

PHILADELPHIA HOUSE PRICE INDICES

April 23, 2019



DREXEL UNIVERSITY
Lindy Institute
for Urban Innovation

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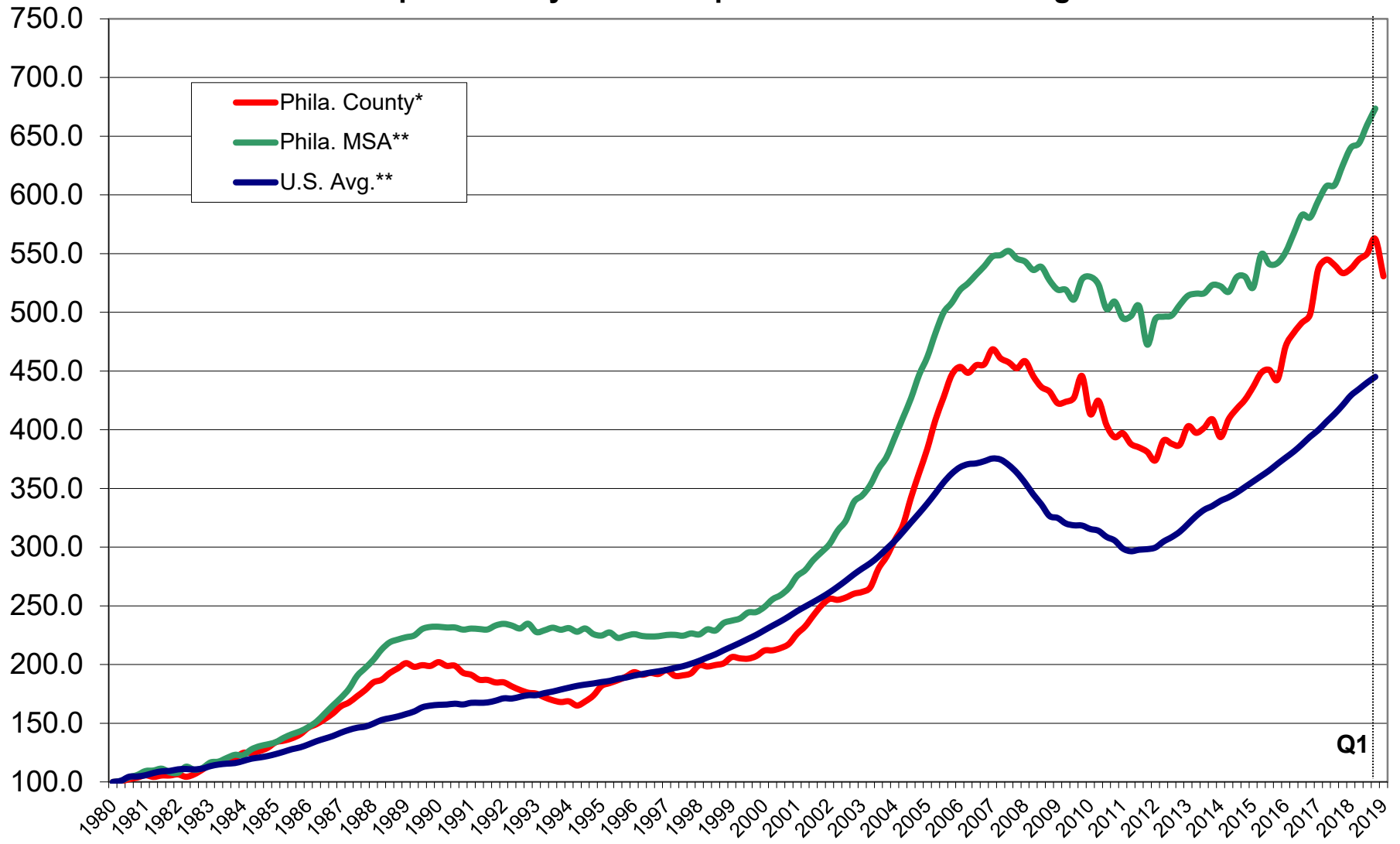
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Kevin C. Gillen Ph.D.. The author thanks Azavea.com, the Philadelphia Office 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. © 2019, Drexel University, All Rights Reserved.*



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House Price Indices 1980-2019: 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.

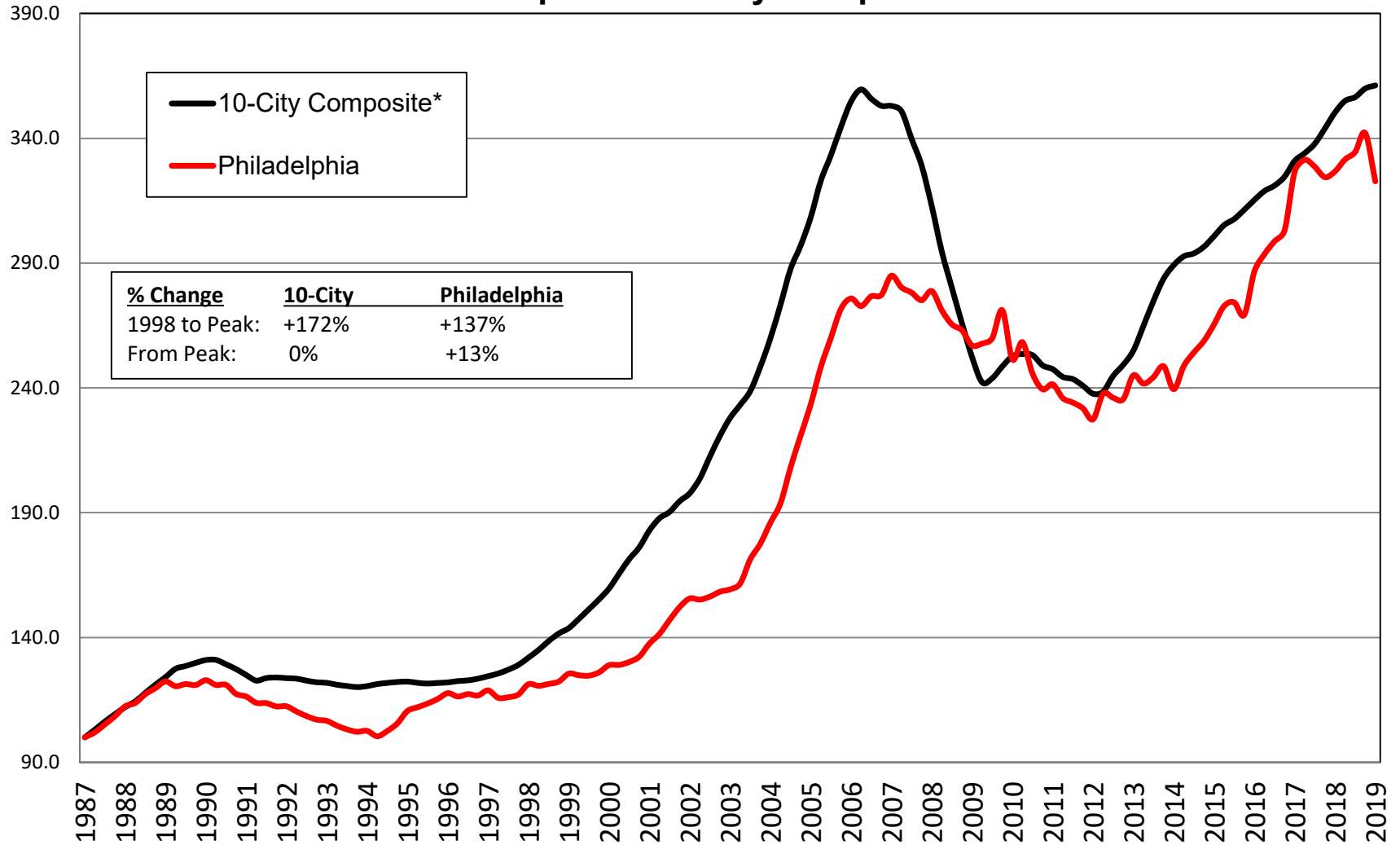
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
39-Year	430.6%	559.7%	340.2%
10-Year	25.6%	22.5%	30.8%
1-Year	-1.2%	8.4%	6.5%
1-Quarter	-5.7%	2.4%	1.3%

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

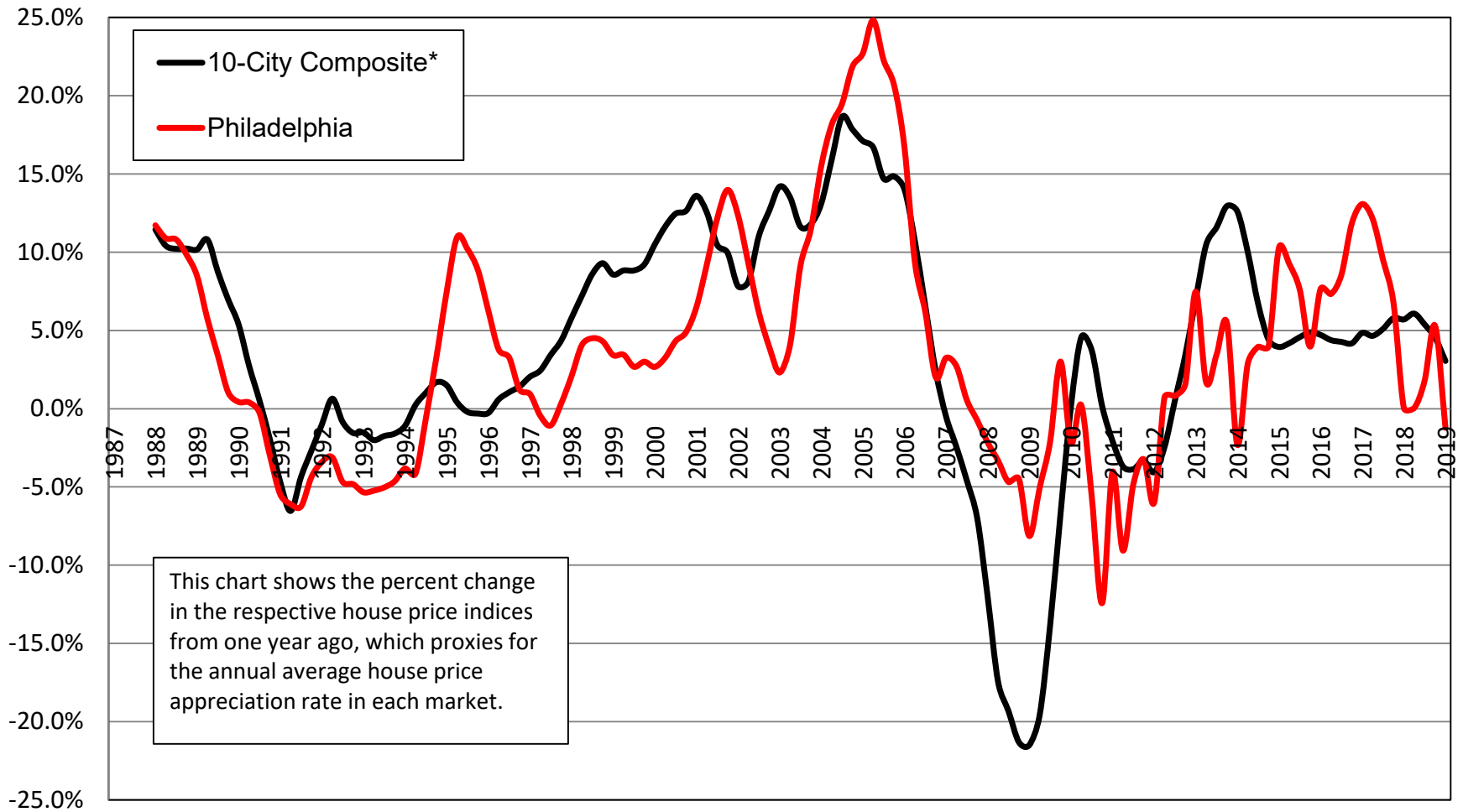
**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2018Q4 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

House Price Appreciation 1987-2019: 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 (%) 1987-2019: Philadelphia v. 10-City Composite

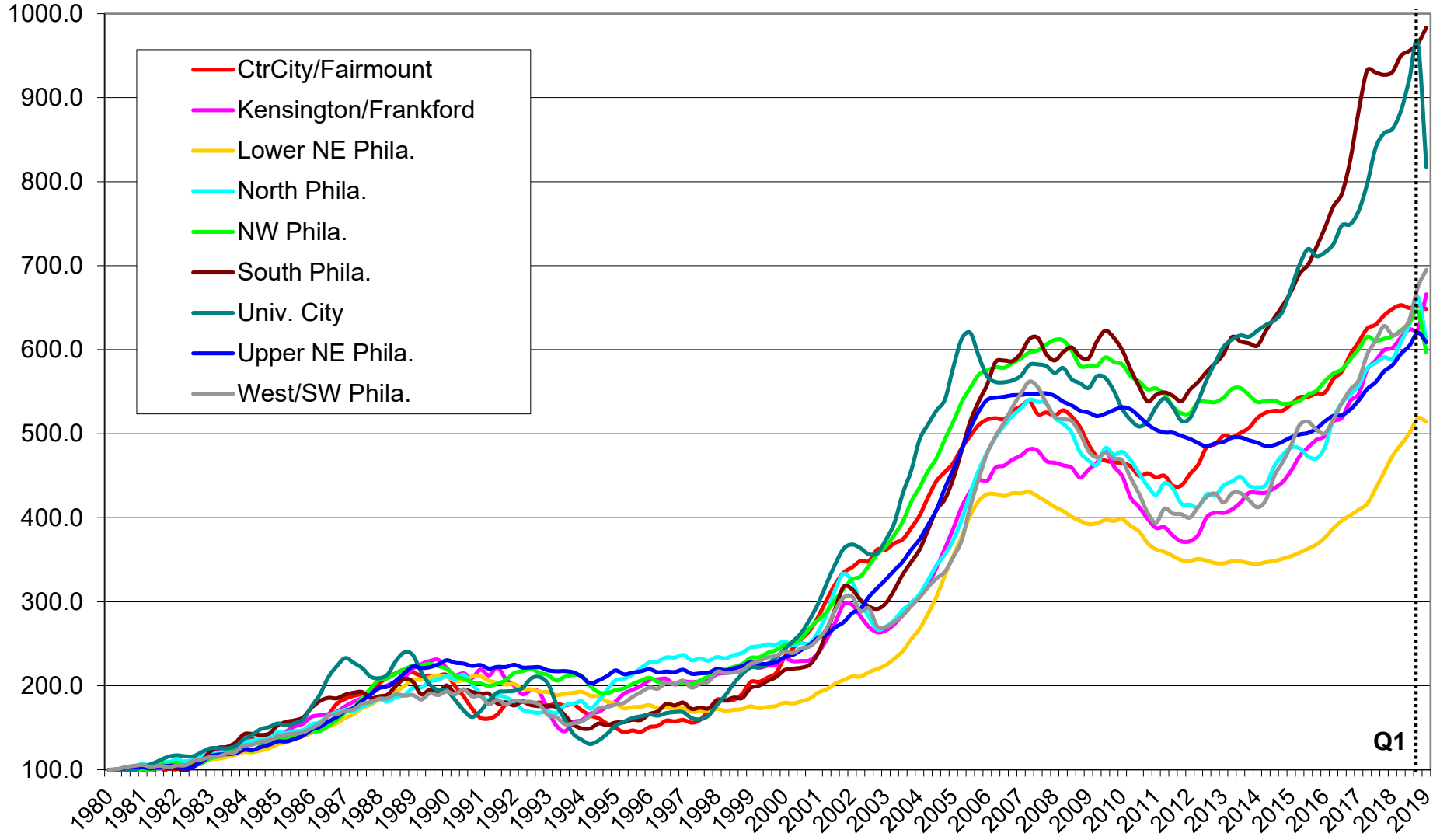


This chart shows the percent change in the respective house price indices from one year ago, which proxies for the annual average house price appreciation rate in each market.

