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Mortgage Data

The collection of mortgage data is clearly basic to an understanding of developments in the mortgage market, both for market participants, analysts, economists and regulators, and for home owners and those aspiring to home ownership. A comprehensive and reliable set of data, regularly updated and analysed for emerging trends, is vital for government, policy makers and politicians so that the implications of such trends are properly understood and evaluated, thus giving rise to appropriate policy responses. One of the many problems between 1995 and 2008 is that no one had access to consistent, reliable and adequate data so that the developments taking place in the mortgage markets could be charted. This was one of the reasons why the extent of the growth in both number and quality of subprime mortgages was not observed until the rate of delinquencies and foreclosures began to reach alarming proportions. The purpose of this chapter is to look at the available data and to explain why it was so inadequate.

Sources of mortgage data

The Home Mortgage Disclosure Act, 1975 and the American Housing Survey

Information under this Act and data from the bi-annual American Housing Survey, conducted by HUD and the US Bureau of the Census, is available to the public free of charge. The latter survey is occasionally used to supplement HMDA data but it is not generally used for regulatory purposes. It does provide a picture of changes in patterns of home ownership over the years, as it covers the same 60,000 housing units, including the demographics of the occupants, details of the amount of the mortgage and the interest rate charged, the value of the property, and taxes and other housing costs. However, the HMDA data is the most widely used.

First American Loan Performance (LP)

This is the most important proprietary source of information, with a data base of over 100 million active and paid-off loans tracked for delinquency, prepayment and foreclosure. LP provides loan-level details of non-agency,

publicly traded mortgage and asset-backed securities, including all mortgages purchased by Fannie Mae and Freddie Mac, as well as non-agency securitized loans. It also owns the country's largest servicing performance data repository. One of LP's main attractions is its compilation of the largest credit and prepayment performance data base of subprime loans, but it has less coverage of the subprime market.

Lender Processing Services (LPS)

Lender Processing Services (formerly known as McDash) includes 18 large mortgage servicers, 9 out of the top 10, but does not include portfolio loans. LPS data and analytics grant access to loan-level data on about 40 million active first loans and 9 million second mortgages; more data, it claims, about US mortgages than is provided by any other single company. Its Credit Model exposes subsets of the loan population that have a greater tendency to default by examining interest rate projections, geographical factors and other ways to manage portfolio risk. LPS claims to cover 57% of the market, with larger shares in some areas, whereas LP is thought to cover between 78% and 80%.

The National Delinquency Survey (NDS)

This is published by the Mortgage Bankers Association, and is a long-established source of delinquency and foreclosure rates, based on a sample of about 44 million loans serviced by mortgage companies, commercial banks, thrifts, credit unions and others. The NDS provides quarterly delinquency and foreclosure statistics at the national, regional and state levels. These rates are broken down into loan types (prime, subprime, VA and FHA), fixed and adjustable rate products. At each geographical location, the data is further broken down into total delinquencies, delinquency by past due (30–59 days, 60–89 days, 90 days and over), new foreclosures, foreclosures inventory and seriously delinquent. The total number of loans serviced in each quarter, as compiled in the survey, is also included in the data. As of 2008, there were 55 million loans outstanding.

None of the above sources covers the entire mortgage market. They are all incomplete and are collected on different bases and for different purposes. For this reason, use of the available data is not without its problems. The commercial sources are also expensive and not freely available to researchers and policy makers. Nor do the commercial data providers make information freely available to regulators, perhaps due to perceived conflicts, in that some private subscribers have concluded that matching the data with HMDA data may not be in accordance with their contract terms, and that so doing could possibly provide information which could be used against them in fair lending disputes.

However, more recently, some researchers who have purchased the data have tried to marry up the HMDA with, say, LP data by various complex procedures. One example is the use made by Elizabeth Laderman and Carolina Reid, who sought to draw together the various sources of data in their case to show that the minorities were disproportionately offered and obtained subprime mortgages (defined as higher-priced loans), and that these loans ended in default and foreclosures to a greater extent than for the white population in California. The methodology involved a multi-nominal logit regression to predict the relative probabilities of four categories of mortgages (prime fixed rate; prime adjustable rate mortgages (ARM); subprime fixed rate; and subprime ARM ending in default or foreclosure.)¹ In this paper, they define subprime simply as higher-priced lending, and in passing refer to an important gap in the HMDA statistics: namely, that these do not record loan performance over time.

This is one of several attempts to bring together data from various sources in order to understand both the subprime market and the collapse of the mortgage market in 2008 and 2009. Policy makers and analysts alike sought reliable data sources so that models could be developed to provide a means of understanding the extent of the crisis. It is worth noting that the interest in such research, with a few notable exceptions, began in 2007 and continued throughout 2008 to the present. It is difficult to understand why the HMDA statistics seem to be lacking in such important areas, when these are the statistics on which the various regulators rely, given that a key element of their remit is to ensure the “safety and soundness” of the lenders. The reasons will become clear from a brief history of the Home Mortgage Disclosure Act (HMDA) and its relationship to other legislation.

A brief history of the Home Mortgage Disclosure Act

The HMDA was enacted by Congress in 1975 and is implemented by the Federal Reserve Board’s Regulation C. In 1980, amendments to the HMDA required the Federal Financial Institutions Examinations Council (FFIEC) to compile annually aggregate lending data for each Metropolitan Statistical Area (MSA) by Census tract for certain lenders. The FFIEC is a formal inter-agency body empowered to prescribe uniform principles, standards and reports for the federal examinations of financial institutions by the Federal Reserve, the Office of the Comptroller of the Currency, the Office of Thrift Supervision and the Federal Deposit Insurance Corporation. The only way to change the data requirements was through amending the law, which then allowed the FFIEC to issue regulations.

