

Housing and the Economy: Impacts, Forecasts and Current Research 2018 Update

Geoffrey J.D. Hewings, Ph.D.

Director Emeritus

Regional Economics Applications Laboratory (REAL)

University of Illinois

Institute of Government and Public Affairs

217.333.4740

hewings@illinois.edu

www.real.illinois.edu

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acknowledged

Outline

- 2017 Highlights
- Update on the economy
- Housing market and forecasts
- On-going Research
- Summary Comments

2017 Highlights

- In the last twelve months, median prices maintained **positive annual growth** in each month while sales experienced a **more mixed trend**.
- The median sale prices in Illinois experienced higher annual growth rate than forecasted last year (between 3.9% and 10.7%), while median sale prices in the Chicago PMSA are not significantly different from the forecasts (between 3.5% and 12.0%).
- Illinois's actual and forecasted sales are quite similar, except for a few extreme values (between -2.8% and 11.6%), while sales in the Chicago PMSA experienced higher annual growth rate than forecasted (between -3.8% and 15.3%)

2017 Highlights (continued)

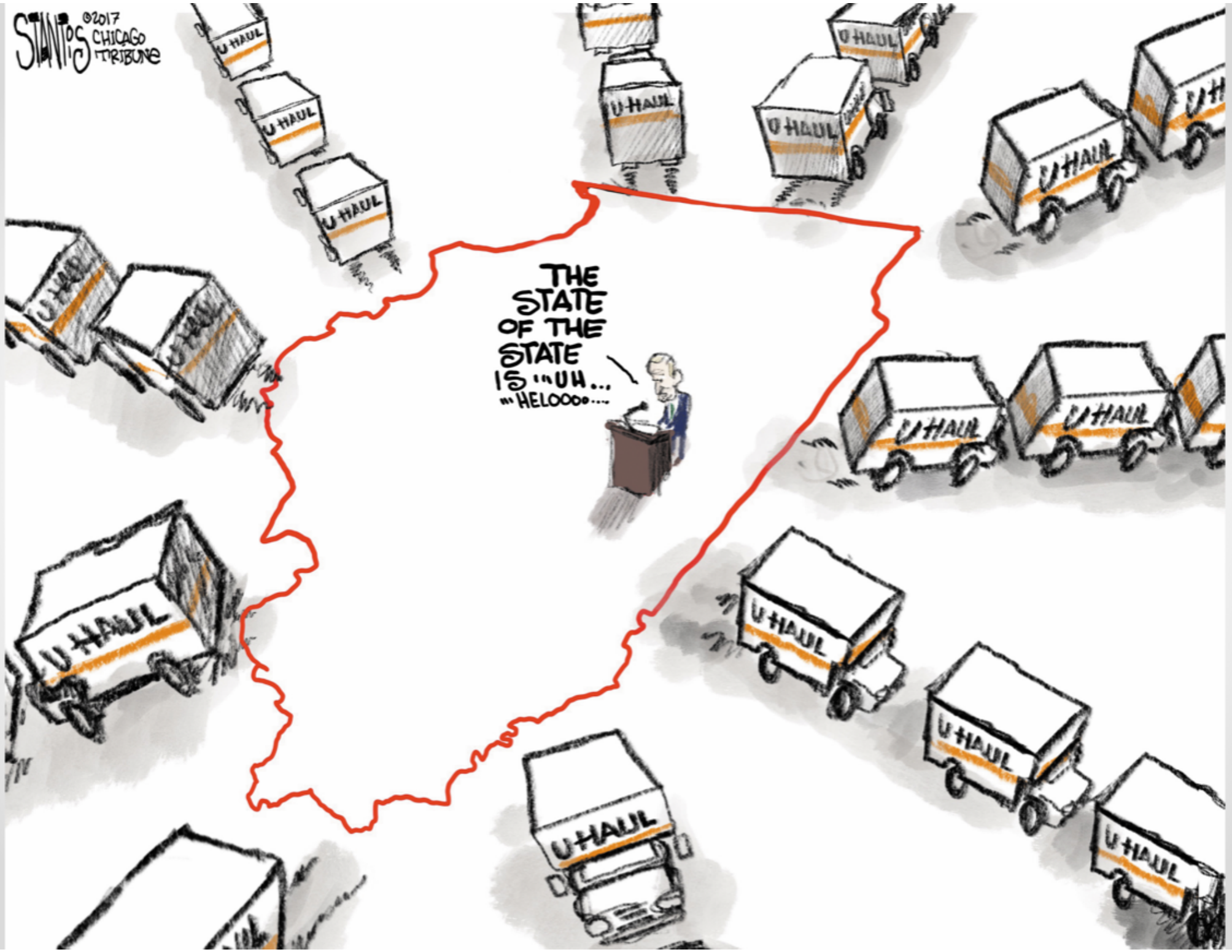
- Examined mix in change of sales in the Chicago PMSA
- Net change of sales in the Chicago PMSA comprises **positive growth in regular sales** and **decreases in foreclosed sales**.
- **For the regular sales**, the annual growth rates were between -2.9% and 18.9%.
- **For foreclosed sales**, the comparative figures were between -17.8% and -1.8%.
- Percentage of foreclosed sales out of total sales continued decreasing to a monthly average of 9.6% in 2017, about one third lower than the monthly average of 16.6% between 2009 and 2016

2017 Highlights (continued)

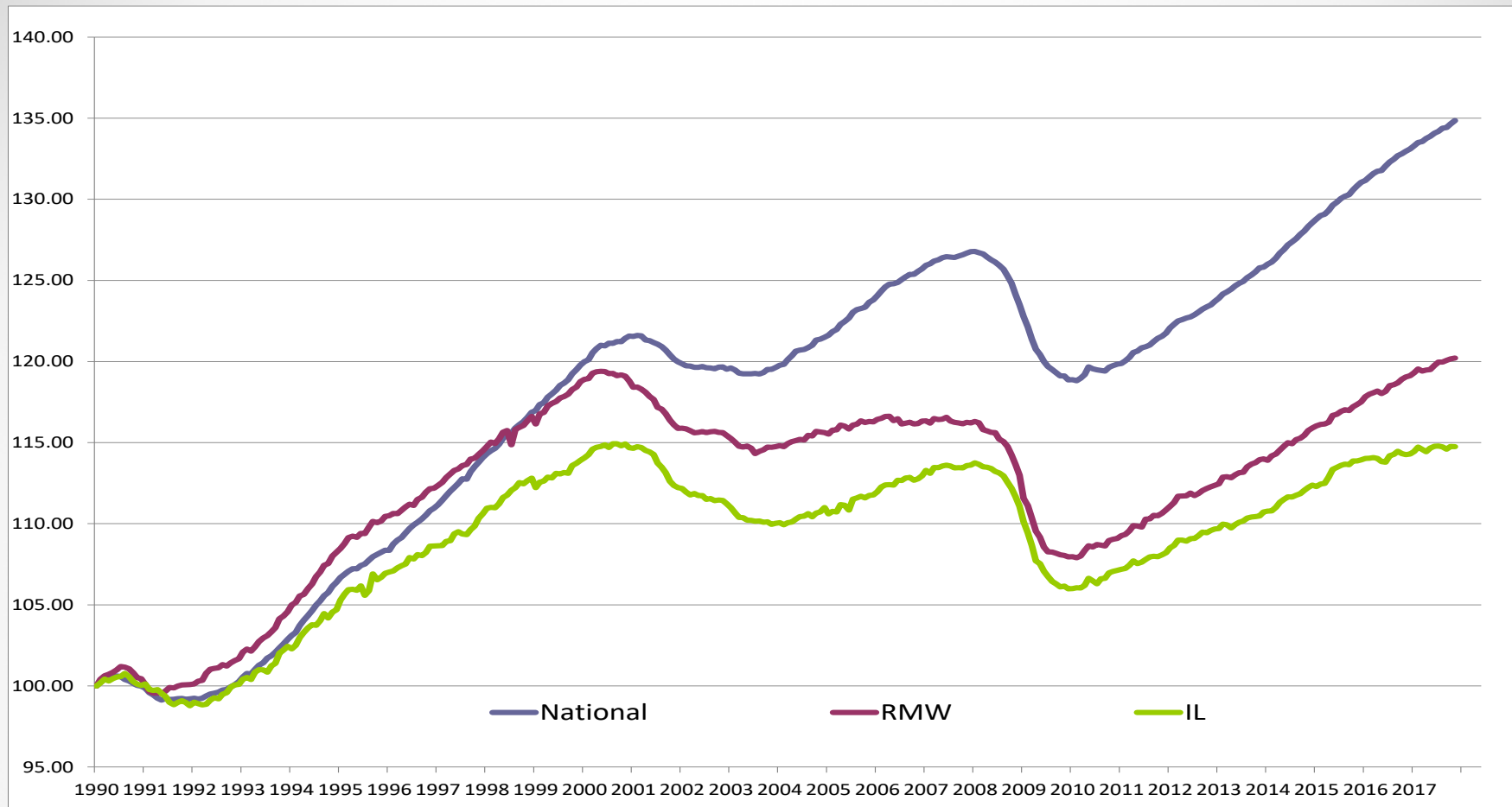
- In 2017, housing prices, after adjusting for inflation, exceeded the previous peak levels recorded in 2008 in both Illinois and Chicago
- In Illinois, the November 2008 median sales price was \$154,900 (in \$2008) and \$175,867 (in \$2017); the current price level was **105% of the 2008 level** after adjusting (119% before adjusting).
- In the Chicago PMSA, the November 2008 median sales price was \$188,000 (in \$2008) and \$213,448 (in \$2017); the comparable figure for price recovery in November 2017 is **105% after adjustment** (120% before adjusting).

