

PHILADELPHIA HOUSE PRICE INDICES

April 18, 2018



DREXEL UNIVERSITY
Lindy Institute
for Urban Innovation

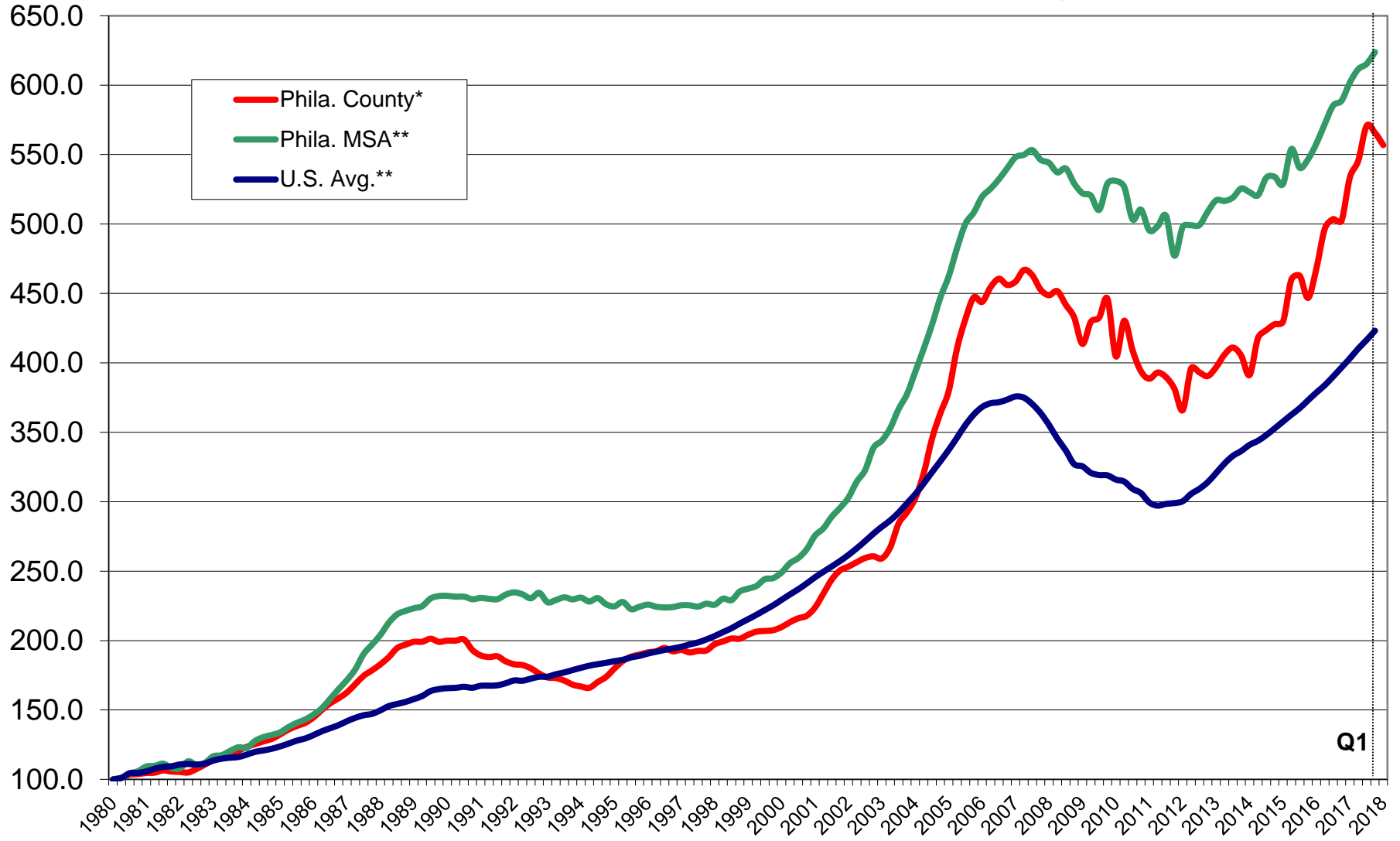
KEVIN C. GILLEN, Ph.D.

Kevin.C.Gillen@Drexel.edu

***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.*



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.

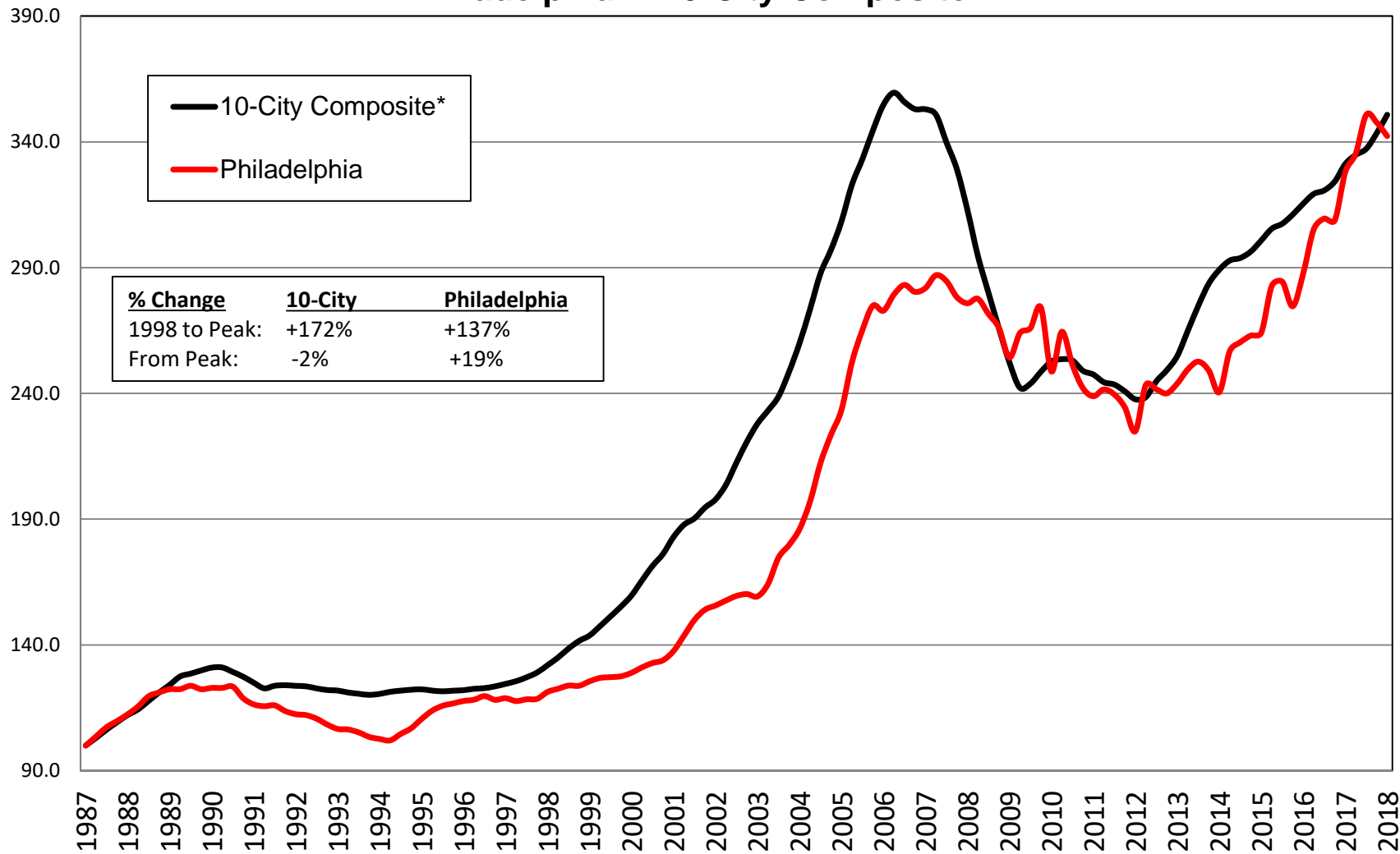
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
38-Year	171.7%	183.1%	144.3%
10-Year	21.6%	13.3%	15.1%
1-Year	4.3%	5.8%	6.5%
1-Quarter	-1.6%	1.4%	1.6%

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

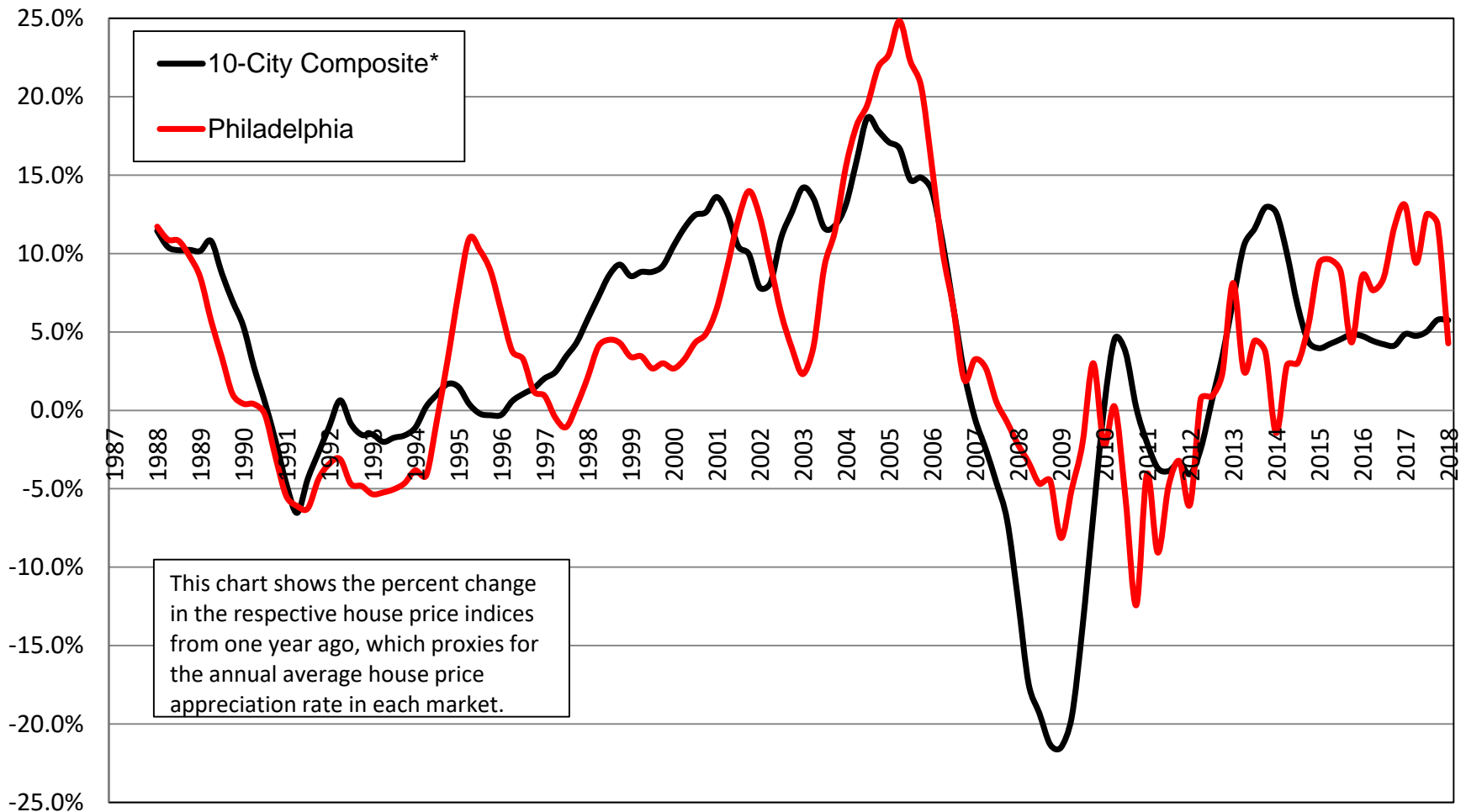
**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2017Q4 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

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.

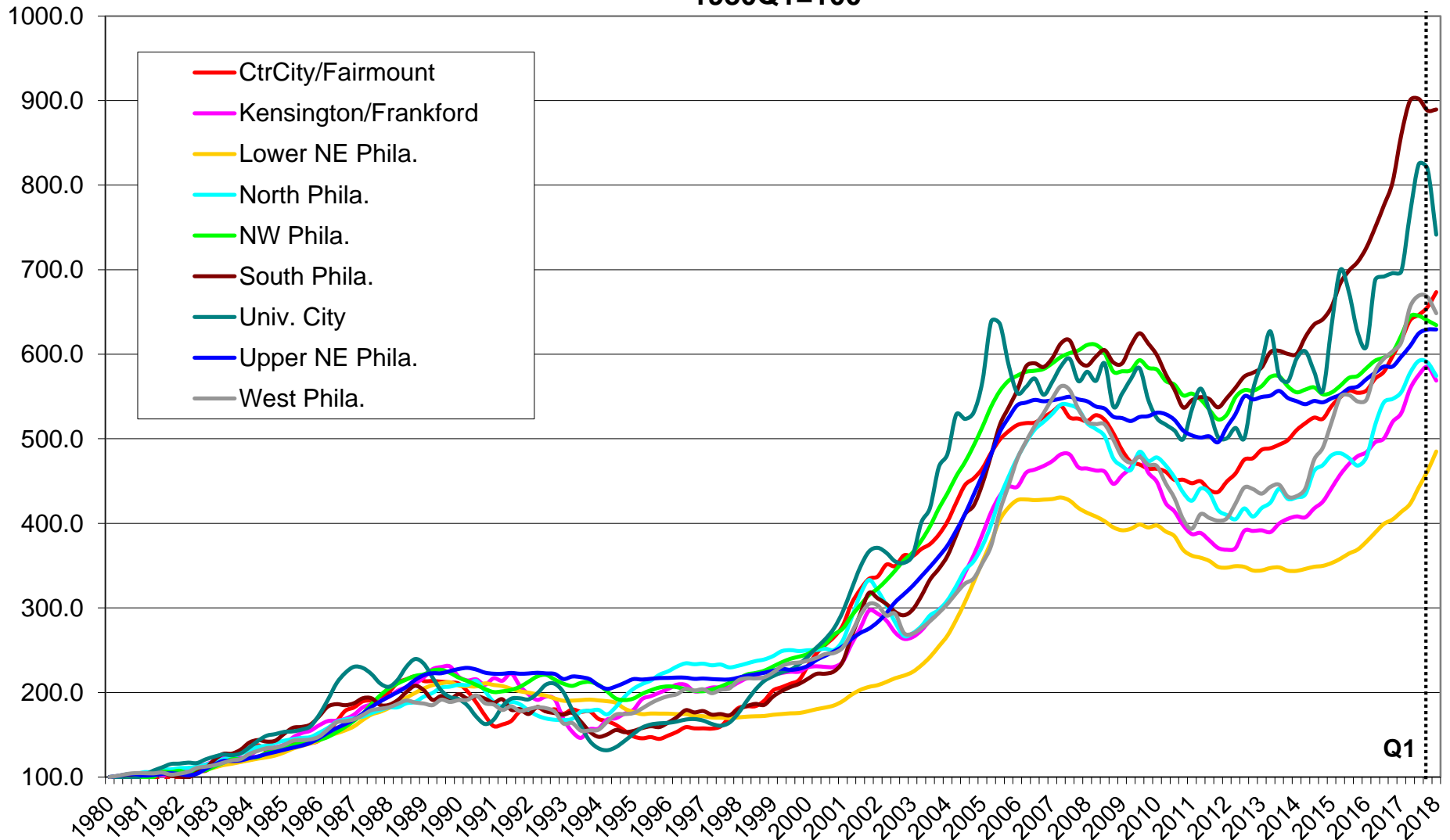
YoY House Price Change (%) 1987-2018: Philadelphia v. 10-City Composite



*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.

