

PHILADELPHIA HOUSE PRICE INDICES

January 28, 2019



DREXEL UNIVERSITY
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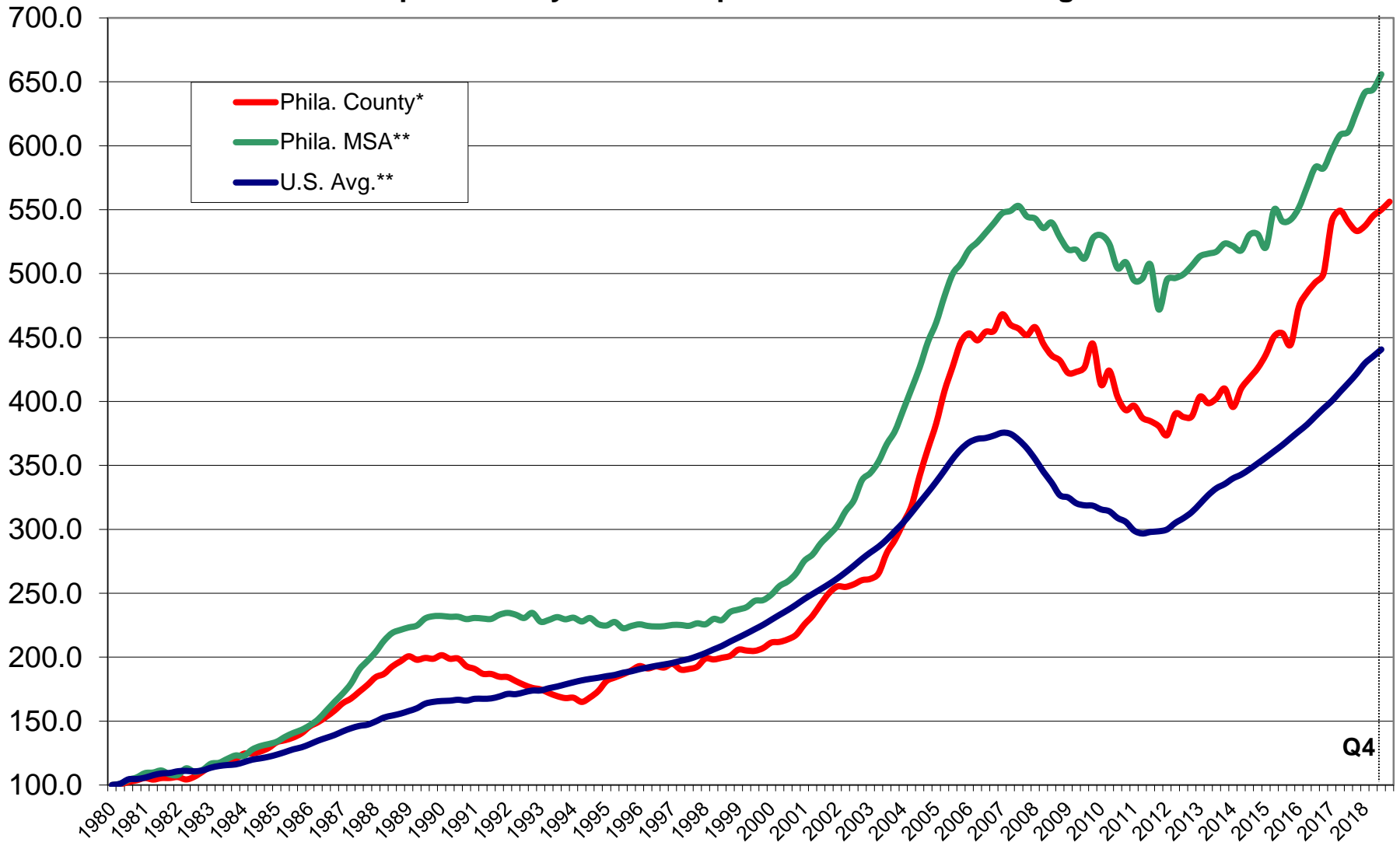
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Kevin C. Gillen Ph.D.. The author thanks Azavea.com, the Philadelphia Office 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. © 2016, Drexel University, All Rights Reserved.*



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House Price Indices 1980-2018: 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).

These HPIs are current through 2016Q4 only.

“MSA”=Metropolitan Statistical Area, which is the entire 10-county region.



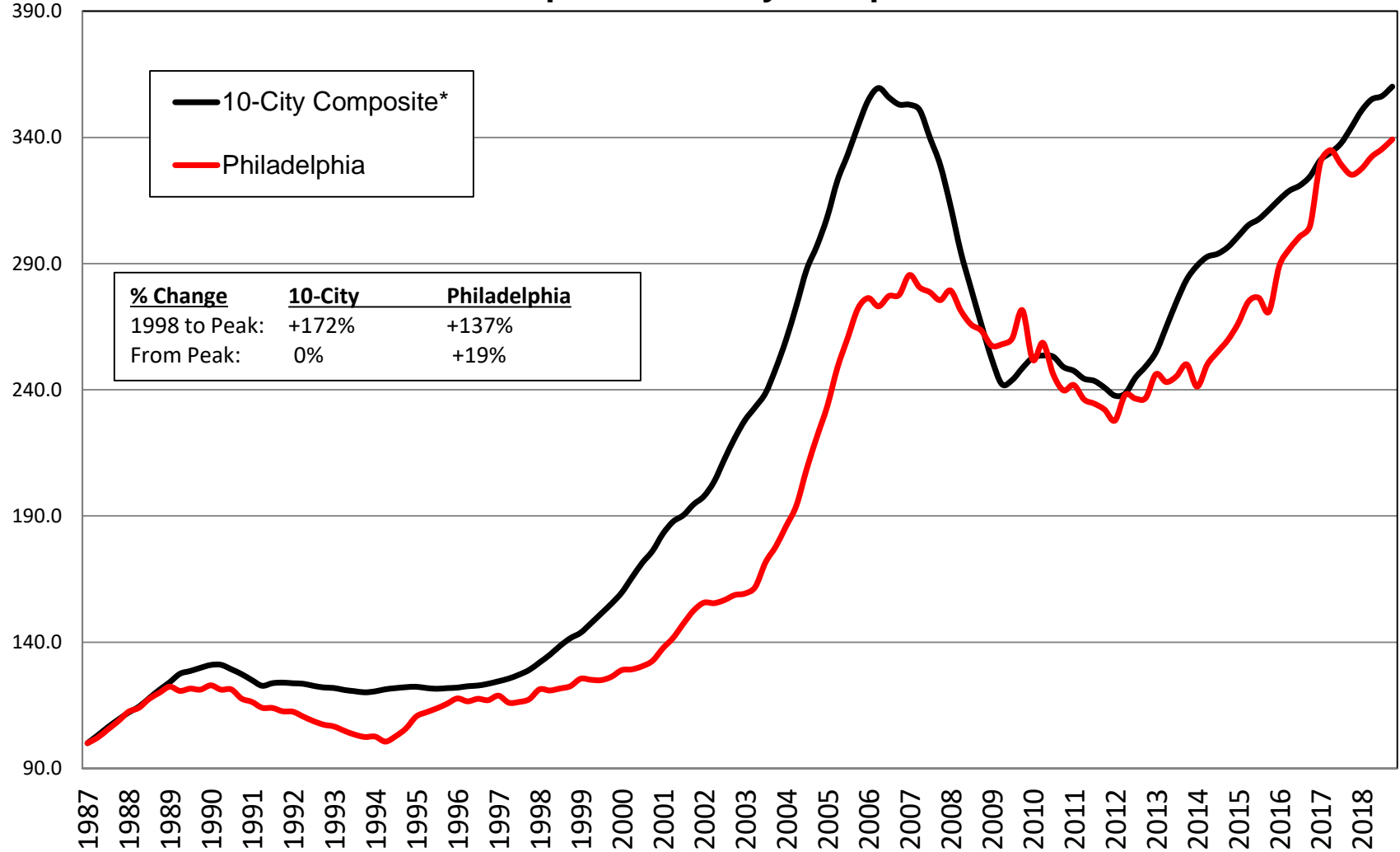
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
38-Year	171.6%	188.1%	148.3%
10-Year	25.3%	19.5%	27.0%
1-Year	4.2%	7.1%	6.2%
1-Quarter	1.1%	1.8%	1.3%

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

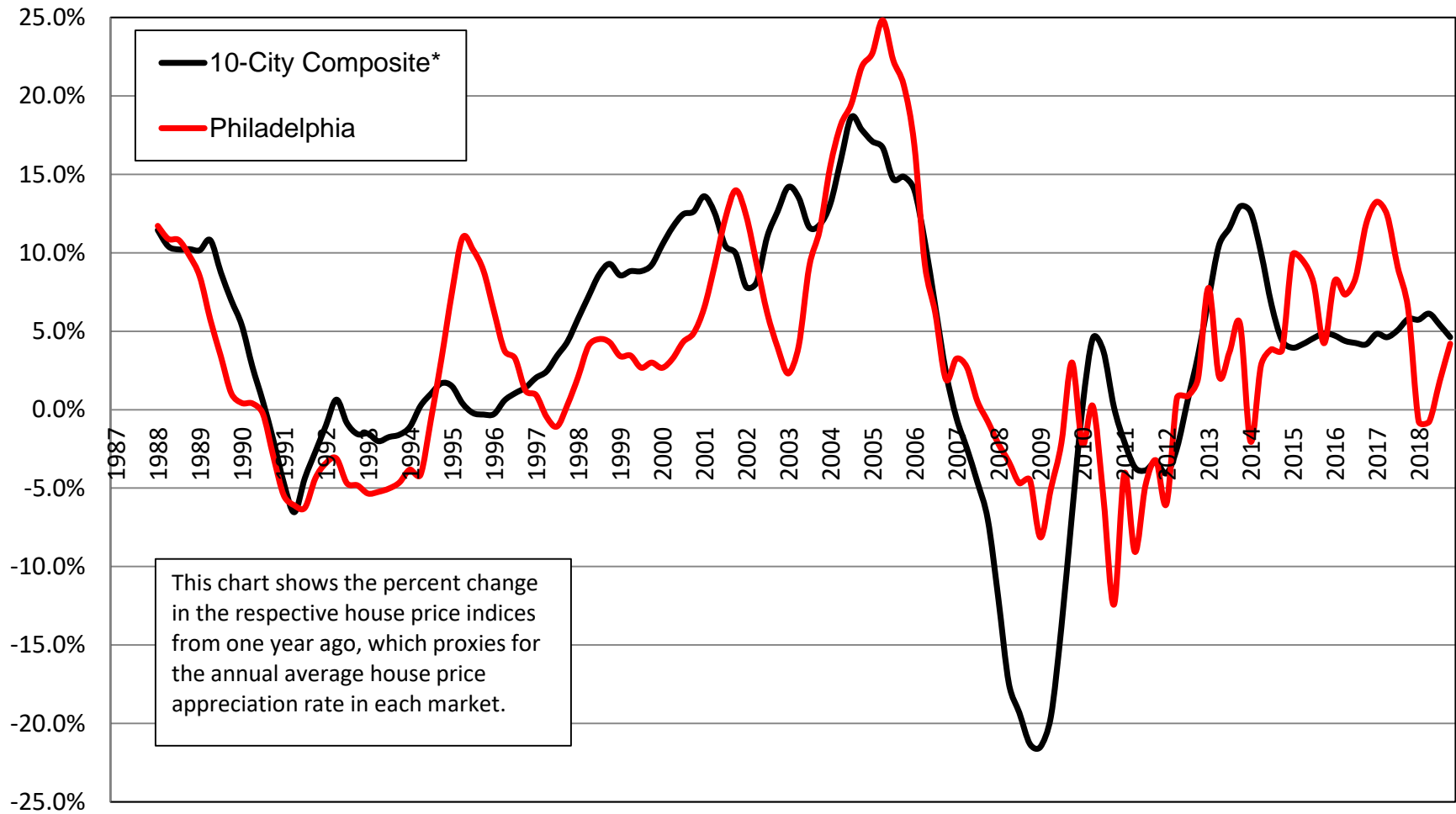
**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2018Q3 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

House Price Appreciation 1987-2018: 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.

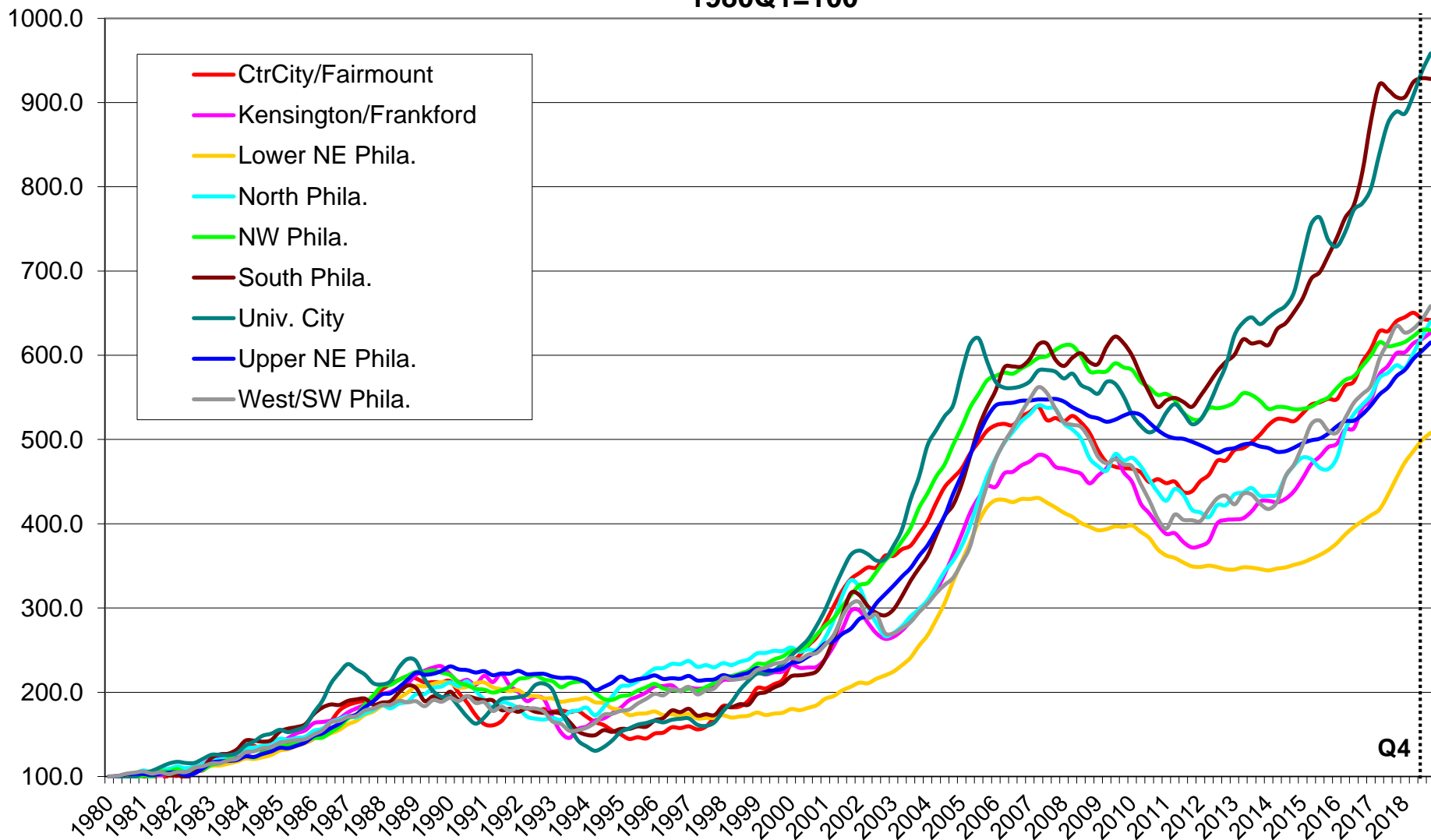
YoY House Price Change (%) 1987-2018: Philadelphia v. 10-City Composite