*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: 1980-2019

1980Q1=100



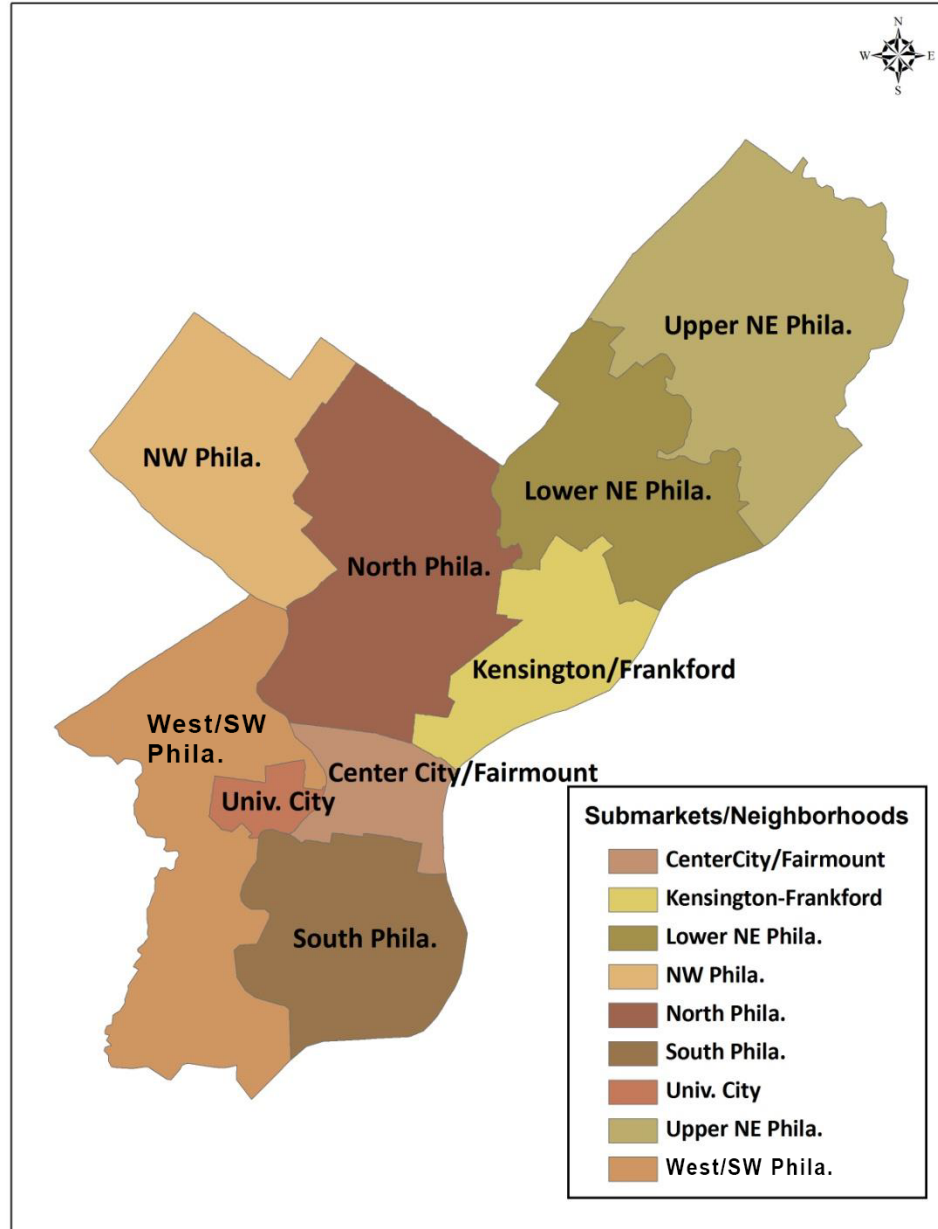
* All indices empirically estimated by Kevin C. Gillen, Ph.D.

Philadelphia House Price Appreciation Rates by Submarket

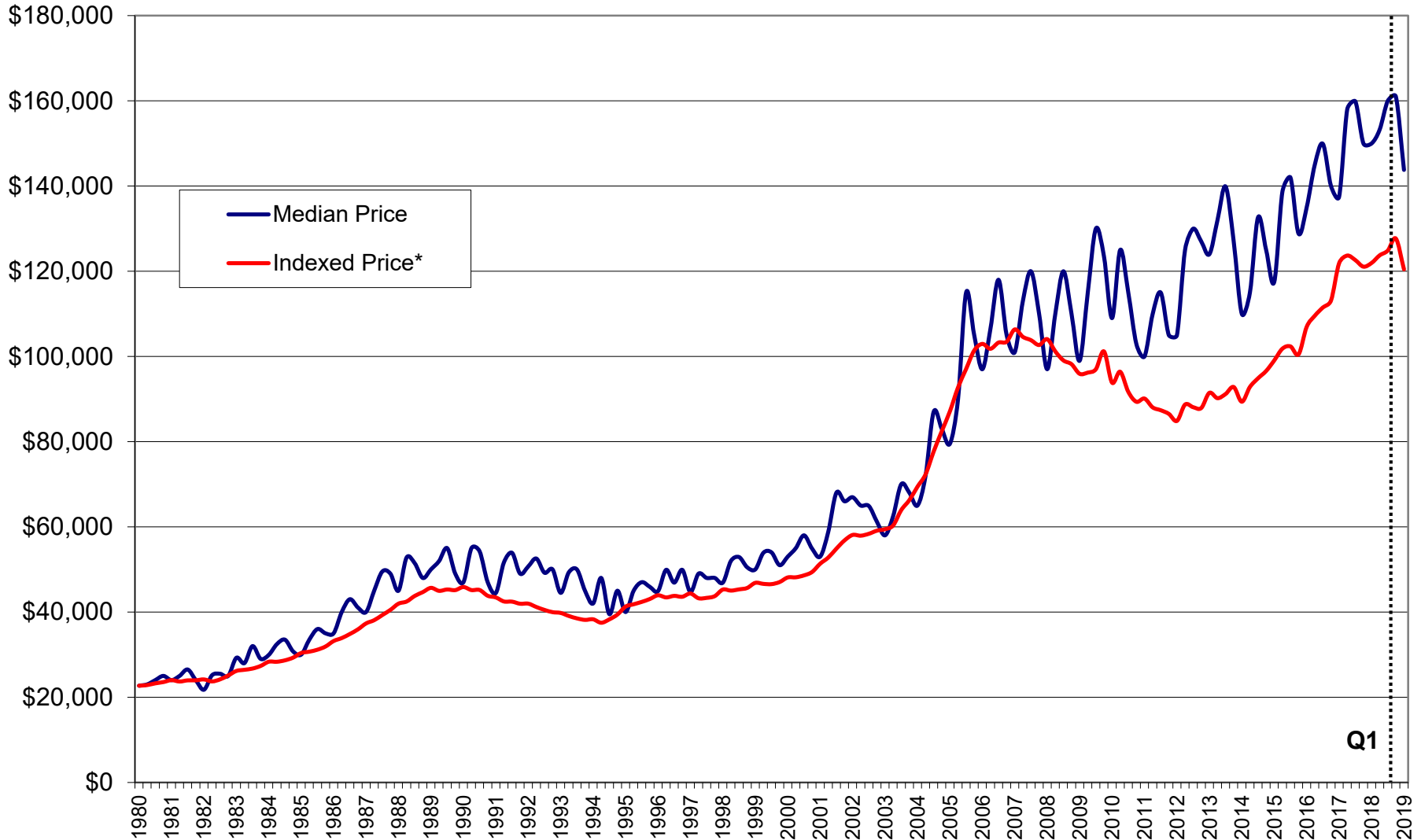
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West/ SW Phila.
39-year	548.3%	566.0%	414.3%	509.4%	496.7%	883.5%	717.5%	508.8%	595.0%
10-year	33.1%	45.7%	31.1%	30.1%	2.8%	66.8%	47.5%	15.9%	45.0%
1-Year	0.0%	10.6%	8.6%	3.4%	-3.1%	5.7%	-5.3%	4.7%	12.6%
1-Quarter	-0.6%	6.7%	-0.8%	-8.1%	-7.5%	2.0%	-15.2%	-1.8%	3.0%

This table gives the total % change in average house values by submarket, through 2019 Q1, from different starting points in time.

