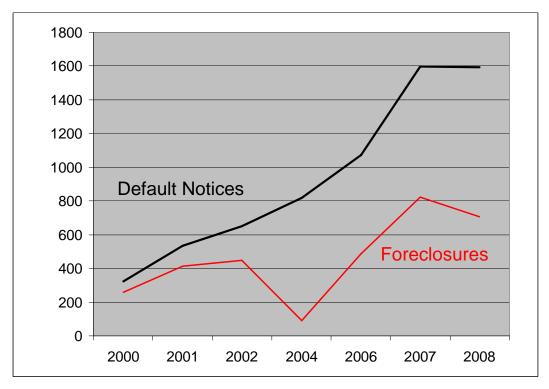
Single-Family Housing Mortgage Defaults & Foreclosures in Douglas County: 2000-2008





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Data

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Disclaimer

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Executive Summary

- ➤ This report quantifies the extent, location, characteristics, and price discounts associated with mortgage default notices (i.e. delinquencies) and actual foreclosures of single-family homes in Douglas County, NE from 2000 to 2008.
- From 2000 to 2008 mortgage default notices increased on average by 22% per year (from 327 to 1,598) with 20% of defaults associated with persons with prior mortgage defaults versus 9% with investors with multiple defaults, and 7% with serial default properties (with different owners).
- From 2000 to 2008, 57% of homeowners receiving default notices were foreclosed on (i.e. self-cure rates were on average 43%). Earlier in the decade (2000 and 2001) self-cure rates were much lower (below 20%).
- ➤ Over the 2007 to 2008 period approximately 1.9% of all single-family homes in Douglas County had a delinquent mortgage (i.e. had received a default notice) but only 0.9% of all properties were actually foreclosed on. Foreclosure rates varied spatially across the county and were highest in neighborhoods with below average property values, low appreciation rates, and higher non-white populations.
- ➤ In 2007 and 2008, foreclosures occurred on average 81 days after default filings. The average duration between foreclosures and re-sales was 4 months, while the average duration between original sales and post-foreclosure re-sales was 42 months.
- ➤ The median value of foreclosed homes in 2007 was \$105,000 with a range from \$30,000 to \$410,000. In 2008, the values of foreclosed homes increased substantially (median of \$115,000 with a range of \$13,000 to \$735,000).
- An analysis of 230 foreclosed homes that later re-sold found that 83% of the homes sold at a discount (less than the home would have expected to sell for), while 17% of the homes actually sold for a premium (more than expected). Foreclosure price discounts were on average 16% and were generally higher among properties previously owned by investors and/or owners who had received prior default notices, and in areas with relatively low valued homes and low appreciation rates. Price discounts are also shown to vary substantially across zip codes.
- ➤ 13% of single-family housing mortgages in Omaha in 2007 and 2008 were 'sub-prime' and sub-prime lending was found to be concentrated in particular neighborhoods.
- Ongoing research is focusing on the estimation of multivariate regression models to quantify the factors which influence the probability of both delinquencies and foreclosures across Omaha. These analyses will include information on the specific structural characteristics of properties and mortgage loan details. As well, additional research is being conducted on the price discounts associated with foreclosed properties using traditional comparable sales-based appraisal methods.

1) Mortgage Default Notices (Douglas County, 2000-2008)

All recorded notice of default filings associated with single-family residential properties in Douglas County, NE from 2000 to 2008 were obtained from the Douglas County Office of the Register of Deeds. These default notices are filed by the mortgagors of properties to officially inform mortgagees that they are in default of their mortgage (loan) agreements. Such default filings are the first step in the process of foreclosing on a property.

Non-single-family properties were removed from this database, as were filings with missing and/or incomplete addresses. As well, multiple notices (to the same owner and/or address) and/or earlier (i.e. repeat) notices assumed to have been resolved or 'self-cured' were removed from the database (approximately 30% of all original notices).

Default notices were classified by year, zip code of the property in question, and whether or not they were focused on owner occupants versus investors (persons or companies receiving multiple notices of default associated with different properties). It was also noted whether properties sent default notices had received prior notices (but to different owners) and hence can be considered chronic or repeat default properties and/or whether persons receiving default notices had received prior notices (at the same property).