*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: 1980-2018

1980Q1=100



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

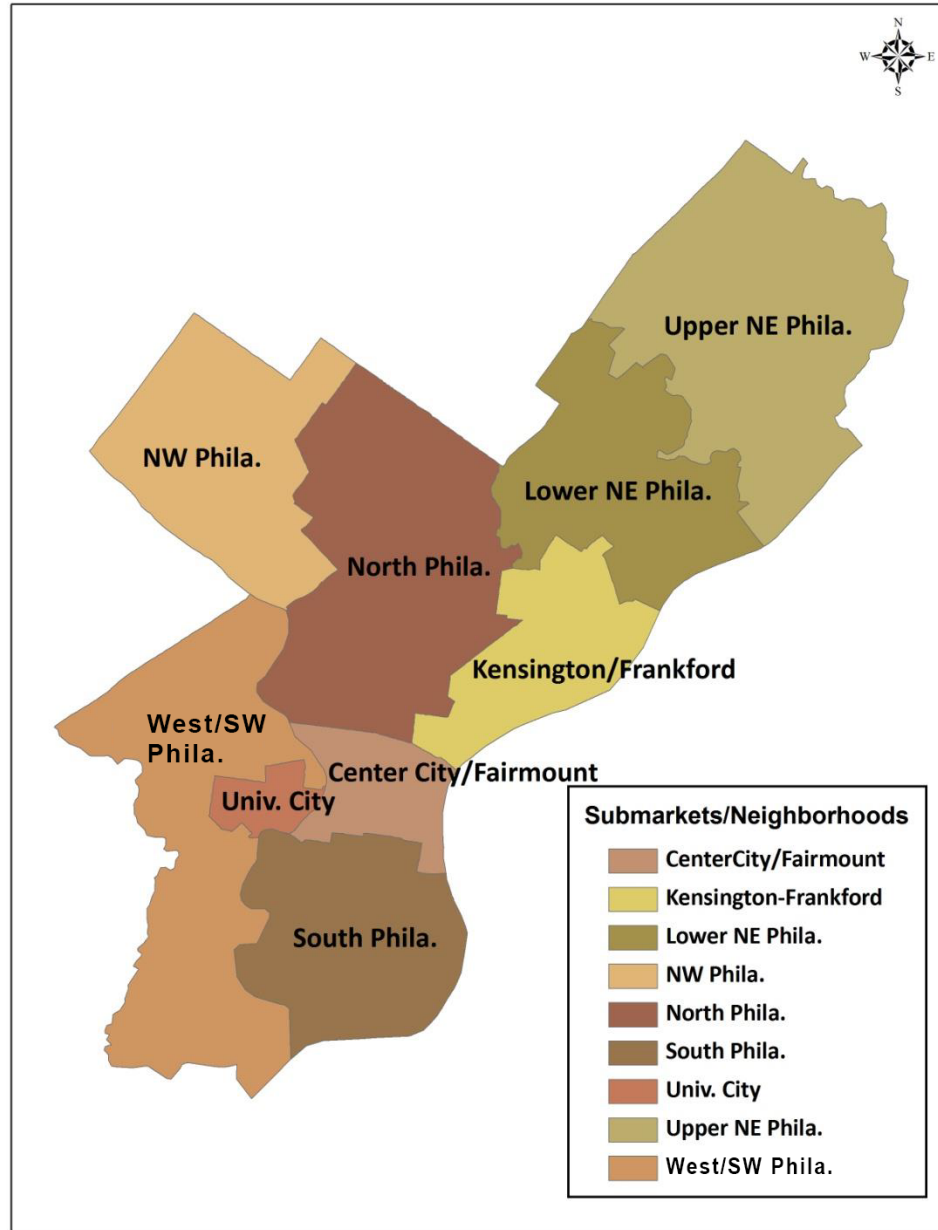
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Philadelphia House Price Appreciation Rates by Submarket

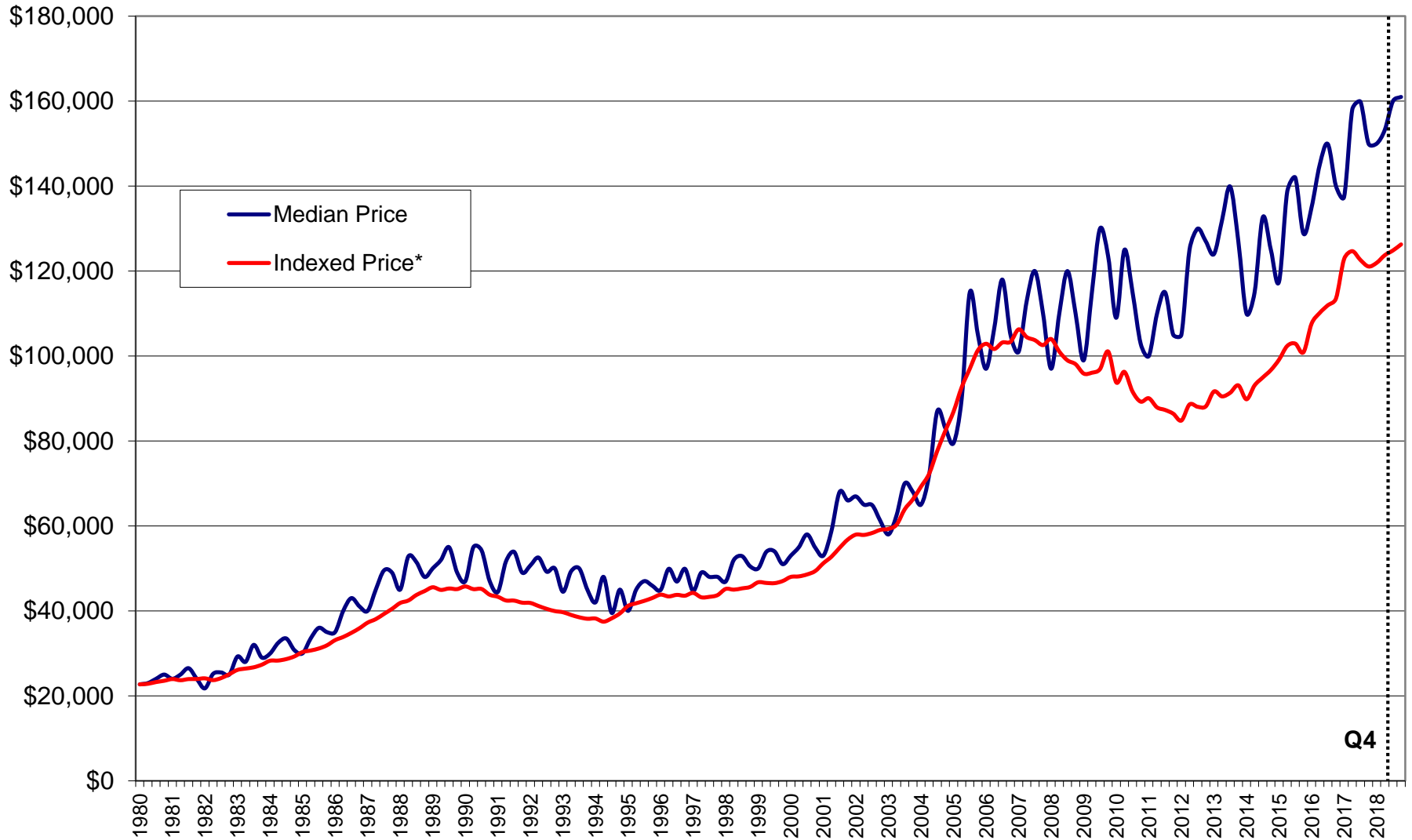
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West /SW Phila.
38-year	185.9%	183.6%	162.5%	185.6%	184.0%	222.8%	226.0%	181.7%	188.5%
10-year	23.4%	33.6%	24.8%	29.2%	8.1%	45.0%	53.7%	15.4%	27.4%
1-Year	0.2%	4.0%	11.1%	8.4%	2.8%	2.4%	7.5%	6.7%	3.6%
1-Quarter	-0.3%	1.2%	1.7%	2.8%	-0.1%	-0.1%	2.2%	1.6%	2.4%

This table gives the total % change in average house values by submarket, through 2018 Q4, from different starting points in time.

Philadelphia Submarket Boundaries



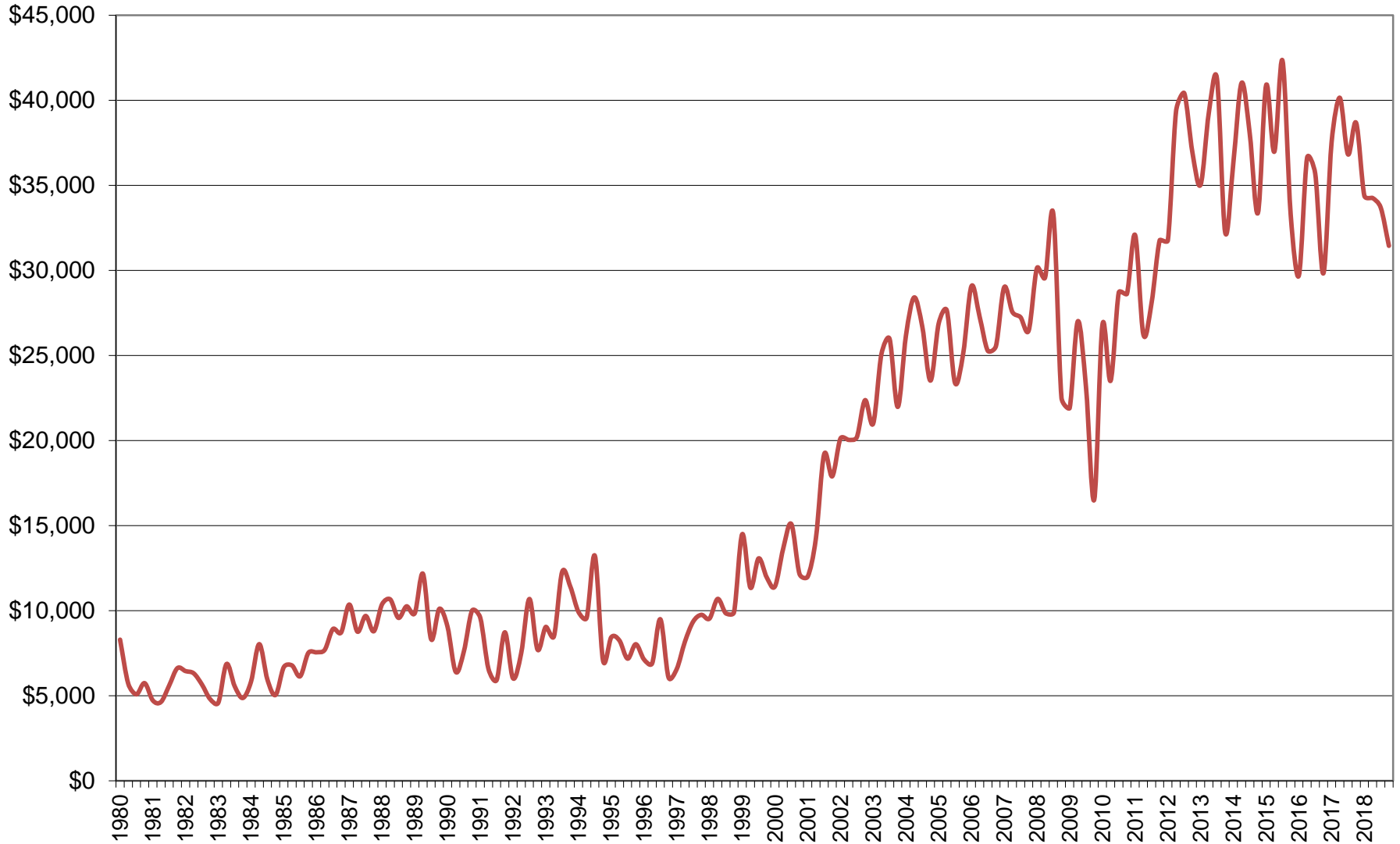
Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2018



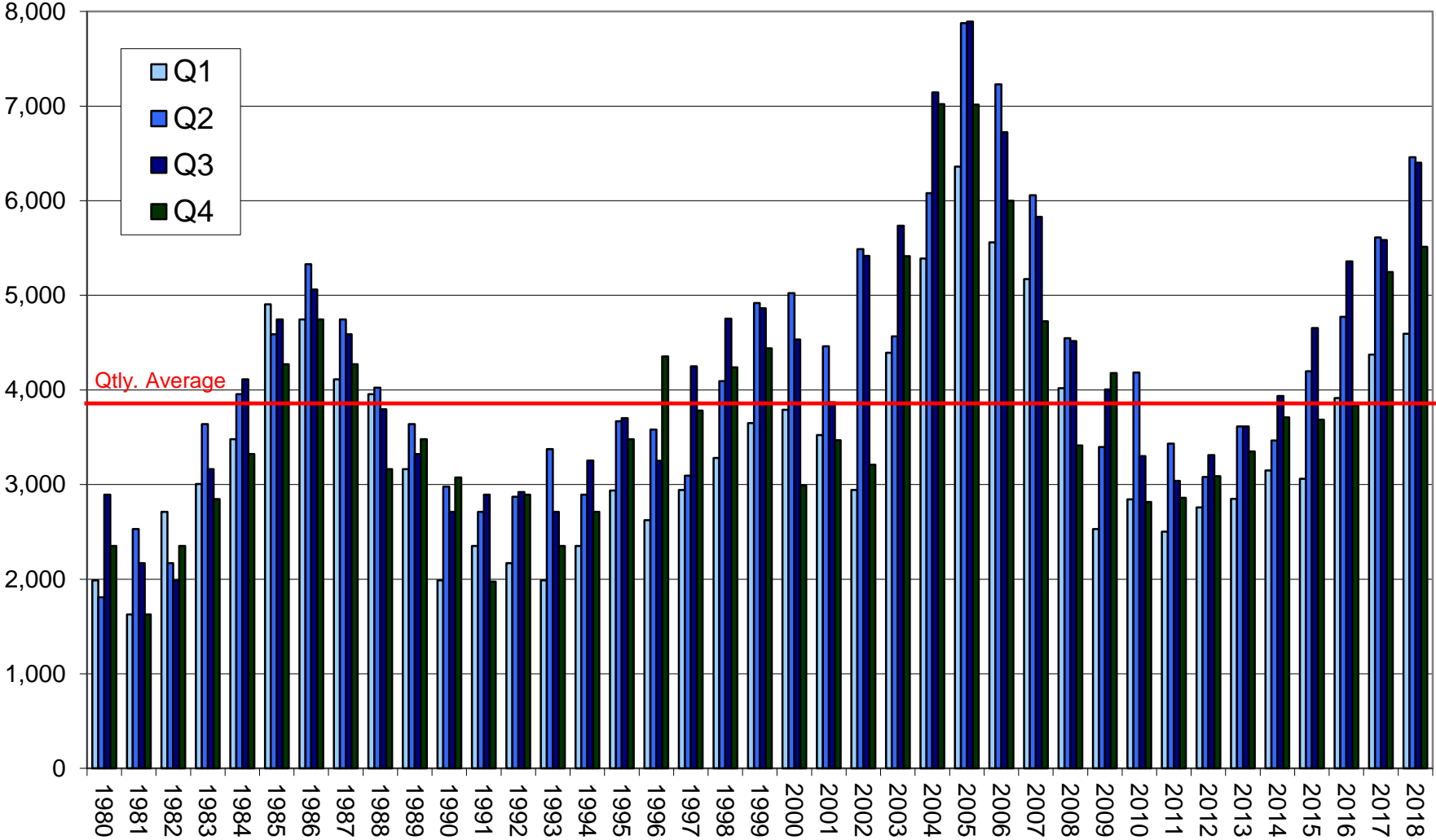
* Empirically estimated by Kevin C. Gillen, PhD