Further amendments enacted by Congress in 1988, 1989, 1991, 1993 and 1994 introduced additional amendments, not all of which were major changes but still required an act of Congress or Congressional approval.

The coverage of HMDA reporting was extended to non-majority-owned savings and loan service corporations, mortgage banking subsidiaries of bank holding companies, and mortgage banking subsidiaries of savings and loan holding companies (1988), followed by mortgage lenders not affiliated with depository institutions or holding companies. In 1991, through the Federal Deposit Insurance Corporation Improvement Act, an exemption was introduced for non-depository mortgage lenders, but this was restricted a year later, in 1992, so that non-depository mortgage lenders with an office in an MSA are included if they meet either an asset-sized test or a lending activity test.

By 1992, lenders in the above categories were required to report on the disposition of applications for mortgages and home improvement loans and to identify the race, sex, and income of loan applicants and borrowers. In addition, they were required to identify the class of purchaser for mortgage purchases sold and were allowed to explain the reasons for their lending decision. Each lender had to submit a loan application register, showing the applications, loans originated and loans purchased, as well as loans originated through a mortgage broker or correspondent. Other changes introduced in 1994 and 1995 concerned making the data available to the public, and making a modified version of the loan register available to the public within 30 days of the lender's regulatory report.

Further significant changes cover raising the exemption limits for reporting requirements for depository institutions from \$10m to \$28m in assets, effective 1997, and to \$29m in 1998 in accordance with changes to Regulation C, which allowed for an annual adjustment to the exemption limit in accordance with the year-to-year changes in the average of the Consumer Price Index for Urban Wage Earners and Clerical Workers. (The asset threshold for non-depository institutions remained at \$10m.) The threshold was increased to \$30m for 2000, \$31m for 2001, and \$32m for 2002 and 2003. The basis for the annual adjustment had nothing to do with the risks of lending even for small institutions, which had no doubt complained about the regulatory burden.

In June 2003, the Office of Management and Budget issued a revised list of metropolitan statistical areas and metropolitan divisions, micro-statistical areas and combined statistical areas, based on data from the 2000 Census. The reasons for the changes in suitable ways of classifying centers of population are interesting, but beyond the scope of this book; "Census tracts" are regarded as having less stable boundaries than other units (such as counties), and zip codes were rejected as not having specific boundaries. The changes in the definition reflect population shifts as well as changes in travel-to-work patterns. The new boundaries following changes in the 2000 Census added 242 zip codes to the HMDA coverage area and increased the number of reporting lenders by 9%. All of the Census tract changes made a longitudinal analysis of HMDA data more difficult.

Various changes took place for reporting from 2004 onwards. These included an expansion of the coverage of non-depository lenders by adding a \$25m dollar volume test to the existing percentage-based coverage test, based on the above index. The most significant change from the point of view of regulators, Congress, consumer advocacy organizations and analysts was the introduction of data related to loan pricing from January 1, 2004. Lenders were required to report loan originations in which the annual percentage rate (APR) exceeds the yield for comparable Treasury securities by a specified amount or threshold. The thresholds are a spread of 3 percentage points for first lien loans and 5 percentage points for subordinate lien loans. Lenders must also report whether a loan is covered by the Home Ownership and Equity Protection Act (HOEPA), and whether the application or the loan involves a manufactured home. This was an attempt to identify subprime loans, which will be discussed in more detail elsewhere.

Few important changes followed in the years 2004 to 2008, apart from raising the exemption threshold until it reached \$39m for data collection in 2009 and the asset threshold for non-depository institutions remained unchanged at \$10m (or less when combined with the assets of any parent corporation) or originated 100 or more home purchase loans, including refinancings of home purchase loans) in the preceding year. The only other significant change in 2008 was to require the lender to report the spread between the loan's APR and a survey-based estimate of the APRs currently offered on prime loans of a comparable type if the spread is equal to or greater than 1.5 percentage points for a first lien loan or 3.5 percentage points for a subordinate lien loan.

Most of the bureaucratic paraphernalia accompanying the HMDA data has to do with the main purpose of the data collection, which had nothing to do with identifying loans and lenders at risk of default. This is why HMDA data did not help the analysts and economists who tirelessly examined all the statistics in an effort to find out what was really going on the mortgage market. That is clear from an understanding of the purpose of the Act and the context in which it was introduced.

The purpose of the Home Mortgage Disclosure Act

The collection of data was for an entirely different purpose: to ensure that minorities had equal access to credit. The Act itself was a further attempt to improve the effectiveness of existing legislation which included the Fair Housing Act, 1968 and the Truth in Lending Act of the same year. The former was designed to ensure that access to mortgage loans could not be denied on grounds of religion, sex, race, color, national origins, disability or familial status, nor could loans be offered on different terms on those grounds. The Truth in Lending Act required full disclosure of the terms of credit.

Two further Acts followed: the Equal Credit Opportunity Act, 1974, the purpose of which was to end discrimination on the grounds of sex and marital status; then in 1994, President Clinton signed the Home Ownership and Equity Protection Act, of which Section 32 applies to mortgages. The Law sets out clear requirements for the disclosure of information to a prospective borrower. It also bans various lending practices, such as balloon payments (for loans in which the regular payments do not entirely pay off the principal balance, and a lump sum of more than twice the amount of regular payments is required for loans with less than five-year terms); negative amortization; and most prepayment penalties. Such practices would inevitably be an important concern for regulators.

