

## Section 4: Home Mortgage Disclosure Act (HMDA) Data Analysis

### **Introduction**

The Federal Financial Institutions Examination Council (FFIEC) gathers data on home mortgage activity from the federal agencies that regulate the home mortgage industry. The data contain variables that facilitate analysis of mortgage lending activity, such as race, income, census tract, loan type, and loan purpose. The FFIEC provides the Home Mortgage Disclosure Act (HMDA) databases and retrieval software on compact disc. Data can be summarized within the software package or downloaded in its raw form for analysis. For this analysis, the FFIEC databases were utilized for 1997 through 2005.

The data reported here are summarized using tables, charts, and maps provided at the end of the section. Table 4.1 and 4.2, on pages 75 and 76 compare the loan activity in Waco with McLennan County as a whole. Tables 4.3 and 4.4, on pages 77 and 78, and Charts 4.1 through 4.4, on pages 79 and 80, provide information for the county. The maps, provided at the end of this section, present data by census tract for the county. The analysis will focus on the tracts within Waco and provides a description of the mortgage industry specific to the city.

### **4.1. Analysis**

Table 4.1 examines home loan activities in Waco and McLennan County. The data are presented by loan type, ethnicity, income, and loan purpose. In the county, White applicants represented the largest number of loan applicants at 68,651. Origination rates (the percentage of applications that result in loans being made) for Whites were over 55 percent. African-Americans were the next largest applicant group with 7,975 applications submitted and an origination rate of over 36 percent. Hispanics had 6,199 applications and an origination rate of about 49 percent. Asian origination rates were at about 51 percent, but there were only 784 applications reported. High-income applicants showed both the highest number of applications, at 67,240, and the highest origination rate, at 54 percent. Both the number of applications and the origination rates drop significantly for all other income groups, with 10,310 applications from middle-income applicants and an origination rate of over 34 percent. Conventional loans account for the largest number of

applications for loan type, at 92,556, with an origination rate of over 45 percent. Home purchase loans show the highest number of applications for loan purpose, at 56,450, and the highest origination rate of about 48 percent. Home improvement loans had the second highest origination rate at over 46 percent with 10,270 loan applications. Refinance loans show 42,945 applications and an origination rate of over 42 percent.

Isolating the tracts within Waco for Loan Type, "Conventional" shows the highest number of loan applications at 40,908 and the highest percentage of loan originations at about 47 percent of all applications. FHA loans show an origination rate of about 46 percent and VA and other loans origination rates of over 56 percent. For loan purpose, about 48 percent of home purchase loans were originated out of 29,552 applications. The origination rates for home improvement and refinance loans were over 46 percent. In Waco, White applicants had the highest origination rate of nearly 60 percent and the highest number of loan applications at 28,662. The origination rate for Hispanics was over 49 percent with 4,284 applications. The origination rate for African-Americans was over 39 percent with 3,662 applications. The origination rate for the very low-income group was over 26 percent, compared to over 56 percent in high-income group.

Table 4.2 displays the HMDA data for the same data categories (Loan Type, Ethnicity, Income, and Loan Purpose). On this table, however, percentages are taken within category, rather than demonstrating the percentage of applications that result in loan originations. For example, the first percentage in the "% of Originations" column indicates that 84.0 percent of originations in the county were for conventional loans compared to a 45.2 percent origination rate in Table 4.1. For comparison, ethnic percentages were included under the "%Pop." column to compare the percentage of originations by ethnic group to their percentage in the population.

Within the "Loan Type" category, "Conventional" shows the highest percentage at 84 percent of all originations in McLennan County. FHA loans, which are government insured and have more stringent lending criteria, were about 11 percent of all originations.

For Ethnicity, "White" shows the highest percentage of originations at nearly 77 percent of the total originations in the county. The percentage of Whites in the population was about 72 percent.

Hispanic applicants accounted for 6.1 percent of all originations, with 17.9 of the total population in the county. African-American applicants account for 5.8 percent of originations, while their presence in the population was 15.2 percent of all residents. Asian applicants represent 0.8 percent of originations with 1.2 percent of the total population in the county.

The highest income group (>120% median) displays the highest percentage of originations, at about 73 percent of all originations. In contrast, the very low-income group accounts for less than four percent of all originations.

The loan purpose data for the county show that home purchase loans were the most frequent purpose at 54 percent. Refinance loans accounted for over 36 percent of the originations. Home improvement loans accounted for over nine percent of all originations.

In Waco, about 81 percent of all originations were from conventional loans. FHA loans were over 12 percent of the originations. In the city, Whites had the highest percentage of origination, over 72 percent of the total. The percentage of Whites in the population was about 61 percent. Hispanic applicants accounted for about nine percent of all originations and about 23 percent of the total population. African-American applicants account for over six percent of originations, while their presence in the population was 22.6 percent of all residents. Asian applicants represent 0.7 percent of originations with 1.5 percent of the total population. Native American applicants represented 0.3 percent of originations with 0.5 percent of the total population. The highest income group (>120% median) displays the highest percentage of originations at about 82 percent of all originations in the city. In contrast, the very low-income group accounts for less than one percent of all originations. The loan purpose data show that home purchase loans were the most frequent purpose at about 60 percent of all originations in the city. Refinance purchase loans accounted for over 30 percent of the originations. Home improvement loans accounted for ten percent of all originations in the city.

Table 4.3, examines the HMDA data more closely with respect to the possibility of redlining within McLennan County census tracts. Redlining relates to the avoidance of certain locations by mortgage lenders in response to undesirable characteristics of the area. There was only one very

low-income census tract, (census tract number 22) with six applications from the high-income applicants in that tract and three of those originated. There were no applications from the other income groups in the very low-income tract. As shown on the Map 1.8, on page 18, this tract had a high percentage of rental units, which explains the low number of loan applications. So, the origination rates in low-income tracts are compared to high-income tracts to find the evidence to support the possibility of redlining.

Origination rates for Waco indicate that Very Low-Income applicants (<51% median income) were successful in obtaining mortgage loans 26.2 times per 100 loan application submissions, Low-Income applicants (51-80% median income) were successful 31.6 times per 100 submissions, Moderate-Income (81-95% median income) and Middle-Income applicants (96-120% median income) had an origination success ratio of 37.0 percent, and High-Income applicants (>120% median income) had a 56.3 percent success ratio. When isolating the Low-Income census tracts, the origination rates are lower than the overall city origination rates. In Low-Income tracts, Low-Income applicants generated originations 26.6 percent of the time, a five percentage point decrease from their overall success in the city. Similar differences in origination rates are noted in the other income groups. Moderate-Income applicants in low-income tracts had a 28.6 percent origination rate, 8.4 percentage points lower than in the city overall. High-Income applicants in low-income tracts had a 58.7 percent origination rate, 3.8 percentage points lower than in the city overall.

