

PHILADELPHIA HOUSE PRICE INDICES



April 28, 2015

KEVIN C. GILLEN, Ph.D.

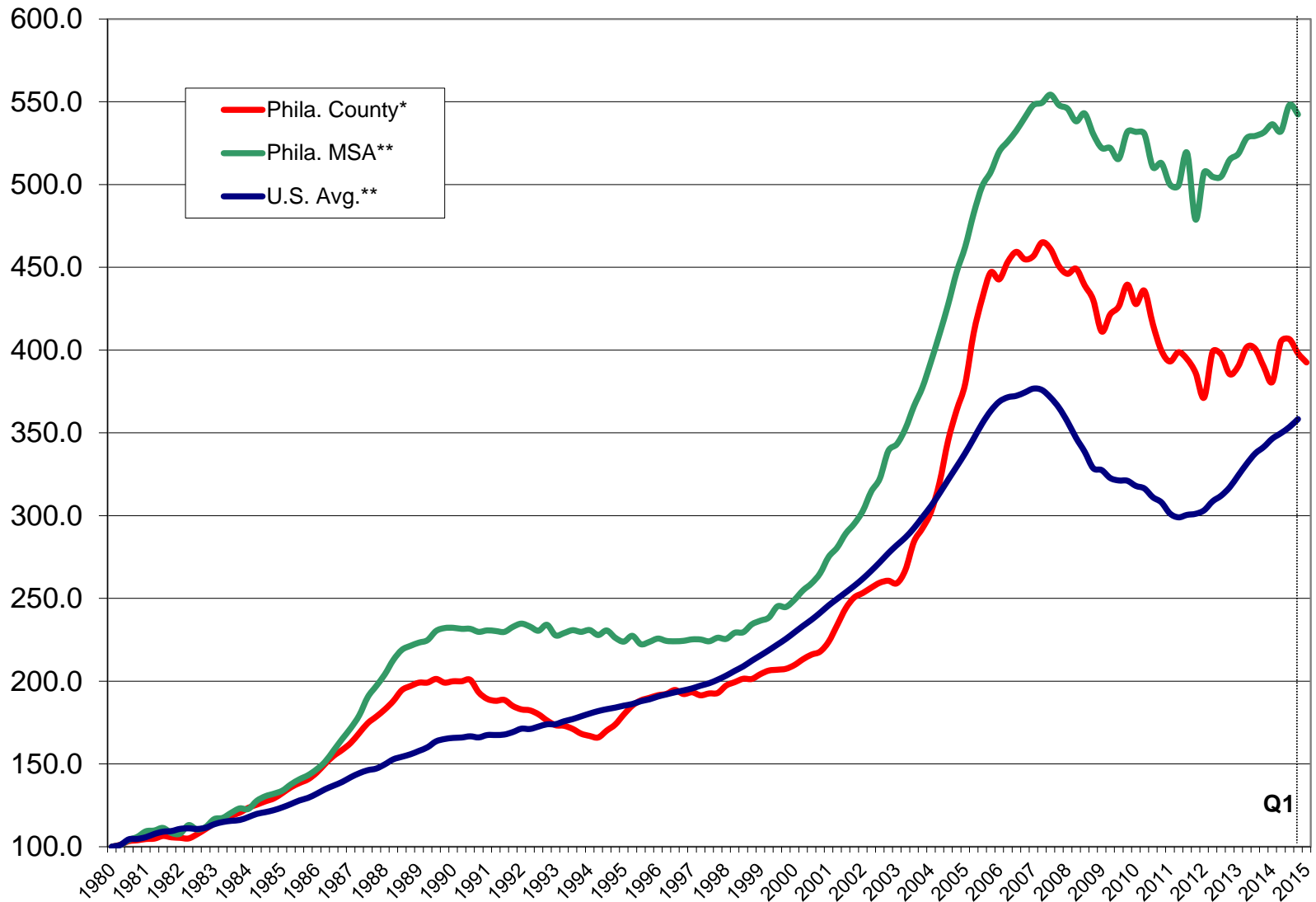
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Disclaimers and Acknowledgments: The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Lindy Senior Research Fellow Kevin Gillen, in association with Meyers Research LLC. The author thanks Azavea.com, the Philadelphia Office of Property Assessment, the Federal Housing Finance Agency, Case-Shiller MacroMarkets LLC, RealtyTrac, Zillow.com, Trulia.com and the NAHB for making their data publicly available.

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House Price Indices 1980-2015: 1980Q1=100 Philadelphia County v. Philadelphia MSA and U.S. Average



* Empirically estimated by Kevin C. Gillen, Ph.D.

**Courtesy of the Federal Housing Finance Agency (FHFA).

HPIs are available through 2014Q4 only

"MSA" = Metropolitan Statistical Area, which is the entire 9-county region

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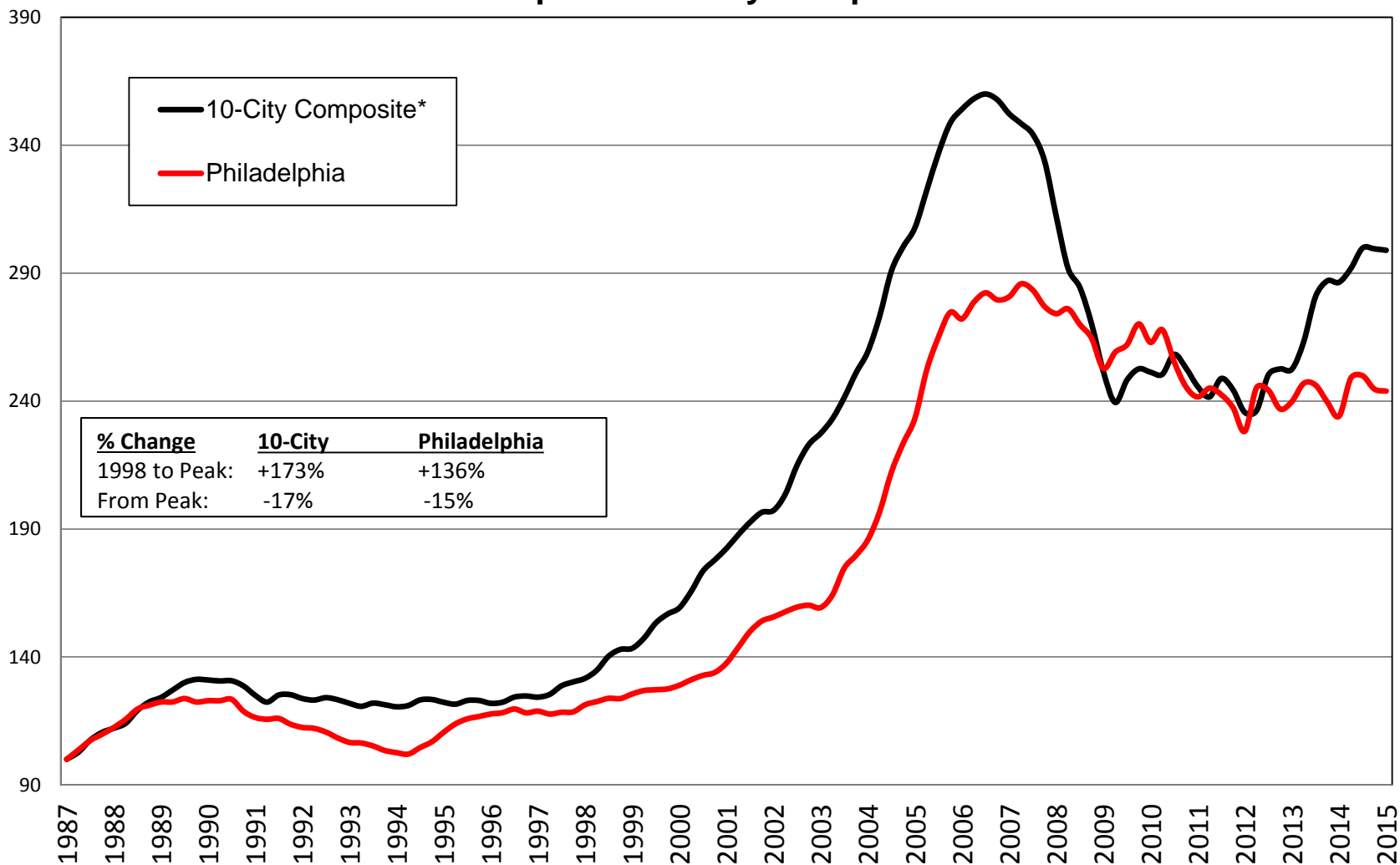
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
36-Year	137.8%	169.1%	127.6%
10-Year	4.5%	19.3%	8.4%
1-Year	4.1%	2.0%	4.8%
1-Quarter	-0.3%	-1.0%	1.3%

*Empirically estimated by Kevin C. Gillen Ph.D.

**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2014Q4 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

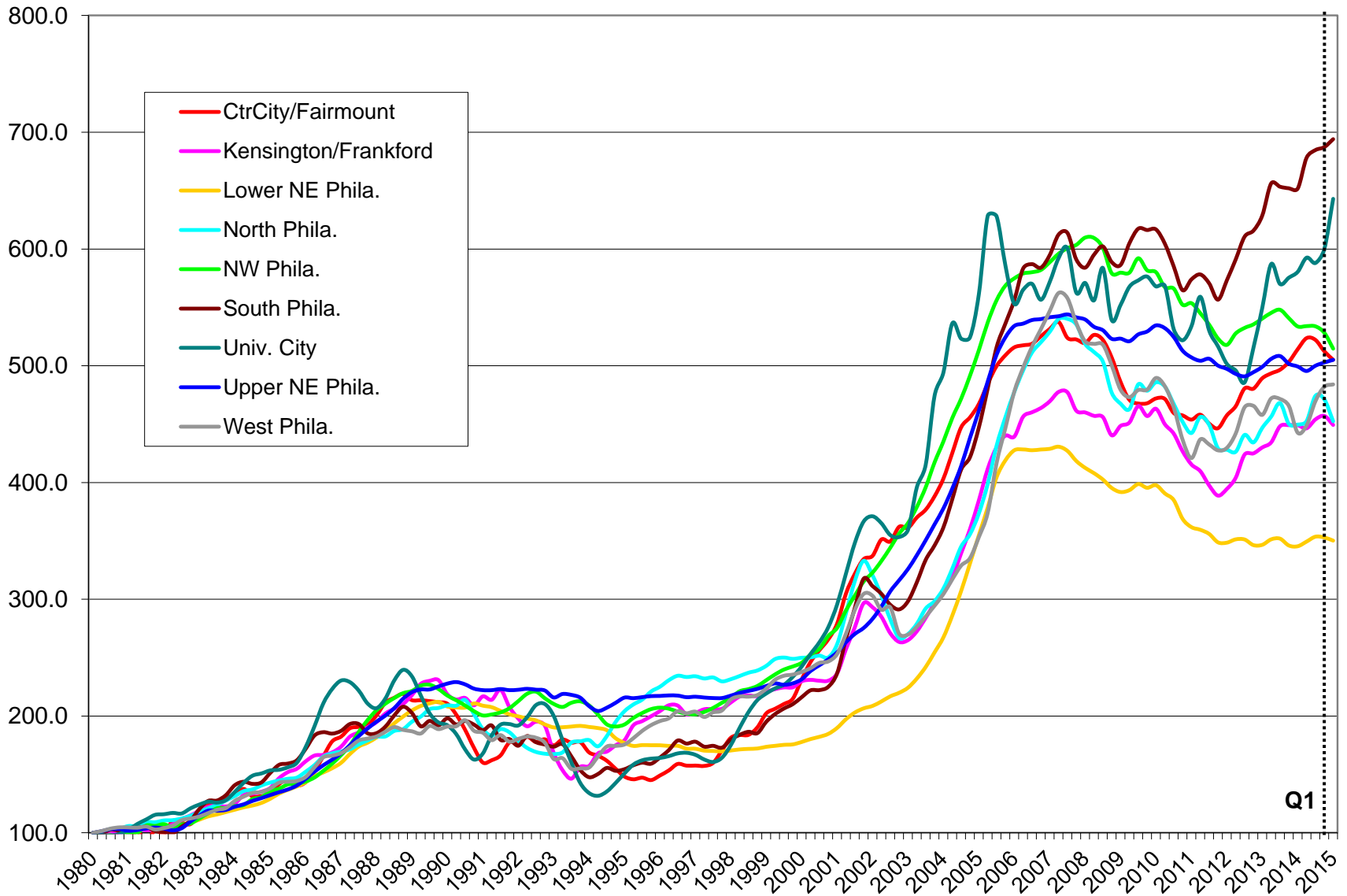
House Price Appreciation 1987-2015: Philadelphia v. 10-City Composite



*Source: S&P/Case-Shiller. The 10-City Composite index includes Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, DC. It does not include Philadelphia.

Philadelphia House Price Indices by Neighborhood: 1980-2015

1980Q1=100



* All indices empirically estimated by Kevin C. Gillen, Ph.D.