The number of tractable and unique default notices of from 2000 to 2008 total 8,288 and their frequency has consistently increased by 22% per year (average) over the eight-year study period from a low of 327 notices in 2000 to 1,598 notices per year in 2008 (Figure 1). Over this period 20% of default notices involved persons with prior notices, while 9% of notices involved investors, and 7% of notices involved repeat notices to the same property (but with different owners). Notice filings to both investors and to chronic default properties appear to be consistent over time while the percentage of owners receiving multiple notices varies over time but without any recognizable trend patterns.

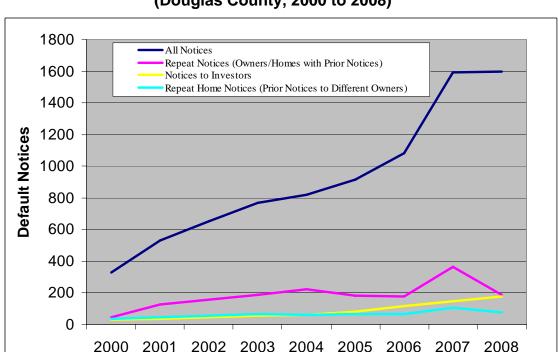


Figure 1. The Frequency of Single-Family Housing Mortgage Default Notices (Douglas County, 2000 to 2008)

2) Mortgage Foreclosures (2000-2008)

Each single-family housing mortgage default notice in the following years: 2000, 2001, 2002, 2004, 2006, 2007 and 2008 was cross-checked with Douglas County property transfer data to determine whether or not it resulted in an actual foreclosure action.

Over these seven years, only 57% of homeowners receiving default notices had their homes foreclosed on (i.e. lost ownership of their properties). Alternatively, 43% of persons receiving default notices were able to "self-cure" their delinquent mortgages either by reconciling outstanding debt prior to actual foreclosure dates, and/or by selling their properties prior to foreclosure.

Earlier in the decade (2000 and 2001) self-cure rates were relatively low (below 20%) and then increased sharply in 2004, fell in 2006 and 2007 and have recently (in 2008) started to increase again (Figure 2). Over time, self-cure rates for investors and homes having prior default notices (and likely foreclosures) are consistently lower than overall self-cure rates. However, self-cure rates among persons having received prior foreclosure notices have for the most part been slightly below overall self-cure rates which indicates that this sub-population of property owners has become very skilled at avoiding foreclosures after receiving default notices.

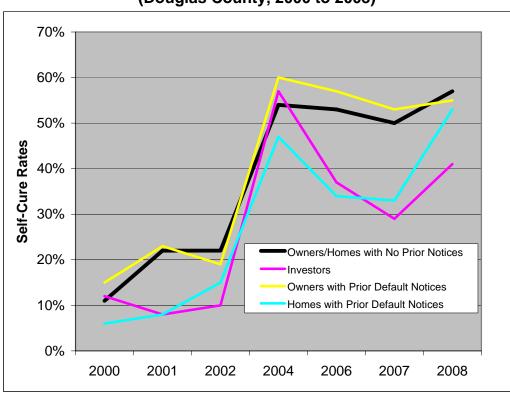


Figure 2. Self-Cure Rates* Under Alternative Scenarios (Douglas County, 2000 to 2008)

^{*}defined as the percentage of default notices not ending in a foreclosure

The resulting number or foreclosures in Douglas County over the 2000 to 2008 period are summarized in Figure 3. Foreclosures increased modestly from 2000 to 2002, fell sharply in 2004 (at the height of price appreciation in the Omaha market), increased sharply from 2005 to 2007, and stabilized somewhat in 2008 (likely due to the initiation of mortgage loan modification programs promoted by the Federal Government).

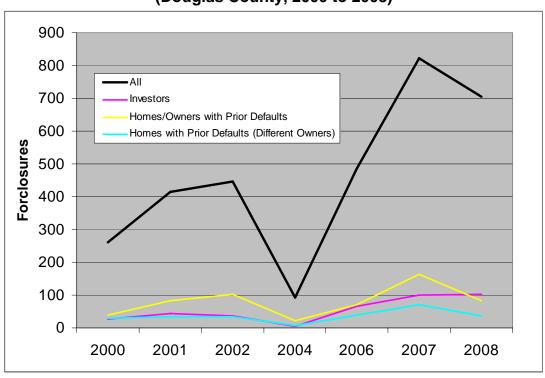


Figure 3. Foreclosures Under Alternative Scenarios (Douglas County, 2000 to 2008)

3) Detailed Analyses of Mortgage Defaults and Foreclosures (2007-2008)

In 2007, 55% of single-family homes receiving default notices were actually foreclosed on versus a 43% foreclosure rate in 2008. This corresponds to approximately 748 foreclosures in 2007 and 884 foreclosures in 2008. It took, on average, 81 days after a default notice for homes to be foreclosed.

