

PHILADELPHIA HOUSE PRICE INDICES

August 23, 2019



DREXEL UNIVERSITY
Lindy Institute
for Urban Innovation

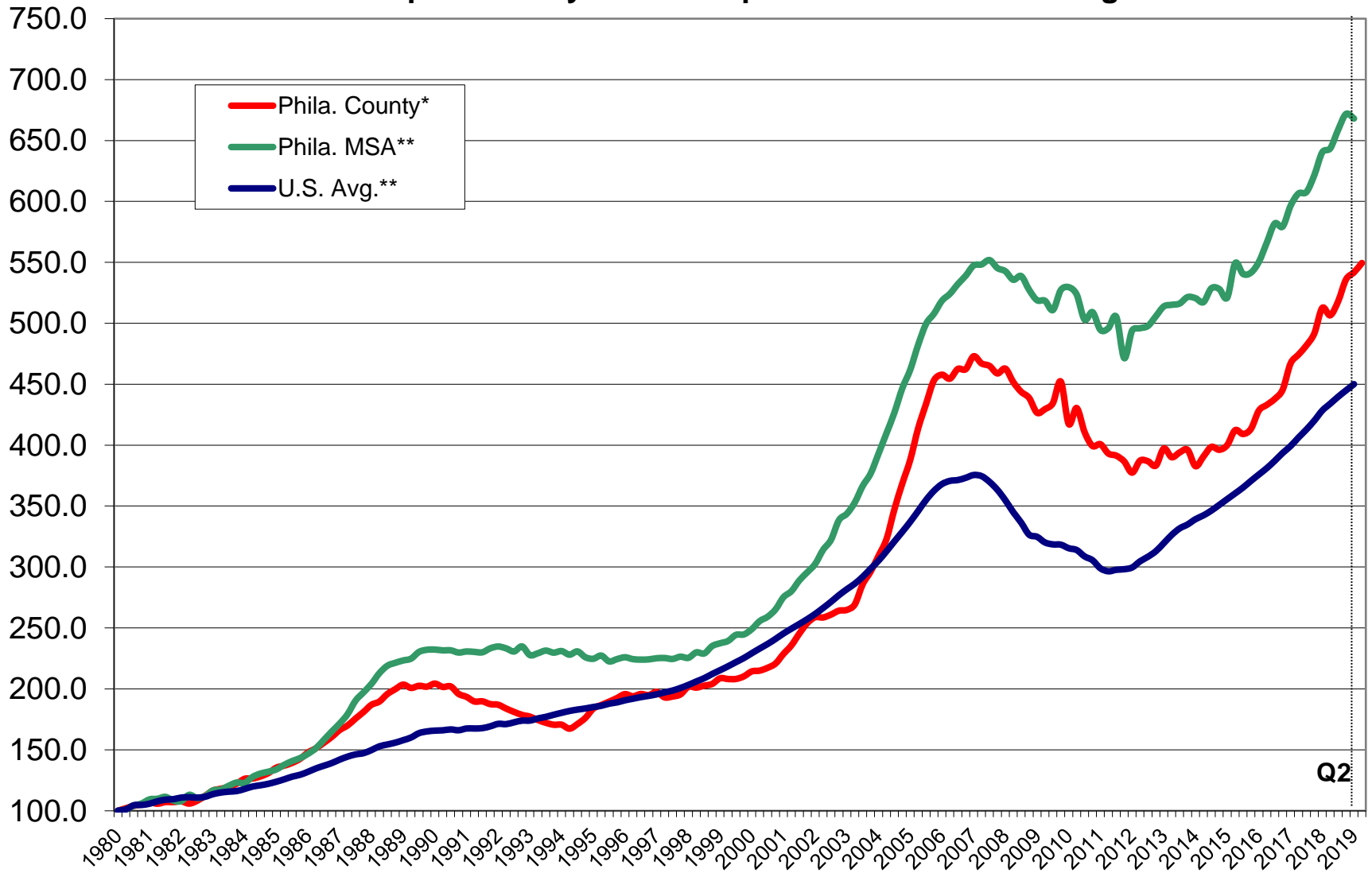
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Kevin C. Gillen Ph.D.. The author thanks Azavea.com, the Philadelphia Office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



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.

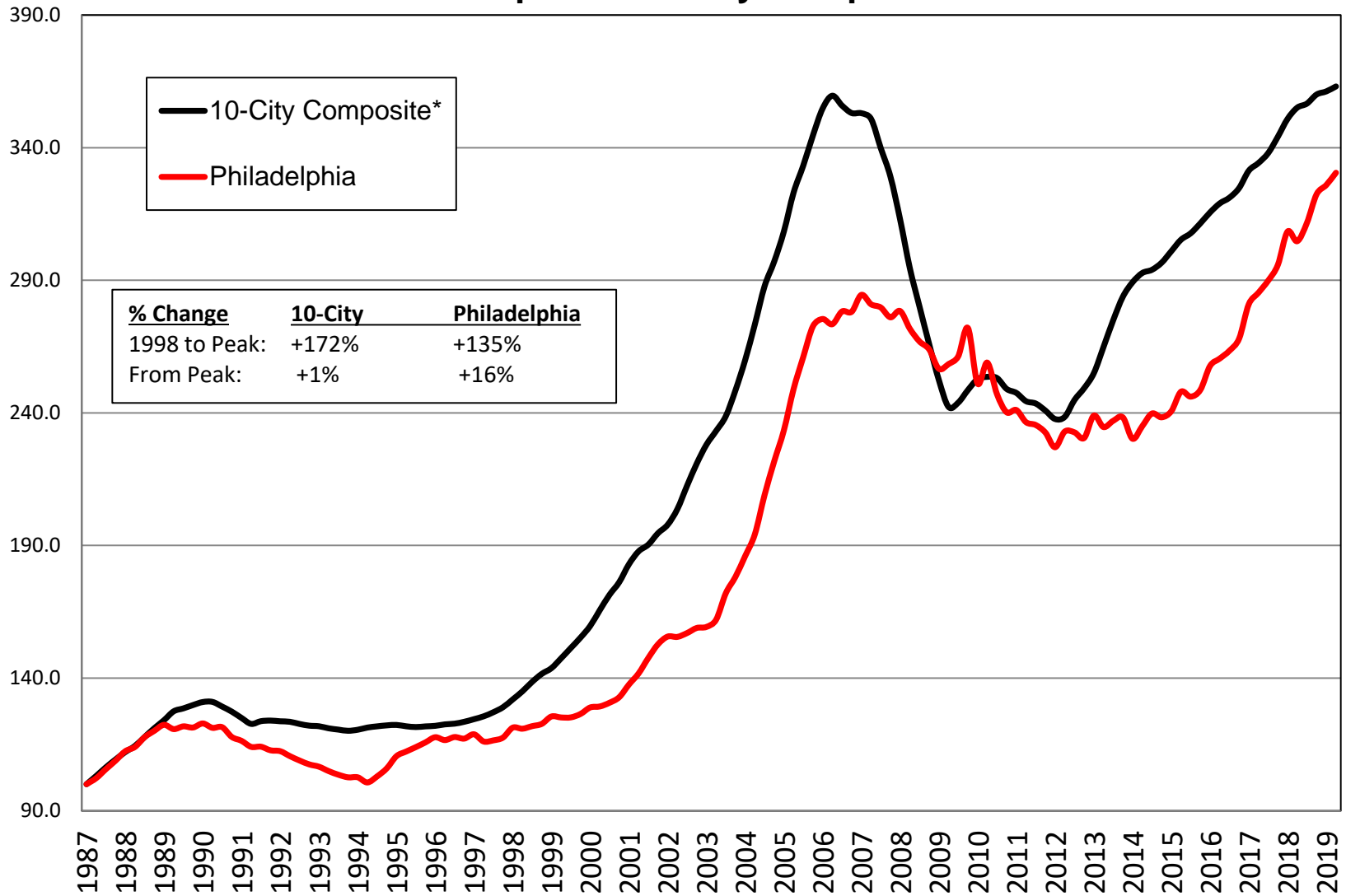
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
39-Year	449.5%	568.0%	350.0%
10-Year	27.9%	28.7%	38.6%
1-Year	8.5%	4.3%	5.1%
1-Quarter	1.4%	-0.6%	1.1%

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

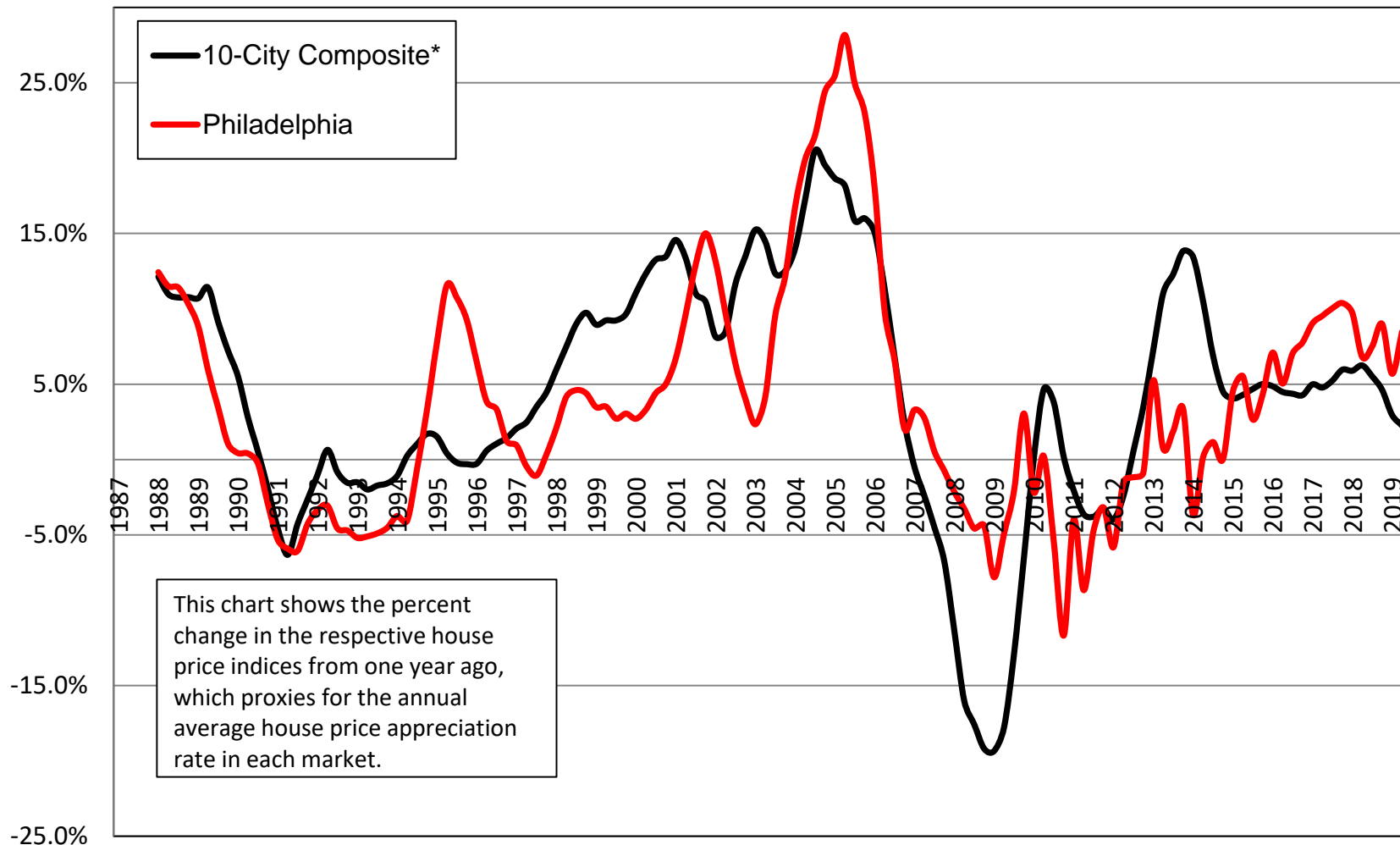
**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2019Q1 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

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.

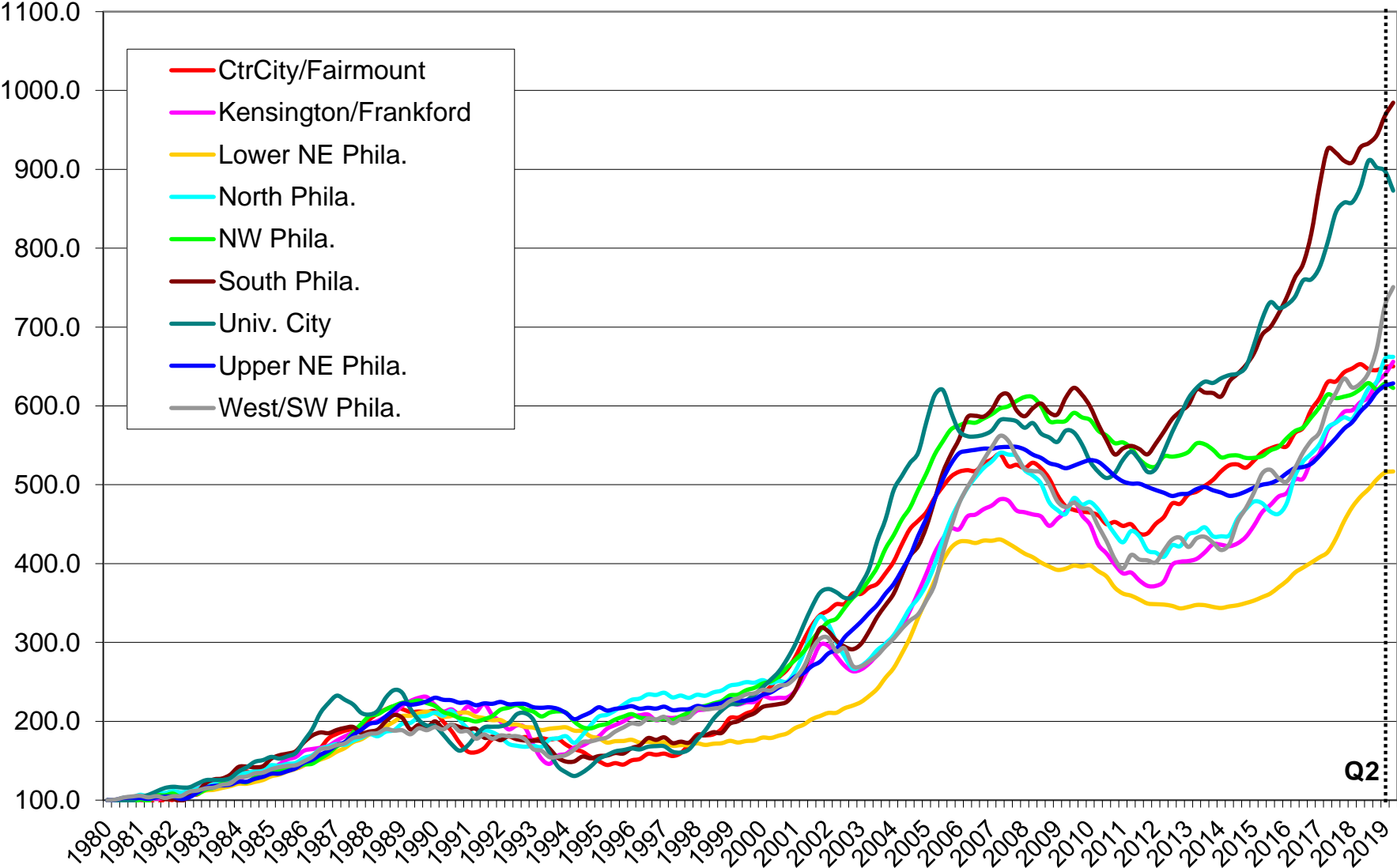
YoY House Price Change (%) 1987-2019: Philadelphia v. 10-City Composite