Update on the economy

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THE STATE OF THE STATE IS "UH... HELLOOOO..."



	Total Non-Farm Employment	Oct 2017– Nov 2017		Last 12 months		Nov 2017
		Growth Rate %	Number of Jobs	Growth Rate %	Number of Jobs	Shadow U.R. **
Nov 2017 Negative	Nation	0.16	228,000	1.43	2,071,000	9.74
	RMW*	0.05	9400	0.98	199,400	10.05
	Illinois	-0.02	-1,100	0.43	25,900	10.24

- Illinois growth rate in 2017 less than a third of the rate of the US as a whole and under half that of the Rest of the Midwest
- If Illinois grew at the same rate as its share of US Gross National Product (4.3%), Illinois would have added 83,000 jobs not 25,900

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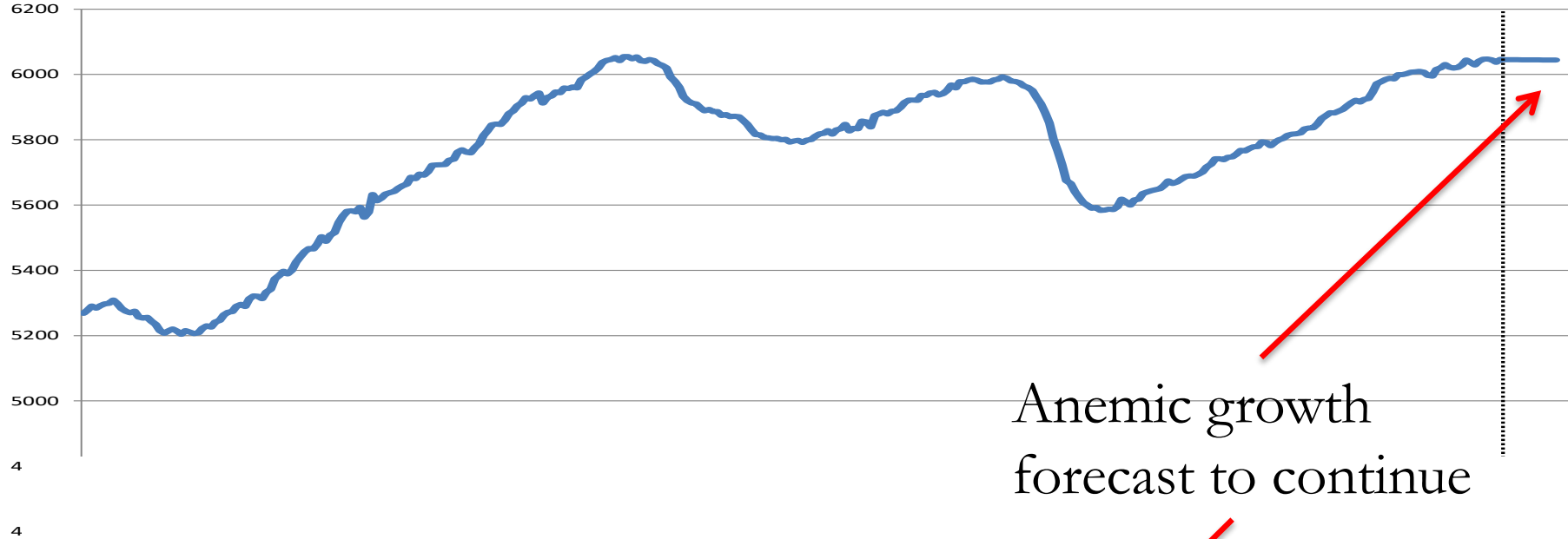
State of Illinois Economies

- 855,700 is the number of jobs needed for the Illinois economy to recover to the previous employment peak, Nov-2000 to accommodate population growth and changes in labor force participation
- In the last twelve months, the state has added 25,900

RECOVERY: How long will it take?

Number of Jobs
(in thousands)

Total Non-farm Employment Forecast



Anemic growth
forecast to continue

Illinois	Nov 2017	Nov 2018 (p)	Number of Jobs	Growth Rate %
Total non-farm	6,045,200	6,044,200	-1,000~7,400	-0.02%~0.12%
Construction	213,300	209,600	-3,700	-1.73%
Manufacturing	575,200	577,100	1,900	0.33%
Trade, transportation & utilities	1,204,100	1,197,900	-6,200	-0.51%
Information	98,900	97,900	-1,000	-1.01%
Financial Activities	396,400	395,200	-1,200	-0.30%
Professional & business services	954,100	969,300	15,200	1.59%
Education & health	927,700	936,800	9,100	0.98%
Leisure & hospitality	595,000	598,400	3,400	0.57%
Other services	248,800	246,400	-2,400	-0.96%
Government	823,600	815,700	-7,900	-0.96%

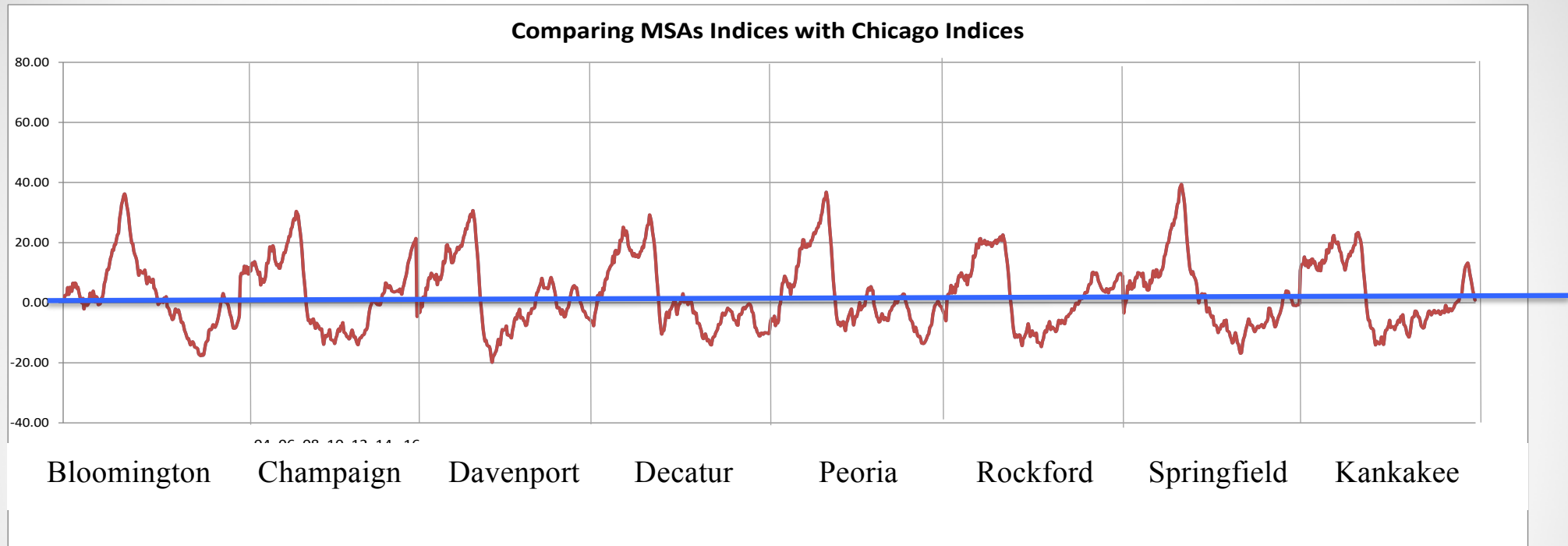
State of the Illinois Economies

Total non-farm employment	Nov 2017 Number of Jobs	Oct 2017 – Nov 2017		Last 12 months	
		Growth Rate (%)	Number of Jobs	Growth Rate (%)	Number of Jobs
Nation	147,241,000	0.16	228,000	1.43	2,071,000
Rest of Midwest (RMW)	20,545,100	0.05	9,400	0.98	199,400
Illinois	6,045,200	-0.02	-1,100	0.43	25,900
Illinois Metro	5,326,100	0.04	1,900	0.69	36,700
Illinois non-Metro (Rural)	719,100	-0.42	-3,000	-1.47	-10,800
Illinois Chicago (Upstate)	4,160,700	-0.001	-100	0.75	31,100
Illinois non-Chicago	1,884,500	-0.06	-1,100	-0.27	-5,200

- Chicago growth much higher than the rest of the state
- Other Metro areas growing but at slower rates
- Rural areas declining

Metro Indices Compared with Chicago's Performance

Value above line indicate growth > Chicago



- From early 2007 to early 2009, all MSAs performed better than Chicago.
- From Mid-2009 to present, MSAs performed less well than Chicago.
- According to the forecast for October 2018, Champaign-Urbana and Rockford are likely to perform better over this period than Chicago. All the other MSAs will compare less favorably to Chicago.