The regulators also had to spend a considerable amount of time both in ensuring that the Community Reinvestment Act was being implemented, and in rooting out discrimination in lending. The extent to which such efforts were successful continues to be a matter of considerable dispute, and is still under discussion in the process of reforming the entire regulatory framework. The reference to the surrounding laws concerned with eliminating discrimination in lending serves to underline the fact that data collection was undertaken with that aim in mind, a major reason for the highly significant omissions in the HMDA data. It was never intended to enable regulators and others to track developments in the mortgage market and thus aid the “safety and soundness” assessments. It was only designed to stamp-out discrimination in lending. But as time went on, the focus of regulators, analysts, economists and policy makers shifted to the behavior of the mortgage market and away from discrimination in lending. This is clear from the increasing number of articles about the market which struggle to make sense out of the HMDA data.

Gaps in the HMDA data

Borrower's income

First of all, although the data record the borrower's income, they do not provide any further information about the borrower's employment, gaps in employment, sources of income used to obtain the mortgage (which could have covered a wide range, such as alimony payments and social security benefits, as indicated in earlier chapters), or the borrower's credit history or substitutes for credit history, such as regular payment of rent, or utility bills. Nor do they include the FICO score. This means that key issues of credit risk are not included in the data, although the inclusion of credit scores was discussed for at least a decade, so that by 2010, the Federal Reserve was still considering what changes should be made to Regulation C, which determines the content and timing of HMDA data.

Loan-to-value ratios and the price of the loan

Other aspects of the risks involved in lending were not included in the data. These consist of two important elements: loan-to-value ratios, and the performance of the loan. The data on purchased loans, that is, loans purchased by lenders in order to improve their CRA ratings, is virtually non-existent, so that a lender's portfolio could include mortgages the lender has originated for which the reporting had to comply with the existing regulations, and purchased loans, which did not. The lender could then package and sell on a bundle of mortgages which included the loans originated by the lender and the purchased loans for which little information was available, either for the regulators or for the buyers of the MBSs.

High LTVs have long been recognized as a risk factor. "Empirical investigations have found that both equity and adverse changes in borrowers' circumstances are related to mortgage loan performance, as predicted by theory (option-based theories and triggering-event theories, such as unemployment). Studies consistently find that the level of equity (whether proxied by the loan-to-value ratio or by a contemporaneous measure of the ratio) is closely related to both the likelihood of default and the size of the loss in the event of default." So wrote Robert Avery and others in 1996, all from the Federal Reserve Board's Division of Research and Statistics, pointing out a significant risk factor which was clearly forgotten in the years that followed, as it was left out of the HMDA statistics.²

Credit scores

As well as high LTVs, the credit scores to which reference has already been made are a significant factor. The borrower's income was recorded, but no further information was required, such as the debt-to-income ratio of the mortgage, employment prospects or the sources of the borrower's income. It appears that no record was made of other debts which the borrower had to service at the time of taking out the mortgage, nor the length of such commitments. As time went on, lenders offered loans without the customary full documentation of the creditworthiness of the borrowers. More than that, loans were issued to borrowers on the basis of their stated income and assets, without documentation, or else on the basis of no income at all. The HMDA statistics do not record such information.

Type of mortgage

The other issue concerns the nature of the mortgage, including such features as the length of the mortgage, and the type of mortgage, such as whether it was a fixed or adjustable rate mortgage, an interest only mortgage, prepayment penalties or a so-called "trigger" mortgage. These features were not required

for HMDA returns; eventually the focus was on higher-priced loans, but this was because such loans were thought to be both subprime and discriminatory. Minorities, it was frequently alleged, had to pay more for their mortgages than the white population, and the price of the mortgage was a means of identifying such discrimination. Consumer groups had stressed the need to end “predatory lending”, and as a result the price of the loan had to be reported from January 1, 2004 onwards.

Price of the mortgage

Whatever the measure used, the rate spread between US Treasury securities and the interest rate charges on mortgages is both misleading and, further, was introduced at just the wrong time. It reflects an assumption that high interest rates on mortgages represent an increase in the reported higher-priced and therefore subprime loans, whereas the changes from year to year may simply reflect changes in the relationship between short- and long-term interest rates.

An analysis of the rate spreads between five-year and 30-year Treasury securities over the past two decades shows that 2003 and 2004 were unusual: the yield curve was steep during that time because of the low short-term interest rates, and as a result, the gap between the two rates was exceptionally large. For example, in mid-January 2004, the yield on five-year Treasuries was 2.97% and on 30-year securities, 4.87%; but the gap narrowed to a limited extent during the year, so that by early January 2005 the yield on five-year Treasuries rose to 3.71% while on 30-year Treasuries it had fallen to 4.72%. Shorter-term interest rates continued to rise throughout 2005, but the longer-term rates continued to rise as well, so that by the end of 2005 the two rates were much closer.

This explains why the gap between the effective interest rate as measured by the APR on most mortgages and the HMDA threshold for reporting higher-priced loans narrowed between 2004 and 2005. For loans priced in the week beginning January 15, 2004, the average APR on the conventional first lien fixed rate 30-year prime loans as reported by Freddie Mac was 5.72%. That meant that the gap between the APR of the typical prime loan priced during that week and the HMDA reporting threshold was 215 basis points, but by December 15, 2005, this had decreased to 140 basis points. Regardless of the nature of the loans and any other factors, the reported incidence of higher-priced loans would have increased during 2005, but subprime lending may not have increased.³ That would be the case, if subprime loans are defined entirely in terms of higher-priced loans.