Philadelphia Submarket Boundaries

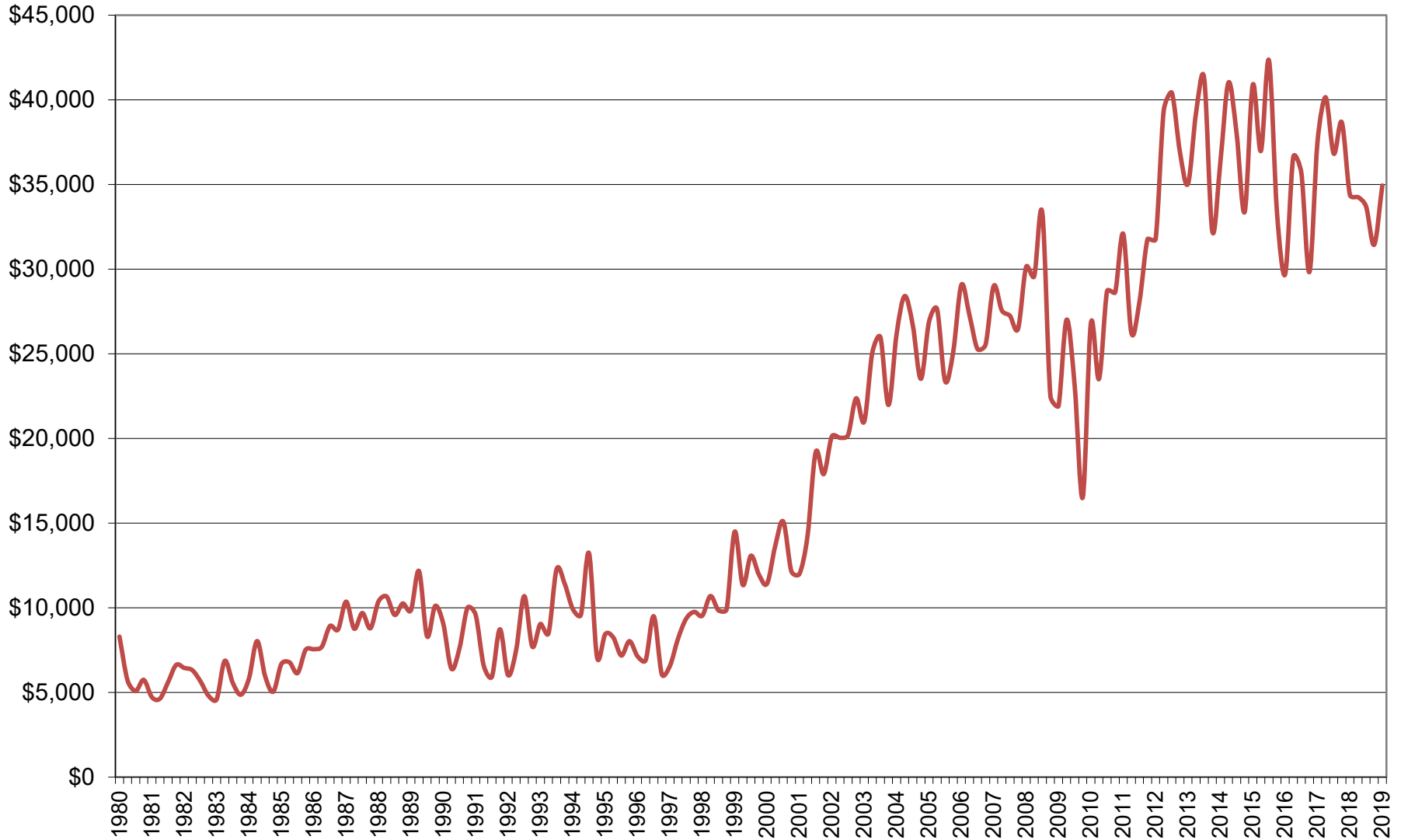


Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2019

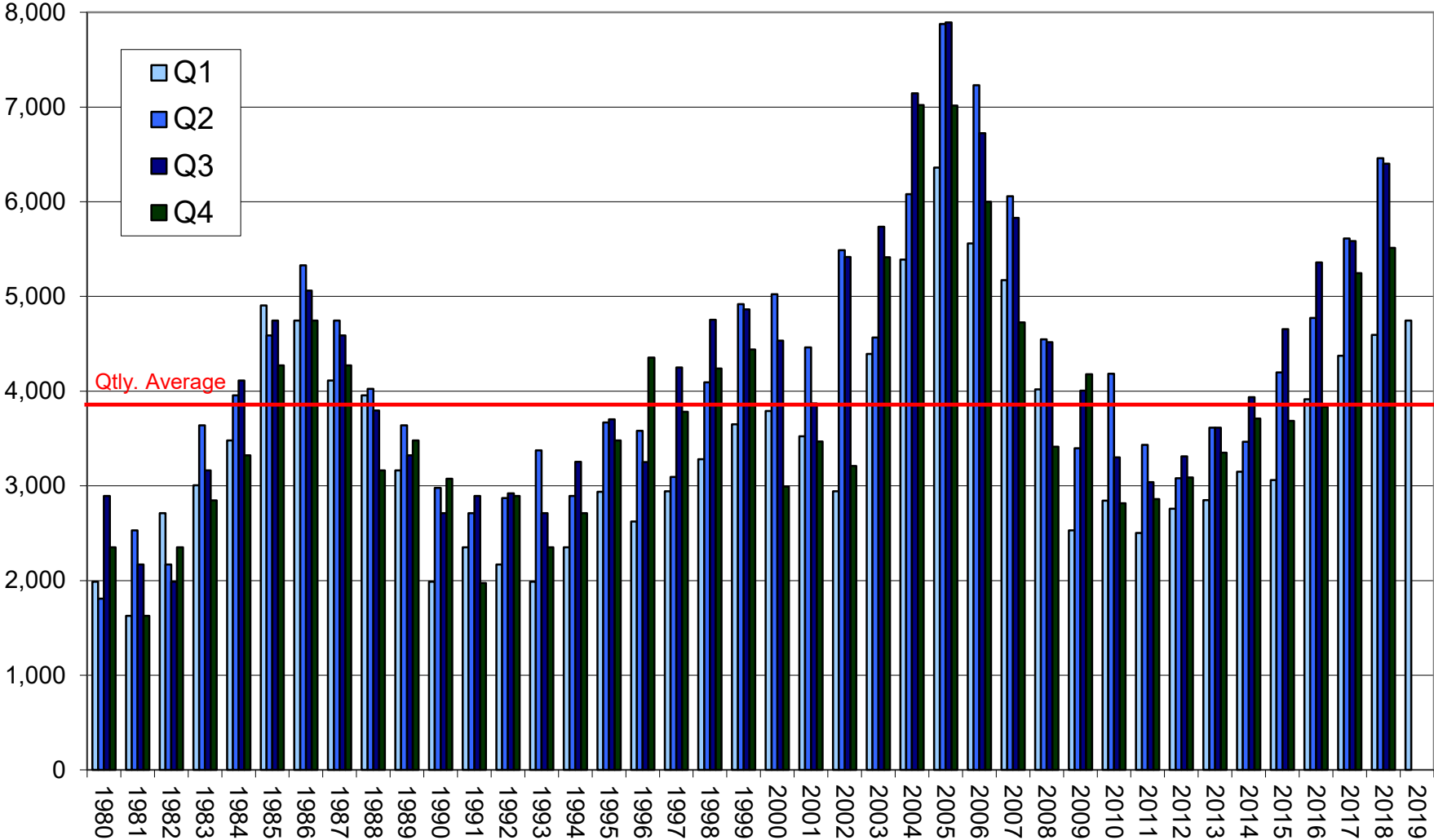


* Empirically estimated by Kevin C. Gillen, PhD

Average House Price Minus Median House Price: 1980-2019

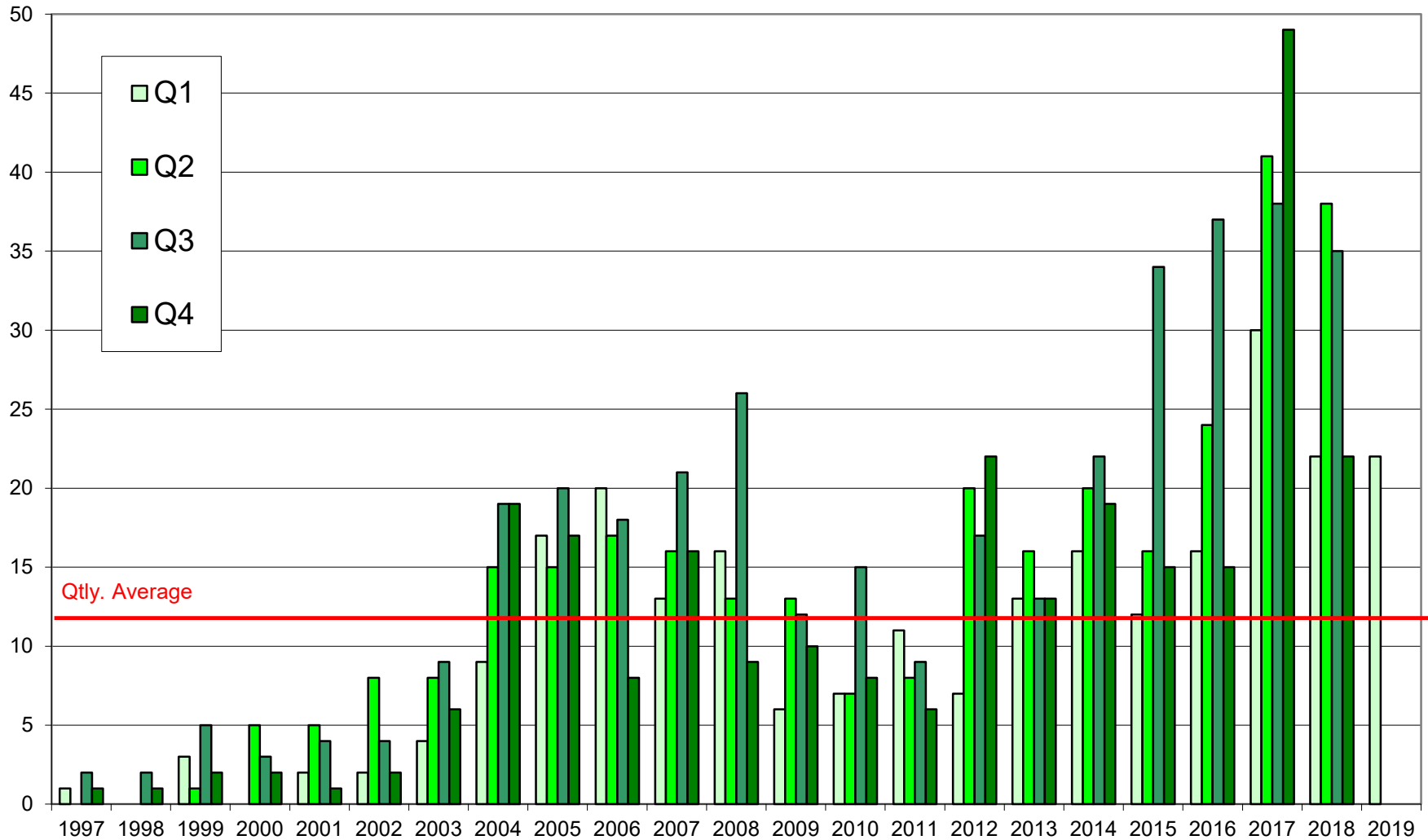


Number of Philadelphia House Sales* per Quarter: 1980-2019



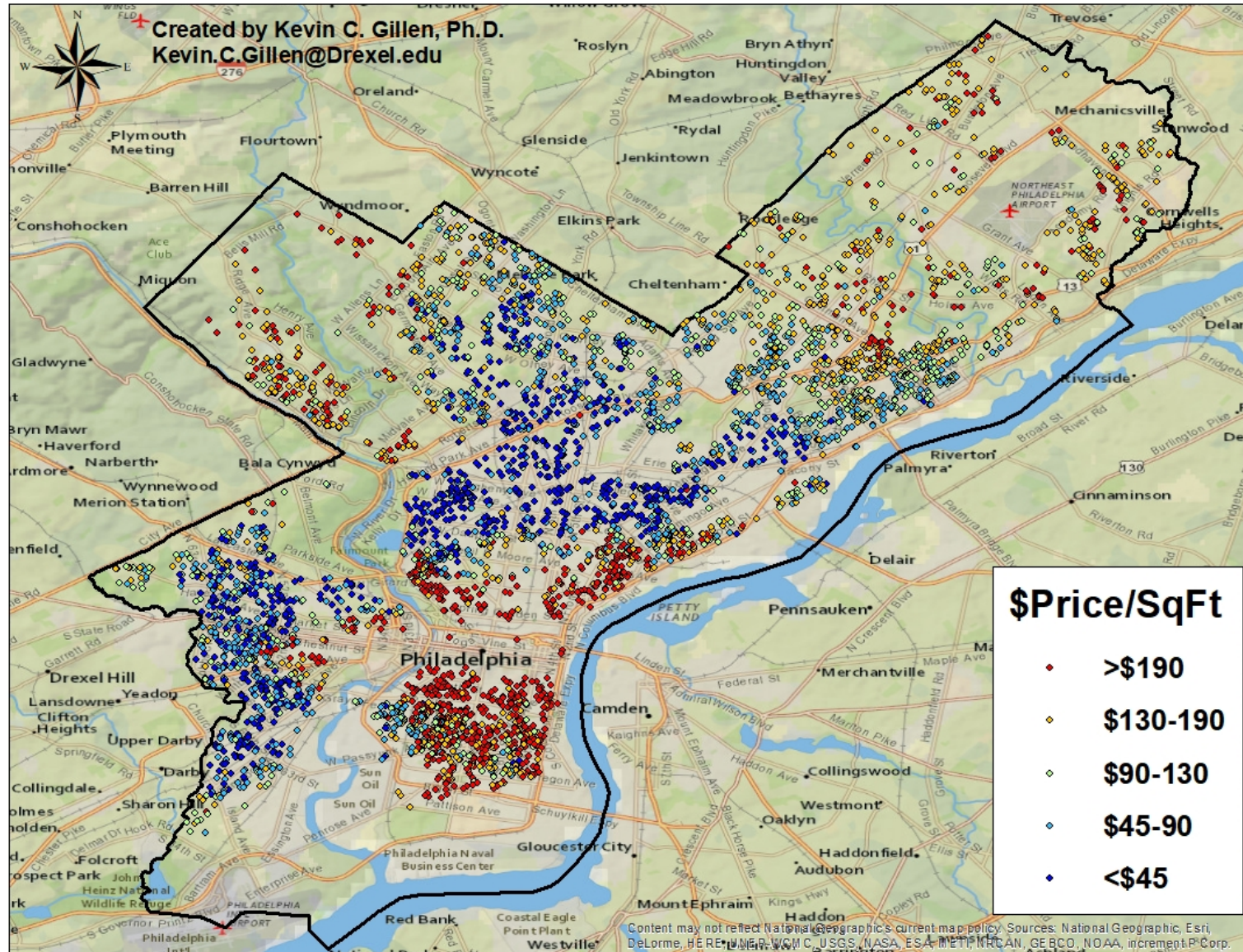
*Only arms-length transactions between private sector entities were included in these numbers.

Number of Philadelphia House Sales* per Quarter with Price >= \$1 Million: 1997-2019



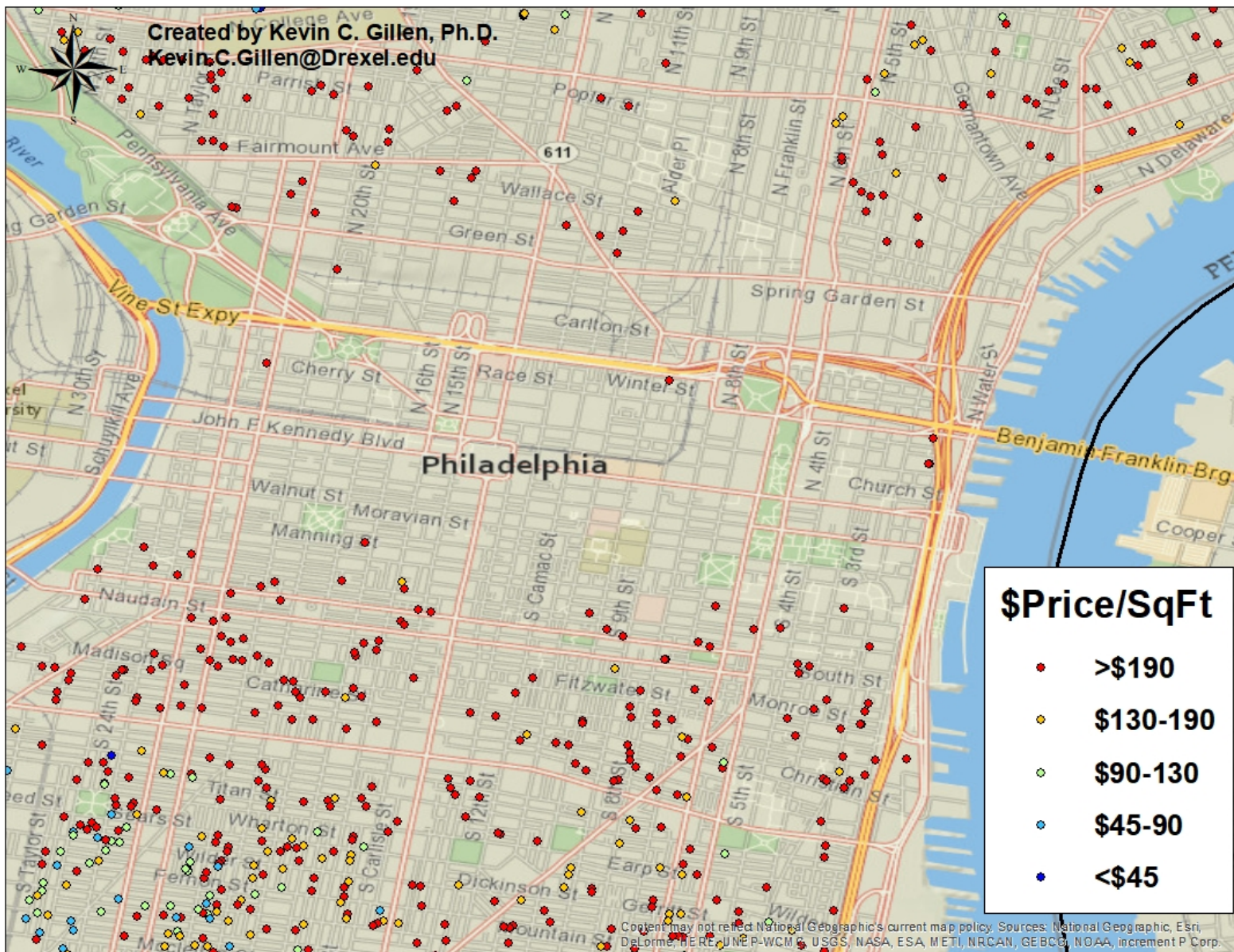
*Only arms-length transactions between private sector entities were included in these numbers.

Philadelphia House Sales in 2019 Q1

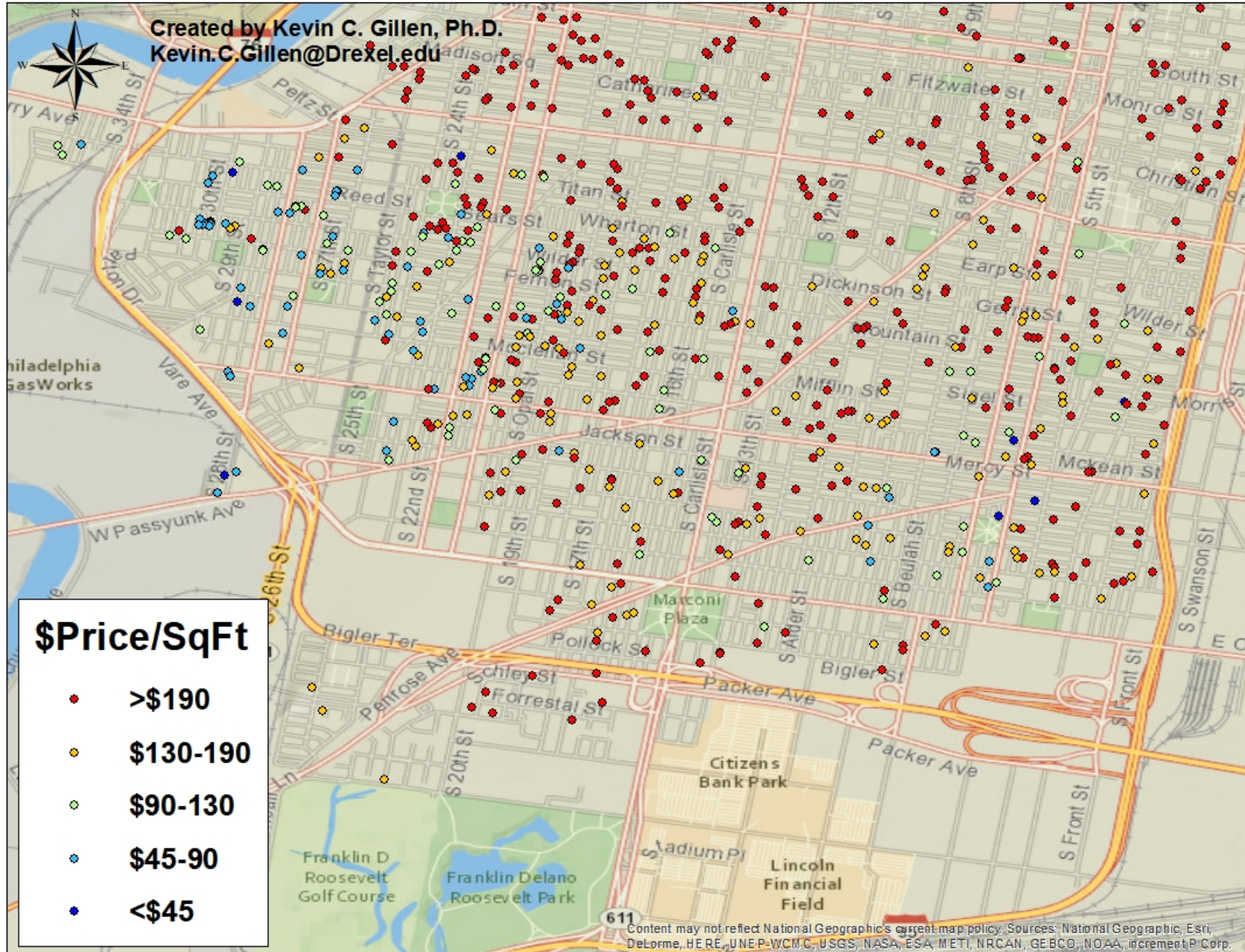


Note: Sales are color-coded by the quintiles of the distribution of \$Price/SqFt. Hence, each of the five categories covers exactly 20% of all sales.