In 2007, the median value of foreclosed homes (its prior sale price) was \$105,000 with a range of foreclosed values from \$30,000 to \$410,000. In 2008, the value of foreclosed homes increased substantially (median of \$115,000 with a range of \$13,000 to \$735,000).

Dividing the number of default notices and actual foreclosures over this two-year period by the total number of single-family housing units indicates that 1.9% of all single-family homes in Douglas County were delinquent on their mortgages in 2007 or 2008 and that 0.9% of all single-family housing units were actually foreclosed on (Table 1).

Foreclosure rates across different zip codes of Douglas County demonstrate that foreclosure rates are not spatially uniform (Figure 4). In particular foreclosures as a

percentage of all single-family housing within zip codes, are highest in areas of lowervalued housing, in areas with higher price depreciation, and in areas with higher percentages of non-white populations (Table 1).

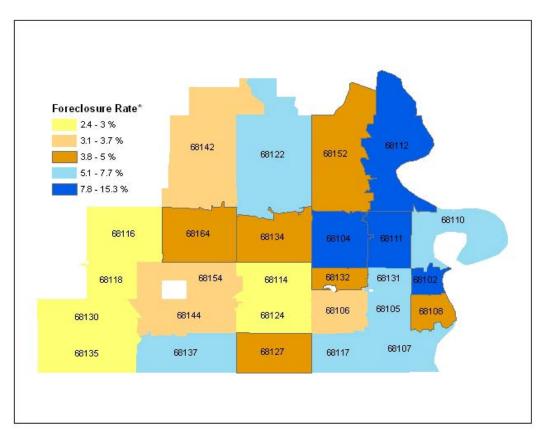
Table 1. Default and Foreclosure Rates* in Douglas County Zipcodes (2007-08)

	Default	Foreclosure
	Notice Rate	Rate
County-wide	1.9%	0.9%
Zip codes with Average Housing Values >\$216,000	1.5%	0.7%
Zip codes with Average Housing Values <\$100,000	2.7%	1.3%
Zip codes with High 2006-08 Depreciation (-10% or higher)**	2.3%	1.2%
Zip codes with Low 2006-08 Depreciation (-2% or lower)**	1.6%	0.7%
Zip codes with >50% Non-White Populations***	2.5%	1.2%

^{*} Default notices and foreclosures divided by single-family housing units (from a 2007 a Douglas County parcel GIS coverage intersected with zip code boundaries)

** Zip code level housing depreciation rates were calculated previously (Shultz, 2009a)

Figure 4. Foreclosures as a Percentage of Total Housing By Zip Code (2007-2008)



^{*} Foreclosures divided by single-family housing units

^{***} Based on U.S. Census data (2000)

4) Price Discounts Associated with Foreclosed Properties (2007-2008)

A total of 230 single-family homes identified as being purchased after 1999, foreclosed on in 2007 or 2008 and then re-sold were (after foreclosure) prior to February of 2009. This sample does not include any homes that received substantial improvements and/or size increases between foreclosure and re-sale dates. The average duration between foreclosures and re-sales was four months, and the average duration between original sales and post-foreclosure re-sales was 42 months.

Price discounts associated with these foreclosure re-sales were estimated by comparing the estimated (expected) market price of these homes with their actual sales price. Expected Market prices were calculated by multiplying original sale prices by year and zip code specific price appreciation indices in which foreclosed and resold homes were located. These price appreciation indices were previously estimated for the 2000 to 2008 period and include only statistically significant appreciation measures (Shultz, 2009a).

In total, 83% of these foreclosed/resold homes sold at discount (less than the home would have expected to sell for), while 17% of the homes actually sold for a premium. The price discounts were between 16% (median) and 19% (the mean) with a standard deviation of 25% which is similar to estimates from other U.S. cities, and, as expected, are higher than discounts associated with short sales in Omaha (8.5% to 10.3% as estimated in a previous study, Shultz, 2009b). The foreclosure price discounts were relatively larger among properties previously owned by investors, those receiving prior default notices, lower valued homes, homes in low appreciation areas, and homes sold within 3 months (Table 2). Price discounts also varied substantially across 25 different zip codes for which sufficient data (foreclosures and price appreciation) was available (Figure 5).