Comparing Low-Income tracts to High-Income tracts, moderate differences are noted between origination rates. Within High-Income tracts, Very Low-Income applicants generated a 36.9 percent origination rate, 10.7 percentage points higher than Very Low-Income applicants in the Low-Income tracts. High-Income applicants generated a 58.1 percent origination rate within High-Income tracts, 5.6 percentage points higher than in Low-Income tracts. Origination rates for Middle-Income applicants in High-Income tracts were 13.5 percentage points higher than in the Low-Income tracts. While this analysis does not provide conclusive proof that redlining exists, it is reasonable to expect that higher-income applicants would have relatively equal origination rates across all census tracts. The relatively small number of applications in the lower income tracts, however, makes any conclusions about redlining impossible.

Table 4.4 compares origination rates between minorities and White applicants for the various loan purposes and income groups in McLennan County. For all loan purposes shown, White origination rates are higher than minorities. For home purchase loans, origination rates were over 56 percent for Whites and about 47 percent for minorities, a difference of 9.4 percentage points. White applicants for home improvement loans were successful about 22.3 percentage points more often than minorities. The rates for refinance loans show over 16.6 percentage points difference.

Looking at the income group comparison in the county, minorities have origination rates 13.4 percentage points lower than Whites in the High-Income group (>120% MFI) and 6.7 percentage points lower in the Middle-Income group (96-120% MFI). In the Very Low-Income group (<51% MFI), Minority origination rates were 9.5 percentage points lower. In the Low-Income group (51-80% MFI), Minority origination rates were 5.3 percentage points lower.

Chart 4.1 provides a look at origination rates by census tract income for the loan types: conventional, FHA, and VA. Government-insured loans have higher origination rates than conventional loans with the exception of high income group. In Middle-income group, the origination rates of conventional and government-insured loans are almost equal.

Chart 4.2 shows origination rates by ethnicity and income of the census tract. Whites show the highest origination rates of all races in all income groups of tracts except Low-Income tracts. Though the origination rates in Asian and Native American categories show higher origination rates than Whites in Low-Income tracts and similar origination rates to Whites in the other income group of tracts, they represent a very low number of applications.

Chart 4.3 looks at origination rates by the income of the applicant and the income of the census tract for the loan application. There was only one very low-income census tract (tract number 22) with six applications from the high-income applicants in that tract and three of those were originated. There were no applications from the other income groups in the very low-income tracts. The low number of applications can be explained by higher percentage of rental units in the tract. Ideally, origination rates should be similar within the income groups across the tracts of different

incomes. The origination rates of all the income groups increase as the tract income increases. This indicates that families with similar income are more likely to be successful if they are buying in a higher income census tract, which suggests redlining may be occurring in lower income tracts in the community. The relatively small number of applications in the lower income tracts, however, makes any conclusions about redlining impossible.

Chart 4.4 looks at origination rates by loan purpose and the income of the census tract. Applications for all loan types have a higher success rate as the tract income increases, as do home improvement loans, peaking at 60 percent for the High-Income tracts. The origination rate of refinance loans in Very Low-income tracts at 100 percent represents only three applications. Home purchase and refinance loans have similar origination rates in Middle- and High-income tracts and in Low- and Moderate-income tracts home purchase loans have higher origination rates than refinance loans. Home improvement loans show the highest origination rates in Middle- and High-income categories and the lowest origination rates in the Low- and Moderate-income tracts.

Maps 4.1 and 4.3 through 4.6 look at loan activity by census tract. The ratio of denials to originations was calculated for each loan purpose and loan type. Tracts shown in the darkest red indicate those areas where 75 or more applications are denied for every 100 applications that are originated. The red areas show 50 to 75 applications denied for every 100 applications originated. The mauve areas show 25 to 50 applications denied for every 100 applications originated. The pink areas show 0 to 25 applications denied for every 100 applications originated.

Map 4.2 shows the total number of loan originations by census tract. Less active areas are shown in the lighter colors, with the most active areas in dark red. Unlike the other maps, the light areas are meant to indicate areas of concern, either for a lack of loan activity or for their low rate of application originations in relation to denials. Maps 4.3 and 4.4 compare the ratio of loan denials to originations for Conventional loans and Government Backed loans. Maps 4.5 and 4.6 compare the ratio for home purchase loans and home improvement loans.

A look at reasons for denial showed that the majority are related to the applicants' credit history, debt-to-income ratio, and collateral. In Waco, about 3,630 denials (51.0%) were related to the

applicants' credit history in the eight years of the study. Nearly 1,140 (16.1%) denials were related to the applicants' debt-to-income ratio, and 808 denials (11.4%) were blamed on collateral. Other possible reasons for not originating a loan included incomplete applications, employment history, mortgage insurance denied, unverifiable information, and insufficient cash for downpayment and/or closing costs.

## 4.2. Conclusions

In Waco, the least success in loan origination was found in the refinance loan sector and the highest success was in the home purchase loan sector. These results are similar to the results in McLennan County overall. During the period between 1997 and 2005, the majority of loan denials were related to the applicants' credit history.

Overall, the origination rates among Whites were higher than that of minorities in all loan types home purchase, home improvement and refinance loans. Home purchase loans were the most frequent loan type in the city and the county. Though, the Hispanics accounted for the second highest number of applications after Whites, the percentage of loan applications and originations were lower compared to their percentage in population in the city. Similarly, lower number of applications and origination rates are noted among African-Americans. Though there is a disparity in the origination rates between Hispanics and Whites, the difference is not as high as the difference in loan applications in comparison to the population size of Hispanics. This indicates that the issue is more with the lack of applications from Hispanics than with the loan denials. The possible reasons for lower number of applications from Hispanics could be due to language and cultural barriers that impede them in understanding the loan applications and mortgage process. Among African-Americans the issue is both the lack of applications and the lower origination rates.

Overall, the mortgage markets seems to have peaked in 2000 and 2001 Opportunities still exist for borrowers to buy housing or refinance existing higher interest loans. Rising interest rates appear to be having an impact on lending activity in the city, with the number of applications slowing in recent years.