Metro Area Economic Performance last 12 months

Rank	October 2017	November 2017	Rank
1	Kankakee (1.94%)	Kankakee (2.64%)	1
2	Bloomington-Normal (0.92%)	Davenport-Rock Island-Moline (1.63%)	2
3	Chicago (0.61%)	Chicago (0.75%)	3
4	Davenport-Rock Island-Moline (0.52%)	Metro-East (0.61%)	4
5	Metro-East (0.51%)	Peoria (0.51%)	5
6	Peoria (0.15%)	Bloomington-Normal (0.48%)	6
7	Decatur (-0.39%)	Rockford (0.01%)	7
8	Rockford (-0.45%)	Springfield (-0.4%)	8
9	Champaign-Urbana-Rantoul (-0.47%)	Decatur (-0.58%)	9
10	Springfield (-0.95%)	Champaign-Urbana-Rantoul (-0.58%)	10

The State's Economic Challenges

- Incomplete “solution” to budget stalemate
- State finances will not be addressed seriously in 2018 – election
- Research in REAL has shown that partial solutions to revenue challenges have resulted in significantly enhanced net out-migration of skilled workers
- Illinois now dropped to 6th most populous state; lost 33,700 residents in 2017, continuing 4 years of decline
- No concerted effort to grow the economy – state was not competitive in attracting Toyota/Mazda to the state even though we have more available qualified workers than Alabama
- Unlikely that Amazon will locate HQ2 in Chicago

The State's Economic Challenges: Implications for the Housing Market

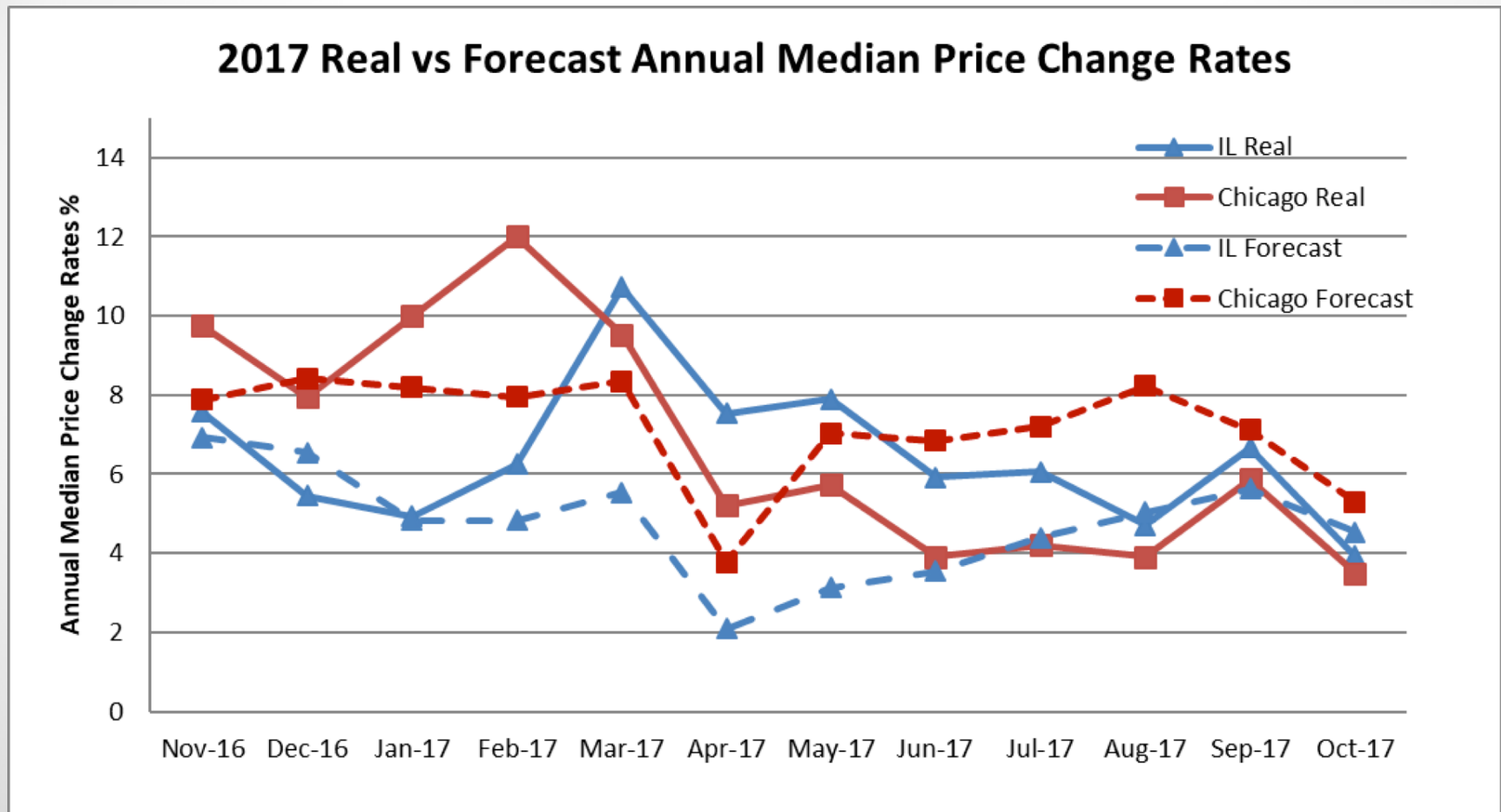
- Migration flows provide a source of “energy” into the housing market – generating sales when a household leaves and purchases when a new migrant re-locates
- If net-migration is negative, then only one part of the market is stimulated
- In-flows will be smaller if job creation lags
- Firms have enormous choices in serving the Midwest market and taking advantage of Illinois’ transportation connections – without having to locate in the state
- There appears to be little interest in a bipartisan approach to what is a major challenge – this is hurting the housing market

Challenges by Changes in 2017 Tax Legislation

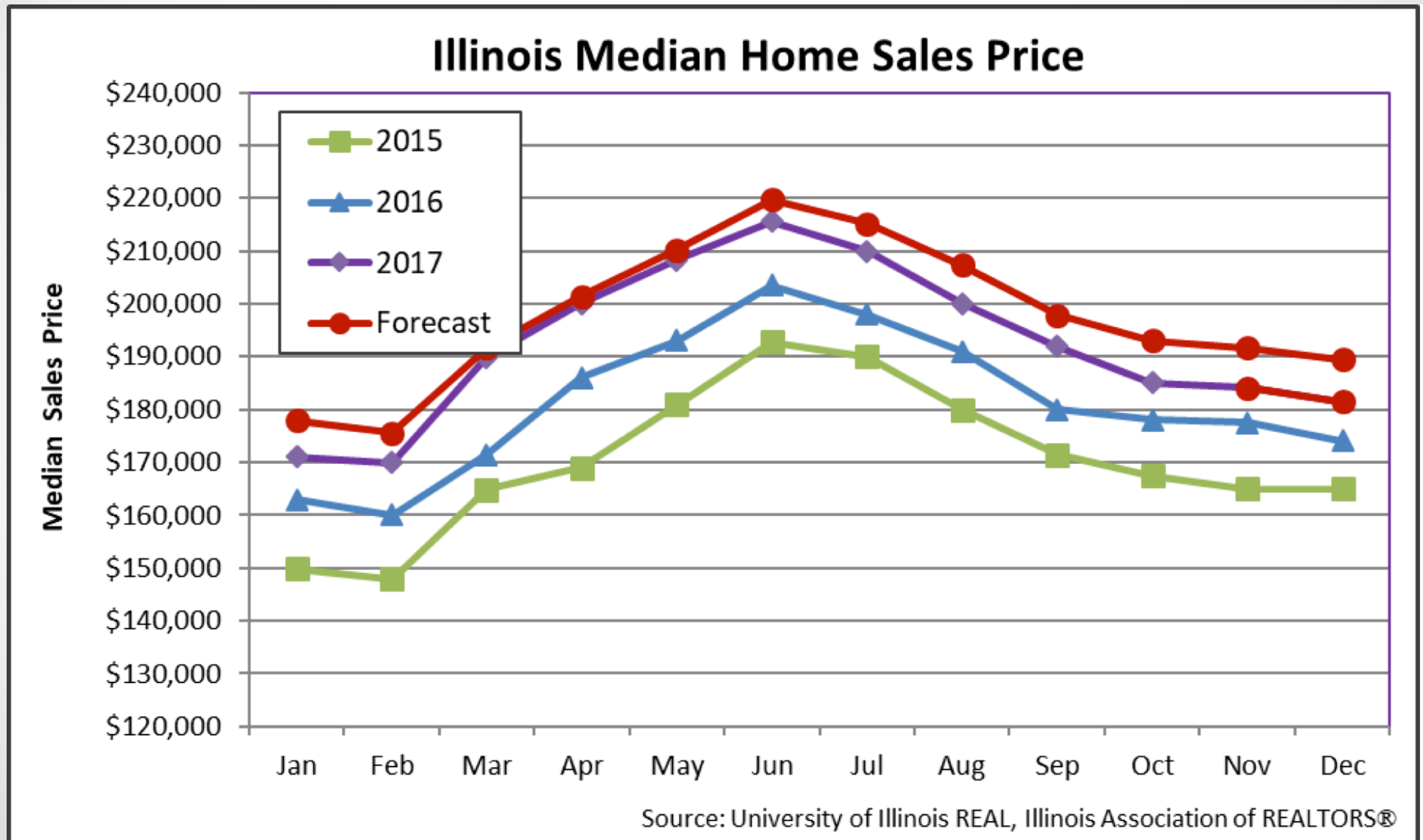
- REAL is exploring ways in which these changes might be evaluated
- Complicated by changes in deductability and how existing home owners and potential home buyers might respond to changes in state and local tax
- Deductability of mortgage interest only affects a relatively small number of home owners
- Empirical evidence garnered after the Reagan-era tax cuts suggested that many households were not aware of tax cuts as the impact on their disposable income was small