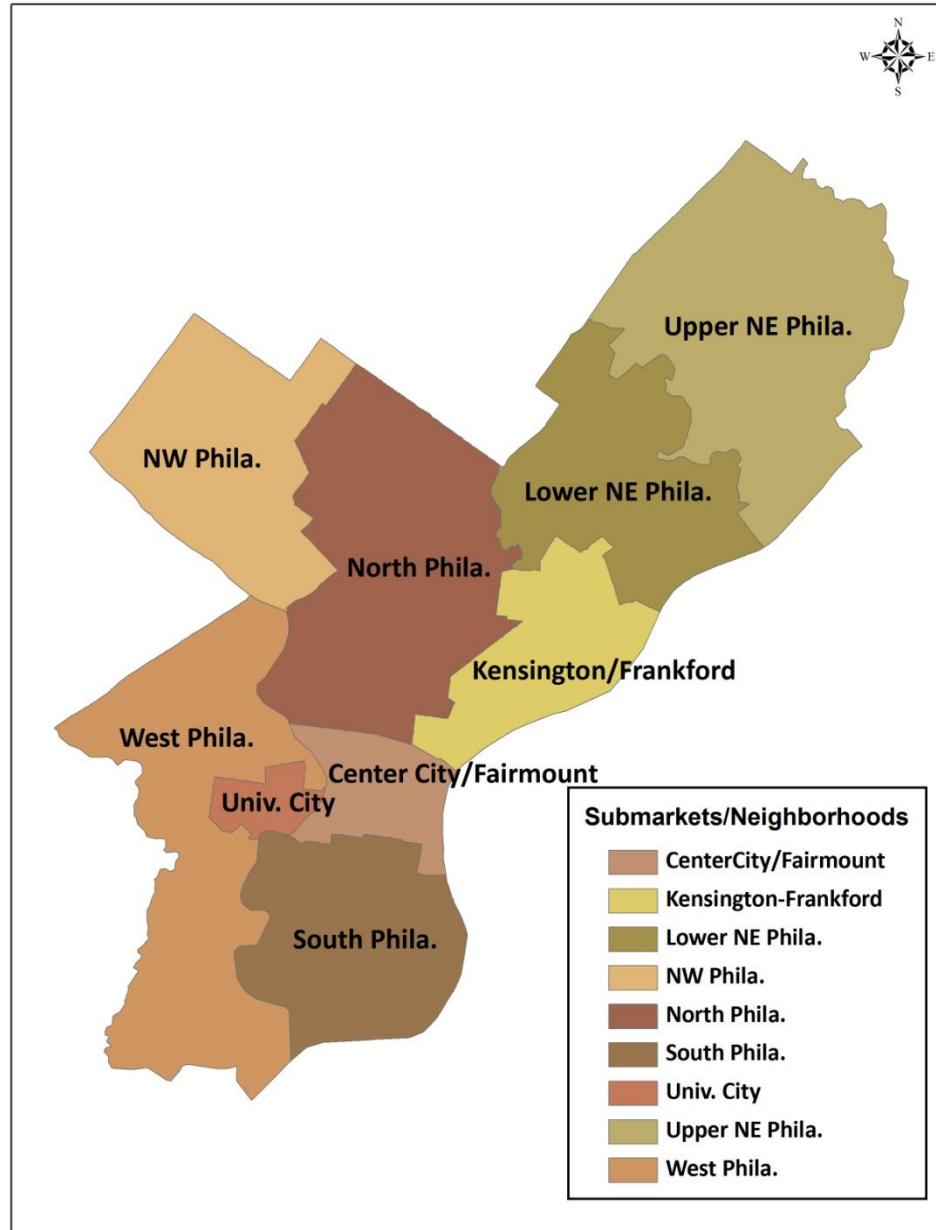
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Philadelphia House Price Appreciation Rates by Neighborhood

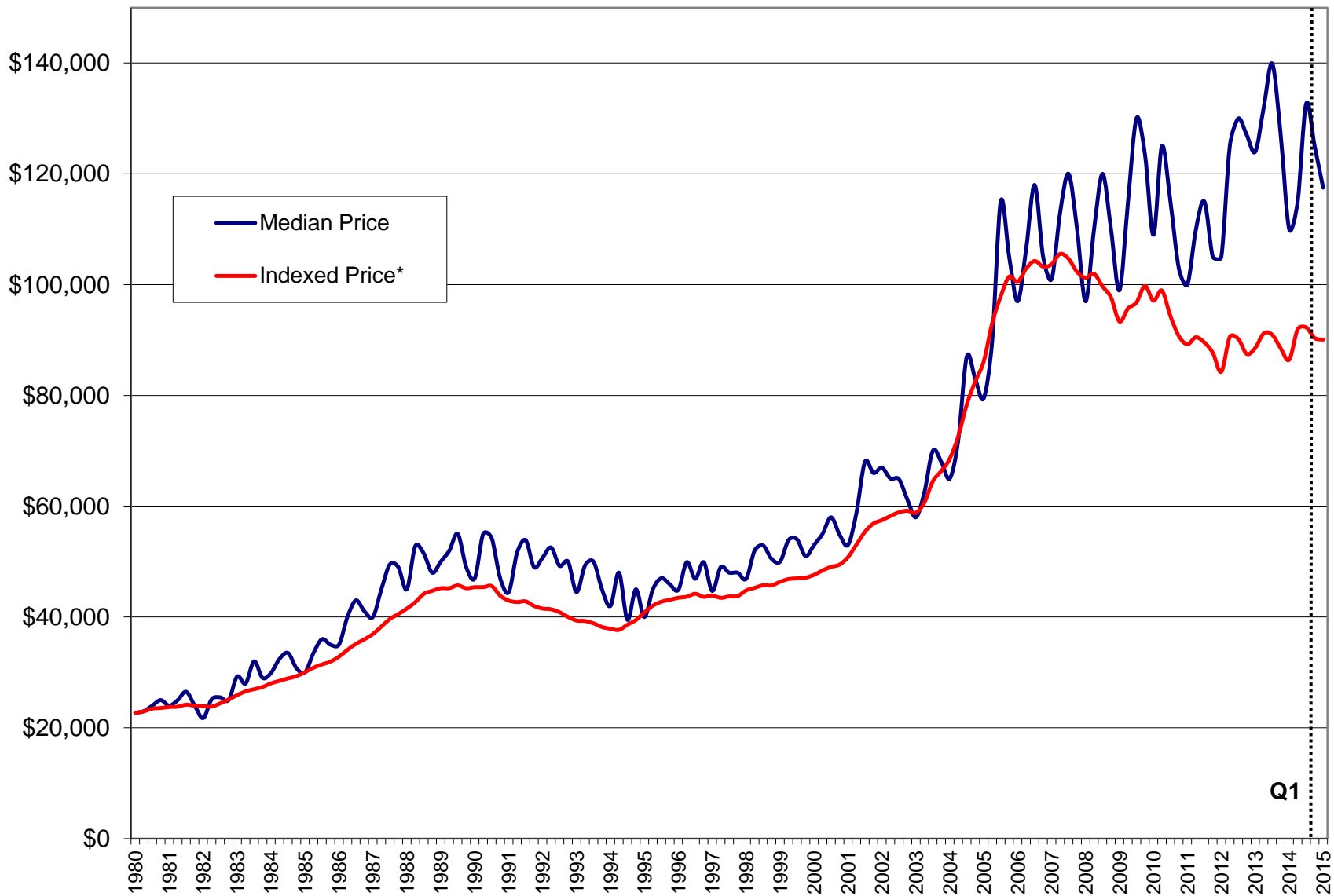
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West Phila.
36-year	162.0%	150.3%	125.3%	150.9%	163.8%	193.7%	186.1%	161.9%	157.7%
10-year	7.8%	15.5%	-1.3%	19.2%	0.3%	44.0%	13.6%	9.0%	31.5%
1-Year	-1.8%	0.0%	1.4%	0.6%	-3.6%	6.3%	10.2%	1.1%	8.9%
1-Quarter	-1.4%	-1.7%	-0.8%	-4.1%	-2.6%	1.0%	6.9%	0.5%	0.4%

This table gives the total % change in house prices by neighborhood, through 2015 Q1, from different starting points in time.

Philadelphia Submarket Boundaries



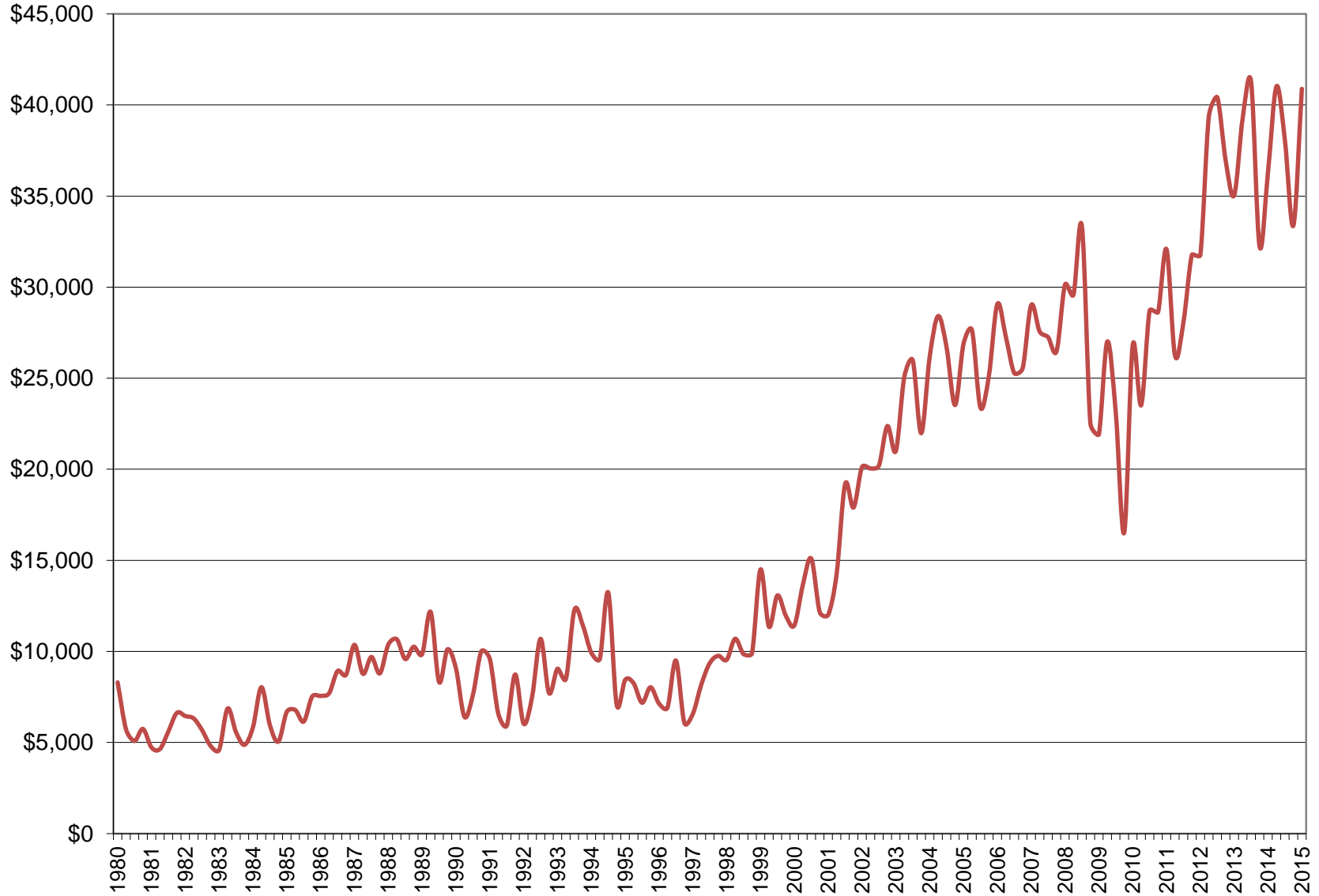
Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2015



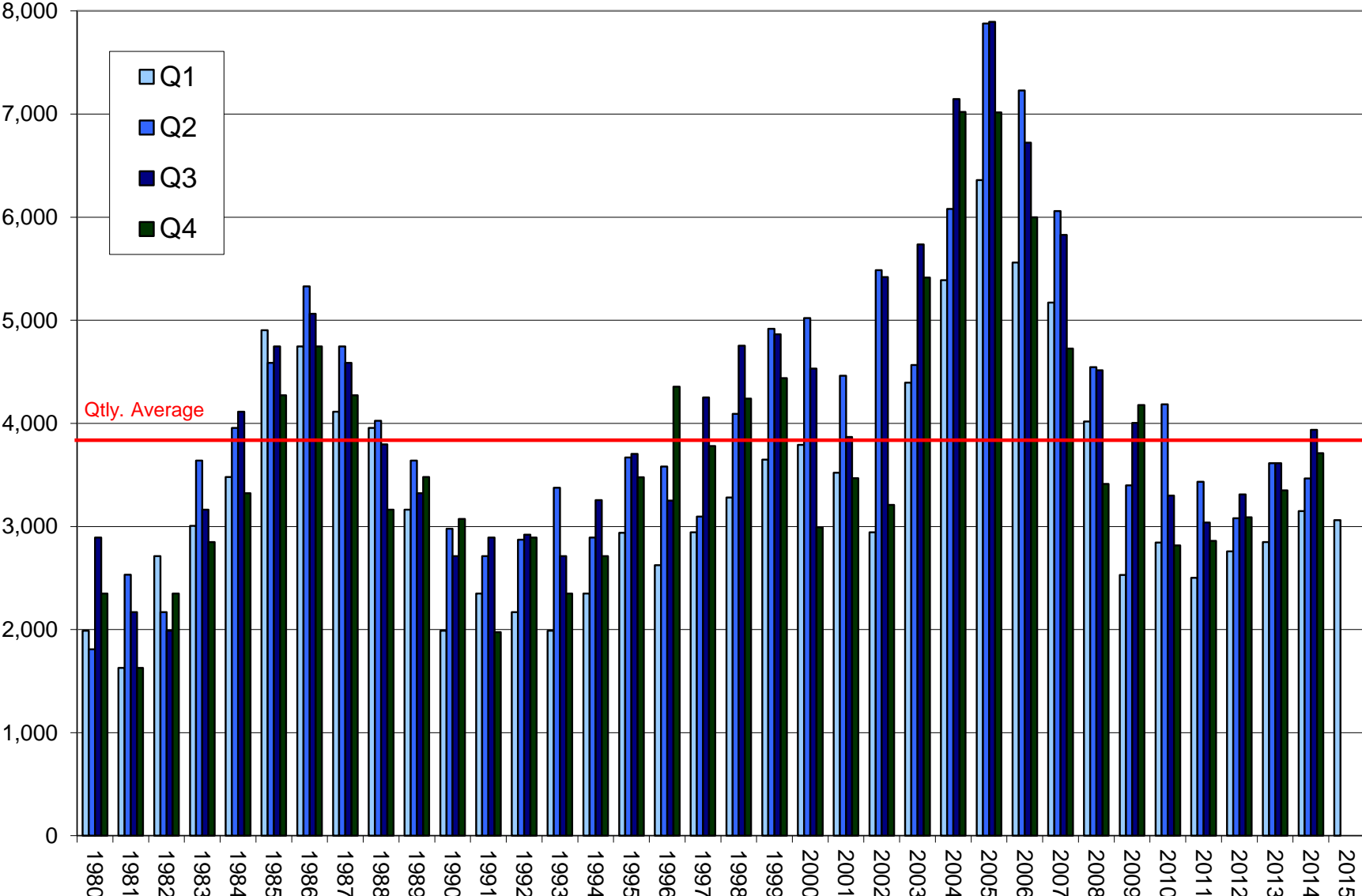
* Empirically estimated by Kevin C. Gillen, PhD

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Average House Price Minus Median House Price: 1980-2015