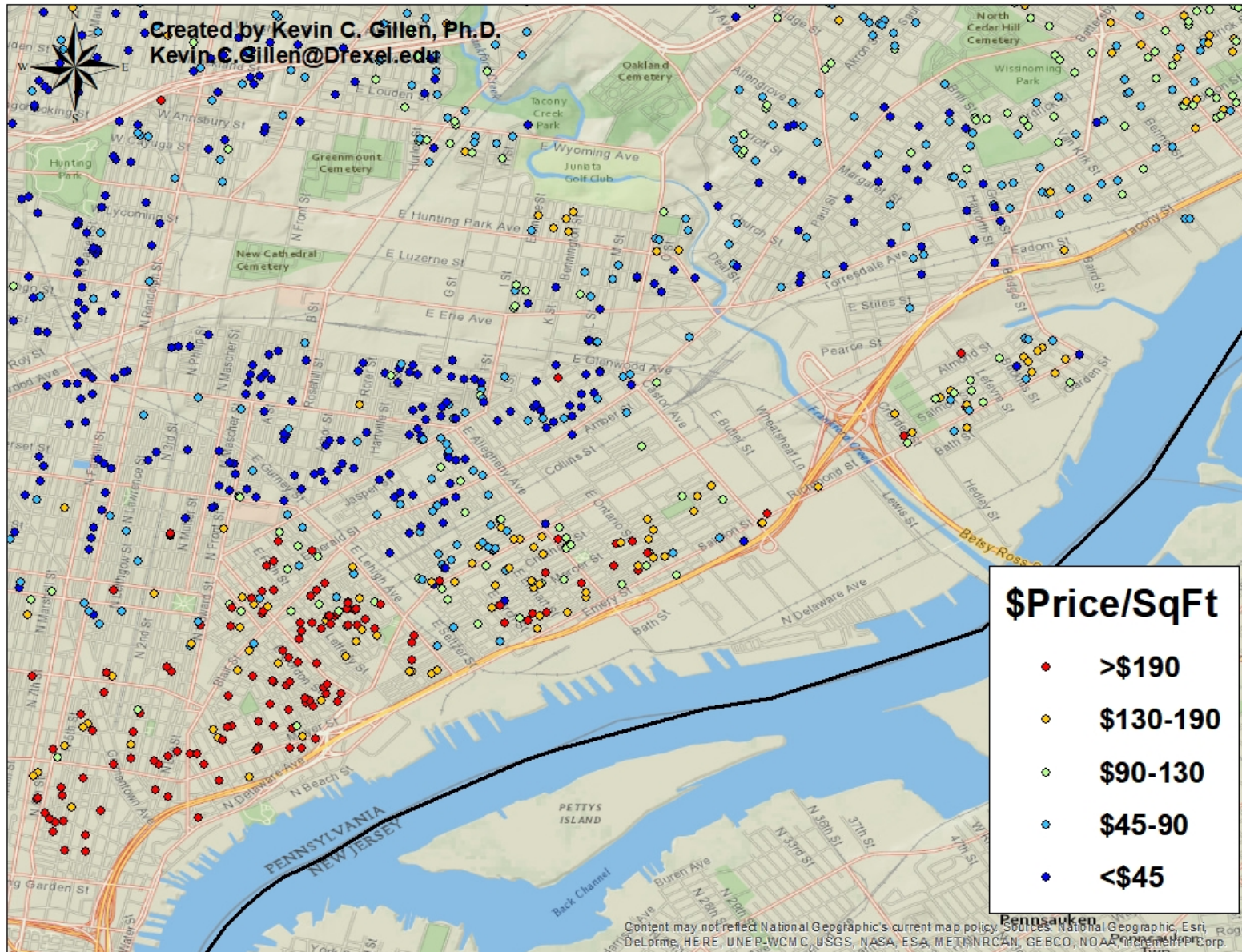
Center City House Sales in 2019 Q1



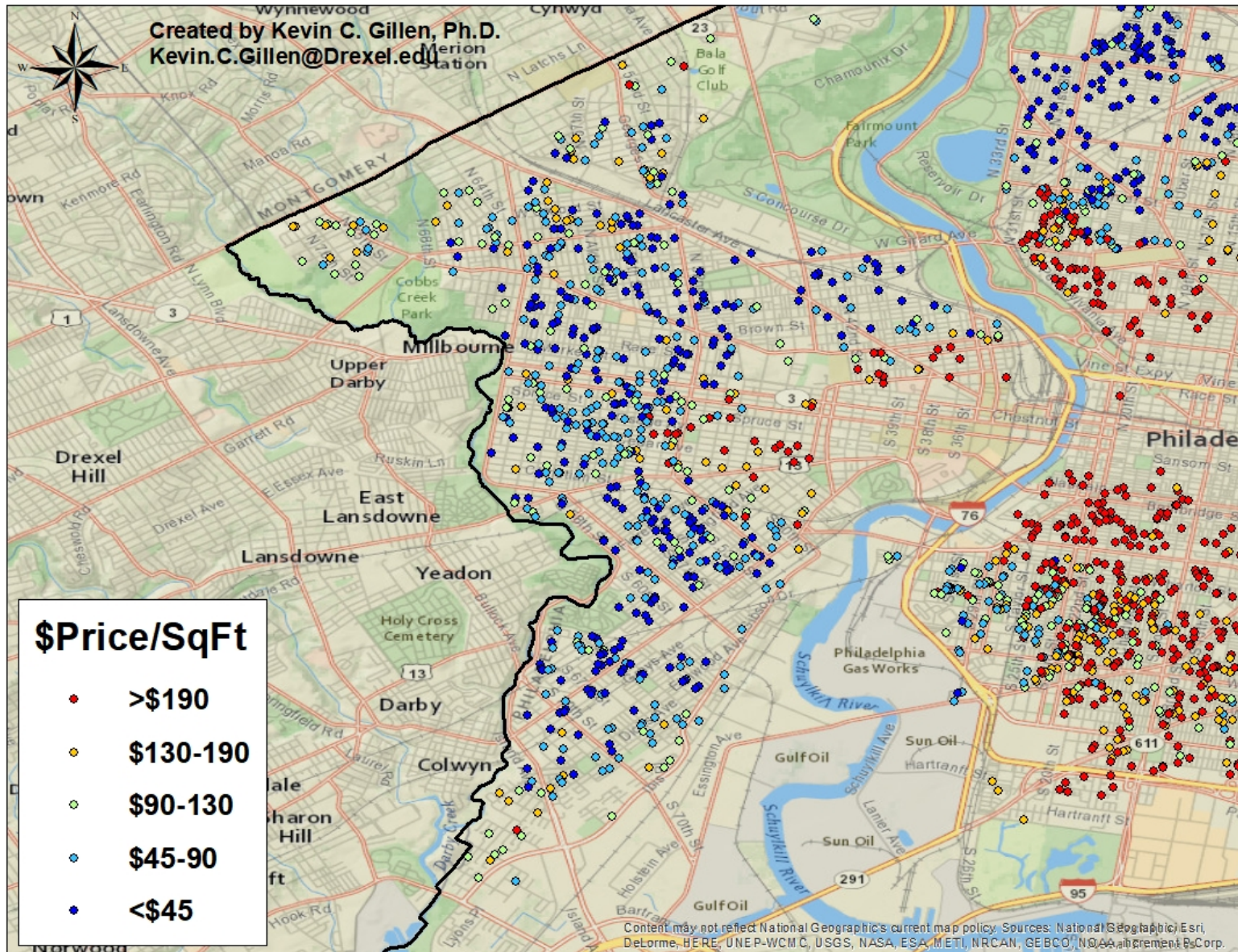
South Philadelphia House Sales in 2019 Q1



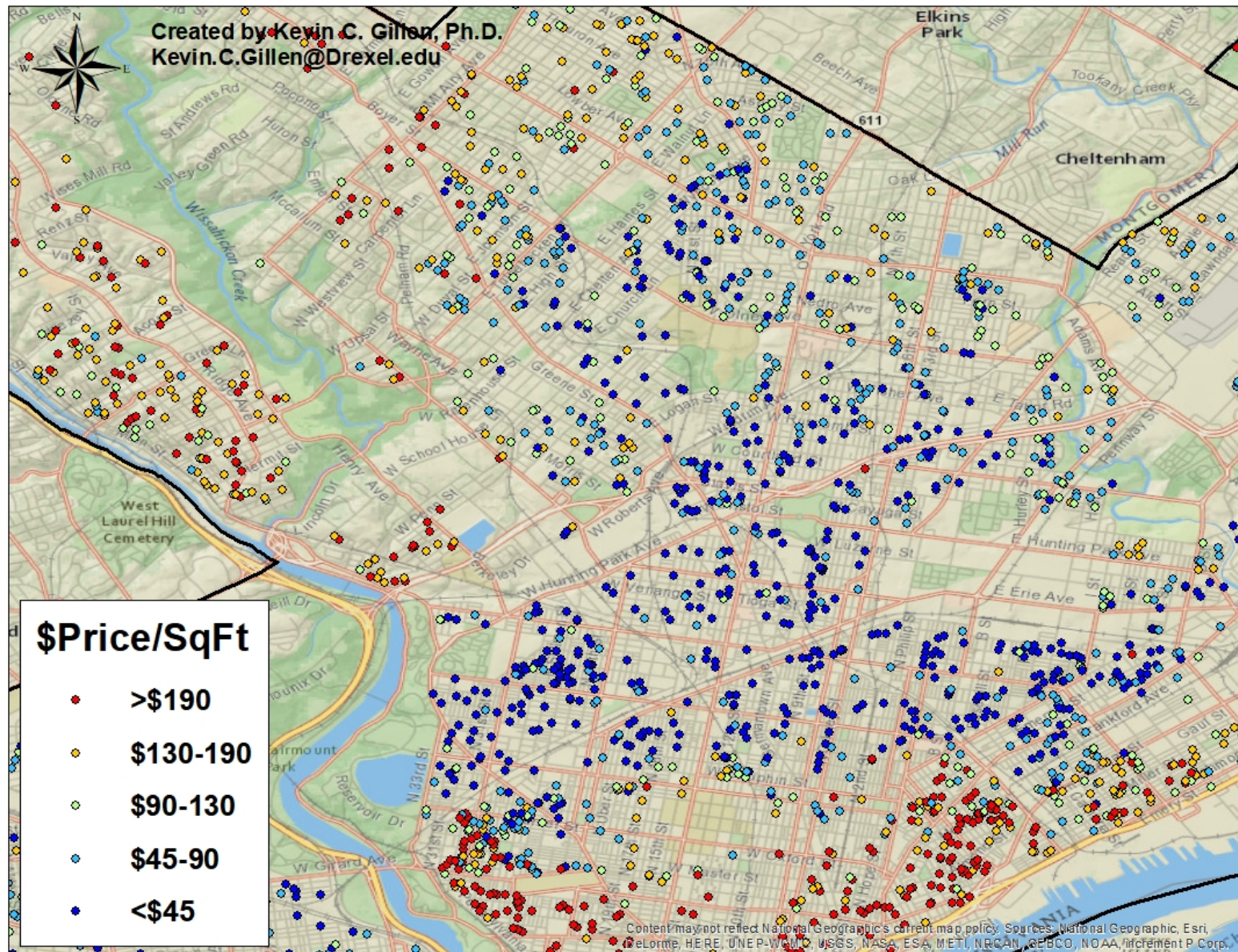
Kensington/Frankford House Sales in 2019 Q1



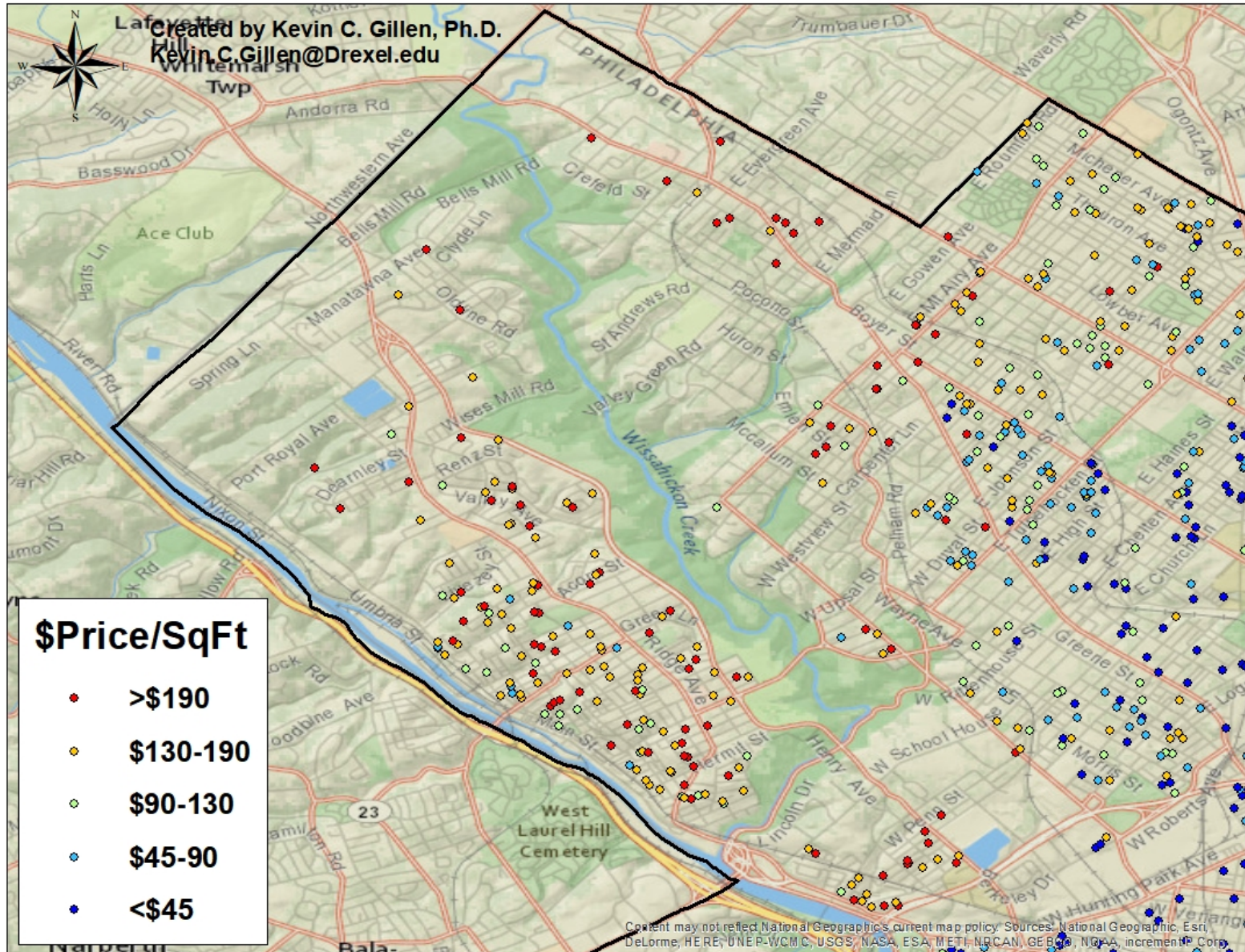
West/SW Philadelphia House Sales in 2019 Q1



