THE BOSTON HMDA DATA SET

The Boston HMDA data set was collected by researchers at the Federal Reserve Bank of Boston. The data set combines information from mortgage applications and a follow-up survey of the banks and other lending institutions that received these mortgage applications. The data pertain to mortgage applications made in 1990 in the greater Boston metropolitan area. The full data set has 2925 observations, consisting of all mortgage applications by blacks and Hispanics plus a random sample of mortgage applications by whites.

To narrow the scope of the analysis in this chapter, we use a subset of the data for single-family residences only (thereby excluding data on multi-family homes) and for black and white applicants only (thereby excluding data on applicants from other minority groups). This leaves 2380 observations. Definitions of the variables used in this chapter are given in Table 9.1.

These data were graciously provided to us by Geoffrey Tootell of the Research Department of the Federal Reserve Bank of Boston. More information about this data set, along with the conclusions reached by the Federal Reserve Bank of Boston researchers, is available in the article by Alicia H. Munnell, Geoffrey M.B. Tootell, Lynne E. Browne, and James McEneaney, "Mortgage Lending in Boston: Interpreting HMDA Data," *American Economic Review*, 1996, pp. 25 − 53.

Two datasets have been included on the website. HMDA_AER is the full HMDA data set used in the Munnell, Tootell, Browne and McEneaney paper. HMDA_SW is contains the 2380 observations that are used in the analysis in Chapter 9.

The description of the data set given below was supplied by the Federal Reserve Bank of Boston.

Federal Reserve Bank of Boston
Research Department

General Research Data Set

FOLLOW-UP TO 1990 HOME MORTGAGE DISCLOSURE ACT (HMDA) REPORTS
LOAN/APPLICATION REGISTER (LAR)

DETAILED LIST OF VARIABLES
(Abbreviated as Question Number on HMDA Surveys)

I.   (**SEQ**) – sequence number, unique identifier for observations

II.   Original HMDA data
        A.   Loan Information
             1.   (**S3**) Type of Loan
                      Codes:
                      1 – Conventional
             3.   (**S4**) Purpose of Loan
                      Codes:
                      1 – Home purchase
                      2 – Home improvement
                      3 – Refinancing
                      4 – Multifamily
             4.   (**S5**) Occupancy
                      Codes:
                      1 – Owner-occupied
                      2 – Not owner-occupied
                      3 – Not applicable
             5.   (**S6**) Loan amount (in thousands)
             6.   (**S7**) Type of action taken
                      Codes:
                      1 – Loan originated
                      2 – Application approved but not accepted
                          by applicant
                      3 – Application denied
                      4 – Application withdrawn
                      5 – File closed for incompleteness
                      6 – Loan purchased by institution

        B.   Property Location:
             1.   (**S9**) MSA (Boston Metropolitan Statistical Area) number where property
                  located
             2.   (**S11**) County where property located
                      Codes:
                      1 – Suffolk
                      0 – Other

C.   Applicant Information
    1.   (**S13**) Applicant race
         Codes:
         1 – American Indian or Alaskan Native
         2 – Asian or Pacific Islander
         3 – Black
         4 – Hispanic
         5 – White
         6 – Other
         7 – Information not provided by applicant in
                    mail or telephone application
         8 – Not applicable
    2.   (**S14**) Co-applicant race[*]
    3.   (**S15**) Applicant sex
         Codes:
         1 – Male
         2 – Female
         3 – Information not provided by applicant in
                    mail or telephone application
         4 – Not applicable
    4.   (**S16**) Co-applicant sex[*]
    5.   (**S17**) Applicant income (in thousands)

D.   Other Loan Information
    1.   (**S18**) Type of purchaser of loan
         Codes:
         0 – Loan was not sold in calendar year covered by register
         1 – FNMA
         2 – GNMA
         3 – FHLMC
         4 – FMHA
         5 – Commercial bank
         6 – Savings bank or savings association
         7 – Life insurance company
         8 – Affiliate institution
         9 – Other type of purchaser
    2.   (**S19A**) Original HMDA report, reasons for denial
         Codes:
         1 – Debt-to-income ratio
         2 – Employment history
         3 – Credit history
         4 – Collateral
         5 – Insufficient cash
         6 – Unverifiable information
         7 – Credit application incomplete
         8 – Mortgage insurance denied
         9 – Other

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[*] Same codes as preceding variable