The situation is more complicated for adjustable rate mortgages (ARMs), as Robert Avery points out in the same article. Under the Federal Reserve Board’s Regulation Z, when calculating the APR for such loans, lenders assume that

the interest rate environment at the time of origination will remain the same for the term of the loan, itself an extraordinary assumption. Because of this “regulatory construct,” when the yield curve is positively sloped, the APRs for ARMs tend to be lower than those for fixed rate loans of similar term and credit risk.

The flattening of the yield curve can have two effects: (i) narrowing the gap between the longer-term rates used for the HMDA reporting threshold and the shorter-term rates used for pricing the loans; and (ii) narrowing the APR gap between adjustable and fixed rate loans because, as short-term interest rates increase, it reduces the differences in APR between fixed and adjustable rate mortgages. The result, according to Avery, was an increase in the proportion of adjustable rate loans that exceeded the HMDA price reporting thresholds, because many relatively high-rate ARMs would not have been reported as higher-priced in 2004, since comparatively low APRs were reported that way in 2005.

By comparison with prime 30-year fixed rate loans, the gap narrowed much more, from 404 basis points at the beginning of 2004 to only 75 basis points at the end of 2005. Avery’s most illuminating comment on this whole analysis lies in his conclusion that “fully quantifying this effect would be difficult even if the HMDA data distinguished fixed from adjustable rate mortgages.”⁴ As will be seen later, it was not only the numbers of ARMs, but also the structure of the latter mortgages and the relationship to changes in the interest rates that were significant. The same article points out that the “HMDA data do not include all of the factors considered in evaluating and pricing credit,” but the rest of the article makes it clear that the purpose was to examine whether or not higher-priced loans were more likely to be extended to minorities, rather than the risks of lending.

Application of reporting requirements

The Federal Reserve Board apparently interpreted the requirement to issue regulations on data for the loans that financial institutions sold, as implying that the data need not be collected for the loans that an institution purchases. This was based on the wording of FIRREA 12 U.S.C., section 2303 (h), which referred only to the loans sold and not to the loans purchased. So loans purchased through securitization and packaged as MBSs soon “lost” the reported information.

The gaps in HMDA reporting requirements identified here are explained by the original purpose of collecting the data, and by understanding how and why that changed over time. The requirement to report on subprime loans did not exist. Instead, HUD chose to identify subprime lending first by the originator, and later by the price of the loans. The next section deals with the identification of subprime loans, first setting out the historical background.

HMDA and the identification of subprime lenders

The introduction of the APR data was regarded as a step forward, since subprime mortgages were identified as subprime if they were originated by a lender on the Subprime and Manufactured Home Lender list maintained by the Department of Housing and Urban Development (HUD). The list consisted of lenders that specialized in subprime or manufactured home lending; it was designed to accompany HMDA data and was available on an annual basis from 1993 to 2005. HUD removed lenders specializing in manufactured housing in 2004, when a means of identifying loans based on manufactured loans was added to HMDA data. It continues to produce the subprime lender list because of concerns that the higher-priced variable might not be sufficient to identify subprime loans. In its description of its own methodology, HUD states that it continues to produce the list because subprime loans do not necessarily have APRs that are above a comparable Treasury APR. Some lenders whom HUD contacted stated that their APR information was incorrectly reported after HUD asked them why their lending portfolios had significant percentages of high APR loans. Then a number of lenders described themselves as “multi-purpose lenders” and pointed out that their high percentage of loans with spreads of 3% or more were due to their broker channels. “These lenders did not feel that they were necessarily subprime.”

In addition, some prime lenders informed HUD that their higher APR loans were not necessarily subprime and could reflect fees and yield spread premiums. For these and other reasons associated with changes in connection with the yield curve, HUD decided to retain its list of subprime lenders. Furthermore, some subprime lenders enter and leave the list, and HUD does not alter the records dating from previous years, so that, for example, if a lender identifies itself as a subprime lender in 2004, that same lender could also have been a subprime lender in some of the preceding years. The list contains a few Alt-A specialists which had similar characteristics to subprime lenders, and were also more likely to have a higher proportion of higher APR loans.

The list itself is based on reviews of each lender’s HMDA filings. Lenders that have higher denial rates, higher shares of mortgage refinancing loans and few loan sales to government-sponsored enterprises or more higher-priced loans are deemed to be subprime lenders. HUD then follows this up with the possible subprime lenders to discuss their area of specialization. The list is updated and revised annually based on the feedback from lenders, policy analysts and housing advocacy groups. Not all lenders specialize in prime or subprime loans, so some subprime loans could be classified as prime and vice versa, but as it was not possible to add subprime loans originated by prime lender, it is possible that the HUD measure understates the number of subprime originations.

HUD then provides a further description of its methodology, which is interesting and worth quoting in full: “First subprime lenders typically have lower origination rates than prime lenders. Second home refinance loans generally account for higher shares of subprime lenders’ total originations than prime lenders’ originations. Third lenders who sell a significant percentage of their portfolios to the GSEs do not typically specialize in subprime lending ... HUD called the lenders identified on the potential list or reviewed their web pages to determine if they specialized in subprime lending. A large number of lenders told us that they offer subprime loans but they do not constitute a large percentage of their overall conventional mortgage originations. Most lenders readily identified themselves as prime or subprime lender specialists. Some lenders identified themselves as all-purpose lenders and broke out their loan portfolios by mortgage product. In a couple of cases, we identified a lender as subprime if their subprime mortgages exceeded 50%.”

