3,479	160	4.6	70.6	13.8	12.5	2.5	0.6	3.9	3.5	1	1	0	0	0	0	0
Junior lien	4,479	3,674	1,589	43.2	1,723	1,030	59.8	. . .	. . .	41.7	33.0	25.3	7.7	7.3	99	0	0	0	0	0	0
Unsecured (conventional or government backed)	351,726	343,747	167,873	48.8	149,829	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	0	0	0	0	0	. . .
Manufactured																					
Conventional, first lien																					
Home purchase	348,818	335,776	163,799	48.8	100,883	50,927	50.5	30.1	23.8	30.2	12.0	3.9	5.3	4.8	. . .	32	1	5.9	6	0	. . .
Refinance	171,666	154,688	77,918	50.4	59,538	31,946	53.7	34.0	26.7	28.7	8.6	2.0	4.9	4.6	1,384	50	3	13.0	2	50.0	0
Other	145,212	130,837	52,631	40.2	68,788	15,667	22.8	28.5	11.9	23.8	23.8	12.0	6.1	5.6	1,023	8	1	25.0	2	0	0
Non-owner occupied[4]																					
Conventional, first lien																					
Home purchase	1,327,514	1,180,975	225,054	19.1	838,486	239,543	28.6	51.3	15.8	25.8	6.3	0.7	4.6	3.9	. . .	369	12	5.6	83	7.2	. . .
Refinance	1,003,827	852,129	240,862	28.3	523,263	155,057	29.6	41.5	14.6	35.0	8.4	0.5	4.9	4.5	347	235	5	4.8	18	5.6	0
Other	495,094	434,143	121,602	28.0	262,974	128,449	48.8	4.3	1.8	35.0	34.2	24.6	7.6	7.4	276	16	2	18.2	7	42.9	0
BUSINESS RELATED[3]																					
Conventional, first lien																					
Home purchase	21,997	20,062	2,003	10.0	17,239	1,121	6.5	53.1	12.4	30.4	3.8	0.3	4.5	3.9	. . .	7	0	0	6	0	. . .
Refinance	23,007	21,046	2,625	12.5	17,598	1,011	5.7	53.1	13.4	30.7	2.7	0.2	4.4	3.9	2	4	0	0	3	0	0
Other	7,362	6,738	1,104	16.4	5,253	246	4.7	28.0	9.8	44.3	14.6	3.3	5.4	5.3	1	3	0	0	2	0	0
MULTIFAMILY[5]																					
Conventional, first lien																					
Home purchase	65,093	59,320	3,923	6.6	51,710	5,992	11.6	50.5	16.8	18.7	12.1	1.9	4.8	4.0	. . .	175	11	7.1	109	2.8	. . .
Refinance	54,099	47,047	4,477	9.5	38,353	5,148	13.4	59.8	14.2	19.7	5.9	0.4	4.3	3.7	35	449	2	0.9	191	1.0	0
Other	25,306	21,817	2,849	13.1	16,978	3,692	21.7	3.9	2.1	49.1	31.6	13.3	6.9	6.7	141	40	7	28.0	8	0	0
Total	**27,451,938**	**22,947,298**	**6,575,500**	**28.7**	**13,969,065**	**4,009,106**	**28.7**	**22.4**	**11.6**	**46.6**	**16.7**	**2.7**	**5.6**	**5.7**	**15,172**	**6,069**	**279**	**8.6**	**1,118**	**4.2**	**0**

NOTE: Excludes transition-period applications (those submitted before 2004) and transition-period loans (those for which the application was submitted before 2004).
1. Annual percentage rate (APR) spread is the difference between the APR on the loan and the yield on a comparable-maturity Treasury security. The threshold for first-lien loans is a spread of 3 percentage points; for junior-lien loans, it is a spread of 5 percentage points.
2. Loans covered by the Home Ownership and Equity Protection Act of 1994, which does not apply to home-purchase loans.
3. Business-related applications and loans are those for which the lender reported that the race, ethnicity, and sex of the applicant or co-applicant are "not applicable"; all other applications and loans are nonbusiness related.
4. Includes applications and loans for which occupancy status was missing.
5. Includes business-related and nonbusiness-related applications and loans for owner-occupied and non-owner-occupied properties.
. . . Not applicable.