*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



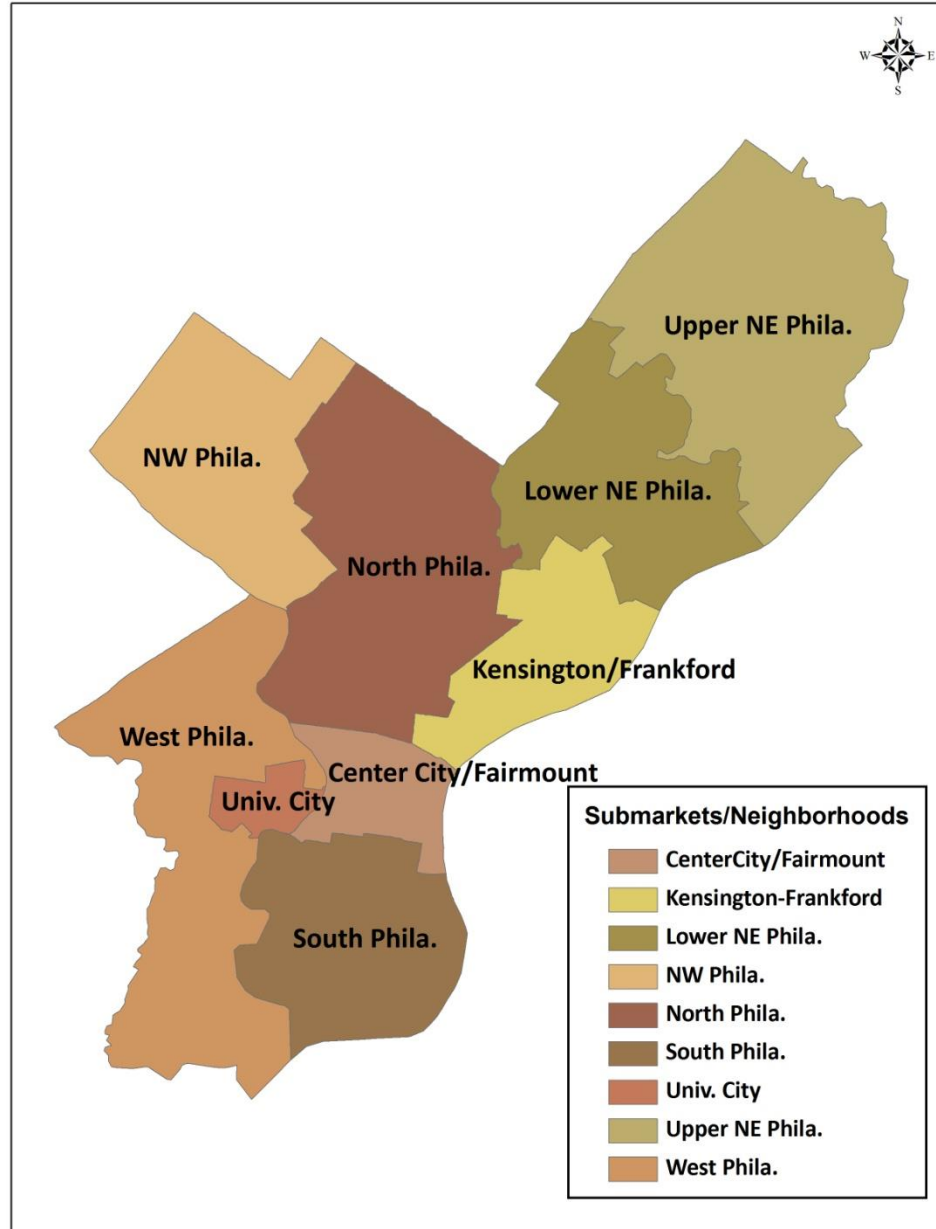
* All indices empirically estimated by Kevin C. Gillen, Ph.D.

Philadelphia House Price Appreciation Rates by Submarket

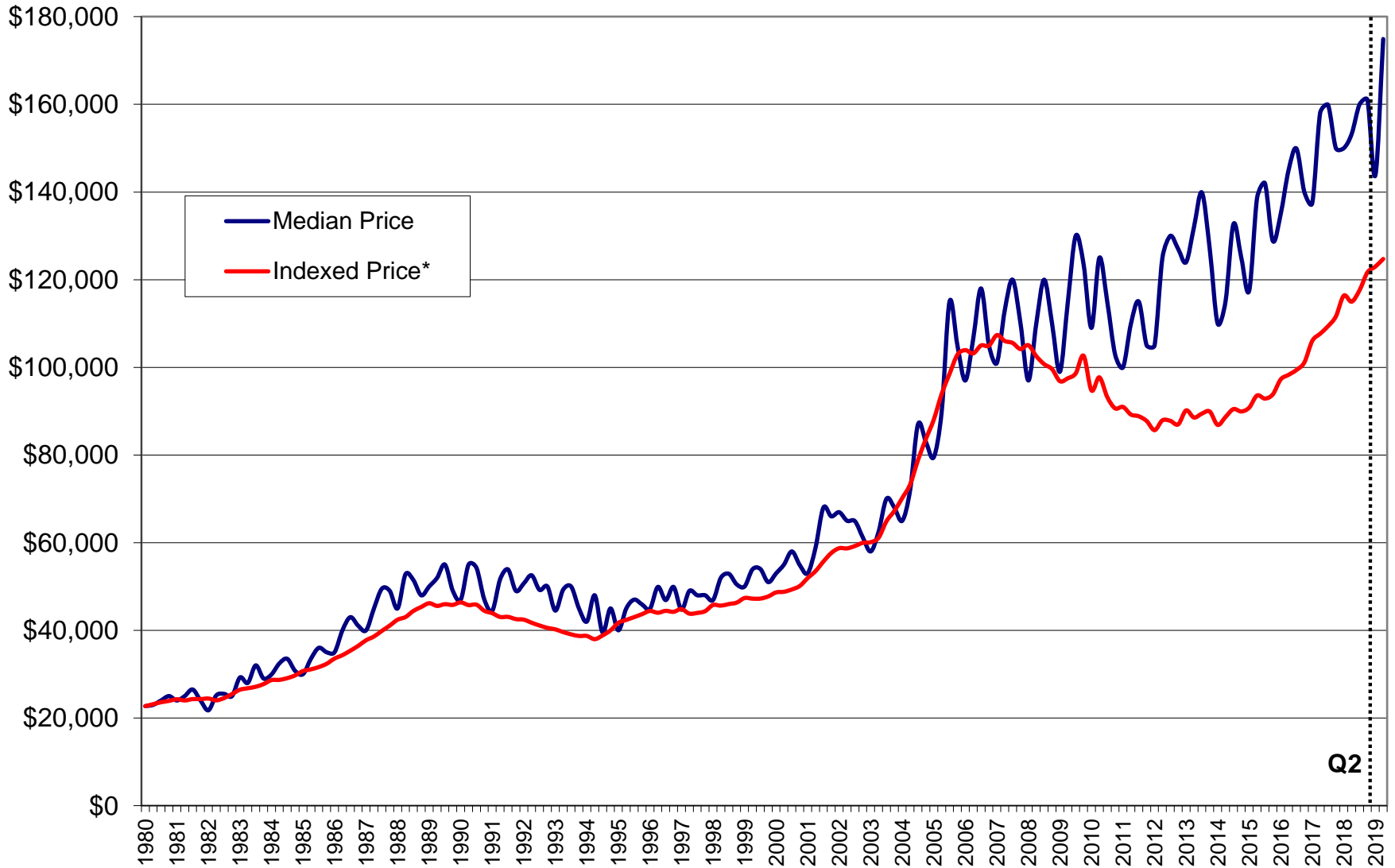
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West/ SW Phila.
39-year	550.1%	556.0%	416.9%	562.2%	522.8%	884.5%	773.0%	528.7%	650.7%
10-year	37.5%	40.8%	31.4%	43.1%	7.2%	61.4%	53.6%	20.7%	59.1%
1-Year	-0.4%	8.5%	6.6%	10.0%	0.2%	6.1%	-0.5%	6.0%	19.4%
1-Quarter	0.1%	2.5%	0.3%	0.4%	-0.9%	1.7%	-2.8%	0.5%	3.2%