Housing Market

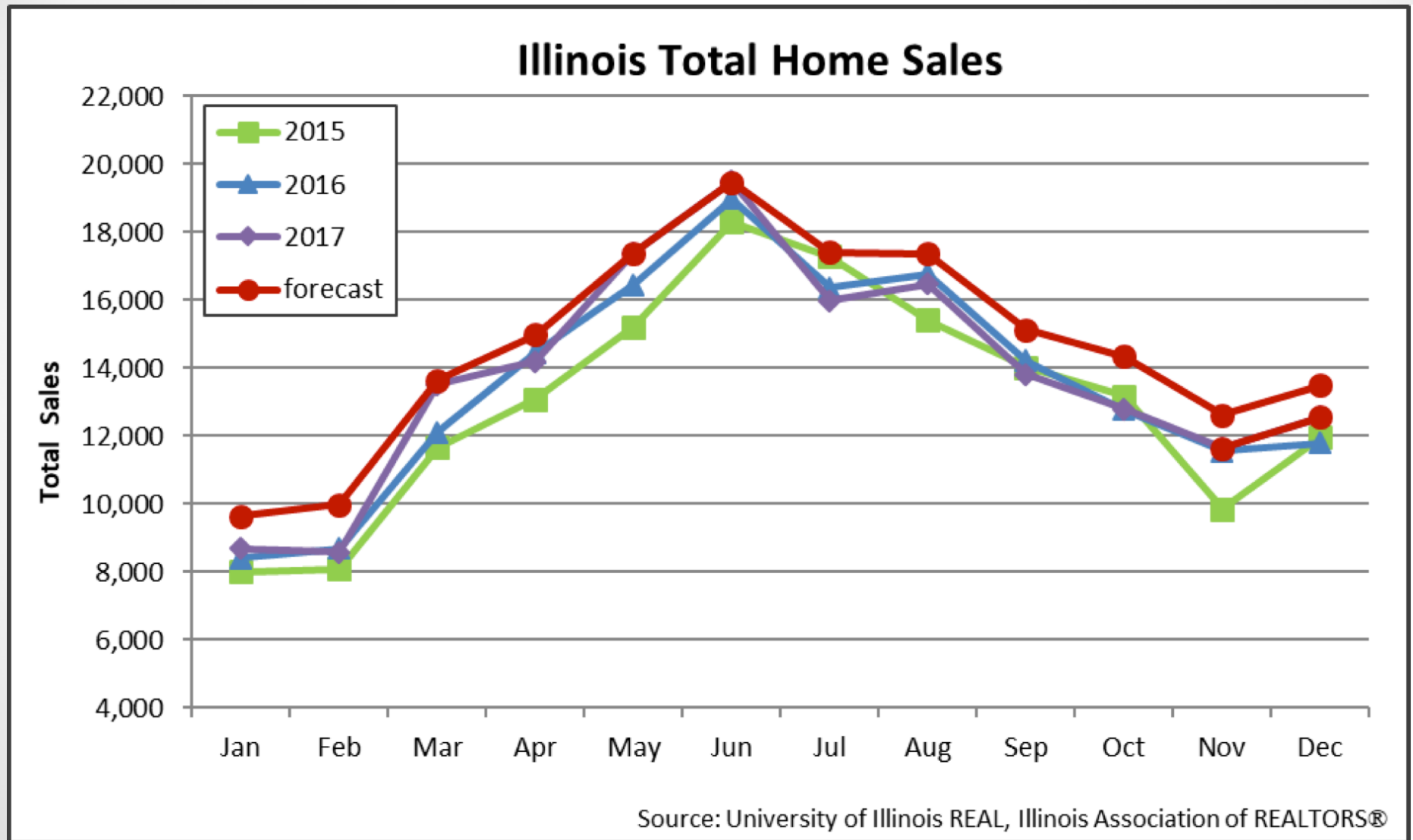
How Good were our Forecasts?