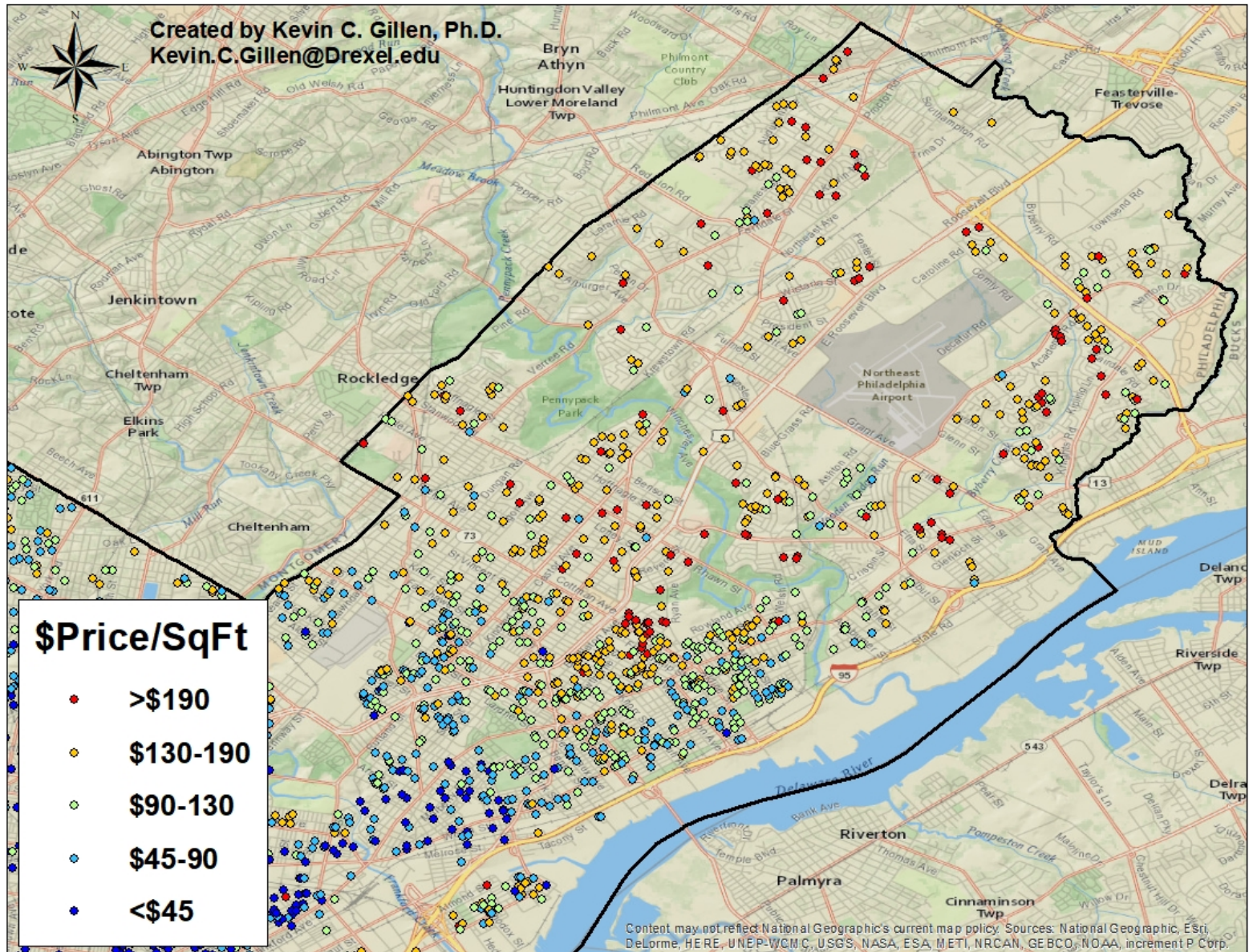
North Philadelphia House Sales in 2019 Q1



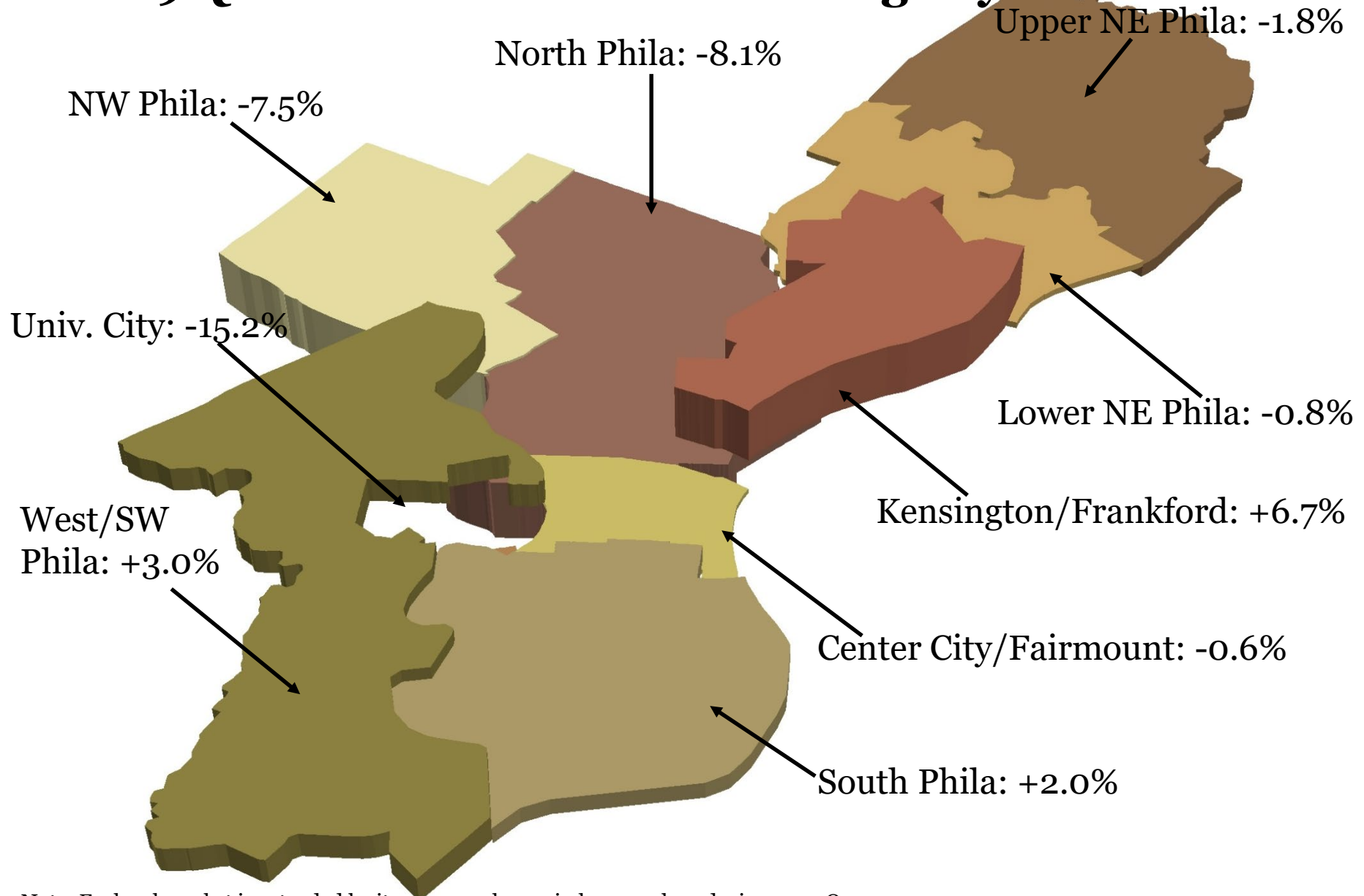
Northwest Philadelphia House Sales in 2019 Q1



Northeast Philadelphia House Sales in 2019 Q1



2019 Q1 House Price Rate of Change by Submarket



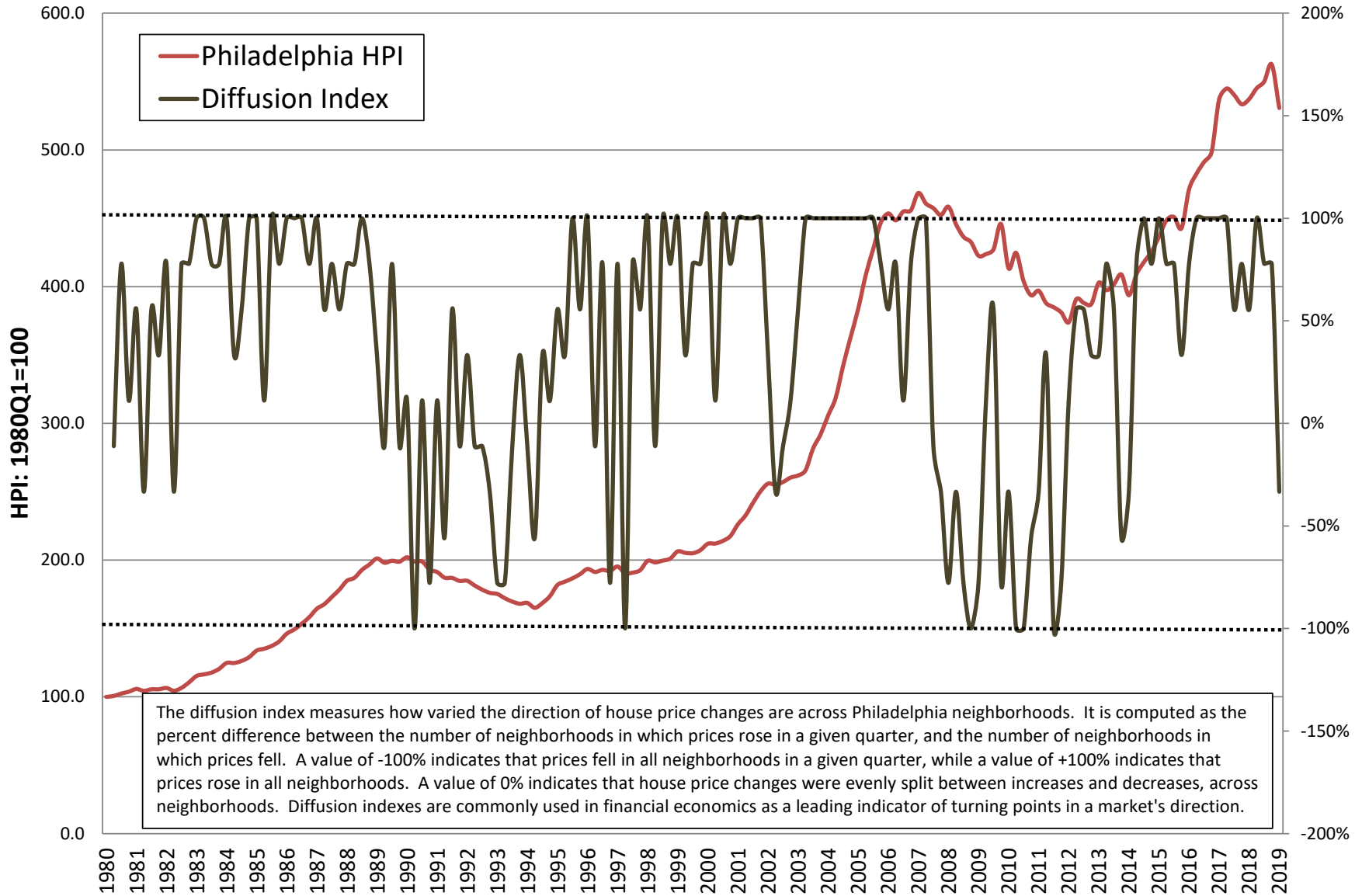
Note: Each submarket is extruded by its average change in house values during 2019 Q1 in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