2006 HMDA Data

5. Home-purchase lending that began with a request for pre-approval: Disposition and pricing, by type of home, 2006

Type of home	Requests for pre-approval			Applications preceded by requests for pre-approval [1]			Loan originations whose applications were preceded by requests for pre-approval									
					Acted upon by lender			Loans with "APR spread" above the threshold[2]								
										Distribution, by percentage points of APR spread					APR spread (percentage points)	
	Number acted upon by lender	Number denied	Percent denied	Number submitted	Number	Number denied	Number	Number	Percent	3-3.99	4-4.99	5-6.99	7-8.99	9 or more	Mean spread	Median spread
ONE- TO FOUR-FAMILY																
NONBUSINESS RELATED[3]																
Owner occupied																
Site-built																
Conventional																
First lien	782,978	192,997	24.6	478,986	417,401	35,416	344,575	33,668	9.8	44.7	17.3	31.0	6.0	0.9	4.7	4.3
Junior lien	158,359	37,834	23.9	103,306	92,200	7,924	72,364	19,054	26.3	. . .	. . .	58.1	34.1	7.9	6.9	6.7
Government backed																
First lien	77,970	22,654	29.1	55,250	48,701	3,996	42,201	1,063	2.5	72.2	18.8	5.9	3.0	0.1	3.8	3.4
Junior lien	58	8	13.8	54	48	5	42	3	7.1	. . .	. . .	66.7	33.3	0	6.2	6.4
Manufactured																
Conventional, first lien	40,506	20,489	50.6	37,589	33,069	18,032	8,357	5,793	69.3	20.0	24.4	40.0	13.5	2.1	5.4	5.2
Other	5,079	1,533	30.2	3,811	3,117	515	2,452	149	6.1	83.9	0.7	3.4	12.1	0	3.8	3.3
Non-owner occupied[4]																
Conventional, first lien	89,459	17,789	19.9	67,177	57,720	7,102	44,834	8,890	19.8	60.0	18.0	16.6	4.3	1.2	4.3	3.7
Other	16,448	3,246	19.7	13,714	11,573	1,591	8,318	4,352	52.3	0	0	22.8	36.1	41.2	8.6	8.5
BUSINESS RELATED[3]																
Conventional, first lien	2,976	198	6.7	2,813	2,370	126	2,161	84	3.9	60.7	7.1	17.9	11.9	2.4	4.6	3.5
Other	388	31	8.0	368	265	23	192	70	36.5	1.4	1.4	37.1	31.4	28.6	7.8	7.7
MULTIFAMILY[5]																
Conventional, first lien	295	30	10.2	275	240	18	212	44	20.8	47.7	18.2	27.3	4.5	2.3	4.6	4.2
Other	126	5	4.0	125	107	4	99	8	8.1	12.5	0	62.5	12.5	12.5	7.6	6.2
Total	**1,174,642**	**296,814**	**25.3**	**763,468**	**666,811**	**74,752**	**525,807**	**73,178**	**13.9**	**30.8**	**12.4**	**36.1**	**15.5**	**5.3**	**5.5**	**5.3**

Table continues on next page.

NOTE: Excludes transition-period requests for pre-approval (those submitted before 2004). Refer to general note to table 1.

1. These applications are included in the total of 27,451,938 reported in table 4.
2. Refer to table 4, note 1.
3. Business-related applications and loans are those for which the lender reported that the race, ethnicity, and sex of the applicant or co-applicant are “not applicable”; all other applications and loans are nonbusiness related.
4. Includes applications and loans for which occupancy status was missing.
5. Includes business-related and nonbusiness-related applications and loans for owner-occupied and non-owner-occupied properties.

. . . Not applicable.

2006 HMDA Data

5. —Continued

Type of home	MEMO Applications with transition-period requests for pre-approval (request submitted before 2004)				
	Number submitted	Number denied	Percent denied	Loans originated	
				Number	Percent with APR spread above threshold
ONE- TO FOUR-FAMILY					
NONBUSINESS RELATED[3]					
Owner occupied					
Site-built					
Conventional					
First lien	35	2	8.7	14	0
Junior lien	3	0	0	2	0
Government backed					
First lien	9	1	11.1	7	42.9
Junior lien	0	0	0	0	0
Manufactured					
Conventional, first lien	0	0	0	0	0
Other	0	0	0	0	0
Non-owner occupied[4]					
Conventional, first lien	10	1	16.7	5	0
Other	3	0	0	1	0
BUSINESS RELATED[3]					
Conventional, first lien	3	0	0	1	0
Other	0	0	0	0	0
MULTIFAMILY[5]					
Conventional, first lien	0	0	0	0	0
Other	0	0	0	0	0
Total	**63**	**4**	**9.1**	**30**	**10.0**

2006 HMDA Data

6. Cumulative distribution of home loans, by loan amount and by purpose, type, and pricing of loan, 2006

Percent

Upper bound of loan amount (thousands of dollars)[1]	Home purchase					Refinance				
	Conventional			FHA	VA	Conventional			FHA	VA
	Not higher priced	Higher priced	Total			Not higher priced	Higher priced	Total		
24	0.3	0.6	0.4	0.1	0.0	0.9	1.3	1.0	0.1	0.2
49	1.9	3.4	2.3	2.5	0.5	3.9	4.7	4.1	2.1	3.3
74	6.6	12.6	8.1	12.9	3.2	9.8	12.9	10.8	9.7	12.2
99	13.6	23.3	16.0	30.1	10.7	17.1	22.8	18.9	23.4	25.6
124	23.7	34.6	26.5	48.4	21.6	26.2	33.6	28.5	40.0	40.0
149	34.5	44.6	37.1	67.4	36.7	34.7	43.5	37.4	57.5	55.3
174	43.9	52.9	46.2	81.3	52.0	43.4	52.5	46.2	71.4	67.0
199	51.9	59.9	54.0	90.0	64.7	50.7	60.0	53.6	81.4	76.2
224	59.5	66.2	61.2	94.4	74.0	58.0	66.7	60.7	88.4	83.2
249	65.2	71.3	66.7	96.8	81.8	63.5	71.8	66.1	92.3	88.5
274	70.3	75.5	71.6	98.1	87.3	68.8	76.3	71.1	94.9	92.4
299	74.4	79.3	75.6	98.8	91.3	72.9	79.9	75.0	96.5	94.9
324	78.4	82.7	79.5	99.2	94.2	77.0	83.3	79.0	97.6	96.8
349	81.3	85.3	82.3	99.5	96.2	80.0	85.9	81.8	98.4	97.9
374	84.0	87.7	84.9	99.8	97.6	83.0	88.2	84.6	99.6	98.8
399	86.1	89.6	87.0	99.8	98.7	85.3	90.0	86.7	99.7	99.4
417	89.1	91.0	89.6	99.9	99.6	88.5	91.4	89.4	99.8	99.9
449	90.2	92.8	90.9	99.9	99.7	89.8	93.1	90.8	99.9	99.9
499	92.2	95.1	92.9	100.0	99.8	92.1	95.2	93.1	100.0	99.9
549	94.0	96.7	94.7	100.0	99.9	94.0	96.7	94.9	100.0	100.0
599	95.2	97.7	95.8	100.0	100.0	95.3	97.6	96.0	100.0	100.0
649	96.3	98.4	96.8	100.0	100.0	96.4	98.3	97.0	100.0	100.0
699	97.0	98.8	97.5	100.0	100.0	97.2	98.8	97.7	100.0	100.0
749	97.5	99.1	97.9	100.0	100.0	97.6	99.0	98.1	100.0	100.0
799	97.9	99.3	98.3	100.0	100.0	98.0	99.3	98.4	100.0	100.0
More than 799	100	100	100	100	100	100	100	100	100	100
Memo *Loan amount (thousands of dollars)*										
Mean	245.8	208.7	236.4	133.0	184.6	245.6	207.5	233.8	150.2	154.1
Median[1]	192	165	185	127	171	196	167	186	138	141