In the additional information provided, HUD points out that they treated all credit unions as prime lenders. “Second, we treat the loans sold to the GSEs by subprime lenders as prime loans. Similarly, the government-insured loans originated by subprime lender specialists are treated as government-insured loans ... users of the list should be reminded that not all of the loans reported by subprime lender specialists are subprime loans. In fact, a number of subprime lenders also originate prime loans. Similarly, a number of large and predominately prime lenders originate a significant number of subprime loans.”⁵

Phases of the HMDA

Once again, it should be stressed that the purpose of HMDA data collection was not to provide detailed statistics about the operation of the mortgage market. In a useful analysis, Joseph Kolar and Jonathon Jerrison describe how its history can be divided into three major phases, reflecting the “changes in perception by the industry’s critics in the advocacy community and on Capitol Hill regarding how the industry serves low-income communities and members of minority groups.”⁶

Phases one and two

In the first phase of the Act, HMDA focussed on concerns about loans by banks and thrifts, reflecting the perception that they were taking deposits from low-income neighborhoods but not reinvesting that money by lending in the same neighborhoods. This pre-dated the introduction of FIRREA (the Financial Institution, Reform, Recovery and Enforcement Act, 1989) and will not be described here. The second phase came about as a result

FIRREA, which led to greatly extended reporting requirements, including data about most bank and non-bank lenders in urban areas. The data collected had to include information about race, ethnicity and gender, as well as each applicant's income, and both accepted and rejected applications for loans that did not close. In implementing the legislative changes, the Federal Reserve Bank (FRB) decided to require public disclosure of each application and closed loans, with any personal identifying information removed.

This is where the Boston Fed report of 1992 came in: as noted in Chapter 1, the report argued that there was still a disparity between white and majority rejection rates. Despite criticisms of the original study, much ink was spilt in the following years in scrutinizing the HMDA data to prove or disprove discrimination against minorities. Community activists seized on HMDA data of individual financial institutions and used it to try to delay or prevent bank mergers, to attack their reputations, or to get funding commitments from them.

The 1989 extensions to HMDA were very clearly designed to be a means of identifying discrimination against minorities. The 1989 Conference Report on the legislation stated: "The Home Mortgage Disclosure Act, as amended by this Act, requires amongst other things, reporting by mortgage lenders to the appropriate regulatory agencies. A primary purpose of such reporting is to assist regulatory agencies in identifying possible discriminatory lending patterns that warrant closer scrutiny. To accomplish this purpose it is essential that the data submitted to the agencies be in a form that facilitates the task of identifying any discriminatory lending patterns that disadvantage women, minority borrowers or predominantly minority or low- or moderate-income neighborhoods."⁷

The Federal Reserve Bank of Boston's 1992 study, purporting to show racial discrimination in mortgage lending, though deficient in many respects, did make one useful point, namely that it is not possible to rely on HMDA data alone to determine whether or not a lender had discriminated against an applicant for a loan on the basis of race, ethnicity or sex. In the years that followed, government agencies responsible for enforcing fair lending laws did not regard the HMDA data as sufficient, and also did not use the many statistical analyses of HMDA data, even if additional information had been given about the underwriting processes, which is not reported under HMDA data.⁸

Lenders were equally unimpressed by the Boston Fed Study, but considered it prudent and a matter of good public relations to be seen to be more active in preventing discrimination. A series of agreements was reached between HUD and the Mortgage Bankers Association (MBA): in September 1994 they came together and agreed a voluntary Fair Lending "Best Practices" Agreement, the first of its kind between a federal agency and a national lending trade association. In December 1997, the MBA and HUD renewed this partnership, signing the Master II Agreement. The Fair Lending "Best Practices" initiative

is also an integral part of the National Homeownership Strategy, which aimed to add up to eight million new homeowners by the year 2000. Since then HUD and the MBA have been engaged in a cooperative effort to assist mortgage lenders and mortgage associations in the negotiation and signing of individual Fair Lending accords. The Agreements offer an opportunity for lenders to incorporate fair housing and equal opportunity principles into their mortgage lending standards, as well as to increase low-income and minority lending: *“Lenders are expanding to new and untapped markets, while minority and low-income applications have risen.”*⁹

Lenders responded in more than one way. They began to change their underwriting standards so that impediments to loan approvals were removed, and created what were often called “new products” (inevitably sub-prime loans) for low-income and credit-impaired borrowers (they could be nothing else, since these two categories were often less likely to be able to meet the conditions necessary for prime loans). The lenders also encouraged the GSEs to make their underwriting standards more “flexible” and to purchase loans which were appropriate to that market. This was necessary as bank regulators began to use HMDA data, especially denial disparity rates, to identify institutions on which they would focus fair lending examination efforts.”¹⁰

Phase three

The next stage was what was dubbed the “Predatory Lending/Price Discrimination Model”, which led to the introduction of detailed reporting on pricing and its relationship to the yield on US Treasuries. The model arose from the criticisms by community advocates that lenders were “expressly seeking out minority or low- or moderate-income lenders for non-prime loans at higher rates and more onerous terms than conventional conforming loans.” The Federal Reserve Board responded not only to the change in focus, but also sought to improve the general quality, consistency and presentation of HMDA reporting. The Federal Reserve reviewed and revised Regulation C (which sets out the details of the reporting requirements under HMDA), which was its responsibility, but Congress did not act to alter the underlying legislation.

The changes in Regulation C on January 1, 2004 required not only information about pricing, but also whether the loan is a first lien loan and whether it is covered by the Home Ownership and Equity Protection Act (HOEPA). The Board of Governors of the Federal Reserve System hoped that this would reveal whether or not certain lenders are targeting minorities or lower-income borrowers for above-threshold loans. In their comment on the final rule, it was stated that “obtaining loan pricing data is critical to address fair lending concerns related to loan pricing and to better understand the mortgage market, including the subprime market.”¹¹ The main focus is still on lending to minorities and low- to moderate-income borrowers.