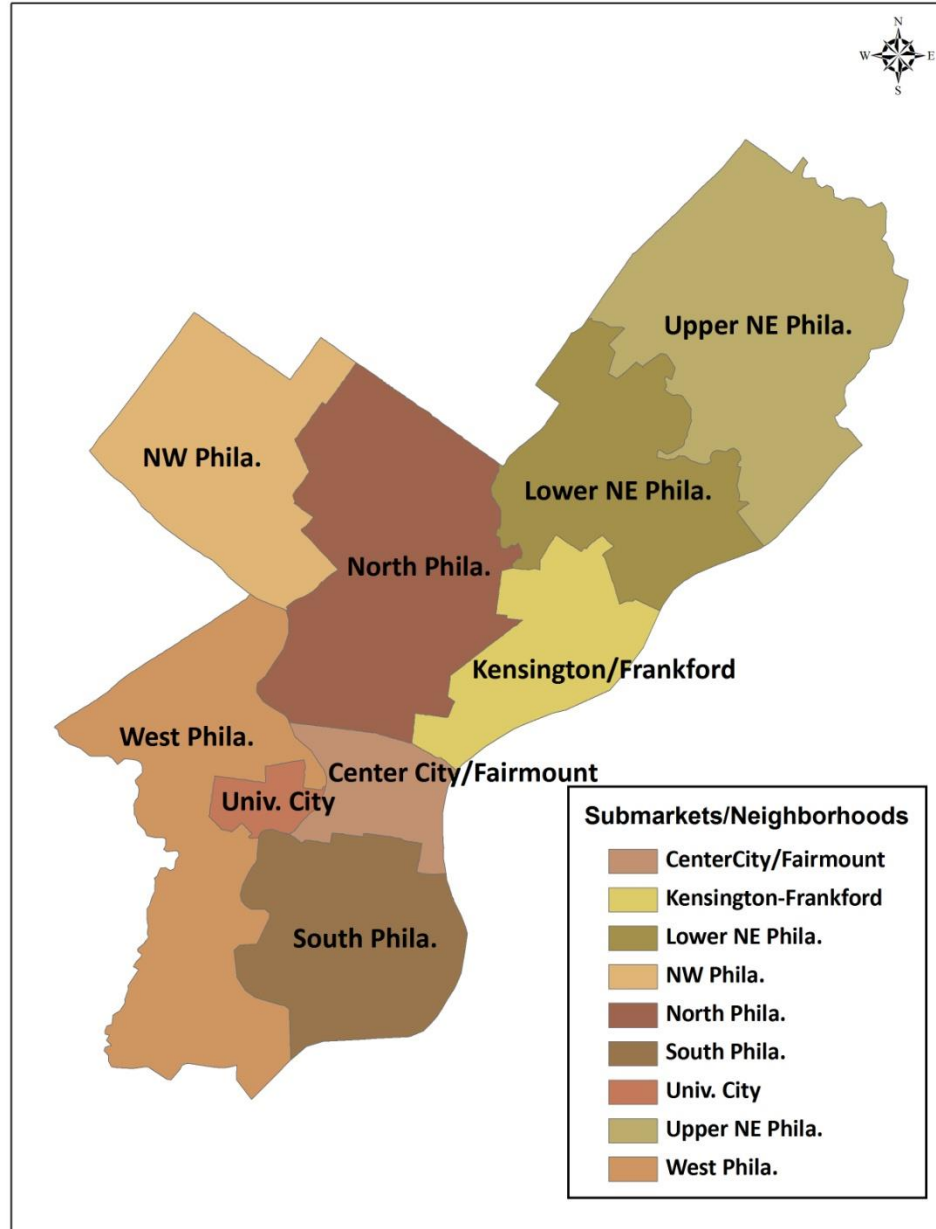
© 2018 Drexel University | Kevin.C.Gillen@Drexel.edu

Philadelphia House Price Appreciation Rates by Submarket

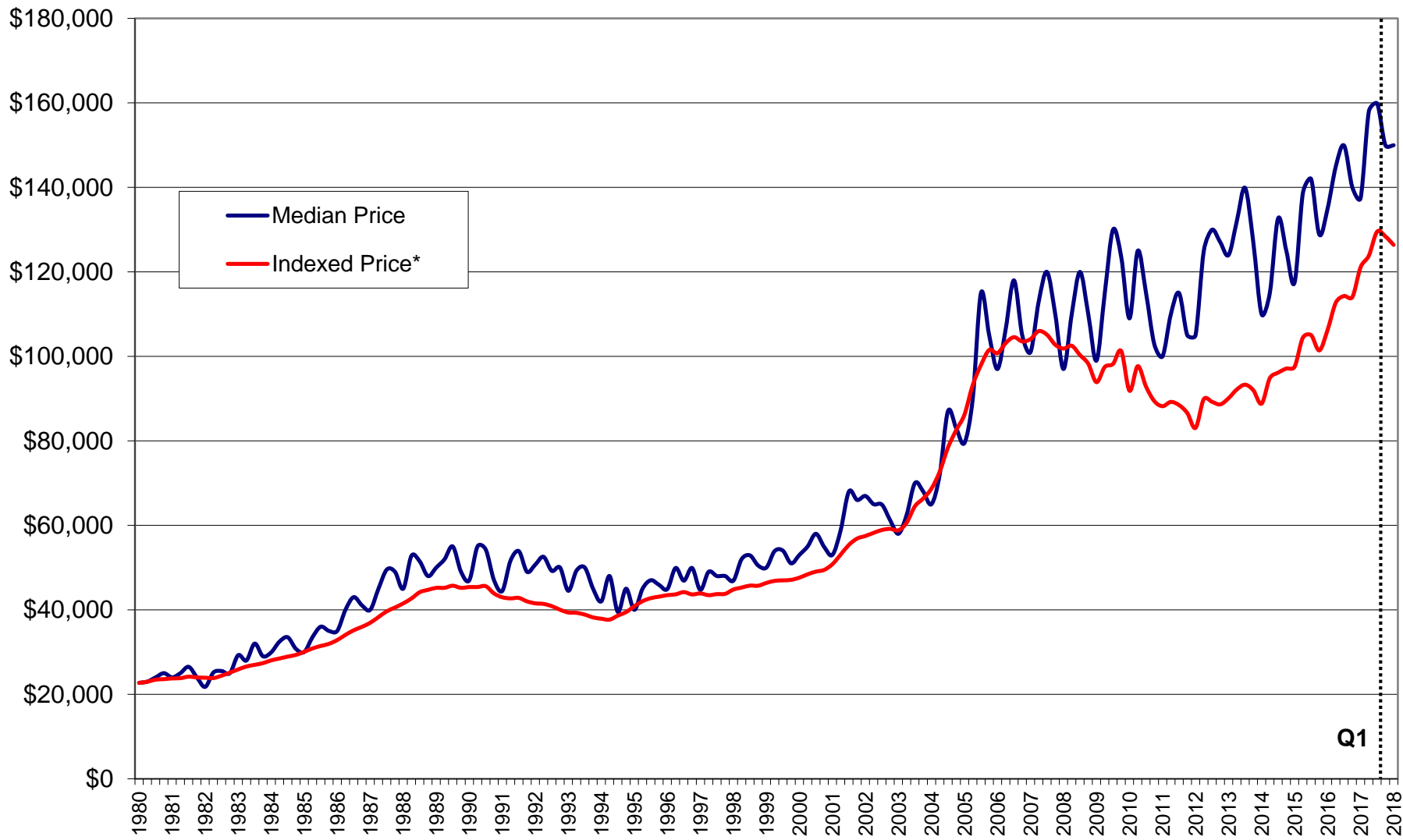
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West Phila.
38-year	190.7%	173.8%	157.9%	174.8%	184.8%	218.5%	200.3%	184.0%	186.9%
10-year	25.7%	20.2%	16.2%	10.3%	3.8%	41.6%	24.7%	14.5%	22.1%
1-Year	8.8%	7.0%	15.9%	3.4%	1.9%	3.4%	6.0%	5.2%	5.4%
1-Quarter	2.7%	-2.8%	4.9%	-2.7%	-0.9%	0.1%	-10.0%	0.0%	-2.9%

This table gives the total % change in average house values by submarket, through 2018 Q1, from different starting points in time.

Philadelphia Submarket Boundaries



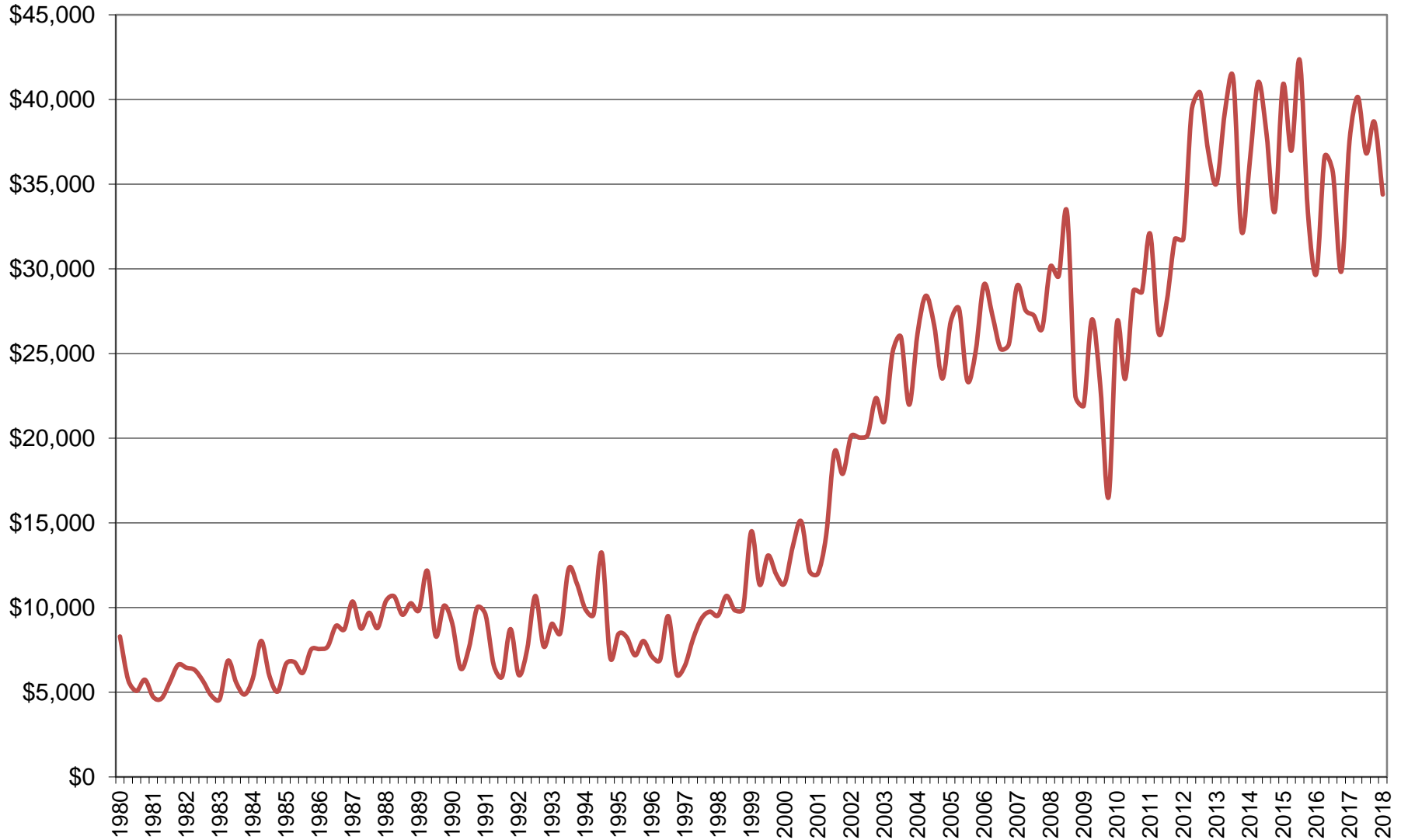
Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2018



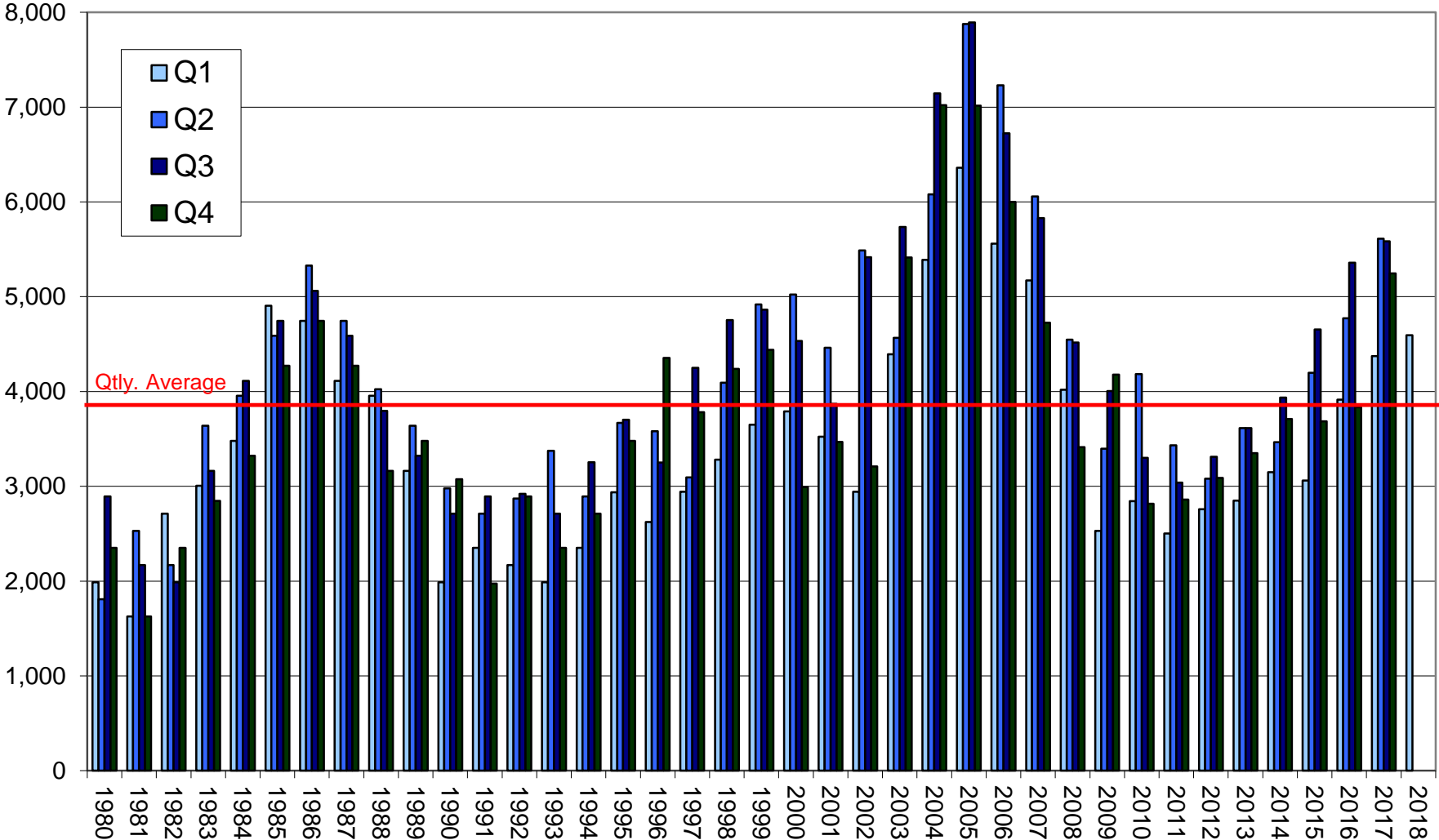
* Empirically estimated by Kevin C. Gillen, PhD

