

PHILADELPHIA HOUSE PRICE INDICES

July 29, 2020



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Lindy Institute
for Urban Innovation

KEVIN C. GILLEN, Ph.D.

Kevin.C.Gillen@Drexel.edu

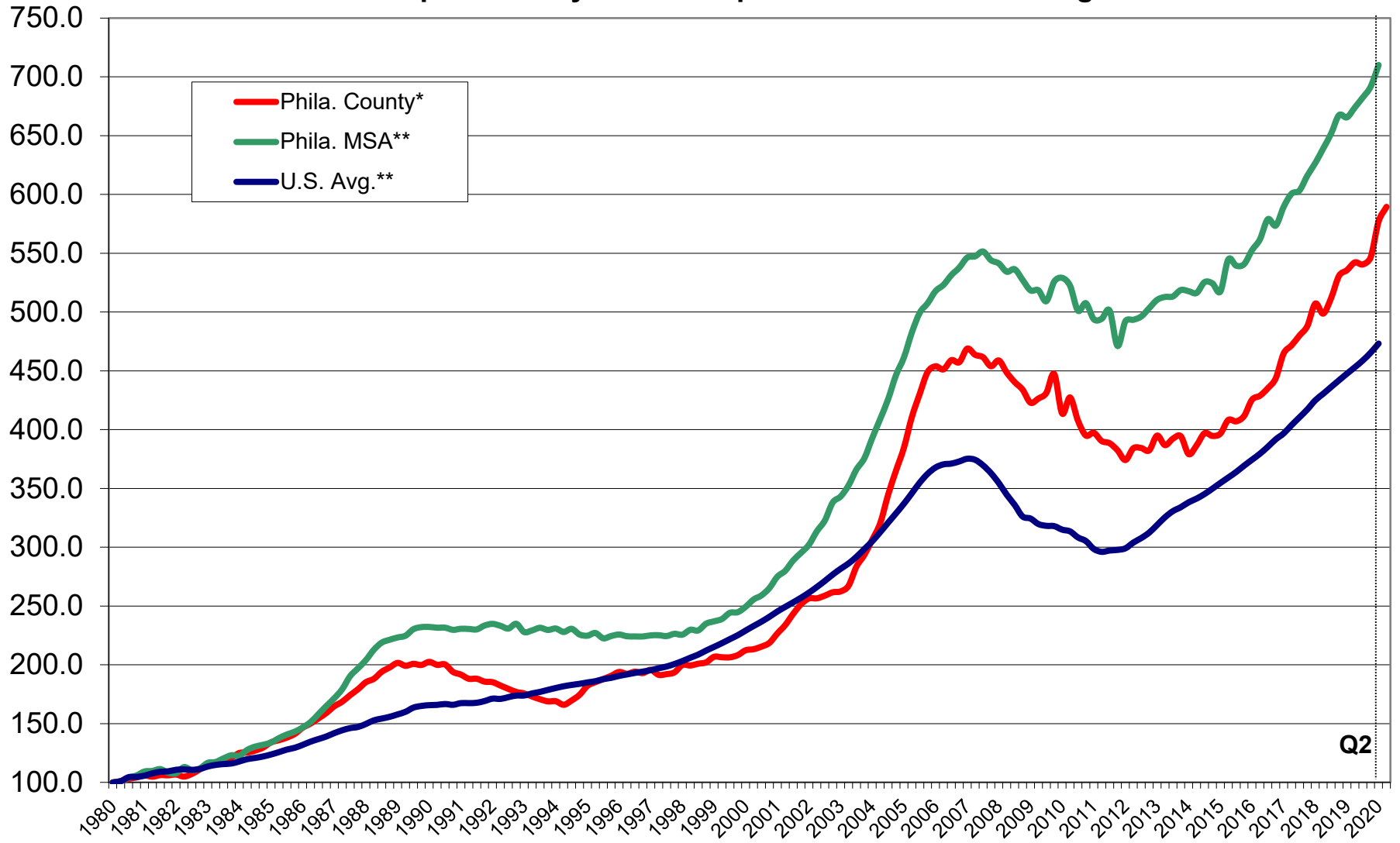
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Kevin C. Gillen Ph.D.. The author thanks Azavea.com, the Philadelphia Office 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 1980-2020: 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 2020Q1 only.

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



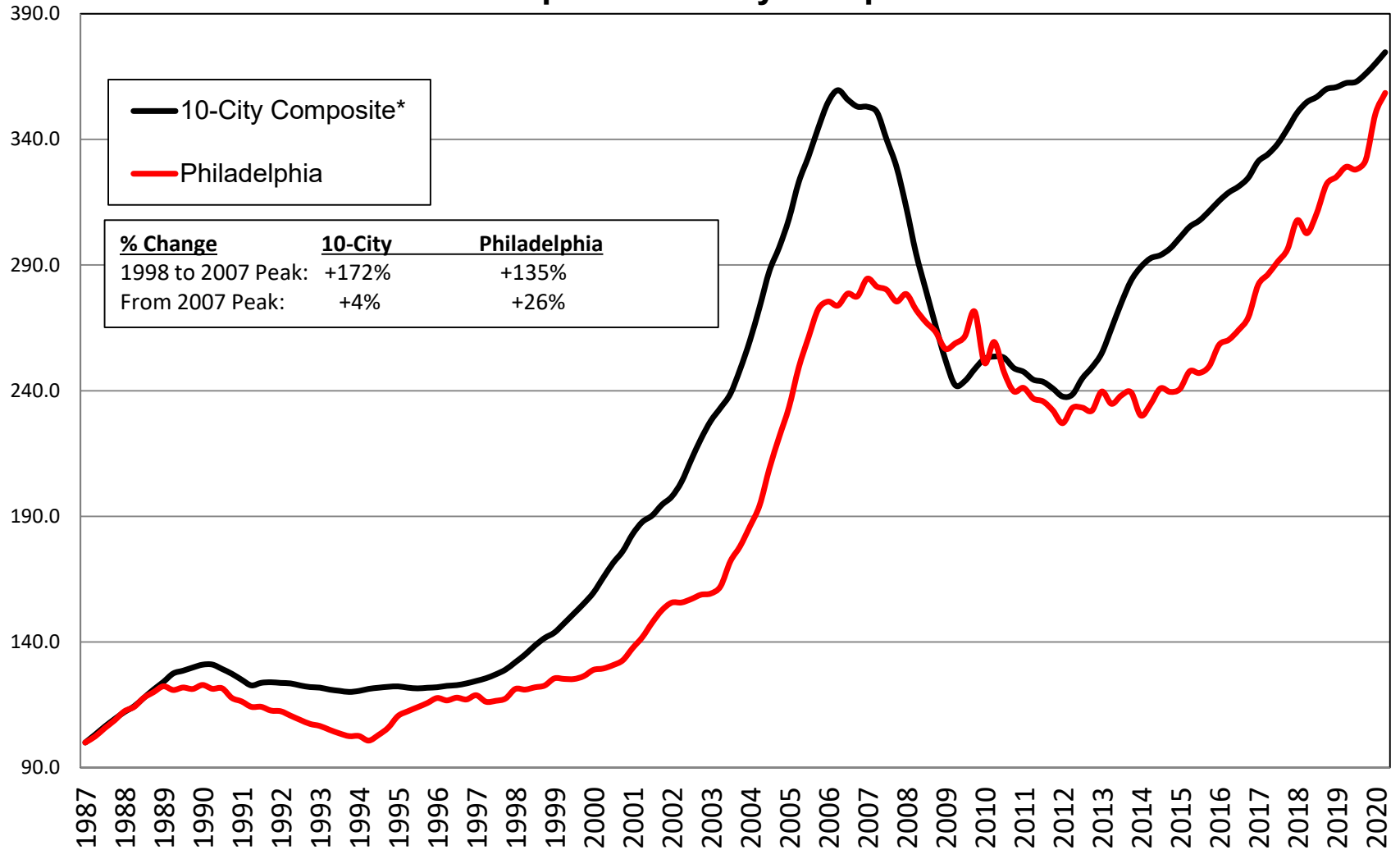
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
40-Year	490.7%	610.0%	373.2%
10-Year	38.2%	34.2%	50.2%
1-Year	8.9%	6.7%	5.7%
1-Quarter	2.4%	2.7%	1.7%