Table 4.1

Home Mortgage Disclosure Act (HMDA) Analysis  
 Comparison of Number of Loan Applications and Origination Rates  
 Waco and McLennan County  
 1997 - 2005

	Waco		McLennan County	
	Number of App.s	Origin. Rate	Number of App.s	Origin. Rate
<b>Loan Type:</b>				
Conventional	40,908	46.6%	92,556	45.2%
FHA	6,340	45.8%	12,104	43.7%
VA & Other	2,895	56.4%	5,140	52.7%
<b>Ethnicity:</b>				
Native	145	51.7%	536	47.0%
Asian	313	56.2%	784	50.8%
Black	3,662	39.2%	7,975	36.1%
Hispanic	4,284	49.3%	6,199	48.7%
White	28,662	59.8%	68,651	55.5%
Other	300	46.7%	483	39.3%
Not Provided	8,212	28.5%	16,479	27.4%
Unknown	4,565	4.4%	8,693	5.4%
<b>Income:</b>				
<51% median (very low)	652	26.2%	5,751	34.1%
51-80% median (low)	2,662	31.6%	6,714	33.0%
81-95% median (moderate)	1,712	37.0%	7,184	40.5%
96-120% median (middle)	4,155	37.0%	10,310	34.3%
>120% median (high)	34,271	56.3%	67,240	54.0%
Unknown	6,691	17.1%	12,601	23.1%
<b>Loan Purpose:</b>				
Home Purchase	29,552	47.5%	56,450	47.6%
Home Improvement	5,104	46.4%	10,270	46.1%
Refinance	15,377	46.3%	42,945	42.2%
Multifamily Dwelling	110	72.7%	135	73.3%
<b>Totals</b>	<b>50,143</b>	<b>47.1%</b>	<b>109,800</b>	<b>45.4%</b>

Table 4.2

Home Mortgage Disclosure Act (HMDA) Analysis  
 Comparison of Originations Within Categories  
 City of Waco and and McLennan County  
 1997- 2005

	# of Originations	Waco % of Originations	%Pop.	# of Originations	McLennan County % of Originations	%Pop.
<b>Loan Type:</b>						
Conventional	19,083	80.8%		41,846	84.0%	
FHA	2,903	12.3%		5,290	10.6%	
VA & Other	1,633	6.9%		2,679	5.4%	
<b>Ethnicity:</b>						
Native	75	0.3%	0.5%	252	0.5%	0.5%
Asian	176	0.7%	1.5%	398	0.8%	1.2%
Black	1,435	6.1%	22.6%	2,881	5.8%	15.2%
Hispanic	2,112	8.9%	23.6%	3,017	6.1%	17.9%
White	17,139	72.6%	60.8%	38,102	76.5%	72.2%
Other	140	0.6%	12.4%	190	0.4%	9.2%
Not Provided	2,341	9.9%		4,509	9.1%	
Unknown	201	0.9%		498	1.0%	
<b>Income:</b>						
<51% median	171	0.7%		1,962	3.9%	
51-80% median	841	3.6%		2,216	4.4%	
81-95% median	634	2.7%		2,910	5.8%	
96-120% median	1,538	6.5%		3,537	7.1%	
>120% median	19,293	81.7%		36,317	72.9%	
Unknown	1,142	4.8%		2,905	5.8%	
<b>Loan Purpose:</b>						
Home Purchase	14,048	59.5%		26,887	53.9%	
Home Improvement	2,369	10.0%		4,734	9.5%	
Refinance	7,122	30.2%		18,127	36.4%	
Multifamily	80	0.3%		99	0.2%	
Totals	23,619	100.0%		49,847	100.0%	

Table 4.3

Analysis of Home Mortgage Disclosure Act Data, 1997-2005  
 Analysis of Redlining in Low-Income Census Tracts

	McLennan County Number of Applications	Origination Rate
<b>Low-Income Tracts</b>		
<51% median	375	26.1%
51-80% median	447	26.6%
81-95% median	269	28.6%
96-120% median	335	31.9%
>120% median	1,745	52.5%
Unknown	341	24.6%
<b>High-Income Tracts</b>		
<51% median	1,427	36.9%
51-80% median	1,513	36.7%
81-95% median	6,185	23.7%
96-120% median	2,652	45.5%
>120% median	34,307	58.1%
Unknown	3,833	35.7%
<b>Difference Between High and Low Tracts (percentage point difference)</b>		
<51% median		10.7%
51-80% median		10.1%
81-95% median		-4.9%
96-120% median		13.5%
>120% median		5.6%
<b>Origination Rates for Waco</b>		
<51% median		26.2%
51-80% median		31.6%
81-95% median		37.0%
96-120% median		37.0%
>120% median		56.3%
Unknown		17.1%

Table 4.4  
Analysis of Home Mortgage Disclosure Act Data

HMDA Activity for McLennan County, 1997 - 2005

	# Apps.	% of Apps.	% Orig.	% Denied
<b>Home Purchase Loans</b>				
Minorities	8,504	15.1%	46.9%	26.6%
White	36,959	65.5%	56.3%	17.9%
Not Provided	10,987	19.5%	19.1%	12.6%
<b>Home Improvement Loans</b>				
Minorities	1,904	18.5%	35.8%	48.8%
White	6,141	59.8%	58.1%	26.7%
Not Provided	2,225	21.7%	21.7%	47.8%
<b>Refinance Loans</b>				
Minorities	5,554	12.9%	37.1%	31.3%
White	25,500	59.4%	53.7%	17.0%
Not Provided	11,891	27.7%	20.0%	26.5%
<b>All Loan Purposes</b>				
Minorities	15,977	14.6%	42.2%	30.9%
White	68,651	62.5%	55.5%	18.3%
Not Provided	25,172	22.9%	19.9%	22.3%
<b>Income Groups</b>				
<b>&lt;51% MFI</b>				
Minorities	1,403	24.4%	26.8%	51.7%
White	3,095	53.8%	36.3%	40.1%
Not Provided	1,253	21.8%	14.7%	52.0%
<b>51 to 80% MFI</b>				
Minorities	1,621	24.2%	34.9%	40.9%
White	3,899	58.1%	40.2%	31.7%
Not Provided	1,195	17.8%	18.3%	47.1%
<b>81 to 95% MFI</b>				
Minorities	391	22.8%	38.2%	37.5%
White	1,035	60.4%	43.6%	27.4%
Not Provided	285	16.8%	21.3%	40.9%
<b>96 to 120% MFI</b>				
Minorities	846	20.4%	38.9%	35.8%
White	2,609	62.8%	45.6%	26.5%
Not Provided	701	16.8%	21.8%	39.9%
<b>&gt;120% MFI</b>				
Minorities	4,387	12.8%	46.9%	26.2%
White	24,417	71.2%	60.3%	15.0%
Not Provided	5,467	16.0%	31.5%	29.3%
<b>Not Provided</b>				
Minorities	419	6.2%	42.4%	9.1%
White	1,679	25.1%	53.1%	7.2%
Not Provided	4,593	68.7%	6.7%	2.1%