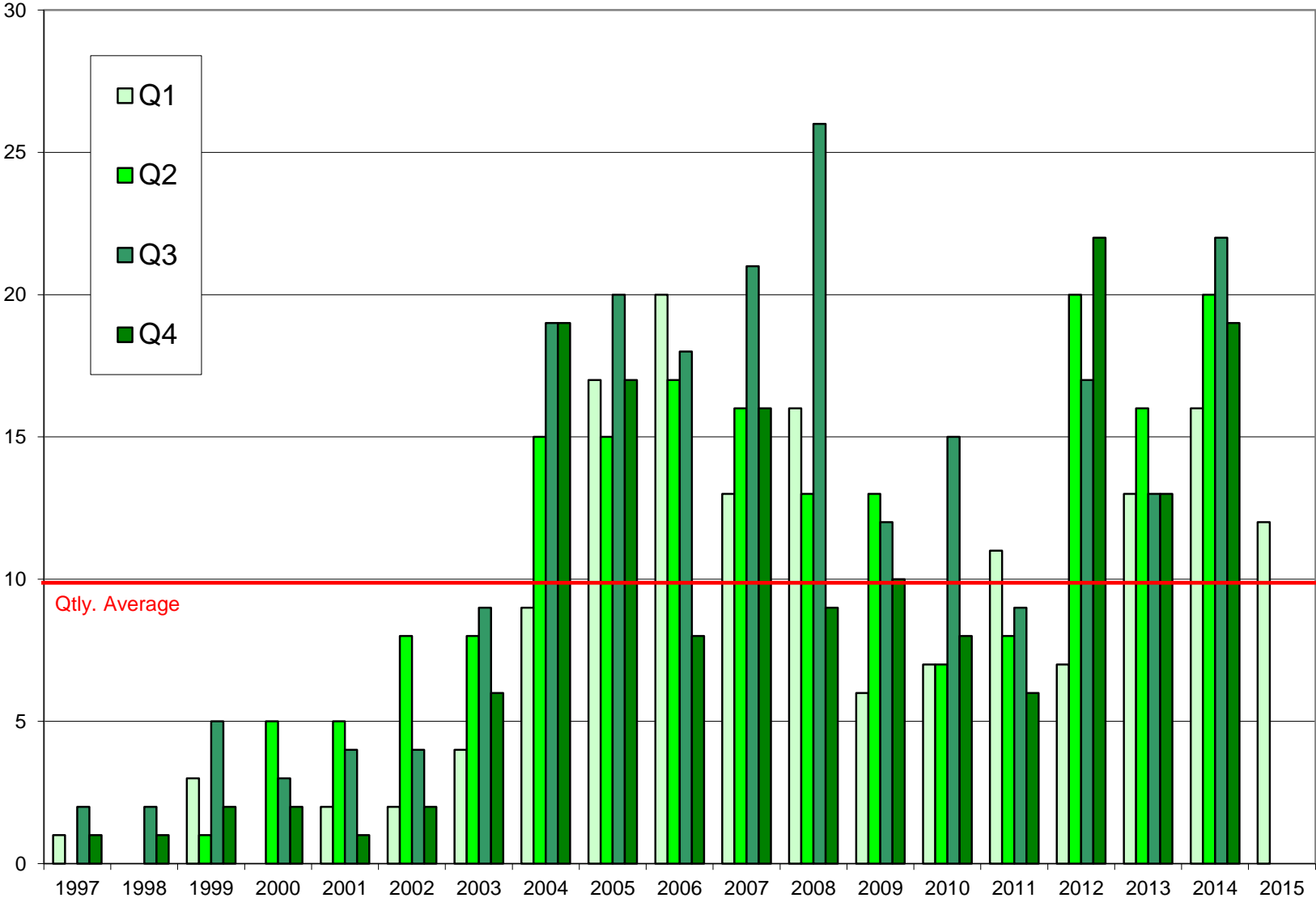


Number of Philadelphia House Sales* per Quarter: 1980-2015



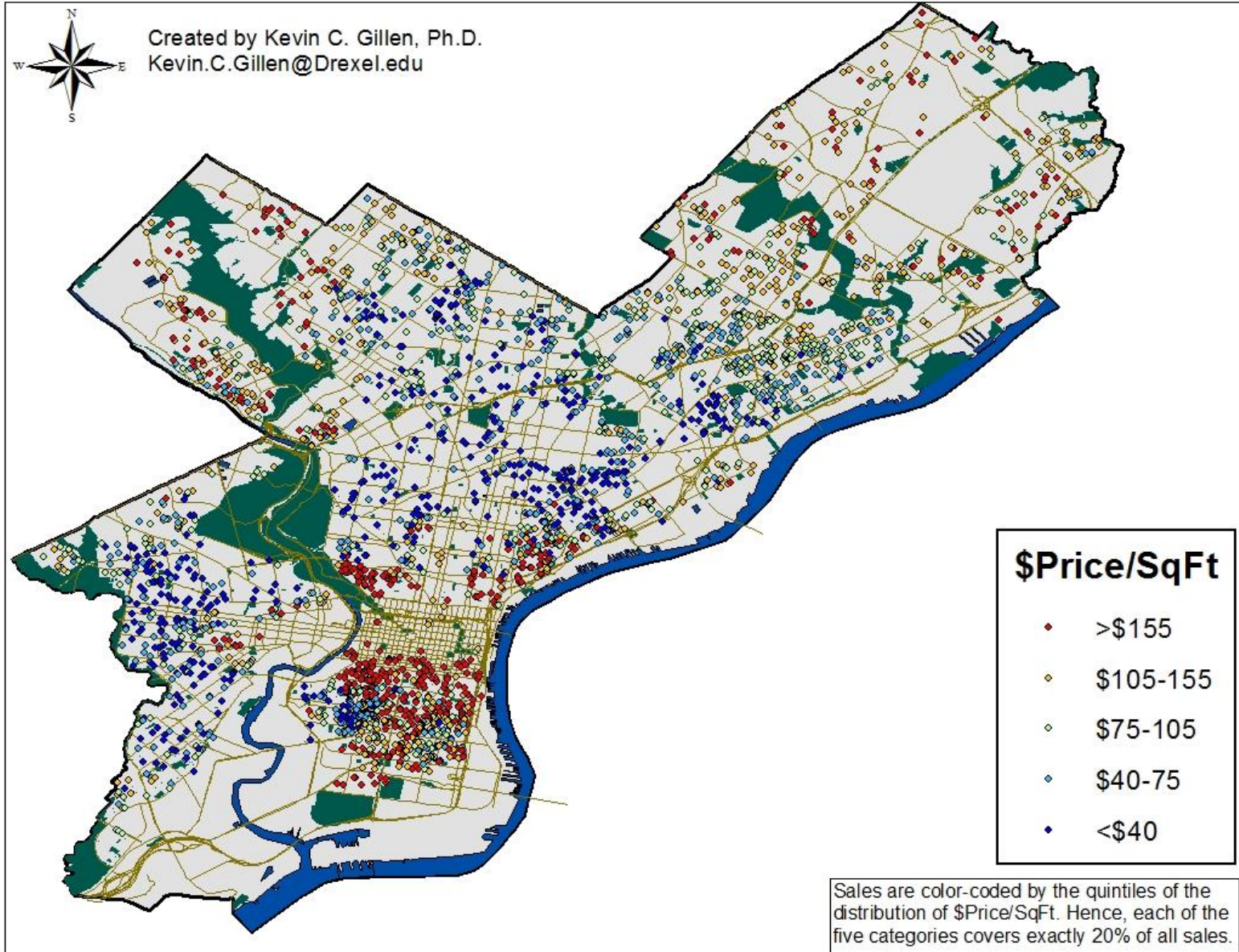
*Only arms-length transactions between private sector entities were included in these numbers.

Number of Philadelphia Home Sales* per Quarter with Price >= \$1 Million: 1997-2015

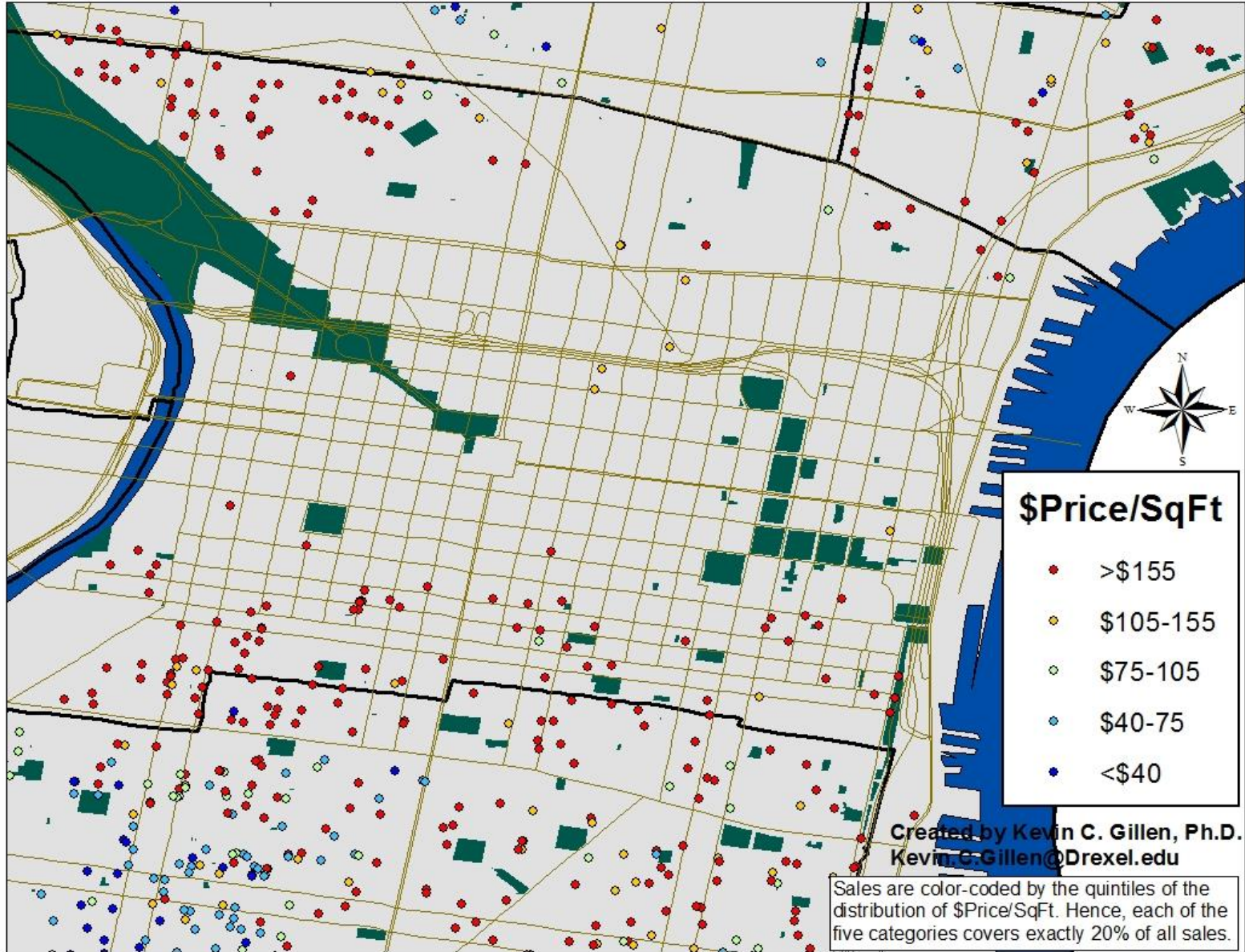


*Only arms-length transactions between private sector entities were included in these numbers.