+ \$1 Million Dollar House Sales in 2019 Q1



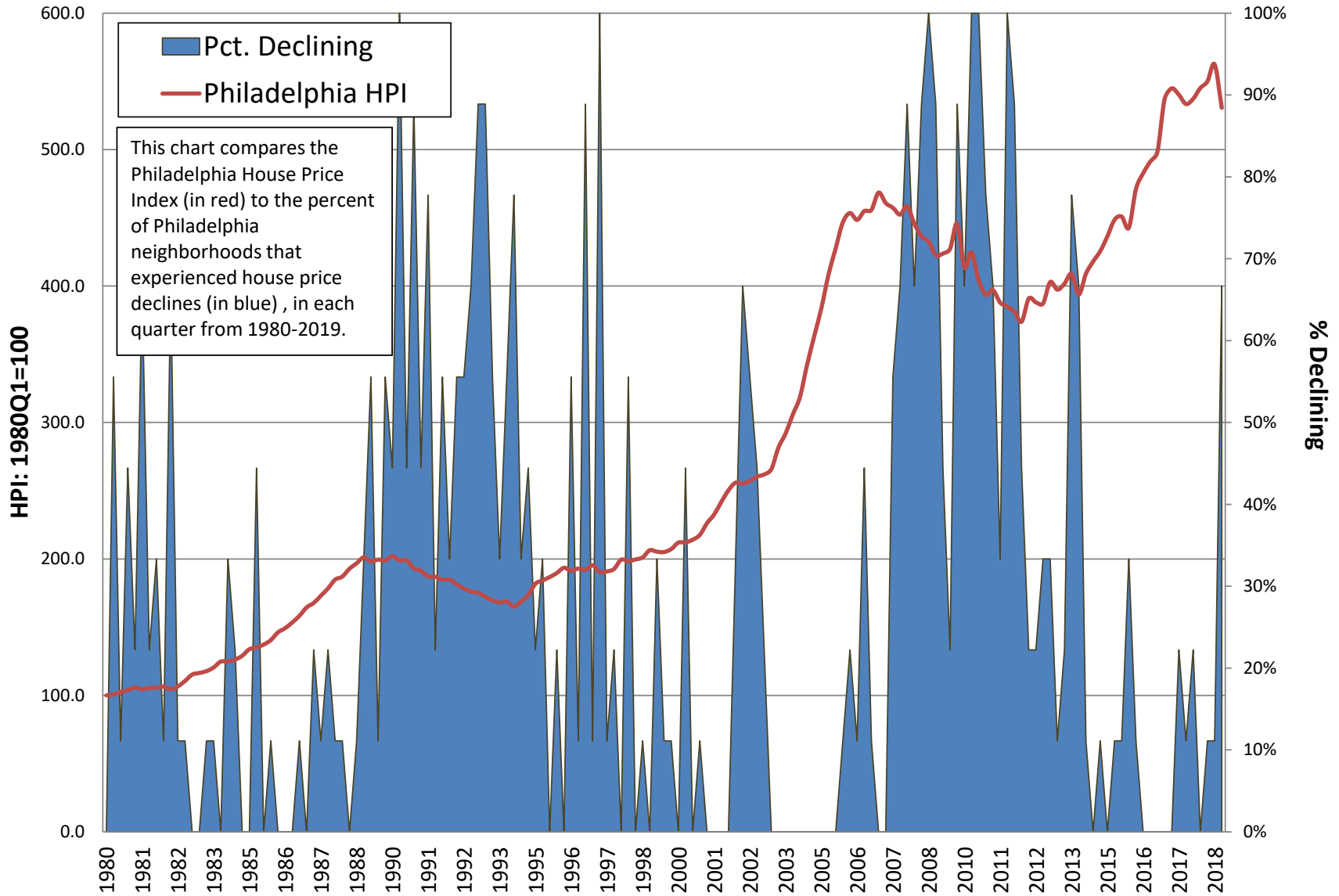
PRICE	ADDRESS
\$1,000,000	246 LOCUST ST
\$1,000,000	1703 RITTENHOUSE SQ
\$1,050,000	9011 CREFELD ST
\$1,100,000	834 S 02ND ST
\$1,149,995	3213 HAVERFORD AVE
\$1,150,000	2125 GREEN ST
\$1,200,000	8124 SAINT MARTINS LN
\$1,225,000	120 BAINBRIDG ST
\$1,271,000	115 W CHESTNUT AVE
\$1,345,000	2330 PINE ST
\$1,386,000	1930 PINE ST
\$1,400,000	1733 PINE ST
\$1,400,000	636 N 16TH ST
\$1,425,000	741 S 15TH ST
\$1,450,000	2050 LOMBARD ST
\$1,450,000	414 S 46TH ST
\$1,499,000	929 N HANCOCK ST
\$1,500,000	814 S 10TH ST
\$1,525,000	622 SPRUCE ST
\$1,800,000	2206 DELANCEY PL
\$1,825,000	1529 PINE ST
\$3,200,000	528 N 34TH ST

Philadelphia House Price Diffusion Index 1980-2019

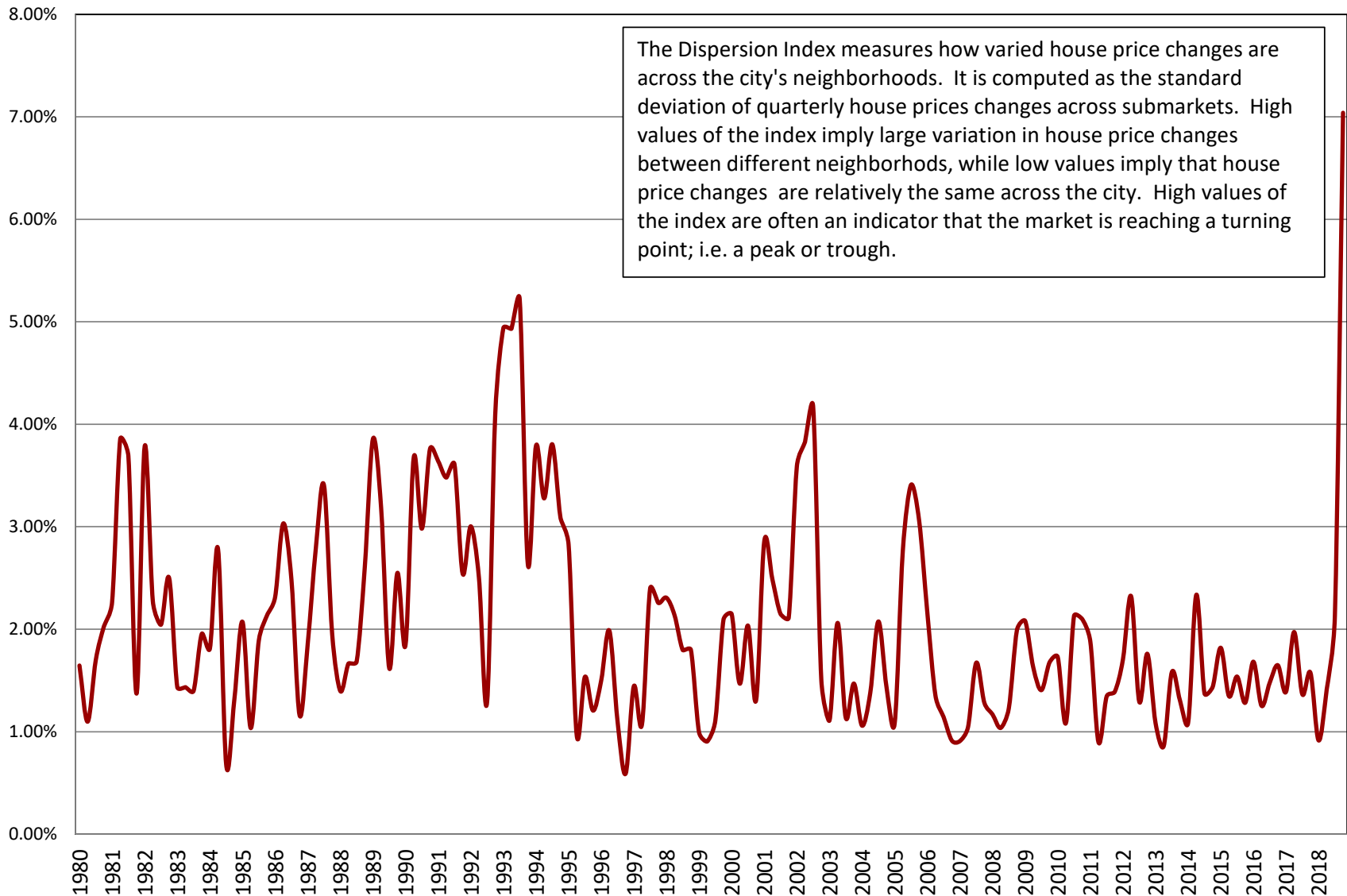


The diffusion index measures how varied the direction of house price changes are across Philadelphia neighborhoods. It is computed as the percent difference between the number of neighborhoods in which prices rose in a given quarter, and the number of neighborhoods in which prices fell. A value of -100% indicates that prices fell in all neighborhoods in a given quarter, while a value of +100% indicates that prices rose in all neighborhoods. A value of 0% indicates that house price changes were evenly split between increases and decreases, across neighborhoods. Diffusion indexes are commonly used in financial economics as a leading indicator of turning points in a market's direction.

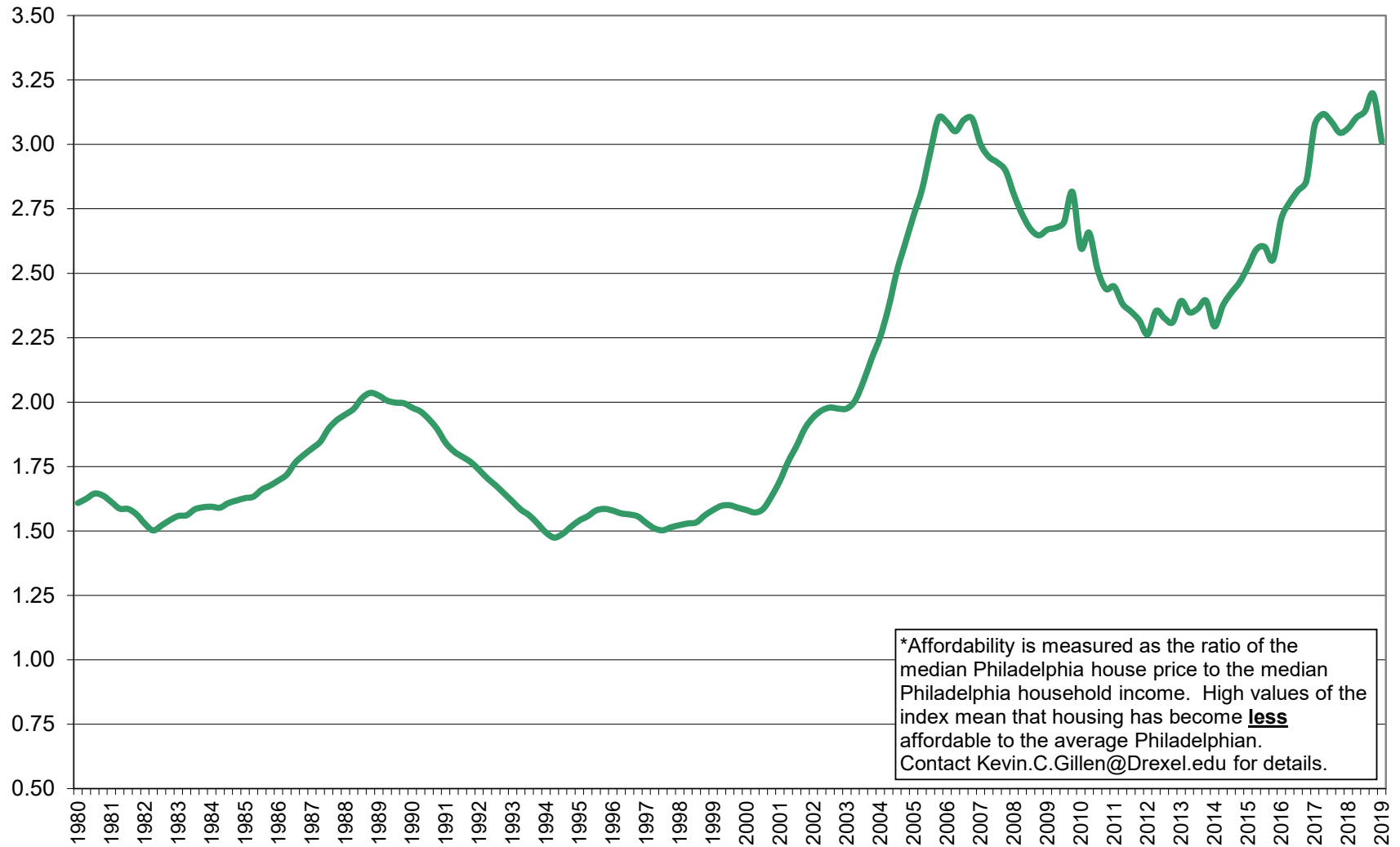
Philadelphia House Prices 1980-2019: Declines v. House Price Index



Dispersion Index of Philadelphia Housing

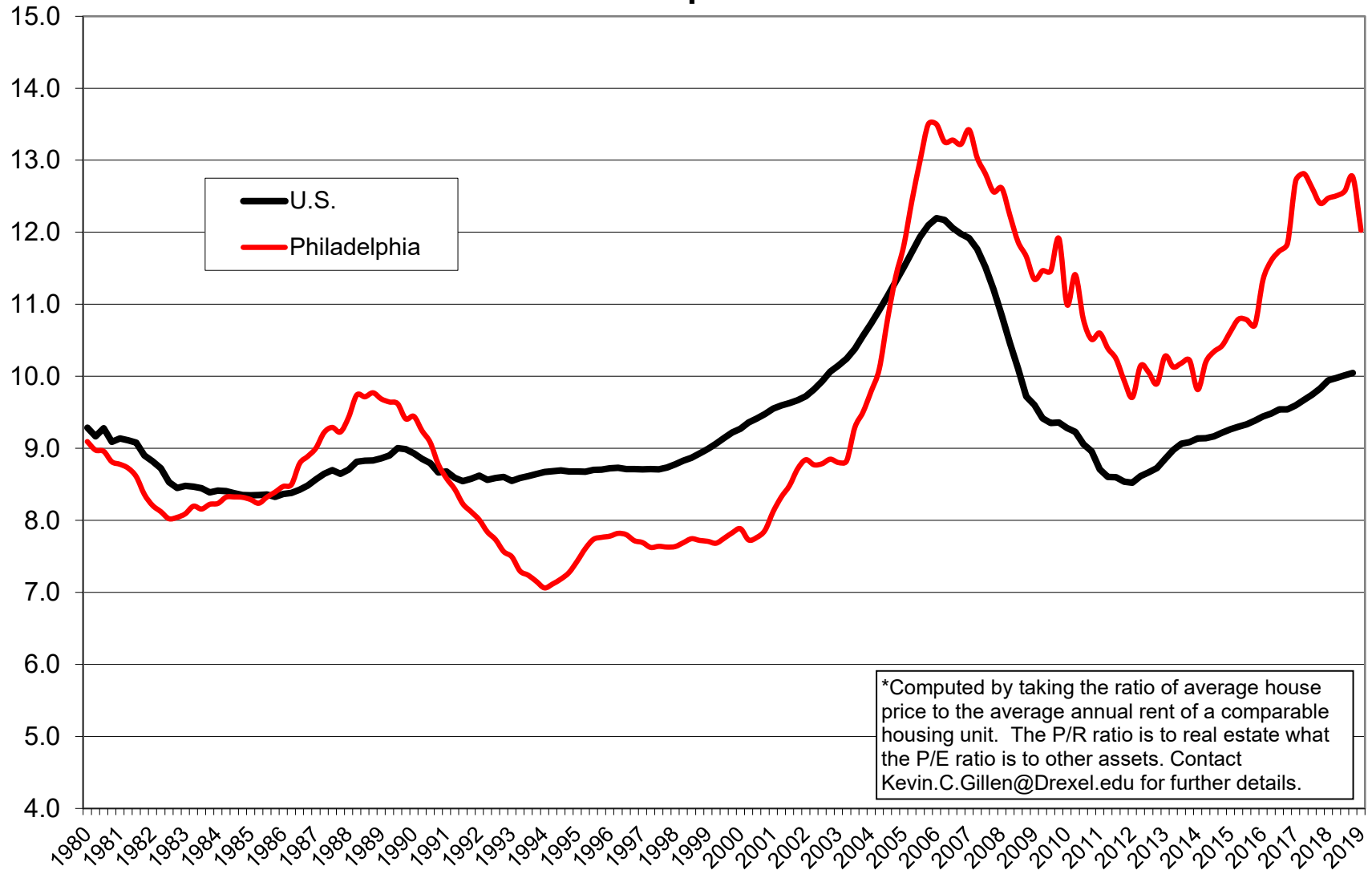


Philadelphia Housing Affordability* Index: 1980-2019



*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.