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

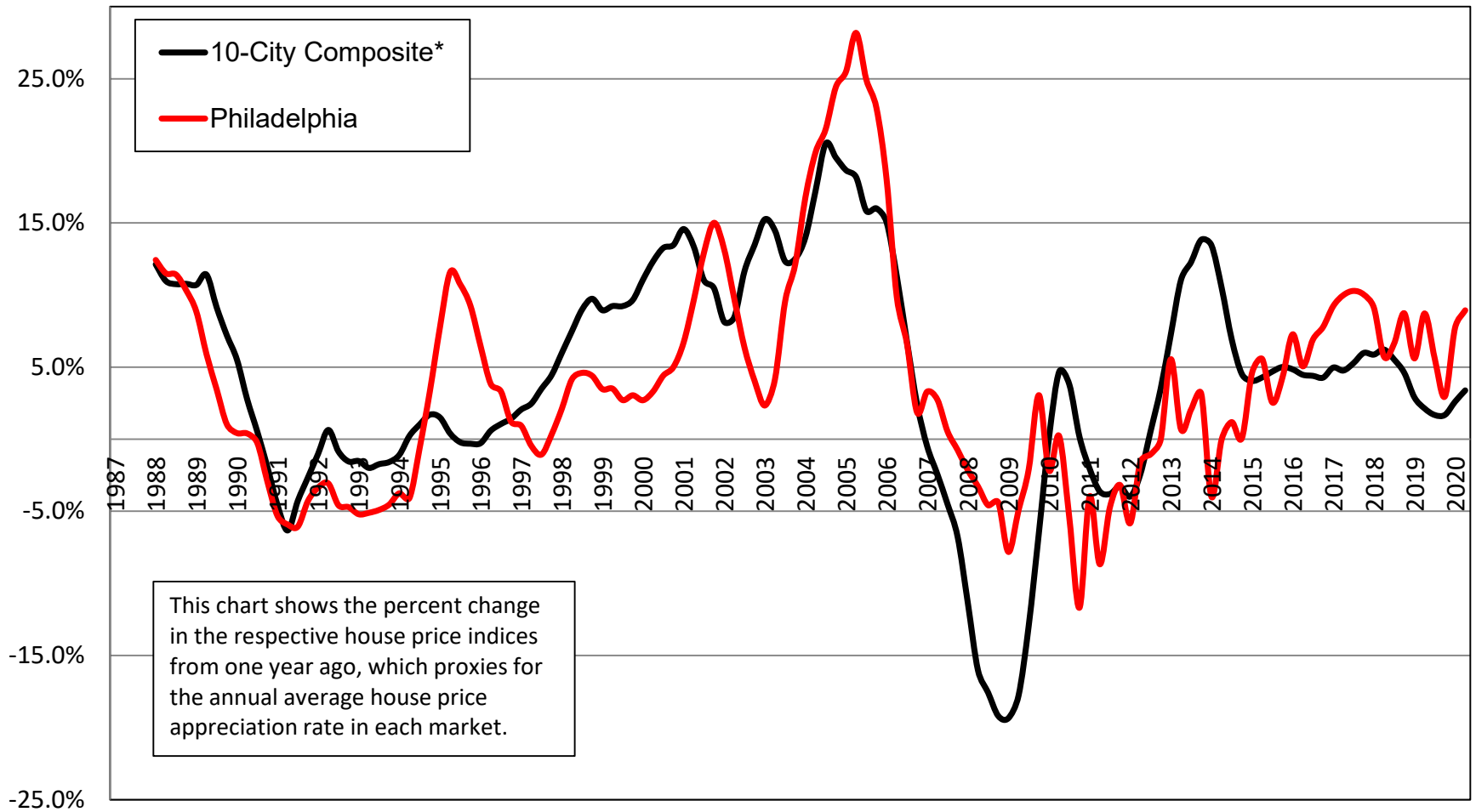
**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2020Q1 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

House Price Appreciation 1987-2020: Philadelphia v. 10-City Composite



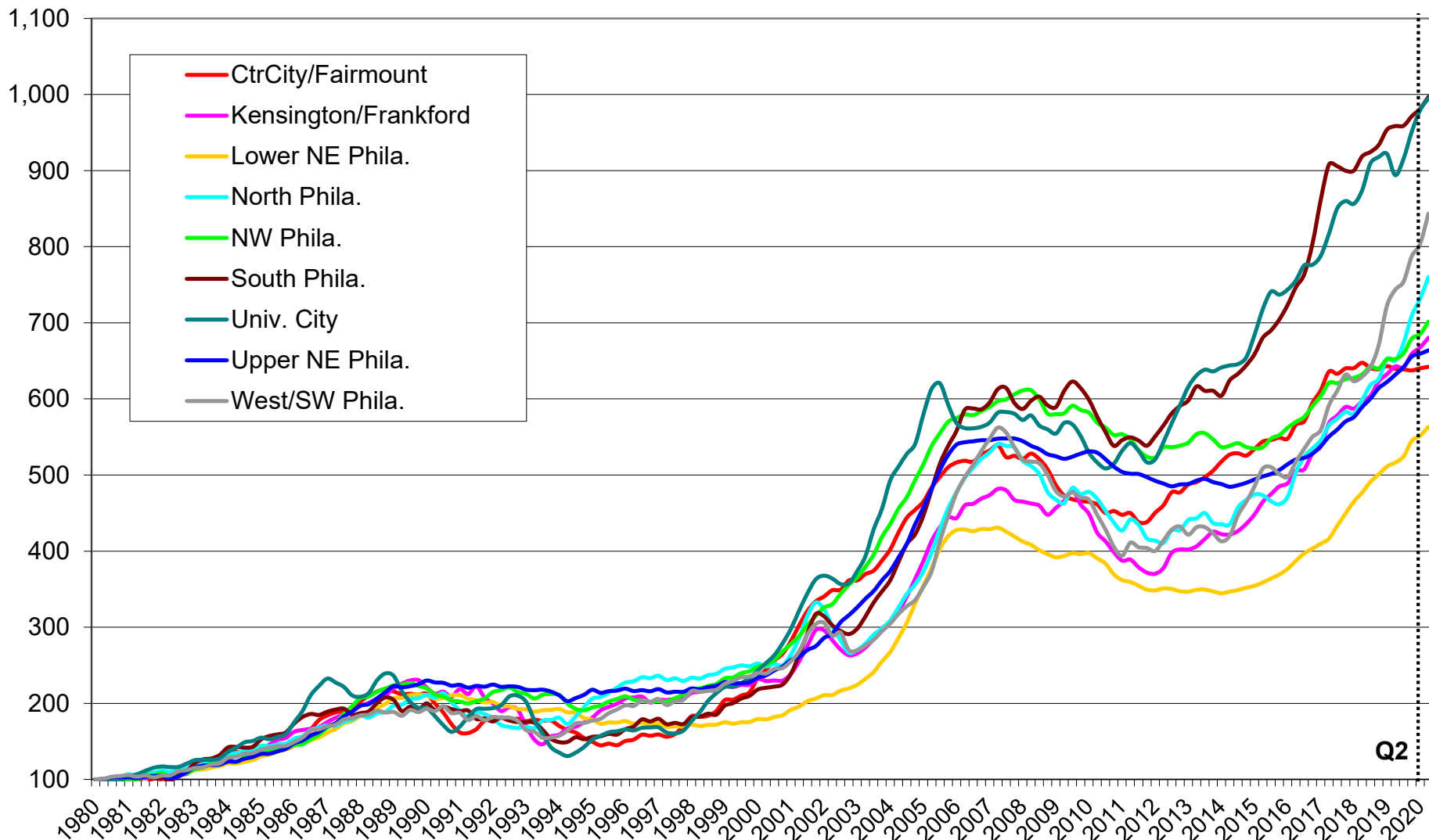
*Source: S&P/Case-Shiller. The 10-City Composite index includes Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, DC. It does not include Philadelphia.