© 2018 Drexel University | Kevin.C.Gillen@Drexel.edu

Average House Price Minus Median House Price: 1980-2018

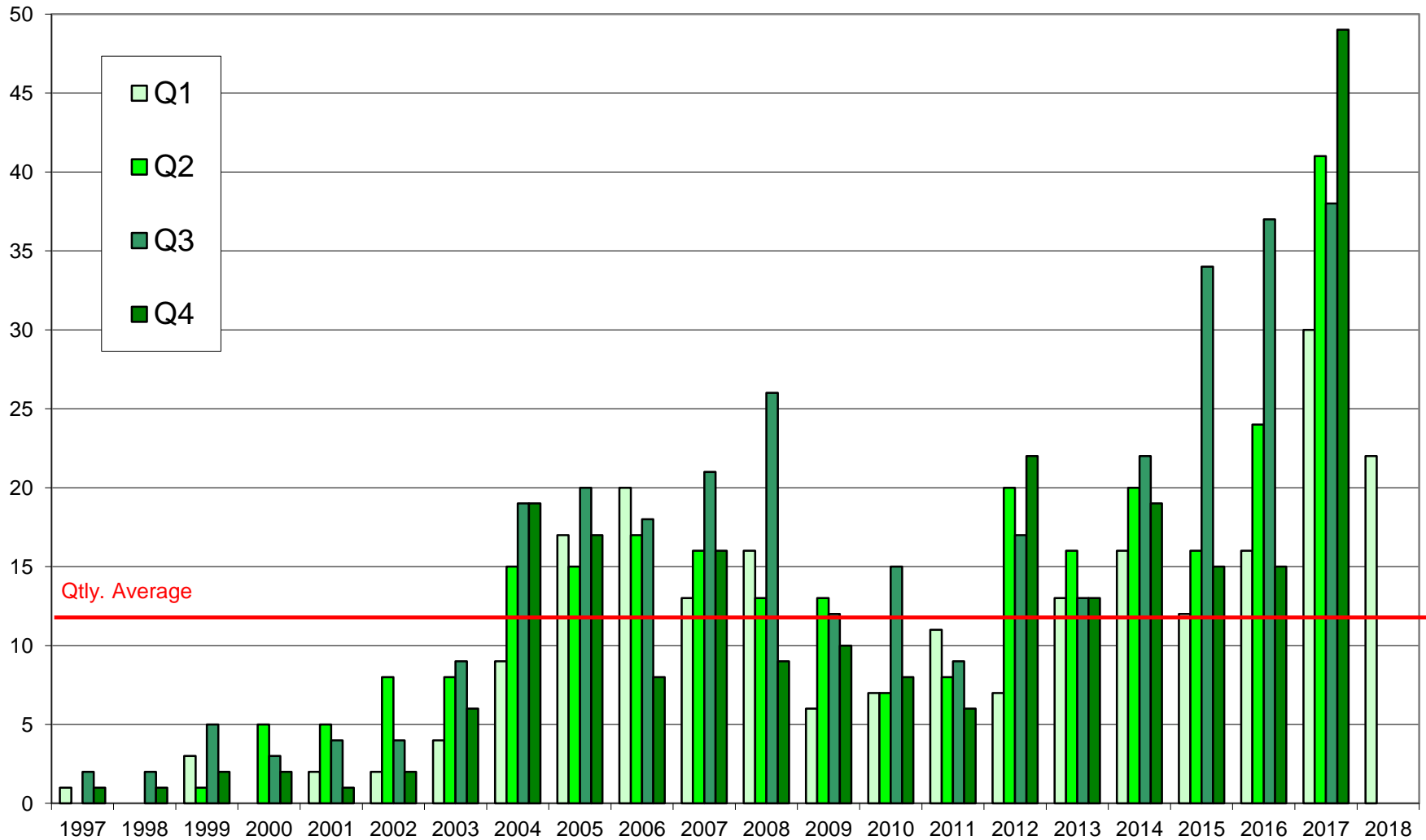


Number of Philadelphia House Sales* per Quarter: 1980-2018



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

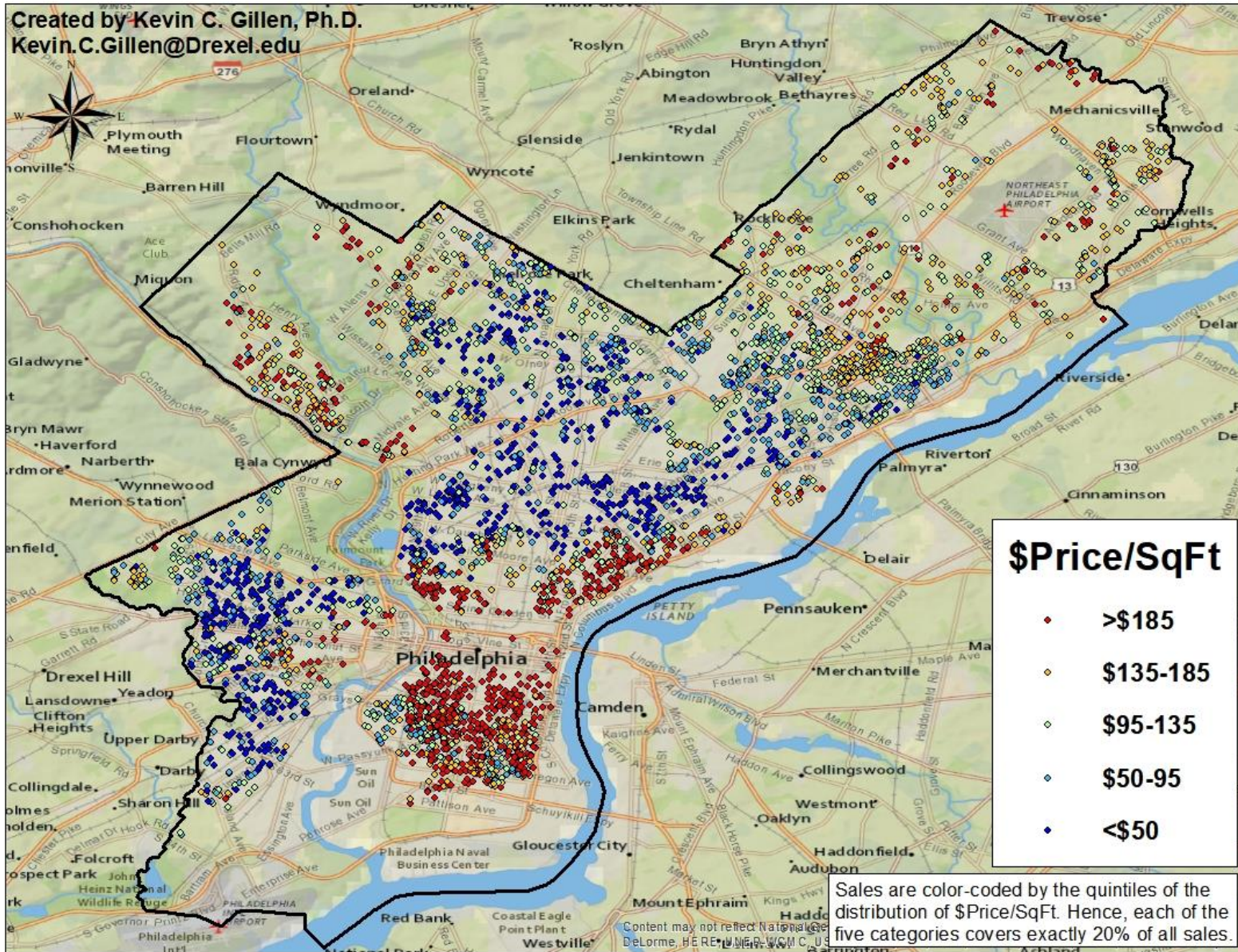
Number of Philadelphia Home Sales* per Quarter with Price \geq \$1 Million: 1997-2018



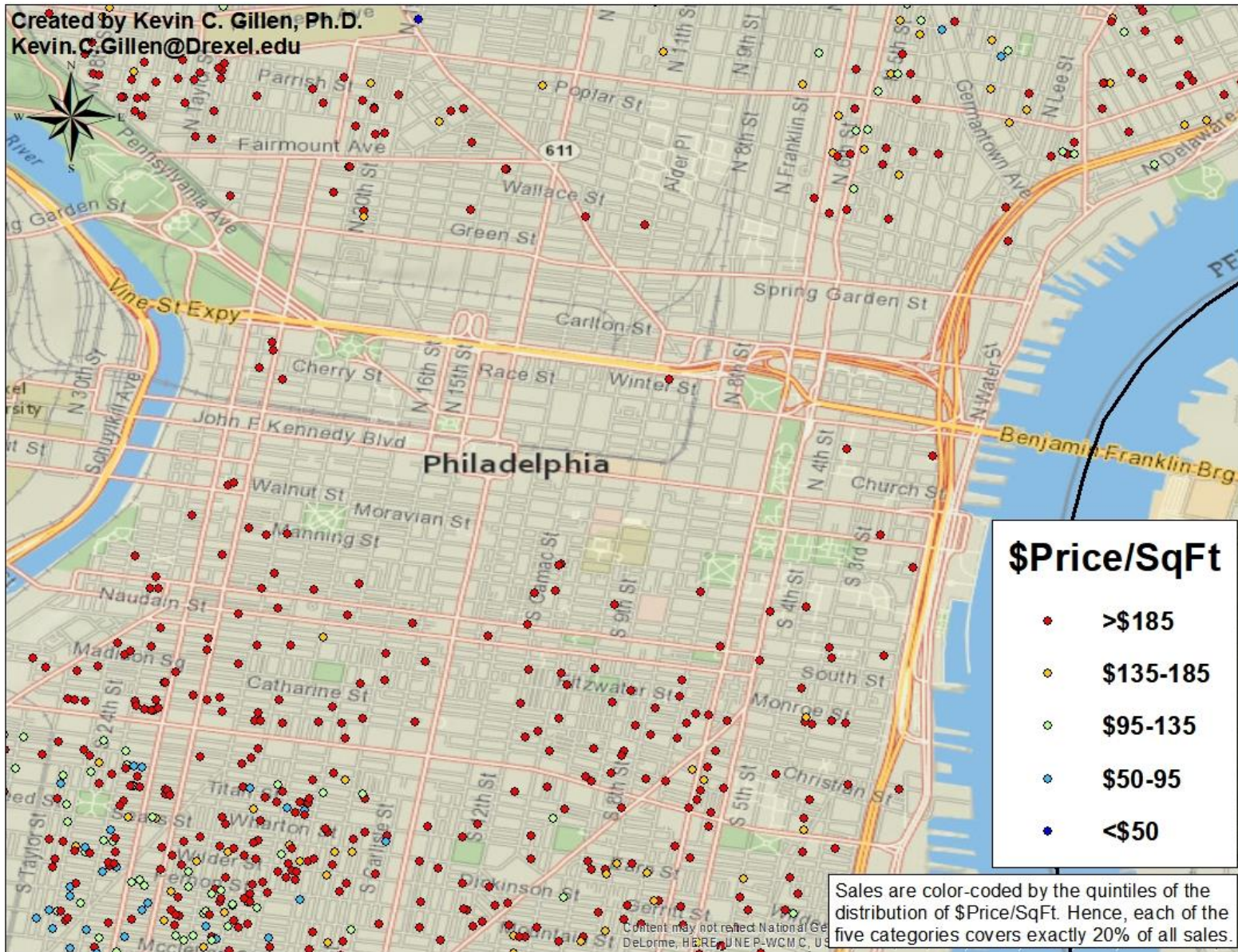
*Only arms-length transactions between private sector entities were included in these numbers.

Philadelphia House Sales in 2018 Q1

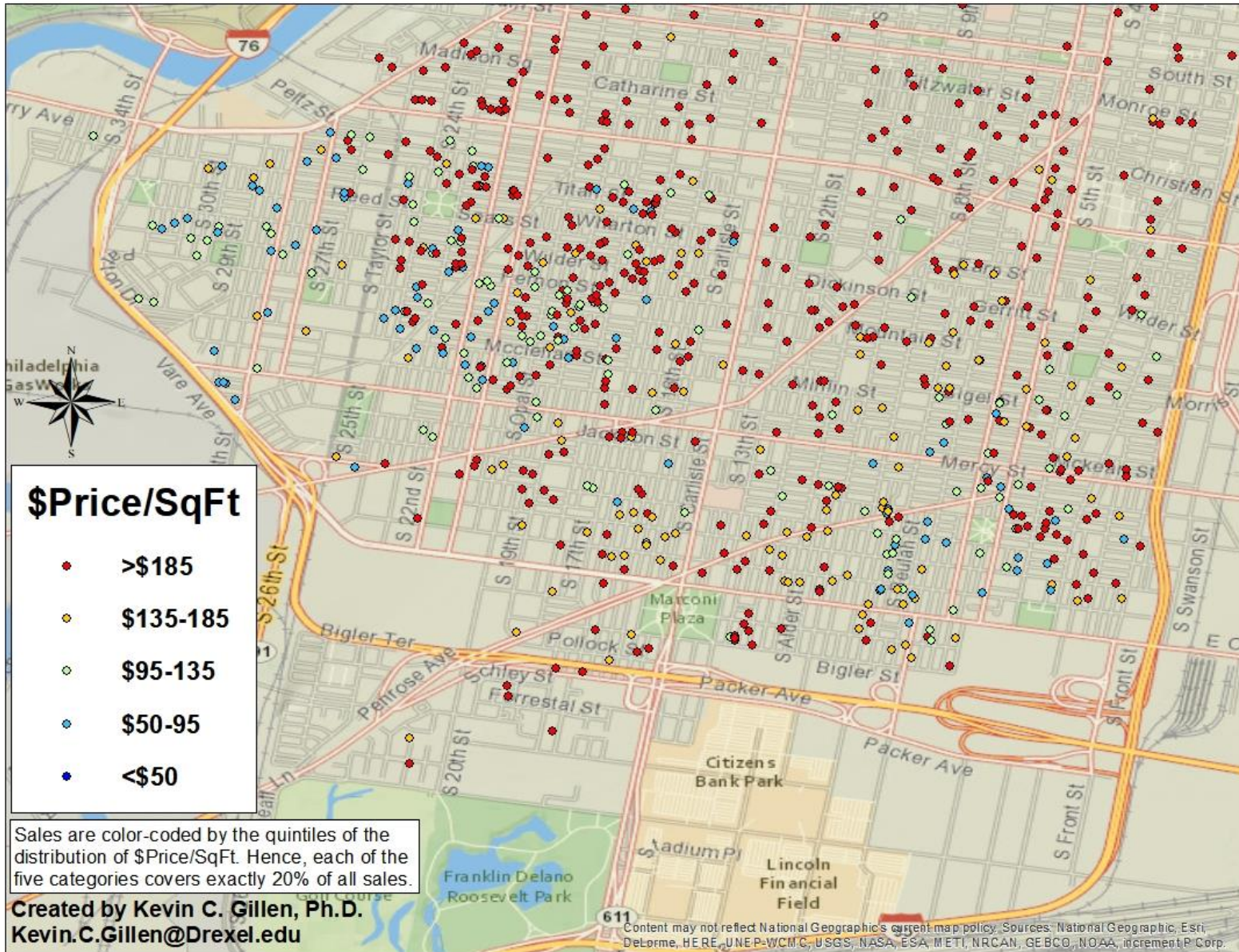
Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu



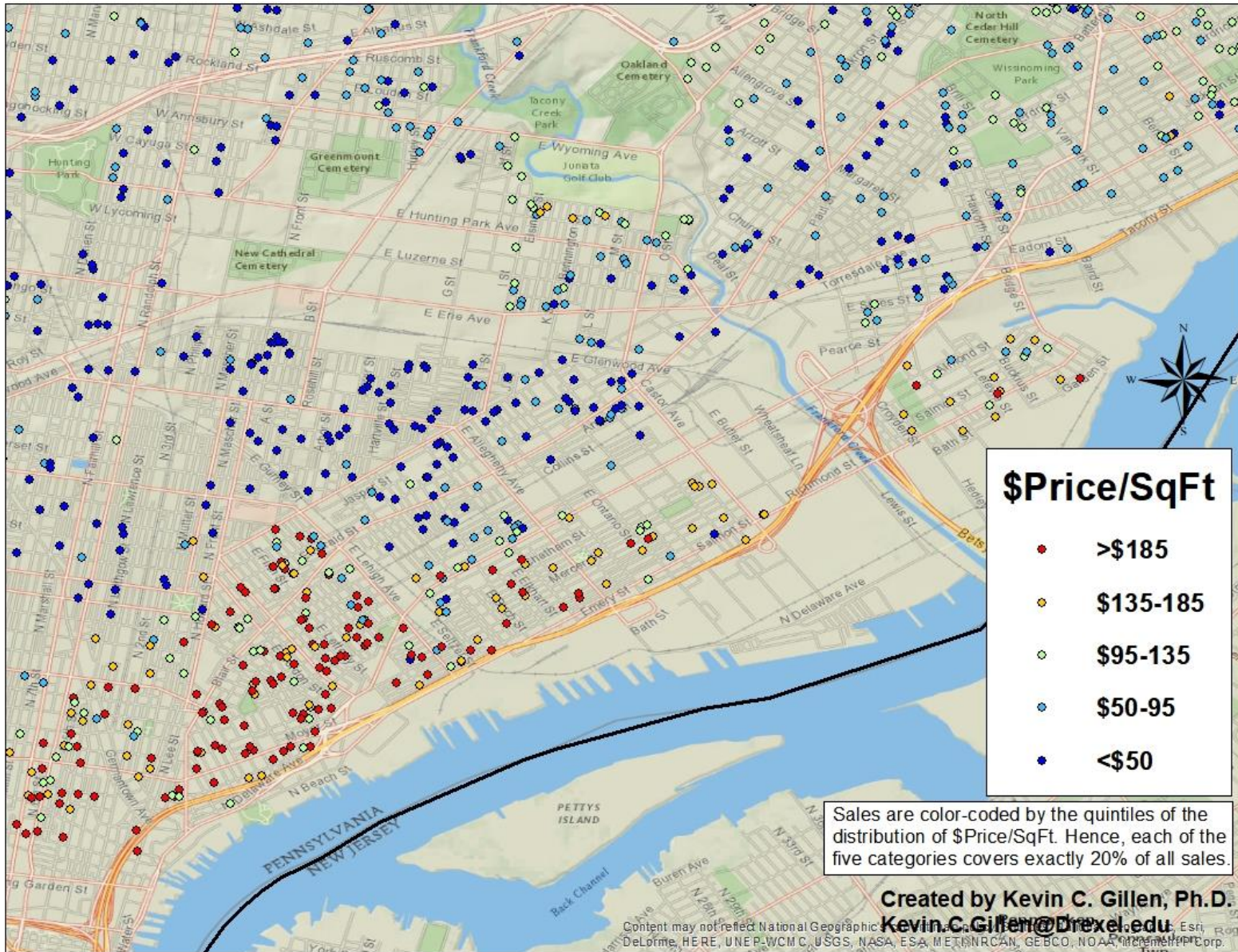
Center City House Sales in 2018 Q1



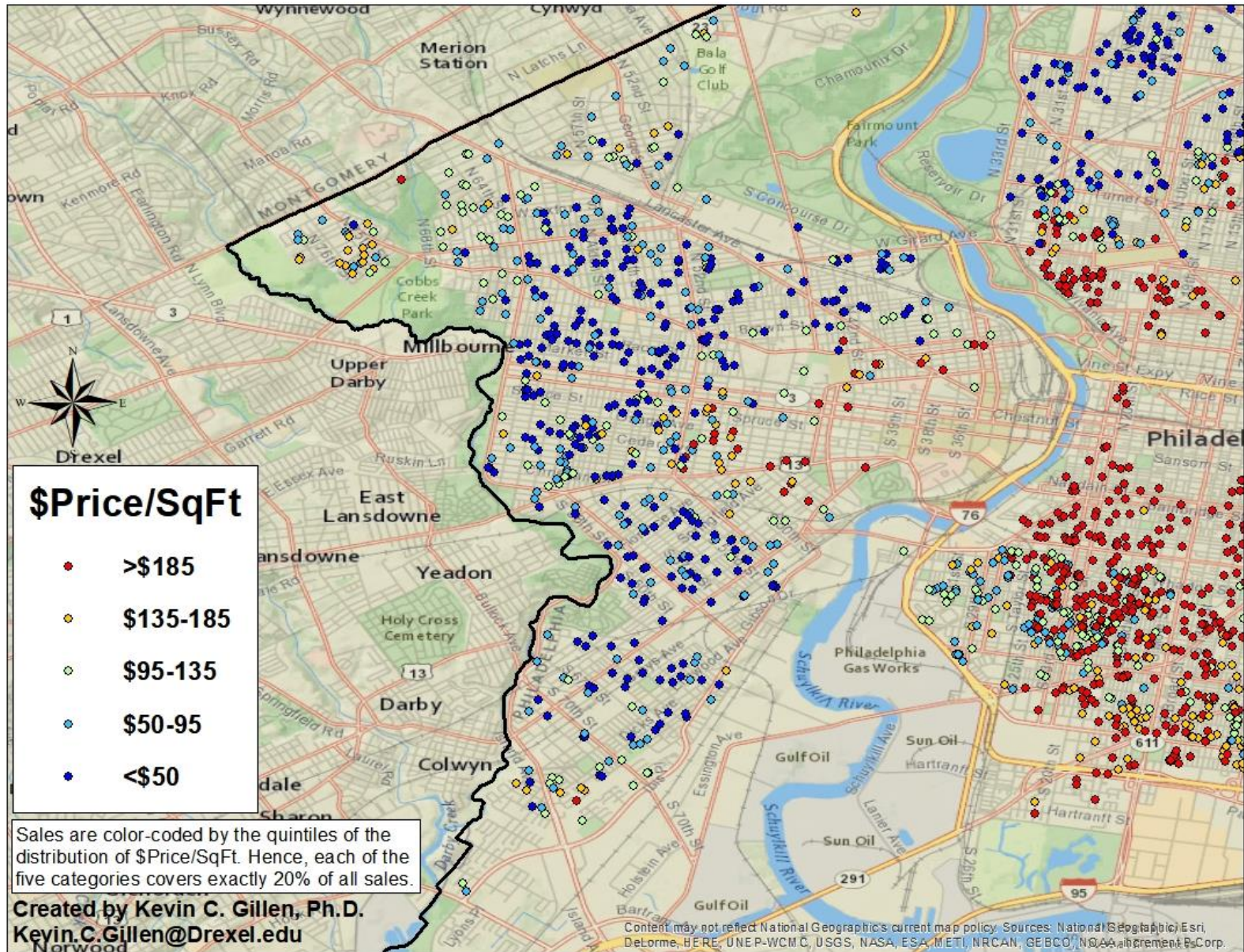
South Philadelphia House Sales in 2018 Q1



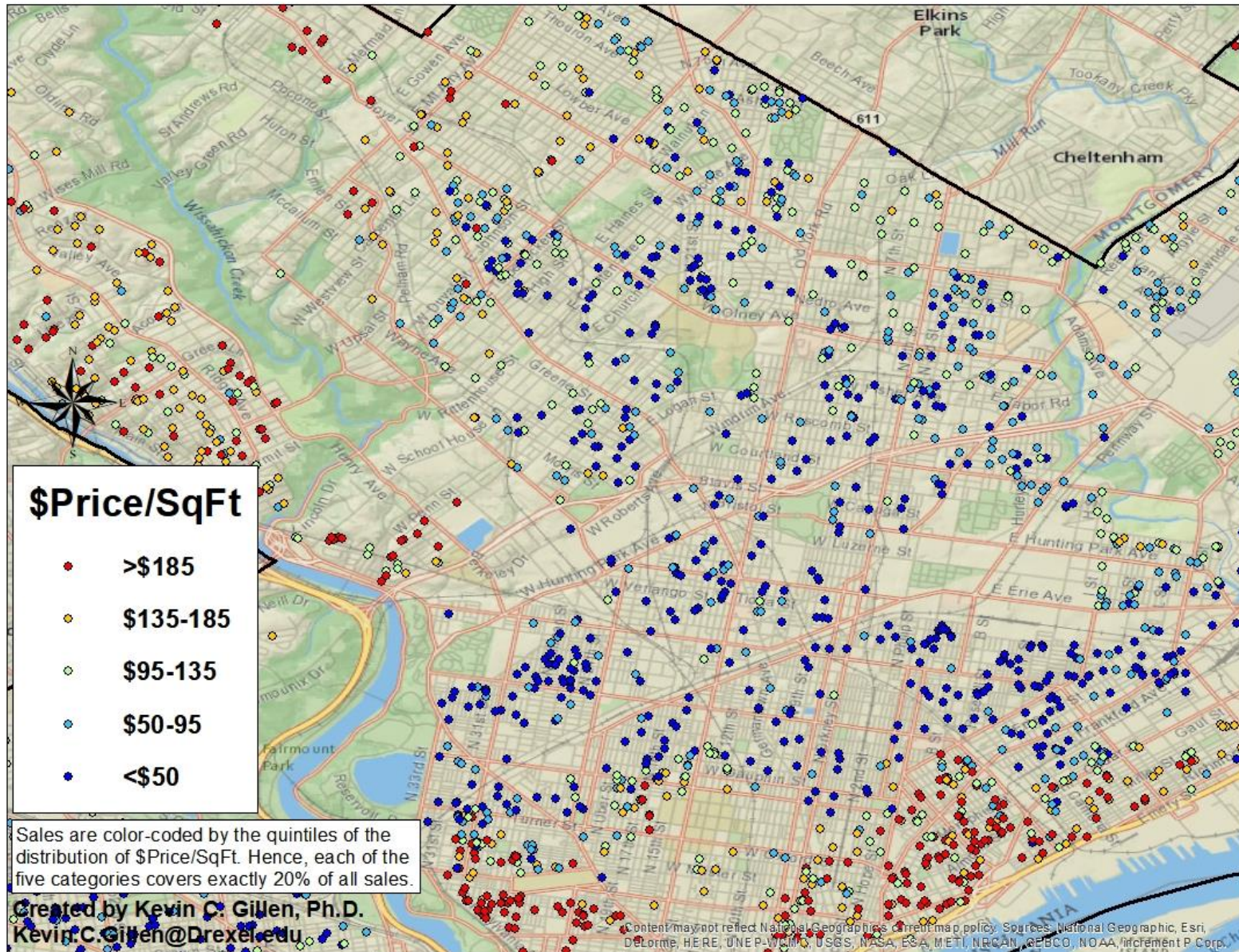
Kensington/Frankford House Sales in 2018 Q1



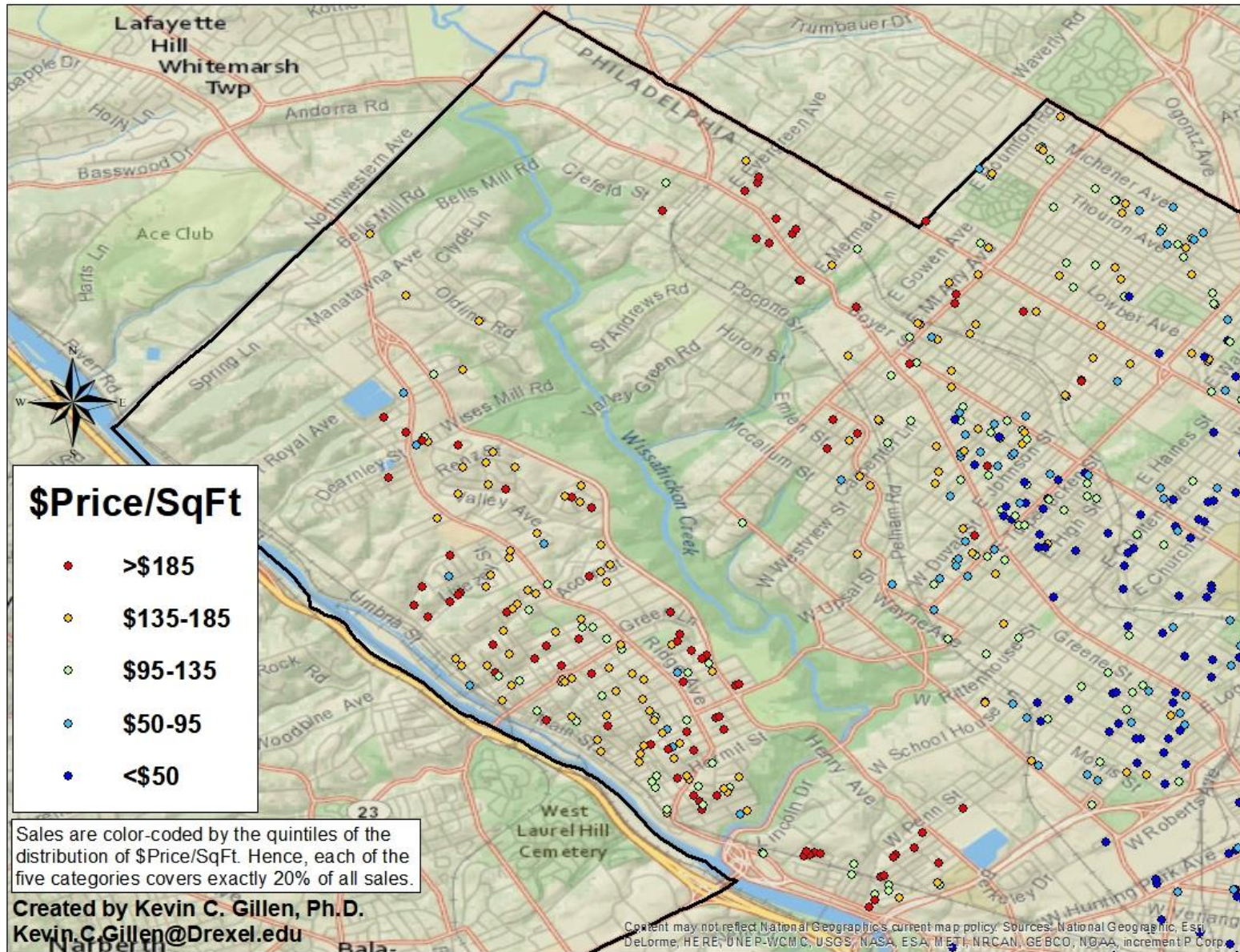
West Philadelphia House Sales in 2018 Q1