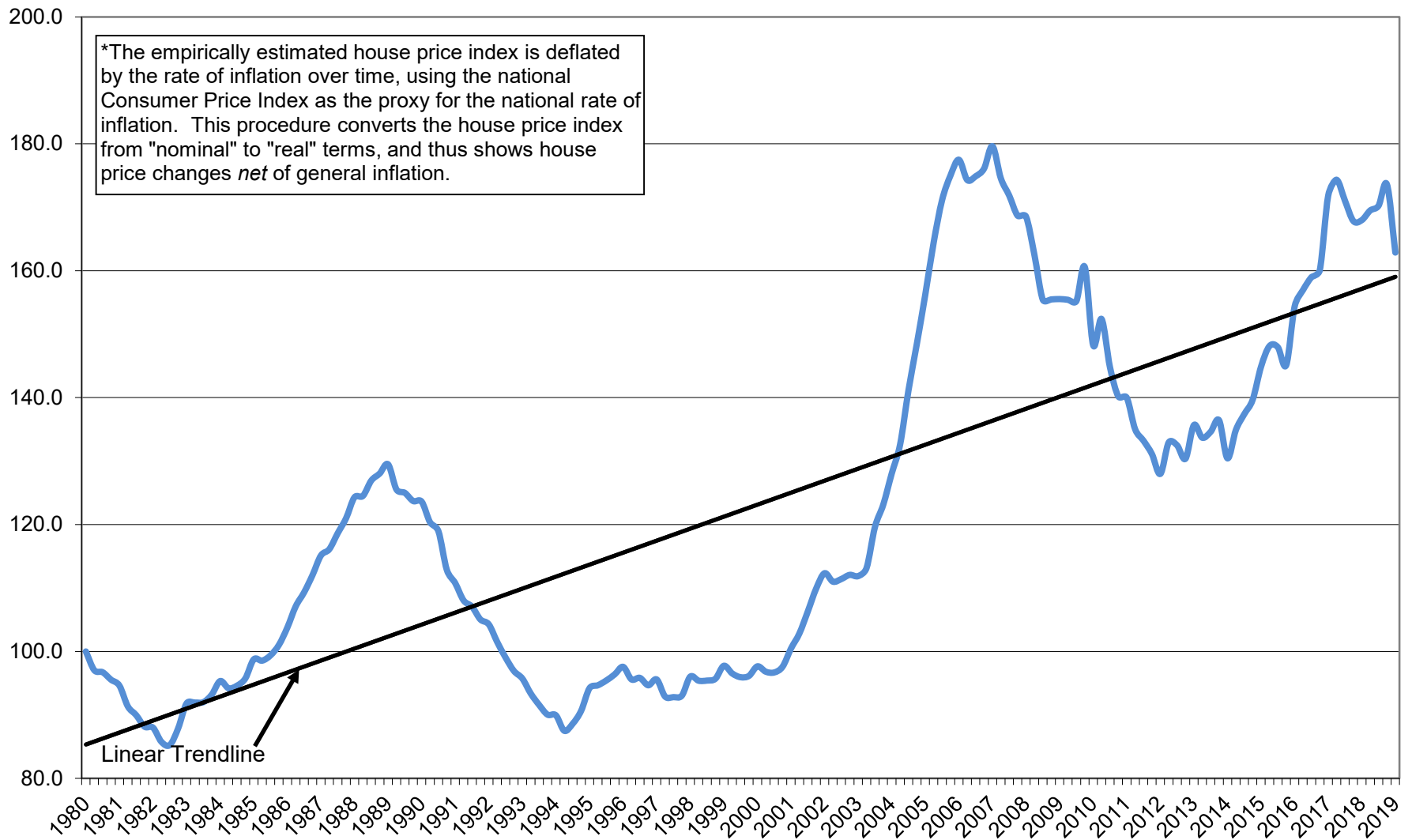
Average House Price-to-Rent Ratios*: 1980-2019 Philadelphia v. U.S.



*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.

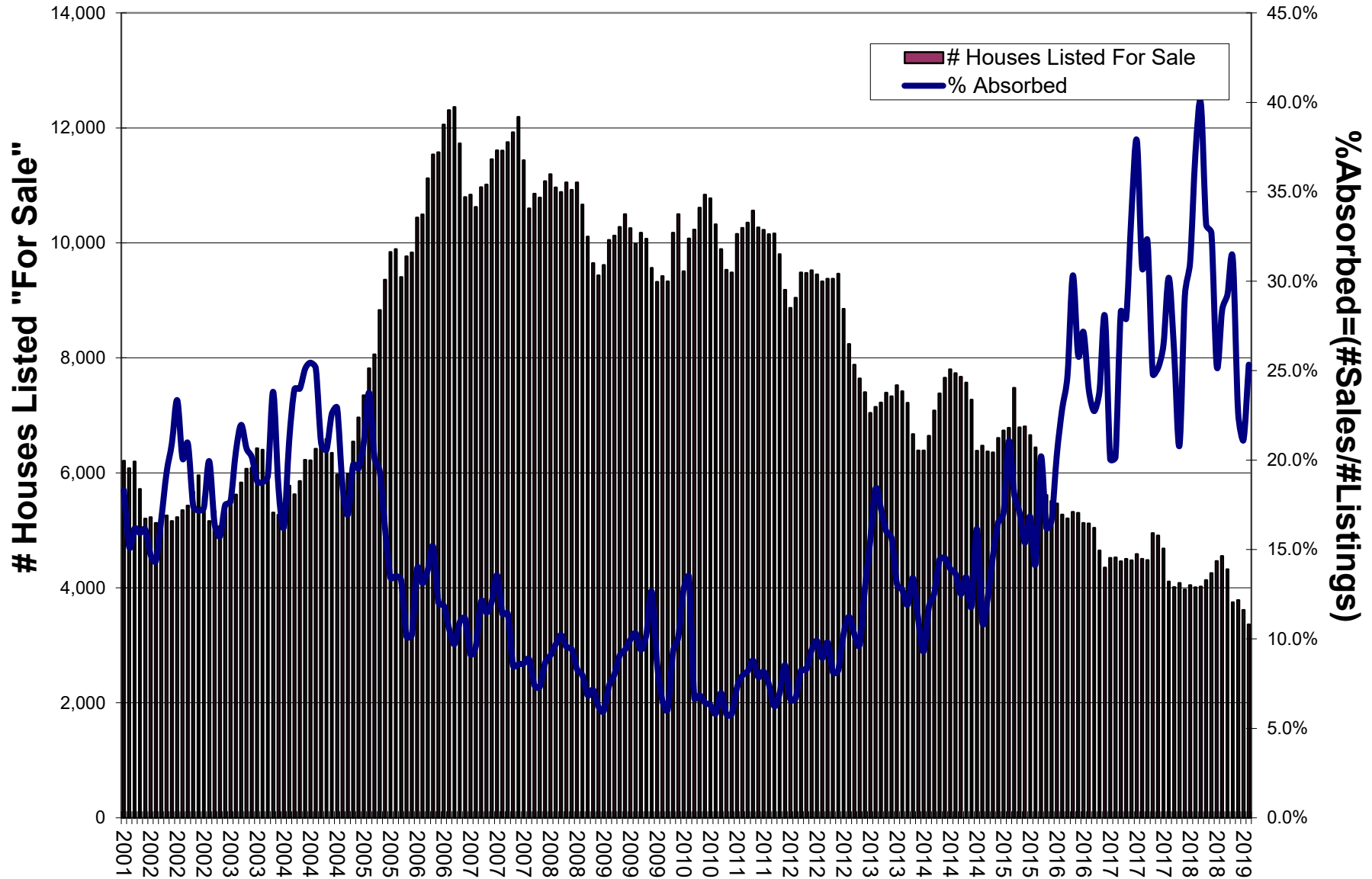
Inflation-Adjusted* Philadelphia House Price Index 1980-2019