However, the authors point out that the data still fail in their purpose. The federal agencies responsible for enforcing the fair lending laws do not use HMDA data, since they do not include the factors actually considered in deciding whether a mortgage should be offered and at what price. The data simply do not cover “the underwriting factors that are most important to the loan decision, including the lender’s assessment of the applicant’s credit and employment history, the applicant’s assets and debt-to-income and loan-to-value ratios.”¹² The HMDA data did not serve a useful purpose throughout their history until 2010, despite the numerous analyses and attempts to improve the data carried out by so many scholars over the years as they tried to interpret the ways in which the mortgage market was developing.

Recent developments

The Wall Street Reform and Consumer Protection Act, perhaps better known as the Dodd-Frank Act, was signed into law on July 21, 2010. Amongst its many provisions relating to the nature and quality of mortgages, it significantly amends the requirements for data to be submitted under the HMDA to include borrower age and gender, credit score, points and fees at origination, the difference between APR for loan and benchmark rate for all loans, and loan features such as prepayment penalties (HMDA amendment, Section 1094).

The Federal Reserve held a series of public hearings throughout the autumn of 2010 to consider the proposed amendments to Regulation C, which covers HMDA reporting. One such hearing was held at the Federal Reserve Bank of Chicago under the chairmanship of Elisabeth Duke, a member of the Board of Governors, with representatives of researchers, credit unions, community banks and other banks, amongst others.¹³ The rule-making authority for amendments to Regulation C is still with the Federal Reserve until the new Consumer Financial Protection Bureau is established.

Elisabeth Duke restated the purposes of the HMDA data: namely to show whether or not lenders are serving the housing needs of the neighborhoods and communities in which they are located; to help government target public investment to promote private investment where required; and to help identify discriminatory lending practices. Elisabeth Duke stressed that the time had come to reconsider the purposes of data collection in the light of the financial crisis. However, the contributors, for various reasons, nevertheless all recommended additions which would undoubtedly have assisted with the identification of the development of the subprime market and the risks involved. The Act itself requires the introduction of a universal mortgage identifier, which is essential for tracking the performance of a particular mortgage.

Participants in the hearing had a much clearer idea of the data which lenders should be required to report under Regulation C, including information on

foreclosures and loans sold back to lenders on recourse, and a means of identifying reverse mortgages. Listed are the key data which all participants argued should be included:

- Cumulative loan-to-value ratio.
- Total debt-to-income ratio. Some recommended recording the back-end ratio, because it includes other types of monthly debt payment obligations in addition to the mortgage and is a better reflection of the borrower's overall debt burden.
- HMDA origination data linked to other types of mortgage data, especially on loan performance, using the universal loan identification number (required under the Dodd-Frank Act). This would enable analysts (and regulators) to track the performance of loans with different underwriting and product characteristics.
- Information concerning the level of documentation used in underwriting a mortgage, especially with regard to the borrower's income.
- Refinance mortgages, indicating whether it is a cash-out refinance versus a term or rate refinance.
- Data on purchasing loans. Loans originated in low- and moderate-income neighborhoods or to low- and moderate-income borrowers can be purchased by banks from other lending institutions in order to obtain credit on the Community Reinvestment Act lending test. Purchasing lenders do not have to report the same data on purchased loans as they do for directly originated loans. "It is therefore impossible to tell if banks are purchasing higher-cost, potentially abusive loans for which they would get CRA credit. Just to give a sense of scale, in 2006, the tail end of the subprime boom, depository institutions or affiliates purchased over 35,000 conventional home purchase or refinance loans in low- and moderate-income Census tracts in the Chicago region. So there were a substantial number of loans for which banks are likely getting CRA credit that we know little about. Purchased loans should be subject to the same recording requirements as directly originated loans."¹⁴
- Participants said they would value the introduction of appraisal identification numbers as well as unique broker identification numbers from existing and newly created databases.
- They also made a plea for public access to all the data, and for greater ease of accessibility to data on the websites.

At the time of writing, the final version of Regulation C has not yet been published. It may be published in October 2012, according to the Regulatory

Agenda published by the Consumer Financial Protection Bureau, which was published in January 2012. According to the Federal Register, the Bureau published for public comment an interim final rule establishing a new Regulation C (Home Mortgage Disclosure), but it “does not impose any new substantive obligations on persons subject to the existing Regulation C,” apart from those set out in Section 1094 of the Dodd-Frank Act.

However, under Subtitle B of the Act, Minimum Standards for Mortgages, Section 1411, lending standards do appear to have been tightened. These rule changes will come in with the establishment of the Consumer Financial Protection Bureau (CFPB), and it is not yet clear how they will affect the reporting requirements when the responsibility for this is transferred to it from the CFBC. Under the provisions for the ability to repay loans, lenders would not be able to make residential mortgage loans unless they make a “good faith determination, based on verified and documented information, that at the time the loan was consummated, the consumer had reasonable ability to pay the loan according to its terms, and all applicable taxes, insurance and assessments. It also provides that nothing in the title should be construed as requiring the depository institution to apply mortgage underwriting standards that do not need minimum underwriting standards required by the appropriate regulator of the depository.”