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

Philadelphia Submarket Boundaries

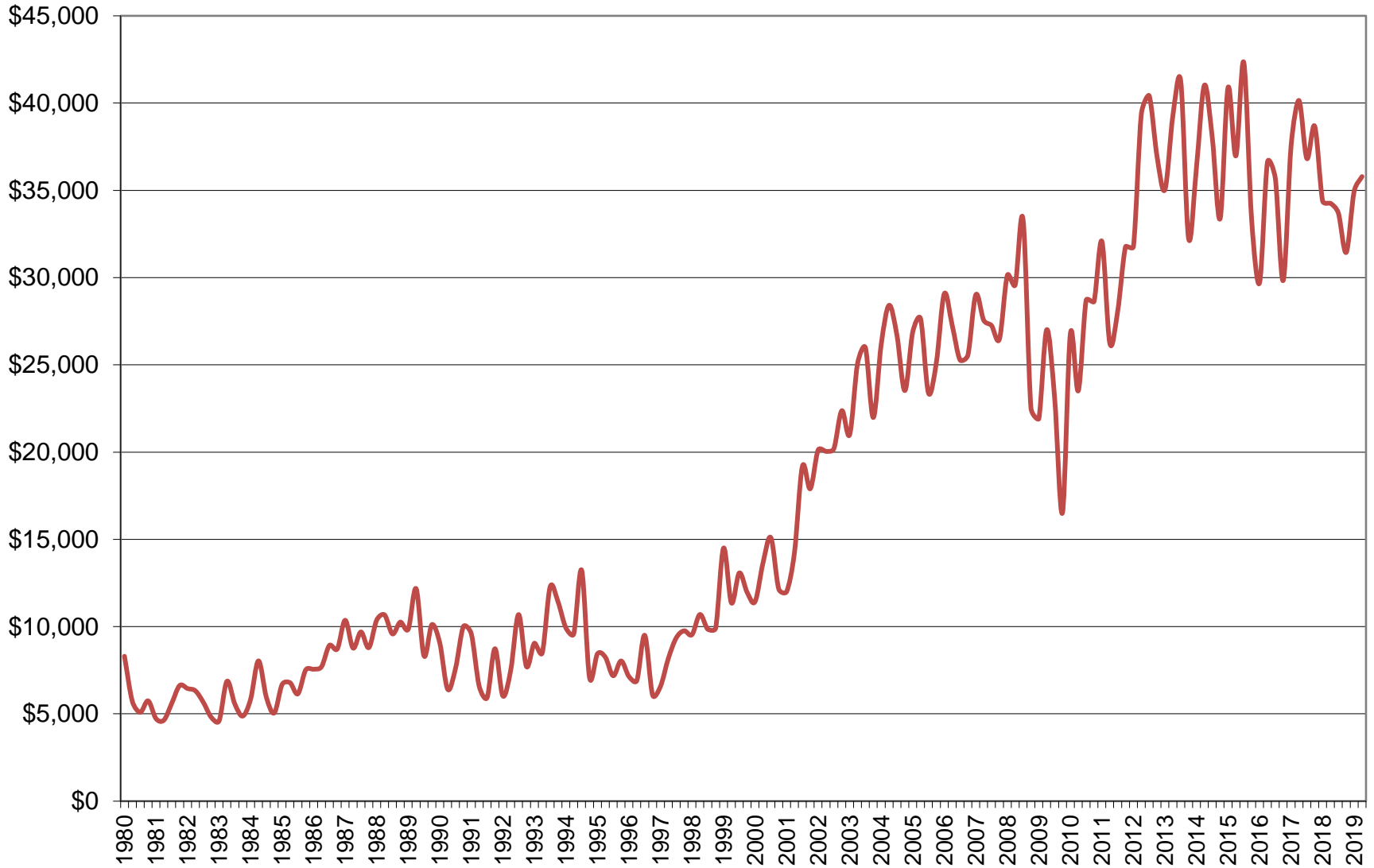


Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2019

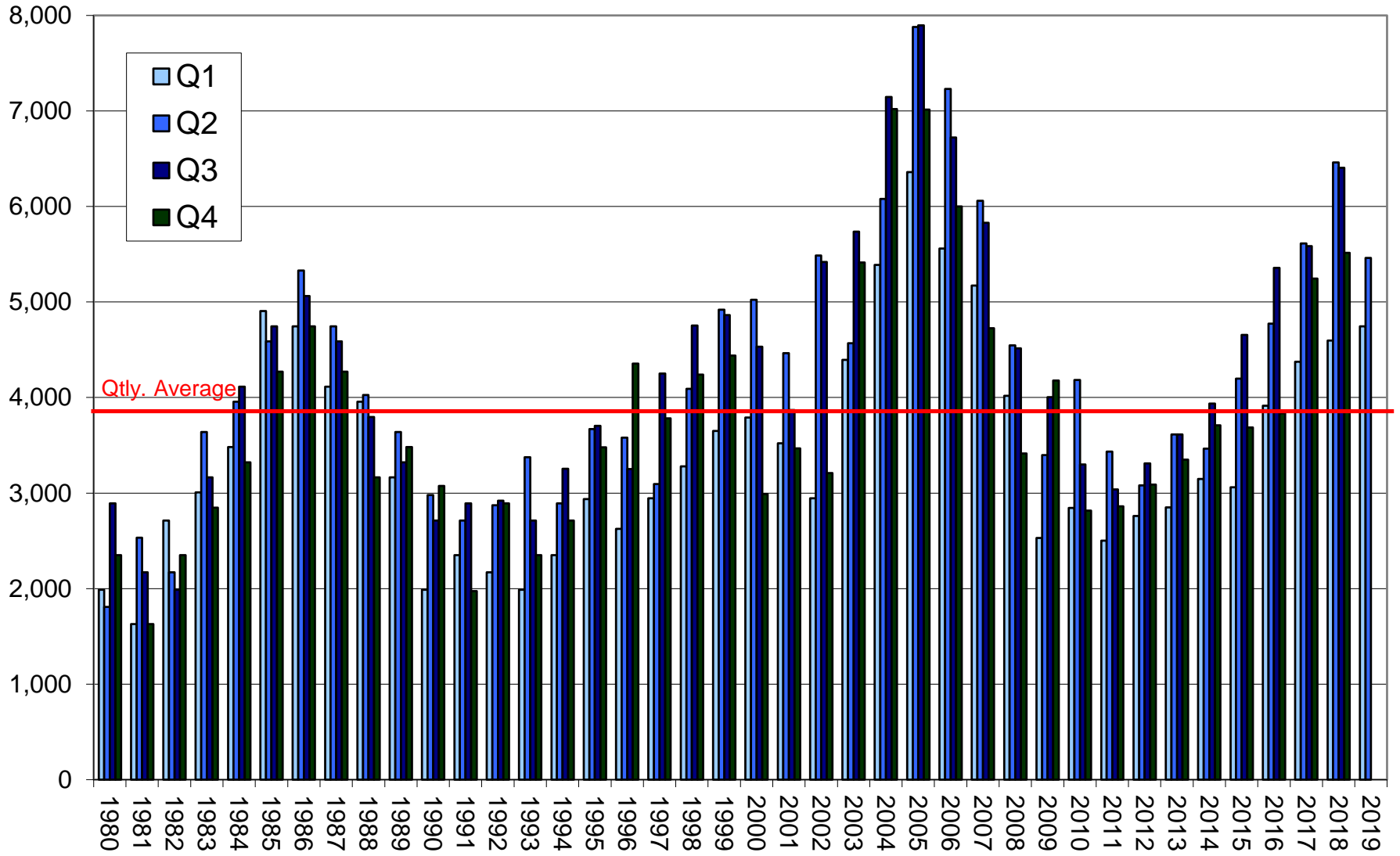


* Empirically estimated by Kevin C. Gillen, PhD

Average House Price Minus Median House Price: 1980-2019

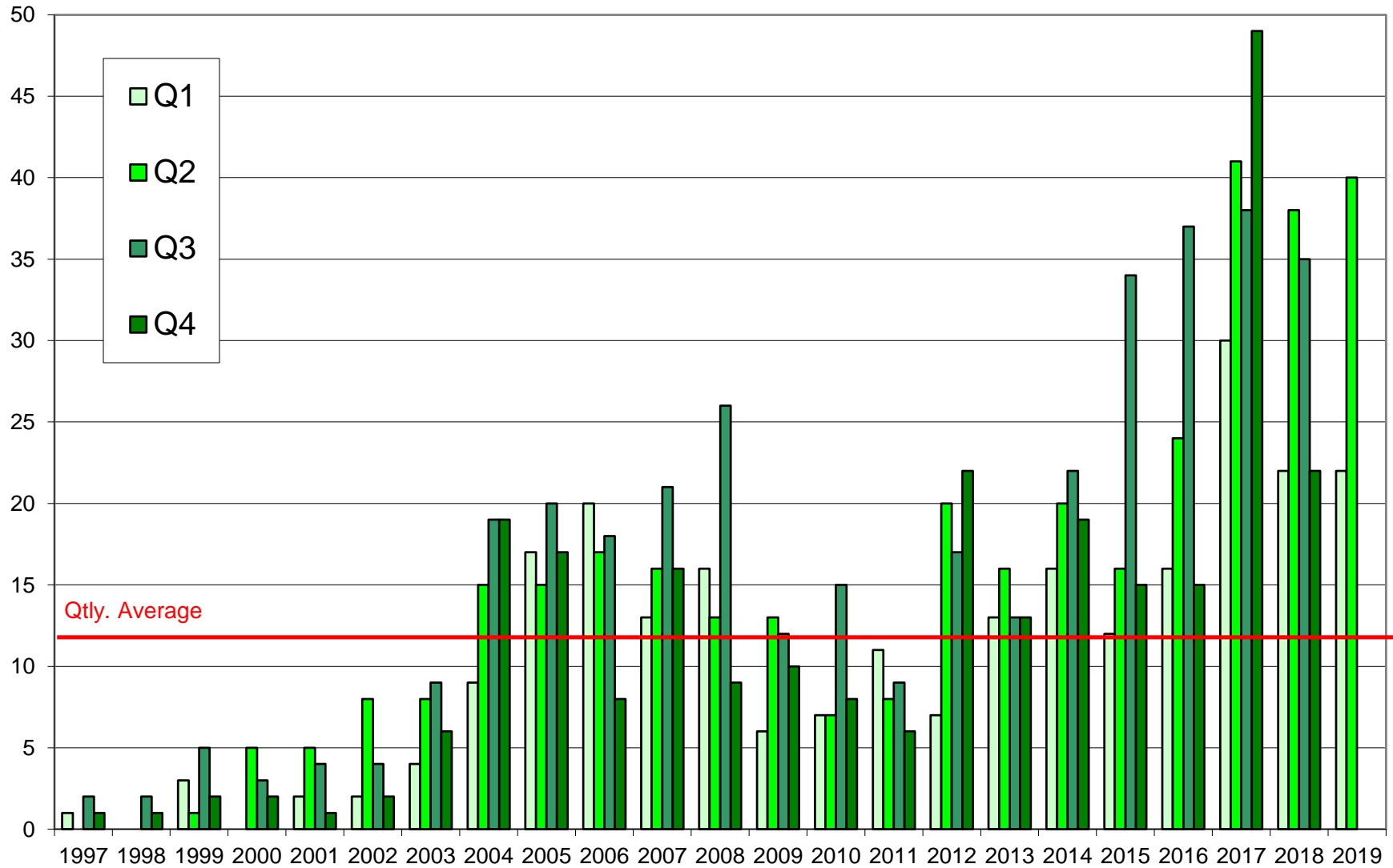


Number of Philadelphia House Sales* per Quarter: 1980-2019



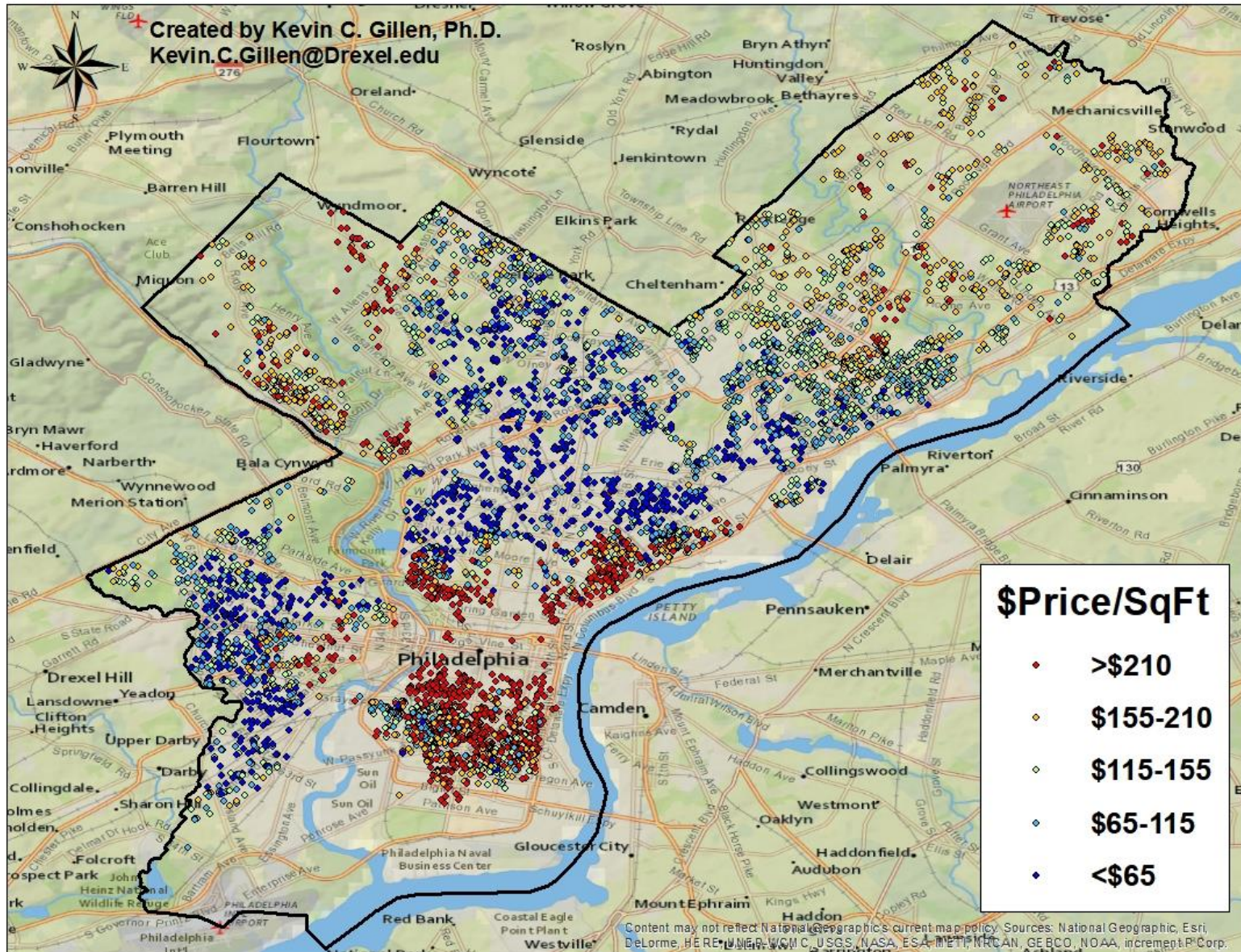
*Only arms-length transactions between private sector entities were included in these numbers.

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



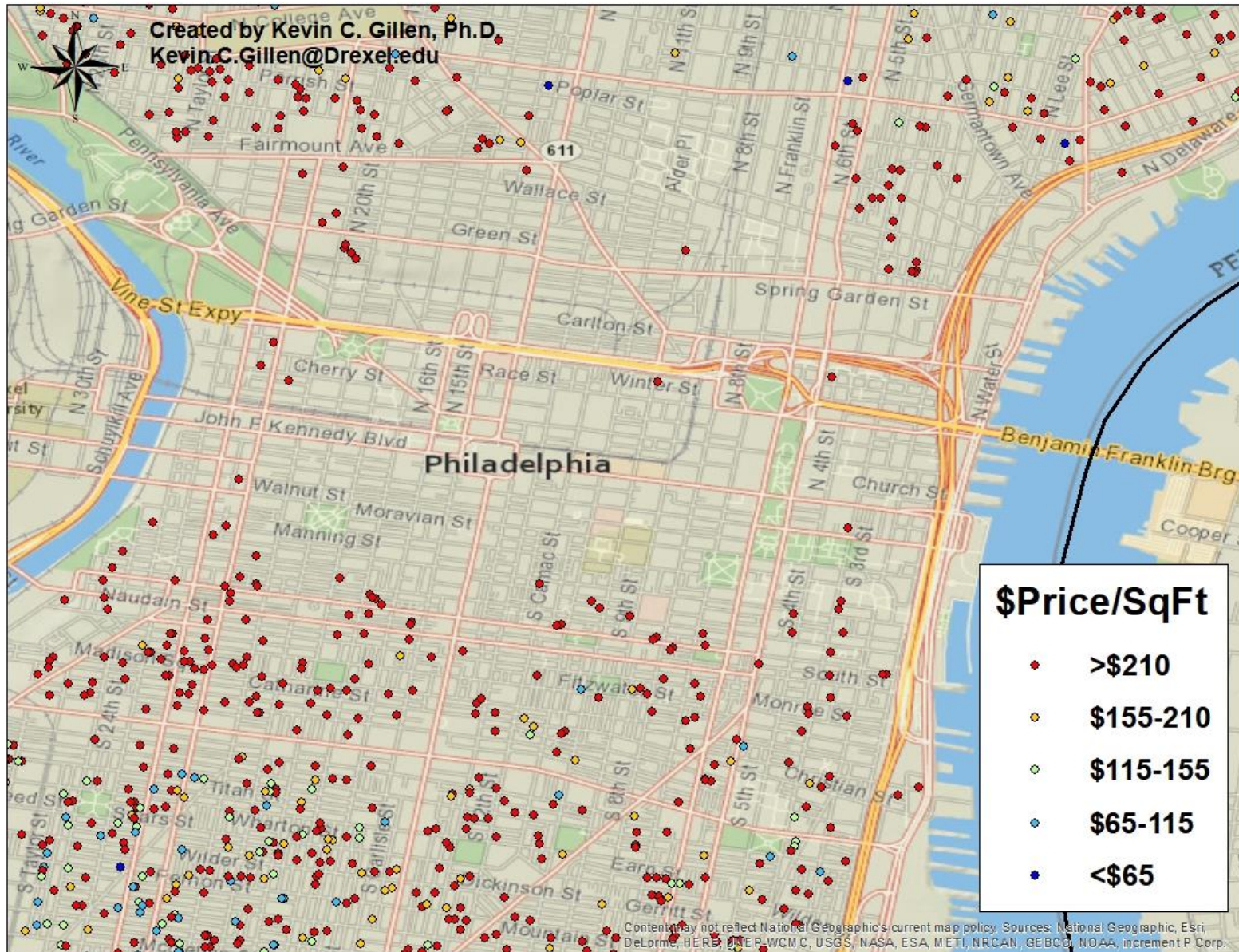
*Only arms-length transactions between private sector entities were included in these numbers.