III.   Follow-up Survey Data
1.   (**S19B, S19C, S19D**) Additions or corrections to reasons for denial from Boston survey data[*]
2.   (**S20**) Number of units in property purchased
3.   (**S23A**) Marital status of applicant
         Codes:
         M – Married
         U – Unmarried (includes single, divorced and widowed)
         S – Separated
4.   (**S24A**) Number of dependents claimed by applicant
5.   (**S25A**) Years employed in applicable line of work
6.   (**S26A**) Years employed on applicable job
7.   (**S27A**) Self-employed applicant
         Codes:
         0 – Not self-employed
         1 – Self-employed
8.   (**S30A**) Base employment monthly income of applicant (in dollars)
9.   (**S30C**) Base employment monthly income of coapplicant (in dollars)
10. (**S31A**) Total monthly income of applicant (in dollars)
11. (**S31C**) Total monthly income of coapplicant (in dollars)
12. (**S32**) Proposed monthly housing expense (in dollars)
13. (**S33**) Purchase price (in thousands)
14. (**S34**) Other financing (in thousands)
15. (**S35**) Liquid assets (in thousands)[**]
16. (**S39**) Number of commercial credit reports in loan file
17. (**S40**) Applicants' credit history meets loan policy guidelines for approval
         Codes:
         0 – No
         1 – Yes
18. (**S41**) Number of separate consumer credit lines on credit reports
19. (**S42**) Credit history - mortgage payments
         Codes:
         1 – No late mortgage payments
         2 – No mortgage payment history
         3 – One or two late mortgage payments
         4 – More than two late mortgage payments
20. (**S43**) Credit history - consumer payments
         Codes:
         1 – No "slow pay" or delinquent accounts, but sufficient references for determination
         2 – One or two "slow pay" account(s) (each with one or two payments 30 days past due)
         3 – More than two "slow pay" accounts (each with one or two payments 30 days past due); or one or two chronic "slow pay" account(s) (with three or more payments 30 days past due in any 12-month period)
         4 – Insufficient credit history or references for determination

[*] Same codes as preceding variable
[**] Applicant and coapplicant data were summed if separate statements were completed.

       5 – Delinquent credit history (containing account(s) with a history of
           payments 60 days past due)
       6 – Serious delinquencies (containing account(s) with a history of
           payments 90 days past due)

21. (**S44**) Credit history - public records
    0 – Information not considered
    0 – No public record defaults
    1 – Bankruptcy
    1 – Bankruptcy <u>and</u> charge offs
    1 – One or two charge-off(s), public record(s), or collection action(s),
       totaling less than $300
    1 – Charge-off(s), public record(s), or collection action(s) totaling more
       than $300

22. (**S45**) Debt-to-income ratio (the banks' calculation of housing
expense/income)

23. (**S46**) Debt-to-income ratio (the banks' calculation of total
obligations/income)

24. (**S47**) Fixed or adjustable rate loan (F or A)
    Codes:
    1 – Adjustable
    2 – Fixed
    3 – Not Available

25. (**S48**) Term of loan (months)

26. (**S49**) Special loan application program

27. (**S50**) Appraised value (in thousands)

28. (**S51**) Type of property purchased
    Codes:
    1 – Condominium
    2 – Single family
    3 – 2 to 4 families

29. (**S52**) Private mortgage insurance (PMI) sought?
    Codes:
    0 – No or information not available
    1 – Yes

30. (**S53**) Private mortgage insurance (PMI) denied?
    Codes:
    0 – PMI approved, did not apply, or information not available
    1 – PMI sought and denied

31. (**S54**) Was a gift or grant as part of down payment?
    Codes:
    0 – No or information not available
    1 – Yes

32. (**S55**) Was there a co-signer for the application?
    Codes:
    0 – No or information not available
    1 – Yes

33. (**S56**) Unverifiable information
    Codes:
    0 – Not applicable (all verifiable)
    1 – Some information unverifiable

34. (**S57**) Number of times application was reviewed by underwriter

III.   Variables Added for Analysis, taken from the Census Survey
        1. (**netw**) Net worth (Total assets - Total liabilities)[***]
        2. (**uria**) Probability of unemployment by industry
        3. (**rtdum**) Minority population share in tract
            Codes:
            0 – if ≤ 0.30
            1 – if > 0.30
        4. (**bd**) Boarded-up value of tract
            Codes:
            0 – if ≤ MSA median
            1 – if > MSA median
        5. (**mi**) Median tract income
            Codes:
            0 – if ≤ MSA median
            1 – if > MSA median
        6. (**old**) Applicant age
            Codes:
            0 – if ≤ MSA median
            1 – if > MSA median
            2 – missing
        7. (**vr**) Tract vacancy
            Codes:
            0 – if ≤ MSA median
            1 – if > MSA median
        8. (**school**) Years of education
        9. (**chvalc**) Change in median value of property in a given tract, 1980-1990

IV.   Dummy variables created from HMDA data
        1. (**dnotown**) Owner occupied property
            0 – Owner occupied
            1 – Not owner occupied, or information not available
        2. (**dprop**) Type of property
            0 – Condominium or single family
            1 – 2-4 families

Notes:
1. 999,999.4 is used in the database to signify missing observations in numerical columns.
2. NA is used to signify missing observations in character columns.

[***] Applicant and coapplicant combined