Chart 4.1: Origination Rates by Loan Types by Income of Census Tracts

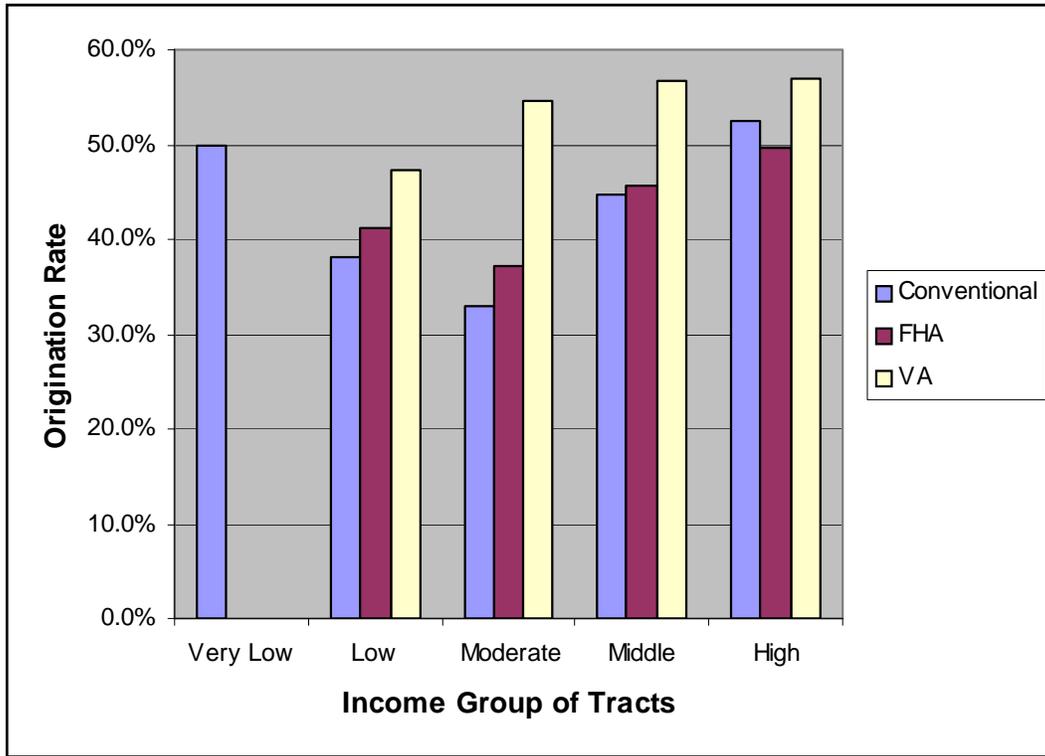


Chart 4.2: Origination Rates by Ethnicity by Income of Census Tracts

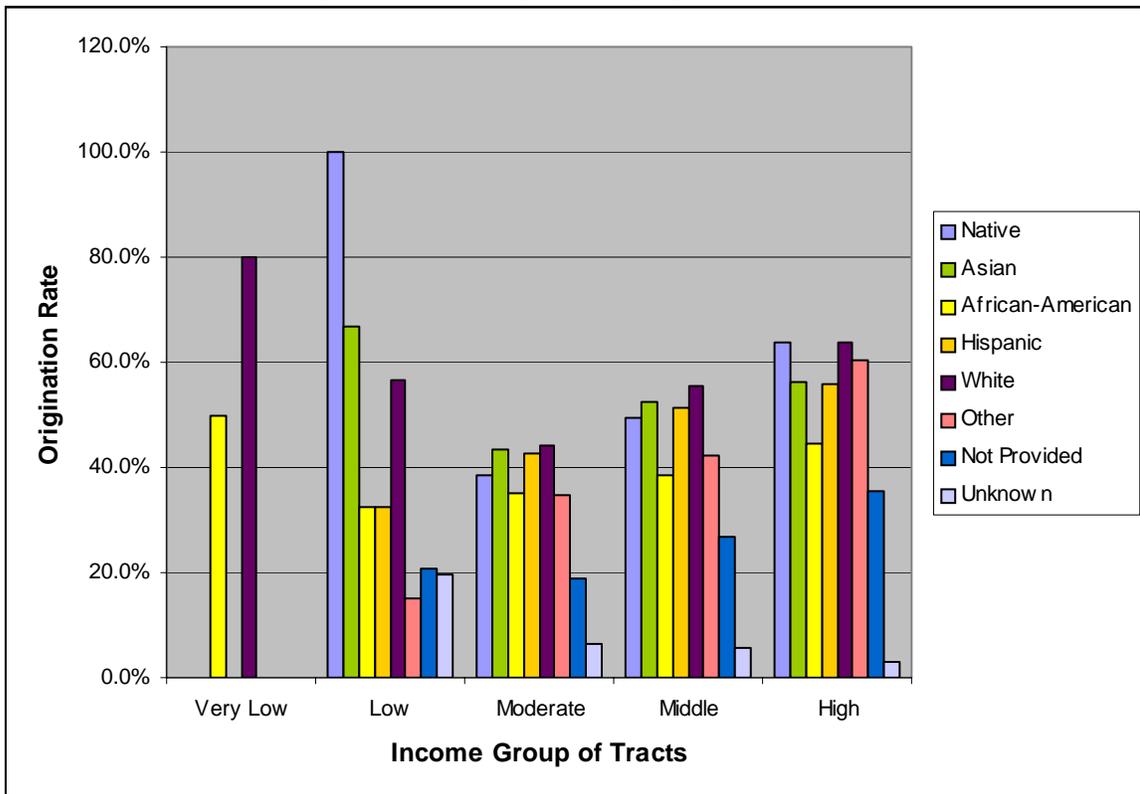