Philadelphia House Sales in 2019 Q2

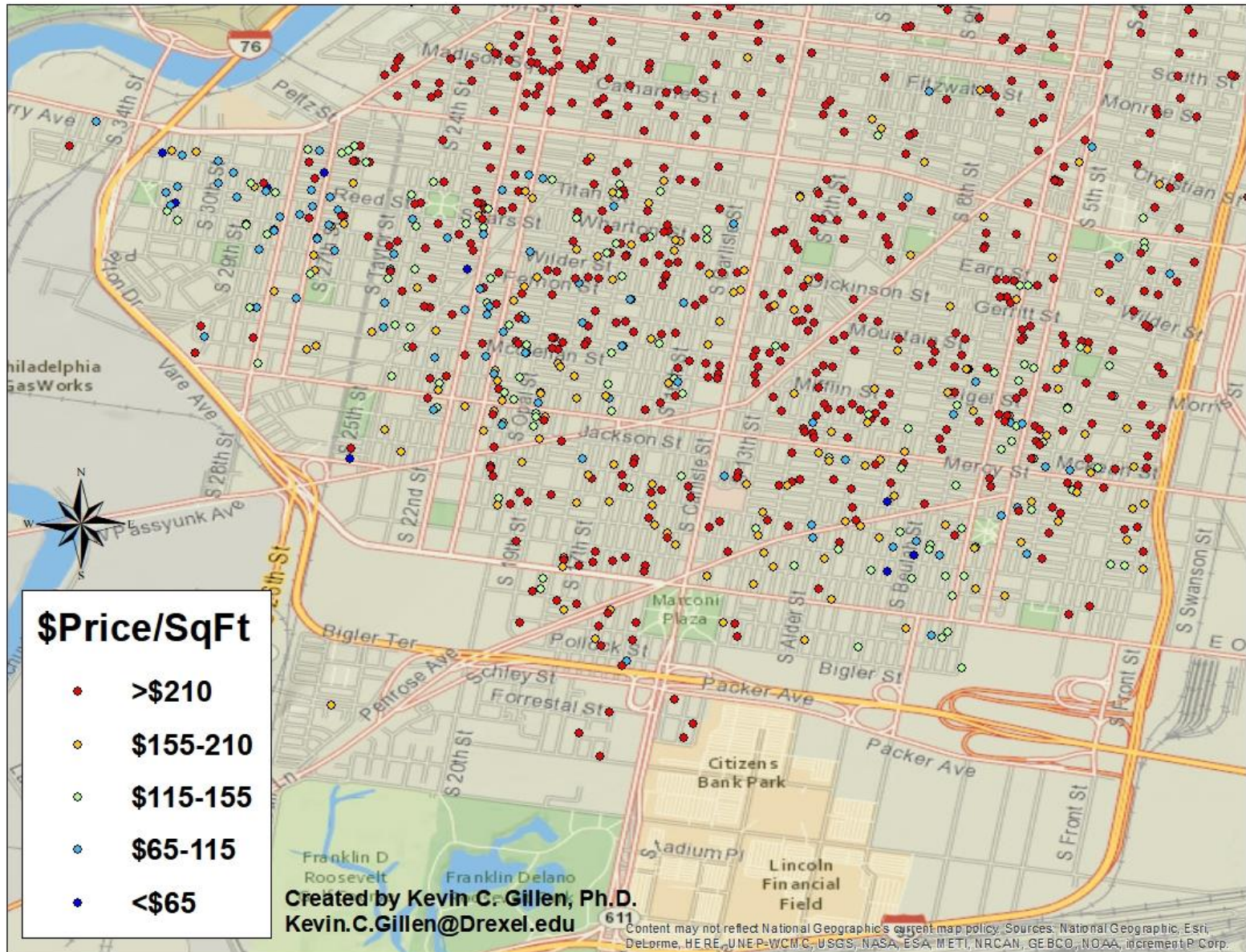


Note: Sales are color-coded by the quintiles of the distribution of \$Price/SqFt. Hence, each of the five categories covers exactly 20% of all sales.

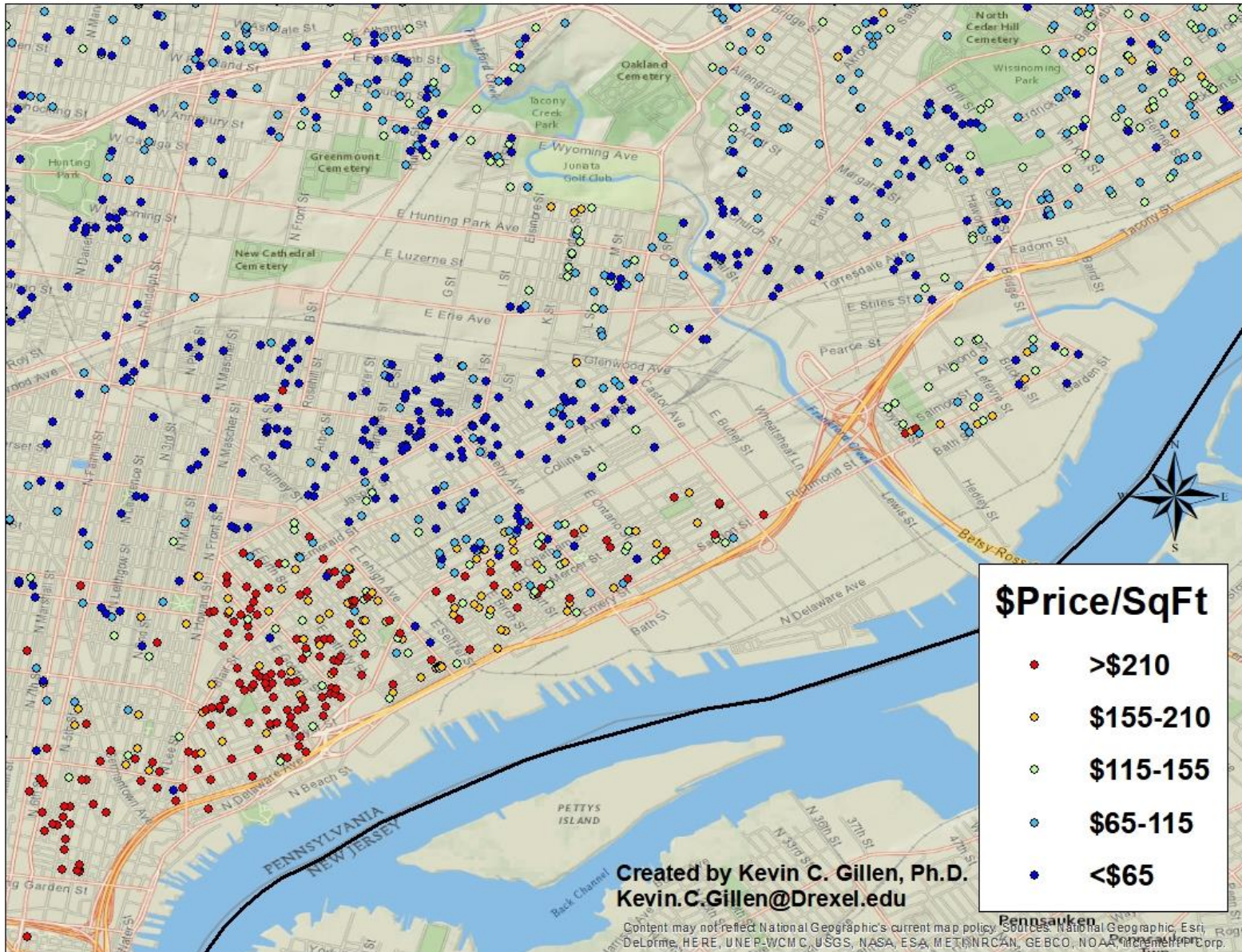
Center City House Sales in 2019 Q2



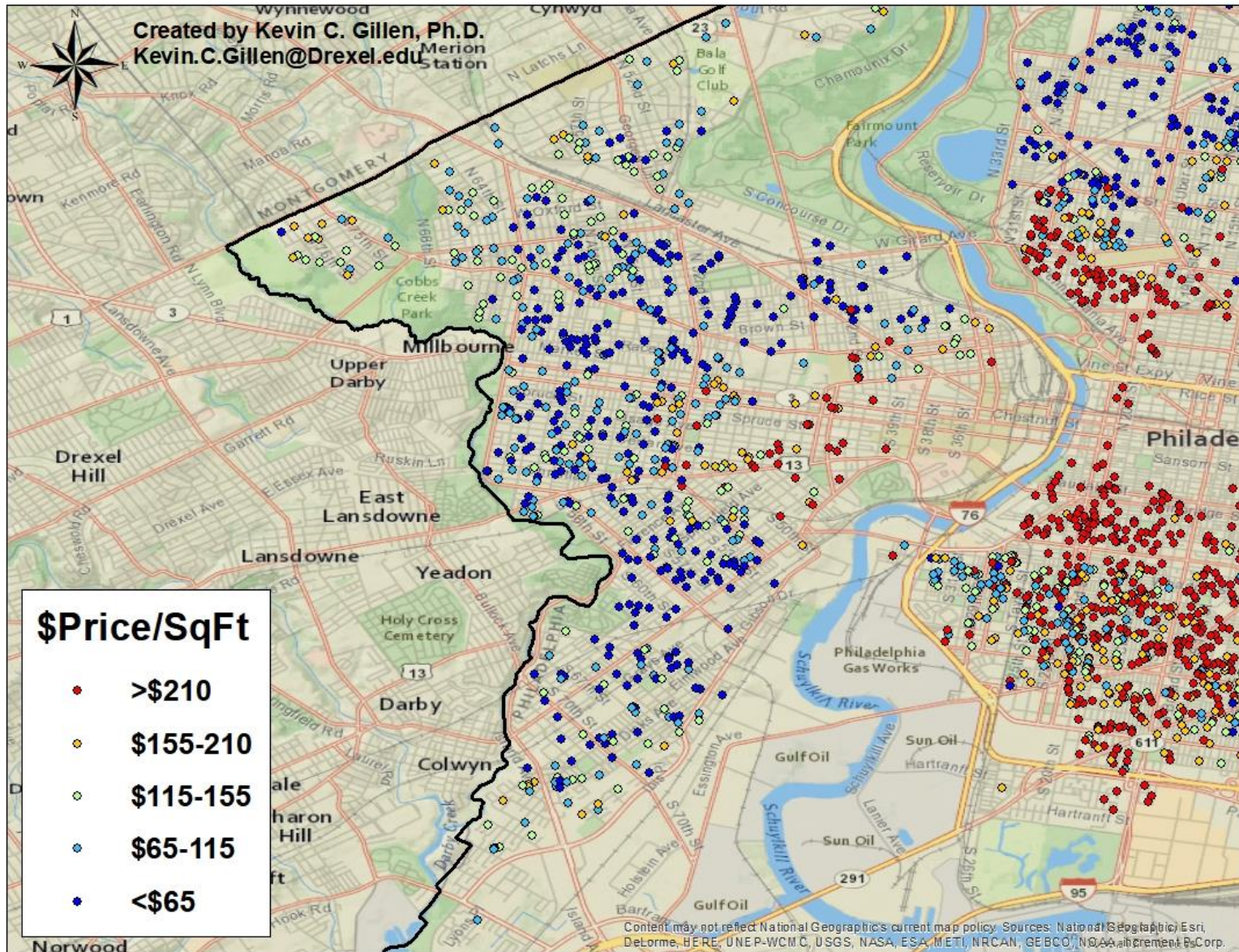
South Philadelphia House Sales in 2019 Q2



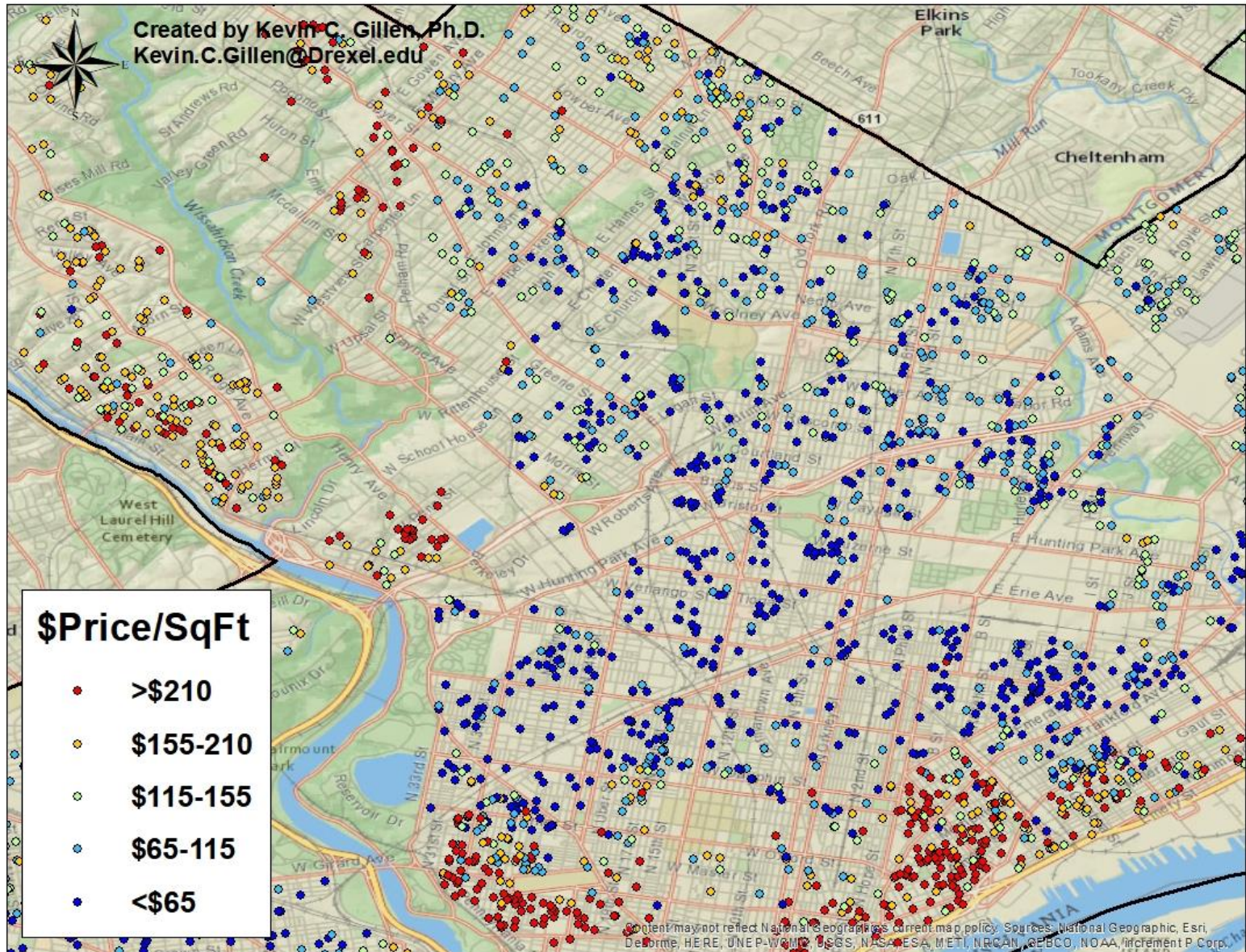
Kensington/Frankford House Sales in 2019 Q2