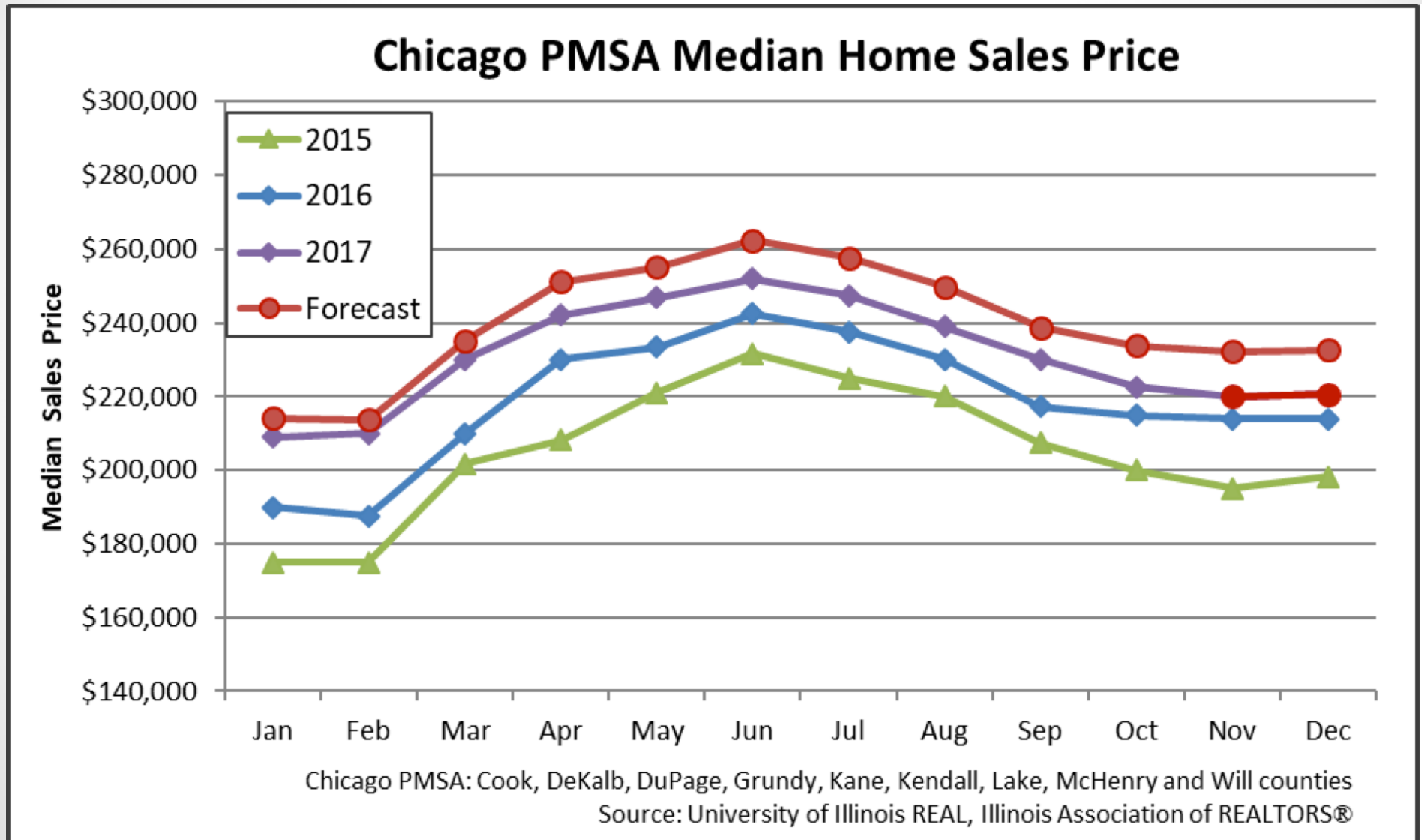
Illinois Housing Market: Prices



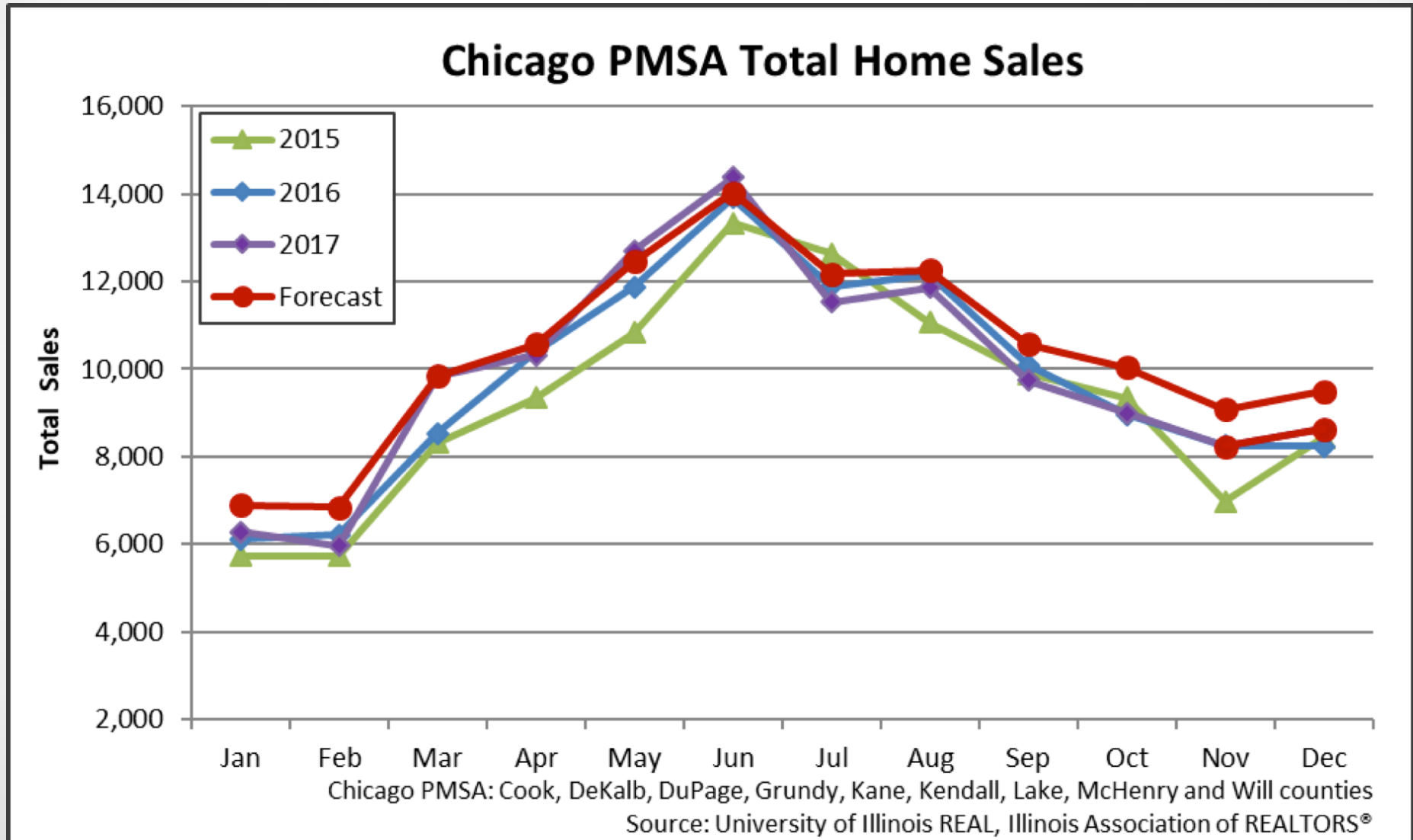
Illinois Housing Market: Sales



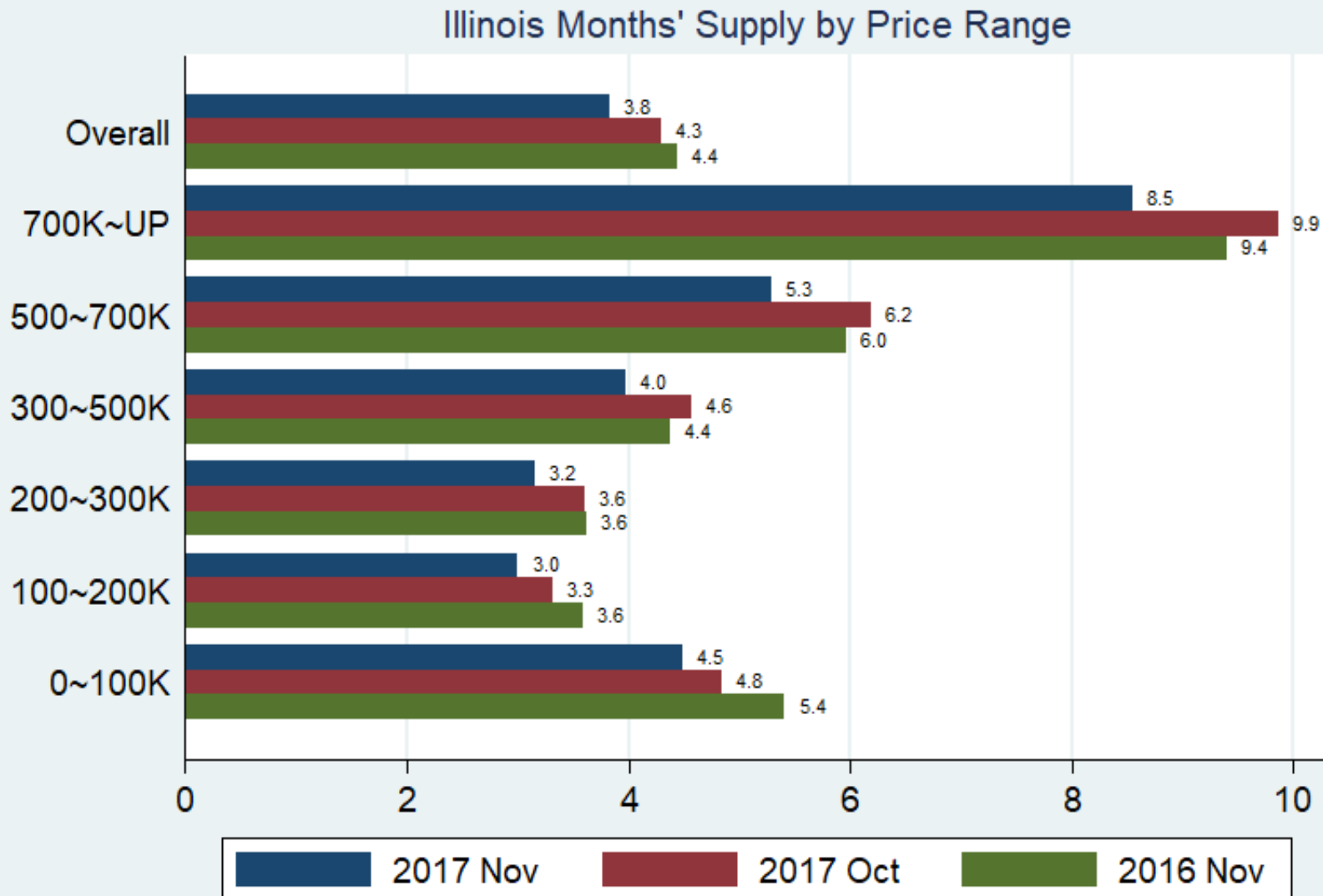
Chicago Housing Market: Prices



Chicago Housing Market: Sales



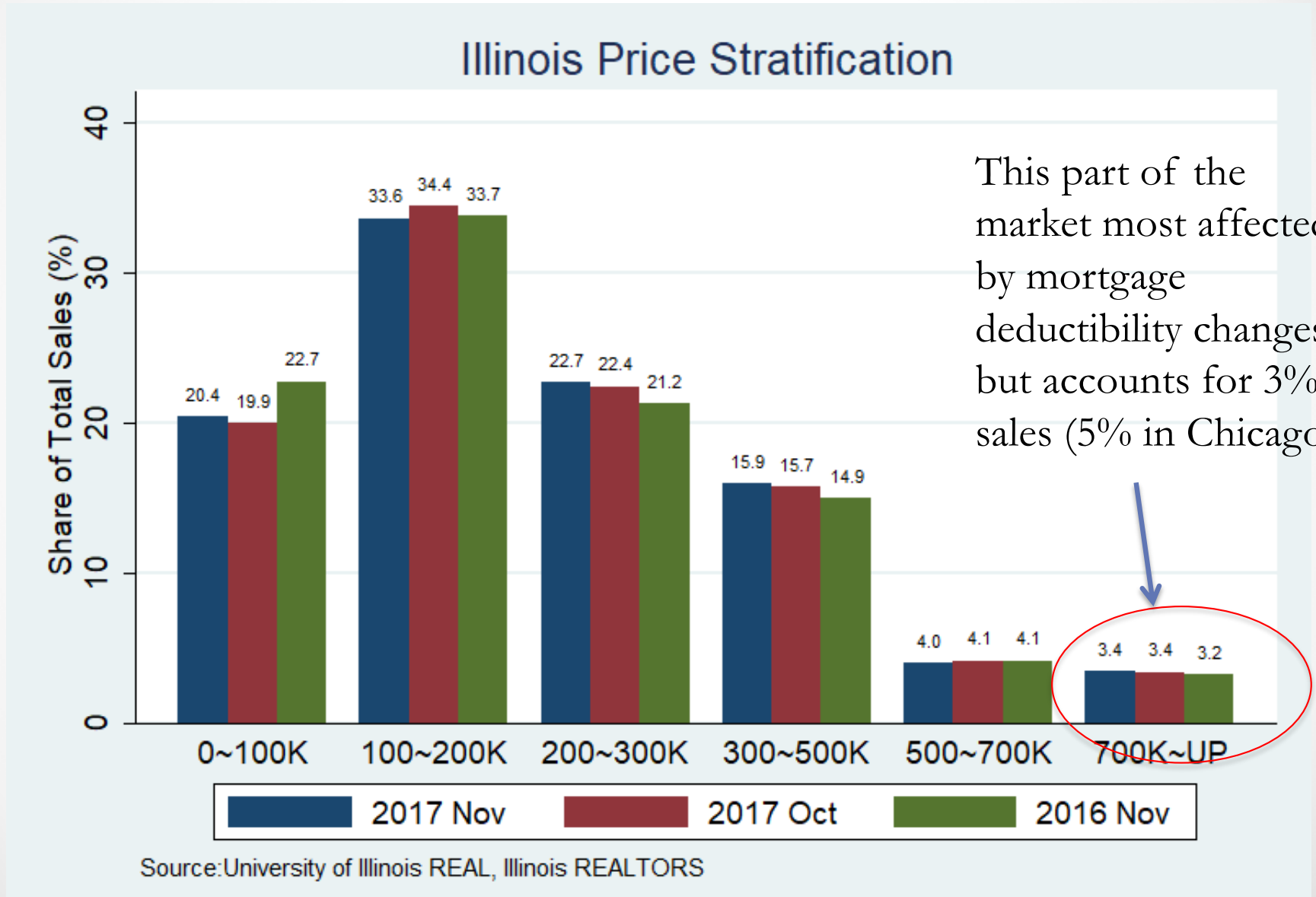
Illinois Housing Market: Inventory



Source: University of Illinois REAL, Illinois REALTORS

Shrinking supply in all price ranges – similar for Chicago₂₄

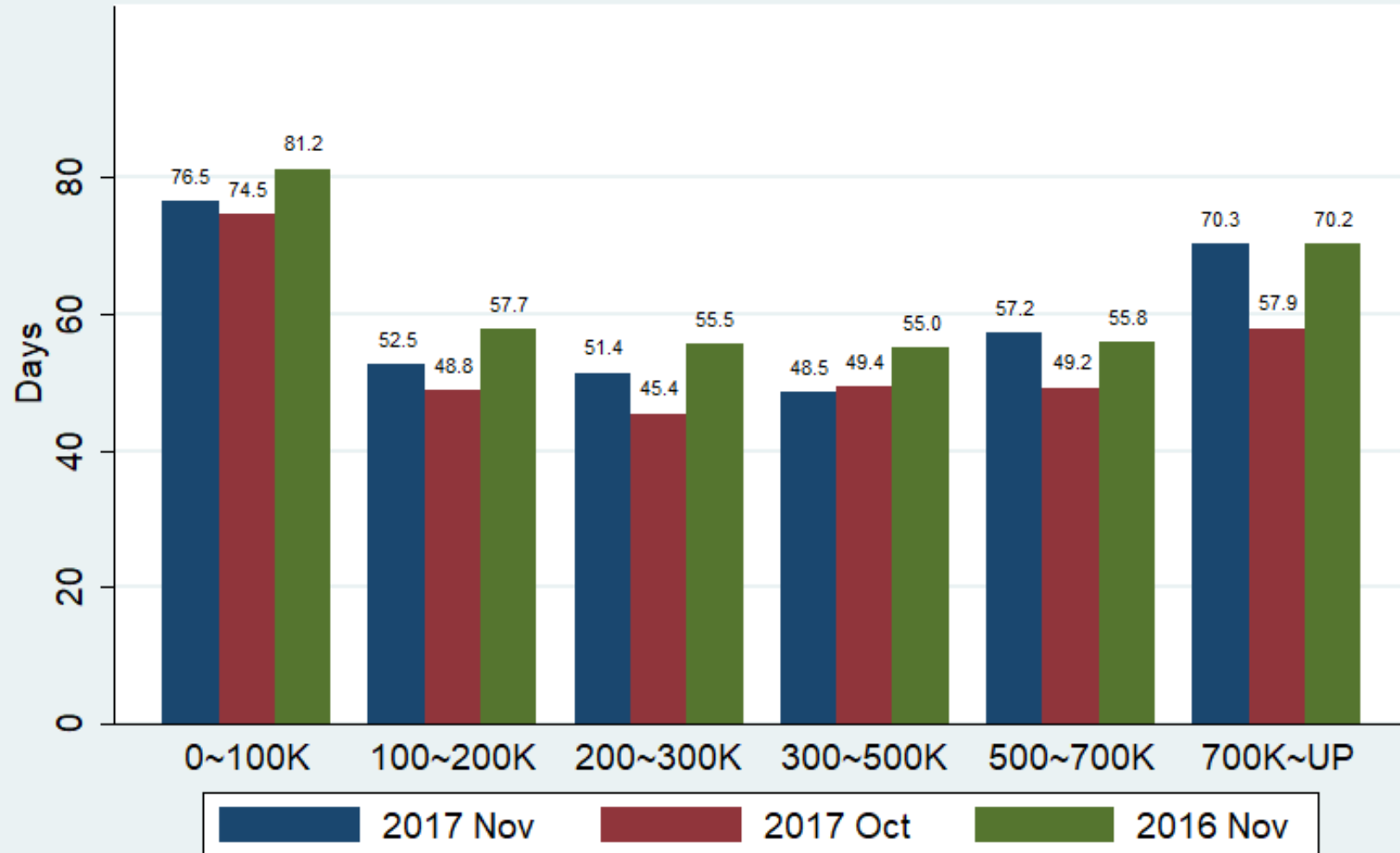
Illinois Housing Market: Price Stratification