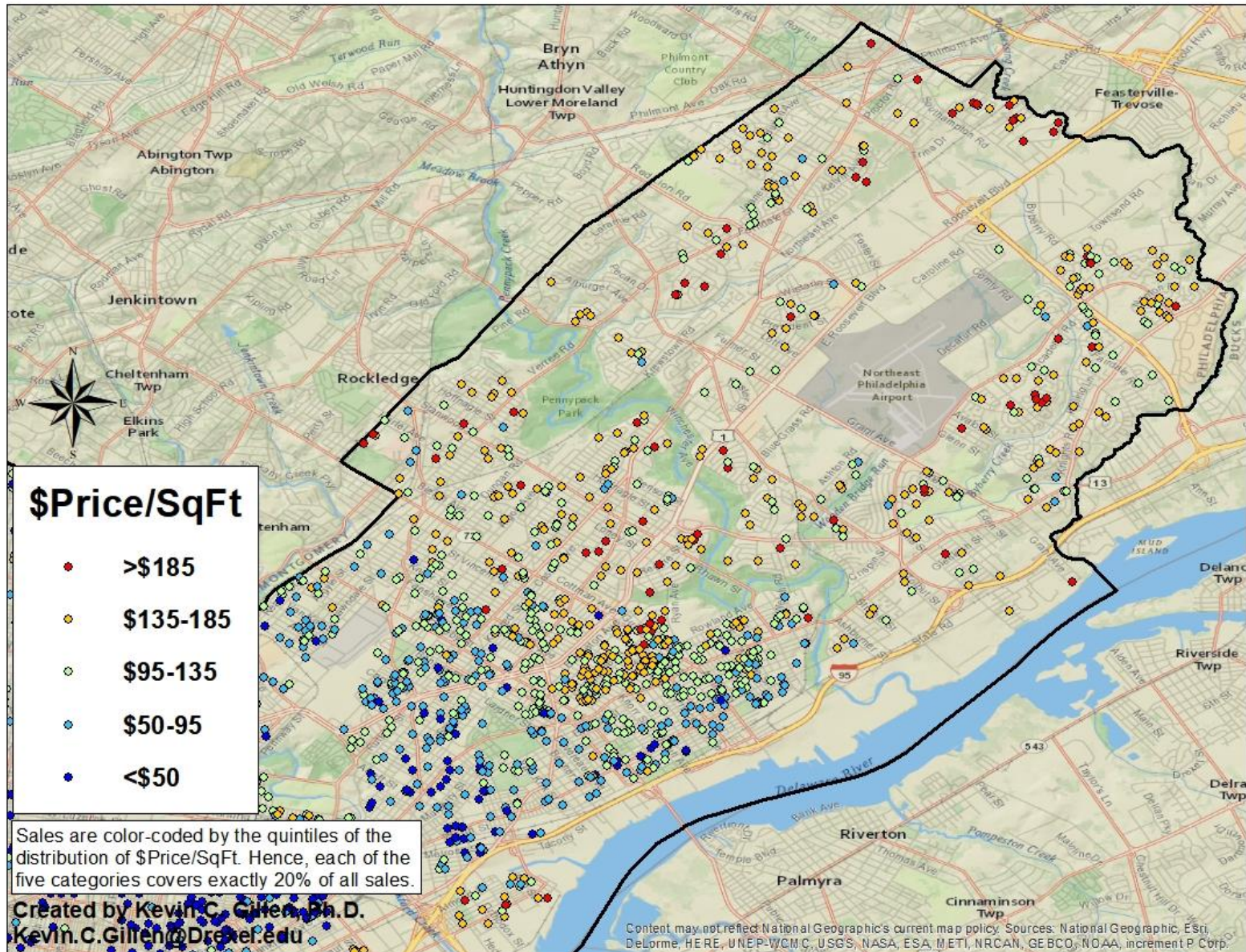
North Philadelphia House Sales in 2018 Q1



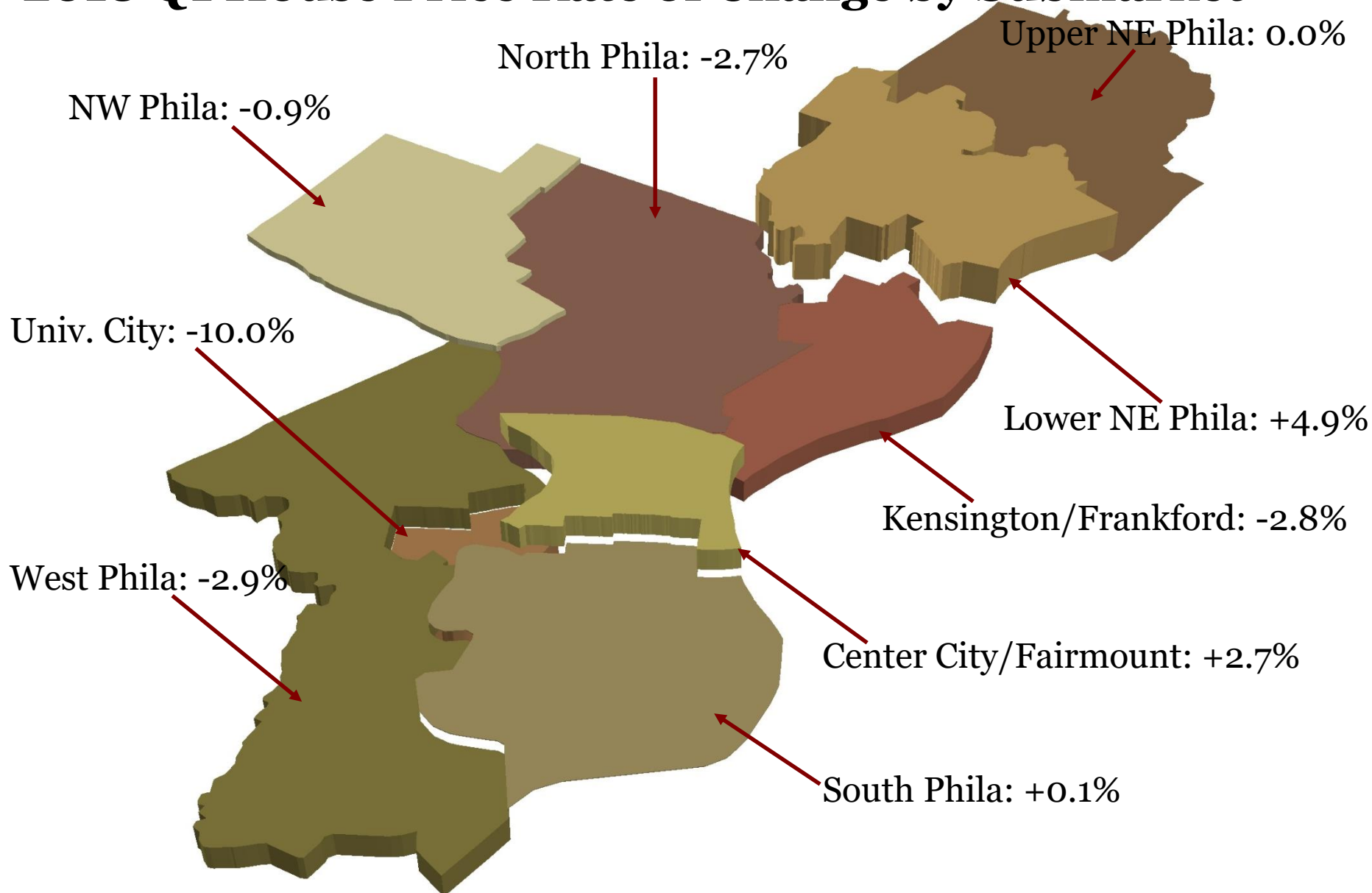
Northwest Philadelphia House Sales in 2018 Q1



Northeast Philadelphia House Sales in 2018 Q1



2018 Q1 House Price Rate of Change by Submarket



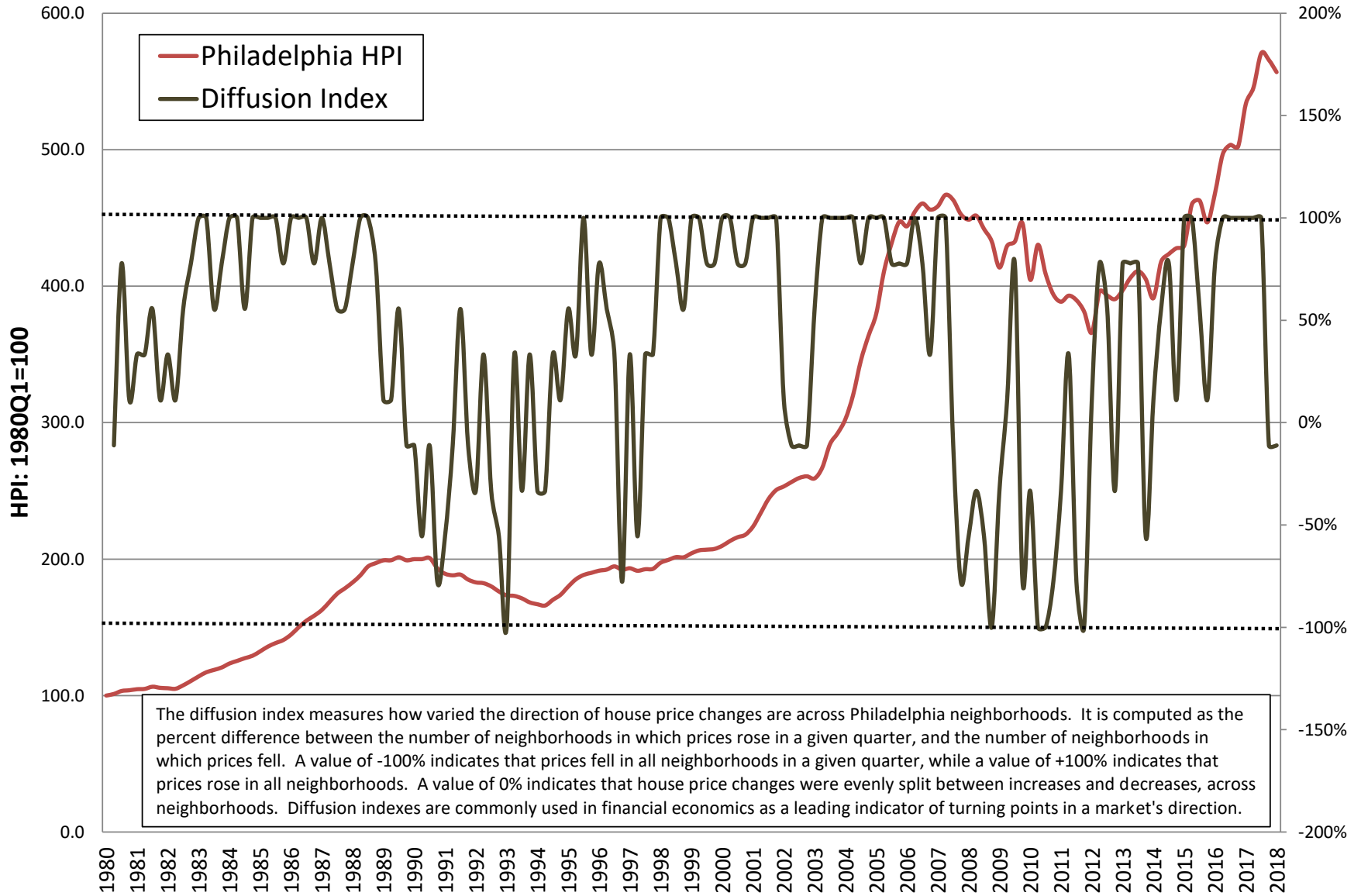
Note: Each submarket is extruded by its average change in house values during 2018 Q1 in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