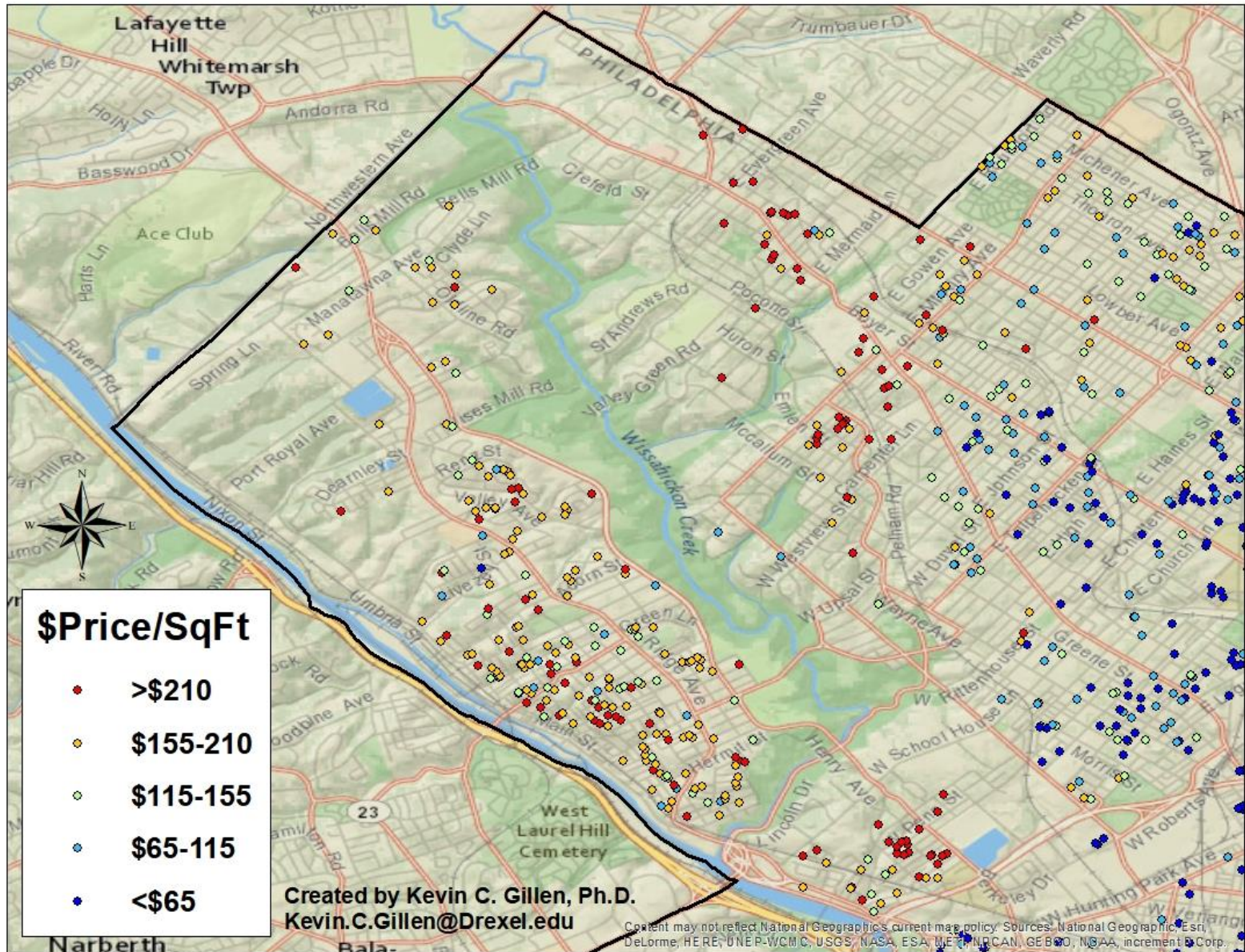
West/Southwest Philadelphia House Sales in 2019 Q2



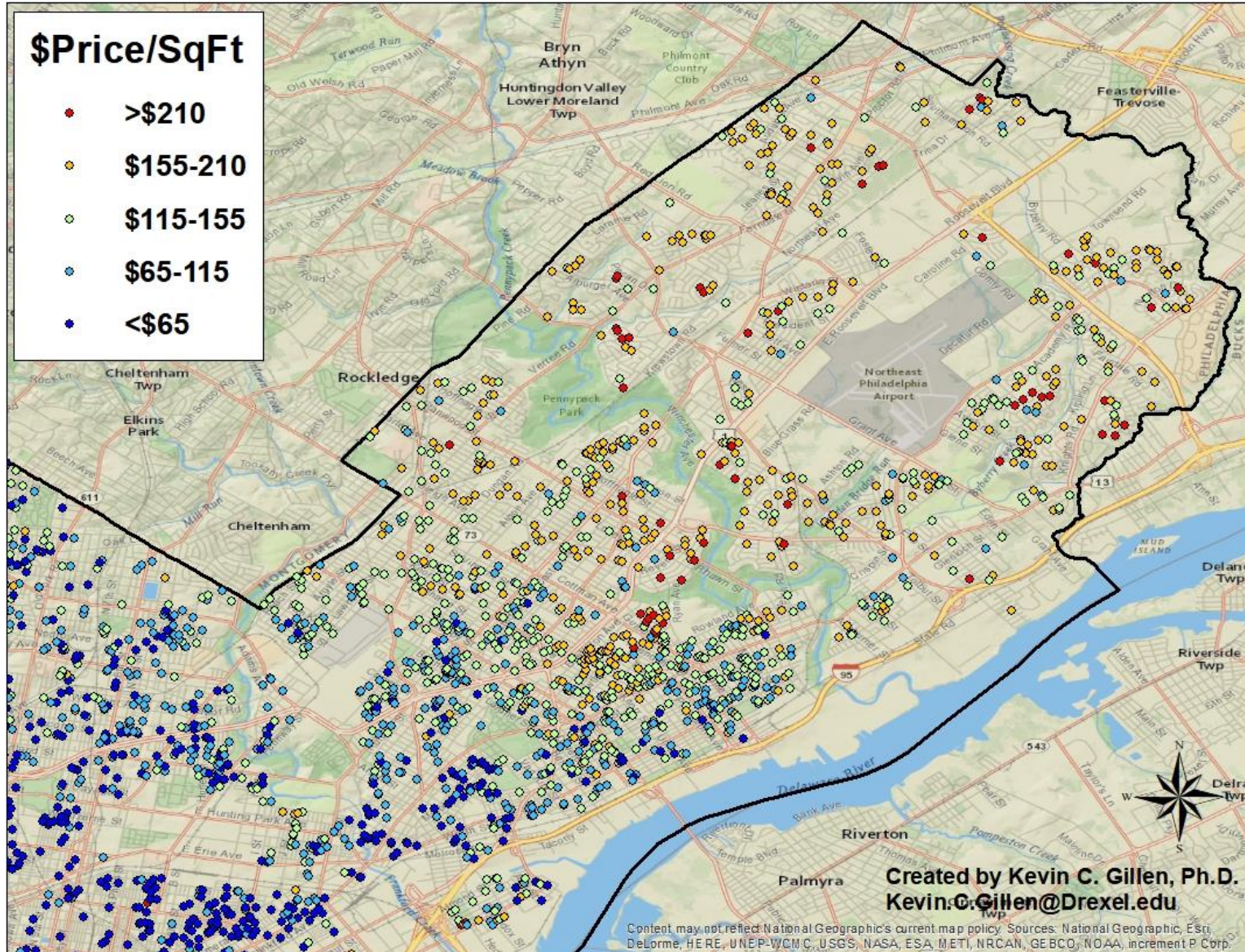
North Philadelphia House Sales in 2019 Q2



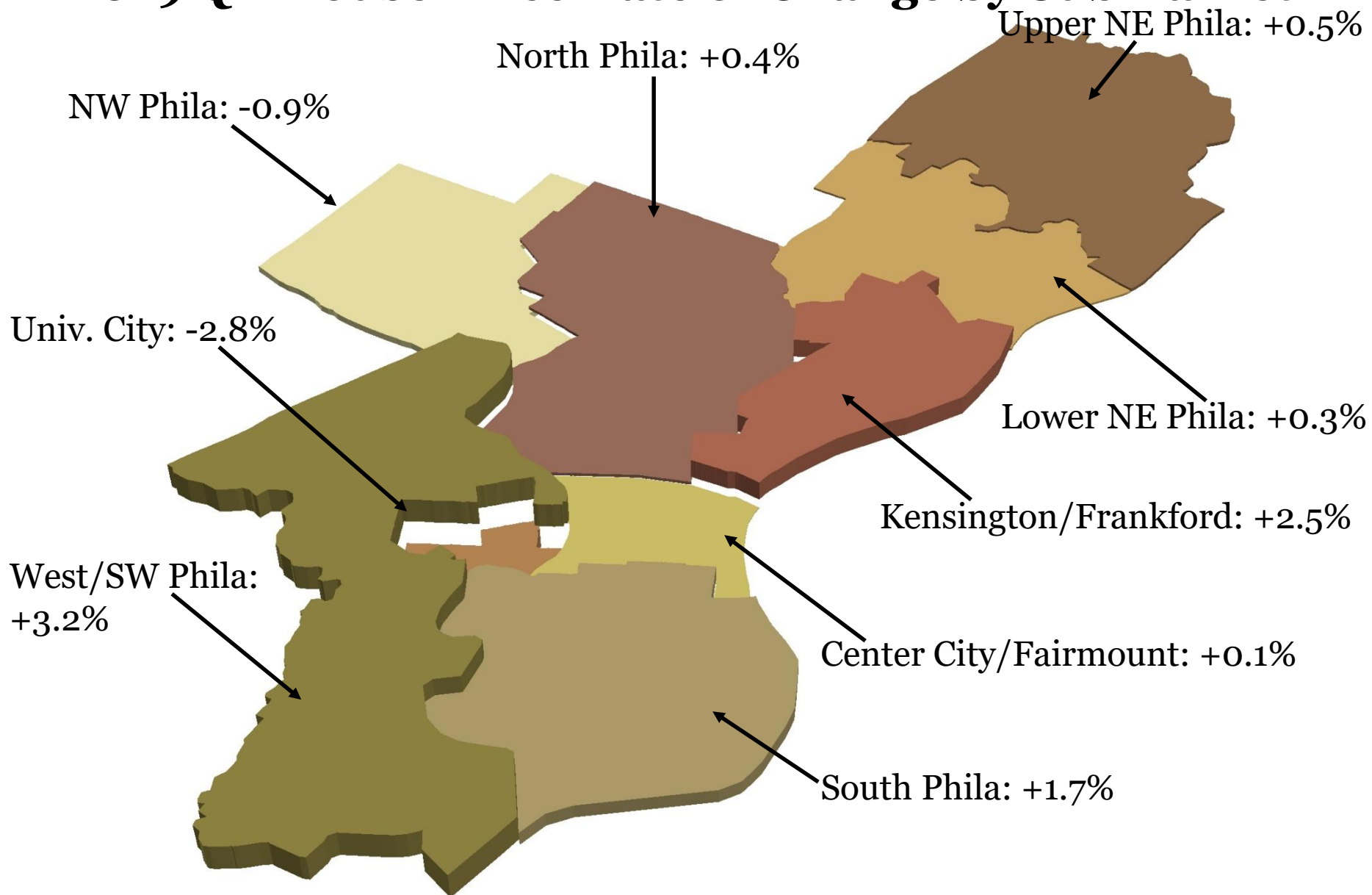
Northwest Philadelphia House Sales in 2019 Q2



Northeast Philadelphia House Sales in 2019 Q2



2019 Q2 House Price Rate of Change by Submarket



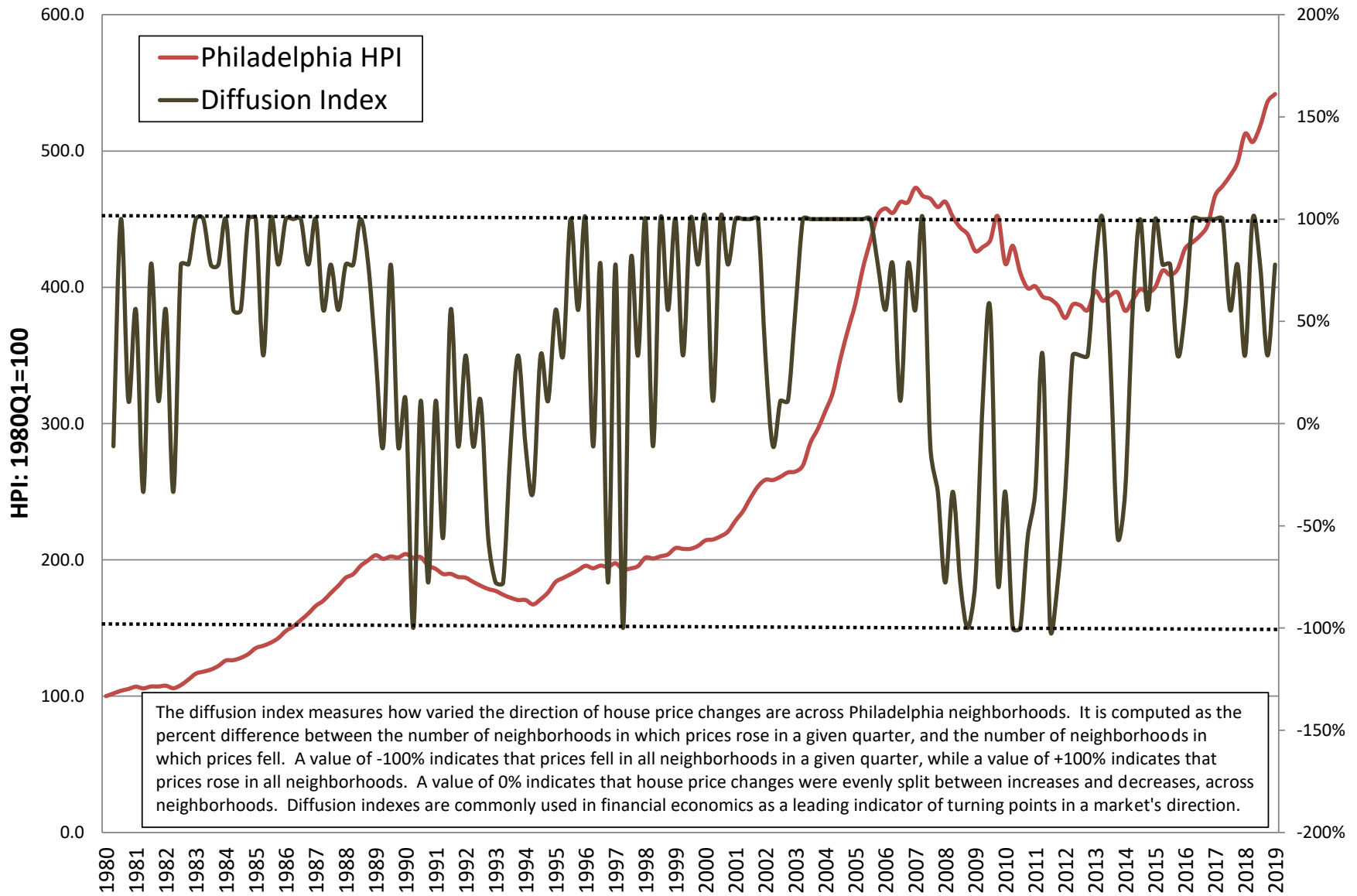
Note: Each submarket is extruded by its average change in house values during 2019 Q2 in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

