One Industry’s Risk is Another Community’s Loss: The Impact of Clustered Mortgage Foreclosures on Neighborhood Property Values in Philadelphia

Presentation before the Federal Reserve Bank of Philadelphia’s Reinventing Older Communities: People, Places, Markets April, 2006
Between 1965 and 2005, 36 million new households become owners.
Pennsylvania’s homeownership rate exceeds the national average and has risen steadily since 1960.

Homeownership Rate; Pennsylvania, 1960-2003
Homeownership in Philadelphia is particularly high among higher income households, but has generally declined since 1980.
For most households, except those with the highest incomes, their home is their only asset.
Pennsylvania mortgage delinquencies exceed the national average and have been on the rise since 2000.
The Pennsylvania foreclosure rate exceeds the national average; both have declined since 2002.
Between 2000 and 2004, both the number of foreclosure filings and the rate of filings peaked in 2002 and then declined.
How does a foreclosure impact the borrower?

- **Monetary - Direct**
  - Net loss on downpayment and principal paid
  - Penalties and fees charged by mortgage servicers during the period of delinquency
  - Legal fees

- **Monetary – Indirect**
  - Future cost of borrowing as a result of damaged credit
  - Moving expenses

- **Nonmonetary**
  - Emotional distress
  - Physical distress
  - Psychological distress
  - Adverse family impacts

Minnesota Family Fund (1998) estimates the cost per household to be approximately $7,200 per foreclosure.
Foreclosures do cost lenders and investors, but...

- Foreclosure ≠ loss to the investor.
  - Pricing (interest and fees/points) of loan compensates for risk
  - Foreclosures are not always consummated
  - In the case of subprime loans, although priced as subprime, a substantial portion of borrowers are prime borrowers
  - Part of the debt is typically paid by the time of foreclosure

- White (2004) cites evidence that subprime losses tend to be in the range of 1% per year of outstanding loan pool balances
Specifying Investor Loss

• Example:

EQCC Asset Backed Certificate Series 2001-2

Original Pool Amount $10,368,314,000
As of Jan, 2006, pool amount is $1,393,672,000 (i.e., 13.4% remaining)
  11.5% Foreclosure
  13.4% Bankruptcy
  2.9% REO

(5.1% Cumulative net loss => approximately 1% / year)
How does a foreclosure impact a municipality?

- Costs associated with:
  - Increased policing
  - Increased fire protection
  - Increased demand for social services
  - Demolition
  - Inspection
  - Legal Actions
  - Tax Revenues
- Managing the foreclosure process
- Reputation
- Apgar (IL) estimates municipal costs to be $34,000; Family Housing Fund (MN) estimates municipal cost to be $27,000

(Apgar, 2005; Family Housing Fund, 1998)
How does a foreclosure impact a community?

- Foreclosures can facilitate racial transition (Baxter and Lauria, 2000; Lauria and Baxter, 1999)

- Foreclosure are associated with violent crime (Immergluck, 2005)

- Foreclosure can adversely impact property value (Immergluck and Smith, 2005; Cagan, 2005; Pennington-Cross, 2004)
  - Estimates of cost include: Chicago (Apgar) $17,000 to neighboring properties; Chicago (Immergluck & Smith) \( \approx 1\% \).
Residential Sale Prices; 2000
Residential Sale Prices; 2001
Residential Sale Prices; 2002
Residential Sale Prices; 2003
Counting Foreclosures Around Sales

Sample Sale from 2003
All Residential Sales in 2003
All Foreclosures Filed 2000-2004
Foreclosures from 2000-2004
by Distance to Sale Point
- 1/8th Mile or Less
- 1/8th to 1/4 Mile
- 1/4 to 3/8 Mile
- 3/8 to 1/2 Mile

Distance to Sale Point
- 1/8th Mile or Less
- 1/8th to 1/4 Mile
- 1/4 to 3/8 Mile
- 3/8 to 1/2 Mile
- Non Residential
- Parks
- Rivers
Financial Distress and Foreclosure Density; 2000

Median Percent of Owner Occupied Households (with a mortgage) Spending More Than 50% of Income on Housing of Census Block Groups by Frequency of Foreclosure Filings; 2000
The average sale in 2001-2003 had approximately 4 foreclosure filings within 1/8th of a mile and one year prior to the sale date.
• Number of foreclosures around the sale is transformed into a natural logarithm
• Fixed-effects multiple regression model using characteristics of the sale property as well as census tract location to predict sale price
• Tested various distances (e.g., 1/8\(^{th}\), 1/4, 3/8\(^{th}\) and 1/2 mile) and time periods (quarterly dating back three years) for foreclosure filings
• Estimated sale price
In general, each foreclosure within $1/8$th of a mile and 1 year prior to a sale reduces the sale price by 1%.

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<td>1/8 mile, yr1</td>
<td>-0.00752 *</td>
<td>-0.01179 *</td>
<td>-0.0079 *</td>
<td>-0.01067 *</td>
<td>-0.0093 *</td>
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<td>Adjusted R2</td>
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<td>0.6201</td>
<td>0.6273</td>
<td>0.6114</td>
<td>0.6242</td>
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<td>Observations</td>
<td>24,796</td>
<td>25,196</td>
<td>27,622</td>
<td>49,992</td>
<td>52,818</td>
<td>77,614</td>
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* = statistically significant

Adjusted R2 is a measure of how strong the explanatory model of price is and it ranges from 0 to 1, where 1 reflects the strongest statistical explanation. The “adjustment” statistically corrects for inter-correlation among variables used to predict price.
Linear: Increasing numbers of foreclosure filings have an independent, and significant negative impact on price.

Cumulative Impact of Foreclosures on Price

(Analysis limited to no more than 38 foreclosures in the measured impact area)
Cumulative Impacts--Unrestricted Truncated at 27, Quadratic Fit

Cumulative (Quadratic) Impact of Foreclosures on Price
(Analysis limited to no more than 27 foreclosures in the measured impact area)

Quadratic: Increasing numbers of foreclosure filings have an independent, and significant negative impact on price.
Areas where prices are highly impacted by foreclosures in 2001
Areas where prices are highly impacted by foreclosures in 2002
Areas where prices are highly impacted by foreclosures in 2003
Conclusions

• Lenders and investors should require enhanced servicing practices that reach borrowers early in default and thus have the greatest likelihood of halting the transition from delinquency to default and foreclosure.

• Consider a suitability standard for the provision of loan products to borrowers;
  – Reconsider when new hybrid loan products designed to make homeownership *seem* more affordable to low- and moderate-income families present greater community risk than can be justified by the potential return to the individual.

• Create procedures so that all foreclosures within a county/state are centrally recorded and publicly available;
  – Include data on the parties to the foreclosure, including the address of the collateral property and identification of the mortgage (e.g., mortgage book/page, originating lender, date of origination, mortgage type and terms).
In Pennsylvania, where there is an existing legislative framework and a nationally recognized emergency mortgage assistance program (Homeowners Emergency Mortgage Assistance Program - HEMAP), require lenders to provide the Commonwealth all Act 91 notices issued [Recommended by PA Department of Banking in 2005]

- Map the location of homes subject to those notices
- Affirmatively deploy approved counselors into particularly hard-hit communities
- Investigate lenders with disproportionate numbers of foreclosure filings, unusually brief period between origination and Act 91 notice, and/or spatial clustering of foreclosure actions

- Strengthen state and federal enforcement efforts designed to limit asset-based lending
- Enhanced financial education opportunities in the middle and high school years