Housing Markets and the Fiscal Health of US Central Cities

#LiveAtUrban
The Effect of the Housing Crisis on the Finances of Central Cities

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Introduction

• In many central cities, revenues have not yet returned to their pre-Great Recession levels

• Our research has explored the ways in which the boom and bust of housing prices, and the sharp spike in mortgage foreclosures influenced the finances of central cities

• We try to quantify the impacts, and draw policy lessons that will help cities better prepare for future economic downturns and shocks to the housing market
It is Hard to Compare Fiscal Conditions Across Cities

• Governance structures vary across cities, making fiscal comparisons difficult

• For example:

  • The municipal government in **Boston** finances almost all public services,

  • but in **La Vegas**, $\frac{3}{4}$ of revenue raised by local governments serving Las Vegas residents is raised by *overlying* independent school districts, counties, and special districts
Per Capita General Expenditures in the Baltimore and Tampa FiSCs by Type of Government, FY 2014

<table>
<thead>
<tr>
<th>Type of Government</th>
<th>Baltimore, MD</th>
<th>Tampa, FL</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>$5,471</td>
<td>$1,903</td>
</tr>
<tr>
<td>County</td>
<td>$1,903</td>
<td>$1,229</td>
</tr>
<tr>
<td>School</td>
<td>$1,553</td>
<td>$1,379</td>
</tr>
<tr>
<td>Special District</td>
<td>$606</td>
<td>$0</td>
</tr>
</tbody>
</table>

Baltimore, MD: $6,077
Tampa, FL: $6,063
Fiscally Standardized Cities (FiSCs)

• Constructed by summing city government revenues and spending and the share of revenue and spending of overlying governments collected from or spent on behalf of central city residents

• FiSC database – 91 large central cities with annual data from 2000 to 2014
The Housing Market in 91 FiSCs
CoreLogic Housing Price Index
Foreclosure Rates
## Housing Market Experience in Selected Cities, 2002-2011

### Four Types of Housing Markets

<table>
<thead>
<tr>
<th></th>
<th>2002 to Peak Year</th>
<th>Peak to 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boom No Bust</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>78.7 (2007)</td>
<td>-12.5</td>
</tr>
<tr>
<td>San Francisco</td>
<td>49.7 (2007)</td>
<td>-18.8</td>
</tr>
<tr>
<td><strong>Boom and Bust</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baltimore</td>
<td>103.8 (2007)</td>
<td>-32.3</td>
</tr>
<tr>
<td>Stockton</td>
<td>82.5 (2006)</td>
<td>-60.4</td>
</tr>
<tr>
<td><strong>Status Quo</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffalo</td>
<td>29.2 (2011)</td>
<td>-8.8</td>
</tr>
<tr>
<td>Houston</td>
<td>25.3 (2007)</td>
<td>-8.8</td>
</tr>
<tr>
<td><strong>Secular Decline</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleveland</td>
<td>7.5 (2005)</td>
<td>-32.5</td>
</tr>
<tr>
<td>Detroit</td>
<td>6.6 (2005)</td>
<td>-51.5</td>
</tr>
</tbody>
</table>
Real Per Capita Revenues and Spending Average in 90 Fiscally Standardized Cities

Trends Since the Beginning of the “Great Recession”
Miscellaneous revenues declined sharply. In 2014 they were 34% below their 2007 level.
Real Per Capita Spending, Percentage Change Relative to 2007
90 Fiscally Standardized Cities

- Housing and Community Development
- Health and Social Services
- Transportation
- Natural Resources, Parks, Solid Waste, and Sewage
- Education
- Public Safety
- Capital Outlays
Measuring the Impact of the Housing Crisis and the Great Recession on the Property Tax and General Revenue of Fiscally Standardized Cities
How the Housing Market Crisis Influenced Property Tax Revenue

- Housing prices fall
- Assessed values lowered

Factors influencing government decisions:
- Changes in income and expenditure needs
- Changes in state aid and federal aid
- Changes in other local revenue sources
- State-imposed tax limits