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Average House Price Minus Median House Price: 1980-2018

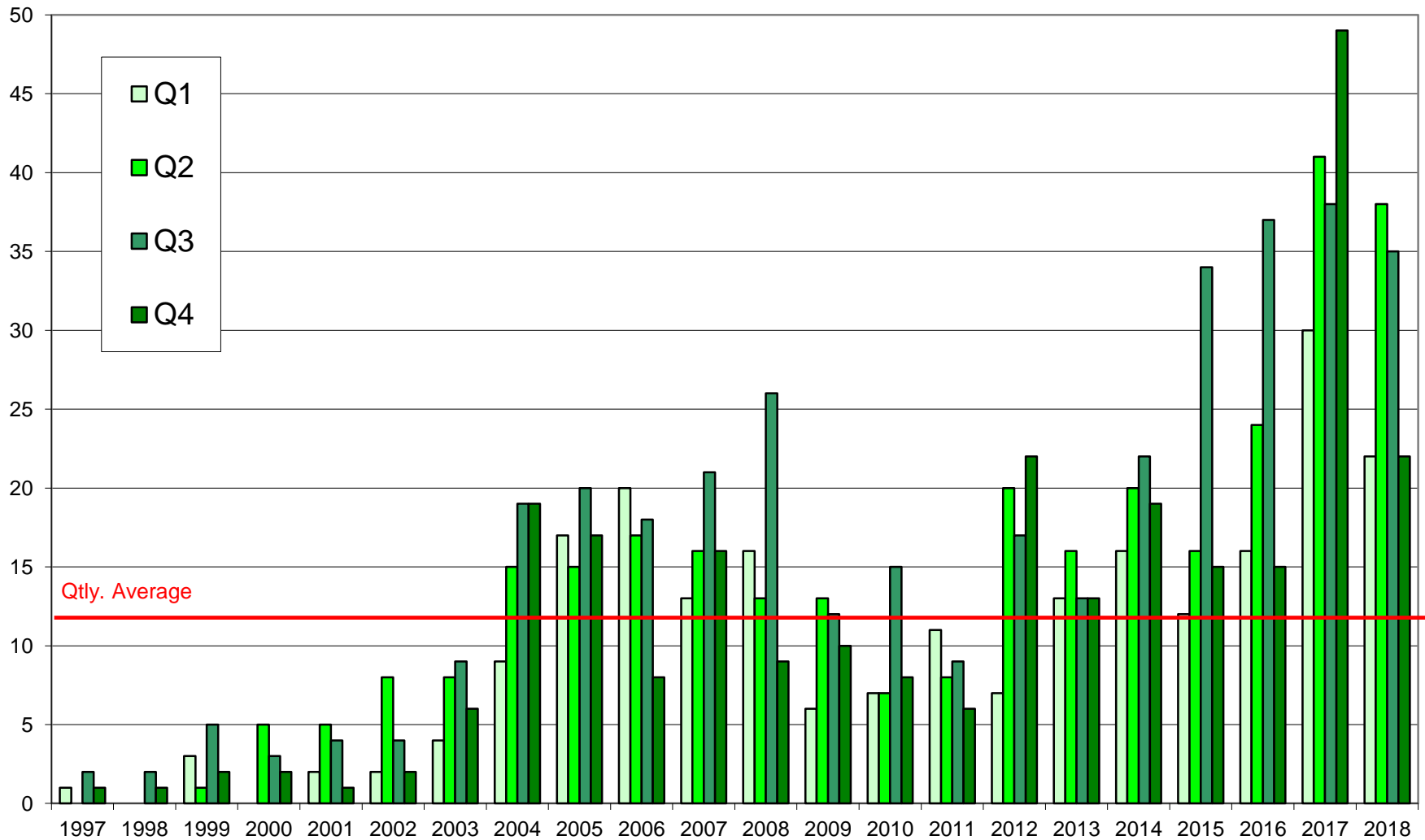


Number of Philadelphia House Sales* per Quarter: 1980-2018



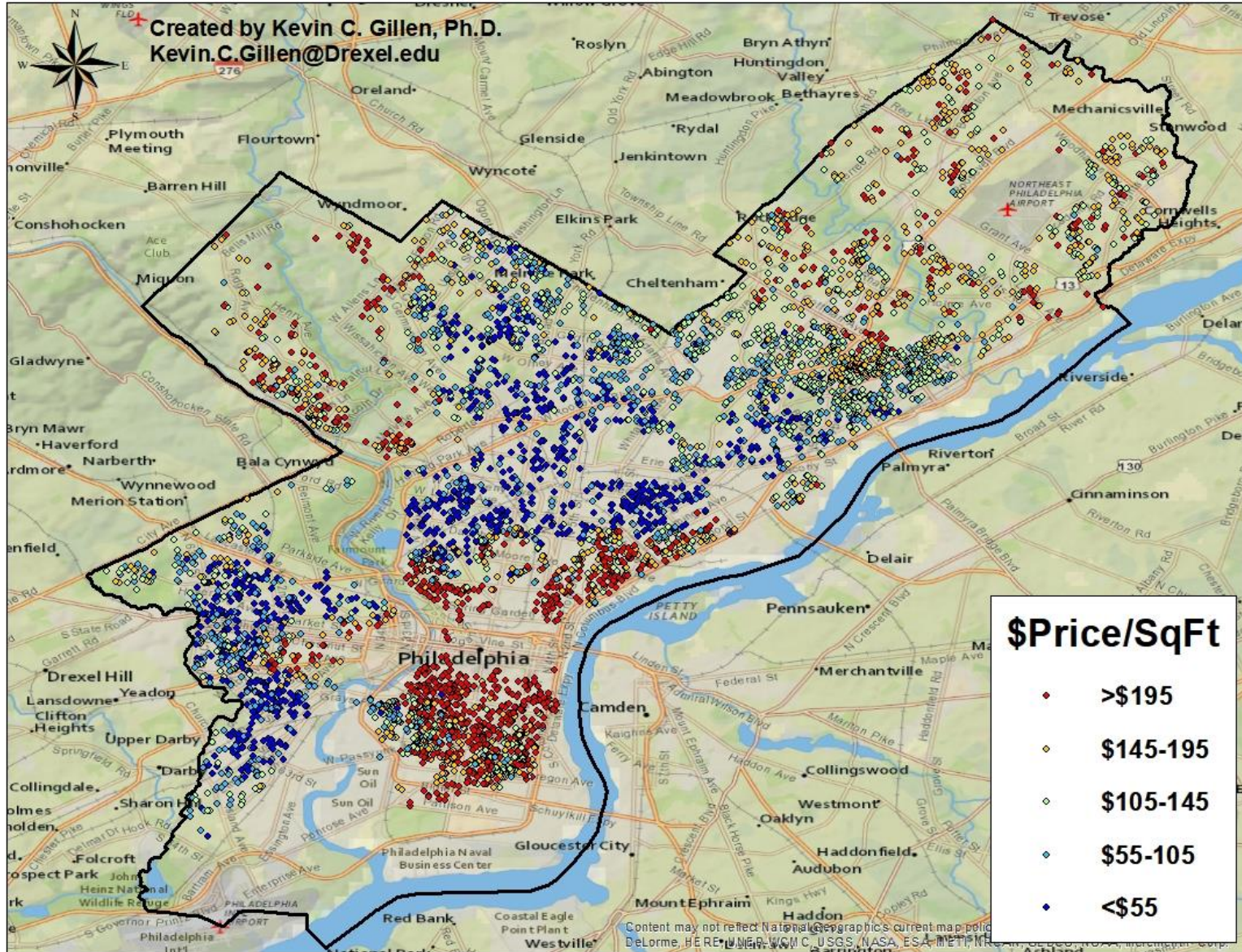
*Only arms-length transactions between private sector entities were included in these numbers.

Number of Philadelphia House Sales* per Quarter with Price \geq \$1 Million: 1997-2018

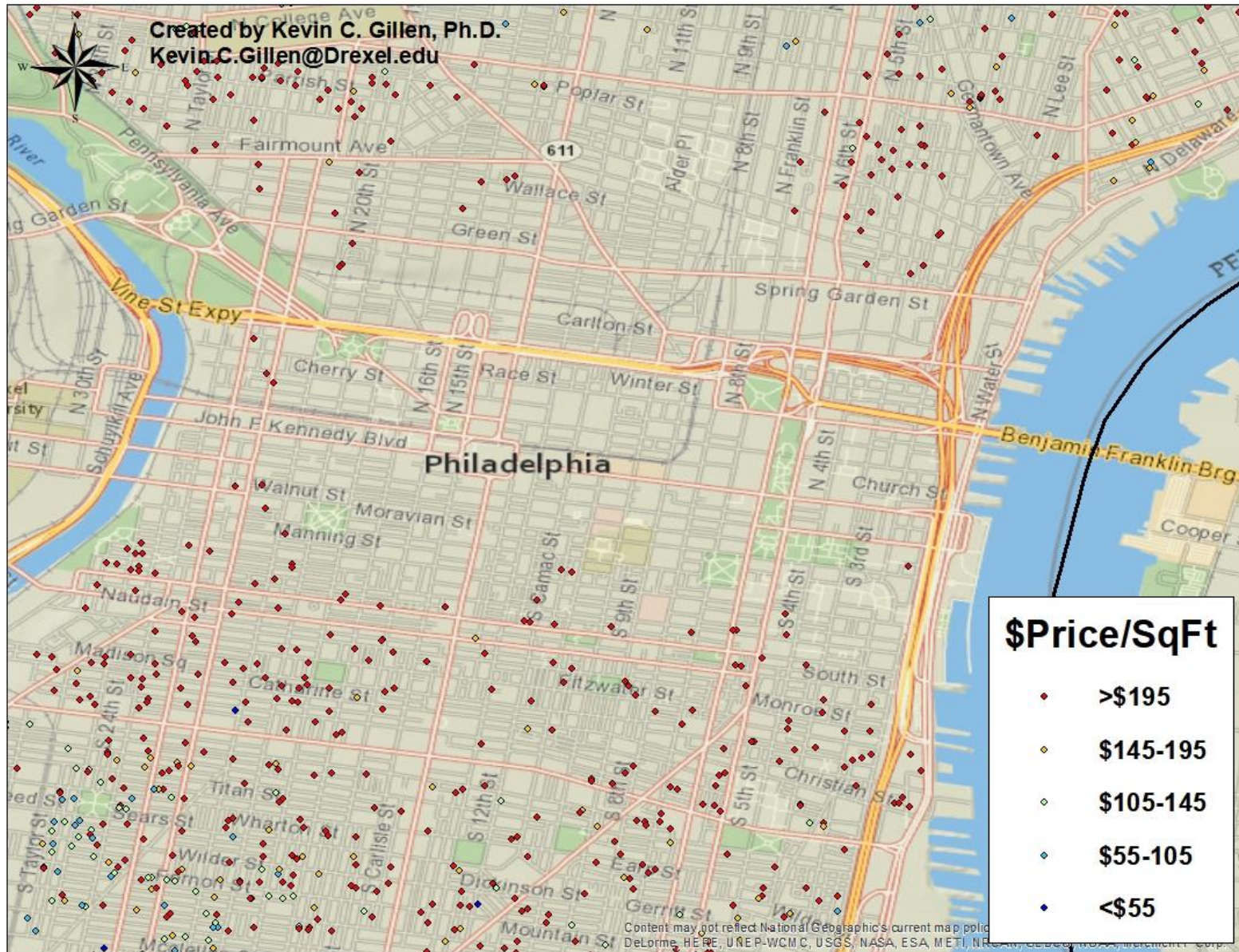


*Only arms-length transactions between private sector entities were included in these numbers.