YoY House Price Change (%) 1987-2020: 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: 1980-2020 1980Q1=100



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

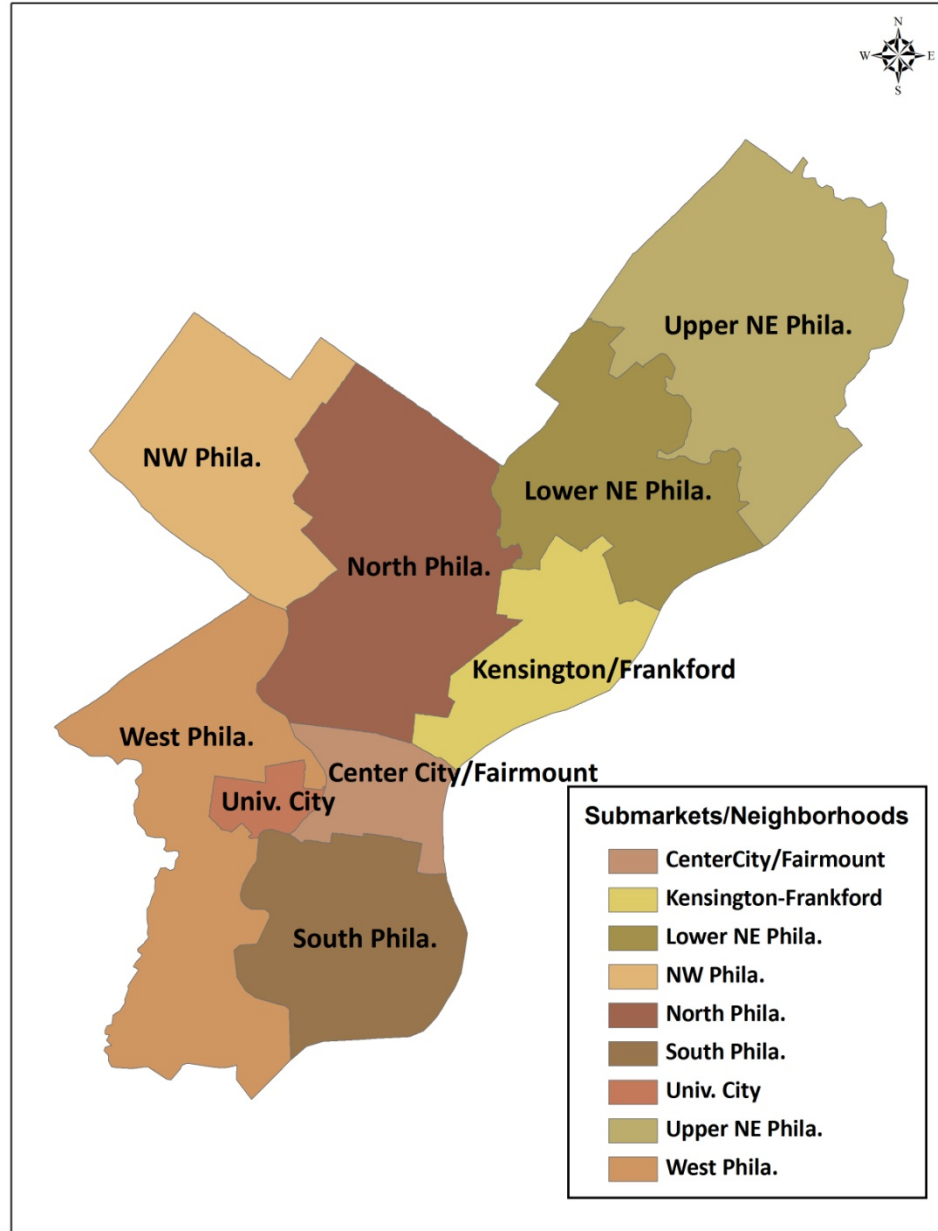
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Philadelphia House Price Appreciation Rates by Submarket

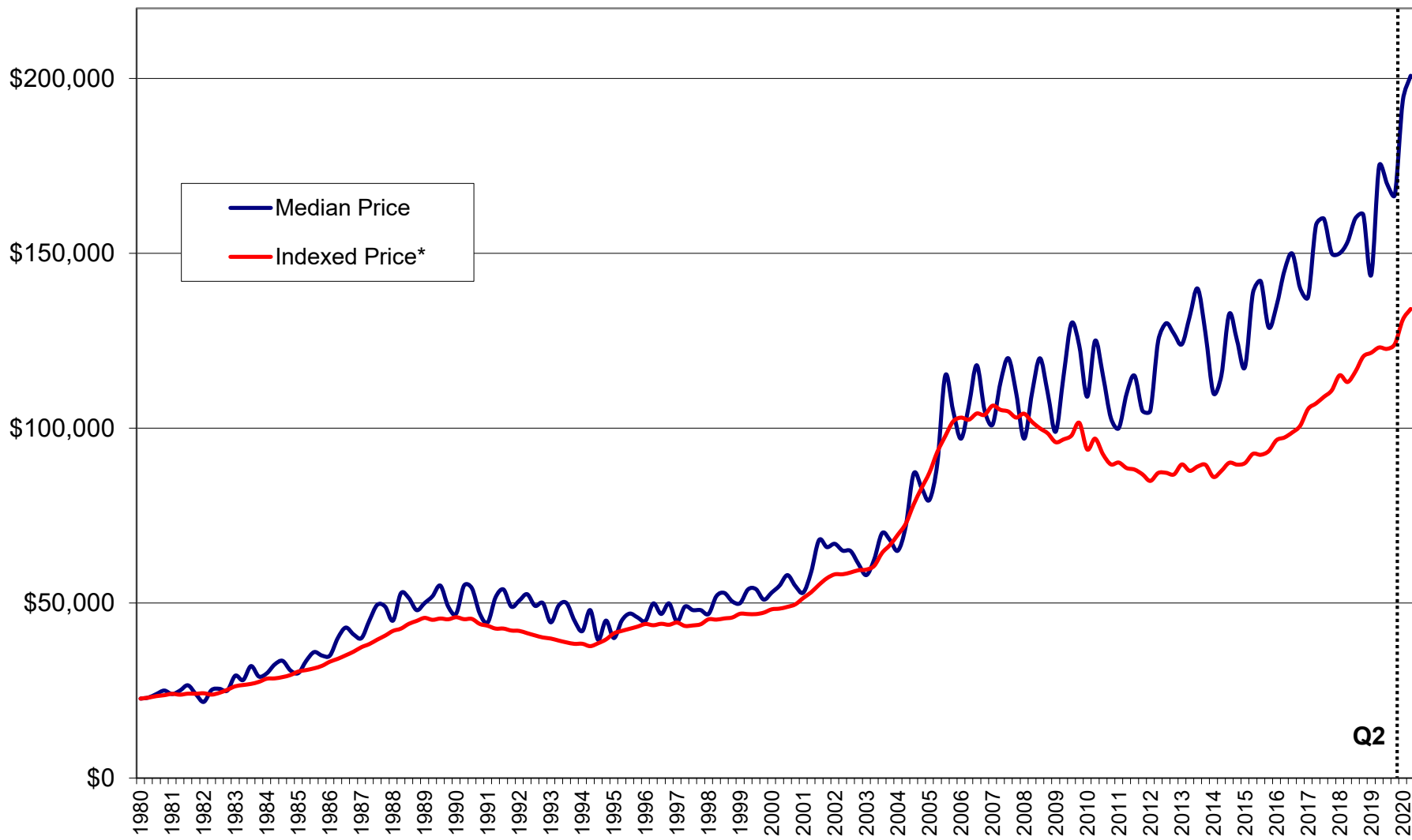
Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West/ SW Phila.
40-year	542.2%	580.3%	463.3%	660.2%	601.6%	896.8%	895.1%	563.7%	743.3%
10-year	39.2%	60.4%	44.3%	62.3%	23.4%	72.9%	92.7%	25.4%	88.5%
1-Year	0.4%	5.9%	9.1%	16.9%	7.5%	4.0%	11.3%	5.0%	13.4%
1-Quarter	0.3%	1.9%	2.1%	3.9%	2.4%	1.6%	1.6%	0.6%	5.0%