- Local government decision to raise property tax rate
- Fewer property taxes collected
- Foreclosure rates rise
- Property tax revenue falls
Property Tax Results

- Housing prices rise—3 years later, property tax revenues rise
- Housing prices fall—3 years later, property tax revenue fall

Average 26% decline in Housing Prices Associated with a 4% Decline in Property Tax Revenue
Explaining the Property Tax Results

• Why didn’t local government raise rates enough to limit revenue declines?
  – Falling incomes and rising unemployment made raising rates politically infeasible
    • New York City is a counter-example
  – In CA and FL, even a 25% increase in property tax rates would have led to revenue declines of 10% to 15%
  – State-imposed rate limits and property tax levy limits placed constraints on local governments
Explaining the Property Tax Results

• Why weren’t property tax reductions even larger?
  – In some states, assessment limits constrained downward adjustments of the property tax base
    • e.g. California’s Proposition 13: NYC’s assessment phase-in rules
  – Non-residential property values much more stable than residential values
The Impact of Foreclosure Rates on Property Tax Revenue

- Strong independent effect of foreclosure rates
- Rise in foreclosure rates significantly contributes to the reduction in per capita property tax revenue
Property Tax Revenue (dashes) and Foreclosure Rates (solid line)
Average in Florida and California Fiscally Standardized Cities

Florida
California
Can Other Revenue Sources Replace the Property Tax?

- Increased State aid: $1 more reduces property taxes by only 12 cents
  - City governments replaced only a small part of state aid cuts with higher property taxes

- More federal aid goes along with higher, not lower property taxes
  - No evidence of substitution.

- Revenue from other taxes barely substitute for property tax

- User fees supplement (don’t substitute for) property tax revenues
General Revenue Results

• Approximately 1/3 of post-2009 decline in the per capita general revenue of FiSCs was attributable to housing market stress, i.e. the fall in housing values and the rise in foreclosures
  – High foreclosure rates serve as a proxy for general economic decline, further reducing general revenues

• State aid has a large impact on general revenues
  – ⅓ to ½ of the drop in general revenue from 2007 to 2013 was due to reduced state aid
  – a $1 cut in state aid reduces general revenues by from 60 to 88 cents
Some Policy Recommendations

- State and local governments should prepare for the next downturn by increasing the level of fund balances (rainy day funds)
  - Cities with rising housing prices should build up reserves
  - Don’t wait until it is obvious that there is a housing bubble
  - Easy to say, hard to do

- States/cities/non-profits develop coordinated policies to reduce/prevent foreclosures

- Federal aid is important, but timing should be spread out over a larger number of years
Thank you
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#LiveAtUrban
Irrational Exuberance at City Hall: Local Government Resilience in Housing Booms and Busts

Tracy Gordon (Urban Institute)  
Michael Lens and Paavo Monkkonen (UCLA)  
Larry Rosenthal (UC Berkeley)  

Policy Forum on Housing Markets and Fiscal Health of U.S. Central Cities  
April 17, 2017
Local governments were hit hard in the Great Recession

Year-over-Year Change in Major Local Government Receipts

Source: NIPA Table 3.21, converted to real 2015 $.

Source: US Census Bureau
Resulting in job losses unlike prior downturns

State and Local Government Employment
Cumulative monthly job loss by sector indexed to August 2008

Percent (%)

One way this recession was different is housing

Home Prices vs. City Revenues

- Home price index 1
- Property taxes
- Home price index 2
- Property sale revenue
- General revenue
- Sales taxes
- Individual income taxes

Source: Revenue amounts comes from the Census of Governments Annual Survey of State and Local Government Finances.
Note: Restricted to cities with 2012 populations of 25,000 and above, weighted by population. Revenues are per capita amounts in real 2012 dollars, indexed to 2000.
Our motivation

A burgeoning literature suggests *individuals spend perceived housing wealth*

Made easier by *financial innovations like 2nd mortgages* available as secured lines of credit

Estimated *marginal propensity to consume* of about $0.06 per $1, stronger in booms vs. busts