+ \$1 Million Dollar House Sales in 2019 Q2

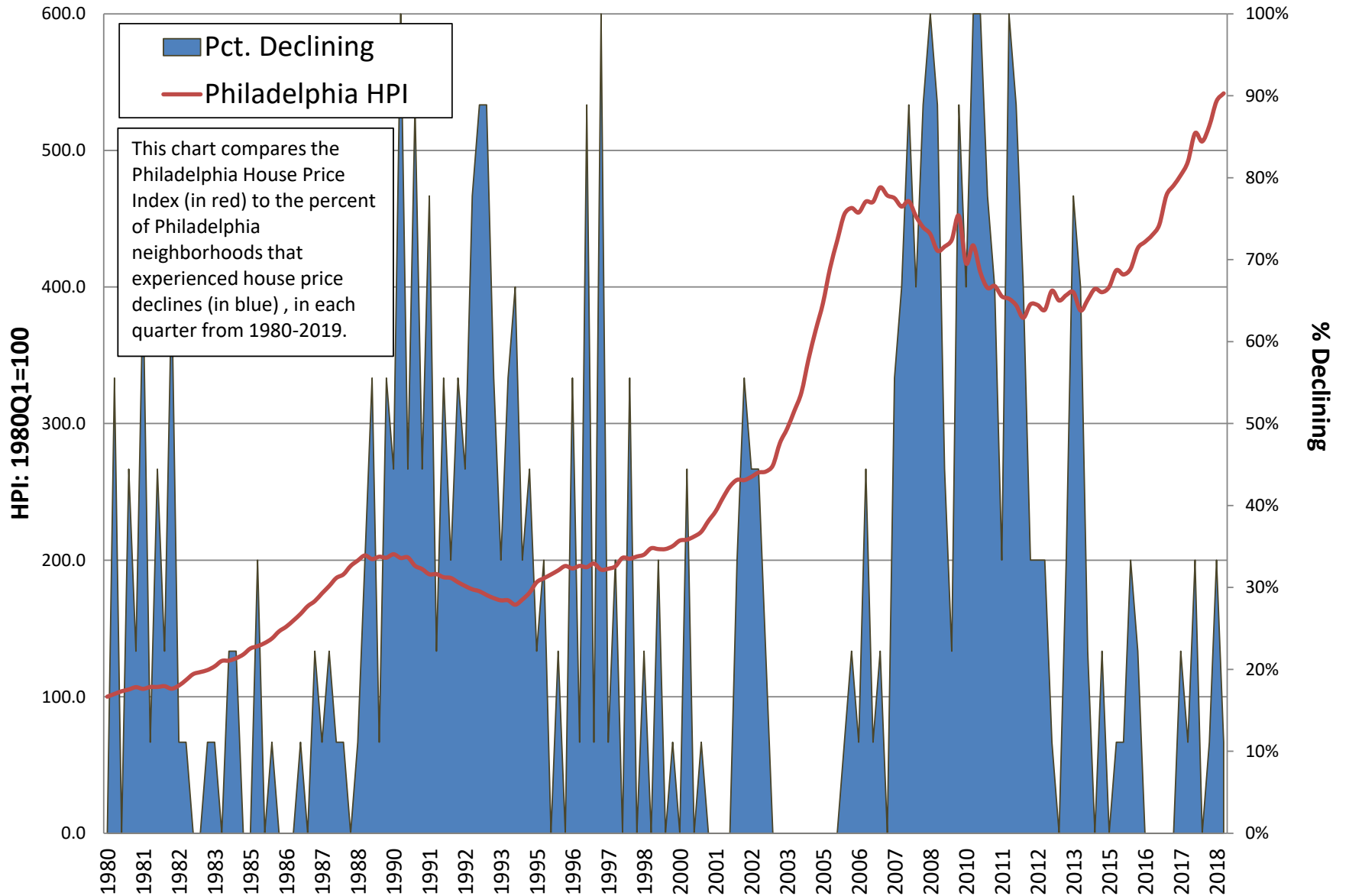


PRICE	ADDRESS
\$1,000,000	229 N 10TH ST
\$1,080,000	618 S 27TH ST
\$1,100,000	251 S 03RD ST
\$1,100,000	808 ADDISON ST
\$1,100,000	825 N ORKNEY ST
\$1,100,000	2108 SANSOM ST
\$1,100,000	2129 SPRUCE ST
\$1,100,000	3300 BARING ST
\$1,105,000	611 N 03RD ST
\$1,150,000	42 S 03RD ST
\$1,150,000	1630 WAVERLY ST
\$1,155,000	214 CHRISTIAN ST
\$1,170,000	226 GASKILL ST
\$1,175,000	1617 LOMBARD ST
\$1,175,000	8030 NAVAJO ST
\$1,175,000	1329 N RANDOLPH ST
\$1,200,000	8100 LINCOLN DR
\$1,250,000	409 S 03RD ST
\$1,295,000	2054 LOMBARD ST
\$1,300,000	1424 BAINBRIDGE ST
\$1,371,275	723 GLENGARRY RD
\$1,390,000	432 W MORELAND AVE
\$1,395,000	741 BAINBRIDGE ST
\$1,412,500	1338 KATER ST
\$1,505,000	2040 PINE ST
\$1,550,000	813 S 19TH ST
\$1,565,000	620 N BODINE ST
\$1,595,625	604 W HARTWELL LN
\$1,600,000	2106 SPRING ST
\$1,695,000	137 SALTER ST
\$1,750,000	340 S 04TH ST
\$1,825,000	314 S 10TH ST
\$1,920,000	231 DELANCEY ST
\$2,065,000	339 S 18TH ST
\$2,075,000	905 PINE ST
\$2,175,000	1013 CLINTON ST
\$2,175,000	7700 SAINT MART LN
\$2,395,000	601 W HARTWELL LN
\$2,488,000	1204 SPRUCE ST
\$3,175,000	2017 DELANCEY PL

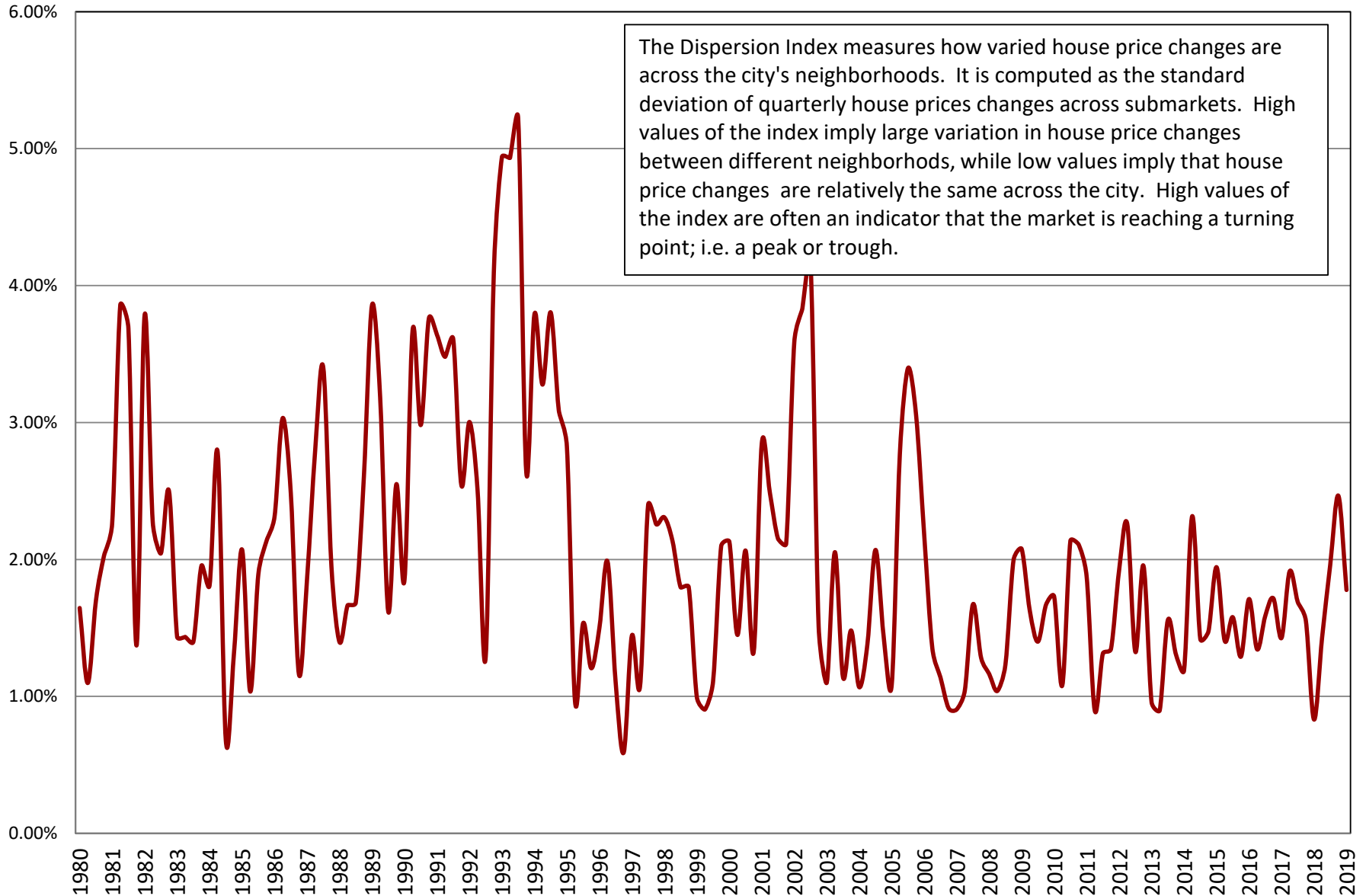
Philadelphia House Price Diffusion Index 1980-2019



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

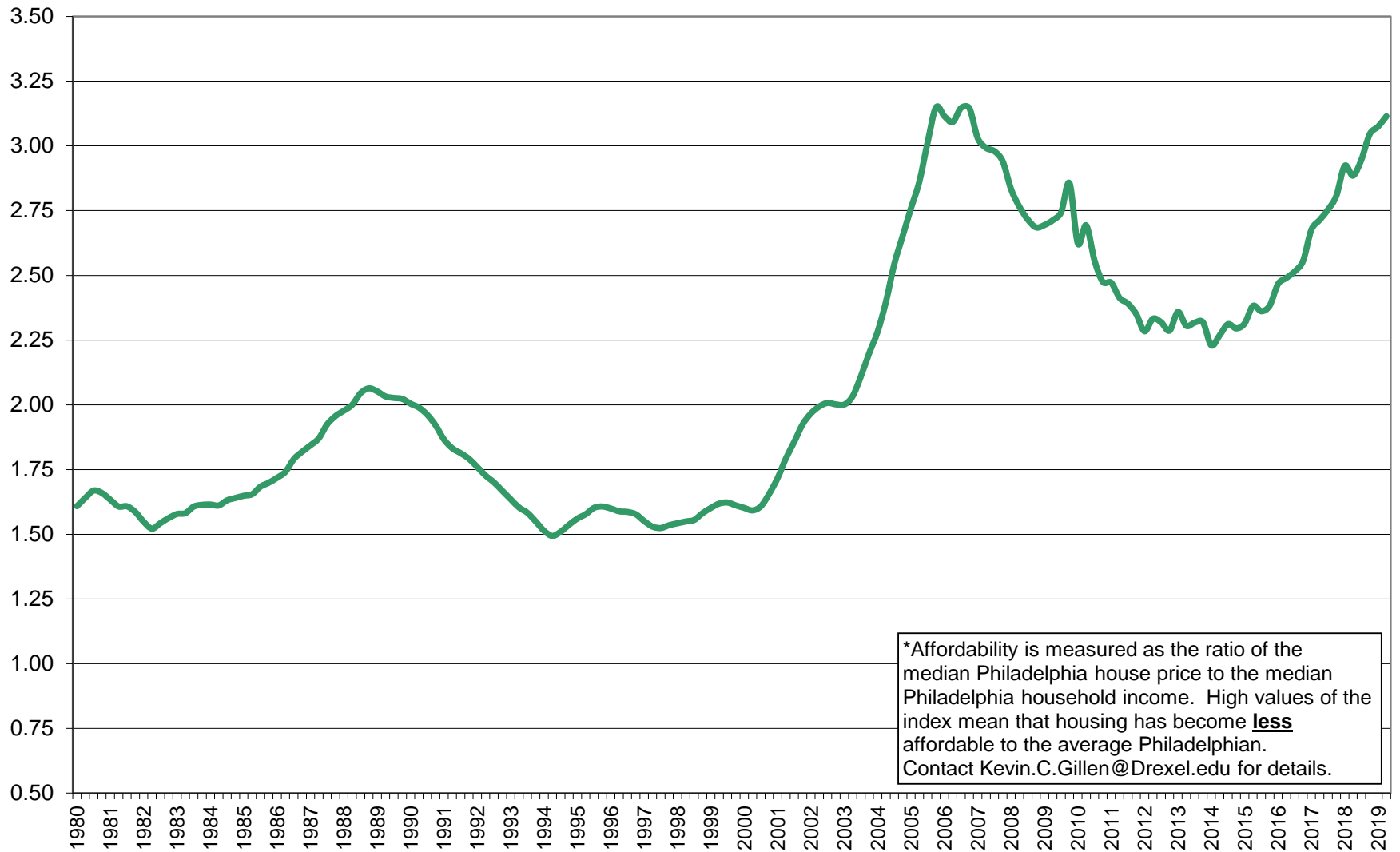


Dispersion Index of Philadelphia Housing



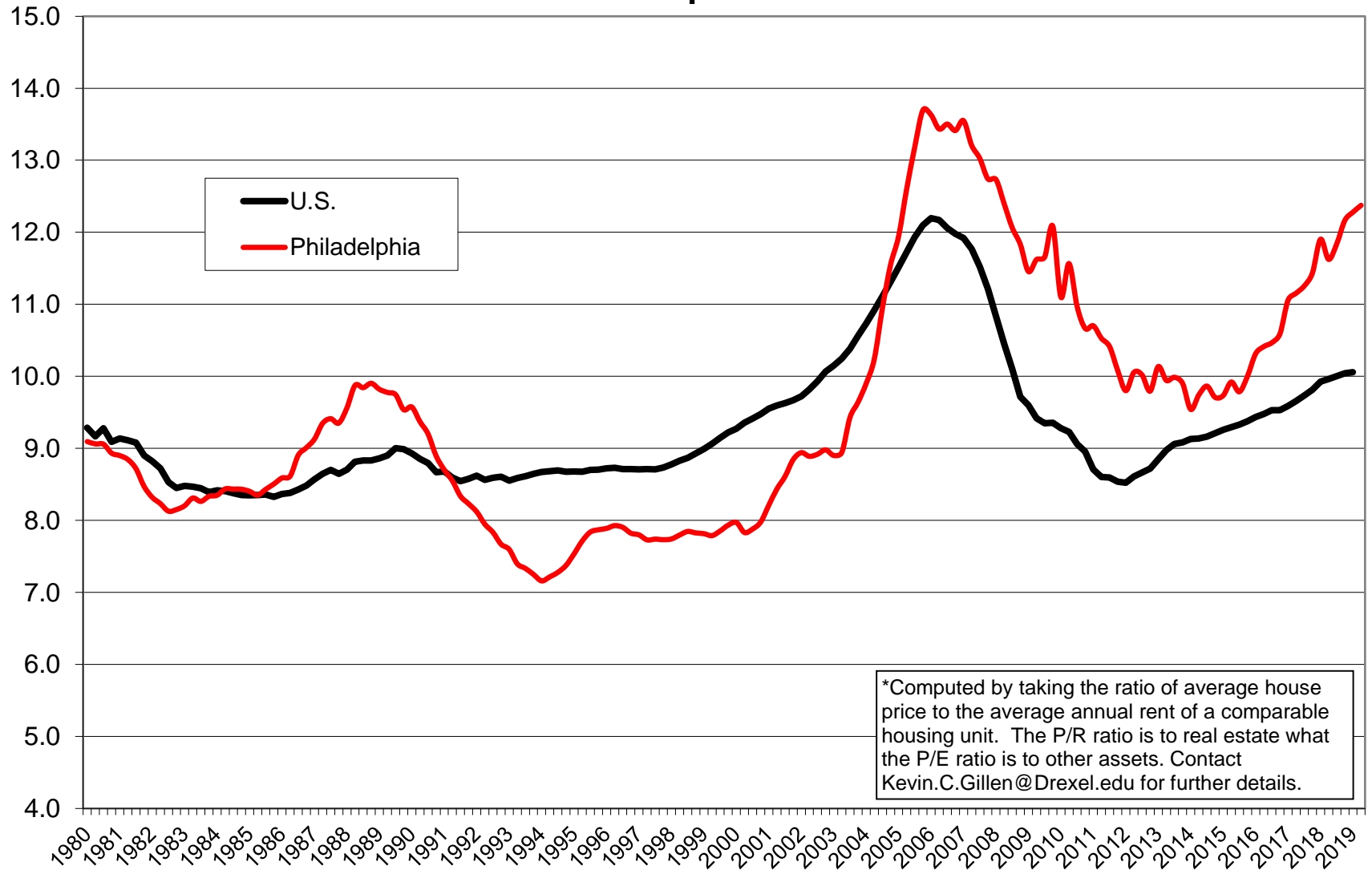
The Dispersion Index measures how varied house price changes are across the city's neighborhoods. It is computed as the standard deviation of quarterly house prices changes across submarkets. High values of the index imply large variation in house price changes between different neighborhoods, while low values imply that house price changes are relatively the same across the city. 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: 1980-2019



*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.