1. Loan amounts are reported under HMDA to the nearest $1,000.

FHA Federal Housing Administration. VA Department of Veterans Affairs.

7. Cumulative distribution of home loans, by borrower income and by purpose, type, and pricing of loan, 2006

Percent

Upper bound of borrower income (thousands of dollars)[1]	Home purchase					Refinance				
	Conventional			FHA	VA	Conventional			FHA	VA
	Not higher priced	Higher priced	Total			Not higher priced	Higher priced	Total		
24	2.9	3.6	3.1	5.9	1.0	2.9	4.6	3.5	4.6	3.0
49	22.5	29.3	24.2	50.6	31.0	23.1	33.0	26.2	39.5	31.4
74	46.3	56.1	48.8	83.2	69.2	48.8	62.3	53.0	76.3	69.4
99	64.8	73.9	67.1	94.5	89.2	68.1	79.8	71.8	93.1	88.5
124	76.8	84.3	78.7	97.7	96.6	80.0	88.6	82.7	98.0	96.0
149	83.8	89.9	85.4	98.7	98.8	86.5	92.8	88.5	99.3	98.6
199	91.6	95.7	92.6	99.5	99.8	93.2	96.8	94.3	99.8	99.8
249	94.9	97.6	95.6	99.7	99.9	96.0	98.2	96.6	99.9	100.0
299	96.5	98.4	97.0	99.8	100.0	97.2	98.7	97.7	99.9	100.0
More than 299	100	100	100	100	100	100	100	100	100	100
Memo *Borrower income, by selected loan type (thousands of dollars)*[2]										
All										
Mean	105.3	86.1	100.5	55.2	66.0	98.6	78.1	92.1	60.1	65.8
Median[1]	79	68	76	49	60	76	63	72	56	60
Conforming										
Mean	85.3	74.0	82.4	. . .	. . .	80.9	67.8	76.7	. . .	. . .
Median[1]	72	64	70	. . .	. . .	70	60	66	. . .	. . .
Jumbo										
Mean	271.6	212.1	258.8	. . .	. . .	234.7	191.0	223.7	. . .	. . .
Median[1]	199	168	190	. . .	. . .	175	150	168	. . .	. . .

Note: For loans with two or more applicants, HMDA-covered lenders report data on only two. Income for two applicants is reported jointly.

1. Income amounts are reported under HMDA to the nearest $1,000.

2. By size, all loans backed by the FHA or VA are conforming.

. . . Not applicable.

FHA Federal Housing Administration. VA Department of Veterans Affairs.

8. Non-owner-occupied lending as a share of all first liens to purchase one- to four-family site-built homes, by number and dollar amount of loans, 1990–2006

Percent

Year	Number	Dollar amount
1990	6.6	5.9
1991	5.6	4.5
1992	5.2	4.0
1993	5.1	3.8
1994	5.7	4.3
1995	6.4	5.0
1996	6.4	5.1
1997	7.0	5.8
1998	7.1	6.0
1999	7.4	6.4
2000	8.0	7.2
2001	8.6	7.6
2002	10.5	9.2
2003	11.9	10.6
2004	14.9	13.1
2005	17.3	15.7
2006	16.5	14.8

9. Higher-priced lending: Distribution by type of lender, and incidence at each type of lender, 2004–06

Percent

Type of lender	2004			2005			2006		
	Higher-priced loans		MEMO: All loans, distribution	Higher-priced loans		MEMO: All loans, distribution	Higher-priced loans		MEMO: All loans, distribution
	Distribution	Incidence		Distribution	Incidence		Distribution	Incidence	
Independent mortgage company	50.6	25.5	27.8	52.0	41.4	31.0	45.7	41.5	31.2
Depository	25.9	8.0	45.2	22.8	12.8	43.8	28.5	18.7	43.4
Subsidiary of depository	11.5	9.0	17.9	13.0	20.7	15.5	12.4	22.9	15.4
Affiliate of depository	12.0	18.6	9.1	12.2	30.9	9.7	13.4	37.9	10.1
Total	100	14.0	100	100	24.7	100	100	28.4	100

NOTE: Conventional, first-lien mortgages for site-built properties.