*Did city decision-managers display similar behavior? Did irrational exuberance wreak havoc at City Hall?*
To address these questions, we developed city level home price indexes

**Hedonic Price Index Percent Change**
Los Angeles Metropolitan Statistical Area
2001 - 2006

- 181 incorporated places in Los Angeles MSA

- 81% of incorporated places have hedonic price index data
We considered a range of city sizes and types

### Hedonic Index Boom (2003-2007) and Bust (2008-2012)

\[N=815\]

<table>
<thead>
<tr>
<th>Big boom</th>
<th>N</th>
<th>Cities include:</th>
<th>Small boom</th>
<th>N</th>
<th>Cities include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big bust</td>
<td>114</td>
<td>San Bernardino, CA</td>
<td>89</td>
<td></td>
<td>Baltimore, MD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stockton, CA</td>
<td></td>
<td></td>
<td>Chicago, IL</td>
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<tr>
<td></td>
<td></td>
<td>Tampa, FL</td>
<td></td>
<td></td>
<td>Minneapolis, MN</td>
</tr>
<tr>
<td>Small bust</td>
<td>89</td>
<td>Los Angeles, CA</td>
<td></td>
<td></td>
<td>Cincinnati, OH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sacramento, CA</td>
<td></td>
<td>523</td>
<td>Memphis, TN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>San Francisco, CA</td>
<td></td>
<td></td>
<td>Tulsa, OK</td>
</tr>
</tbody>
</table>

Notes: Restricted to 815 cities with populations >=5,000 in all years and >=25,000 in at least one year 2002-2012. The "big" versus "small" distinction is based on a 75th percentile cut-off.
Suggestive evidence of a wealth effect

Where housing wealth = price index multiplied by the city’s number of housing units and starting value in base year
We explore using more fully specified models

\[ E_{it} = \alpha_0 + \beta_1 R_{it} + \beta_2 HW_{it} + X_{it} + C_i + T_t + u_{it} \]

where

\[ E_{it} = \text{expenditures for city}_i \text{ in year}_t \]

\[ R_{it} = \text{revenues for city}_i \text{ in year}_t \]

\[ HW_{it} = \text{housing wealth for city}_i \text{ in year}_t \]

\[ X_{it} = \text{socio-economic characteristics for city}_i \text{ in year}_t \]

\[ C_i = \text{city fixed effects} \]

\[ T_t = \text{year fixed effects} \]

\[ u_{it} = \text{an error term} \]

We also estimate revenue equations with housing wealth lagged 3 yrs on right hand side
Preliminary results

OLS Regressions for Total Revenues per Capita

- Housing wealth lagged 3 years

**Coefficient estimates**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Controls</td>
<td>1.6***</td>
</tr>
<tr>
<td>Controls</td>
<td>0.9***</td>
</tr>
<tr>
<td>Controls + City, Year FEs</td>
<td>0.4**</td>
</tr>
<tr>
<td>Controls + City, Year FEs + Interactions</td>
<td>0.8*</td>
</tr>
</tbody>
</table>

**Note:** *** denotes $p$ value $<0.01$, ** $p<0.05$, and * $p<0.1$
Preliminary results

OLS Regressions for Total Expenditures per Capita

Coefficient estimates

*** 1.5
** 1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0

No Controls  Controls  Controls + City, Year FEs  Controls + City, Year FEs + Interactions

Note: *** denotes p value <0.01, ** p<0.05, and * p<0.1
Summing up

No evidence for a spending spree *on average*. However, this doesn’t mean it wasn’t an issue in some places.

Some responsiveness in individual budget categories such as *transportation* and *public safety*.

Limited evidence that response greater when *elected officials* and *appointed CFOs* share budget authority.

Limited evidence that cities starting off in *worse financial condition* more susceptible to swings in housing prices.
Next Steps

California, New York, North Carolina are all stepping up efforts to monitor local fiscal conditions

What are proper roles of state, federal governments?
Should housing price changes be part of an early warning system for monitoring local fiscal conditions?

We will continue to explore these issues in qualitative work including interviews with city financial officials
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