Little change 2016-2017 – same for Chicago but with larger decline in share <\$100K

Time on the Market

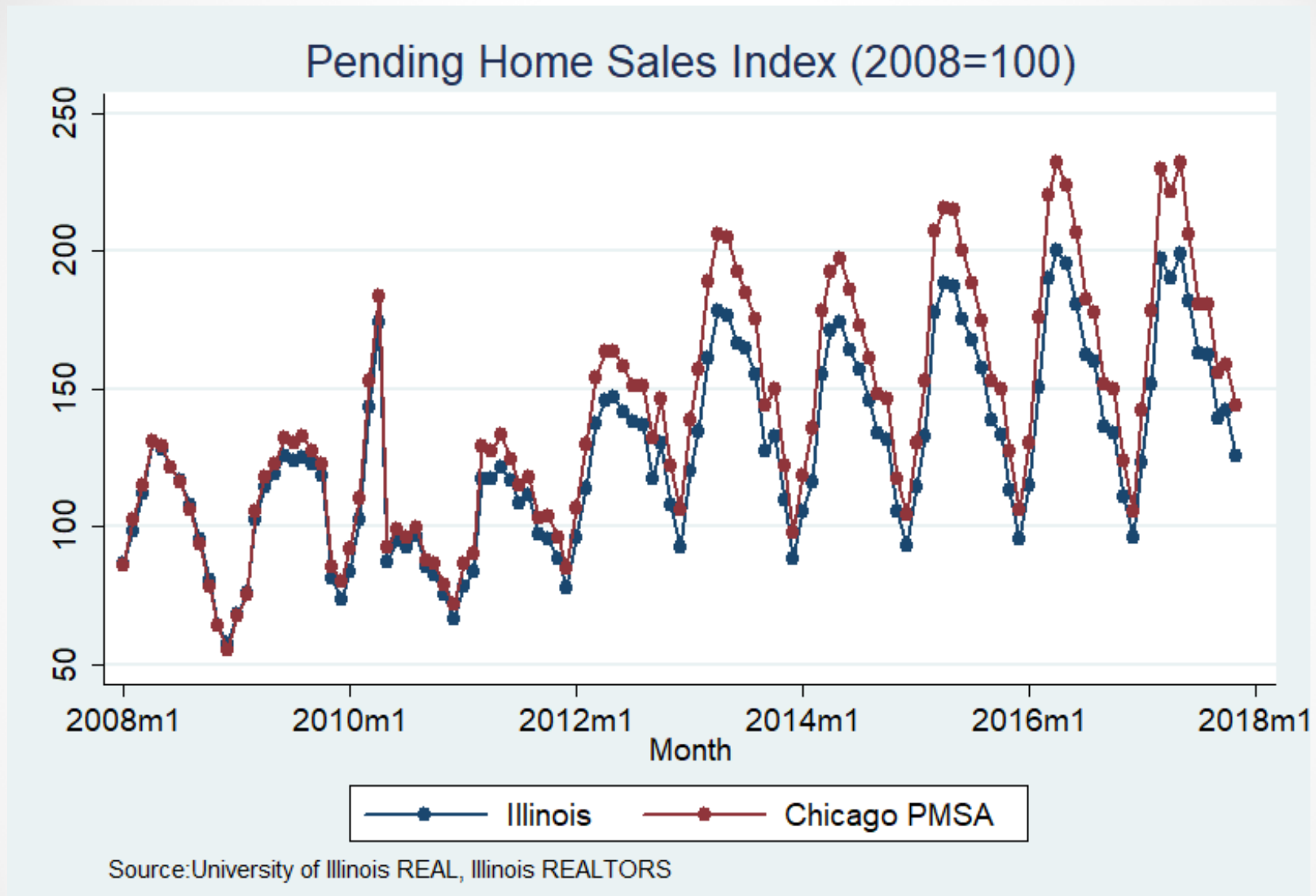
Illinois Average Time on the Market



Source: University of Illinois REAL, Illinois REALTORS

Upward tick for higher priced houses

Pending Sales Index



Product and highlight this more prominently in 2018 and issue for each MSA

Initial research will tie this with MSA Business Indices

Exploration Spatial Association of Price Formation

Tobler's (1979) First Law of Geography:

“Everything is related to everything, but nearby things are more related than distant things.”