The lender is now required to assess the consumer’s ability to repay a residential mortgage loan, based on his or her credit history, current and expected income which s/he is reasonably assured of receiving, current obligations, debt-to-income ratio or residual income after paying non-mortgage debt and mortgage-related obligations, employment status and any other financial resources beyond the equity in the property s/he proposes to buy. The income must be verified by tax returns, payroll receipts or any relevant third-party documents. If the income is properly documented, the lender may also consider seasonality and irregularity of income in the underwriting process. The lender must also consider the consumer’s ability to repay using a payment schedule fully amortizing the loan over its term.

The new legislation does exempt certain streamlined loans made, guaranteed or insured by federal departments or agencies from verification requirements as long as certain conditions are met, such as the borrower not being more than 30 days behind on the existing loan; refinancing does not increase the principal balance outstanding on the prior loan except for fees and charges allowed by the department or agency making, guaranteeing or insuring the refinancing. There are also rules regarding such loans, limiting the extent of the fees and points, the interest rate, which must be lower than the interest rate of the original loan, the refinancing, which must be fully amortized in accordance with the department or agency regulations, and ruling out balloon repayments, amongst others.

The criteria for a qualified mortgage are also set out in Section 1412 of the legislation, which allows the lender and any assignee of a residential mortgage

loan subject to liability under title to presume that the loan meets the “ability to repay” requirement if it is a “qualified mortgage”, that is, if it meets the following conditions:

- If regular repayments do not result in an increase in the principal, and, apart from balloon loans under specified circumstances, does not allow the borrower to defer the principal;
- Except for balloon loans under specified circumstances, does not include a balloon payment that is twice as large as the average of earlier specified payments;
- For which the income and financial resources of the borrower are verified and documented;
- For fixed rate loans, underwriting based on a payment schedule fully amortizing the loan over the loan term and taking into account all applicable taxes, insurance and assessments;
- For adjustable rate loans, underwriting based on the maximum rate permitted under the loan during the first five years, a payment schedule that fully amortizes the loan over the loan term and takes into account all applicable taxes, insurance and assessments;
- Complies with guidelines or regulations established by CFPB relating to ratios of total monthly debt to income or alternative measures of the ability to pay regular expenses after payment of total monthly debt, taking into account the income of the borrower and such other factors CFPB considers relevant and consistent with its purposes;
- For which total points and fees payable in connection with the loan do not exceed 3% of the total loan amount;
- For which the loan term does not exceed 30 years, except as such terms may be extended by CFPB, such as in high-cost areas; and
- In the case of a reverse mortgage, one which meets the standards for a qualified mortgage.

Prepayment penalties are to be phased out for qualified mortgages and are prohibited for all mortgages which are not qualified mortgages. There is an exception for government loans in that HUD, Veterans Administration and the Agriculture and Rural Housing Service, together with the CFPB, prescribe the rules defining the type of loans they insure, guarantee or administer that are qualified mortgages but which may not conform to the rules above.

Apart from the rules governing mortgages, there are new rules governing the activities of appraisers and mortgage brokers, who are now included in

the definition of mortgage originators. They must be qualified and licensed, if applicable, in accordance with the relevant state or federal law.

In July 2011, the responsibility for Regulation C was transferred to the newly established Consumer Financial Protection Bureau (CFPB). The new Regulation C substantially duplicates the Federal Reserve's Regulation C and does not impose any important new requirements, but only adds a few technical revisions of no particular significance, in terms of data that would help regulators understand developments in the mortgage market. The Bureau will be financed from the fees received by the Federal Reserve, rather than Congressional appropriations, but already disagreements over the cost may mean that the Bureau receives \$80m in set-up funds instead of the \$134m in the President's Budget. Professor Elizabeth Warren, who has been charged with establishing the CFPB, referred to caps on the dedicated funding that currently governs it, and pointed out that "it would take nearly twenty years to invest as much money in protecting consumers and consumer financial markets as it cost the government to resolve IndyMac, a single institution that failed in the financial crisis of 2008."¹⁵

Subprime mortgages

As has been established, for much of the period between 1995 and 2008, it was argued that there was no generally accepted definition of "prime" and "subprime" mortgages in the market place, or amongst analysts and perhaps even regulators. Without an agreed definition, it was difficult, if not impossible, to assess the growth and development of the subprime market. It was easy and useful to all the parties involved to base their analyses on the two identifiers the HMDA offered, that is, the number of mortgages offered by the lenders who chose to identify themselves as subprime lenders in the years up to 2004, and then to identify "subprime" mortgages as higher-priced mortgages with all the difficulties of identification that involved.

Another method of identifying subprime lending is to focus on the attributes of the borrower, regardless of the lender involved. In a joint proposal to provide guidance to the financial institutions that engage in subprime lending, the agencies involved in supervising them, that is, the Office of Thrift Supervision*, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Board of Governors of the Federal Reserve System, decided that "subprime" referred to the credit characteristics of individual borrowers.

Subprime borrowers typically have weakened credit histories that include payment delinquencies, and possibly more severe problems such as 'charge-offs', judgments, and bankruptcies. They may also display reduced repayment capacity as measured by credit scores, debt-to-income ratios, or other criteria that may

*Notes to state that the Office of Thrift Supervision ceased to exist in October, 2011, when it was merged with the Office of the Comptroller of the Currency. (OCC).

encompass borrowers with incomplete credit histories. Such loans have a higher risk of default than loans to prime borrowers. Generally, subprime borrowers will display a range of credit risk characteristics that may include one or more of the following:

- Two or more 30-day delinquencies in the last 12 months, or one or more delinquencies in the last 24 months;
- Judgment, foreclosure, repossession or charge-off in the prior 24 months;
- Bankruptcy in the last 5 years;
- Relatively high default probability as evidenced by, for example, a credit bureau risk score (FICO) of 660 or below (depending on the product/collateral), or other bureau or proprietary scores with an equivalent default probability likelihood; and/or
- Debt service-to-income ratio of 50% or greater, or otherwise limited ability to cover family living expenses after deducting total monthly debt-to-service requirements from monthly income.