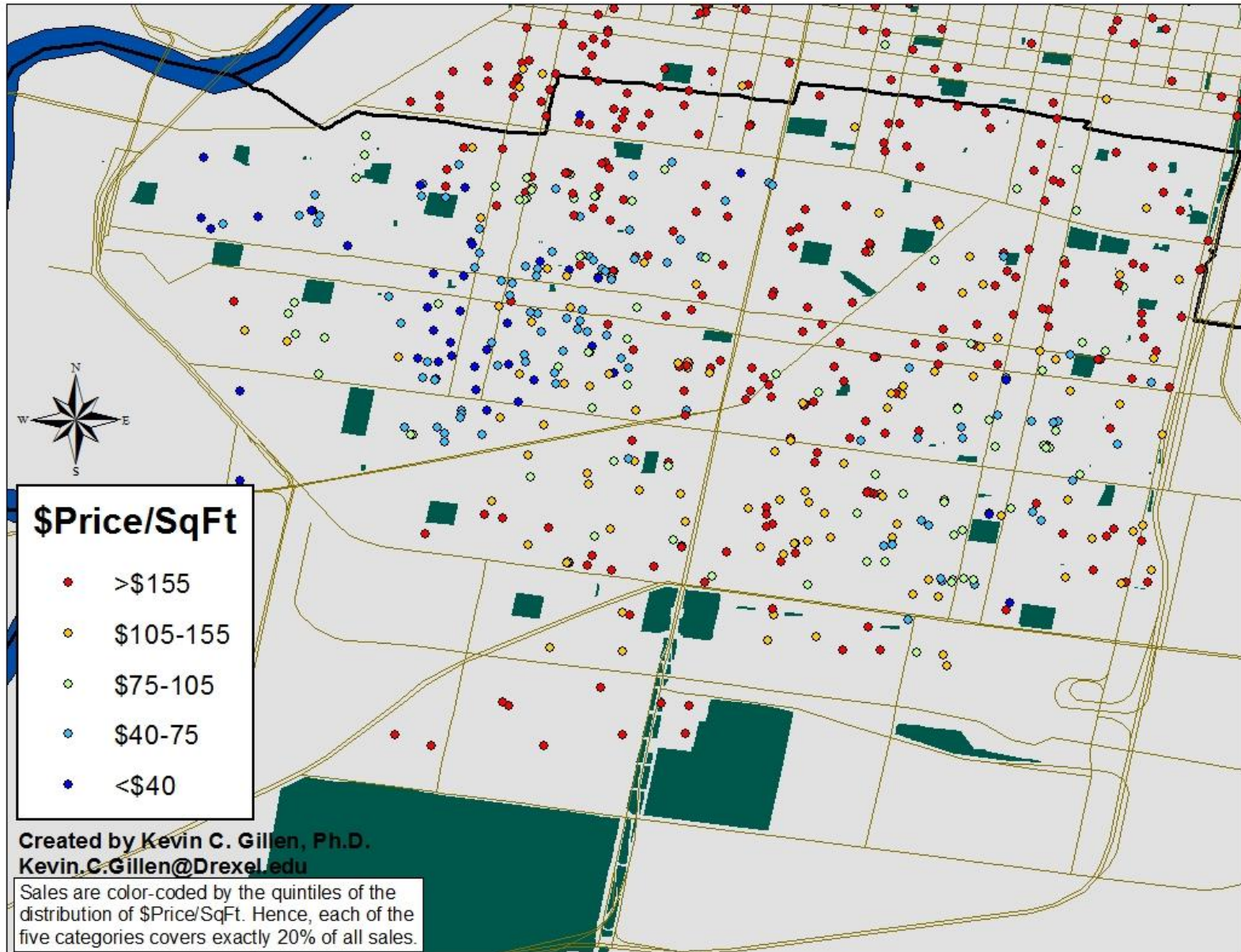
Philadelphia House Sales in 2015 Q1



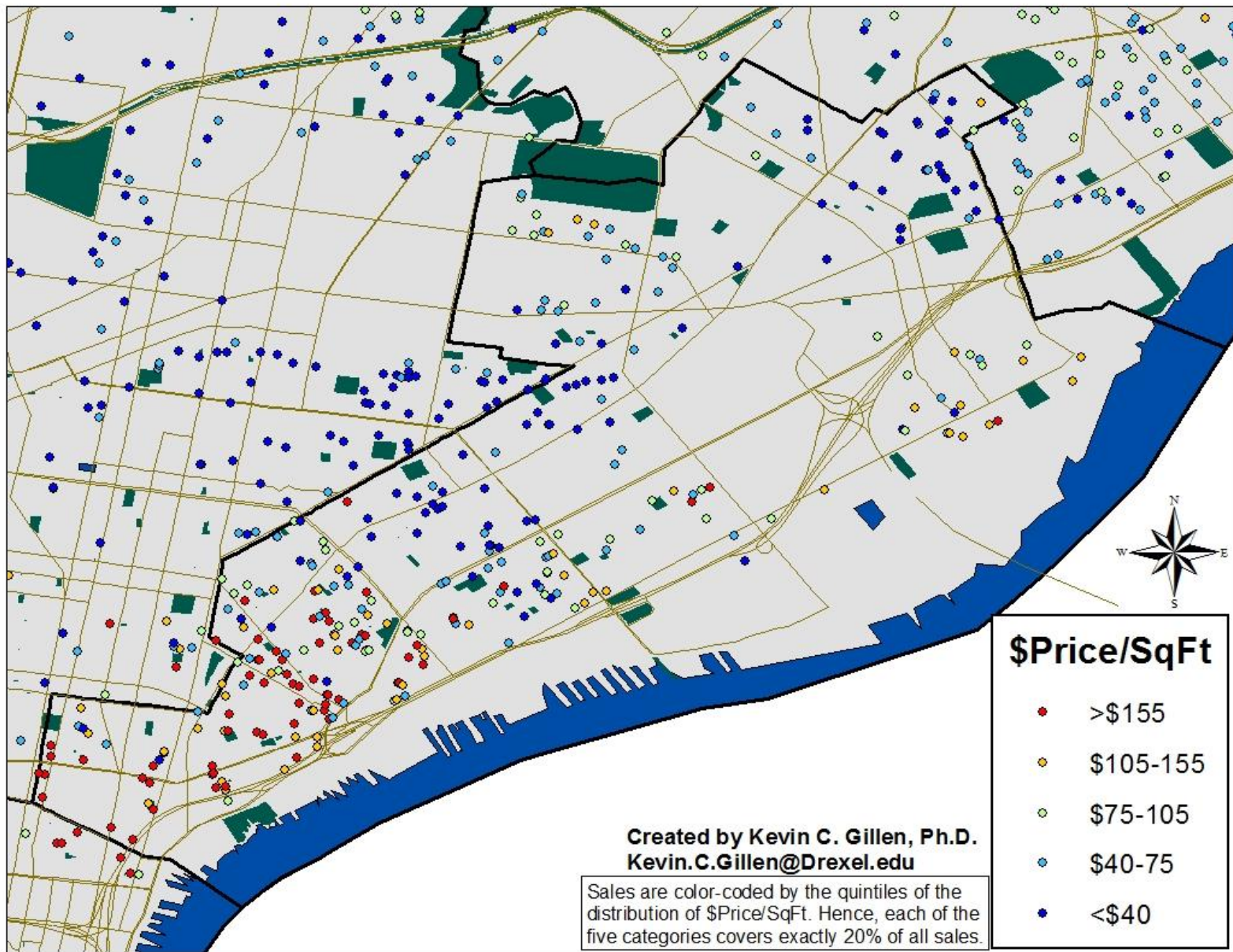
Center City House Sales in 2015 Q1



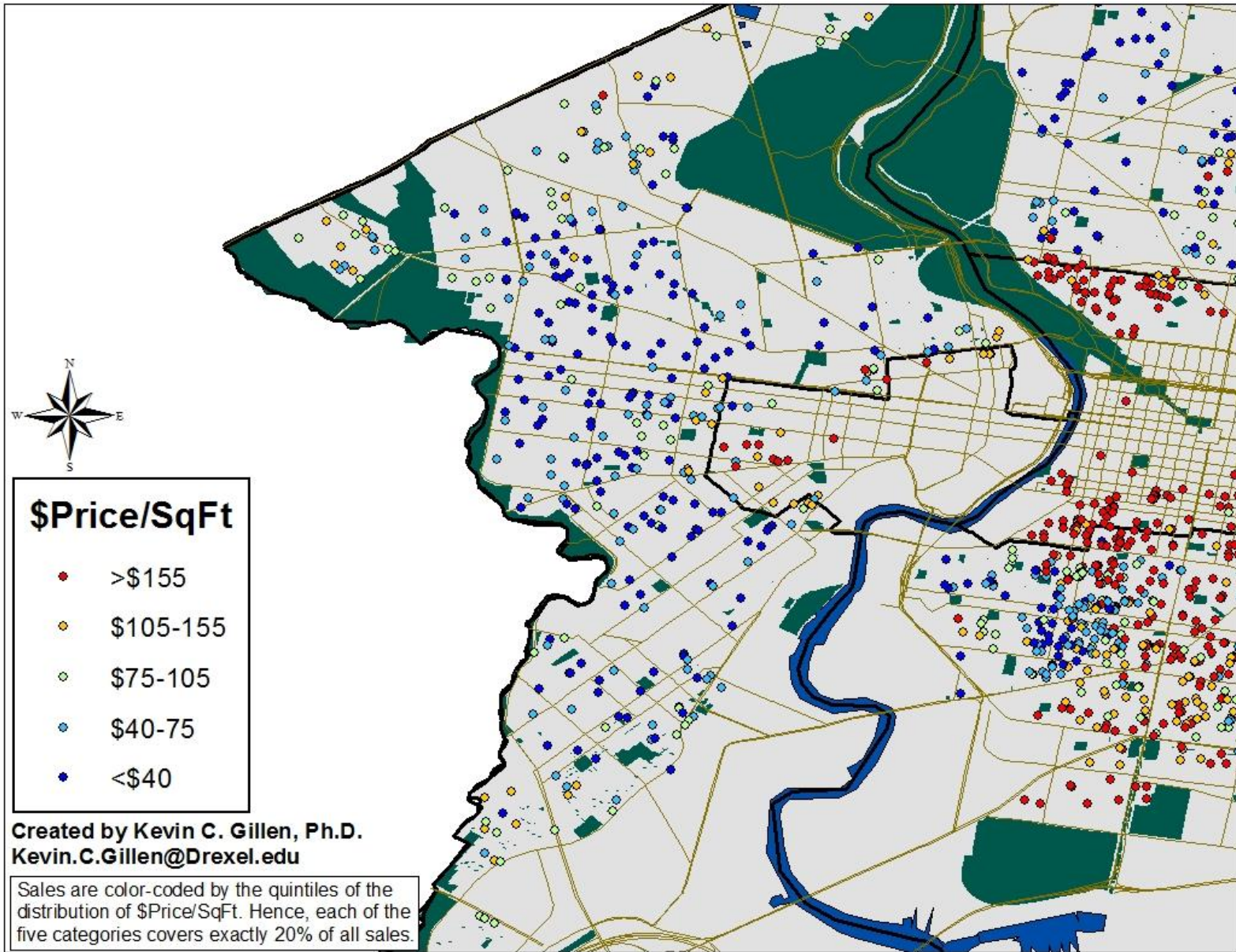
South Philadelphia House Sales in 2015 Q1



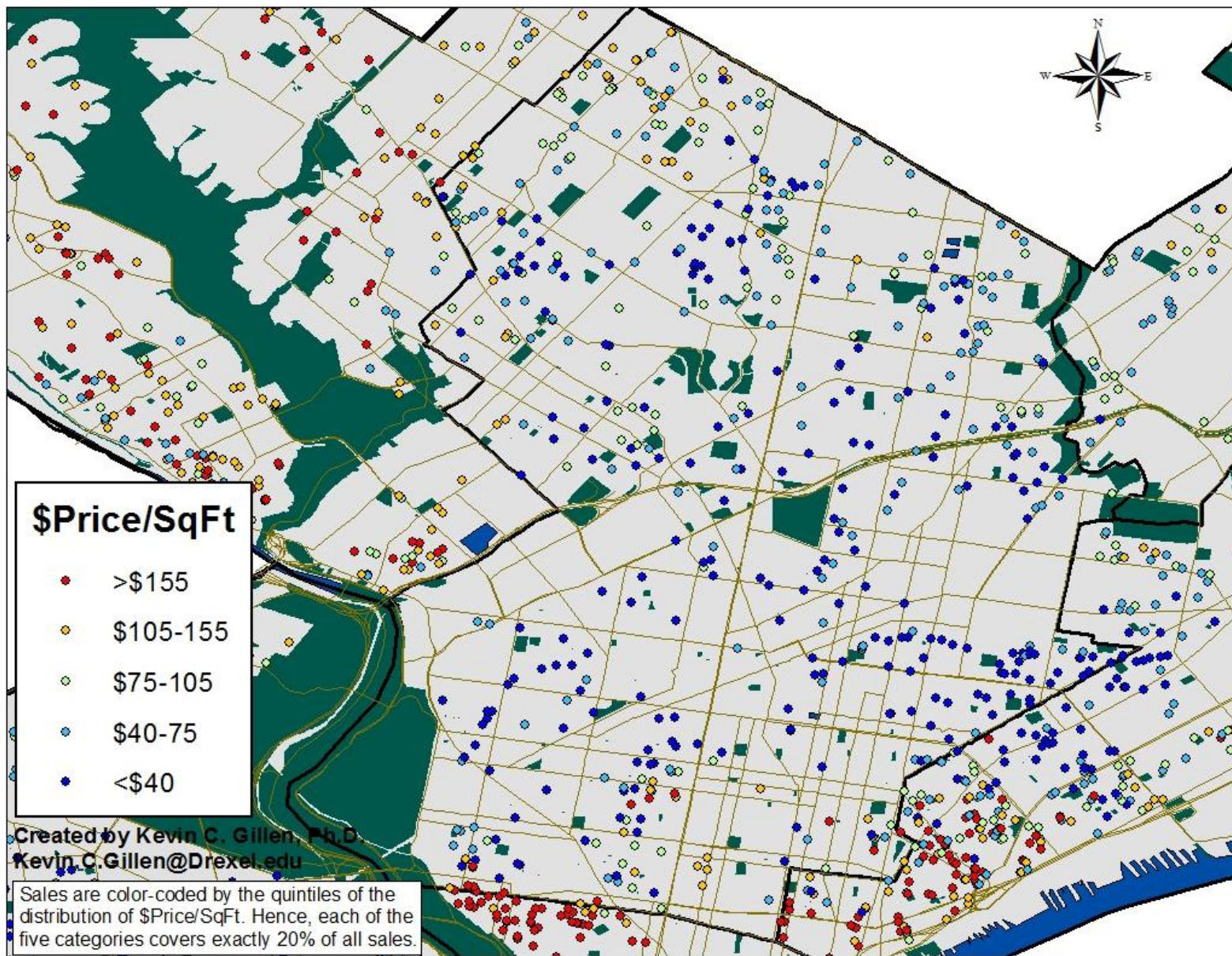
Kensington/Frankford House Sales in 2015 Q1