Exploring price formation within the city of Chicago

- How are prices related across communities?
- Which communities are leaders and which followers in price changes?
- Even Median or REAL's Housing Price Index can mask significant variations within a metropolitan region

Spatial Distribution of House Prices, 2016

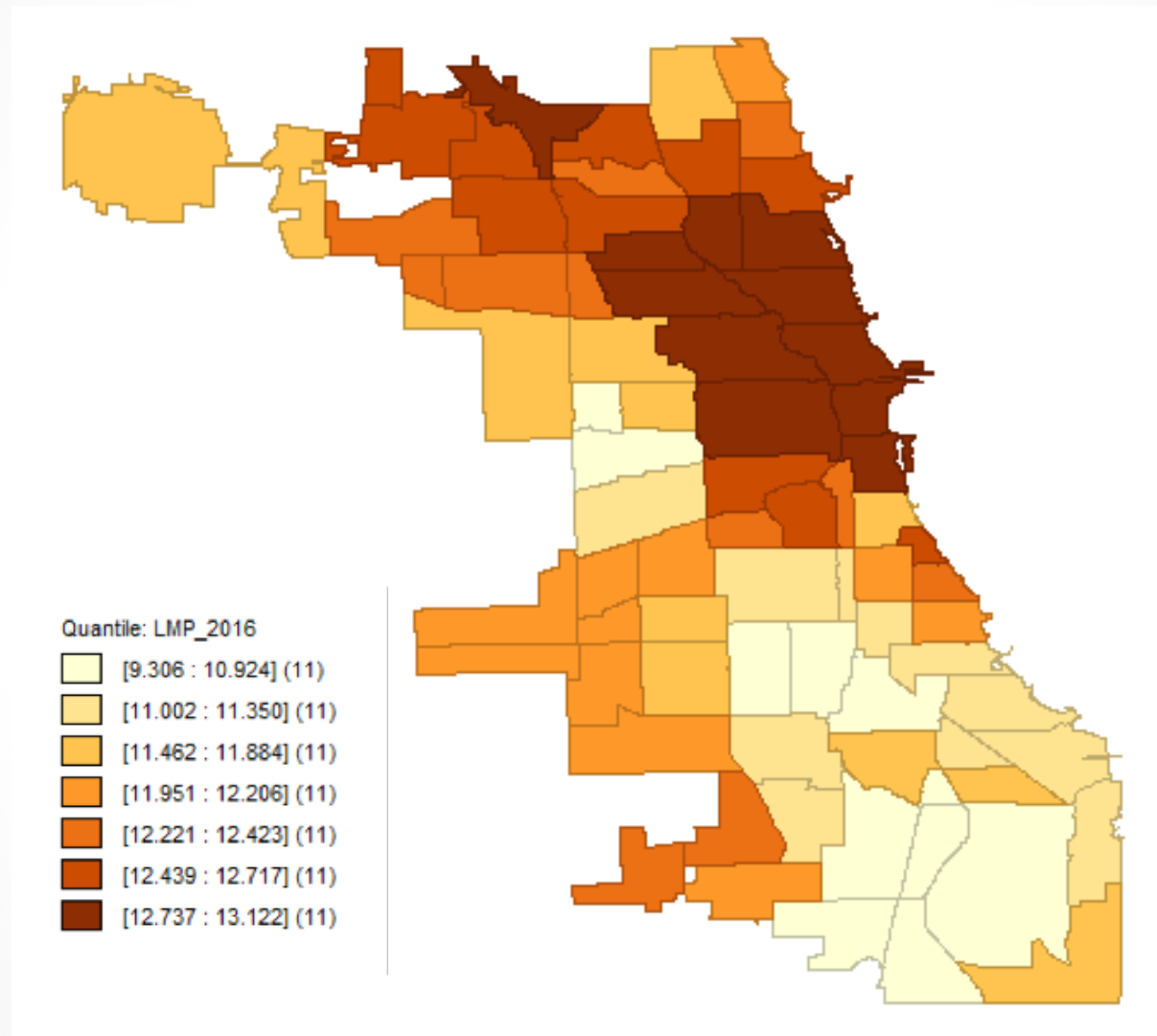
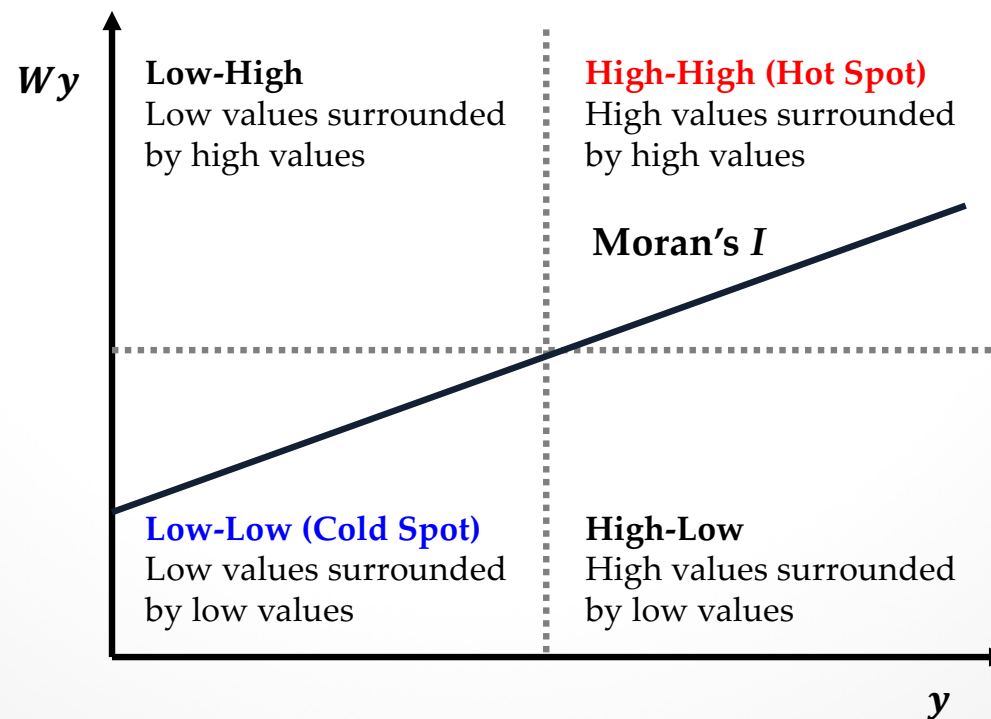


Figure. Spatial Distribution of House Prices (in logs) in Chicago Communities

Identification of relationships

- Divide communities into 4 groups
 - **High** price communities surrounded by other **High** price communities
 - **Low** surrounded by **Low**
 - **High** surrounded by **Low**
 - **Low** surrounded by **High**