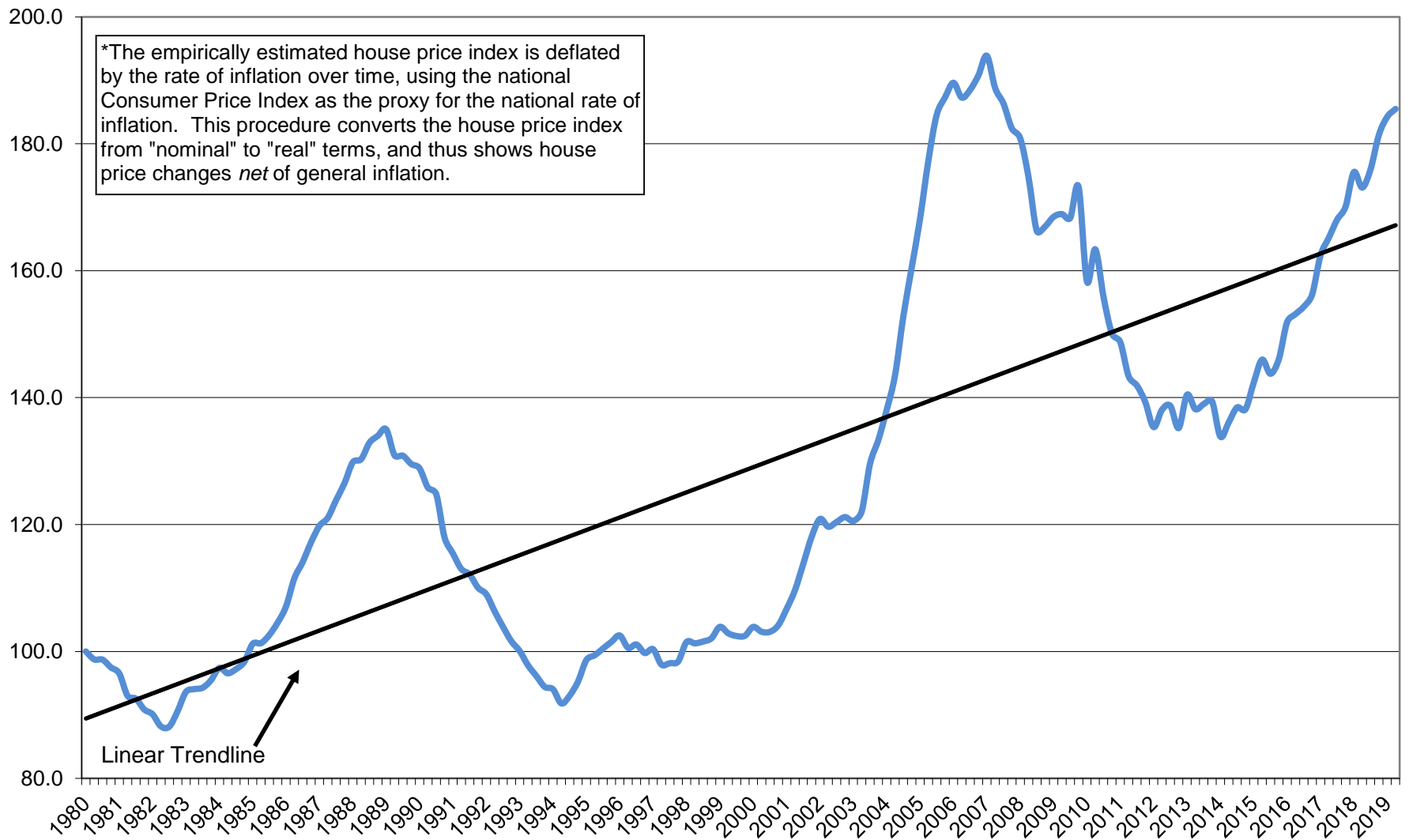
Average House Price-to-Rent Ratios*: 1980-2019 Philadelphia v. U.S.



*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.

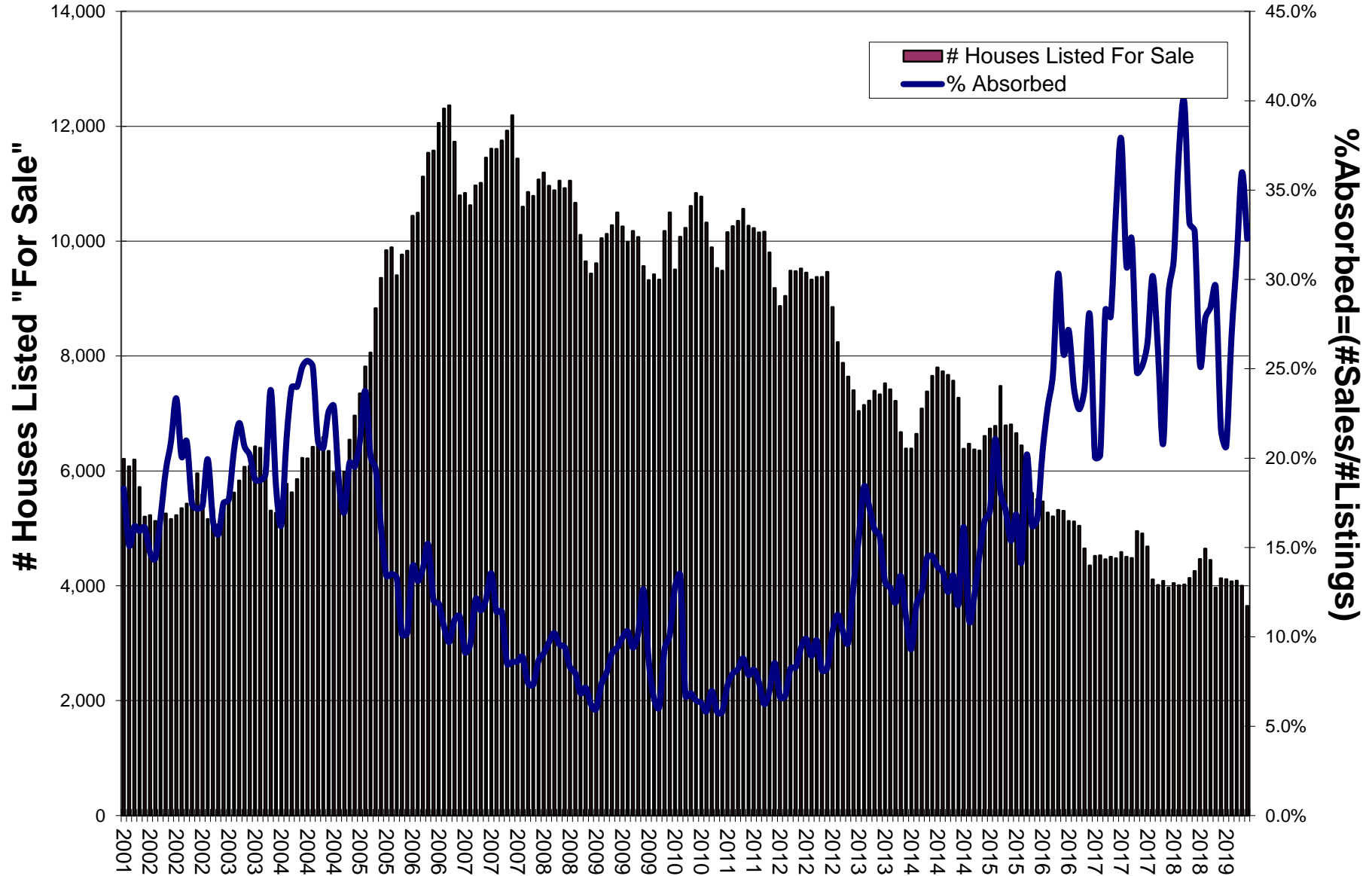
Inflation-Adjusted* Philadelphia House Price Index 1980-2019