West Philadelphia House Sales in 2015 Q1

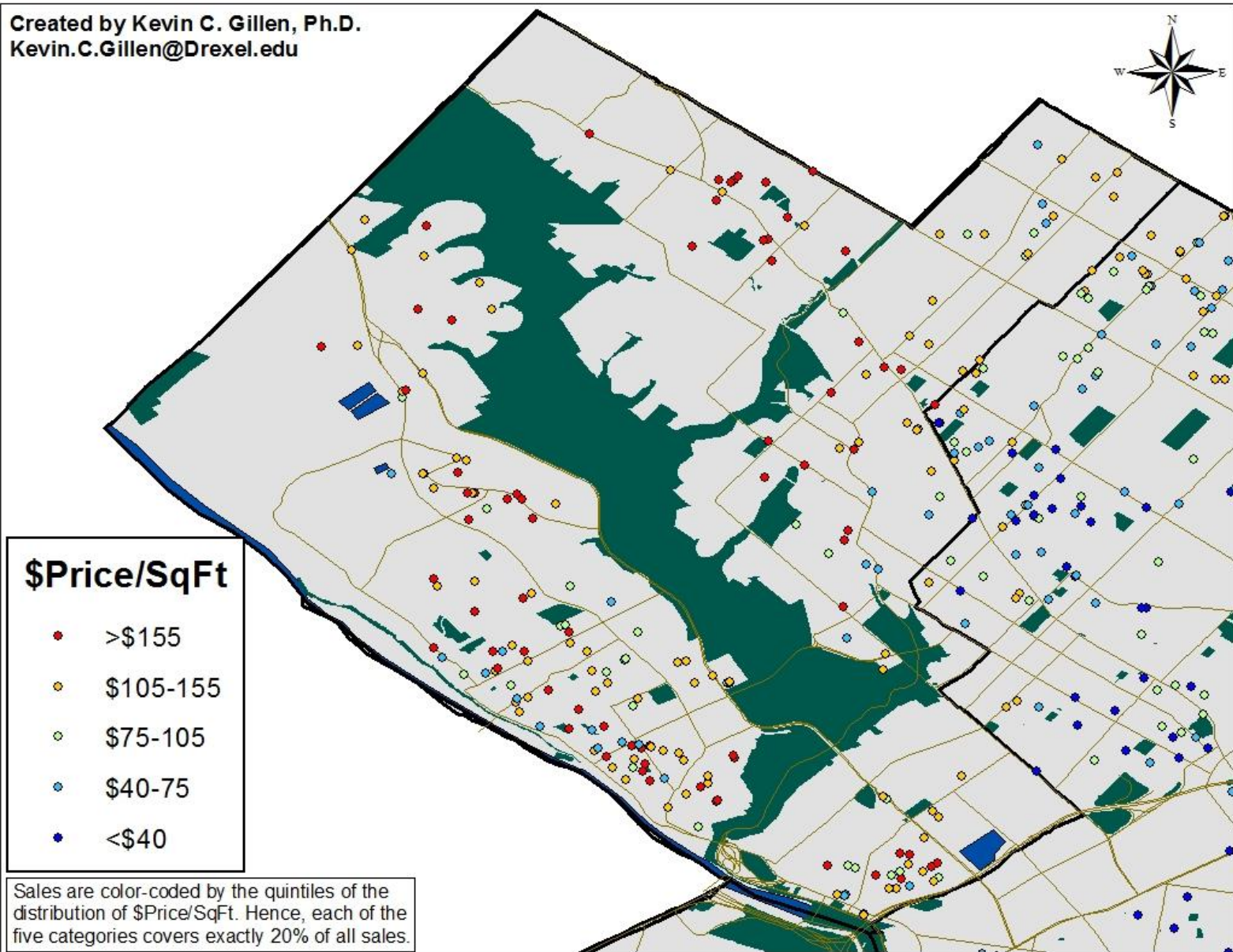


North Philadelphia House Sales in 2015 Q1

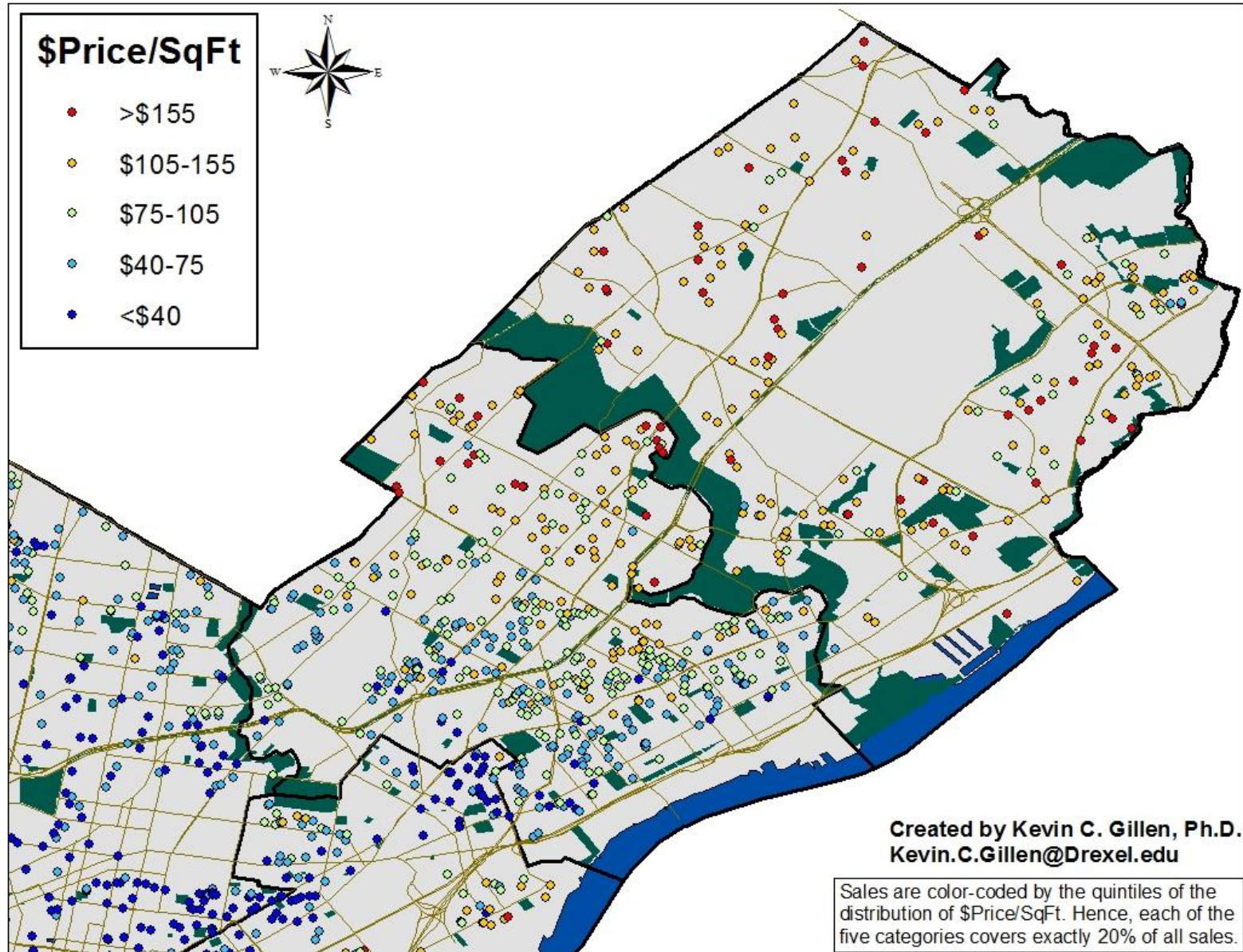


Northwest Philadelphia House Sales in 2015 Q1

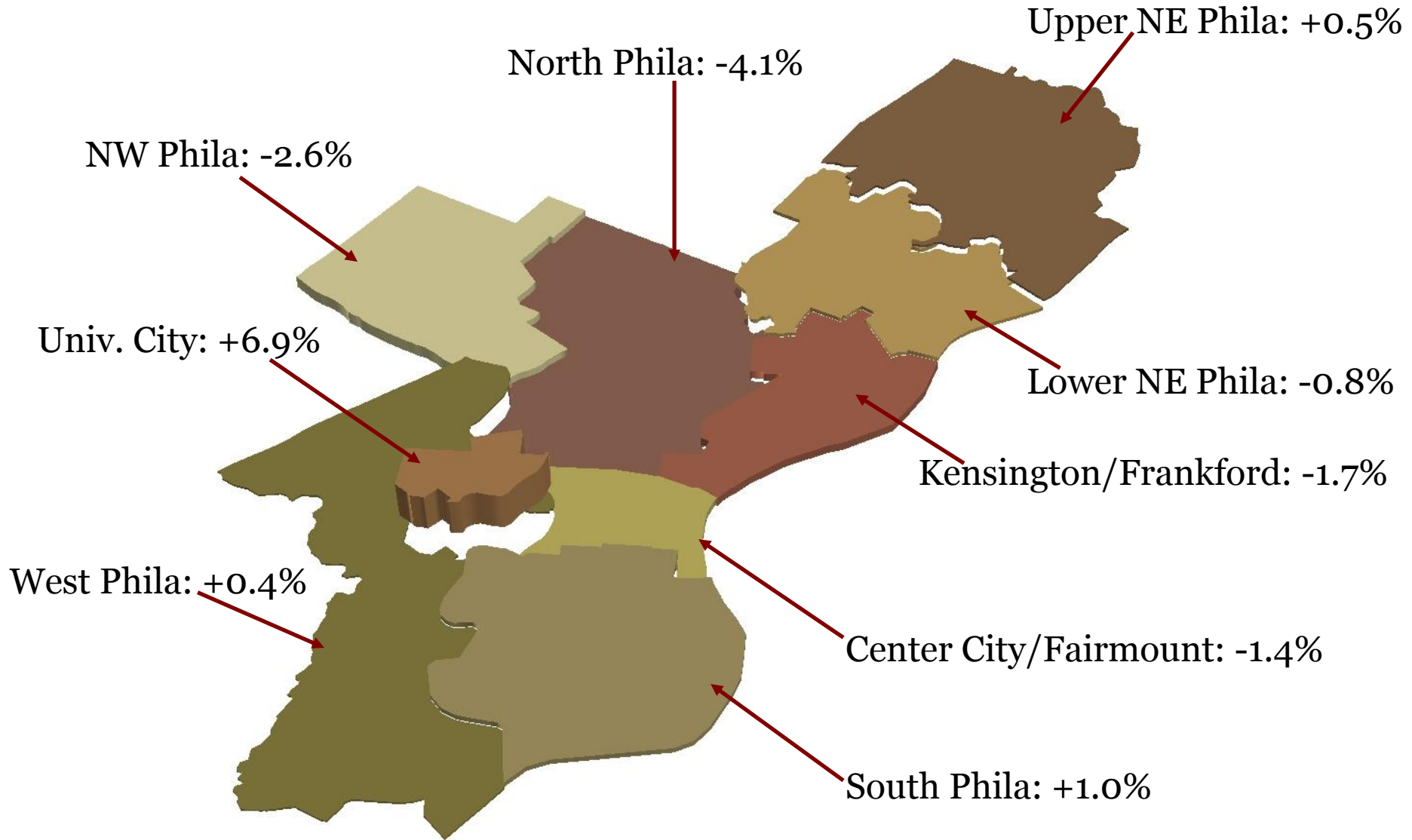
Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu



Northeast Philadelphia House Sales in 2015 Q1

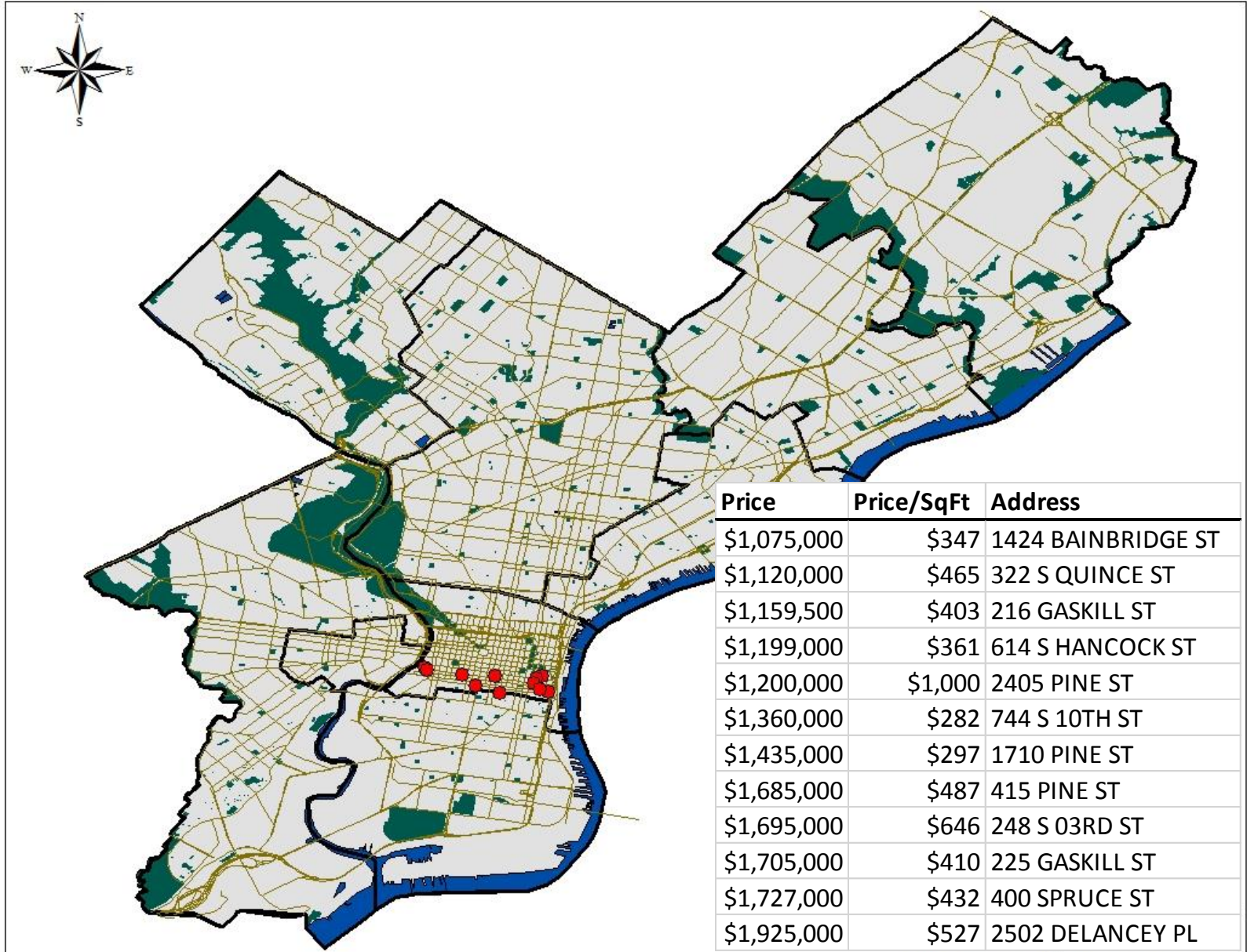


2015 Q1 House Price Rate of Change by Neighborhood

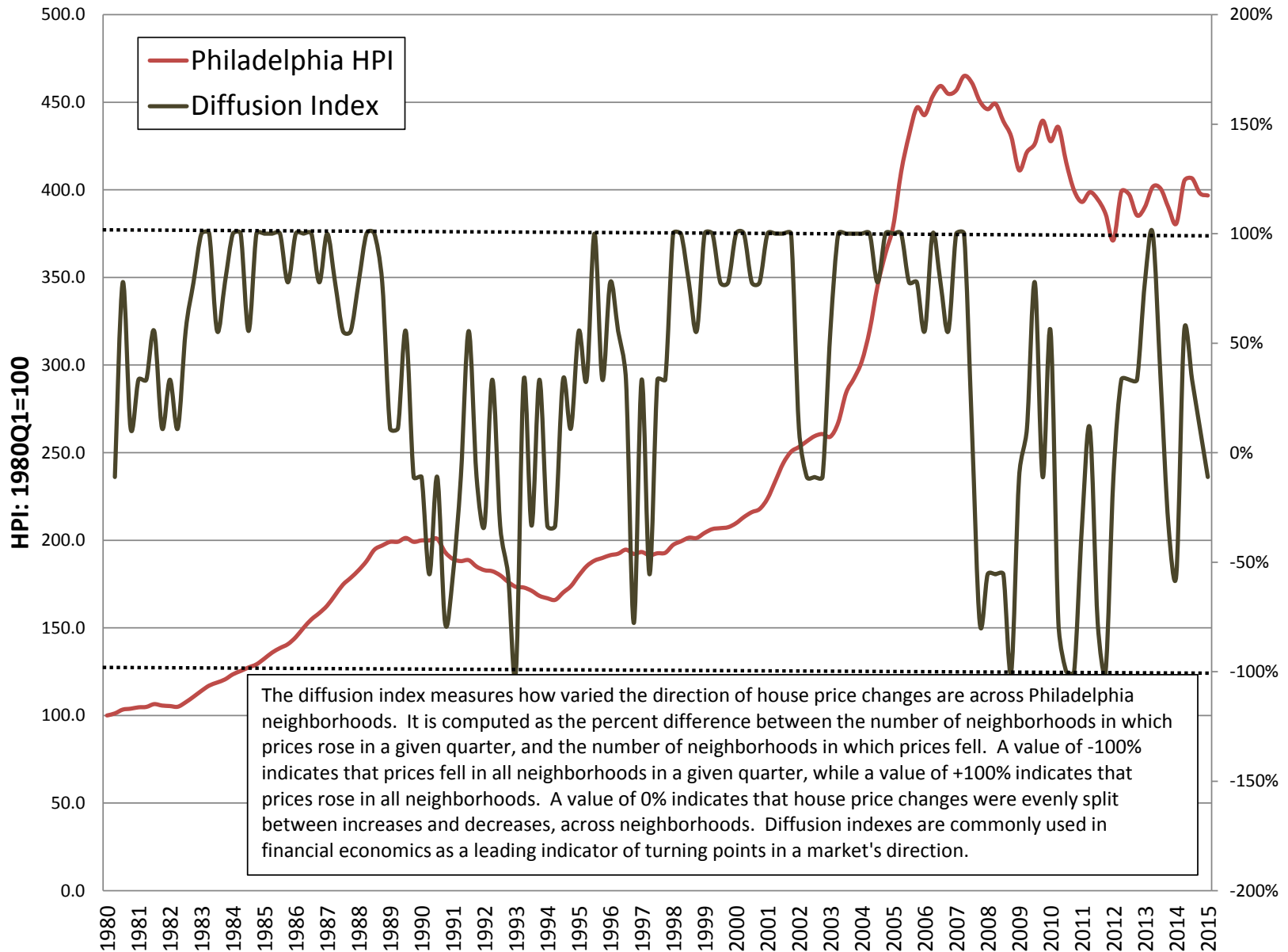


Note: Each neighborhood is extruded by its average change in house values during 2015 Q1 in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