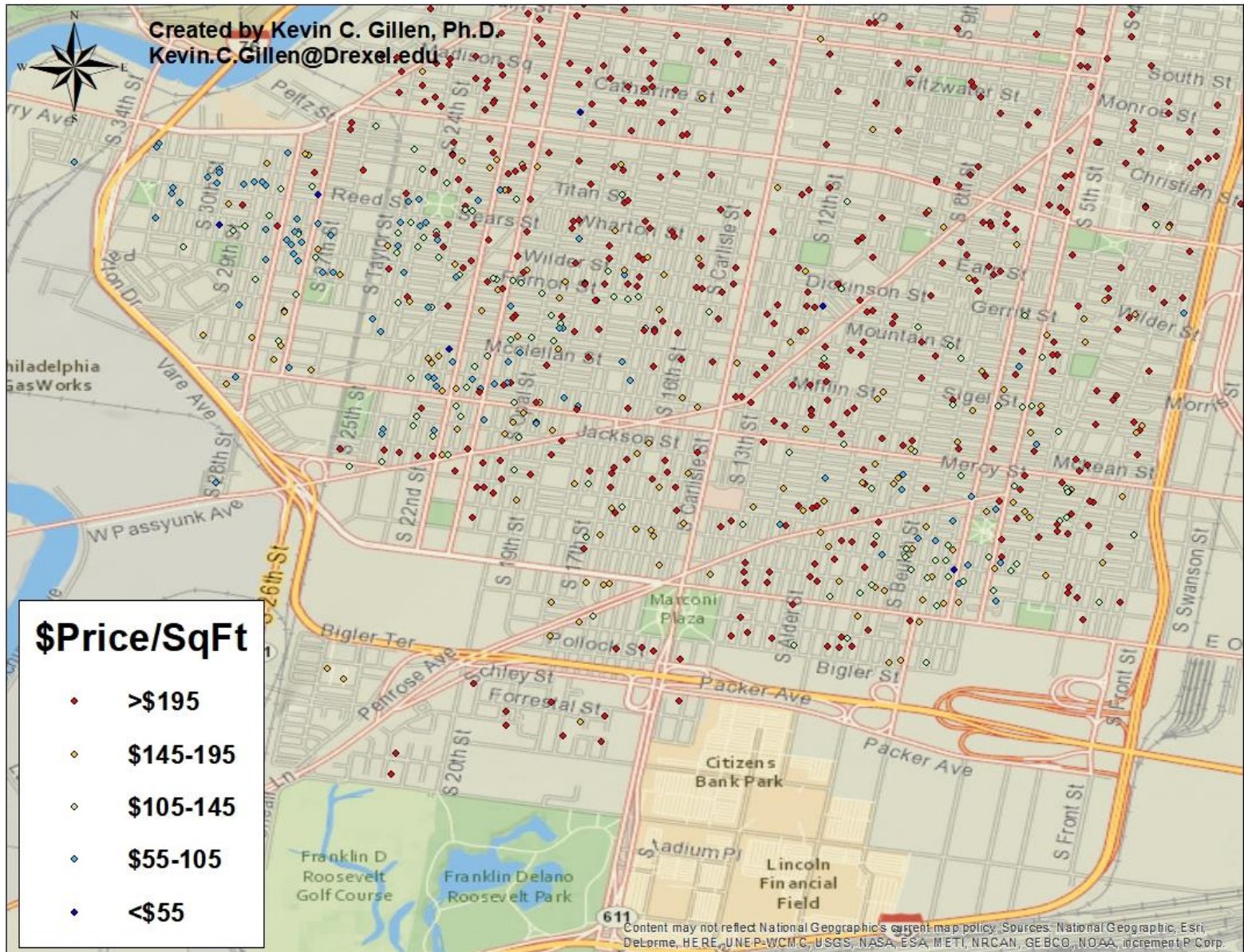
Philadelphia House Sales in 2018 Q4



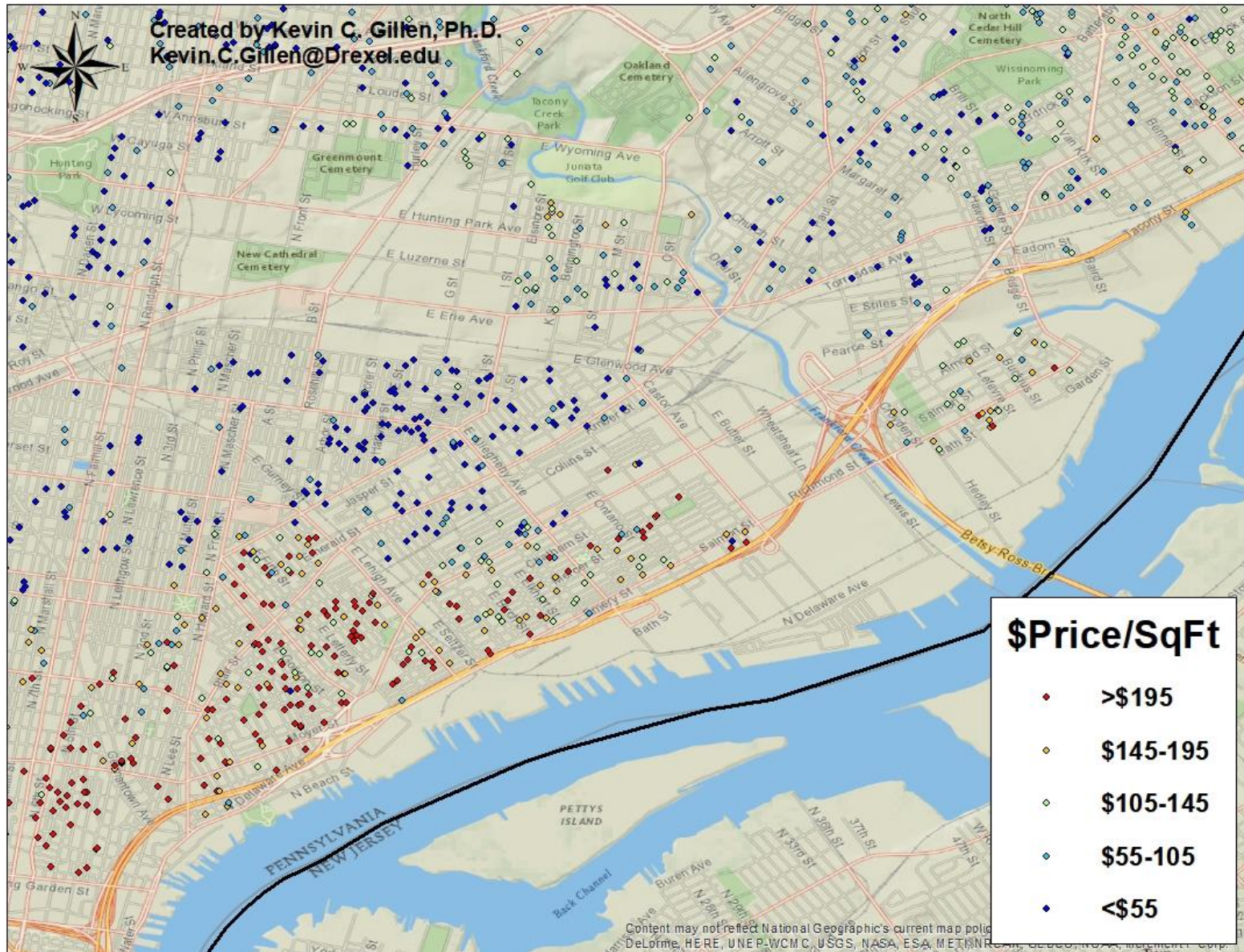
Center City House Sales in 2018 Q4



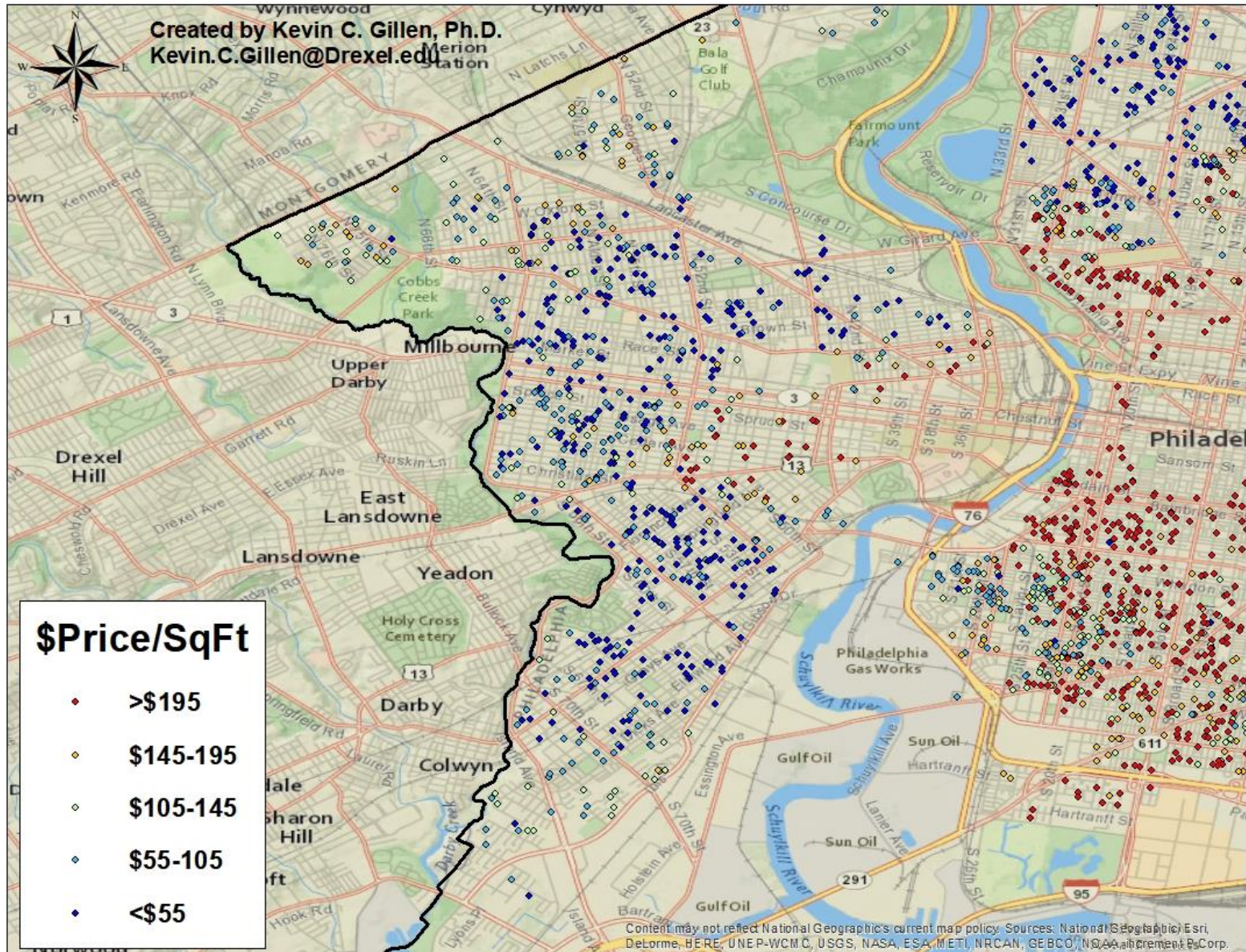
South Philadelphia House Sales in 2018 Q4



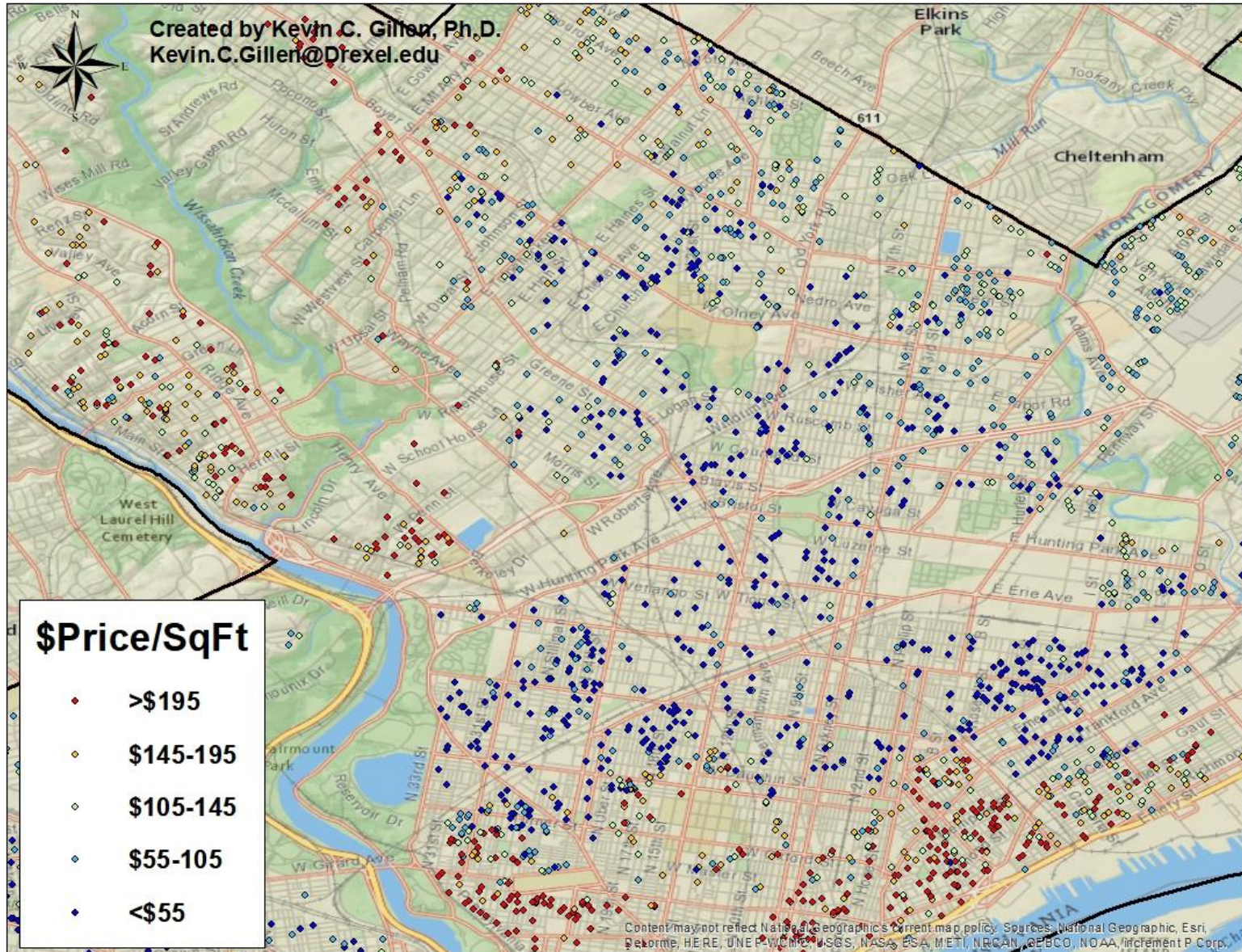
Kensington/Frankford House Sales in 2018 Q4



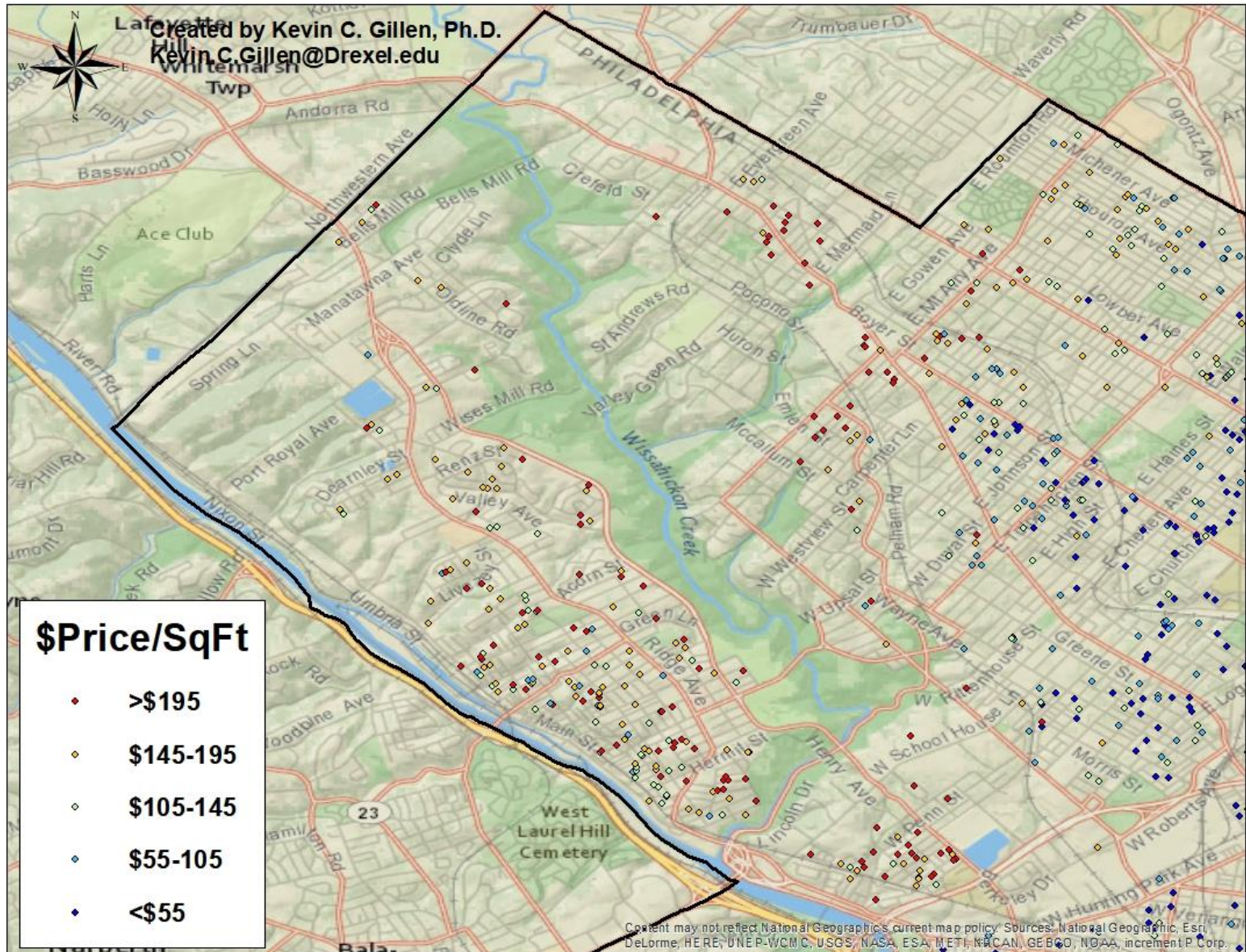
West/SW Philadelphia House Sales in 2018 Q4