+ \$1 Million Dollar House Sales in 2018 Q1



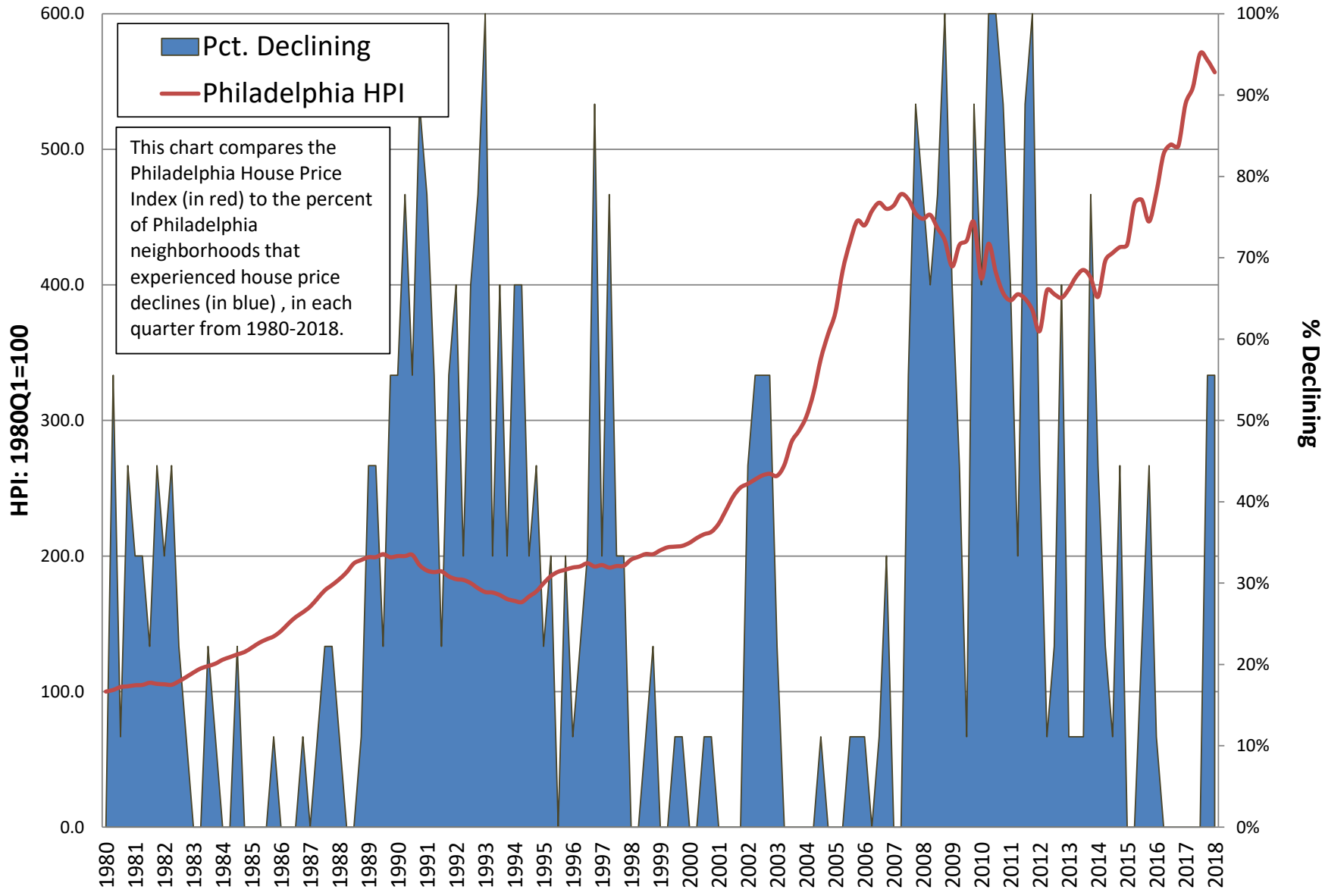
PRICE	ADDRESS
\$1,025,000	421 W MERMAID LN
\$1,050,000	1426 KENILWORT ST
\$1,060,000	6925 SCOTFORTH RD
\$1,130,000	2009 NORTH ST
\$1,180,000	2427 PINE ST
\$1,200,000	238 S 07TH ST
\$1,264,000	126 S VAN PELT ST
\$1,300,000	927 CLINTON ST
\$1,304,000	1939 PINE ST
\$1,385,000	755 N CAPITOL ST
\$1,400,000	2010 RITTENHOUSE SQ
\$1,500,000	618 S 07TH ST
\$1,585,000	8525 SEMINOLE AVE
\$1,600,000	2220 LOCUST ST
\$1,625,000	110 PINE ST
\$1,642,050	511 S 24TH ST
\$1,675,000	240 PINE ST
\$1,800,000	273 S 04TH ST
\$2,263,151	109 S VAN PELT ST
\$2,400,000	2101 RACE ST
\$2,500,000	134 S FRONT ST
\$3,740,000	2101 DELANCEY PL

Philadelphia House Price Diffusion Index 1980-2018

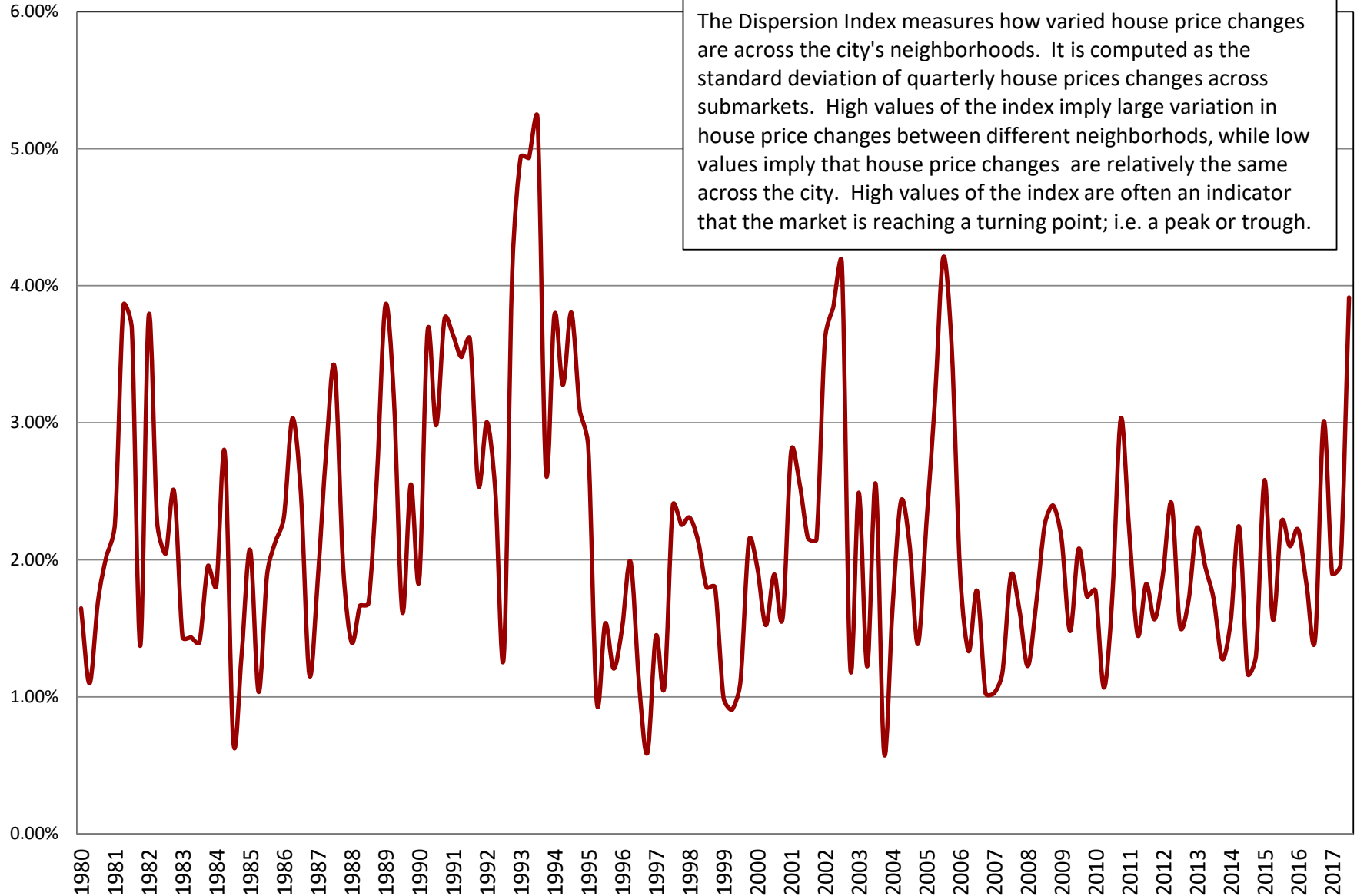


The diffusion index measures how varied the direction of house price changes are across Philadelphia neighborhoods. It is computed as the percent difference between the number of neighborhoods in which prices rose in a given quarter, and the number of neighborhoods in which prices fell. A value of -100% 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.

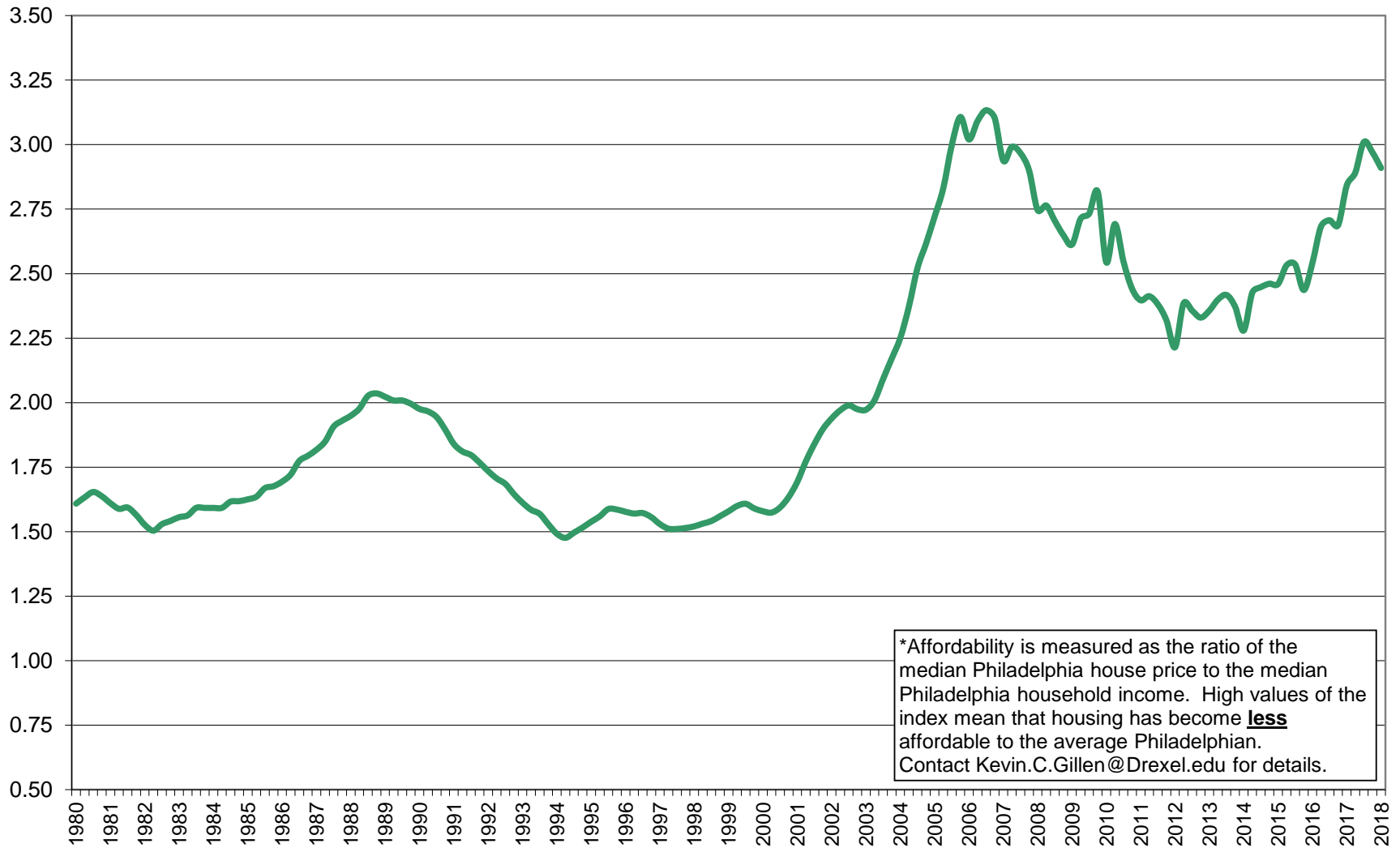
Philadelphia House Prices 1980-2018: Declines v. House Price Index



Dispersion Index of Philadelphia Housing

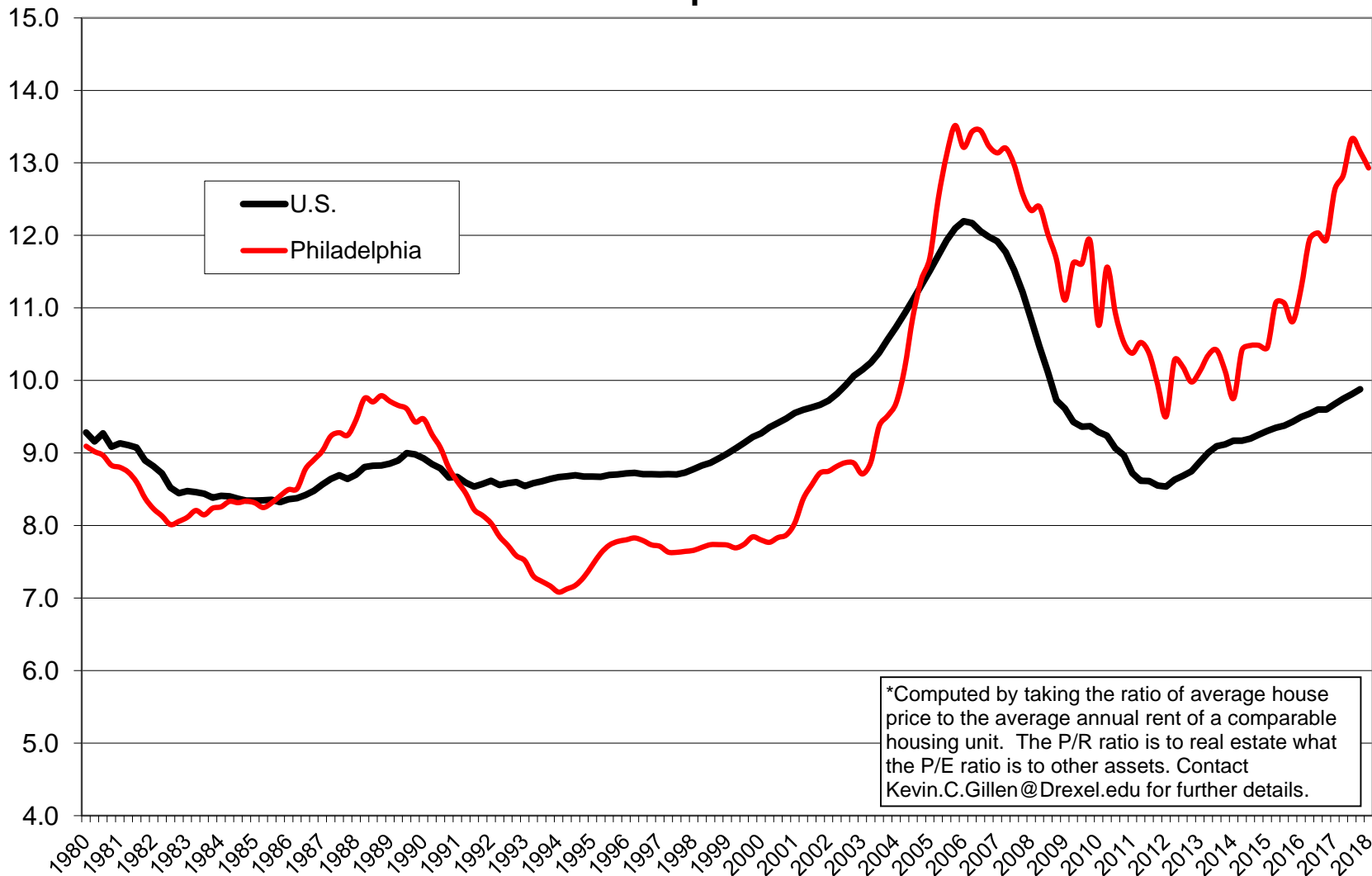


Philadelphia Housing Affordability* Index: 1980-2018



*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.