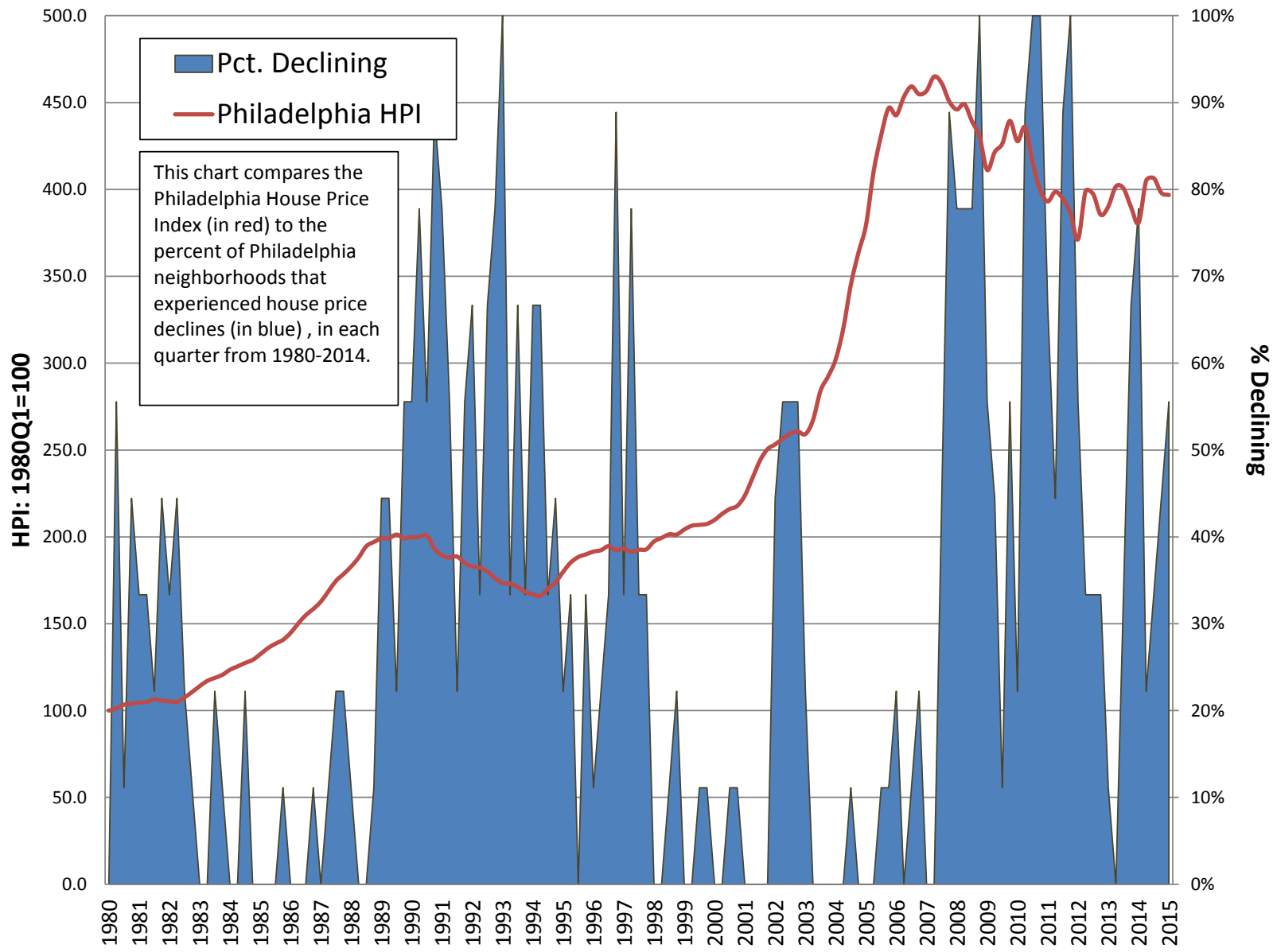
+\$1 Million Dollar House Sales in 2015 Q1



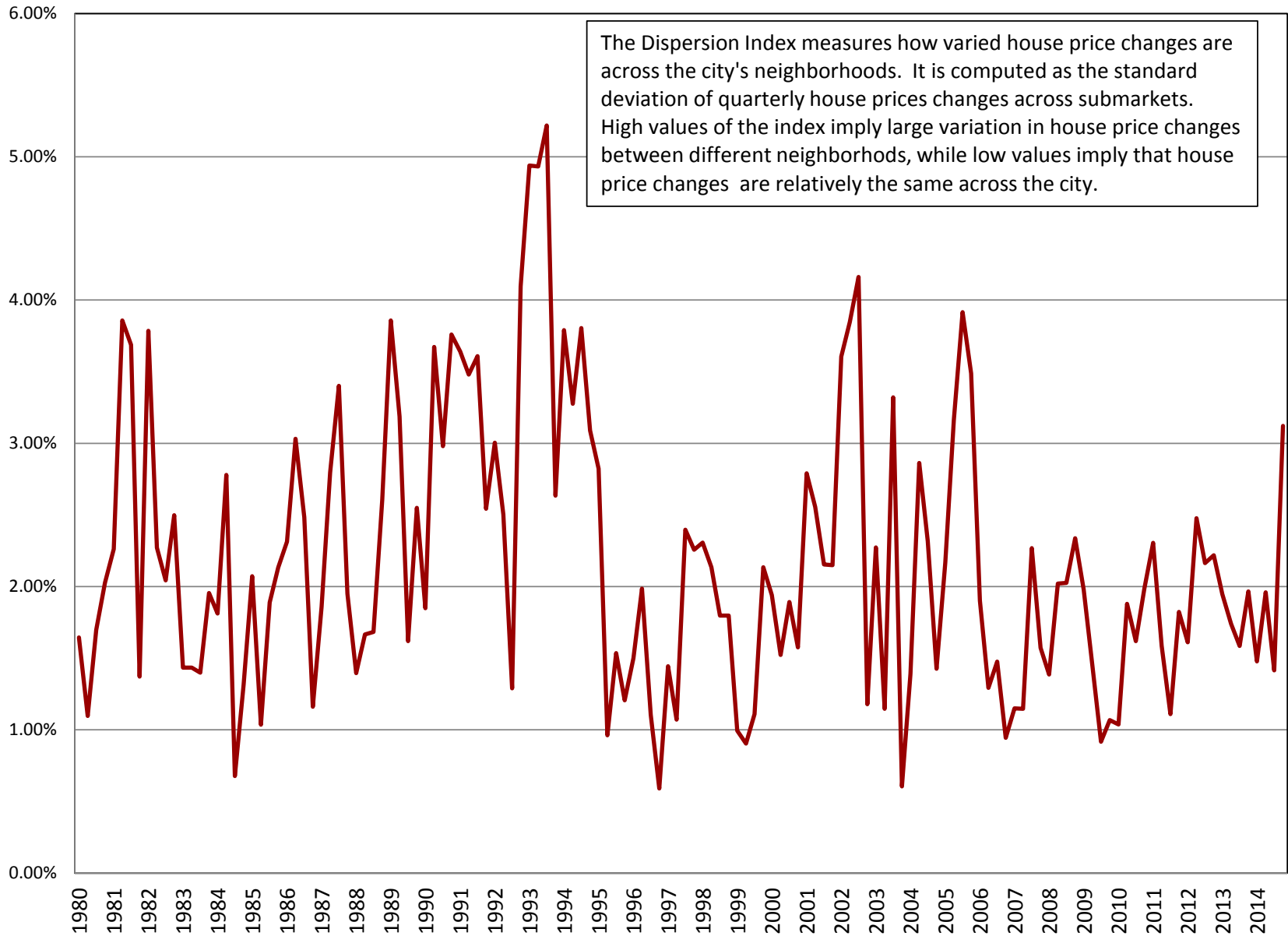
Philadelphia House Price Diffusion Index



Philadelphia House Prices: Declines v. House Price Index

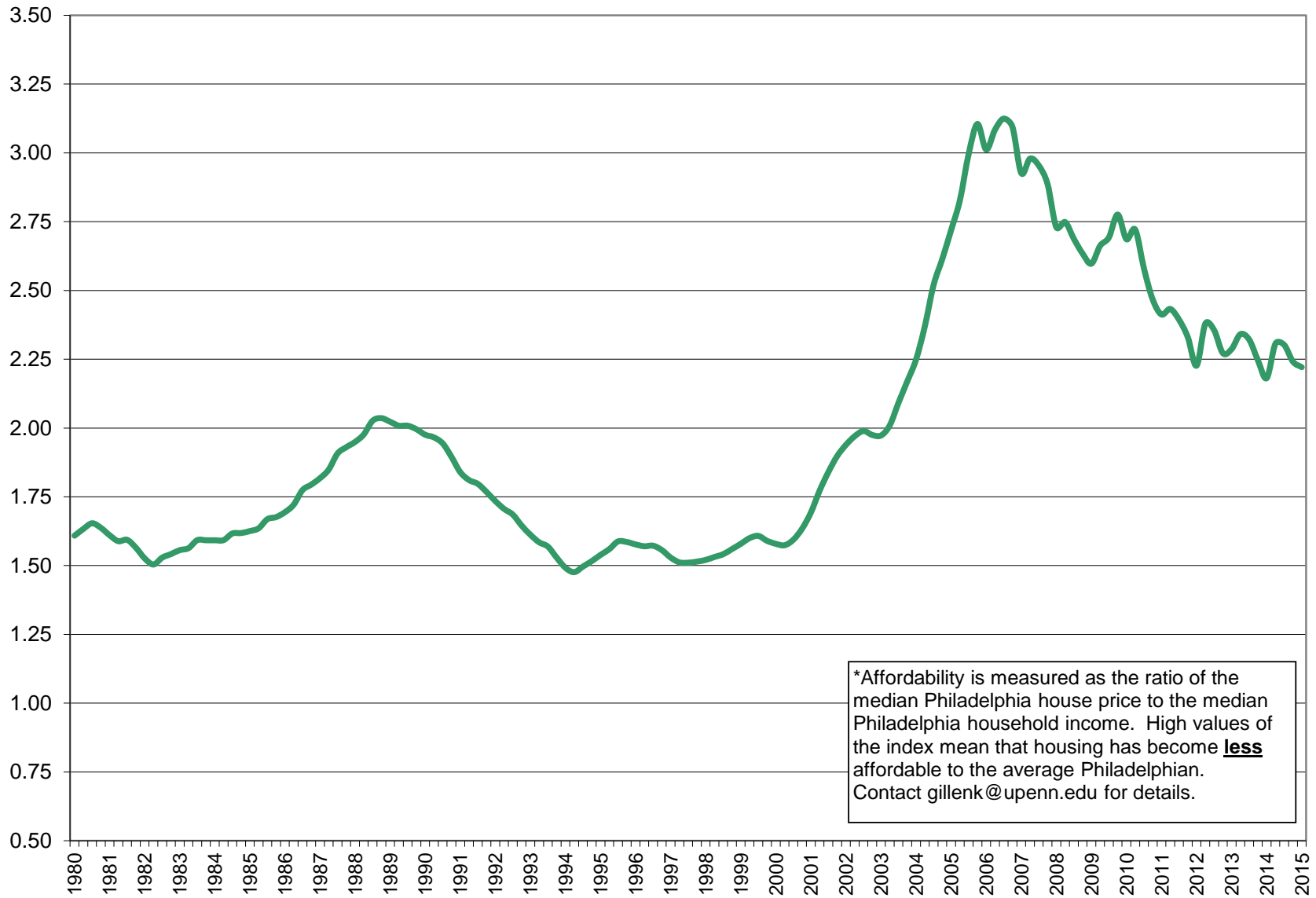


Dispersion Index of Philadelphia Housing



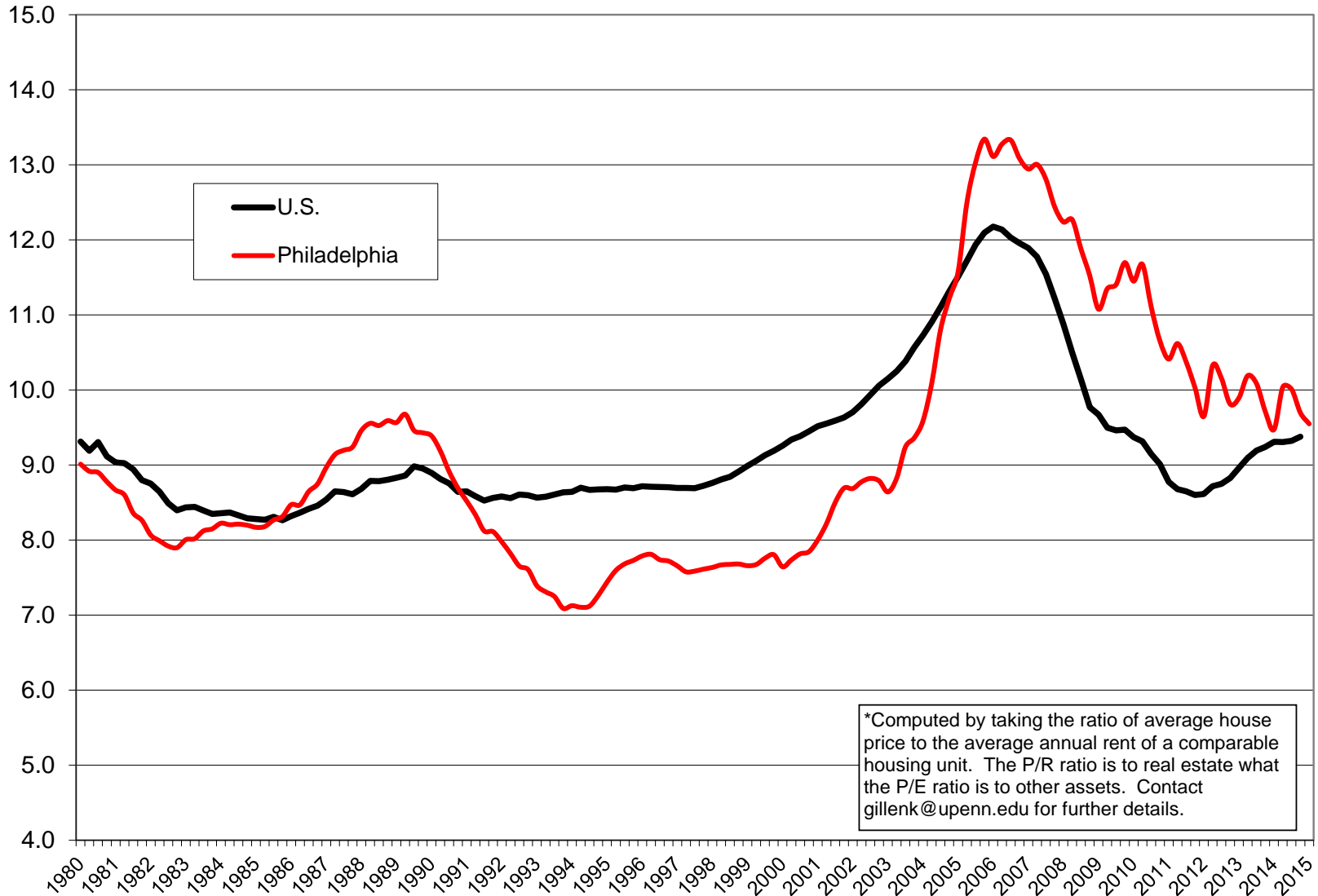
The Dispersion Index measures how varied house price changes are across the city's neighborhoods. It is computed as the standard deviation of quarterly house prices changes across submarkets. High values of the index imply large variation in house price changes between different neighborhoods, while low values imply that house price changes are relatively the same across the city.