Chart 4.3: Origination Rates by Applicant Income by Income of Census Tracts

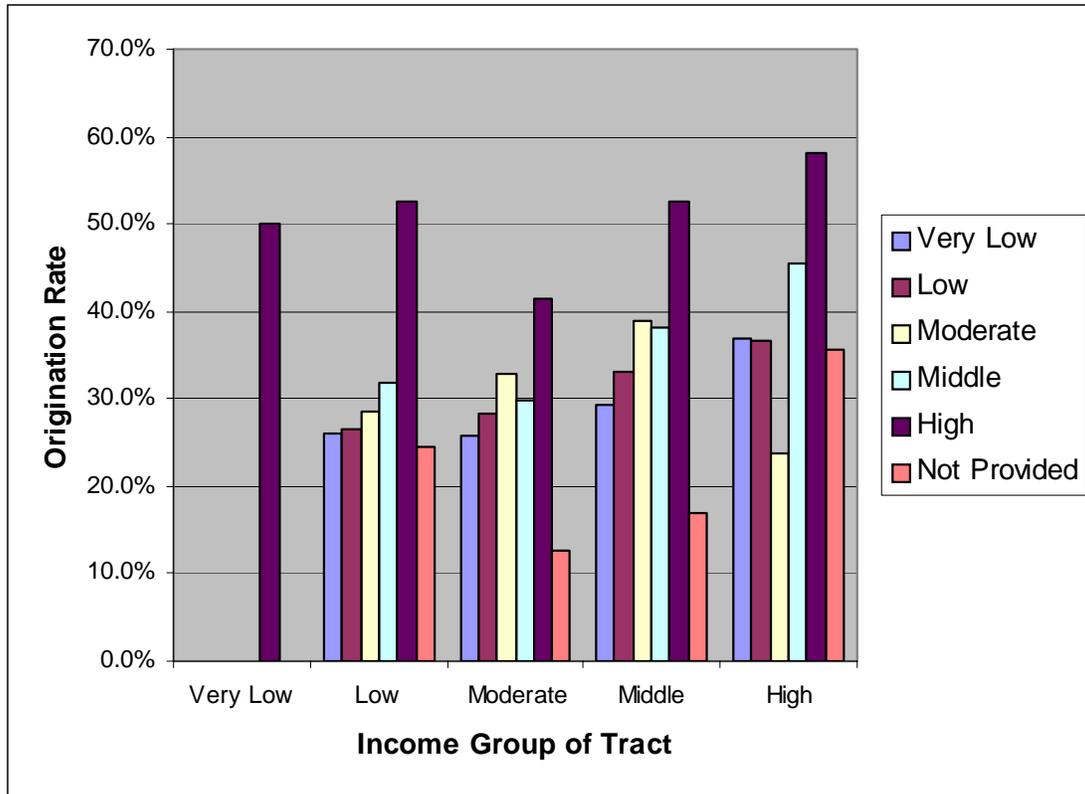
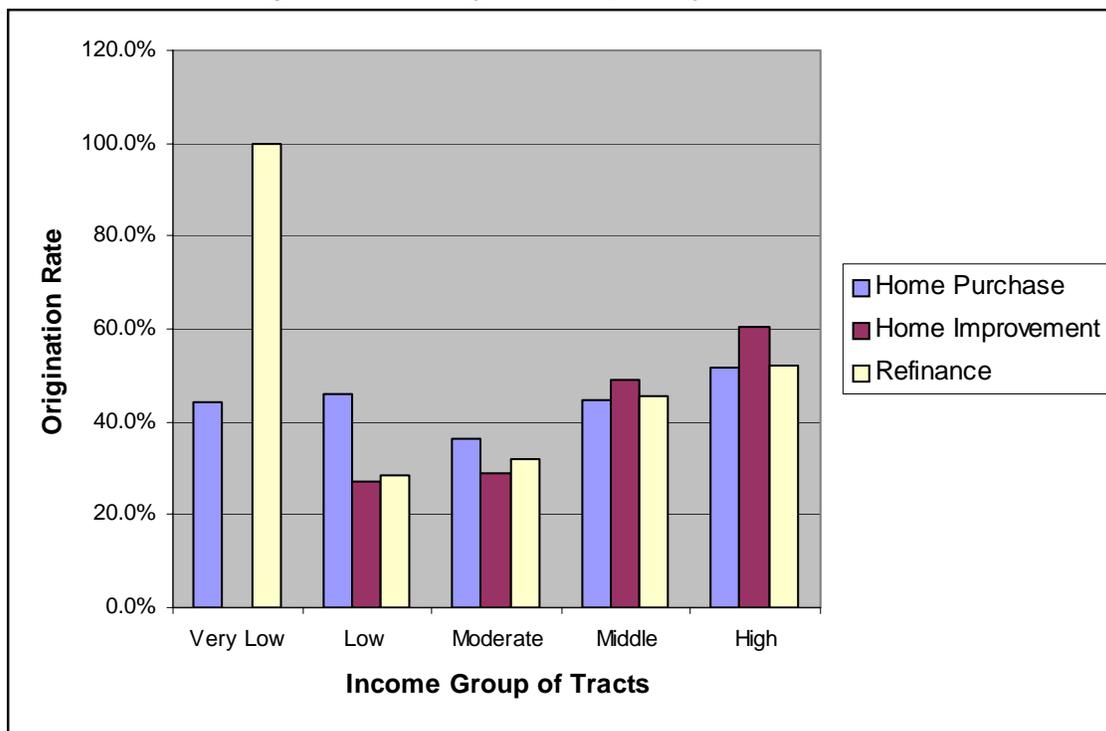
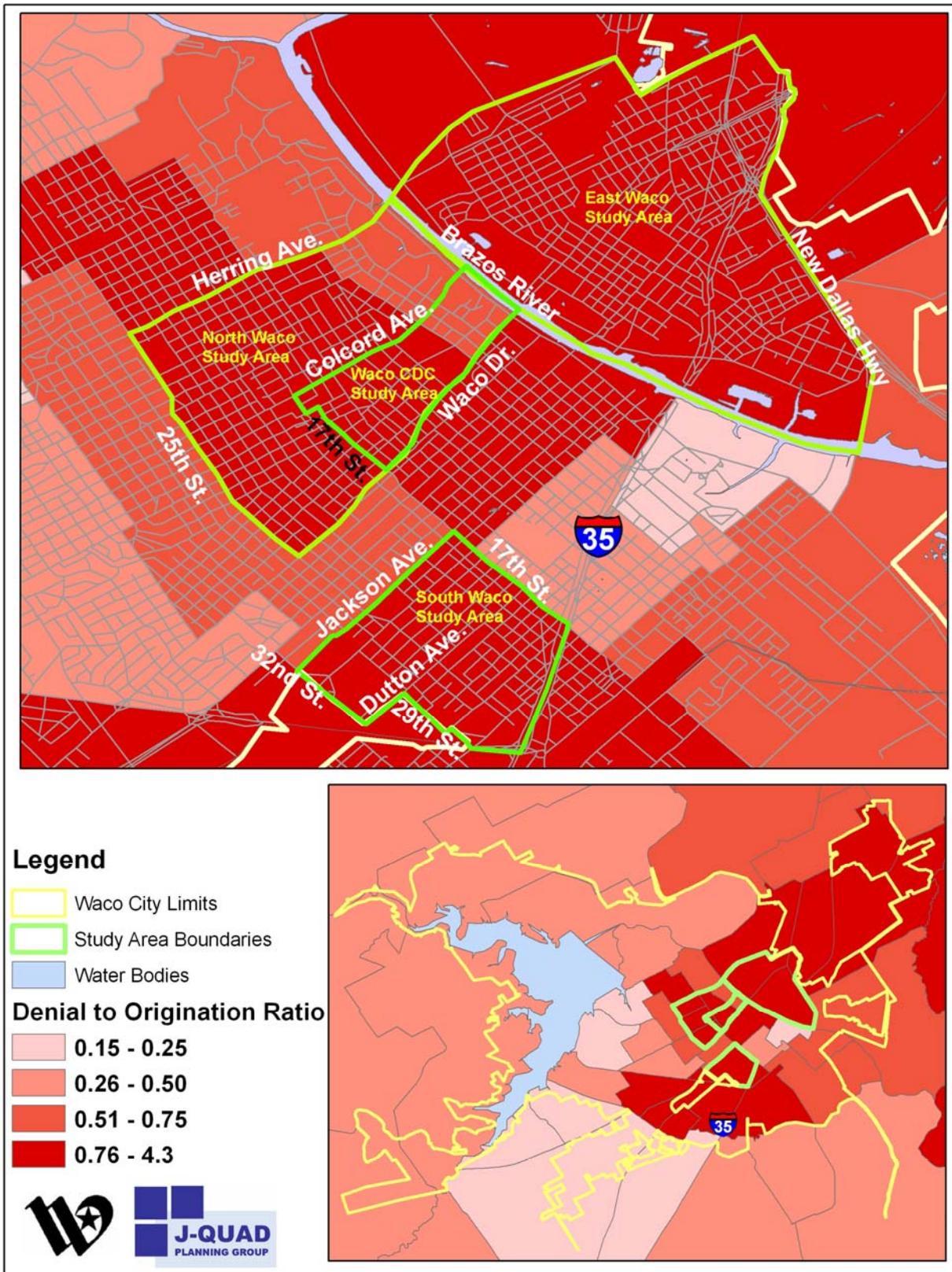