Table 10. Incidence of higher-priced lending in states grouped by share of originated loans that had an adjustable rate, and the change in incidence, by quintile and type of loan , 2006

Quintile of states	Home purchase		Refinance	
	2006 (percent)	Change, 2005-06 (percentage points)	2006 (percent)	Change, 2005-06 (percentage points)
Lowest	19.0	0.8	38.3	6.7
Second lowest	20.6	1.4	33.6	5.8
Middle	23.6	1.6	31.8	5.0
Second highest	21.6	-0.1	29.0	5.3
Highest	26.4	4.6	31.2	5.3
Memo: California[1]	30.2	1.4	23.3	4.6
Total	24.1	1.9	30.2	5.3

Note: Spreads are unadjusted. Quintiles based on share of loans originated in 2006 that had an adjustable rate. For definition of higher-priced lending, refer to text.

1. California is shown separately because it accounts for a large number of loans and has a high incidence of adjustable-rate lending.

11. Incidence of higher-priced lending, unmodified and modified for borrower- and lender-related factors, for conventional first liens on owner-occupied one- to four-family site-built homes, by type of loan and by race, ethnicity, and sex of borrower, 2005 and 2006

Percent except as noted

Race, ethnicity, and sex[1]	2005				2006			
	Number of loans	Unmodified incidence	Modified incidence, by modification factor		Number of loans	Unmodified incidence	Modified incidence, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
	Home purchase							
Race other than white only								
American Indian or Alaska Native	27,766	35.3	29.5	21.8	21,615	34.2	30.5	24.5
Asian	237,383	16.6	15.8	16.6	187,187	16.8	15.3	16.8
Black or African American	312,451	54.7	47.0	27.2	318,650	53.7	47.6	30.3
Native Hawaiian or other Pacific Islander	23,450	34.8	30.4	21.0	18,773	34.0	29.2	22.9
Two or more minority races	2,112	30.4	28.7	20.8	2,112	27.6	28.6	20.7
Joint	51,881	18.2	23.0	19.0	44,666	17.5	23.8	19.8
Not available	431,159	32.4	33.6	21.6	377,985	29.2	31.8	23.3
White, by ethnicty								
Hispanic white	464,634	46.1	34.2	21.9	464,291	46.6	35.1	24.0
Non-Hispanic white	2,789,265	17.2	17.2	17.2	2,406,570	17.7	17.7	17.7
Sex								
One male	1,392,947	31.7	31.7	31.7	1,255,567	32.3	32.3	32.3
One female	1,021,006	30.8	29.8	30.8	925,029	30.9	30.2	31.2
Two males	44,278	23.1	23.1	23.1	36,405	23.9	23.9	23.9
Two females	36,140	24.7	22.4	23.9	31,062	26.2	22.5	23.4
	Refinance							
Race other than white only								
American Indian or Alaska Native	37,213	28.9	32.1	24.1	27,748	32.8	36.1	29.5
Asian	165,011	15.2	18.9	21.1	127,873	19.6	23.7	25.3
Black or African American	441,299	49.3	45.0	27.2	397,452	52.8	50.0	33.0
Native Hawaiian or other Pacific Islander	31,453	28.4	32.2	24.3	24,078	33.6	37.5	30.0
Two or more minority races	3,650	28.6	29.5	24.2	2,913	28.0	28.9	30.8
Joint	61,200	19.3	26.2	22.4	41,875	26.2	33.3	26.9
Not available	752,573	32.2	38.0	24.5	570,431	38.2	43.7	30.6
White, by ethnicty								
Hispanic white	478,381	33.8	31.5	23.6	437,163	37.7	37.0	29.7
Non-Hispanic white	3,496,425	21.0	21.0	21.0	2,596,873	25.7	25.7	25.7
Sex								
One male	1,424,721	30.3	30.3	30.3	1,197,165	34.6	34.6	34.6
One female	1,229,138	31.1	30.0	30.4	1,033,700	35.3	34.3	34.5
Two males	37,442	21.2	21.2	21.2	27,336	26.6	26.6	26.6
Two females	41,572	27.0	23.5	22.5	31,179	34.1	29.9	26.6

NOTE: Excludes transition-period loans (those for which the application was submitted before 2004). For definition of higher-priced lending and explanations of spread adjustment and of modification factors, refer to text.

1. Categories for race and ethnicity reflect the revised standards established in 1997 by the Office of Management and Budget. For method of allocation into racial and ethnic categories and definitions of categories, refer to text note 36. Loans taken out jointly by a male and female are not tabulated here because they would not be directly comparable with loans taken out by one borrower or by two borrowers of the same sex.

12. Mean APR spreads, unmodified and modified for borrower- and lender-related factors, for higher-priced conventional first liens on owner occupied one- to four-family site-built homes, by type of loan and by race, ethnicity, and sex of borrower, 2005 and 2006