Philadelphia Housing Affordability* Index: 1980-2015



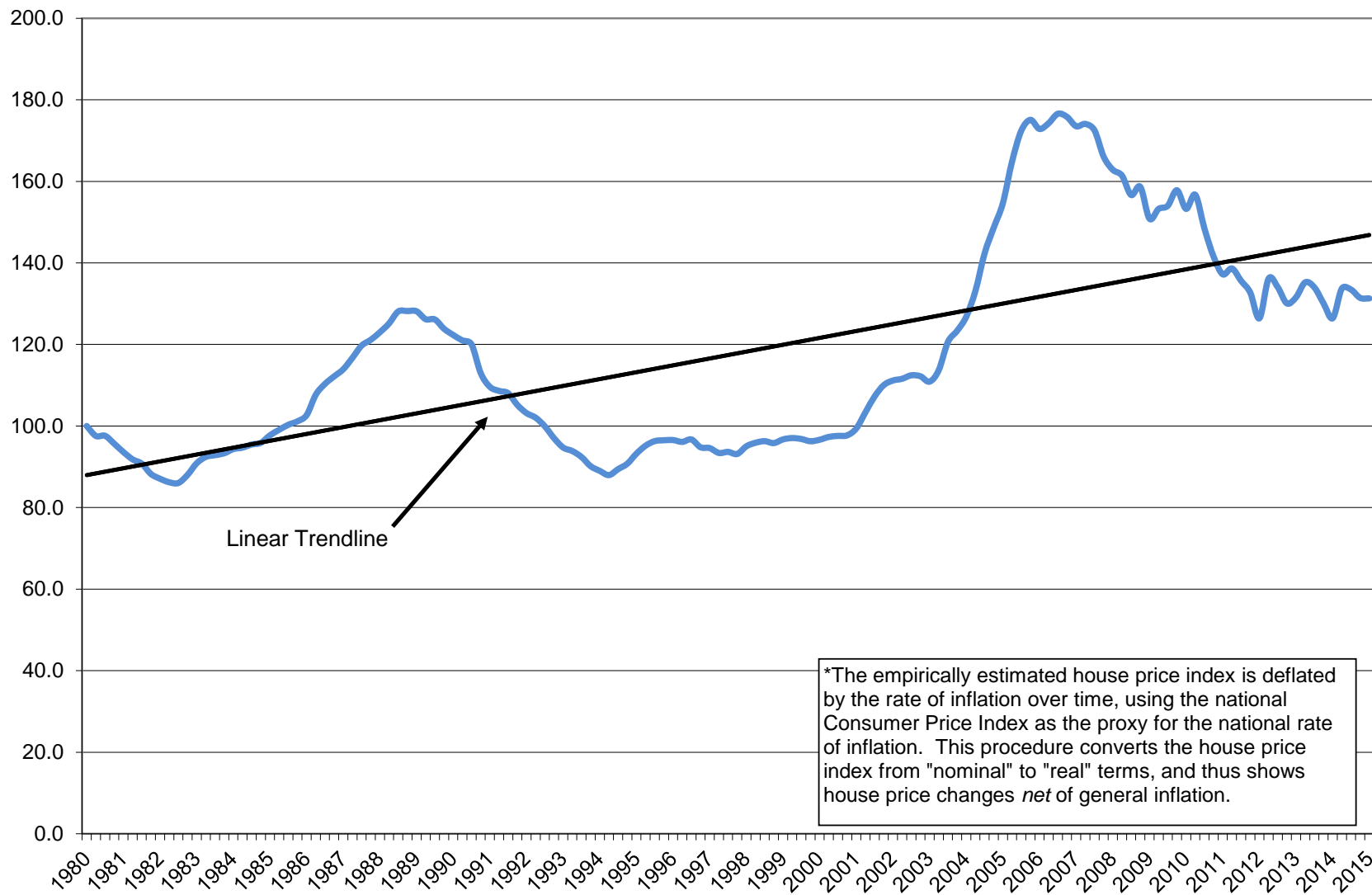
*Affordability is measured as the ratio of the median Philadelphia house price to the median Philadelphia household income. High values of the index mean that housing has become **less** affordable to the average Philadelphian. Contact gillenk@upenn.edu for details.

Average House Price-to-Rent Ratios*: 1980-2015 Philadelphia v. U.S.



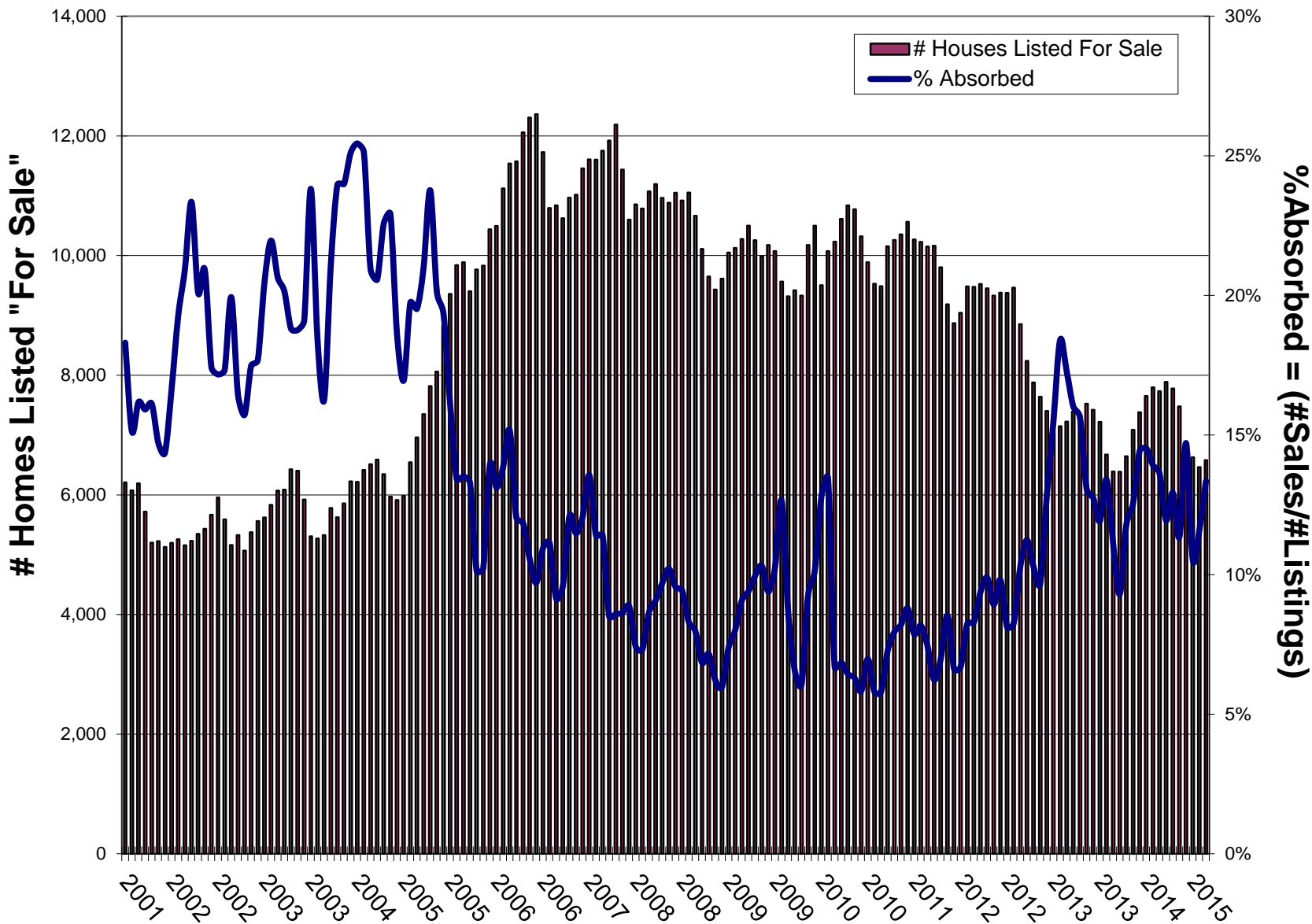
*Computed by taking the ratio of average house price to the average annual rent of a comparable housing unit. The P/R ratio is to real estate what the P/E ratio is to other assets. Contact gillenk@upenn.edu for further details.

Inflation-Adjusted* Philadelphia House Price Index 1980-2015 1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Absorption Rate



“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

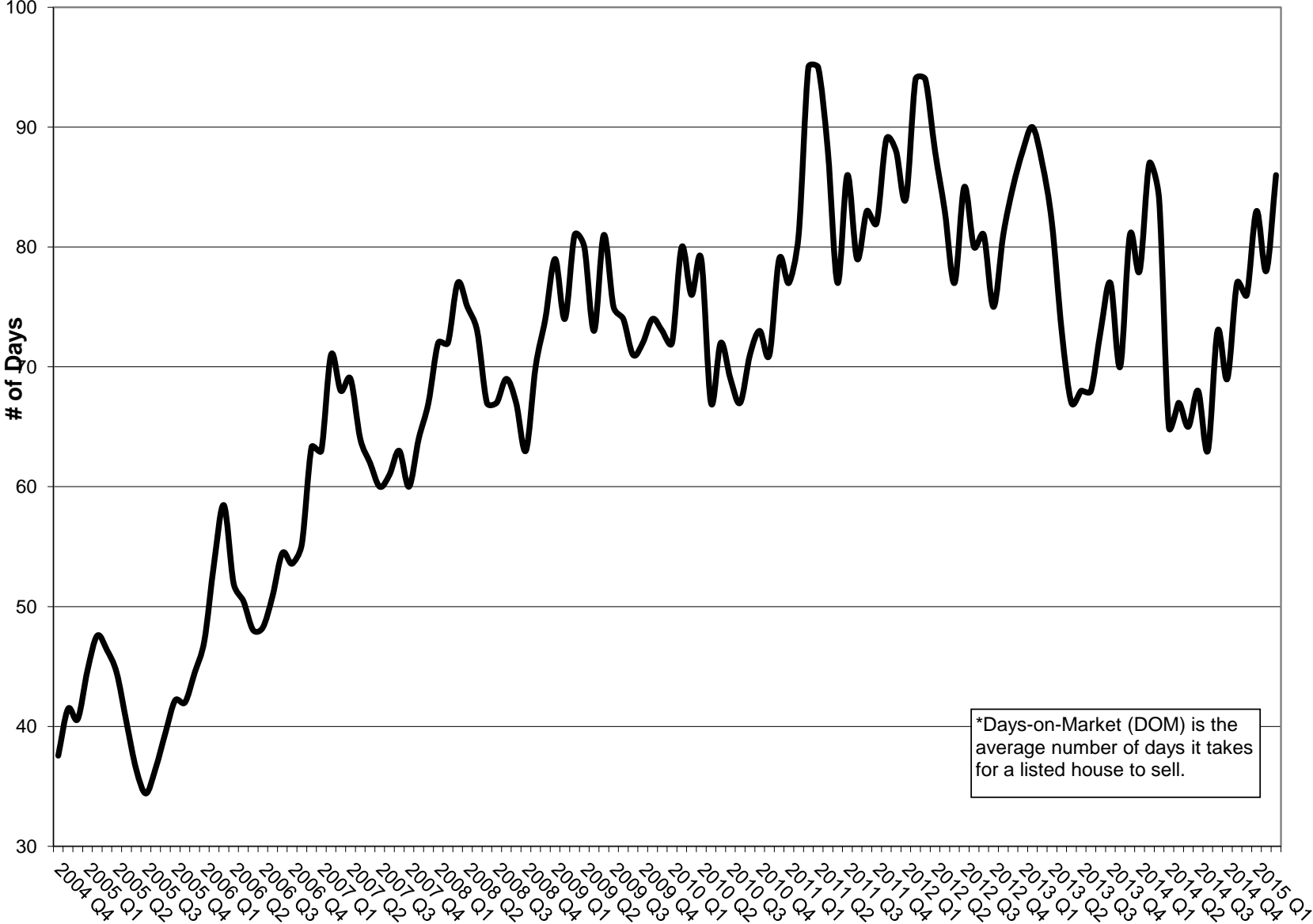
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Source: Trend MLS