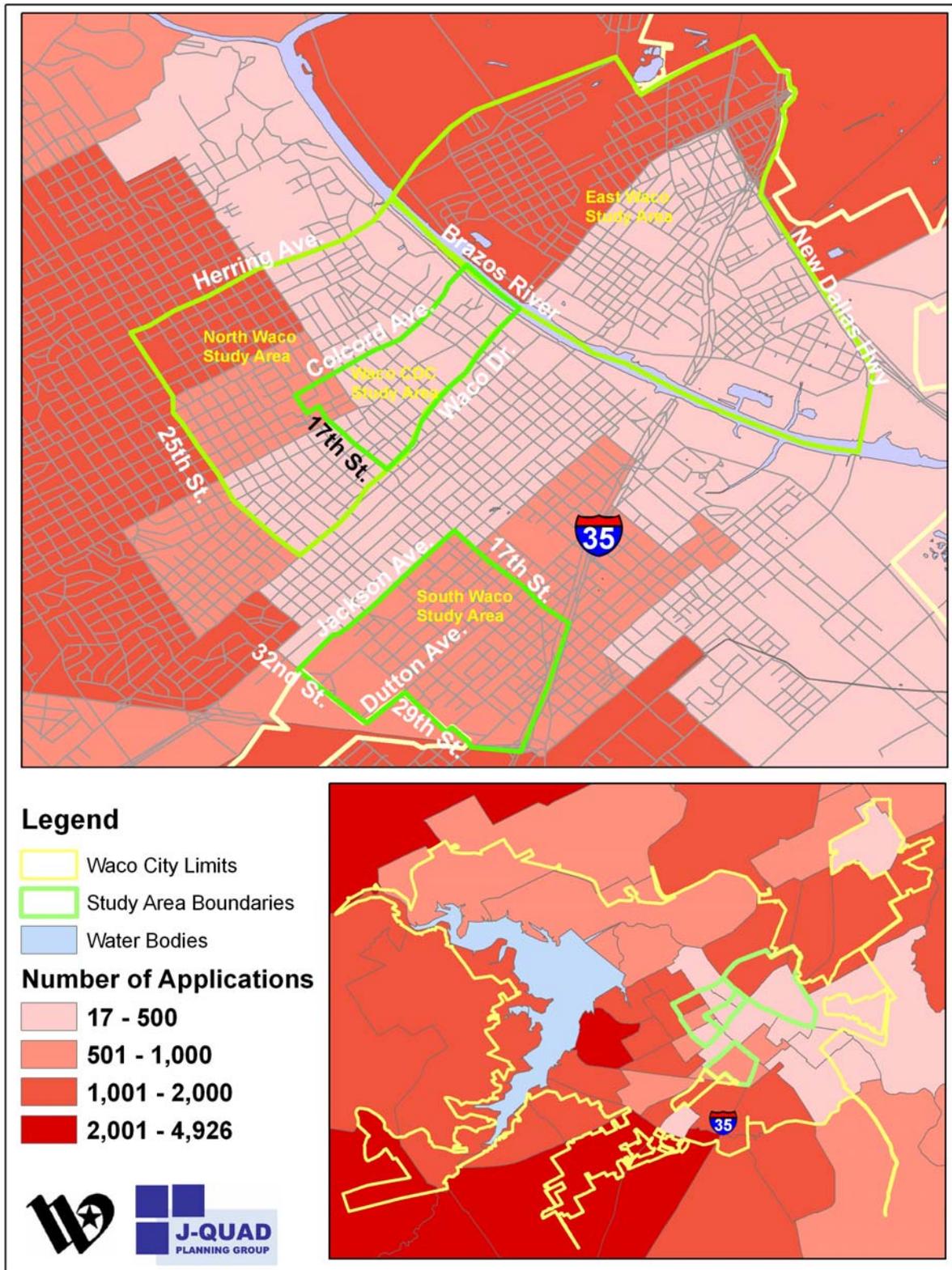
Chart 4.4: Origination Rates by Loan Purpose by Income of Census Tracts