This table gives the total % change in average house values by submarket, through 2020 Q2, from different starting points in time.

Philadelphia Submarket Boundaries



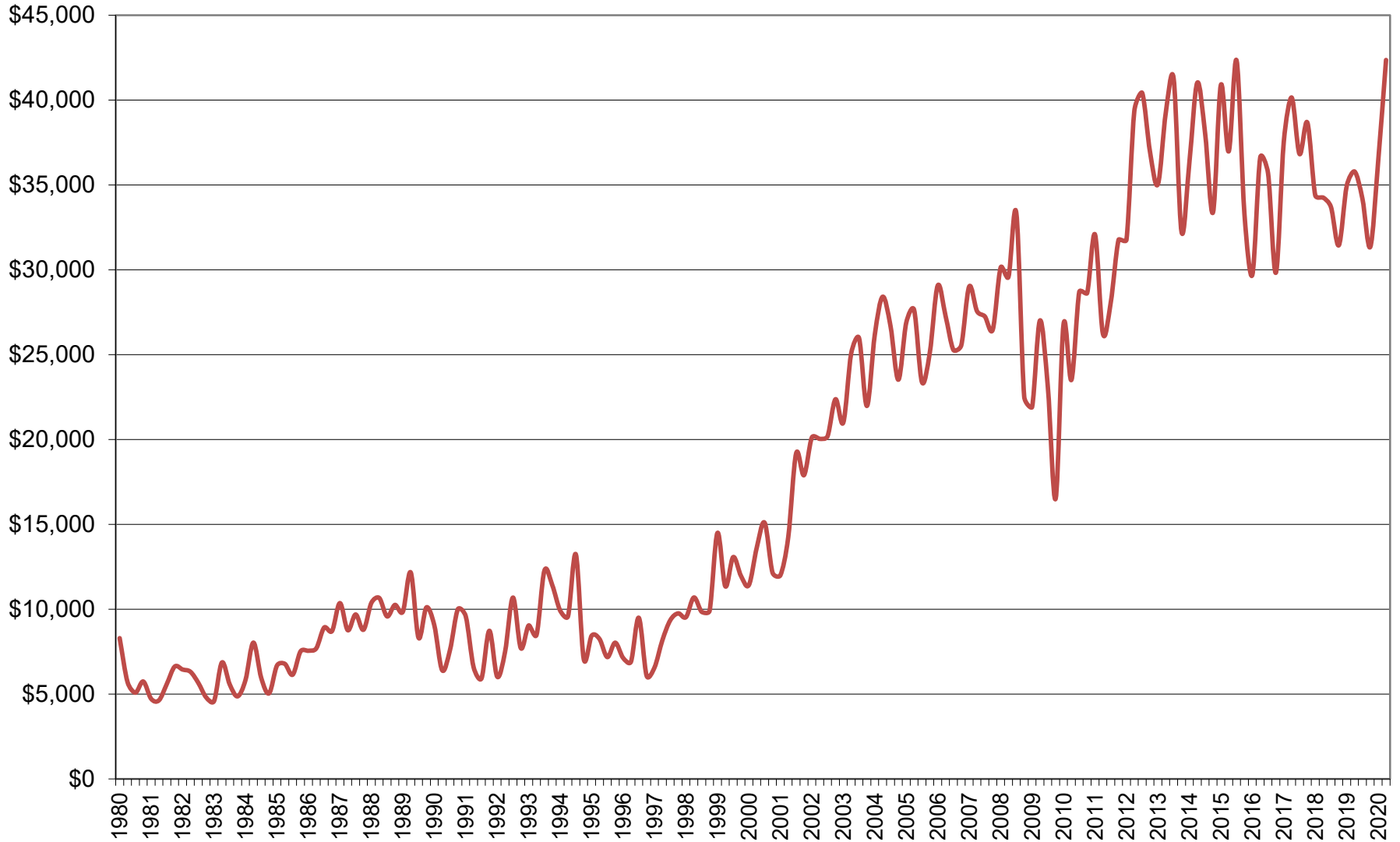
Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2020