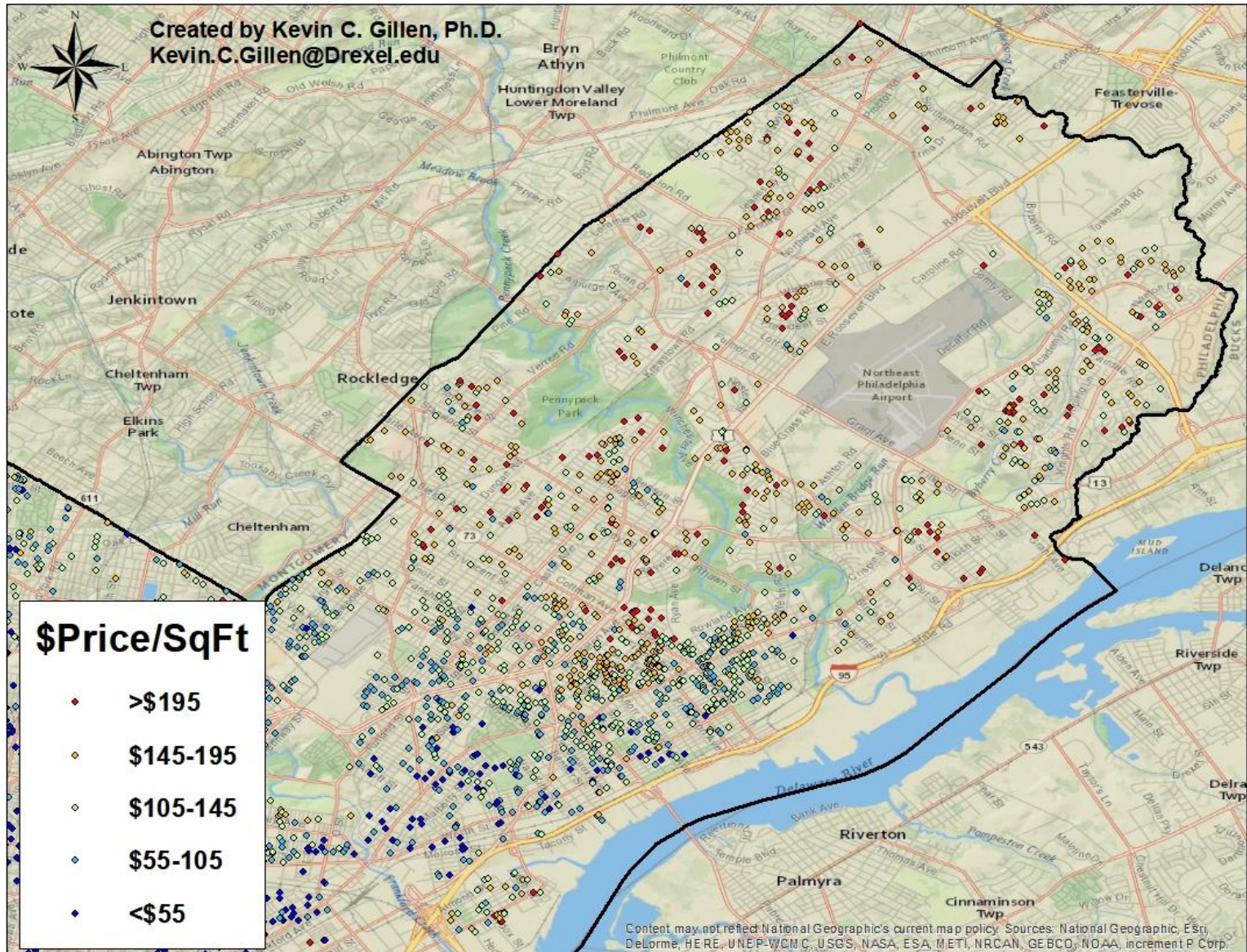
North Philadelphia House Sales in 2018 Q4



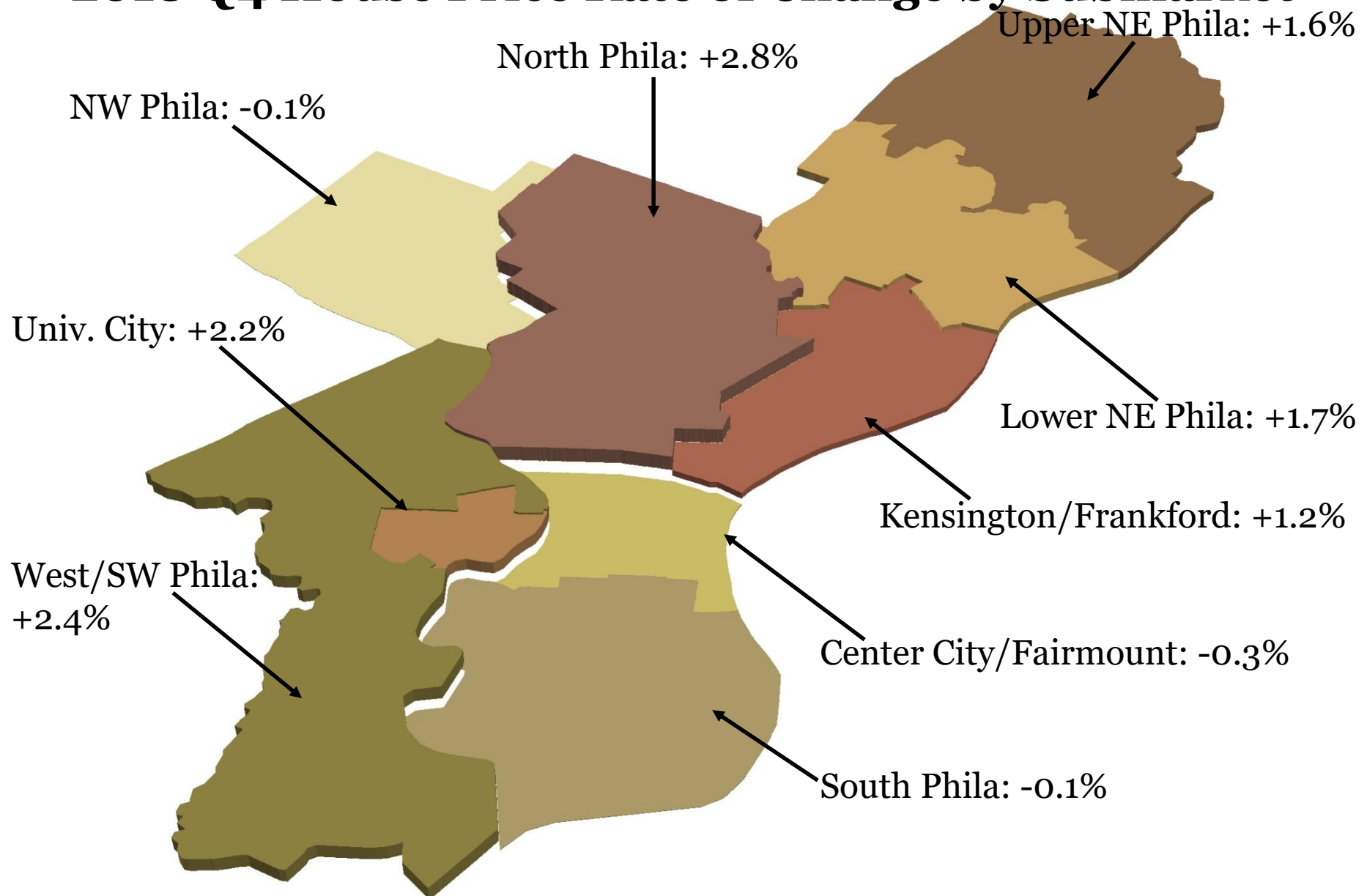
Northwest Philadelphia House Sales in 2018 Q4



Northeast Philadelphia House Sales in 2018 Q4

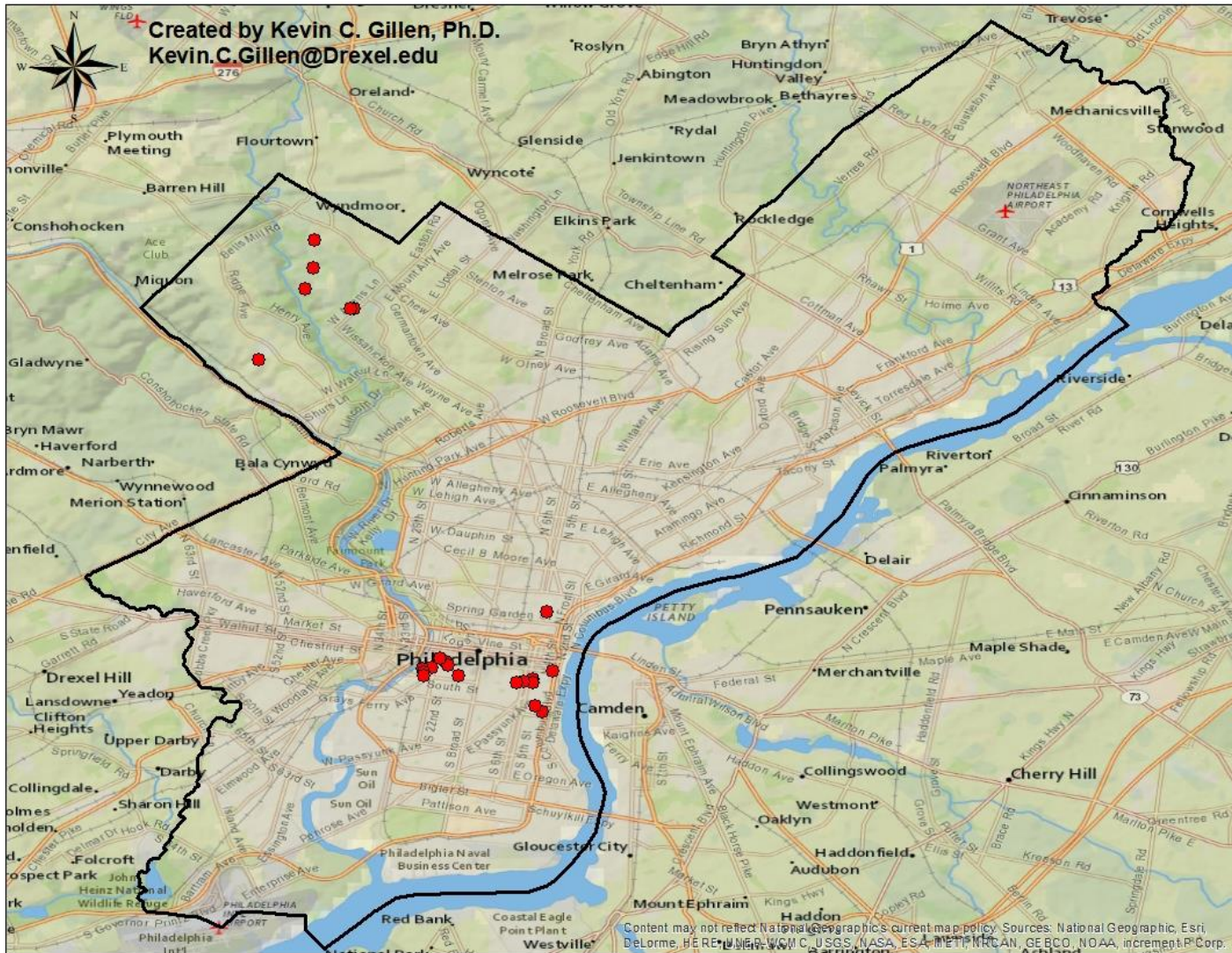


2018 Q4 House Price Rate of Change by Submarket



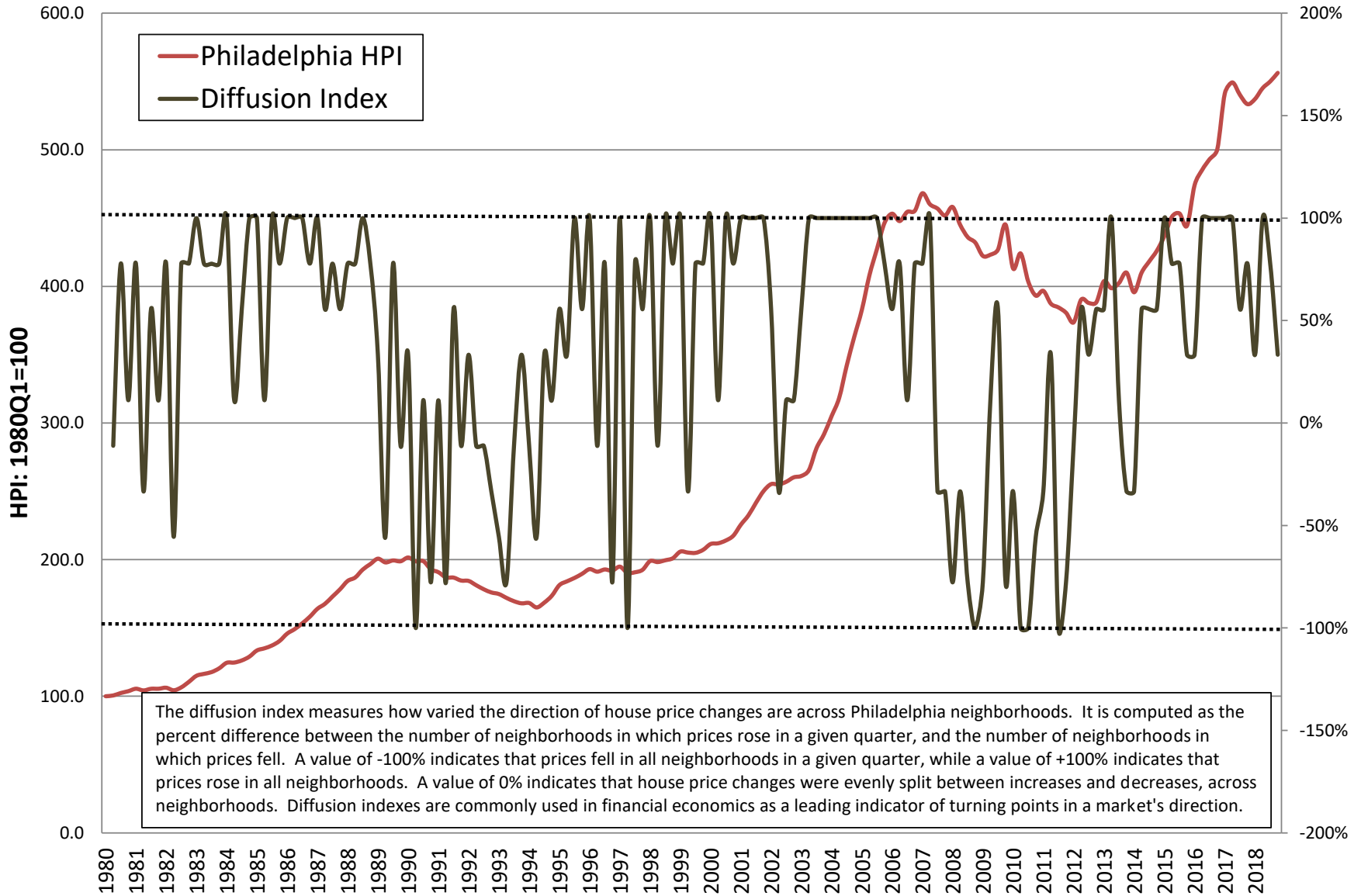
Note: Each submarket is extruded by its average change in house values during 2018 Q4 in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