Percentage points except as noted

Race, ethnicity, and sex	2005				2006			
	Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor		Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
	Home purchase							
Race other than white only								
American Indian or Alaska Native	9,799	4.6	4.8	4.8	7,388	5.2	5.2	5.2
Asian	39,471	4.6	4.7	4.7	31,395	5.0	5.1	5.1
Black or African American	171,009	5.0	4.9	4.9	171,238	5.7	5.6	5.3
Native Hawaiian or other Pacific Islander	8,162	4.6	4.8	4.8	6,376	5.2	5.2	5.1
Two or more minority races	641	4.8	4.9	4.8	583	5.4	5.4	5.3
Joint	9,468	4.6	4.8	4.8	7,802	5.3	5.3	5.2
Not available	139,740	4.9	4.9	4.8	110,527	5.5	5.5	5.3
White, by ethnicty								
Hispanic white	214,415	4.6	4.7	4.8	216,422	5.3	5.2	5.2
Non-Hispanic white	479,338	4.7	4.7	4.7	426,138	5.1	5.1	5.1
Sex								
One male	441,919	4.8	4.8	4.8	405,414	5.3	5.3	5.3
One female	313,959	4.8	4.8	4.8	285,937	5.3	5.3	5.3
Two males	10,213	4.5	4.5	4.5	8,716	5.2	5.2	5.2
Two females	8,943	4.7	4.6	4.5	8,142	5.4	5.3	5.2
	Refinance							
Race other than white only								
American Indian or Alaska Native	10,770	4.8	4.8	4.8	9,096	5.1	5.1	5.1
Asian	25,119	4.7	4.8	4.8	25,096	4.9	5.0	5.1
Black or African American	217,351	5.0	5.0	4.9	209,910	5.4	5.3	5.2
Native Hawaiian or other Pacific Islander	8,945	4.8	4.8	4.8	8,102	5.1	5.1	5.1
Two or more minority races	1043	4.9	4.9	4.8	815	5.2	5.3	5.2
Joint	11,815	4.7	4.8	4.8	10,958	5.0	5.1	5.1
Not available	242,666	5.0	5.0	4.8	217,915	5.3	5.3	5.1
White, by ethnicty								
Hispanic white	161,713	4.8	4.8	4.8	164,748	5.1	5.1	5.1
Non-Hispanic white	733,290	4.8	4.8	4.8	668,337	5.1	5.1	5.1
Sex								
One male	432,386	4.9	4.9	4.9	414,387	5.2	5.2	5.2
One female	382,071	4.9	4.9	4.9	365,368	5.2	5.2	5.2
Two males	7,937	4.8	4.8	4.8	7,276	5.0	5.0	5.0
Two females	11,208	4.8	4.8	4.8	10,646	5.1	5.1	5.0

NOTE: Spread-unadjusted APR is the difference between the APR on the loan and the yield on a comparable-maturity Treasury security. Spread-adjusted APR is the difference between the APR on the loan and the estimated APR reported by Freddie Mac for a thirty-year fixed-rate loan in their Primary Mortgage Market Survey. Excludes transition-period loans (those for which the application was submitted before 2004). Refer also to note 1, table 11.

13. Denial rates on applications, unmodified and modified for borrower- and lender-related factors, for conventional first liens on owner-occupied, one- to four-family, site-built homes, by type of loan and by race, ethnicity, and sex of applicant, 2006

Percent except as noted

Race, ethnicity, and sex	Home purchase				Refinance			
	Number of applications acted upon by lender	Unmodified denial rate	Modified denial rate, by modification factor		Number of applications acted upon by lender	Unmodified denial rate	Modified denial rate, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
Race other than white only								
American Indian or Alaska Native	34,646	25.9	22.2	18.2	63,757	44.7	44.8	37.7
Asian	264,397	17.0	14.5	14.8	215,172	27.7	33.2	34.6
Black or African American	553,168	31.6	27.7	21.5	883,842	44.9	46.2	38.7
Native Hawaiian or other Pacific Islander	29,104	23.4	20.3	17.4	47,437	36.4	41.8	37.5
Two or more minority races	3,139	20.2	18.0	17.2	5,878	40.5	42.9	37.3
Joint	57,781	13.6	17.0	14.9	74,030	34.0	40.3	34.4
Not available	611,069	24.2	23.7	18.1	1,448,614	48.0	49.6	38.3
White, by ethnicty								
Hispanic white	719,166	25.4	20.3	17.5	801,813	33.5	36.6	35.8
Non-Hispanic white	3,063,436	13.1	13.1	13.1	4,343,279	30.6	30.6	30.6
Sex								
One male	1,833,621	21.7	21.7	21.7	2,324,086	37.6	37.6	37.6
One female	1,334,498	21.0	20.5	20.9	1,926,089	36.1	35.0	35.9
Two males	50,505	19.2	19.2	19.2	50,870	36.5	36.5	36.5
Two females	43,322	19.5	17.4	17.7	60,185	39.5	36.8	36.1

NOTE: Includes transition-period applications (those submitted before 2004). For explanation of modification factors, refer to text. Refer also to note 1, table 11.

14. Distribution of individuals, by type of credit record, borrowing status, and credit score range (percent of census tract population), and by characteristic of census tract (percent of individuals), 2005

Percent

Census tract category	Scorable															
	Mortgage borrowers								Others							
	Low		Middle		High		Total	MEMO: Percent of census tract population[1]	Low		Middle		High		Total	MEMO: Percent of census tract population[1]
	Percent of census tract population[1]	Percent of individuals[2]	Percent of census tract population[1]	Percent of individuals[2]	Percent of census tract population[1]	Percent of individuals[2]			Percent of census tract population[1]	Percent of individuals[2]	Percent of census tract population[1]	Percent of individuals[2]	Percent of census tract population[1]	Percent of individuals[2]		
Income ratio (percent of area median)[3]																
Less than 50	24.9	2.9	16.4	2.0	58.7	0.9	100	4.7	49.8	6.9	14.8	4.7	35.4	2.2	100	67.1
50-79	18.1	21.1	14.4	17.3	67.5	10.0	100	10.7	38.8	28.3	14.3	23.9	46.8	15.4	100	68.1
80 - 119	11.2	56.7	10.8	56.0	78.1	50.4	100	20.6	26.4	49.7	12.0	51.8	61.6	52.3	100	66.4
120 or more	5.5	19.3	7.0	24.8	87.5	38.7	100	28.9	16.6	15.1	9.5	19.6	73.9	30.2	100	61.9
Total	. . .	100	. . .	100	. . .	100	. . .	. . .	. . .	100	. . .	100	. . .	100	. . .	. . .
Racial or ethnic composition (minorities as a percentage of population)																
Less than 10	8.5	34.1	8.9	36.6	82.6	42.3	100	25.9	19.9	24.1	10.1	28.1	70.0	28.1	100	64.4
10-49	9.4	42.2	9.6	44.0	81.0	46.2	100	20.3	26.2	43.0	11.9	44.6	61.9	44.6	100	65.8
50-79	15.3	12.4	13.1	10.9	71.6	7.4	100	12.5	37.1	16.1	14.2	14.1	48.7	14.1	100	67.1
80-100	21.9	11.3	15.9	8.4	62.1	4.1	100	8.7	45.2	16.8	15.6	13.2	39.2	13.2	100	67.7
Total	. . .	100	. . .	100	. . .	100	. . .	. . .	. . .	100	. . .	100	. . .	100	. . .	. . .
Memo: Census tract unknown	11.1		10.7		78.2		100	10.2	32.7		13.0		54.3		100	66.7
Total	**10.2**	**. . .**	**9.9**	**. . .**	**79.9**	**. . .**	**100**	**19.2**	**27.5**	**. . .**	**12.0**	**. . .**	**60.5**	**. . .**	**100**	**65.8**