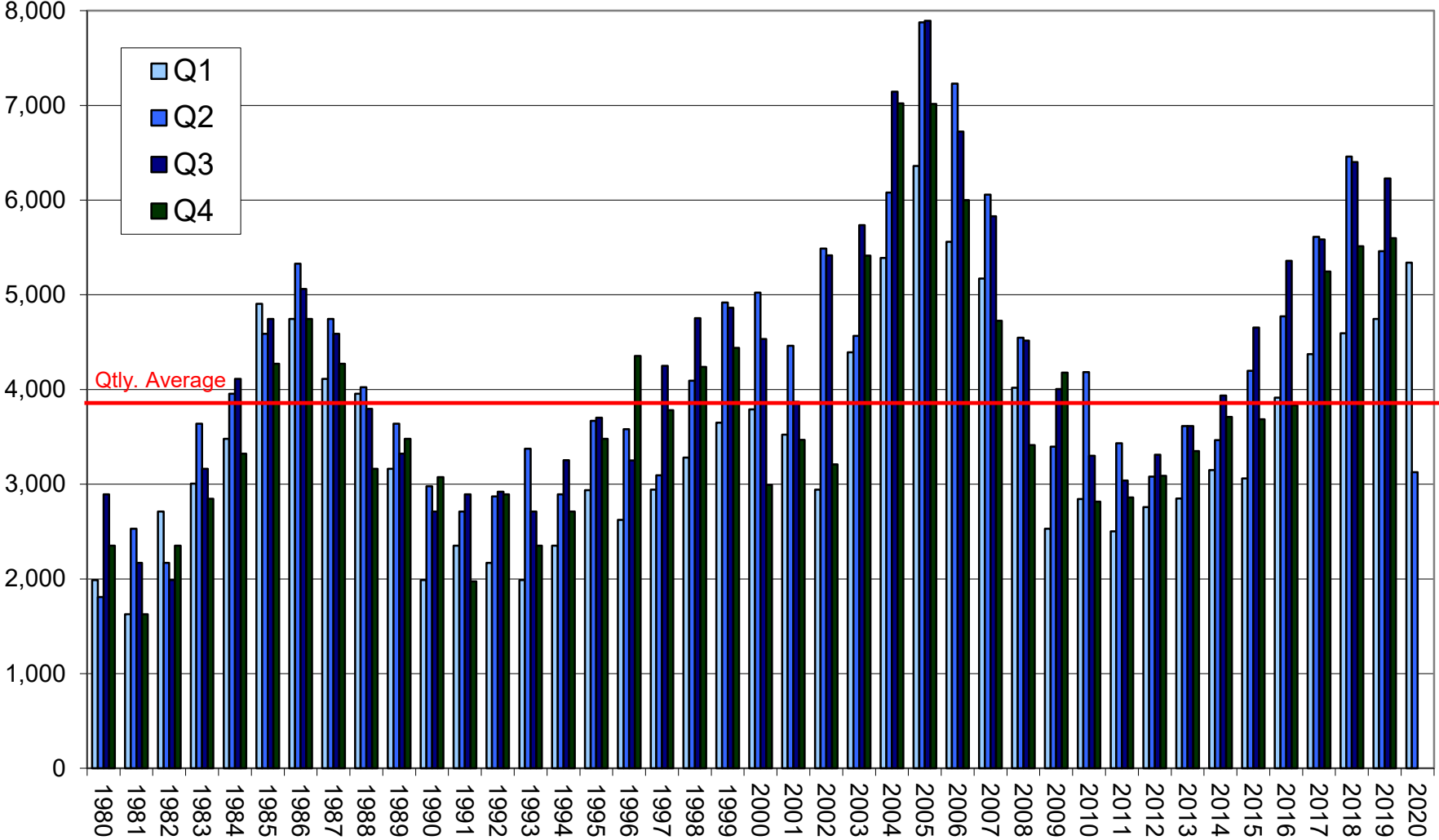
* Empirically estimated by Kevin C. Gillen, PhD

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Average House Price Minus Median House Price: 1980-2020