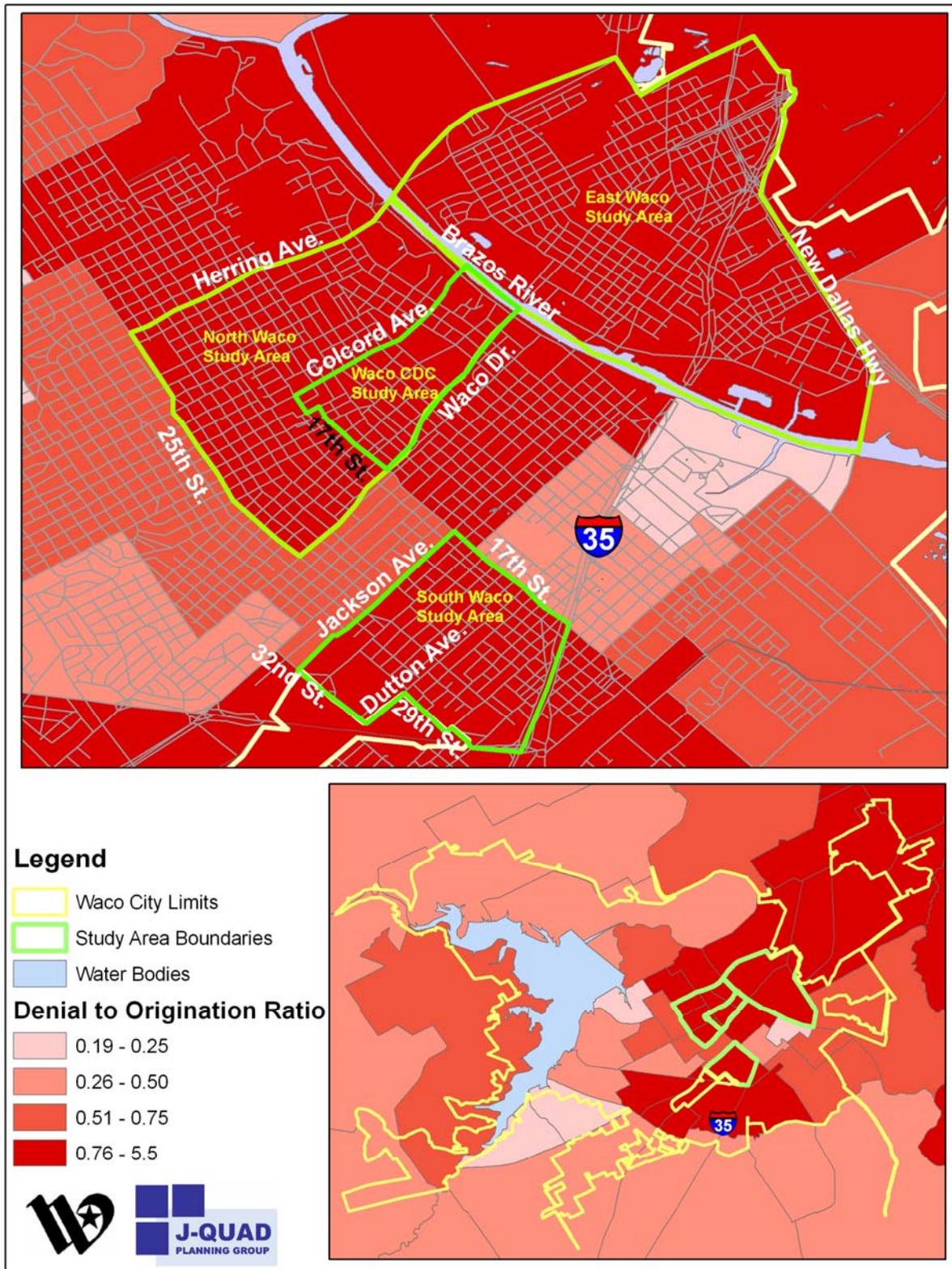
Map 4.1: Ratio of All Loan Denials to Originations, 1997-2005