The agencies add the caveat that the “list is illustrative, not exhaustive and is not meant to define specific parameters for all subprime borrowers,” which is interesting as it does not include any reference to verification of income and employment, including future expectations of employment.¹⁶ By March, 2007, in a Proposed Statement on Subprime Mortgage Lending, also issued by the agencies, they state that the term “subprime” is “defined” in the Expanded Guidance.¹⁷ So by then the agencies regarded subprime lending as being defined by borrower characteristics, perhaps most succinctly defined as a FICO credit score of 660 and below. In its review of non-prime mortgage conditions in the United States, the Federal Reserve Bank of New York stated that “typically a FICO score of 660 or above is required to obtain prime financing.”¹⁸

It is noteworthy, first, that the reference to the FICO score was not recognized in HMDA data and tended to be ignored by analysts; and secondly, that the other aspects of subprime loans were not recognized as being part of the nature of the subprime, or riskier, loan, namely, the combined loan to value of the property at the time of the mortgage origination, and the nature of the loan. Yet in their analysis of credit risk of July 1996, Robert Avery and others recognized the significance not only of FICO scores but also of high LTV ratios, which were much more likely to default, even with conventional mortgages. An analysis of 450,000 loans originated over the period from 1975 to 1983 showed that LTV ratios at origination in the range of 91–95% default more than twice as often as LTVs of 81–90% and more than five times as often as loans with LTVs in the range of 71–80%.¹⁹ A full understanding of the borrower’s credit rating, high LTV ratios and the nature of the loan as serious risk factors is shown, belatedly, in the contents of the Dodd-Frank Act.

If the fact that the combination of low FICO scores and high LTVs was known to increase the risks of default and foreclosure for so long, then why did Congress and the regulators allow subprime borrowing to take place for

well over a decade? The answer lies partly in the way in which the statistics were collected and analysed, and partly because other definitions of subprime lending were used (such as higher-priced loans). In fact, they concealed the true extent of subprime lending.

The Guidance issued by the regulators in 2001 was designed to expand the previously issued examination guidance for supervising subprime lending in 1999. In the introduction, the agencies stated that they continued “to believe that responsible subprime lending can expand credit access for consumers and offer attractive returns. However, we expect institutions to recognize that elevated levels of credit and other risks arising from these activities require more intensive risk management, and, more often, additional capital.”²⁰

The benefits of what should have been described as subprime loans were emphasized at every level, both politically and within government agencies. The view that mortgages should be made available to low- to moderate-income families and minorities as part of the overriding commitment to the American dream of home ownership for all pervaded every aspect of government and almost the entire political class. In April 2005, Alan Greenspan, then Chairman of the Federal Reserve System, praised the “improved access to credit ... [which] has had significant benefits ... Home ownership is at a record high and the number of home mortgage loans to low- and moderate-income and minority families has risen rapidly over the past five years.”²¹ Where the risks were recognized, it was assumed that they could be managed.

Instead, the risks were ignored. The extent of the growth of the subprime market was not observed, because there was no means of observing it. Neither was there a will to see and understand what was happening, because too many legislators, policy makers and regulators either believed or thought it prudent to believe that lending to low- and moderate-income borrowers and minorities was a “good thing,” as it extended home-ownership opportunities to those who would not otherwise be able to share in the American dream. Analysts lacked the raw data to be able to describe what was happening, and no amount of applying sophisticated modeling techniques would replace such a lack of data. Articles which began by stating that, based on HMDA data, such and such a conclusion could be reached, should, unfortunately, be disregarded, since it was not possible to arrive at any conclusion even about the extent of racial discrimination based on such information. Even combining it with LP or MBA data did not help, because they were not collected in the same way; nor is it possible to be sure that sets of raw data were about the same sets of mortgages.

The way forward is to review all minimum standards for mortgages (which includes fully documented and verified information that the borrower at that time had a reasonable ability to repay the loans according to its terms), the additional HMDA requirements, and the Dodd-Frank Act’s mandatory requirement that a publicly available mortgage data base should be created. The reference in Section 1447 is to a default and disclosure data base, recording

the number and percentage of loans that are delinquent by more than 30 days, 90 days, that are real-estate owned, and that are in foreclosure. This and such other information that the Secretary of Housing and the new Consumer Protection Bureau require shall be recorded in the data base.

The Uniform Mortgage Data Program was announced in May 2011, when the FHFA directed the GSEs to develop uniform standards for data reporting on mortgage loans and appraisals, designed to improve the consistency, quality and uniformity of data collected at the front-end of the mortgage process. This should improve the quality of the mortgage purchases and thus reduce the repurchase risk for originators. The FHFA Director argued that developing standard terms, definitions and industry-wide data-reporting protocols will also create new efficiencies for originators and appraisers.²² It is not clear how this fits in with the revised HMDA data. What is clear, however, is that data collection is primarily of interest and importance to the prudential supervisor, as the huge number of subprime mortgages led to the collapse or forced takeovers of so many banks and thrifts. Further clarity on the function of a publicly accessible data base is required, and once again the proposals on the table are still affected by the “affordable housing” ideology and concerns with lending to minorities and low-income families, rather than on the price that all will have to pay if there is another surge in subprime lending in the future.