+ \$1 Million Dollar House Sales in 2018 Q4

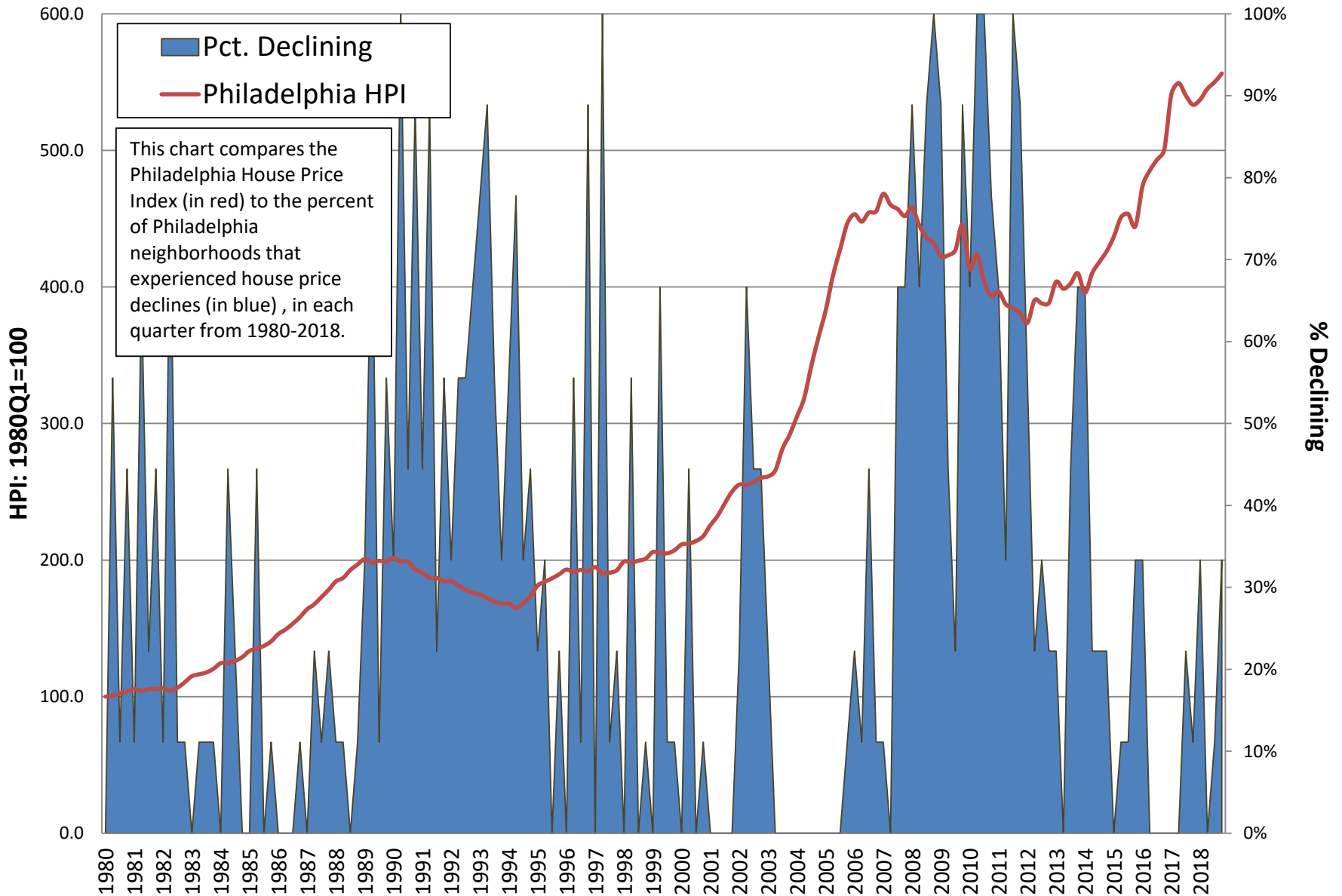


PRICE	ADDRESS
\$1,010,000	825 N LAWRENCE ST
\$1,075,000	831 S 3RD ST
\$1,080,000	358 CINNAMINSON ST
\$1,125,000	1725 ADDISON ST
\$1,145,000	7329 MC CALLUM ST
\$1,149,000	2414 NAUDAIN ST
\$1,150,000	239 REX AVE
\$1,165,000	1928 RITTENHOUSE SQ
\$1,225,000	416 SPRUCE ST
\$1,250,000	7 DRUIM MOIR CT
\$1,255,000	2410 WAVERLY ST
\$1,300,000	2215 DELANCEY PL
\$1,350,000	7304 ELBOW LN
\$1,375,000	541 PINE ST
\$1,500,000	706 PINE ST
\$1,600,000	2019 CHANCELLOR ST
\$1,625,000	137 SALTER ST
\$1,740,000	411 PINE ST
\$1,815,000	117 S VAN PELT ST
\$2,125,000	108 SANSOM ST
\$2,250,000	2503 PANAMA ST
\$3,200,000	609 SAINT ANDREWS RD

Philadelphia House Price Diffusion Index 1980-2018

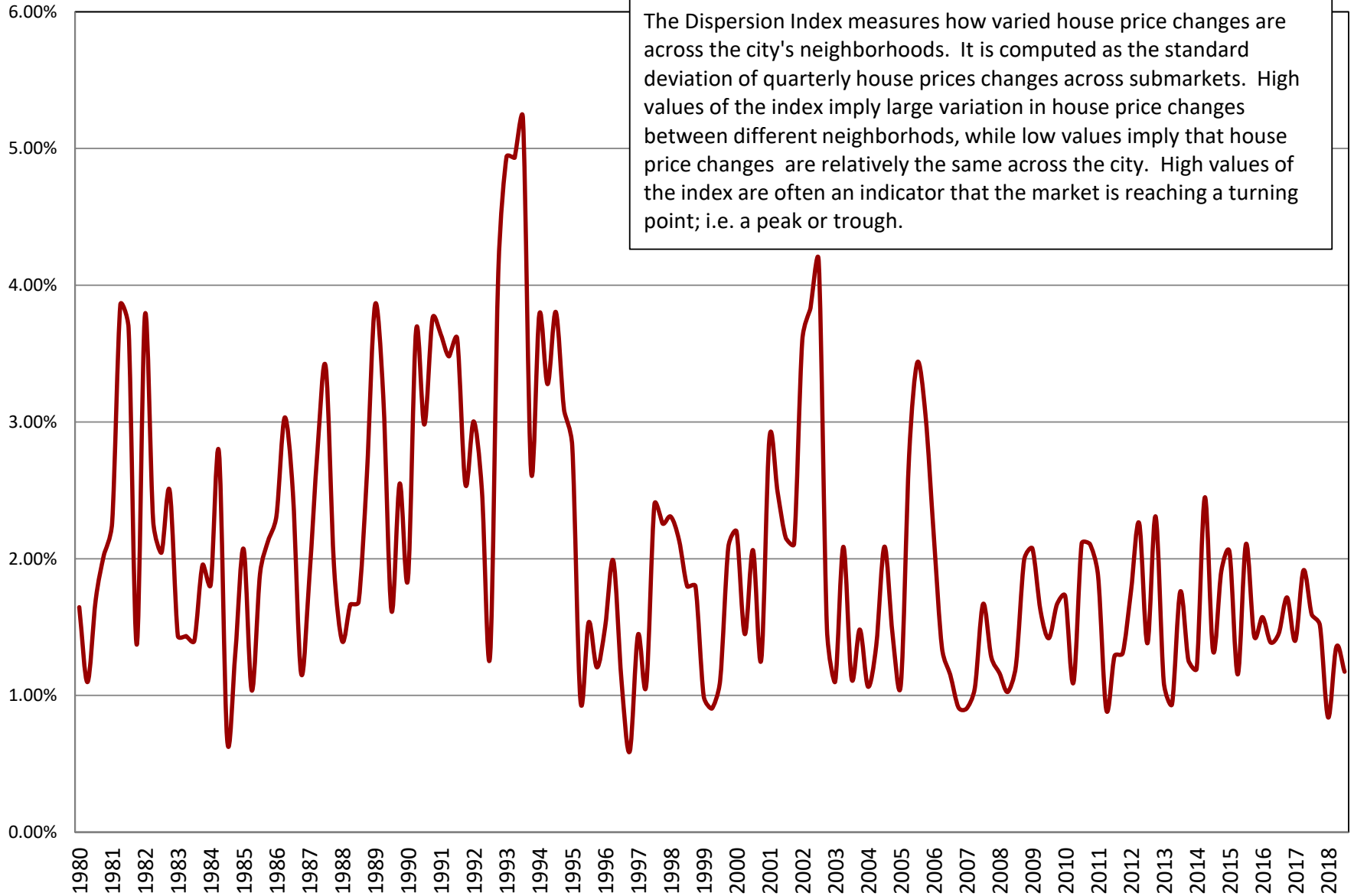


Philadelphia House Prices 1980-2018: Declines v. House Price Index

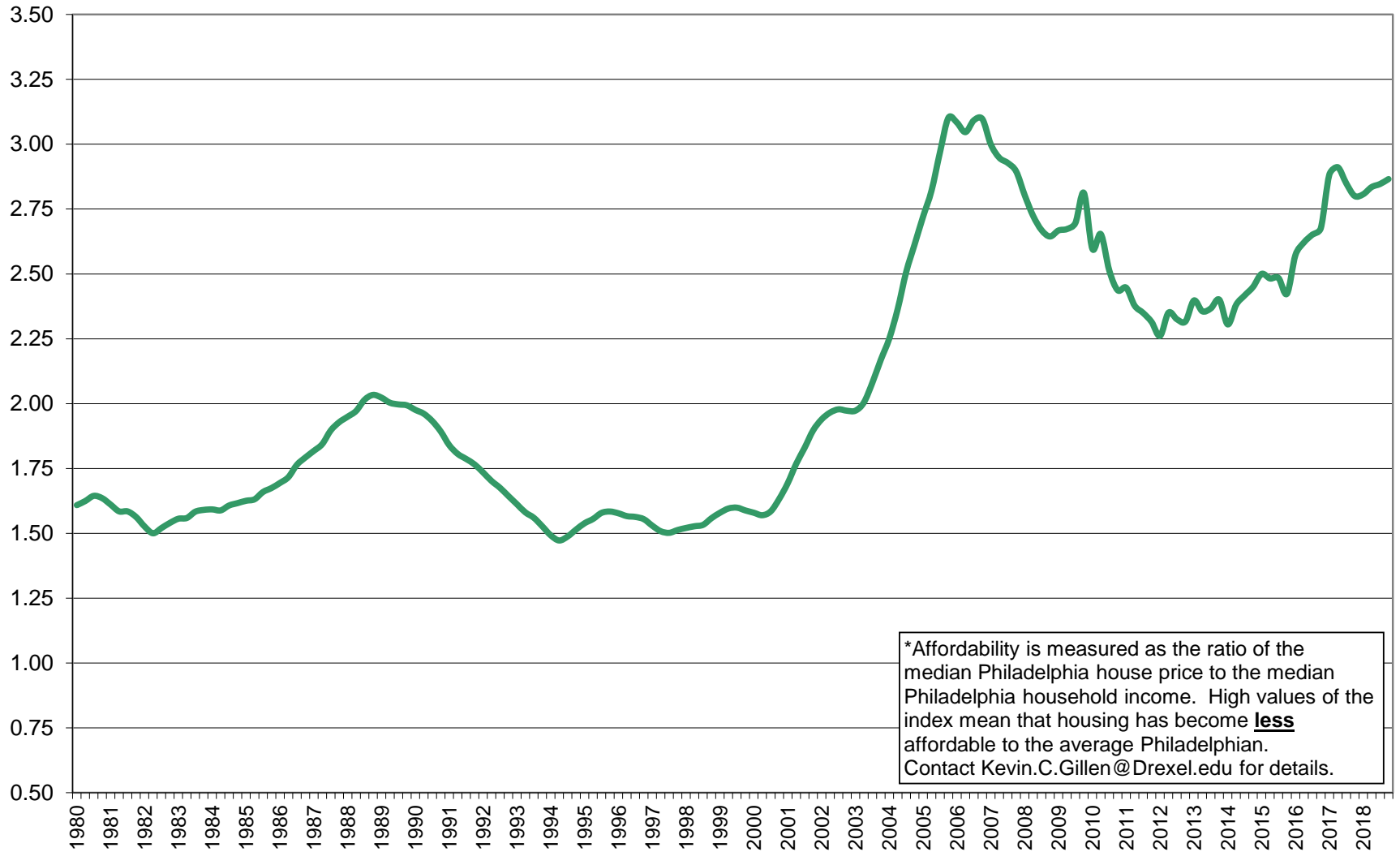


Dispersion Index of Philadelphia Housing

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 price 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. High values of the index are often an indicator that the market is reaching a turning point; i.e. a peak or trough.

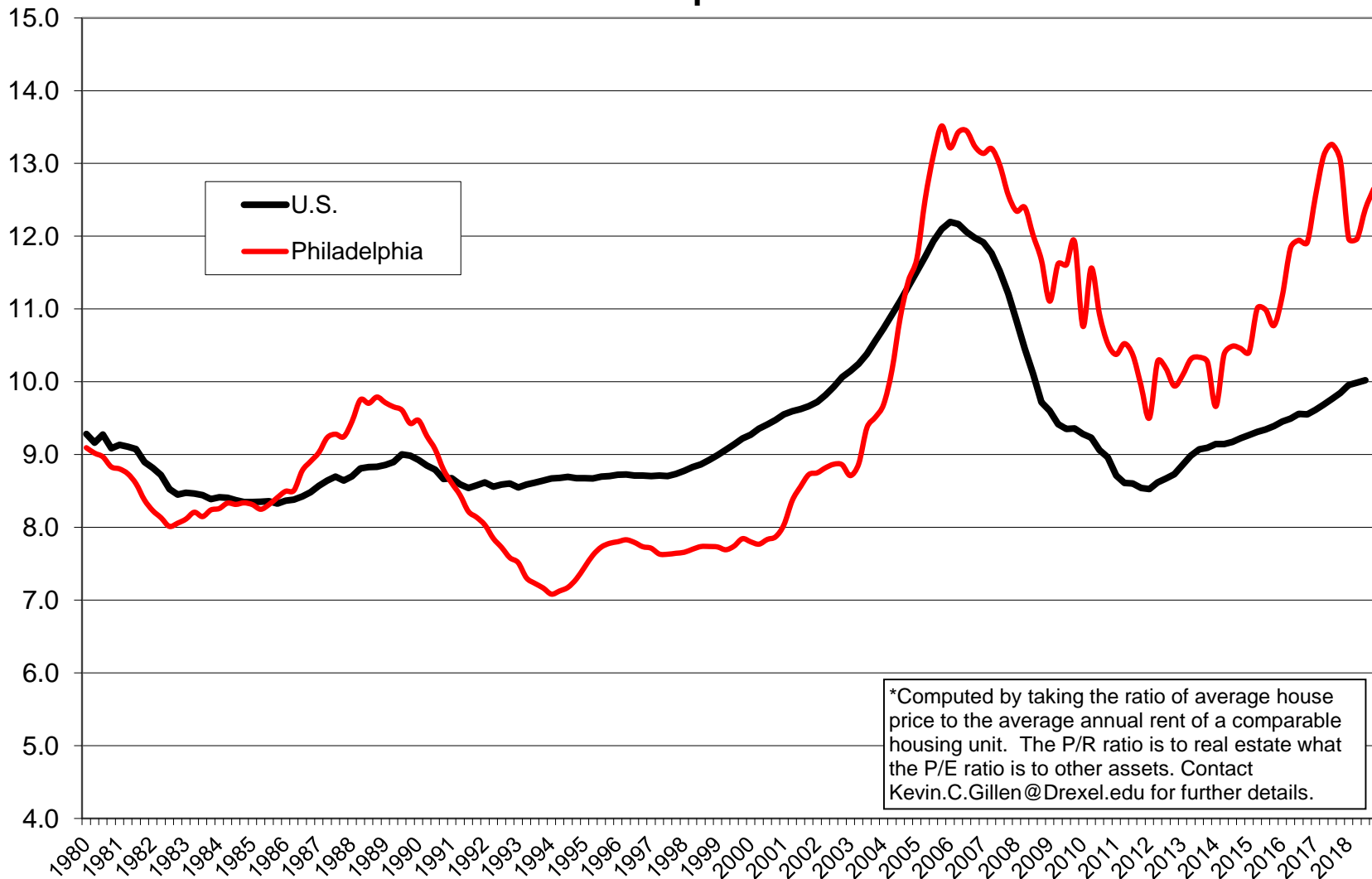


Philadelphia Housing Affordability* Index: 1980-2018



*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 Kevin.C.Gillen@Drexel.edu for details.