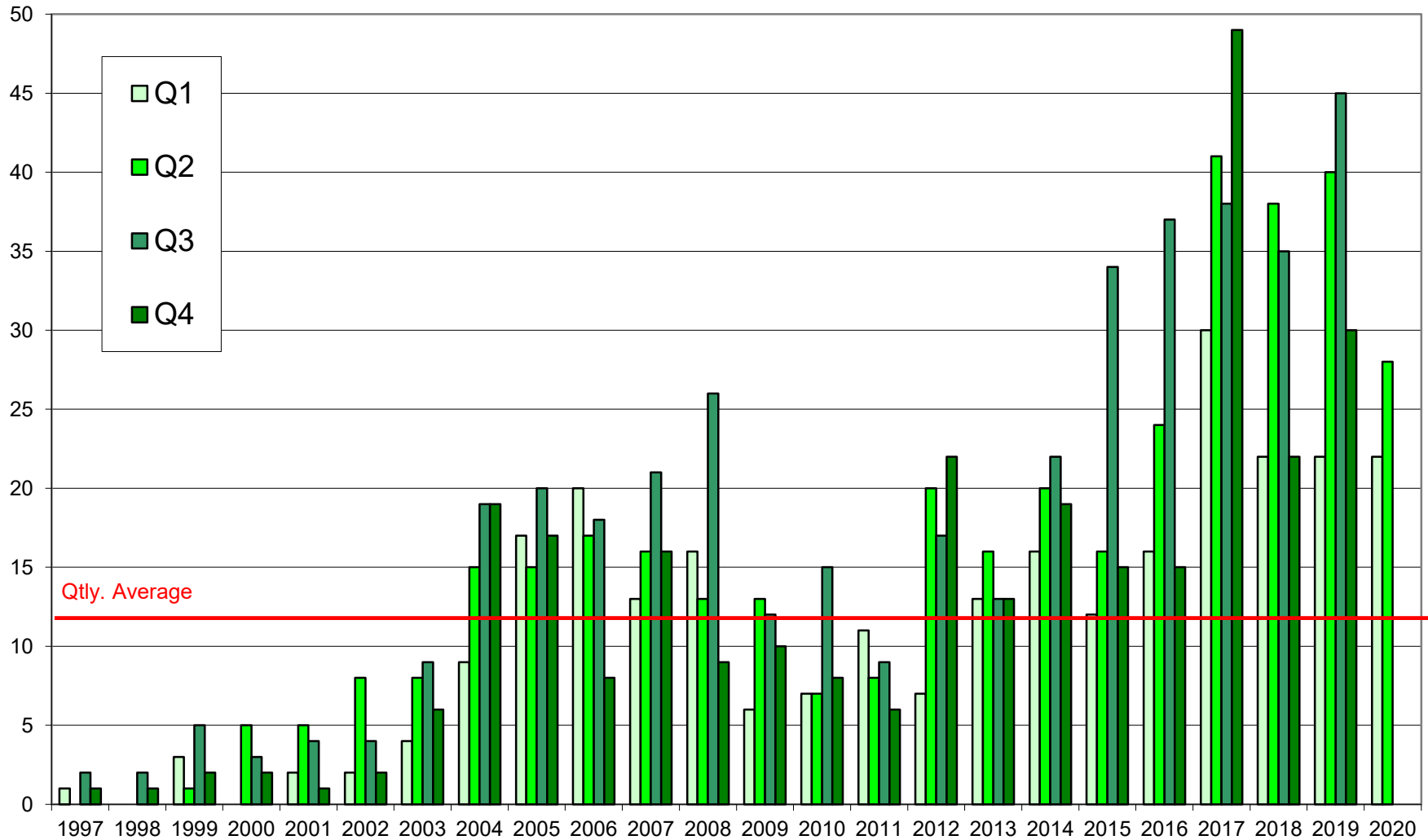


Number of Philadelphia House Sales* per Quarter: 1980-2020



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

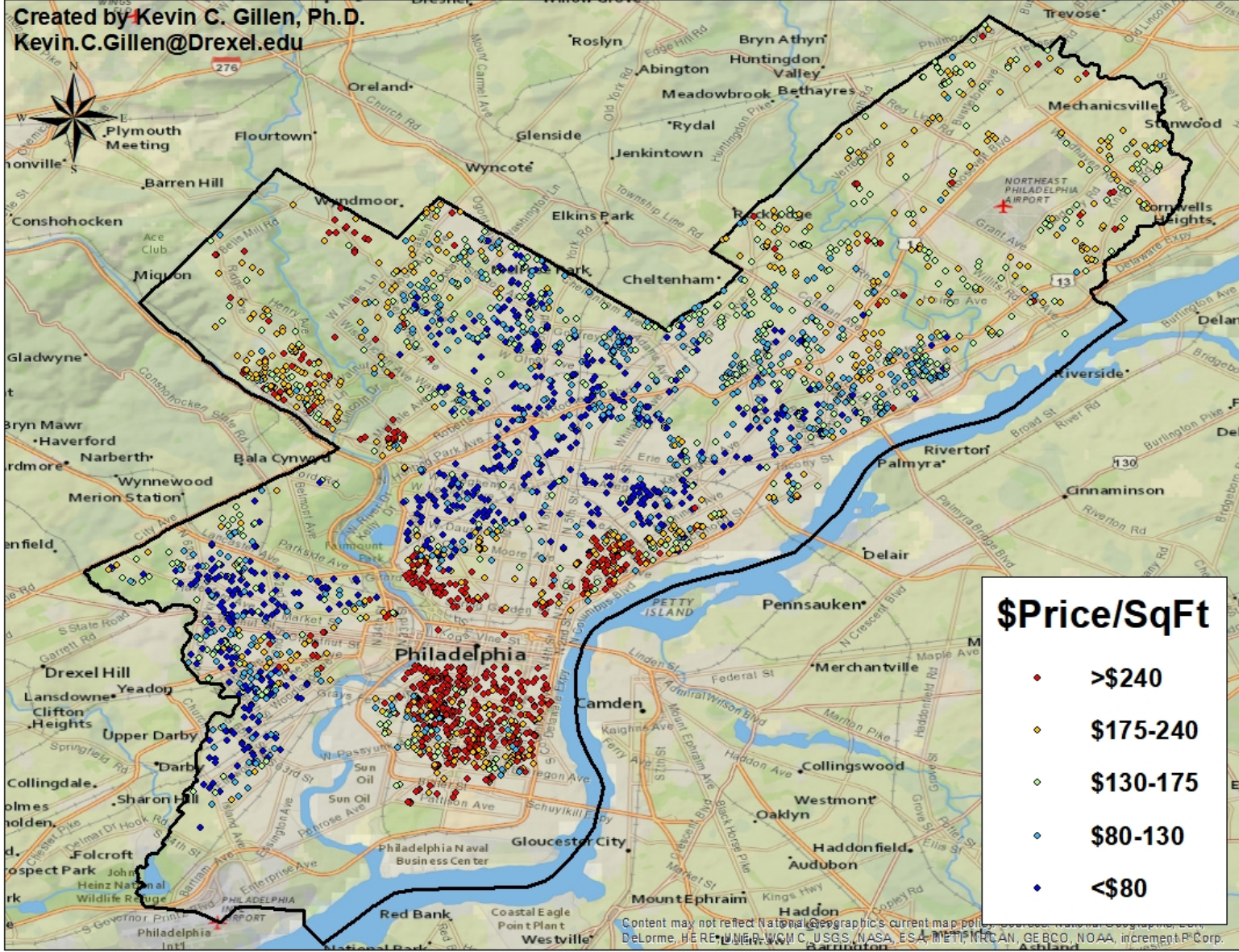
Number of Philadelphia House Sales* per Quarter with Price >= \$1 Million: 1997-2020



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

Philadelphia House Sales in 2020 Q2

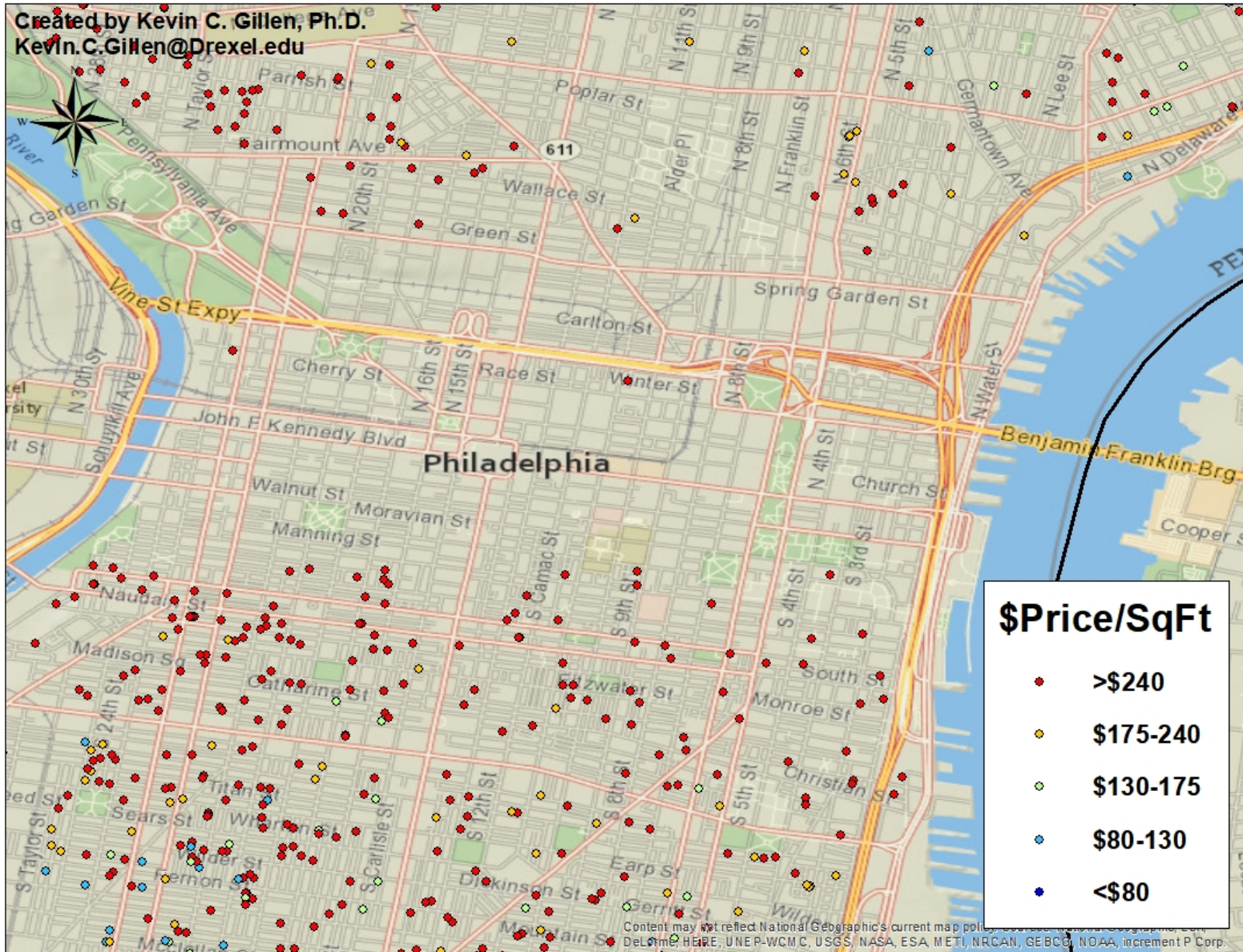
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 Kevin.C.Gillen@Drexel.edu