Table continues on next page.

Note. The credit score ranges are based on the TransRisk Account Management Score (TransRisk Score) as of December 31, 2005. TransRisk Account Management Score is a registered trademark of TransUnion LLC.

1. Population with a credit record. Distribution sums horizontally.

2. Distribution sums vertically.

3. The income ratio of a census tract is the median family income of the tract relative to that of the area (MSA or statewide non-MSA) in which the tract is located.

2006 HMDA Data

14.—Continued

Percent

Census tract category	Unscorable		Incidence of higher-priced lending
	MEMO: Percent of census tract population[1]	Percent of individuals[2]	
Income ratio (percent of area median)[3]			
Less than 50	28.1	9.6	46.5
50-79	21.2	31.5	38.8
80 - 119	13.0	43.8	27.7
120 or more	9.2	15.1	18.3
Total	. . .	100	. . .
Racial or ethnic composition (minorities as a percentage of population)			
Less than 10	9.7	20.7	21.7
10-49	13.9	42.2	24.8
50-79	20.4	18.2	36.3
80-100	23.6	19.0	46.6
Total	. . .	100	. . .
Memo: Census tract unknown	23.2		26.9
Total	**15.0**	**. . .**	**27.0**

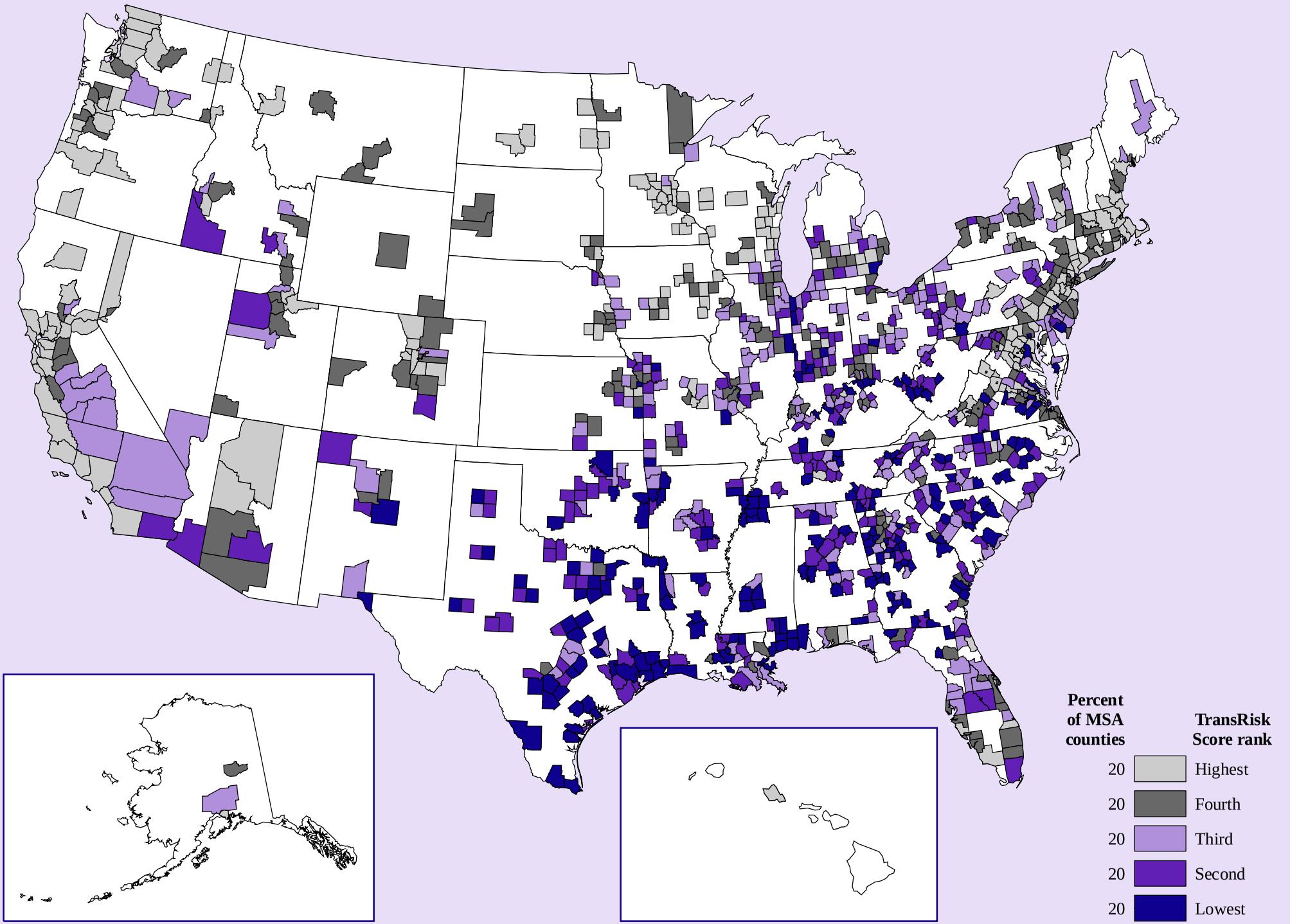
15. Credit scores and the incidence of higher-priced lending, 2006