1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

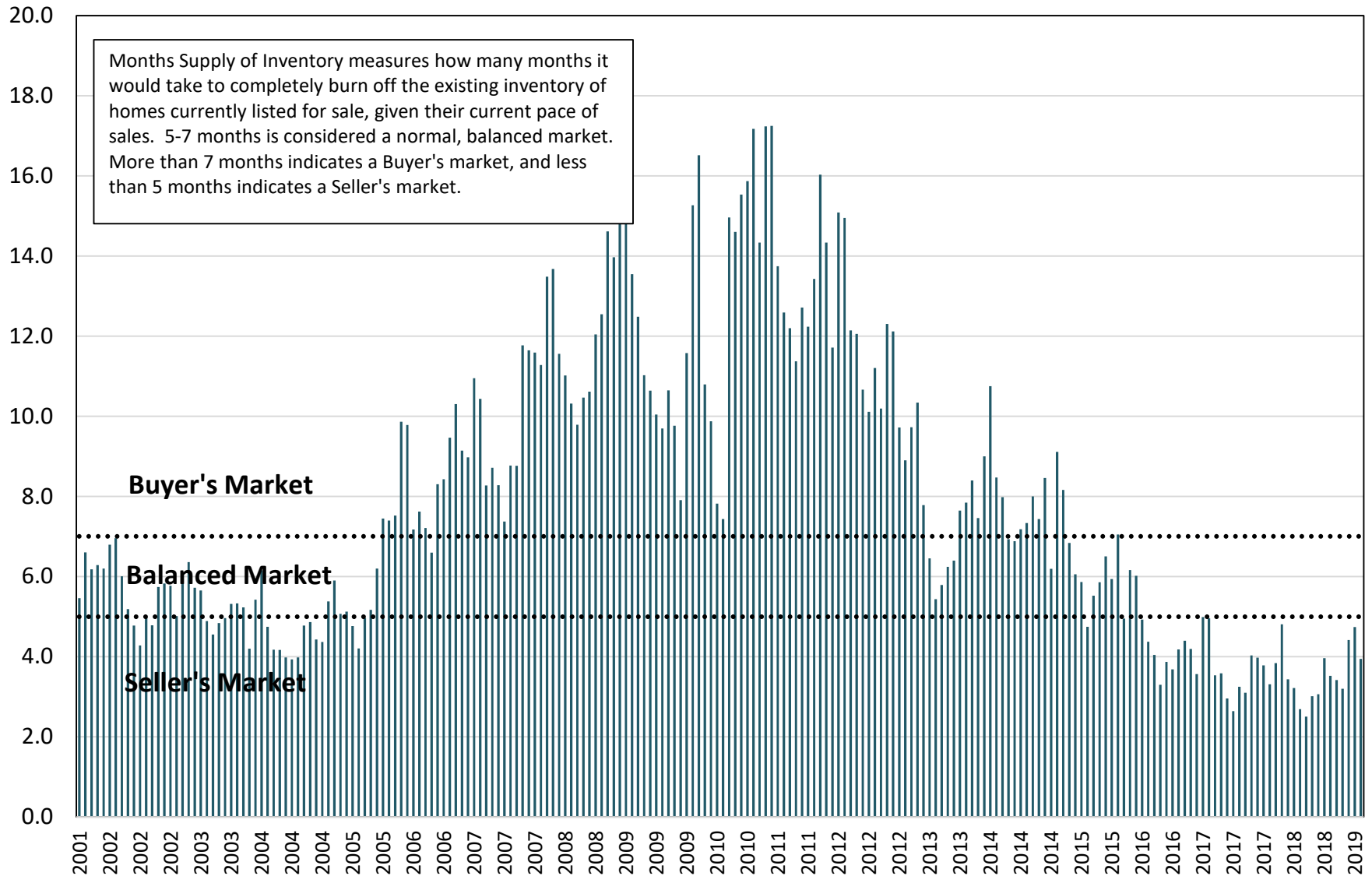


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Trend MLS

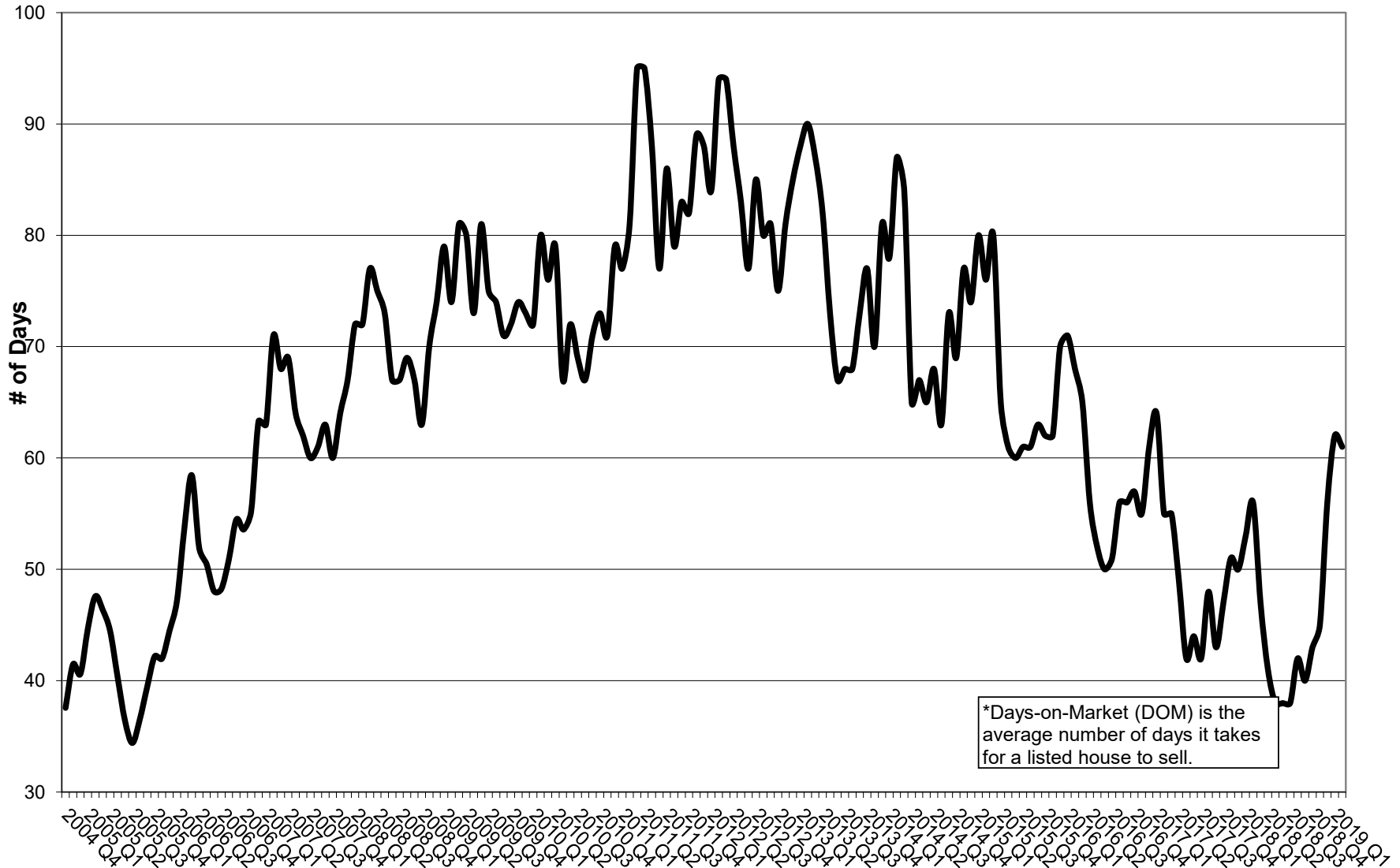


Months Supply of Inventory in Philadelphia



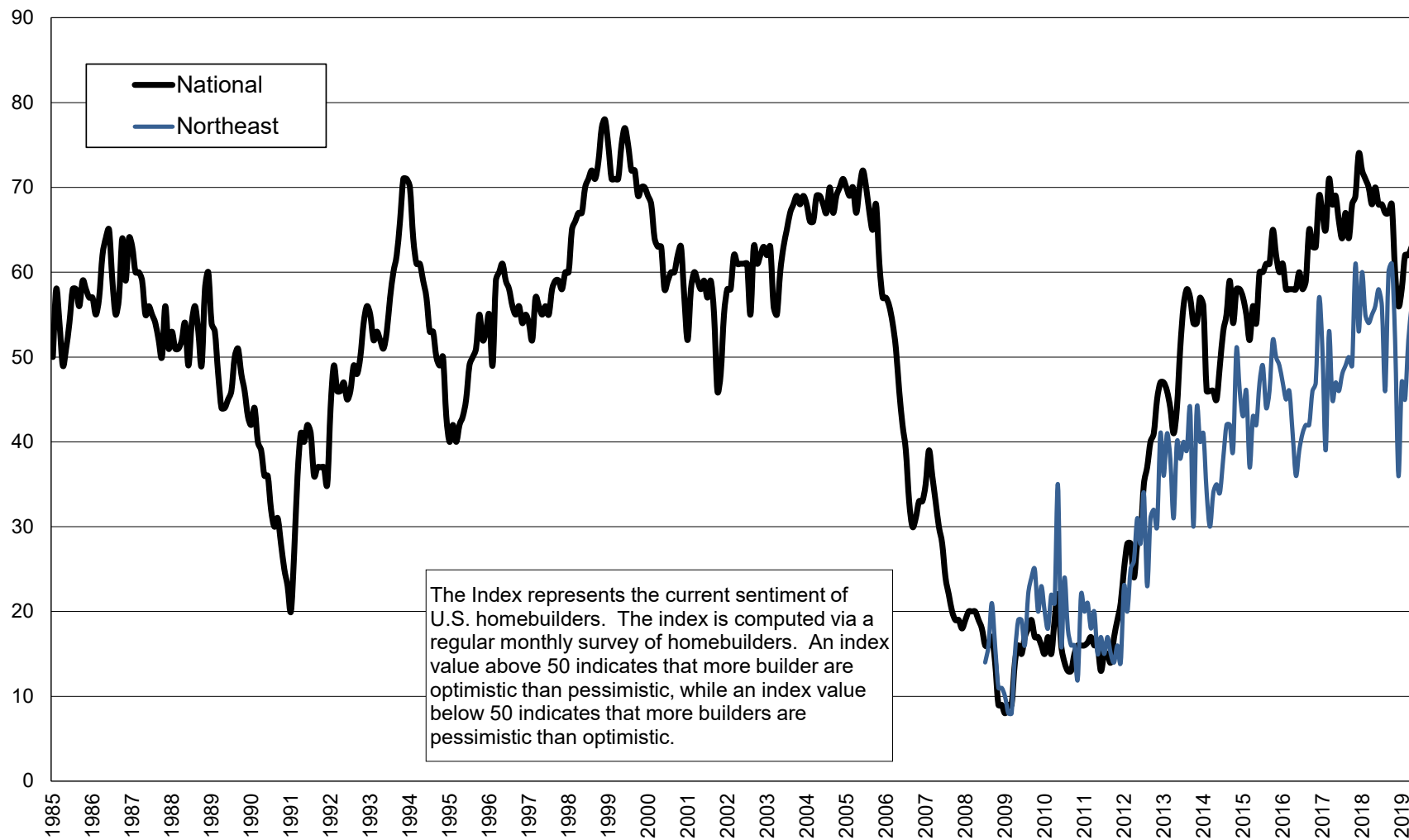
Source: Trend MLS

Average Days-on-Market* for Philadelphia Homes



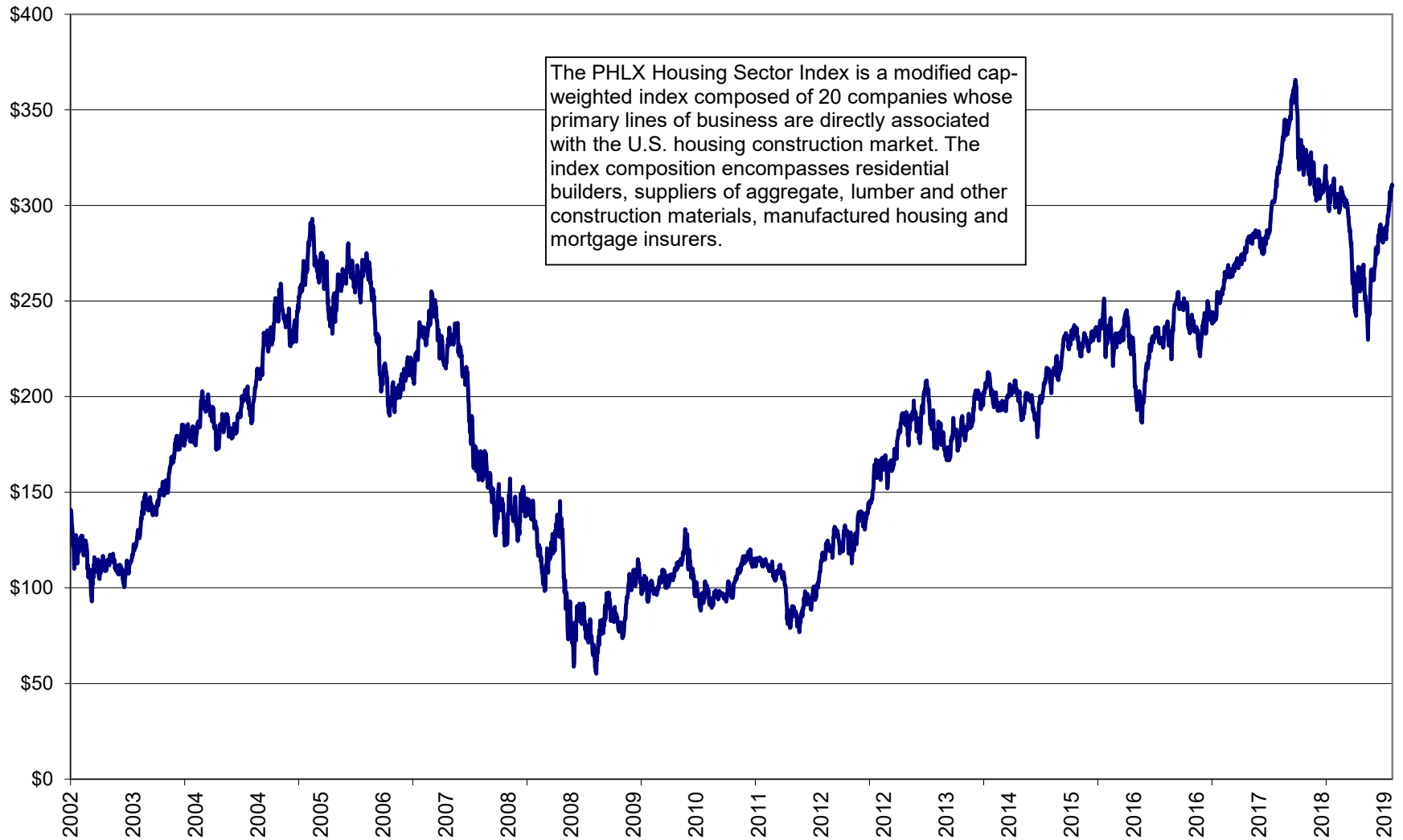
Source: Trend MLS

Index of Homebuilder Sentiment: 1985-2019 (Seasonally Adjusted)



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

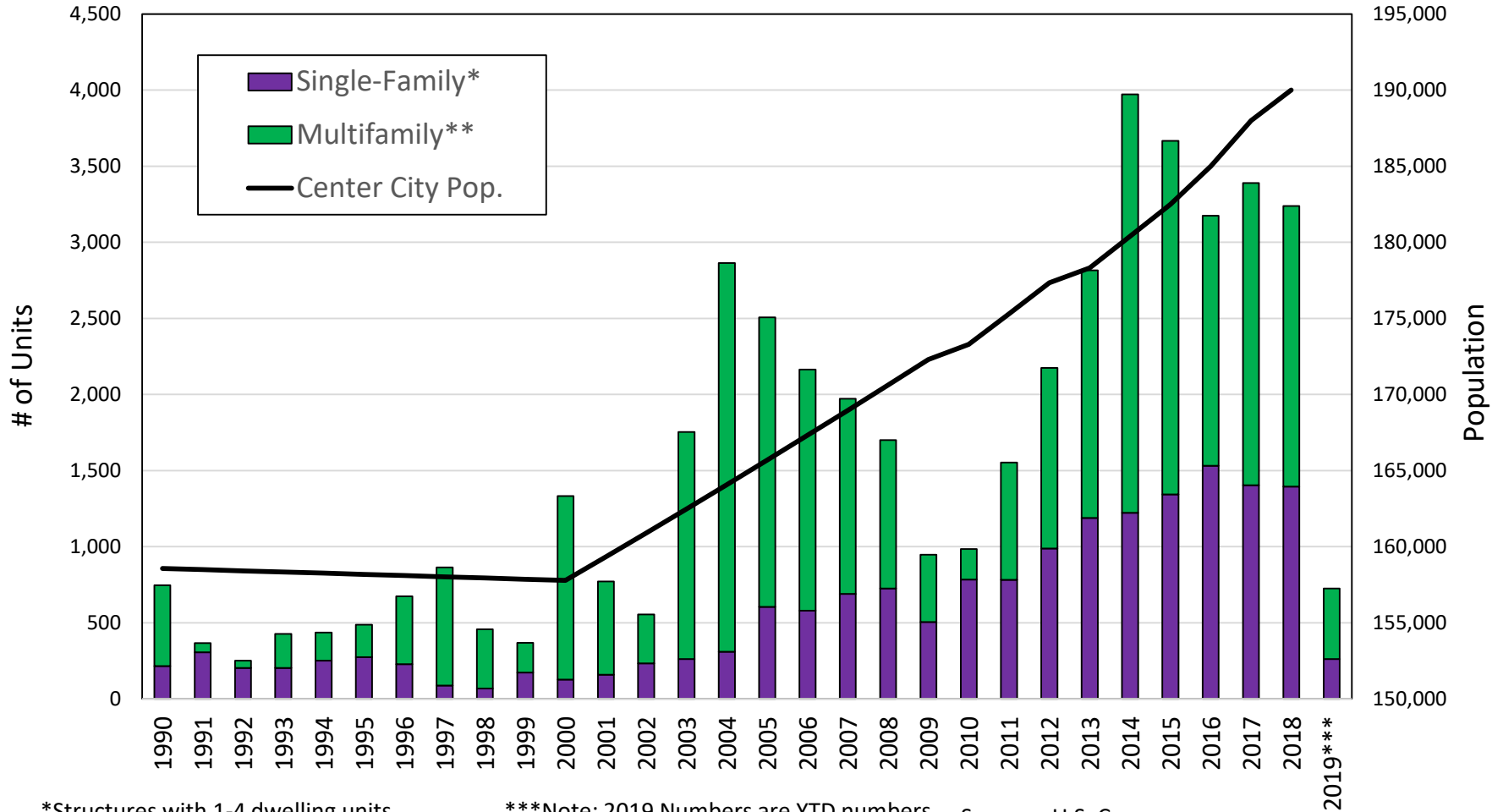
Philadelphia Stock Exchange Housing Sector Index: 2002-2019



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 1990-2019: Single-Family v. Multifamily



*Structures with 1-4 dwelling units

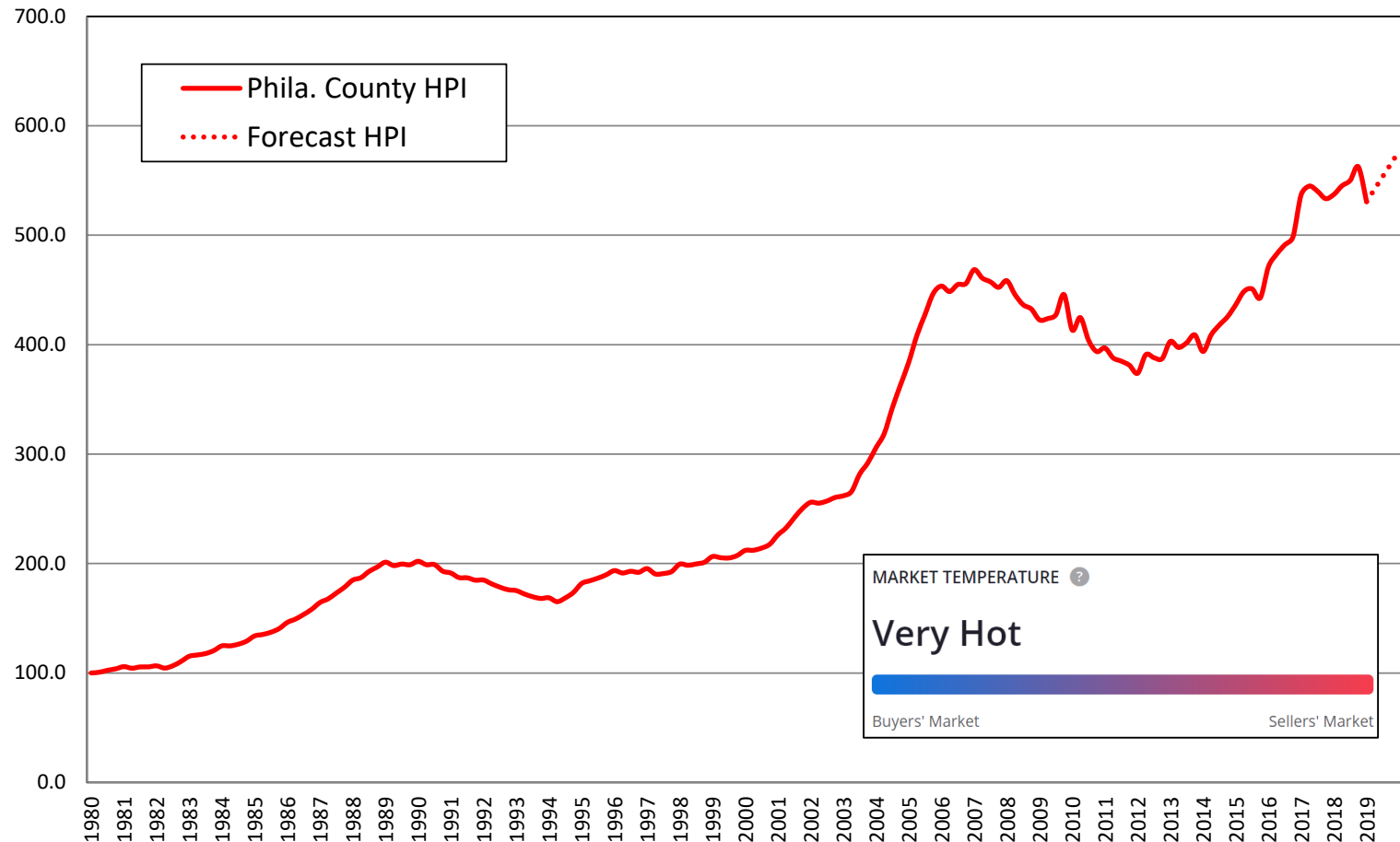
**Structures with >=5 dwelling units

***Note: 2019 Numbers are YTD numbers through March 2019.

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 8.4% over the course of the next twelve months. This is a substantial downgrade from its previous forecast of 17.3% made three months ago. Curiously (and bizarrely), Zillow also changed its rating of Philadelphia's housing market temperature from "Warm" to "Very Hot" this past month. It should be noted that Zillow's forecast for Philadelphia has been consistently and overly optimistic over the course of the past year.

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