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 2020 Q2

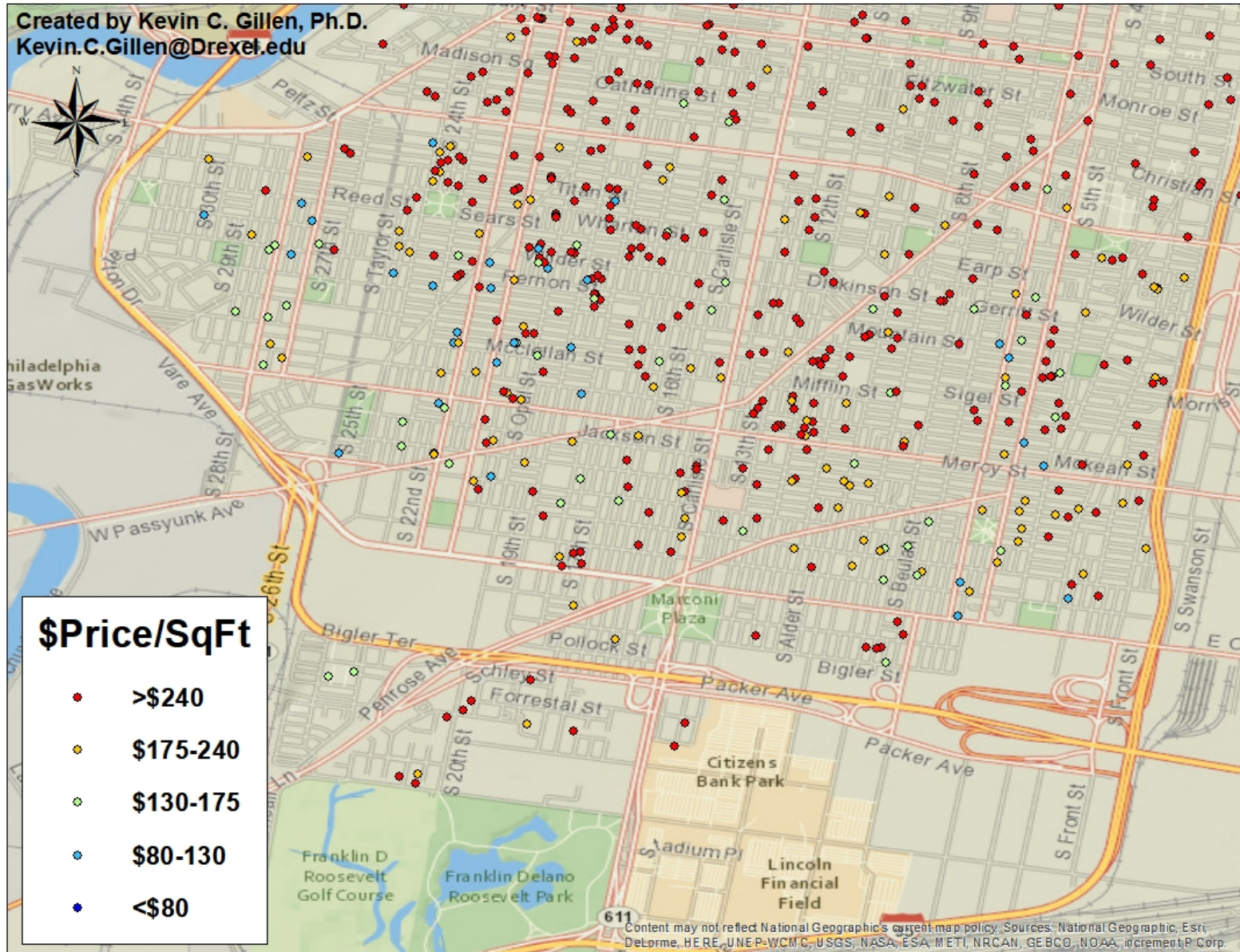
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South Philadelphia House Sales in 2020 Q2