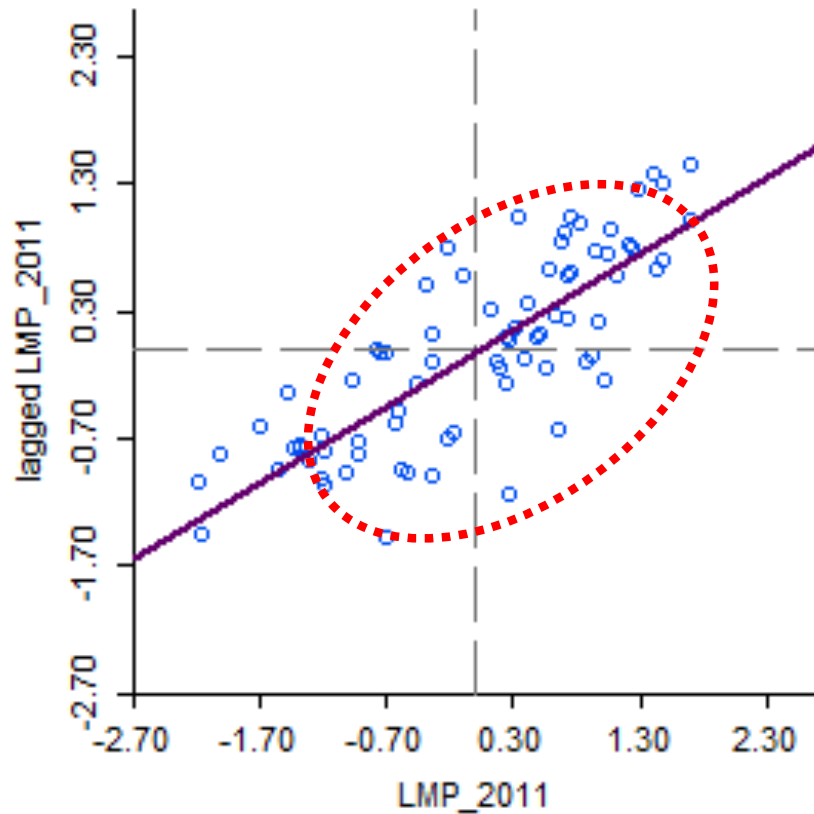


Scatter Plot of House Prices, 2011-2016

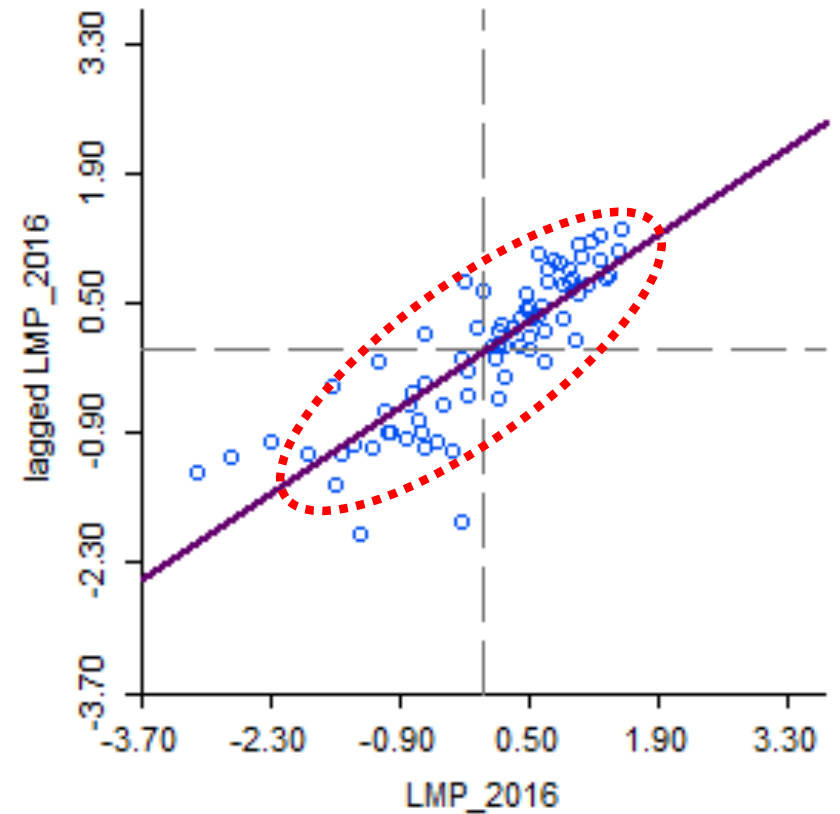
2011

2016

Moran's I: 0.598273



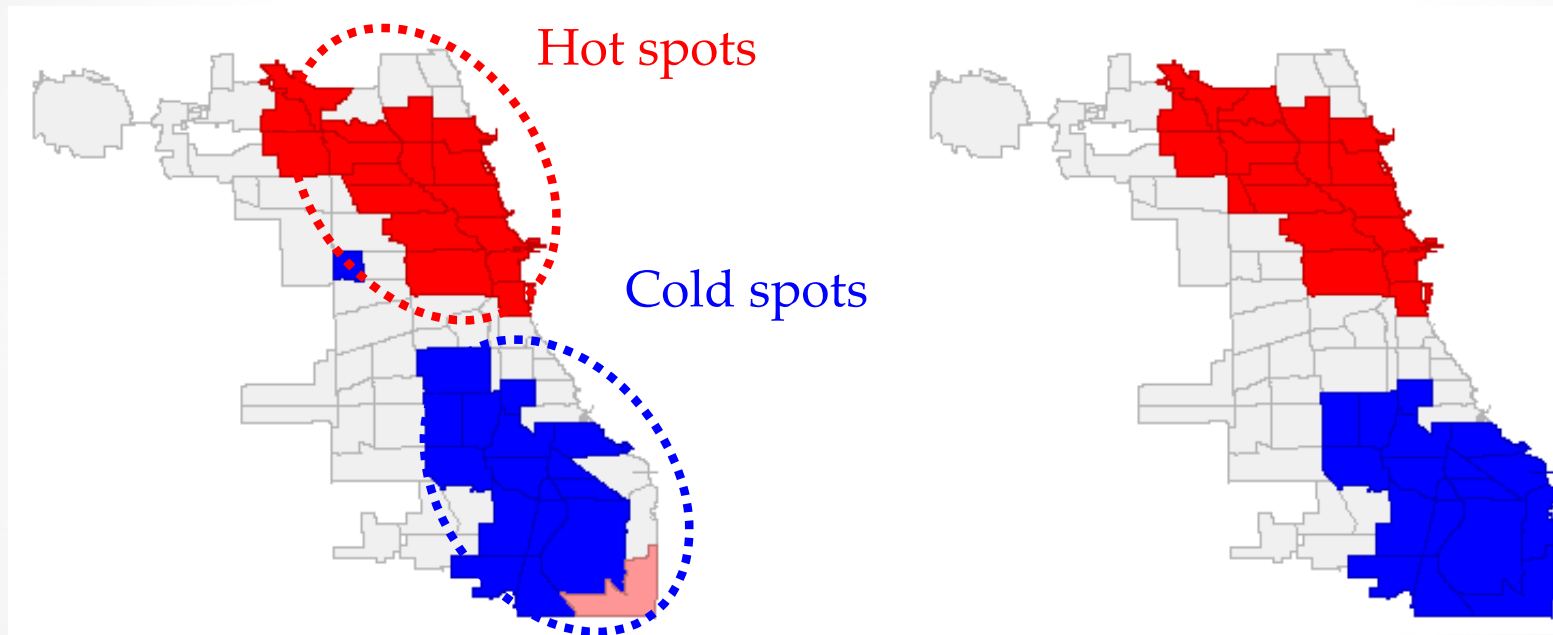
Moran's I: 0.667953



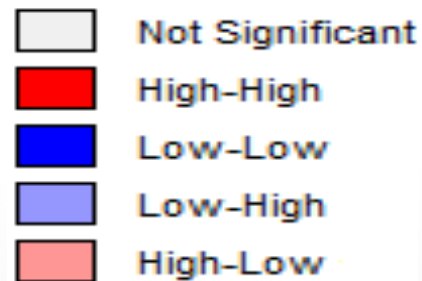
Cluster Maps of House Prices, 2011-2016

2011

2016



LISA Cluster Map:



Summary to Date

- Findings reveal that house prices in the Chicago communities tend to be spatial associated.
- The overall clustering has increased each year
- Cluster maps show that most communities were identified with statistically significant positive spatial autocorrelation.
 - Hot spots of house prices were detected in the northern part of the Chicago, while
 - Cold spots were detected in the southern part.
- Now we will explore how price changes in one community affect or are affected by change in other communities

Final Concerns: Immigration

- By 2030, 20% of Illinois population will be >65
- Shrinking labor force will result in an increase in dependency ratio (number of people not working to those working)
- Research in REAL has shown that immigration is positive for the state's economy

Research Value Added

- Development of **REAL Housing Price Index** – more flexible than Case-Shiller and is not routinely applied to the monthly housing forecasts
- Evaluation of negative impacts of foreclosures and the positive impacts of the **Neighborhood Stabilization Program** – this work has been published in highly ranked academic journals
- Community-level analysis within the Chicago Metro area



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Monthly index of leading indicators for Chicago

The R... urban... focuses on the development and use of analytical models for...
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output analysis to provide for both impact and forecasting analyses. metropolitan models that integrate econometric and input-

Monthly Employment analysis for state and Metro areas Illinois Economic Review (monthly) with employment forecasts for next 12 months

While REAL's primary focus has been on the economies of the Midwest, REAL has collaborated in the development of models for several regions on the east coast. In addition, two models have been constructed for states in Brazil and a third is under construction. A model for the Jakarta Metropolitan region is also under construction.

REAL... the fields of economics, the projects the students

- *Net m...* (Released: 05-01-2009)
- *REAL's appraisal of the Federal Stimulus Package and the Illinois House Capital Bill on the Illinois Economy* [more...](#) (Released: 04-15-2009)
- *Tae-Jeong Kim analyses the impact of updated Fed US forecasts on the Chicago economy.* [more...](#) (Released: 04-07-2009)
- *Geoffrey Hewings presents some thoughts for the new Governor of Illinois.* [more...](#) (Released: 04-07-2009)
- *Chicago Business Activity Index: "Chicago economy expected to contract significantly over the next 12 months"* [more..](#) (Released: 02-23-2009)

For More Information

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