Percent

Share of mortgage borrowers in census tract who have low credit scores	Share of mortgage loans in census tract that are higher priced
0–2.9	13.9
3–6.9	19.8
7–9.9	25.3
10–14.9	27.4
15–19.9	34.7
20 or more	45.4
All tracts	27.0

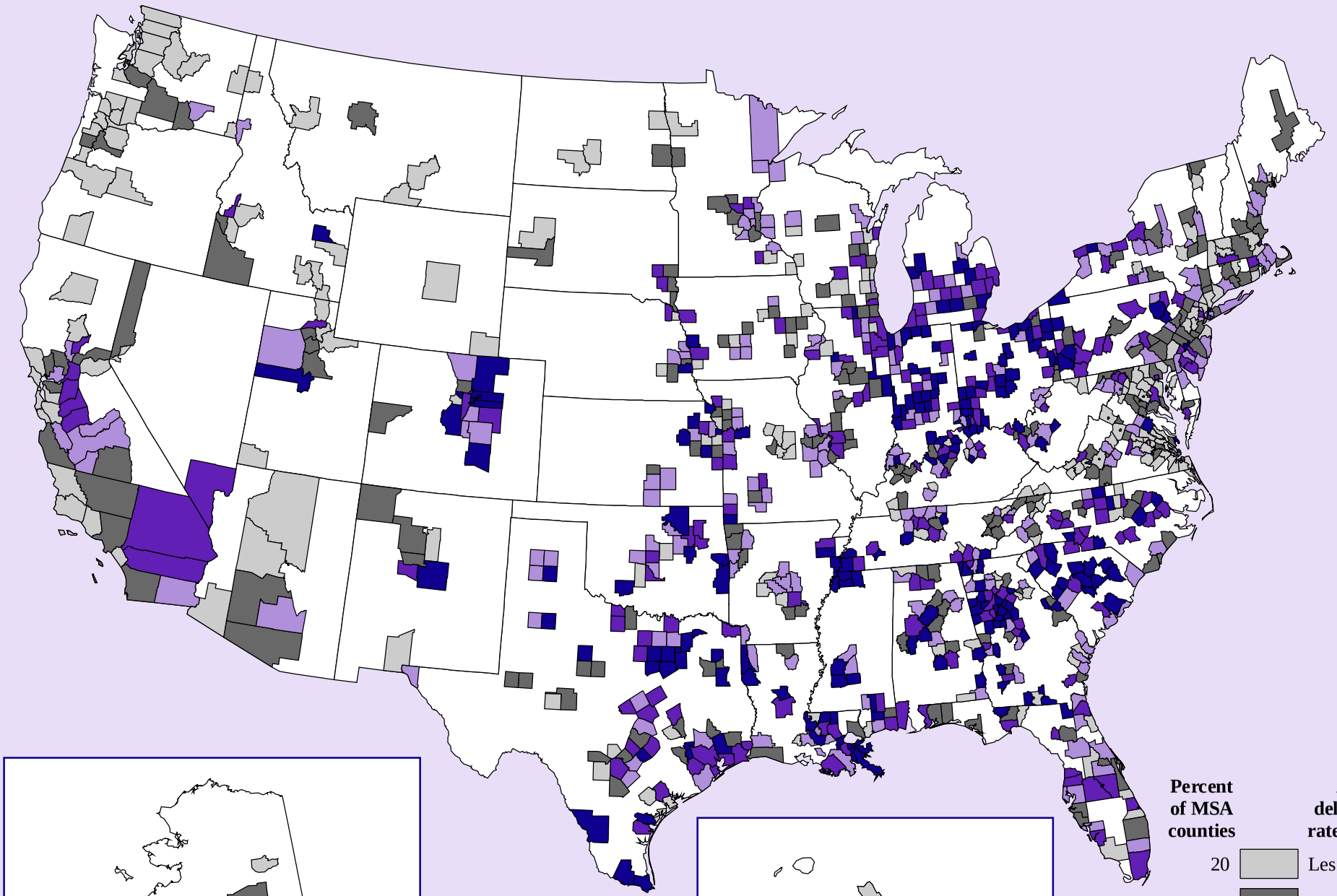
Note. Lending covers first-lien purchase or refinancing loans for site-built homes. Refer also to general note to table 14.