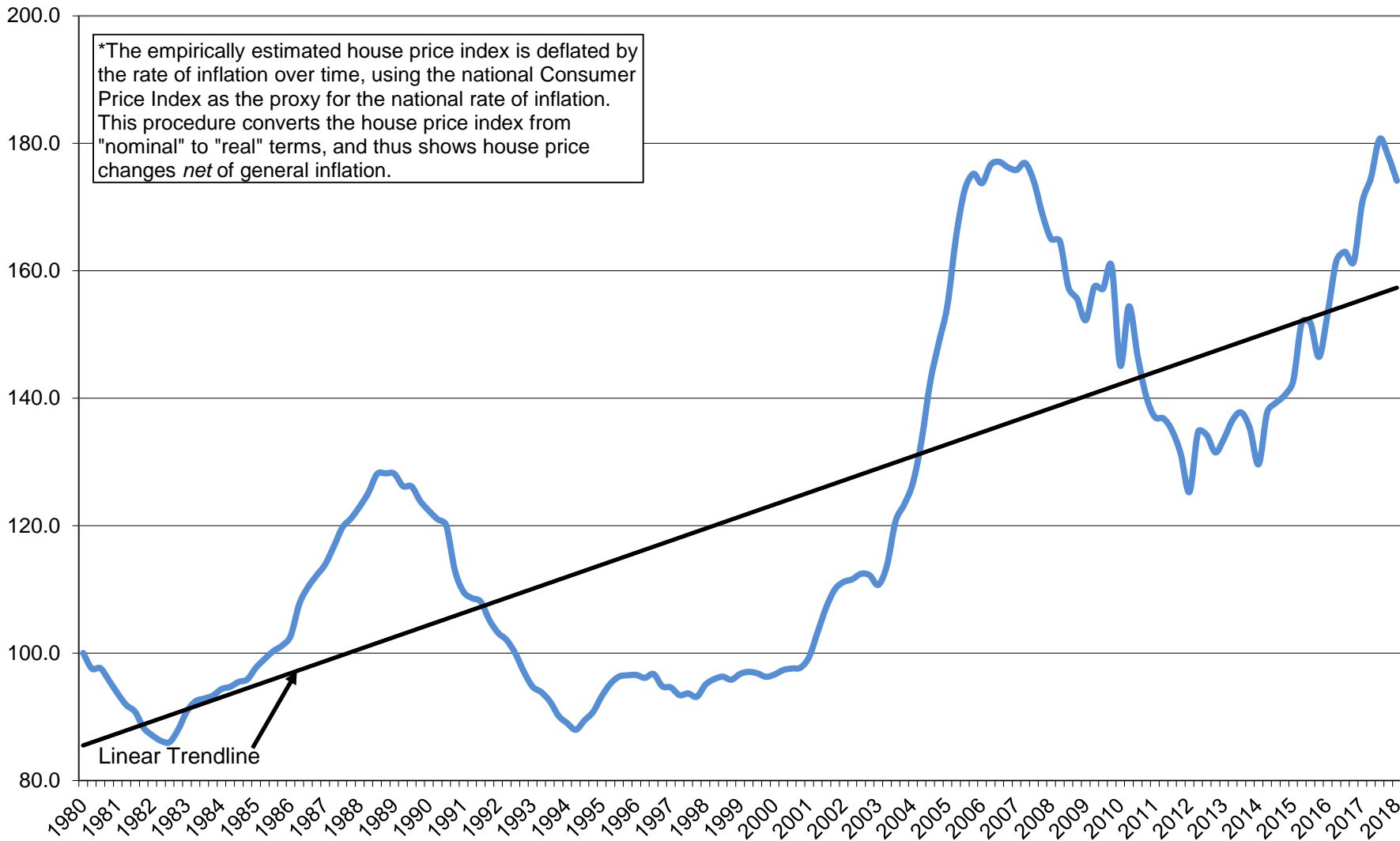
Average House Price-to-Rent Ratios*: 1980-2018 Philadelphia v. U.S.



*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

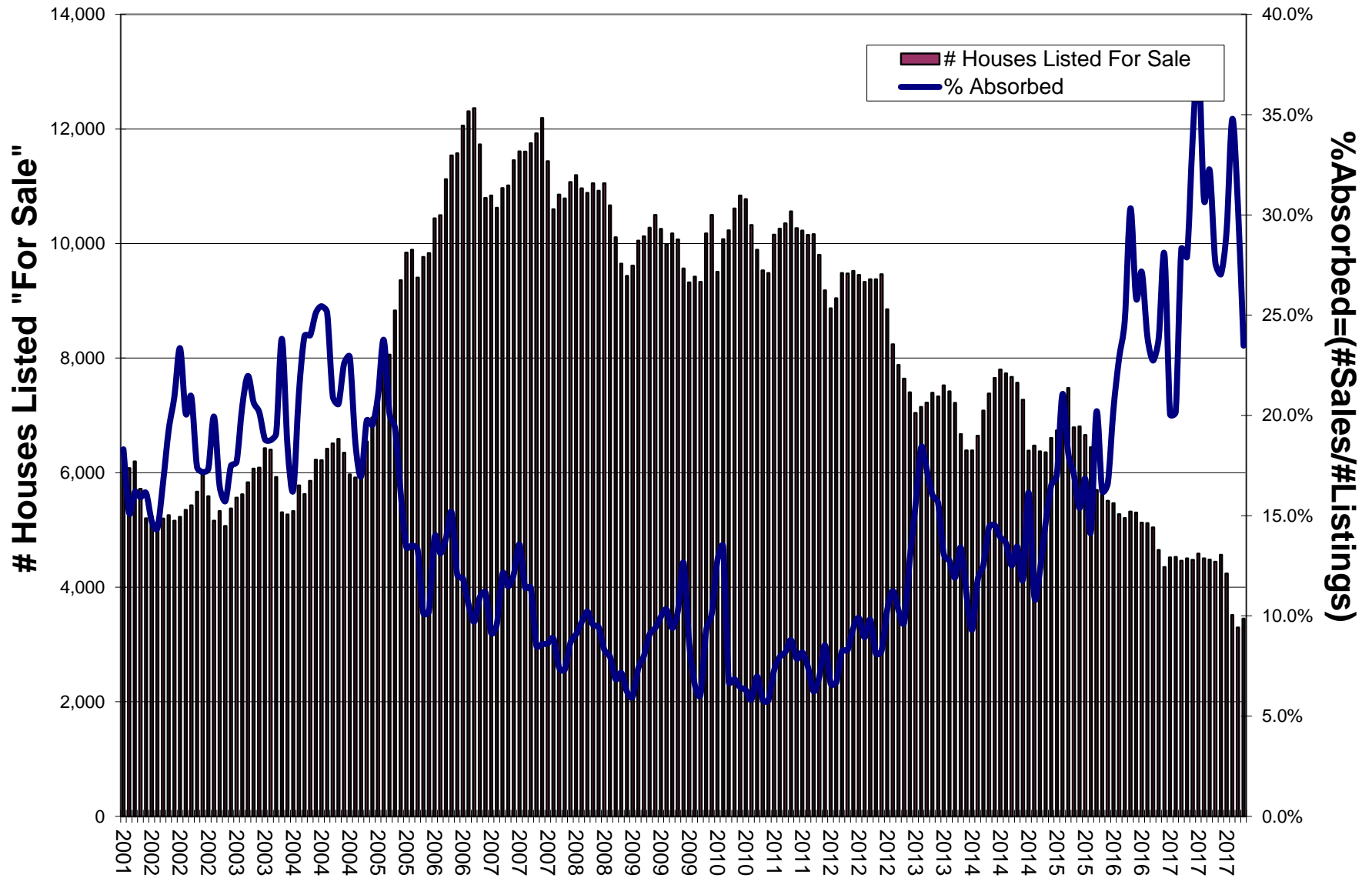
1980Q1=100



Source: US Bureau of Labor Statistics



Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

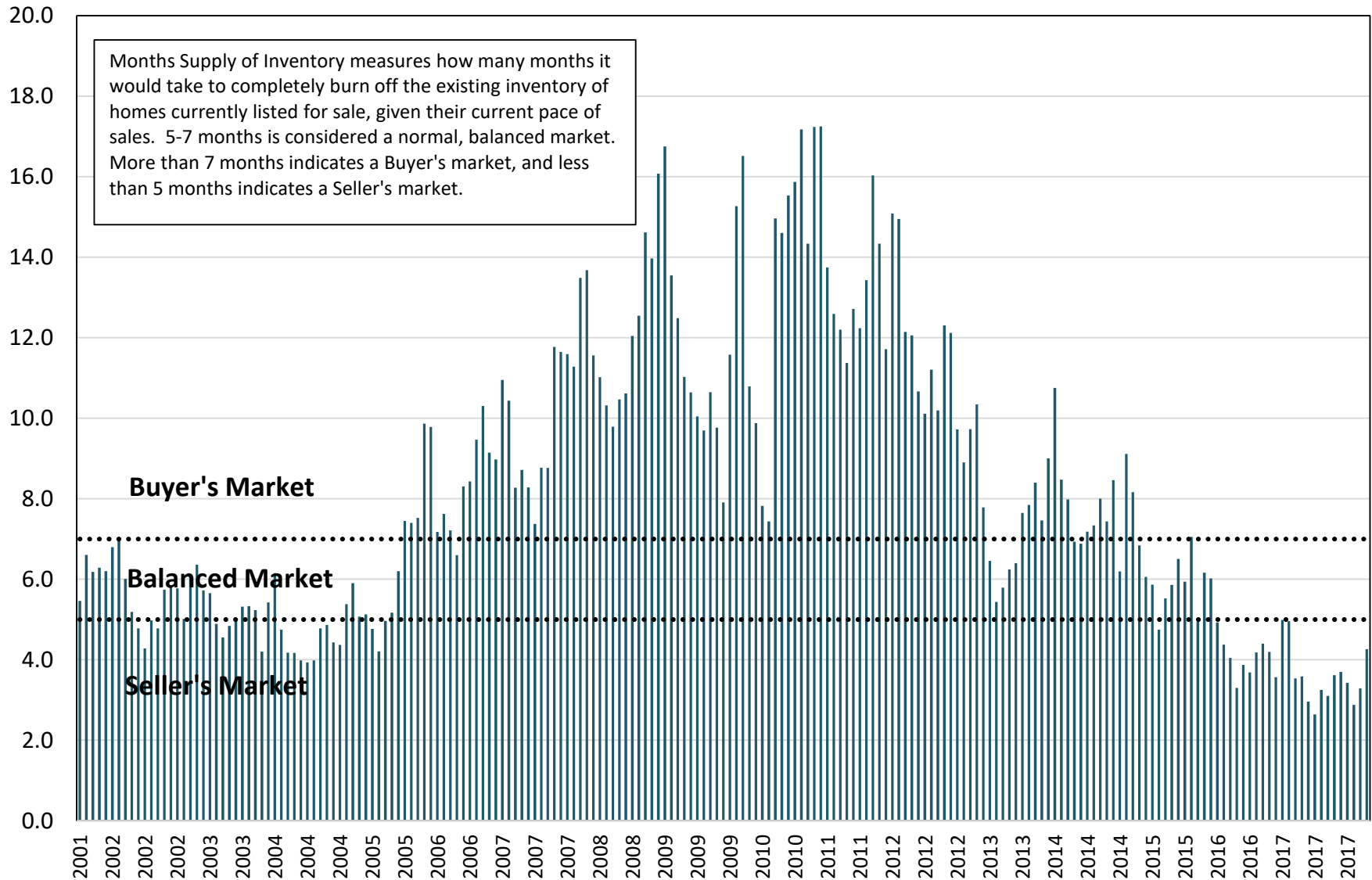


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Trend MLS



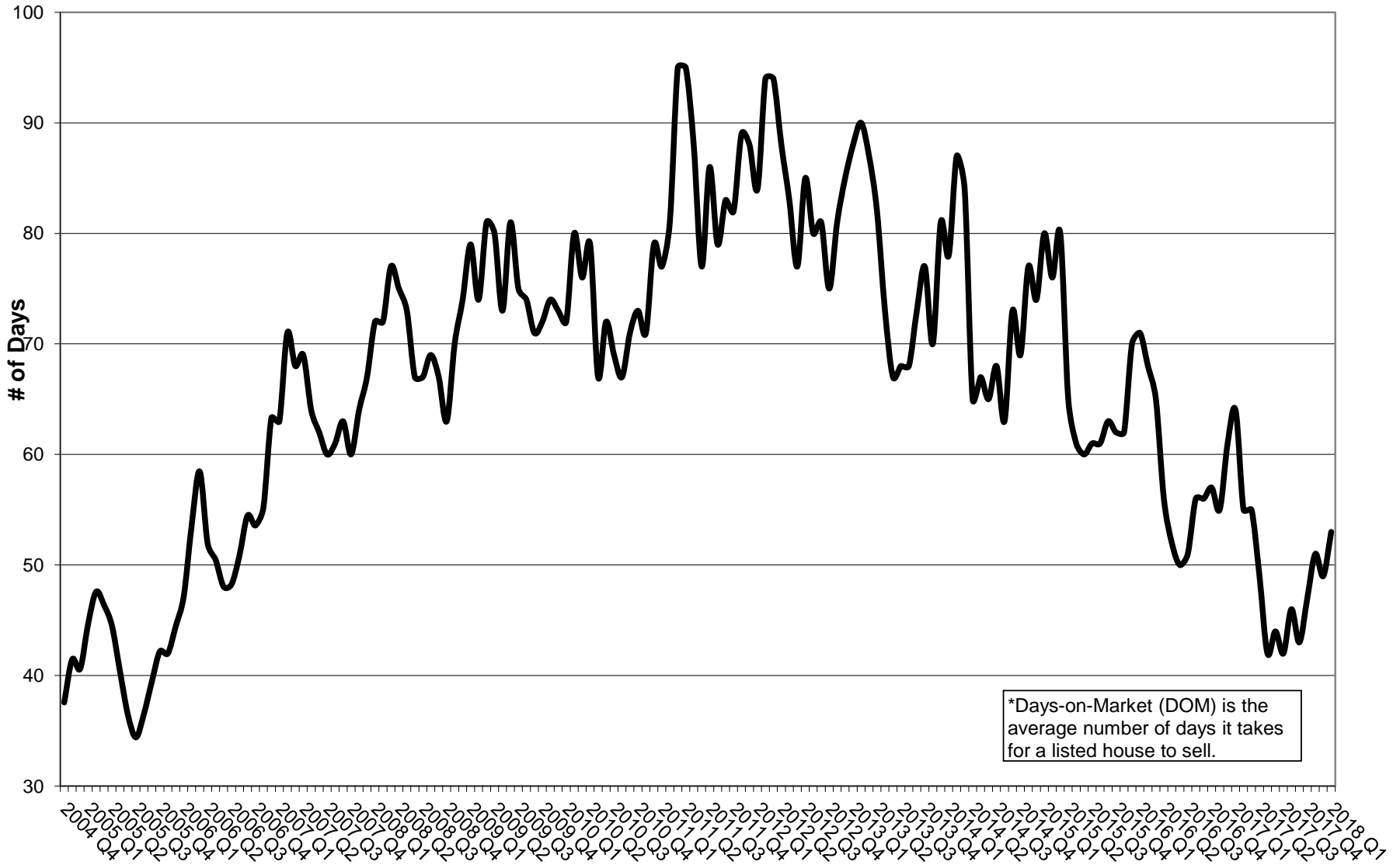
Months Supply of Inventory in Philadelphia