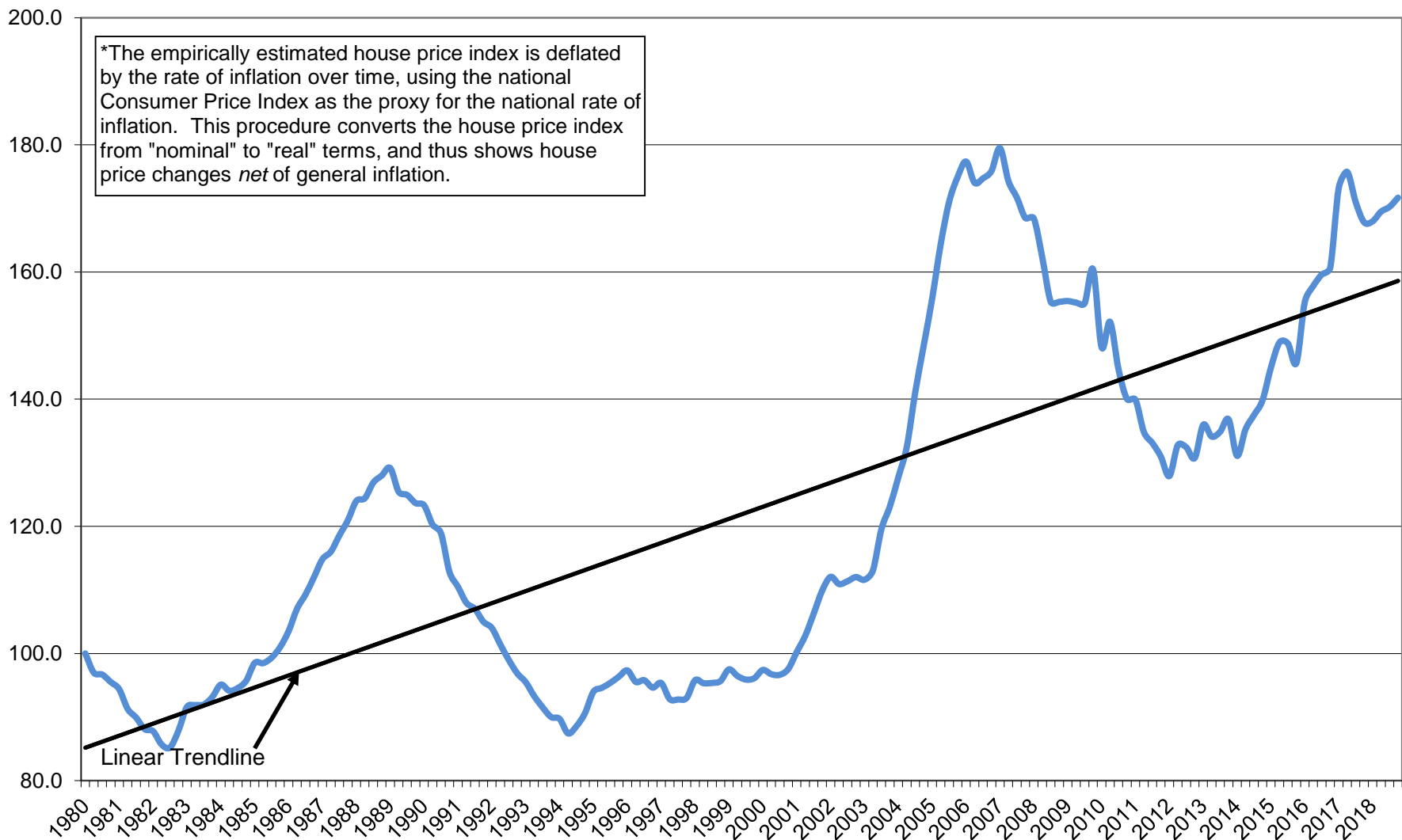
Average House Price-to-Rent Ratios*: 1980-2018 Philadelphia v. U.S.



*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 Kevin.C.Gillen@Drexel.edu for further details.

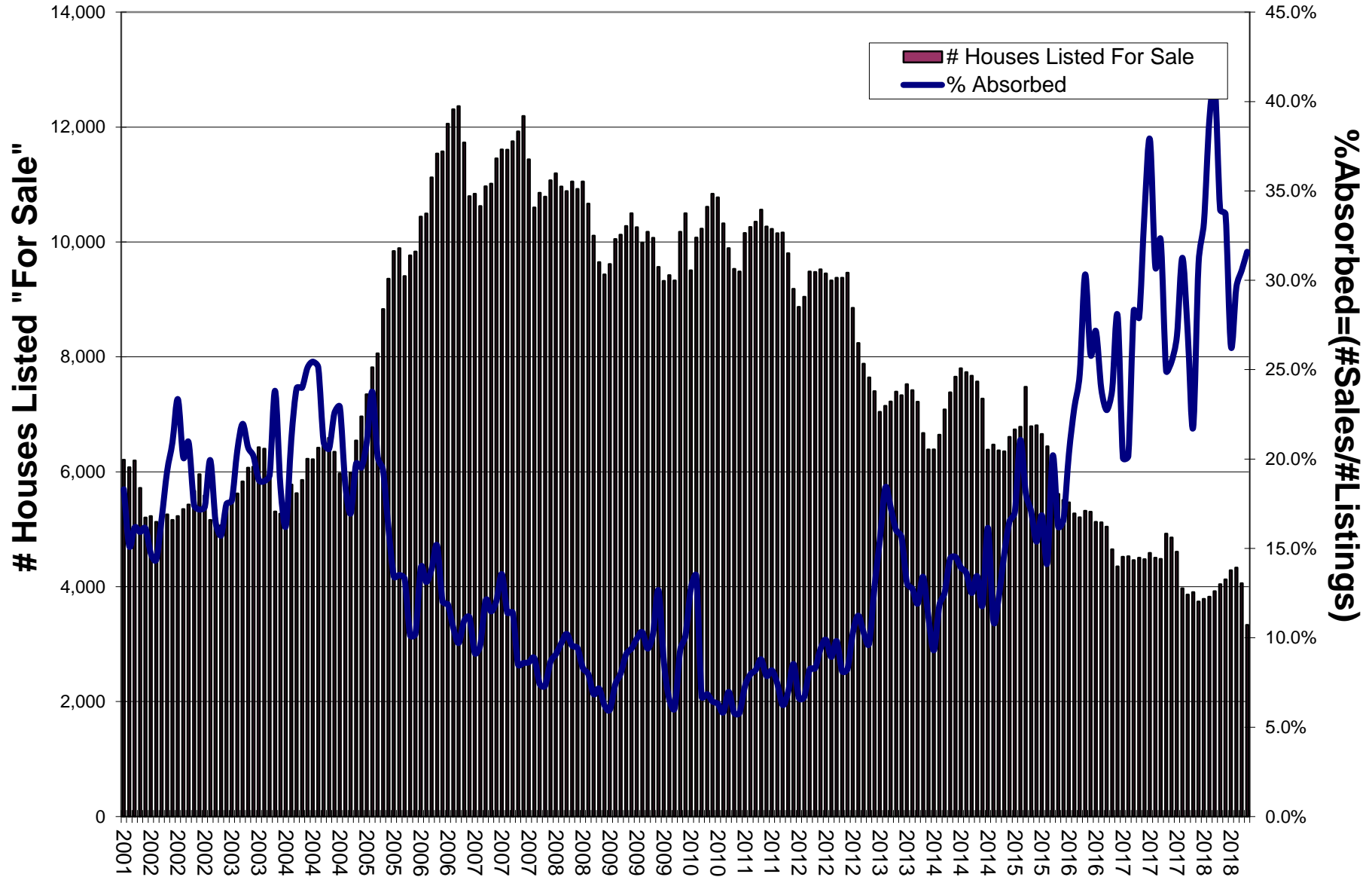
Inflation-Adjusted* Philadelphia House Price Index 1980-2018

1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

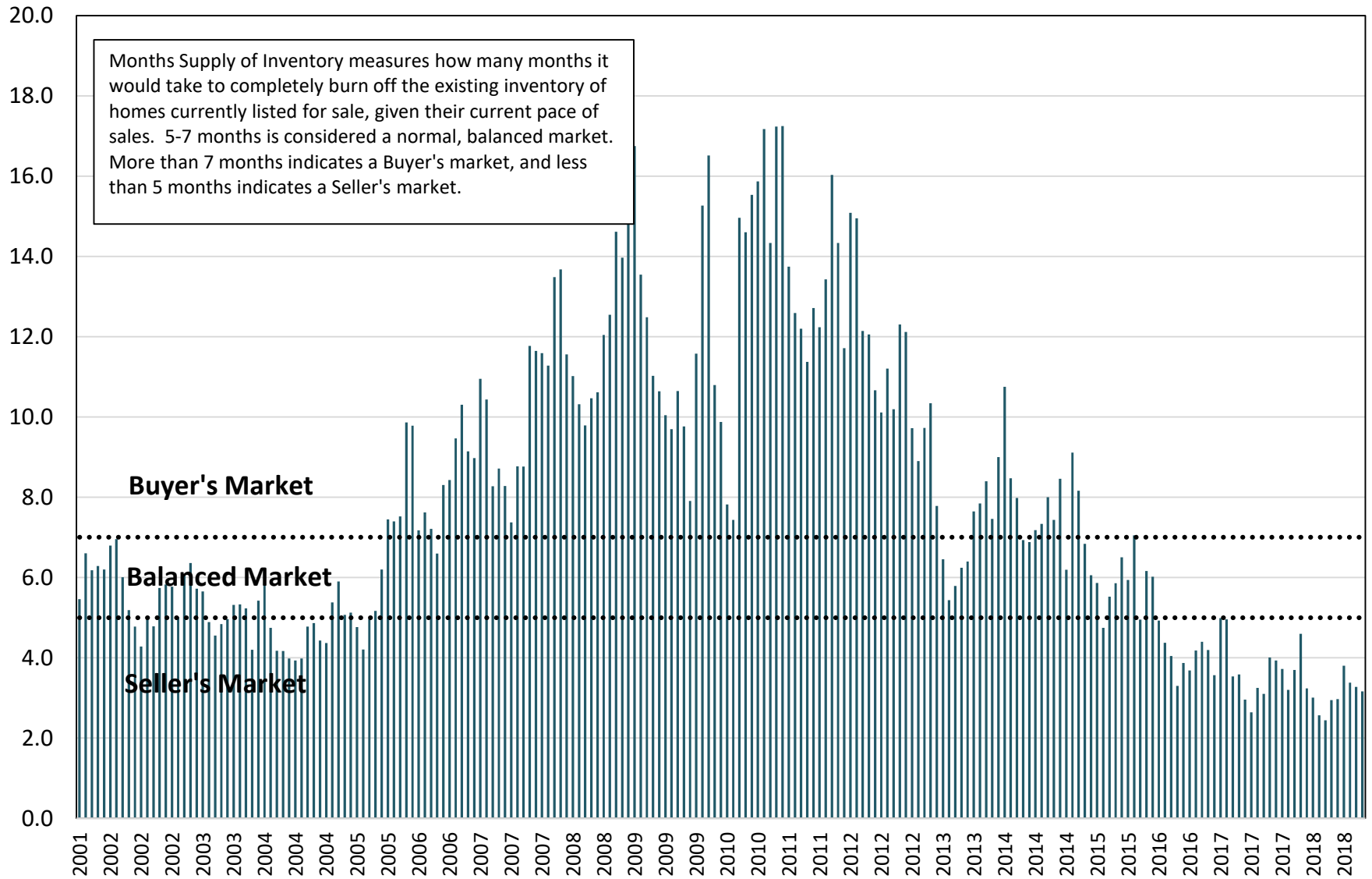


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Trend MLS



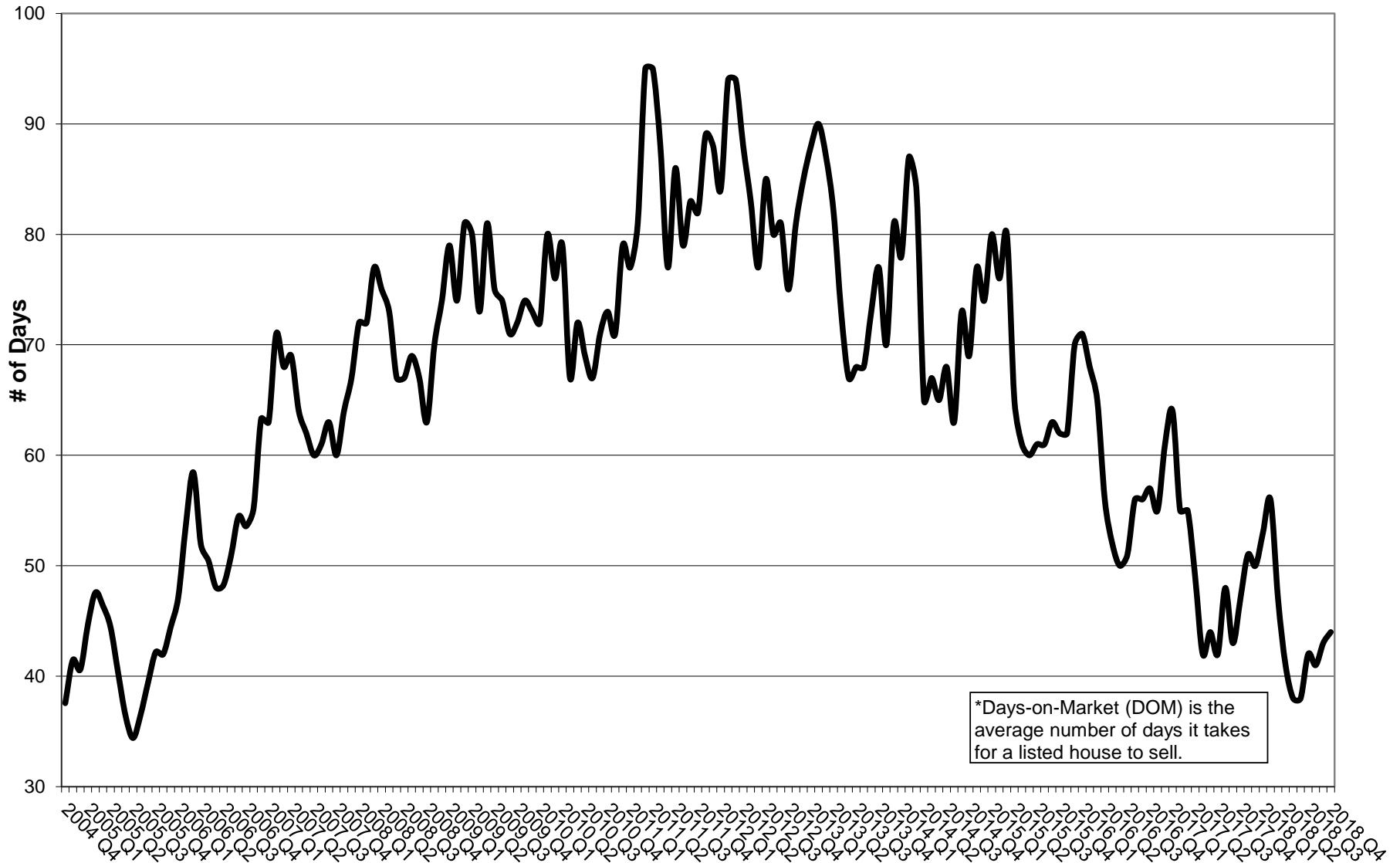
Months Supply of Inventory in Philadelphia