Table 2. Average Foreclosure Price Discounts Under Alternative Scenarios (2007-08)

	Sample	
	Size	Median
All Sales (n =230)	230	16%
Sales Aggregated within Zip Codes*	25	15%
Properties Foreclosed on Investors	32	18%
Properties Whose Owners Received Prior Default Notices	33	17%
Repeat Property Foreclosures with Different Owners	19	20%
Homes with Original Sale Prices <100,000	96	38%
Homes with Original Sale Prices >216,000	26	17%
In Zip codes with High 2006-08 Depreciation (-10% or higher)**		37%
Zip codes with Low 2006-08 Depreciation (-2% or lower)**		22%
Homes Re-sold Less than 3 months after Foreclosure		18%
Homes Re-sold More than 5 months after Foreclosure		12%

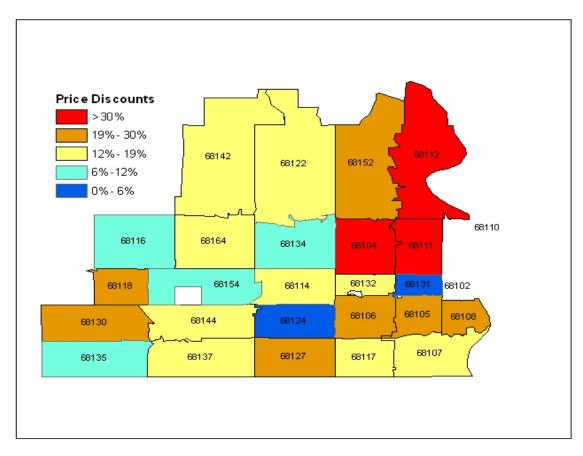


Figure 5. Foreclosure Price Discounts By Zip Code (2007-08)

5) Ongoing Research and Preliminary Findings Regarding Sub-Prime Lending

The price discounts associated with foreclosures that were estimated in this study were based on housing price appreciation indices and repeat sales. Efforts are underway to confirm these discount estimates through the use of more traditional comparable salesbased appraisal approaches.

As well, research efforts are currently underway to quantify the factors influencing the probability of homes across Douglas County becoming delinquent and/or being foreclosed on in a multivariate framework. Specifically, logistic regression models are being developed where the probability of a delinquency and/or a foreclosure are specified to be a function of property characteristics, loan origination terms, and neighborhood-specific price appreciation.

Such regression models require large sample sizes which is problematic due to the to the time consuming requirement of matching loan origination details to each foreclosure property. However, the inclusion of such loan origination information is considered critical based on findings from similar research efforts in other parts of the country and past

^{*} Zip codes 68102 and 68119 were excluded from these analyses as there was not sufficient price appreciation data available for them

research in Omaha. For example, a recent analysis of short sales in Omaha (Shultz, 2009b) found that 70% of short sale listings were originally financed with 100% loan-to-value ratios and/or recently used as collateral for home equity loans.

The inclusion of loan origination details in default and foreclosure models is also justified based on the fact that preliminary research indicates that sub-prime lending is frequent in Omaha, and may likely be a more important cause of mortgage delinquencies and foreclosures than property value depreciation and/or increasing unemployment trends. For example, based on a review of Federal Home Mortgage Disclosure Act (HMDA) data it has been discovered that in 2006 and 2007, 3,501 or 13% of the single-family mortgages in Omaha were sub-prime (defined as annual mortgage interest rates that are at least 3% higher than comparable Treasury rates). As well, 41 mortgage lenders in Omaha over this period had at least 25% of their mortgages classified as sub-prime. Finally it was noted that sub-prime lending appeared to be concentrated in zip codes characterized by relatively low incomes, minority populations, and declining property values.

The ability to predict delinquency and foreclosure rates for specific properties and/or neighborhoods could potentially be used by lenders, non-profit agencies, and/or government institutions to evaluate the need for and/or the feasibility of specific mortgage programs across the Omaha.

6) References Cited

Shultz, S. 2009a. Single-Family Housing Price Appreciation in Omaha (2000-2008). A Report by the UNO Real Estate and Land Use Economics Program (available for download from www.unorealestate.org).

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