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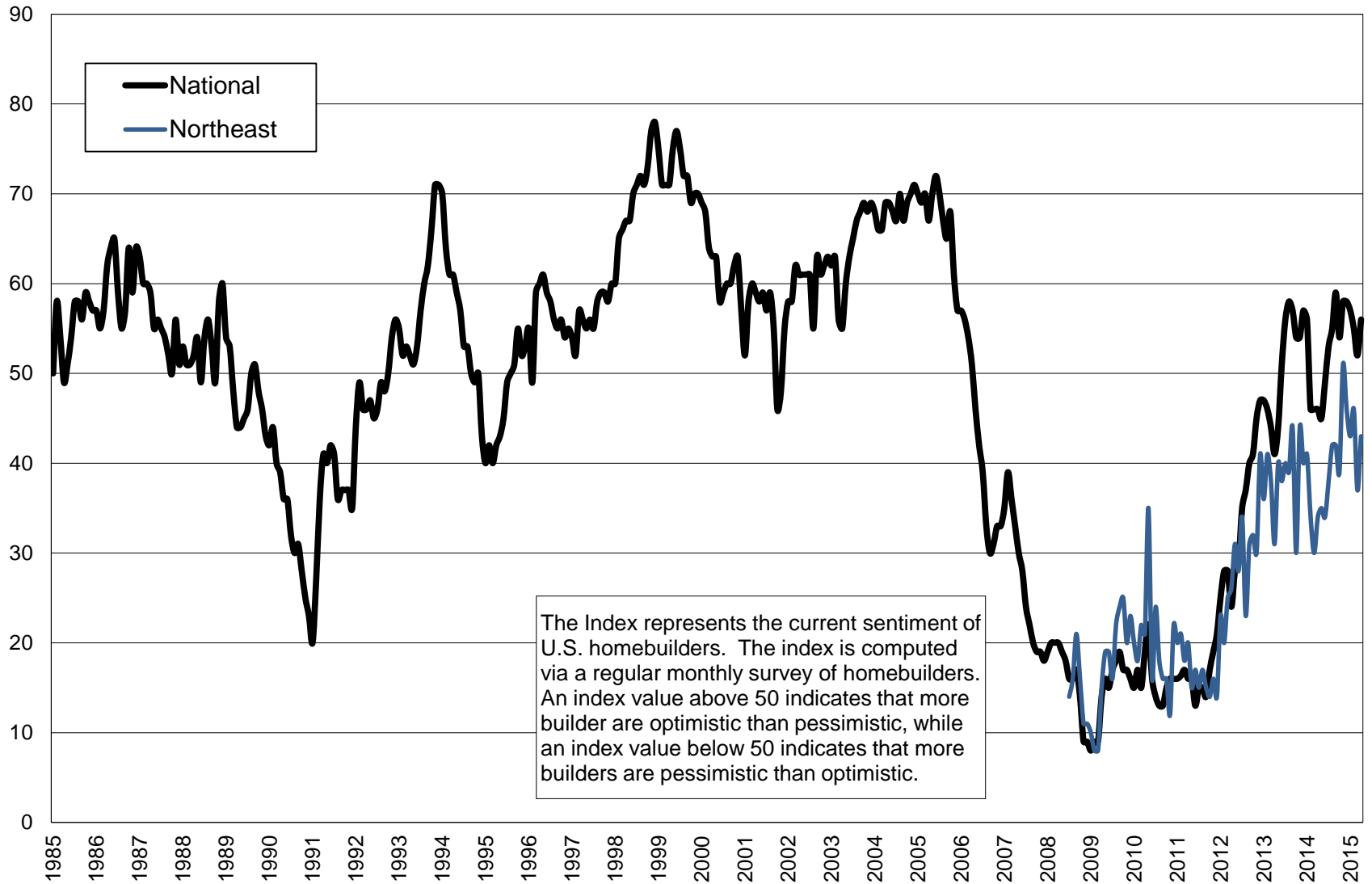
Average Days-on-Market* for Philadelphia Homes



*Days-on-Market (DOM) is the average number of days it takes for a listed house to sell.

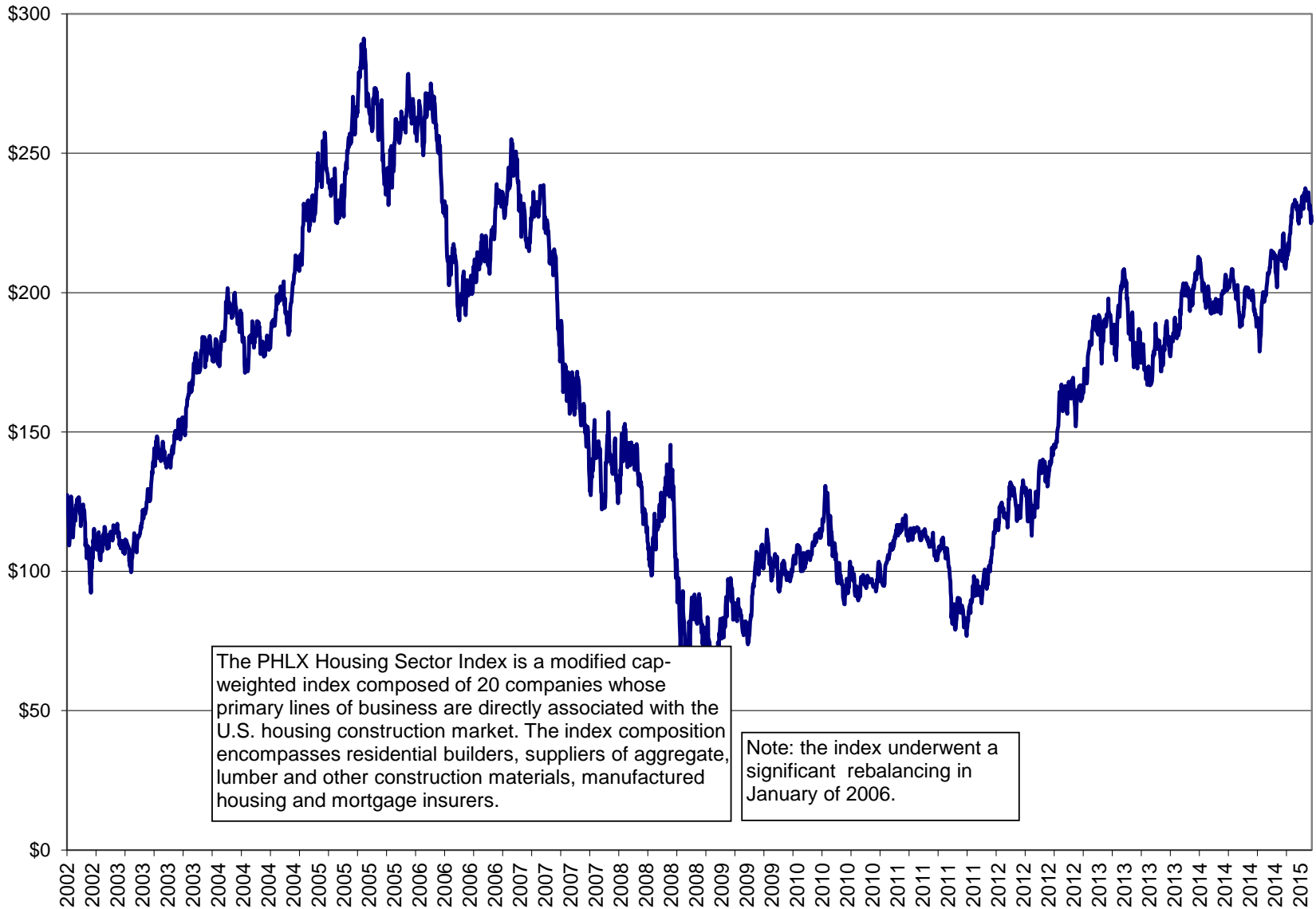
Source: Trend MLS

Index of Homebuilder Sentiment: 1985-2015 (Seasonally Adjusted)



Source: National Assoc. of Homebuilders (NAHB)/Wells Fargo

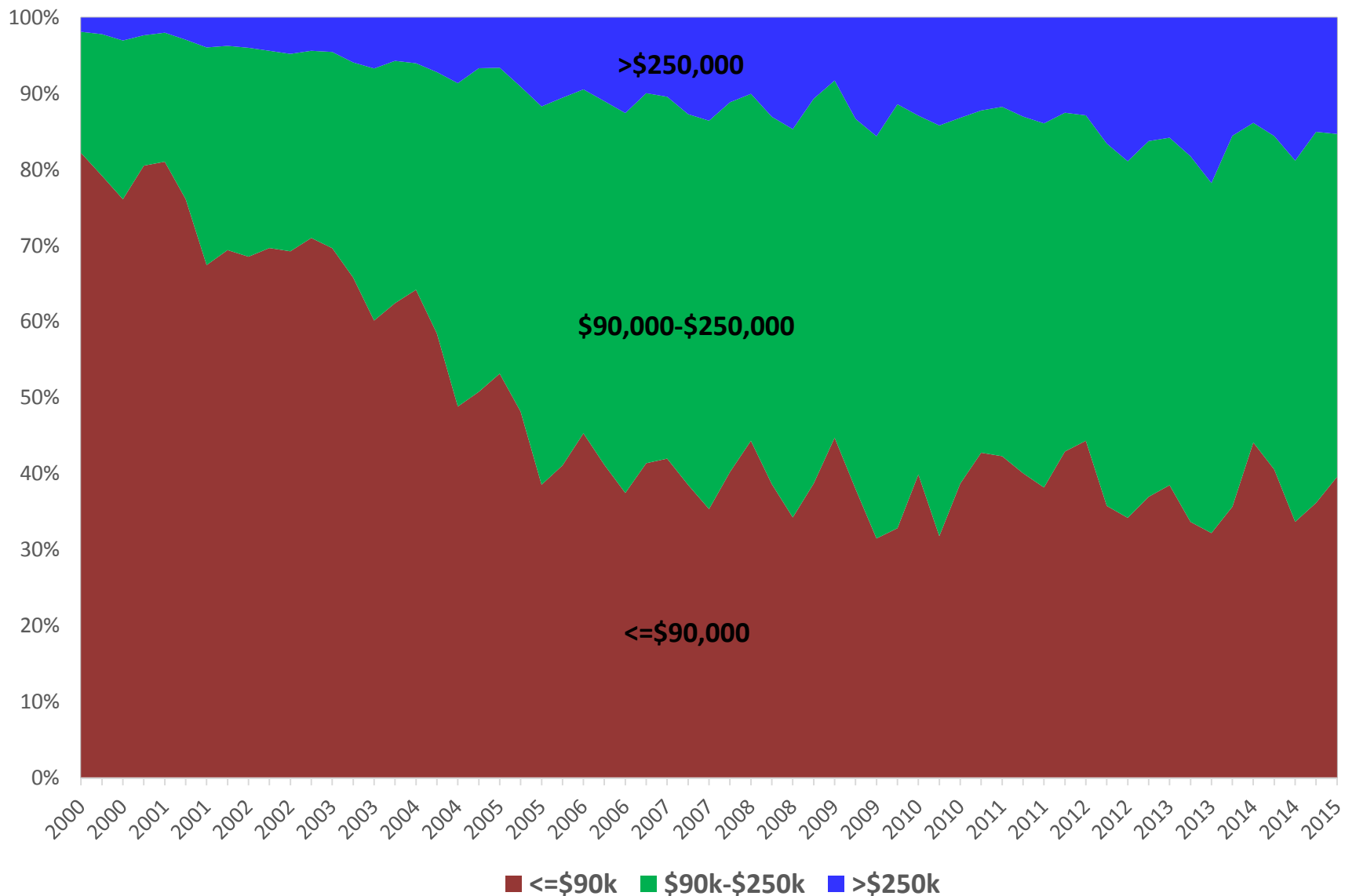
Philadelphia Stock Exchange Housing Sector Index: 2002-2015



The PHLX Housing Sector Index is a modified cap-weighted index composed of 20 companies whose primary lines of business are directly associated with the U.S. housing construction market. The index composition encompasses residential builders, suppliers of aggregate, lumber and other construction materials, manufactured housing and mortgage insurers.

Note: the index underwent a significant rebalancing in January of 2006.

%Market Share of Philadelphia Home Sales by Price Category: 2000-2015



Philadelphia House Price Index and 1-Year Forecast

Philadelphia Market Overview

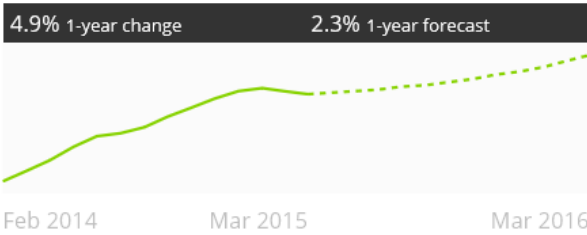
Data through Mar 31, 2015

\$116,500 ZHVI

↑ 2.3% 1-yr forecast (Mar 31, 2016)

No data Median listing price

\$128,250 Median sale price



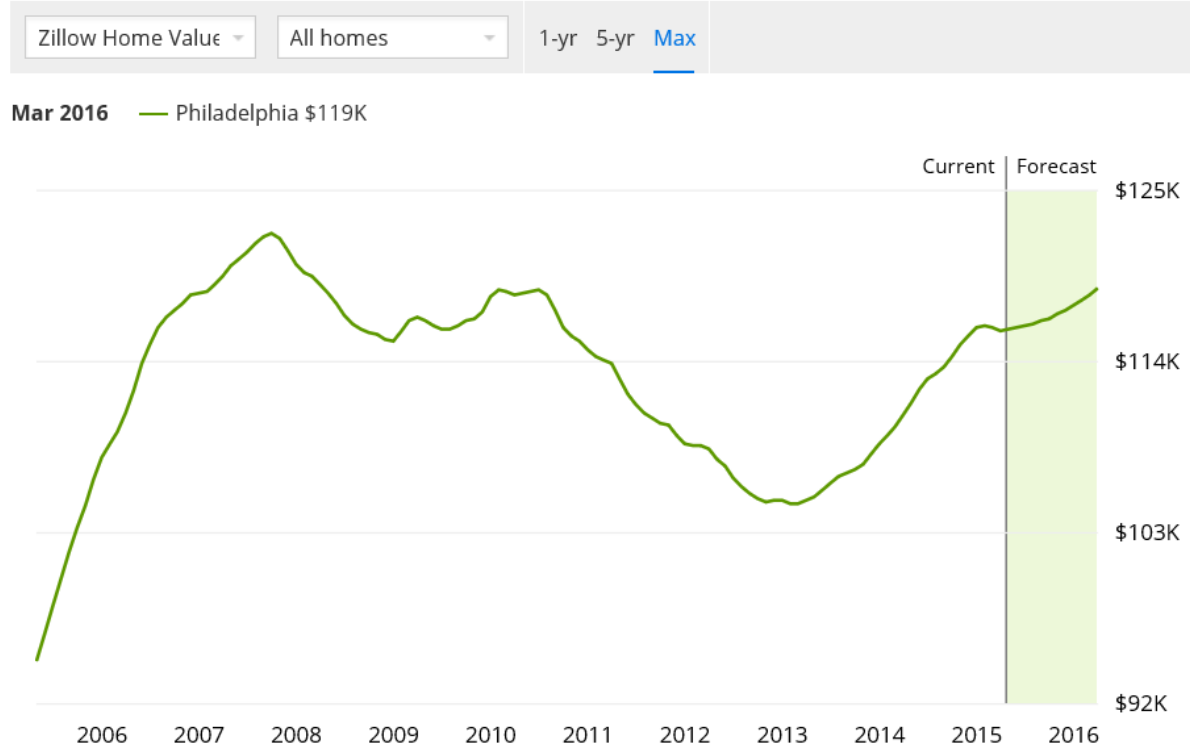
MARKET TEMPERATURE ?

Cold



Buyers' Market

Sellers' Market



Zillow currently rates the Philadelphia housing market as “cold”, which is a downgrade from its previous quarter’s rating of “cool”. However, Zillow is also forecasting Philadelphia house prices to rise an average of 2.3% over the next year, which is an upgrade of its previous quarter’s annual forecast of 0.5%.

Source: <http://www.zillow.com/philadelphia-pa/home-values/>