1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

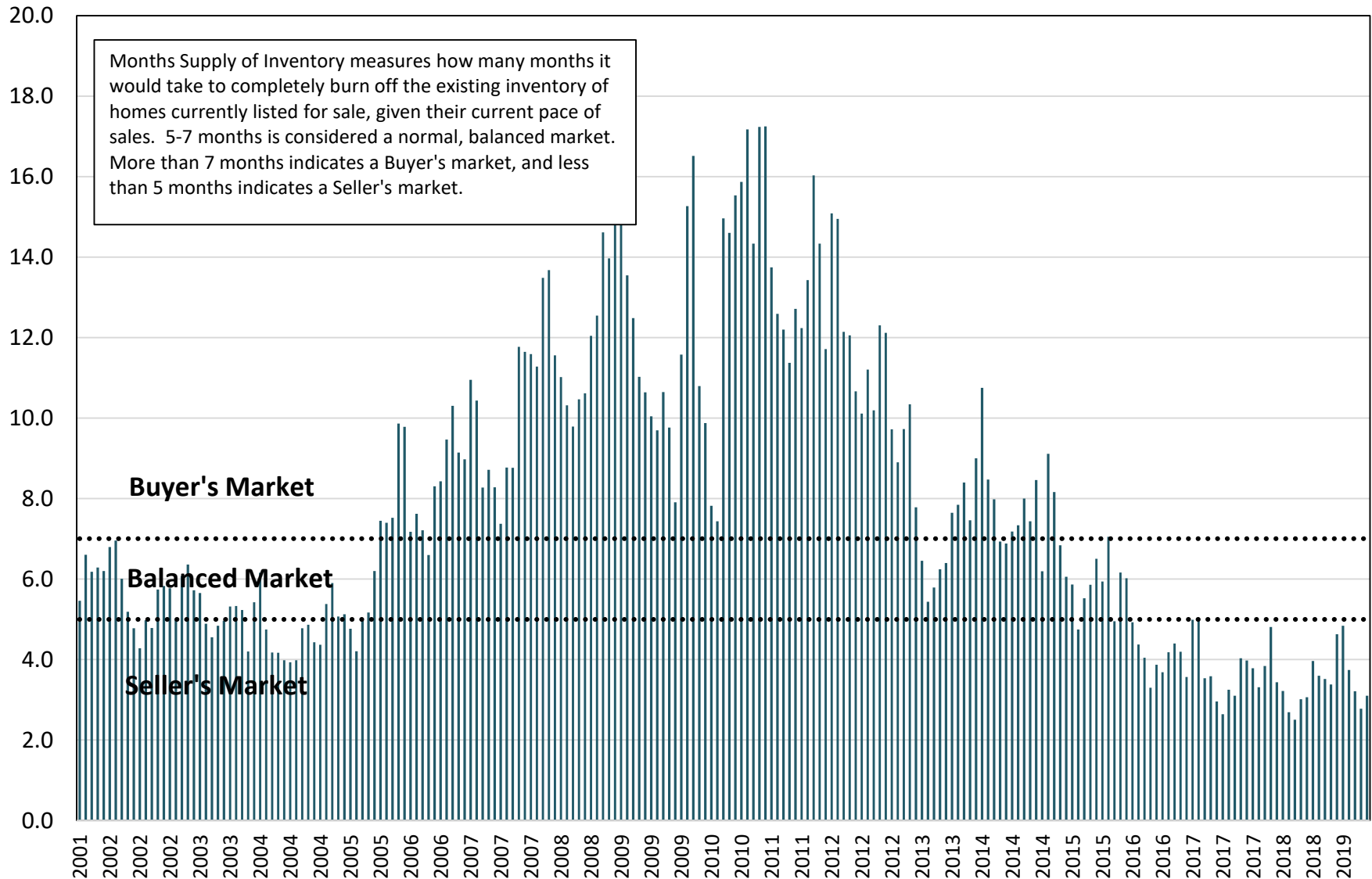


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Trend MLS



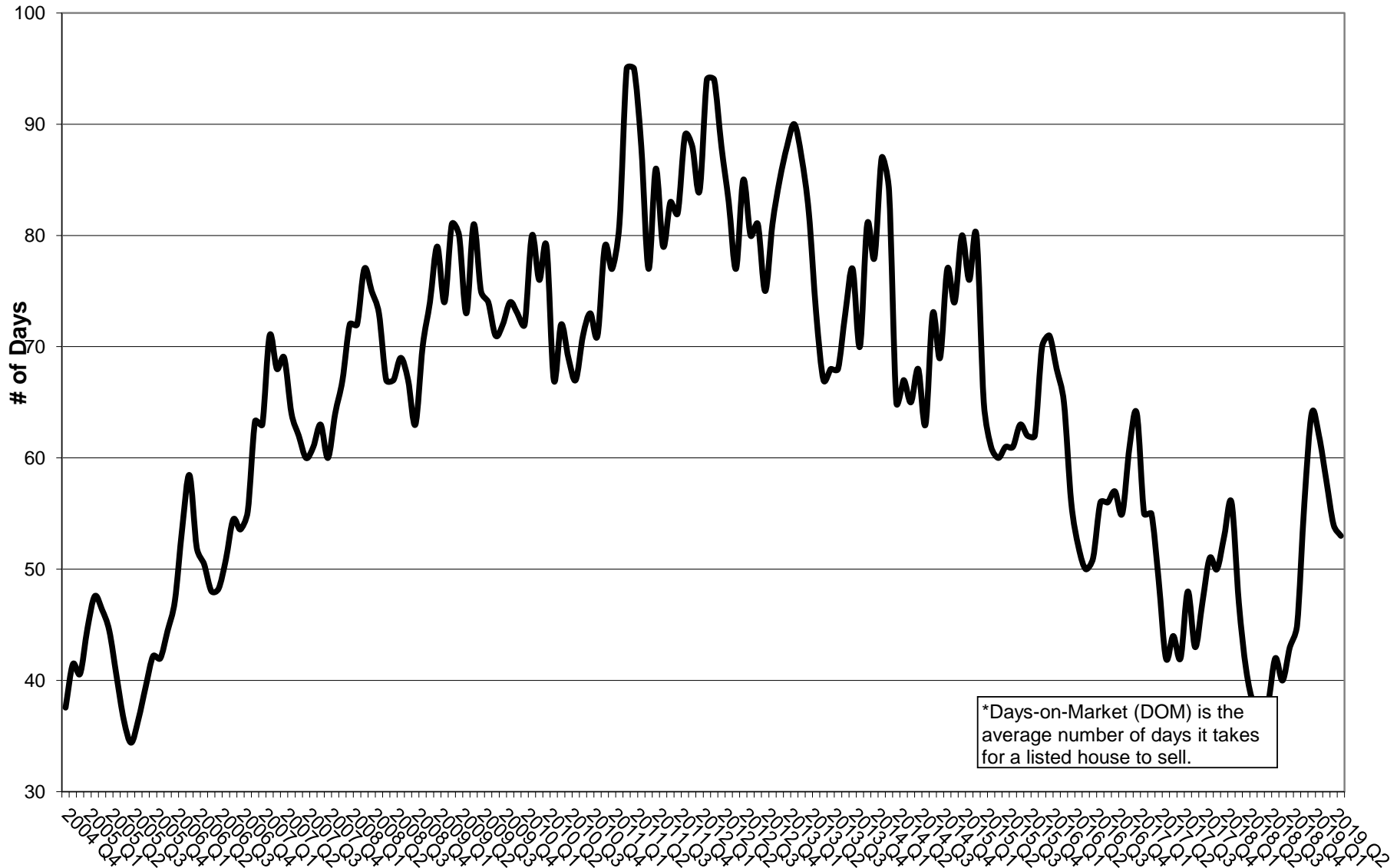
Months Supply of Inventory in Philadelphia



Source: Trend MLS



Average Days-on-Market* for Philadelphia Homes

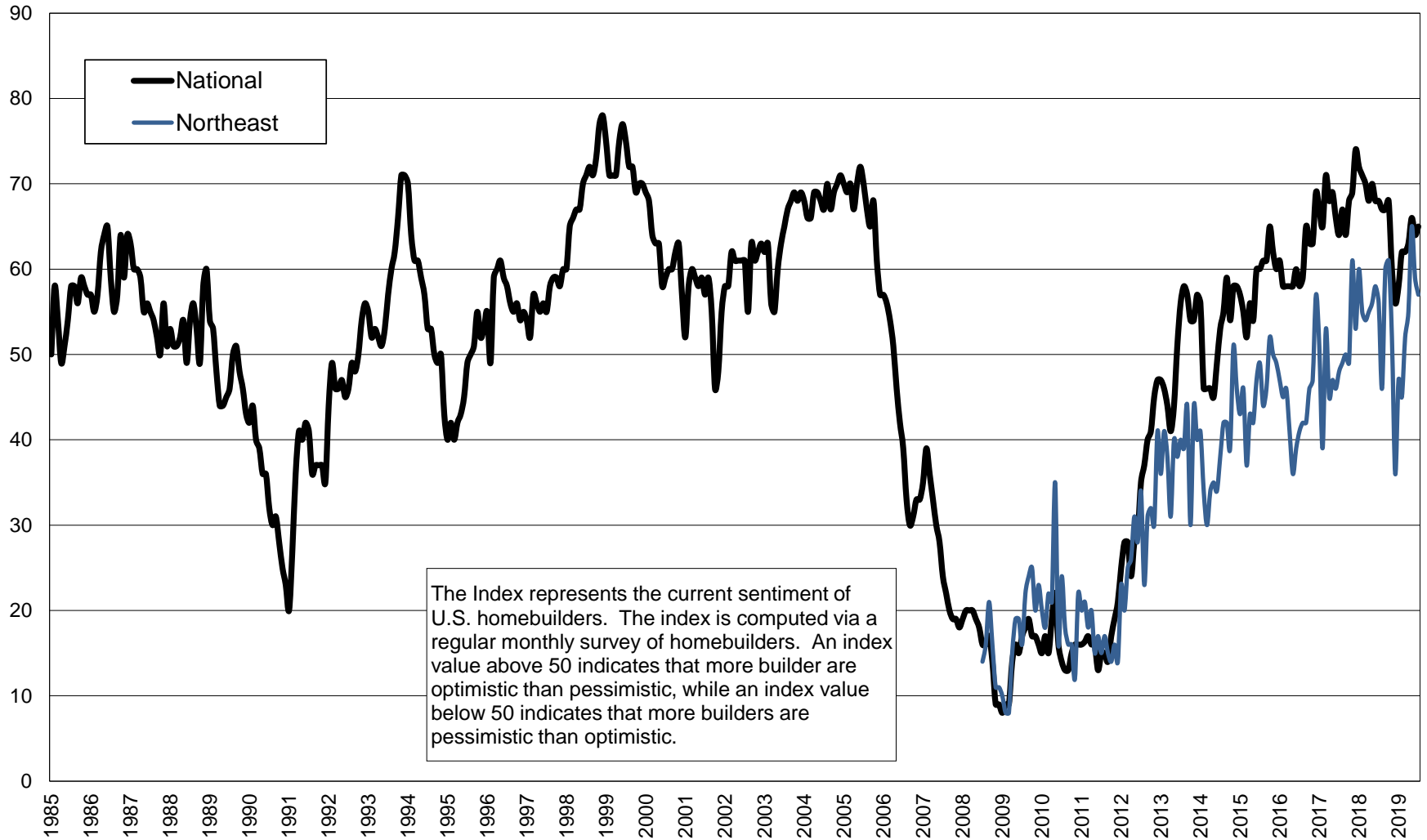


*Days-on-Market (DOM) is the average number of days it takes for a listed house to sell.

Source: Trend MLS



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



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

Philadelphia Stock Exchange Housing Sector Index: 2002-2019

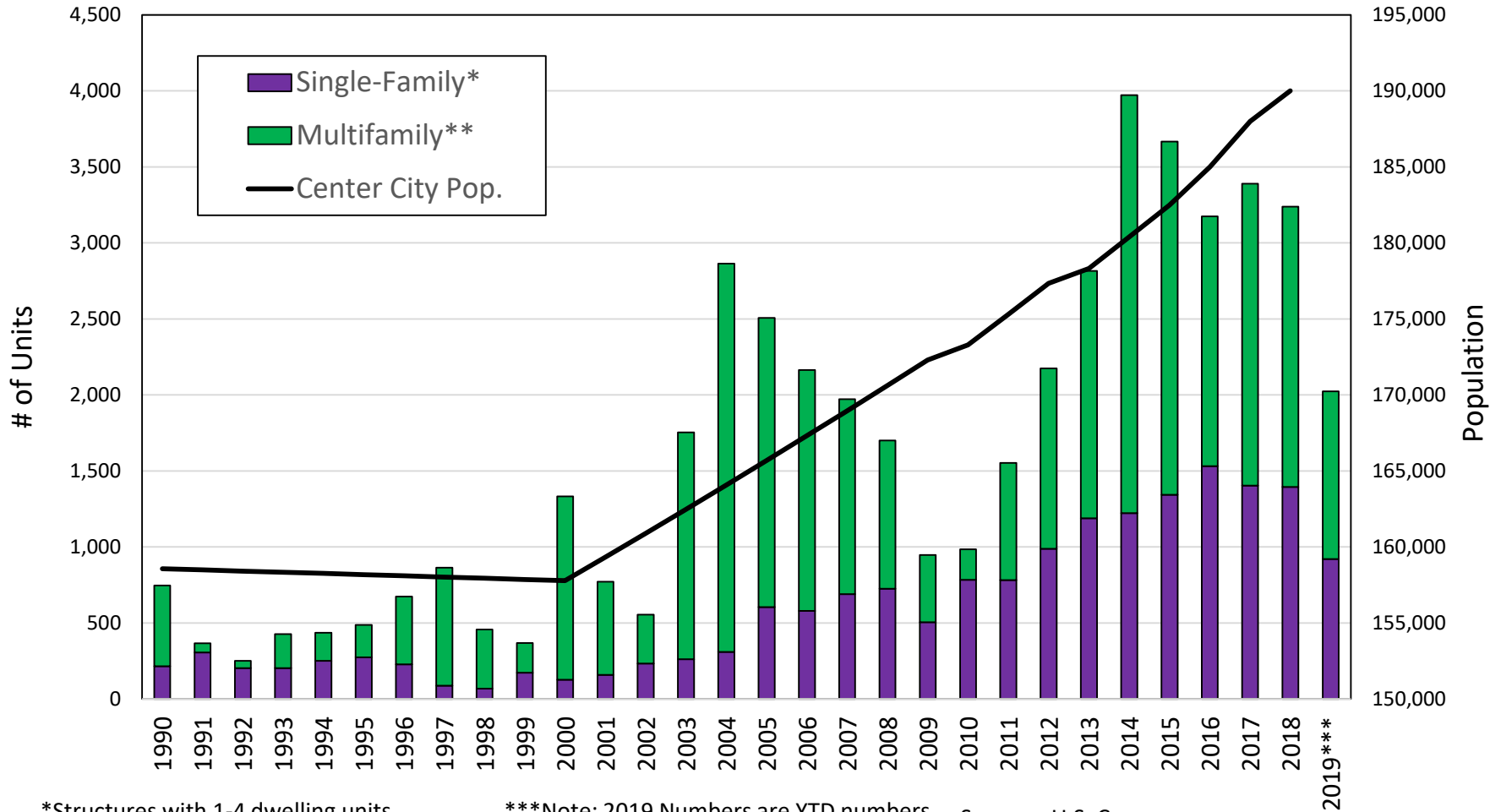


The PHLX Housing Sector Index is a modified cap-weighted index composed of 20 companies whose primary lines of business are directly associated with the U.S. housing construction market. The index composition encompasses residential builders, suppliers of aggregate, lumber and other construction materials,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



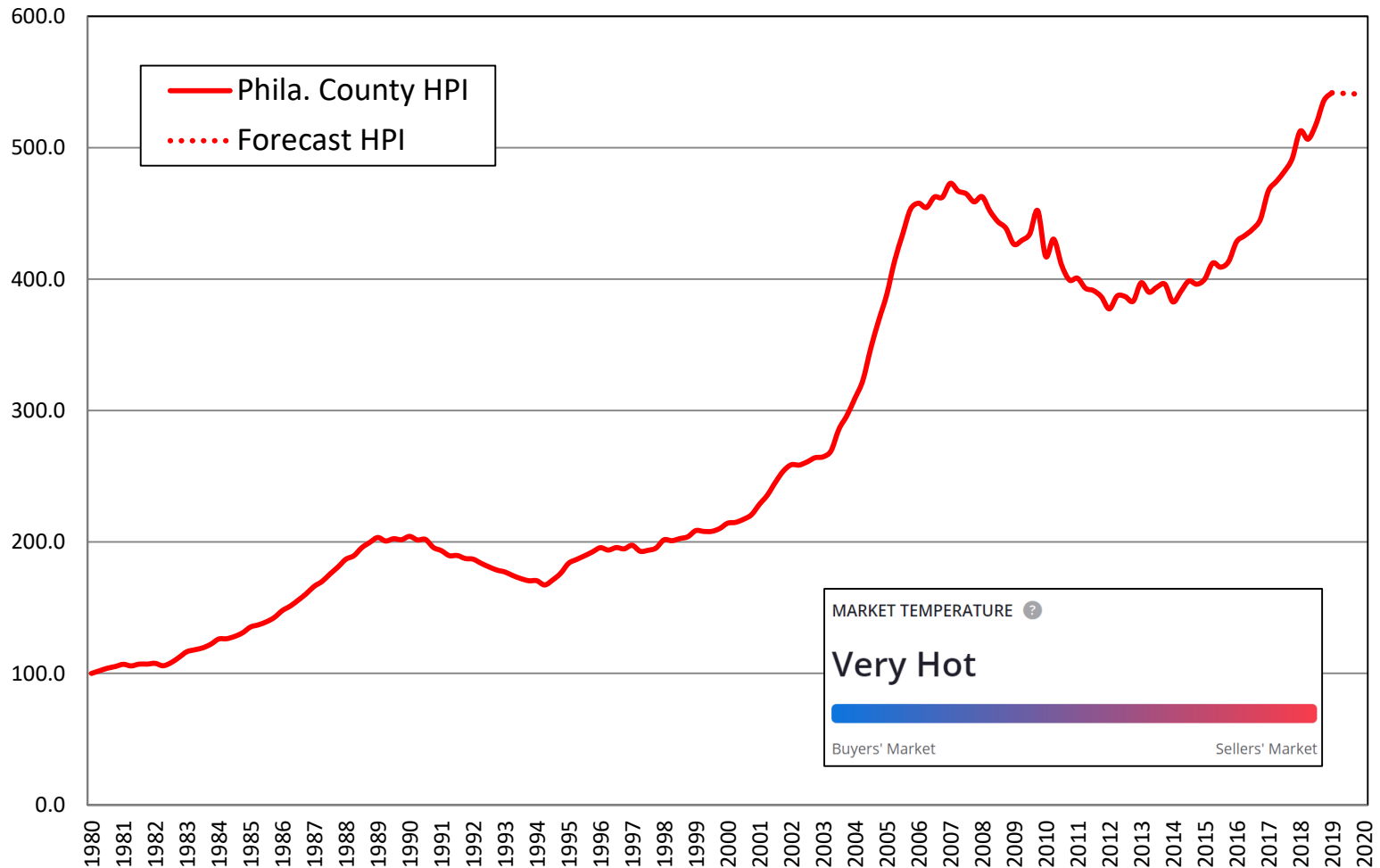
*Structures with 1-4 dwelling units
 **Structures with >=5 dwelling units

***Note: 2019 Numbers are YTD numbers through June 2019 only.

Sources: U.S. Census, Center City District

Philadelphia House Price Index and 1-Year Forecast

Philadelphia House Price Index: Actual v. Forecast



Zillow's most recent forecast of Philadelphia house prices projects negative appreciation over the next 12 months. This is the first time during the current cycle that their forecast has turned negative. As recently as six months ago, Zillow was projecting a very bullish forecast of 17.3% price appreciation over the next 12 months. Curiously (and bizarrely), Zillow has also persisted in rating Philadelphia's housing market temperature as "Very Hot".

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