Source: Trend MLS



Average Days-on-Market* for Philadelphia Homes

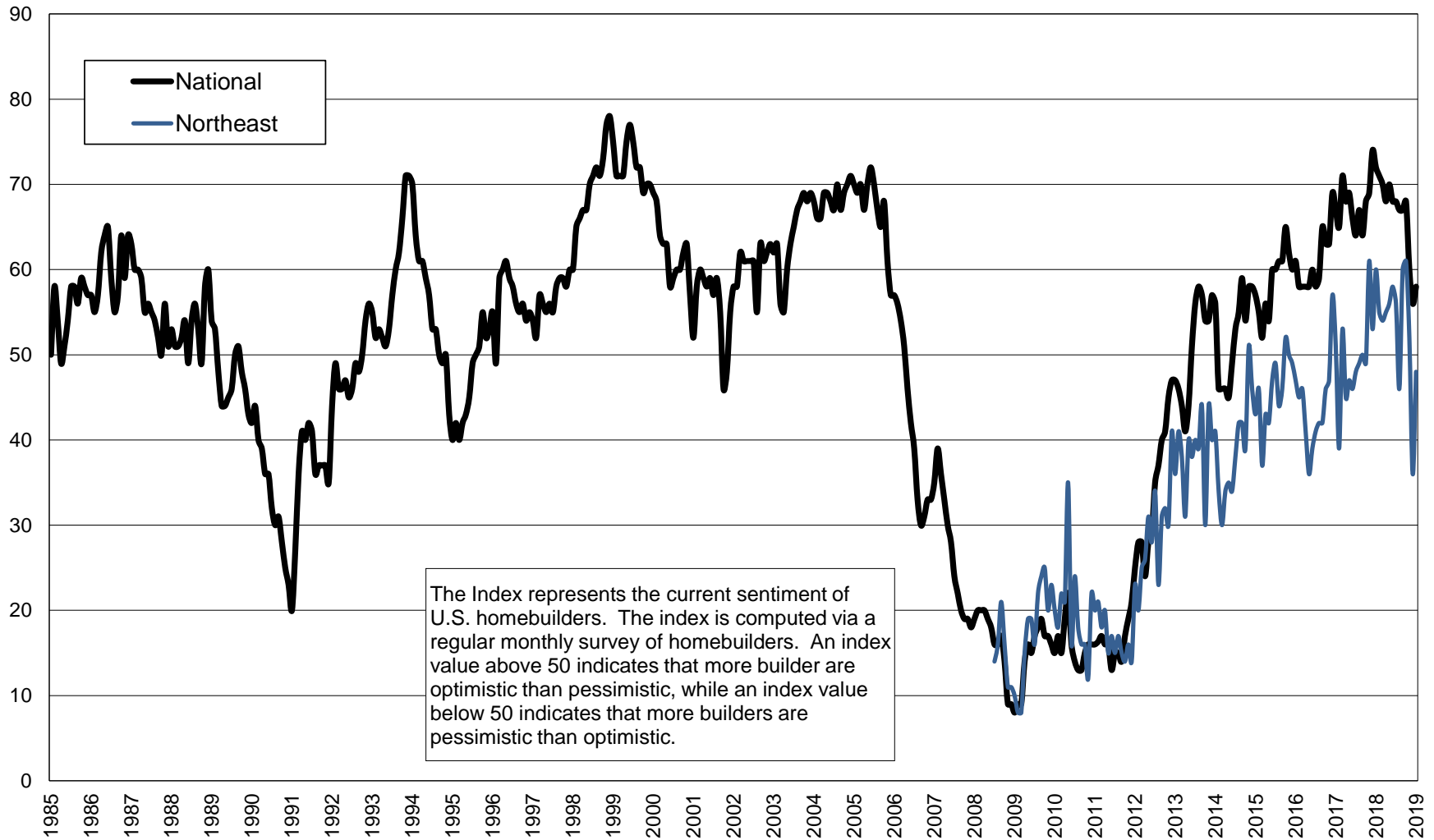


*Days-on-Market (DOM) is the average number of days it takes for a listed house to sell.

Source: Trend MLS

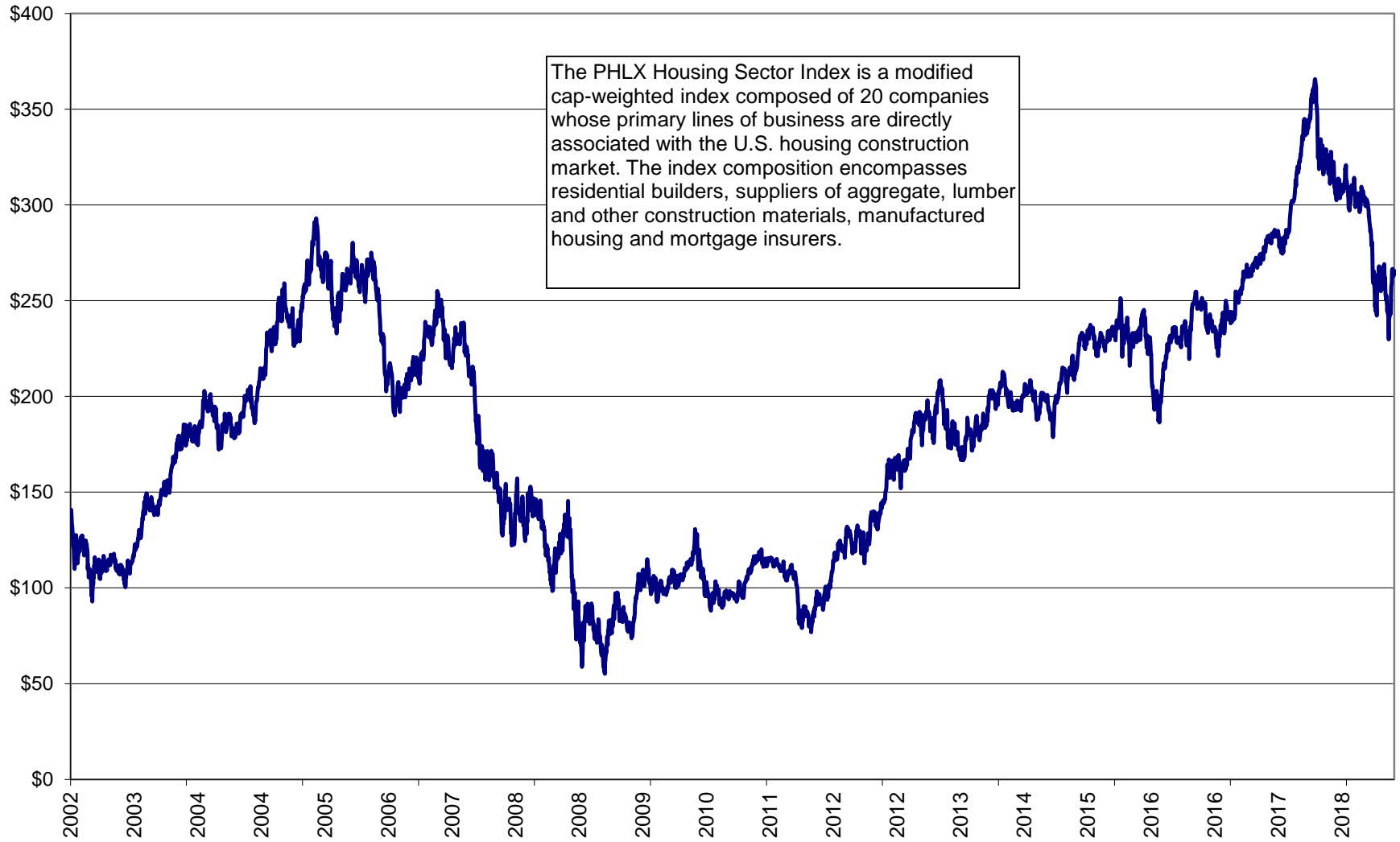


Index of Homebuilder Sentiment: 1985-2018 (Seasonally Adjusted)



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

Philadelphia Stock Exchange Housing Sector Index: 2002-2019

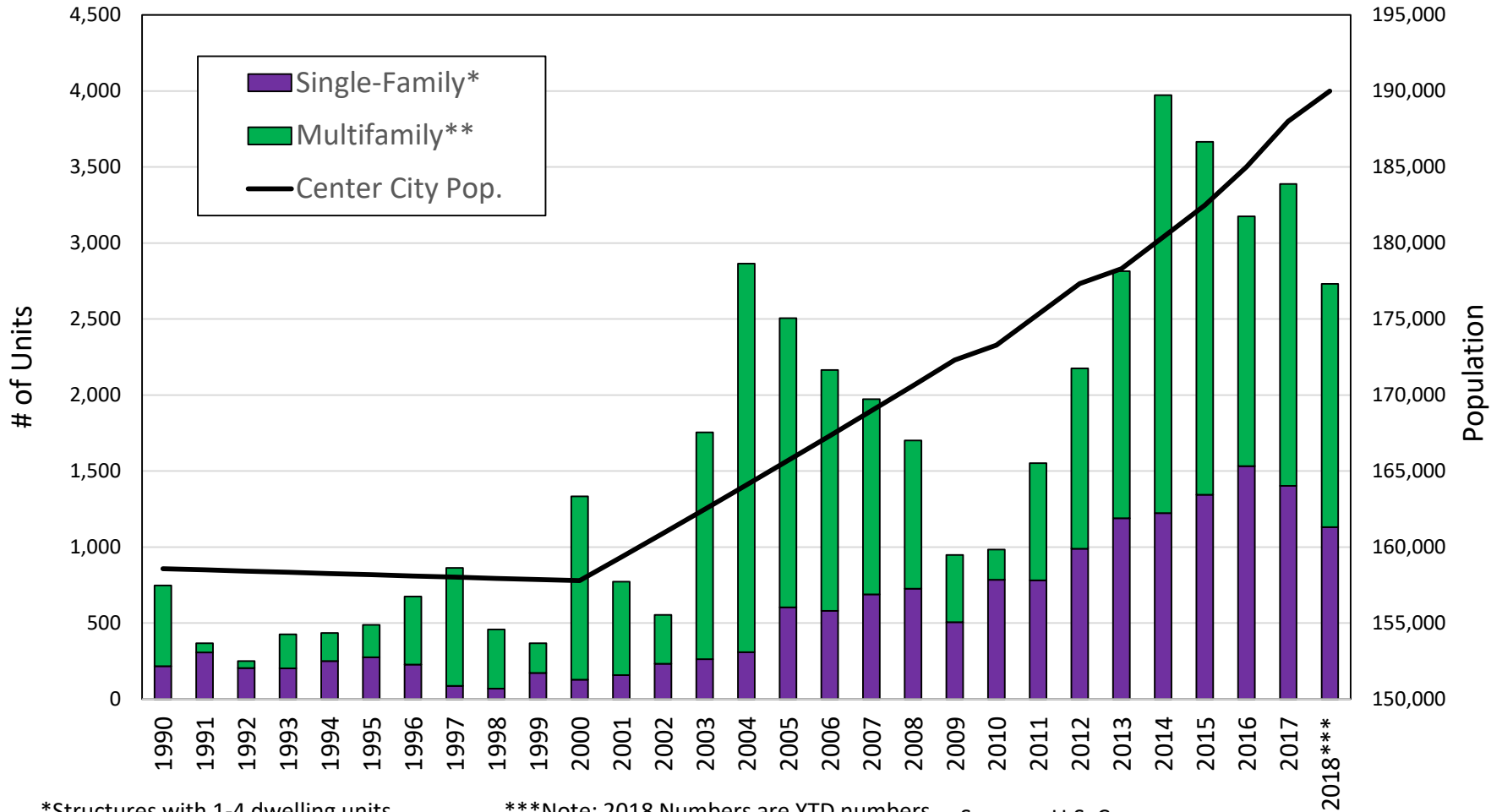


The PHLX Housing Sector Index is a modified cap-weighted index composed of 20 companies whose primary lines of business are directly associated with the U.S. housing construction market. The index composition encompasses residential builders, suppliers of aggregate, lumber and other construction materials,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

Source: finance.yahoo.com



Building Permits Issued for Construction of Residential Units in Philadelphia 1990-2018: Single-Family v. Multifamily



*Structures with 1-4 dwelling units

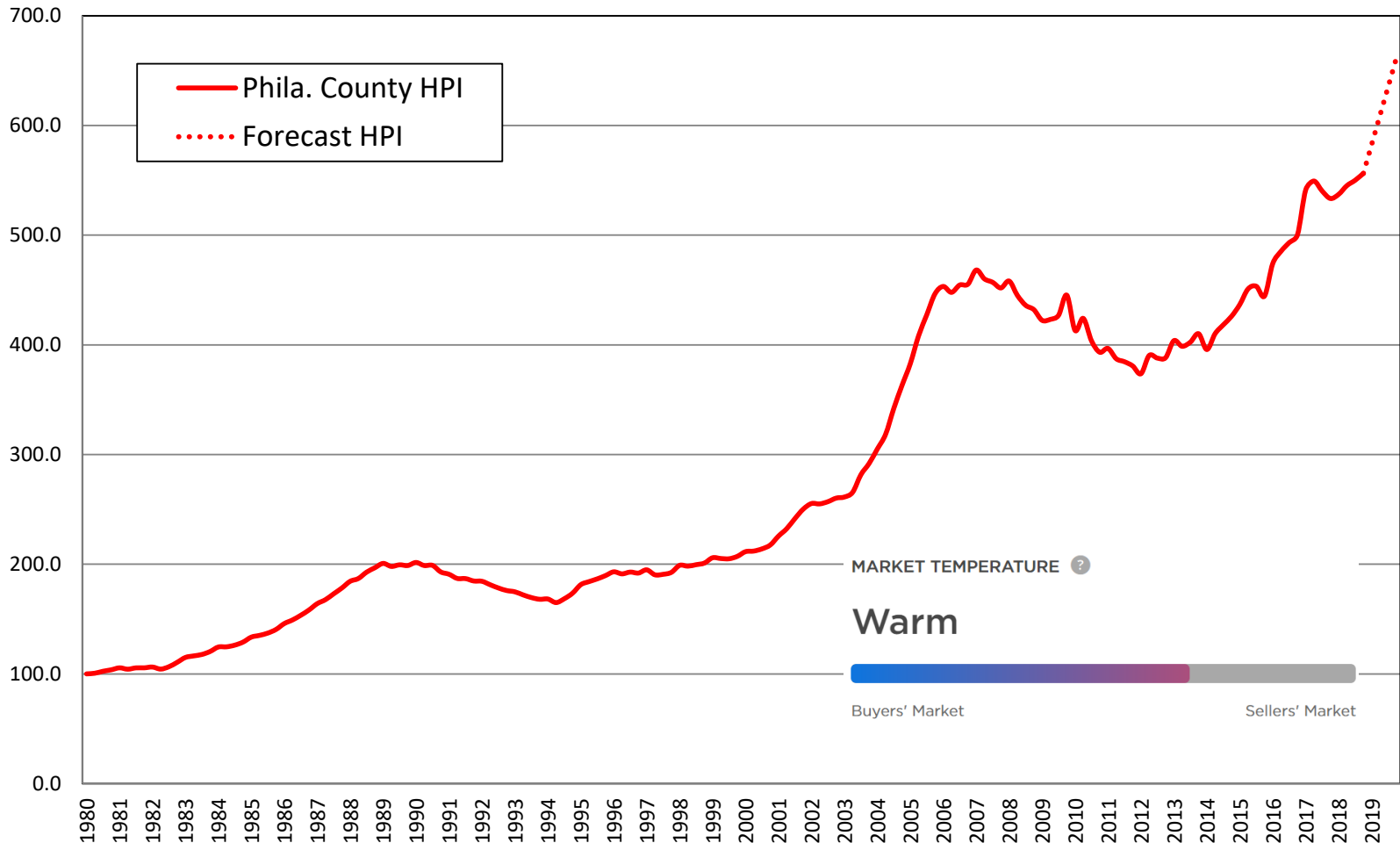
**Structures with >=5 dwelling units

***Note: 2018 Numbers are YTD numbers through October 2018.

Sources: U.S. Census, Center City District

Philadelphia House Price Index and 1-Year Forecast

Philadelphia House Price Index: Actual v. Forecast



Zillow.com is currently forecasting Philadelphia house prices to rise an average of 17.3% over the course of the next twelve months. This is a significant upgrade from its previous forecast of 12.8% made three months ago. Curiously, Zillow also downgraded its rating of Philadelphia's housing market temperature from "Hot" to "Warm" this past month. It had also downgraded the overall level of the market's hotness three months ago, although it kept its "Hot" status.

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