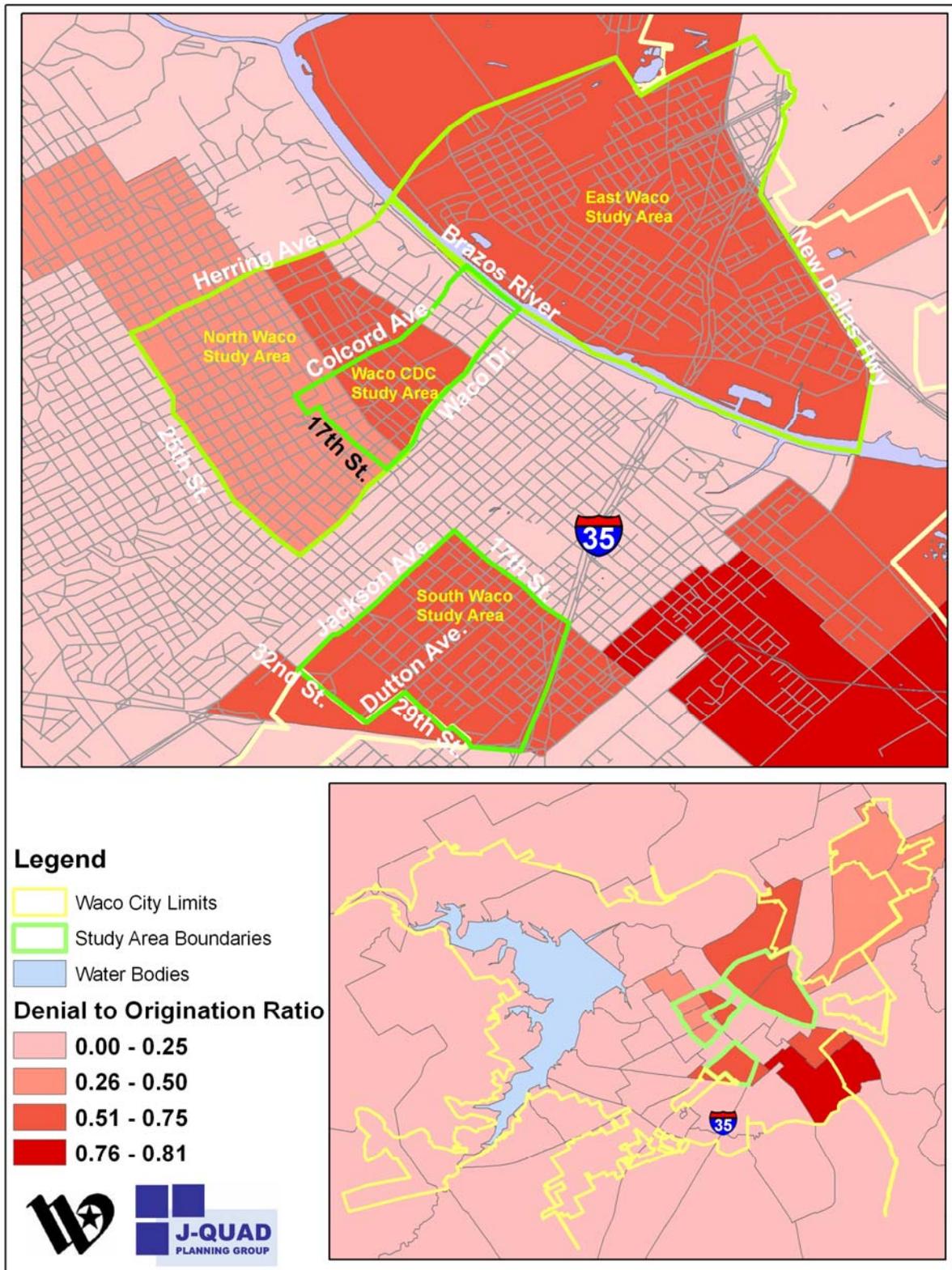
Map 4.2: Total Number of Loan Applications, 1997-2005



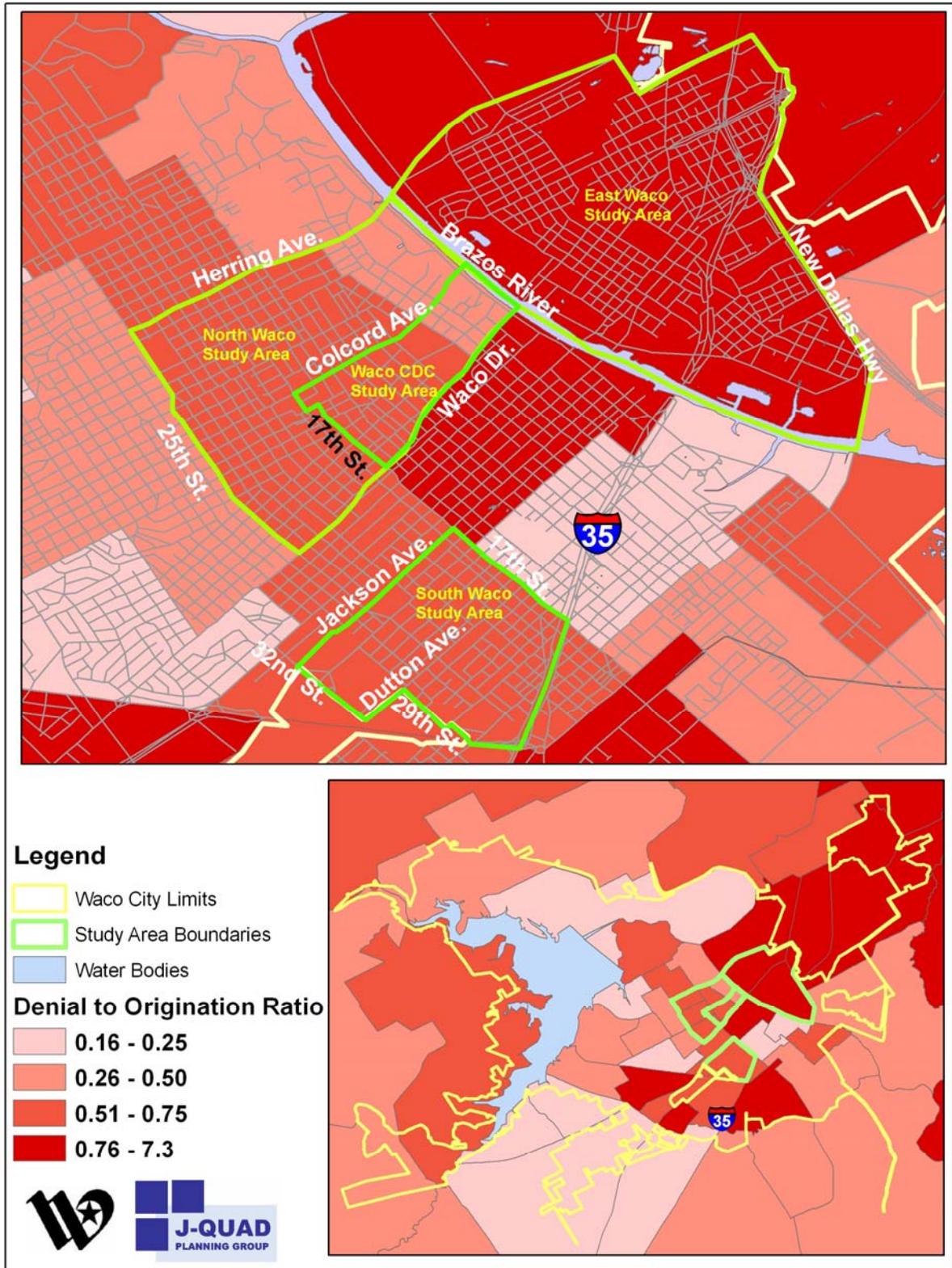
Map 4.3: Ratio of Conventional Loan Denials to Originations, 1997-2005



Map 4.4: Ratio of Government Backed Loan Denials to Originations, 1997-2005



Map 4.5: Ratio of Home Purchase Loan Denials to Originations, 1997-2005



Map 4.6: Ratio of Home Improvement Loan Denials to Originations, 1997-2005