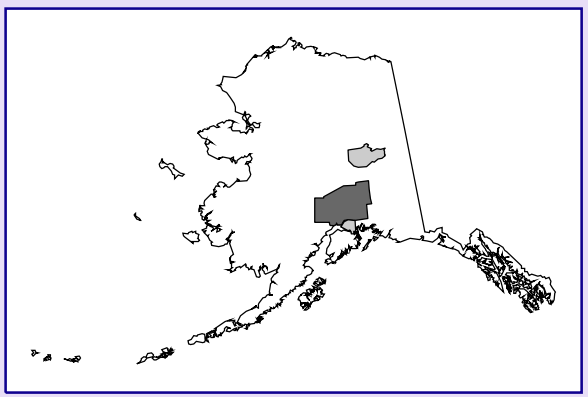
3. Mean TransRisk Score quintiles of mortgage borrowers, by metropolitan statistical area county, December 31, 2005

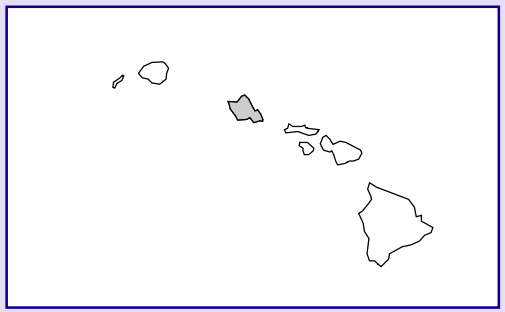


Source: TransRisk Account Management Score (TransRisk Score), from TransUnion LLC.

4. Quintiles of mortgages delinquent 90 days or more, by metropolitan statistical area county, March 31, 2007



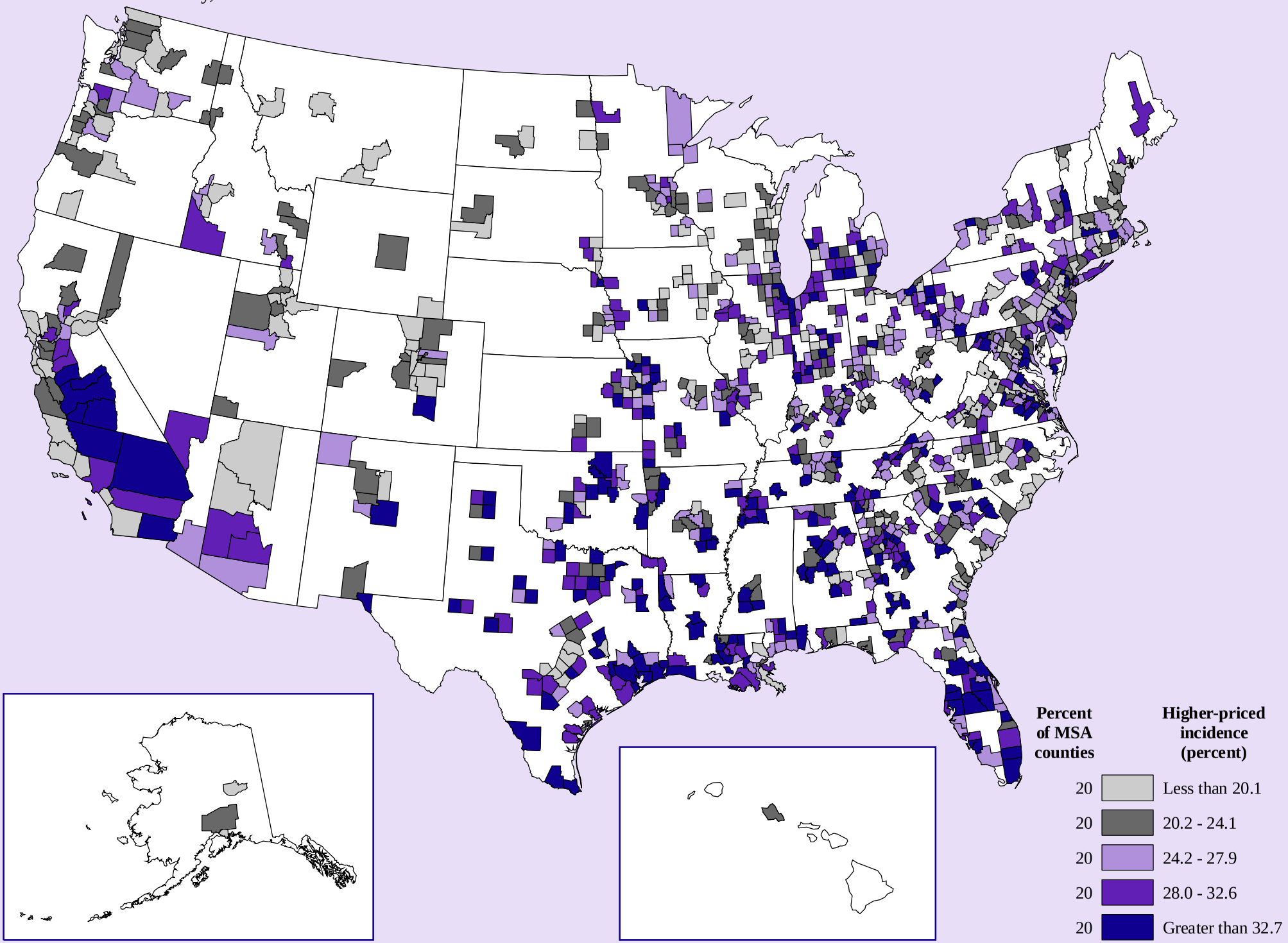




Percent of MSA counties	Actual delinquency rate (percent)
20	Less than 0.81
20	0.82 - 1.13
20	1.14 - 1.45
20	1.46 - 1.91
20	Greater than 1.92

Source: TrenData, from TransUnion LLC.

5. Quintiles of incidence of higher-priced lending for first-lien, home-purchase or refinance loans on owner-occupied, site-built homes, by metropolitan statistical area county, 2006



6. Expected delinquency based on economic factors, by metropolitan statistical area county, March 31, 2007