Source: Trend MLS



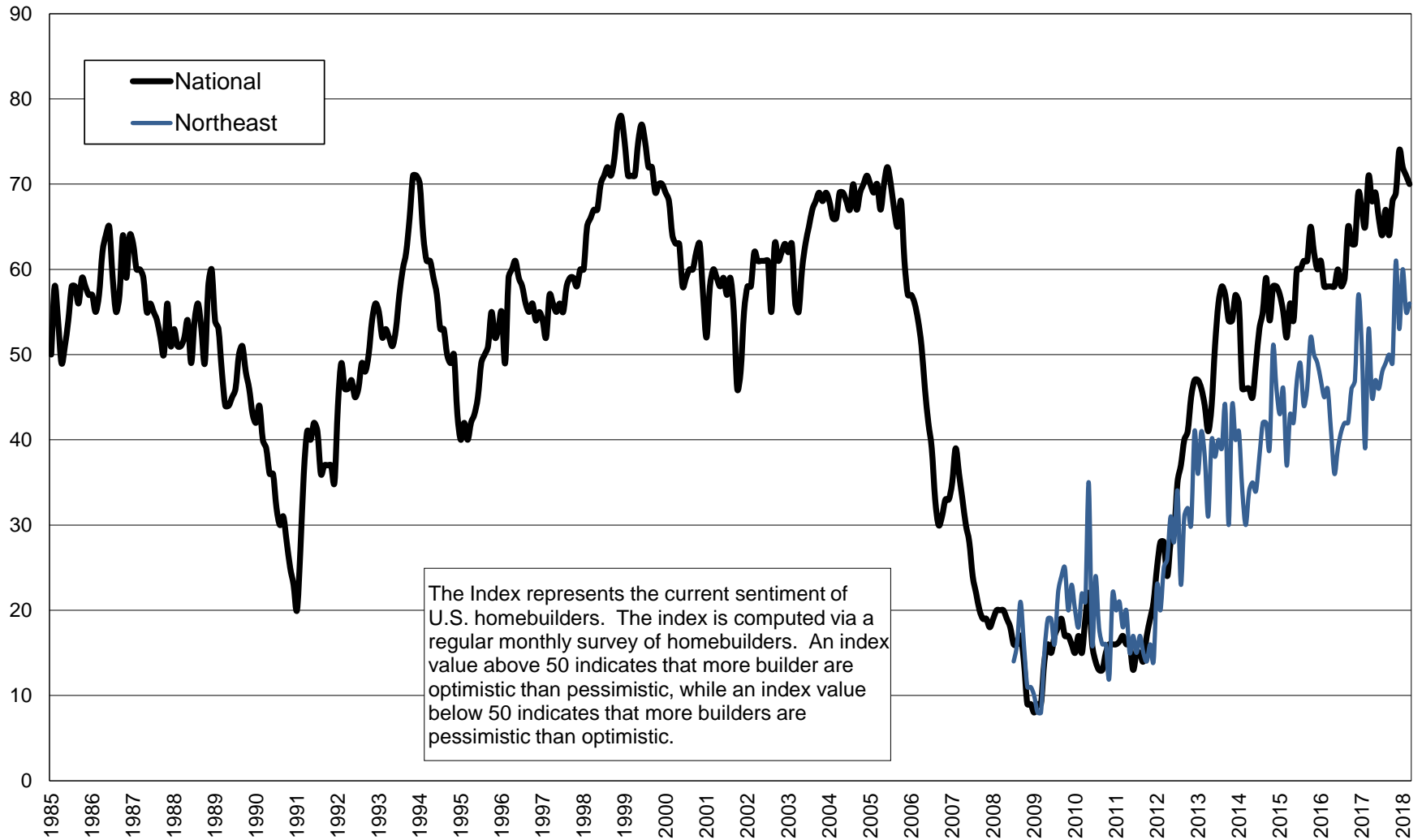
Average Days-on-Market* for Philadelphia Homes



Source: Trend MLS

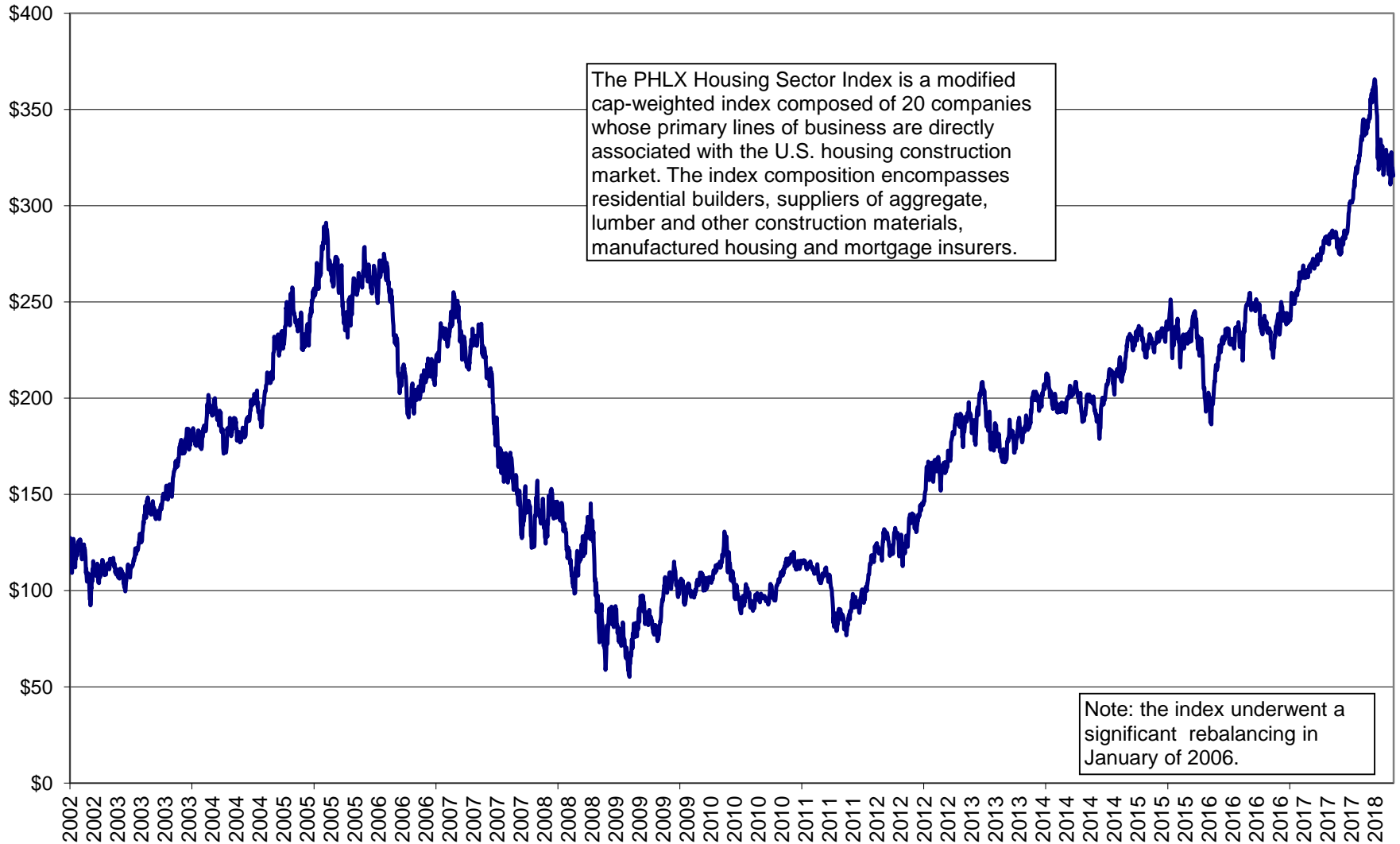


Index of Homebuilder Sentiment: 1985-2018 (Seasonally Adjusted)



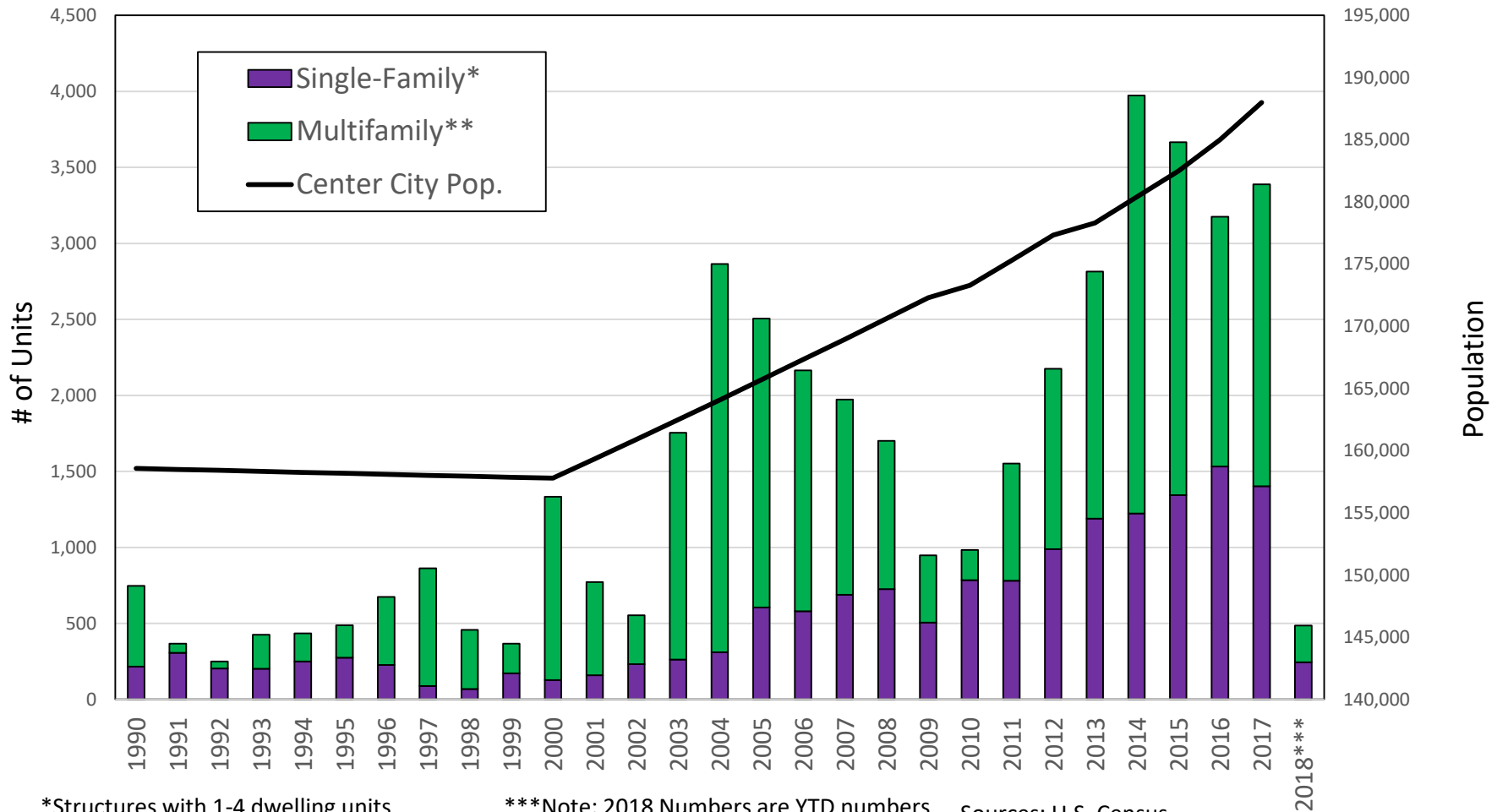
Source: National Assoc. of Homebuilders (NAHB)/Wells Fargo

Philadelphia Stock Exchange Housing Sector Index: 2002-2018



Source: finance.yahoo.com

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



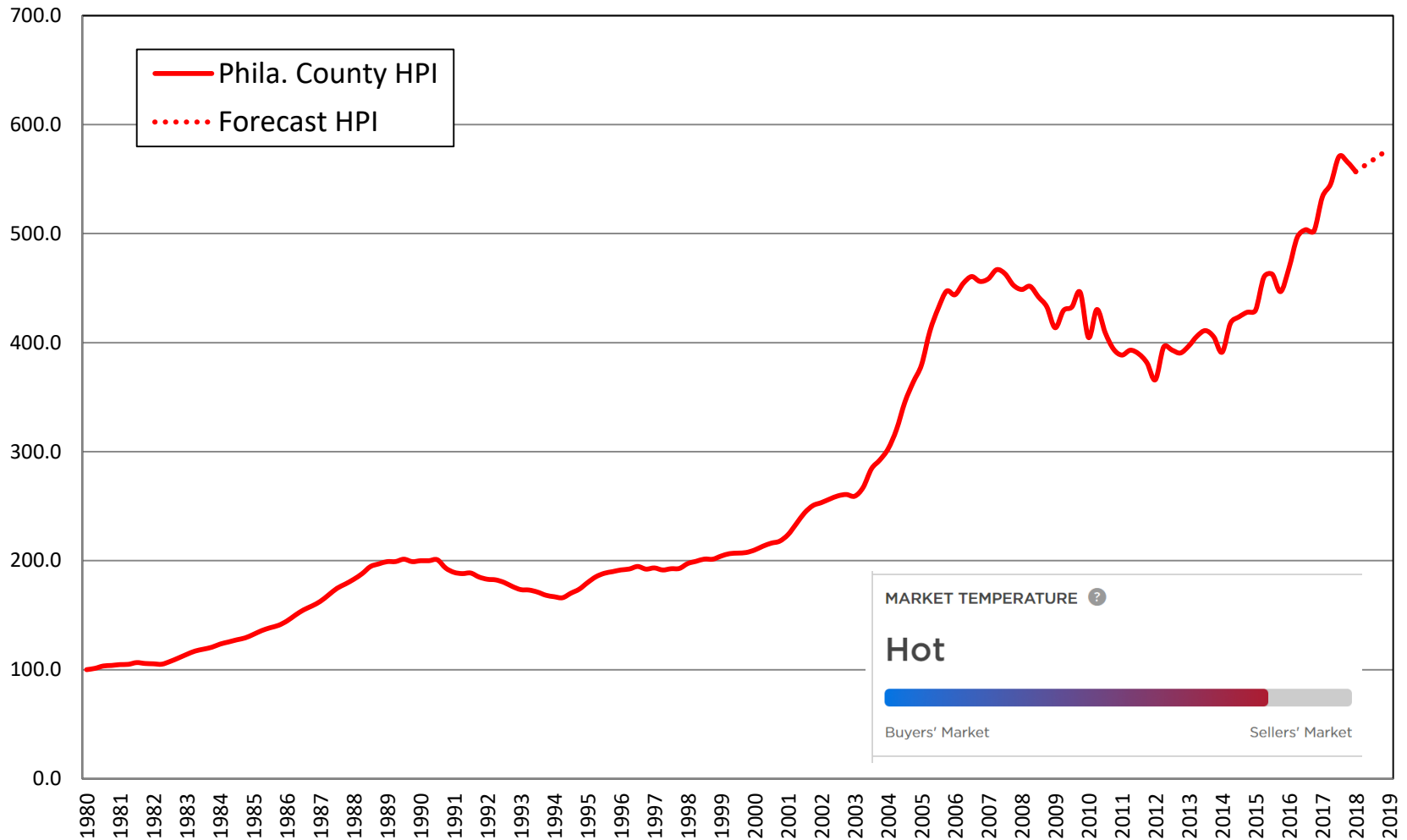
*Structures with 1-4 dwelling units
 **Structures with >=5 dwelling units

***Note: 2018 Numbers are YTD numbers through January 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 3.7% over the course of the next twelve months. This is a downgrade from its previous forecast of 5.0% made three months ago. Zillow also currently rates the temperature of Philadelphia's housing market as "Hot", which is unchanged from its previous rating three months ago.

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