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Kevin.C.Gillen@Drexel.edu

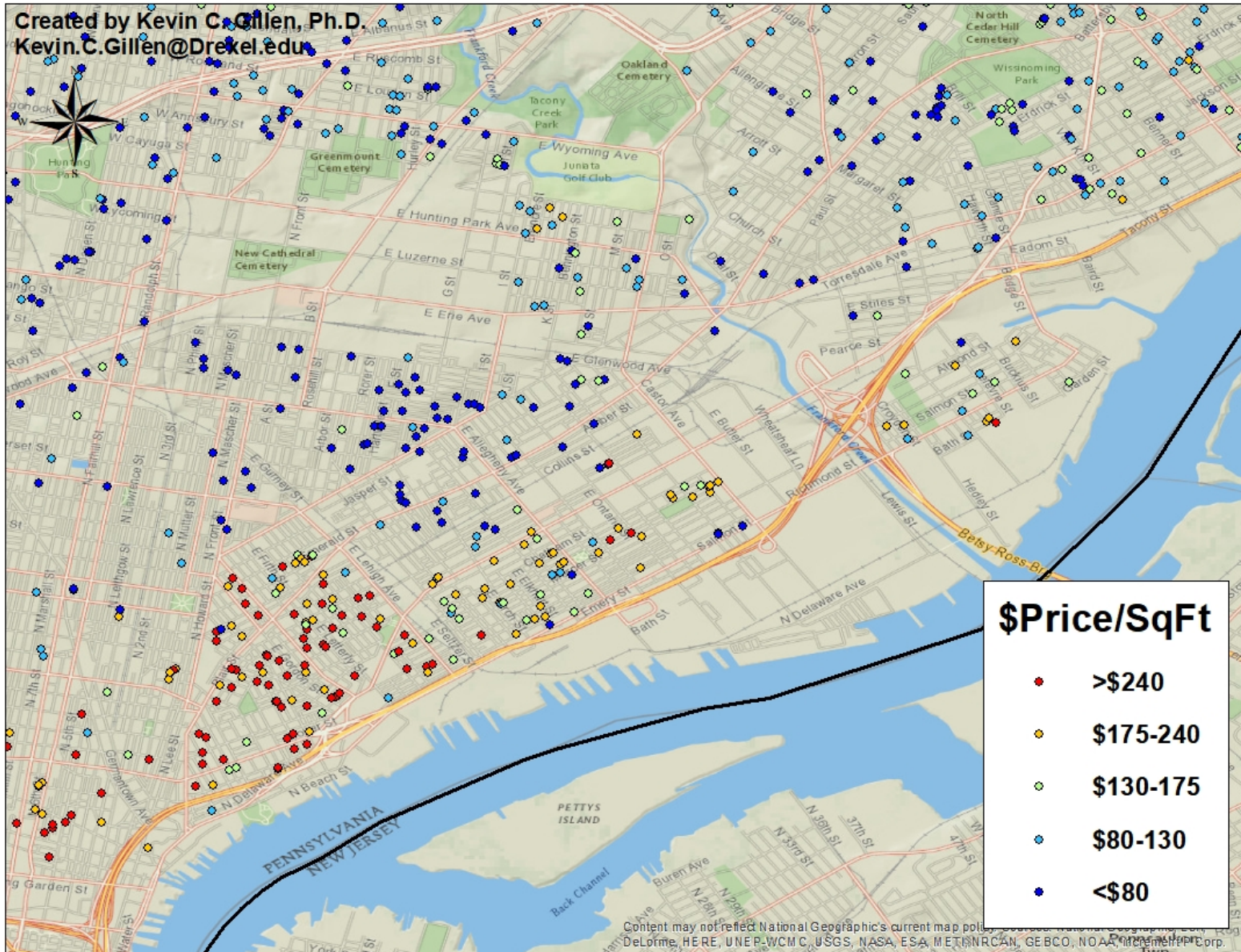


\$/SqFt

- >\$240
- \$175-240
- \$130-175
- \$80-130
- <\$80

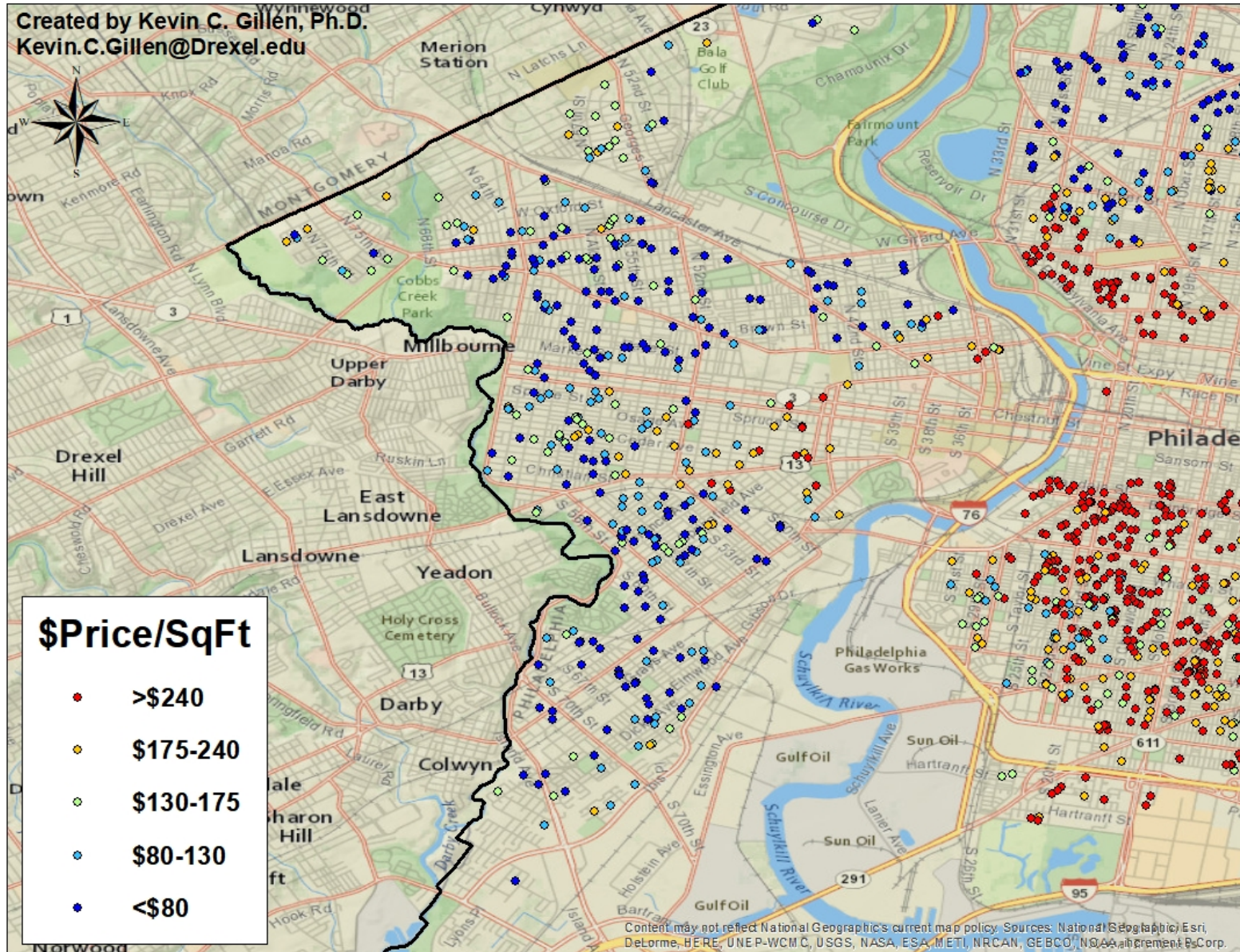
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Kensington/Frankford House Sales in 2020 Q2



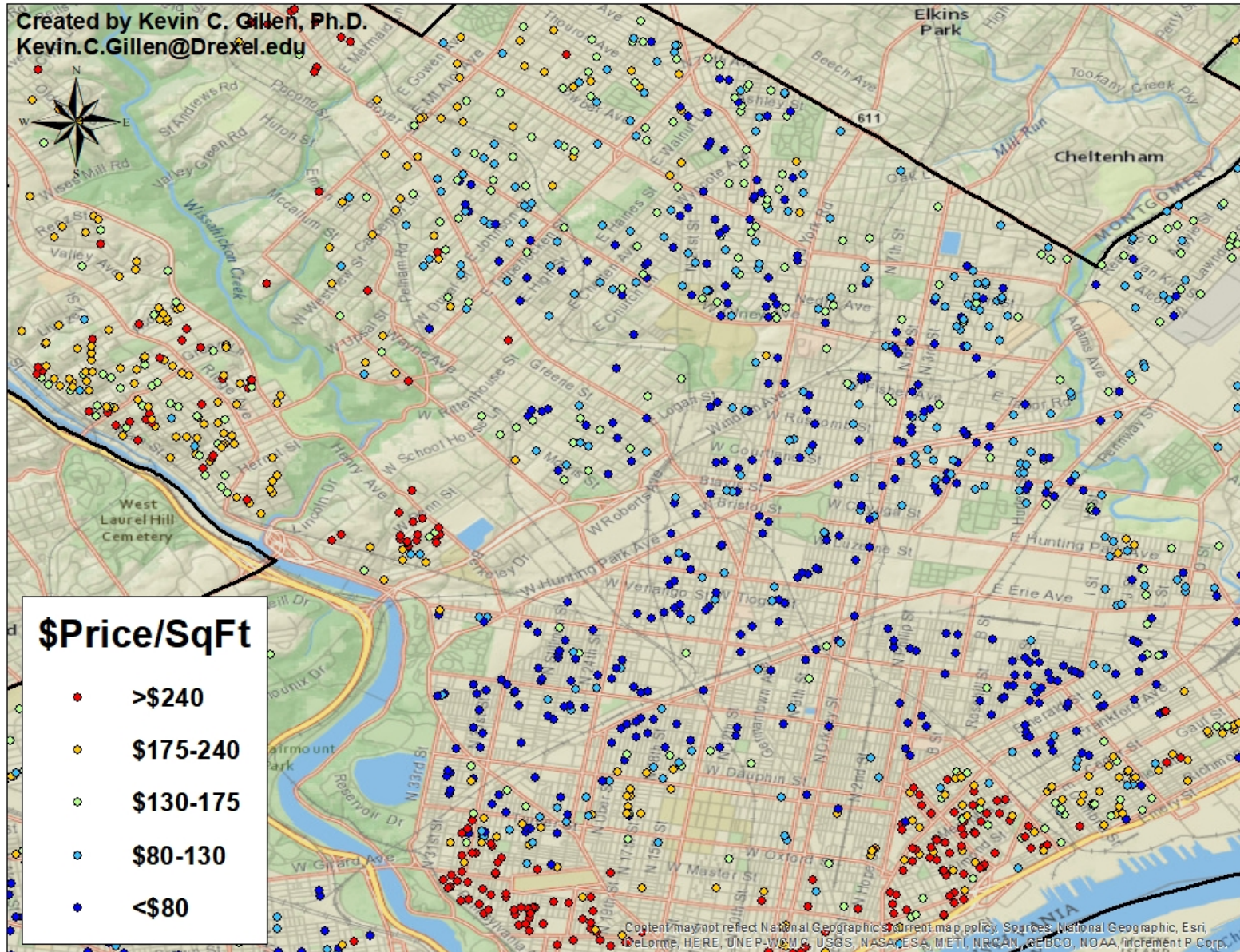
West/Southwest Philadelphia House Sales in 2020 Q2

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Kevin.C.Gillen@Drexel.edu



North Philadelphia House Sales in 2020 Q2

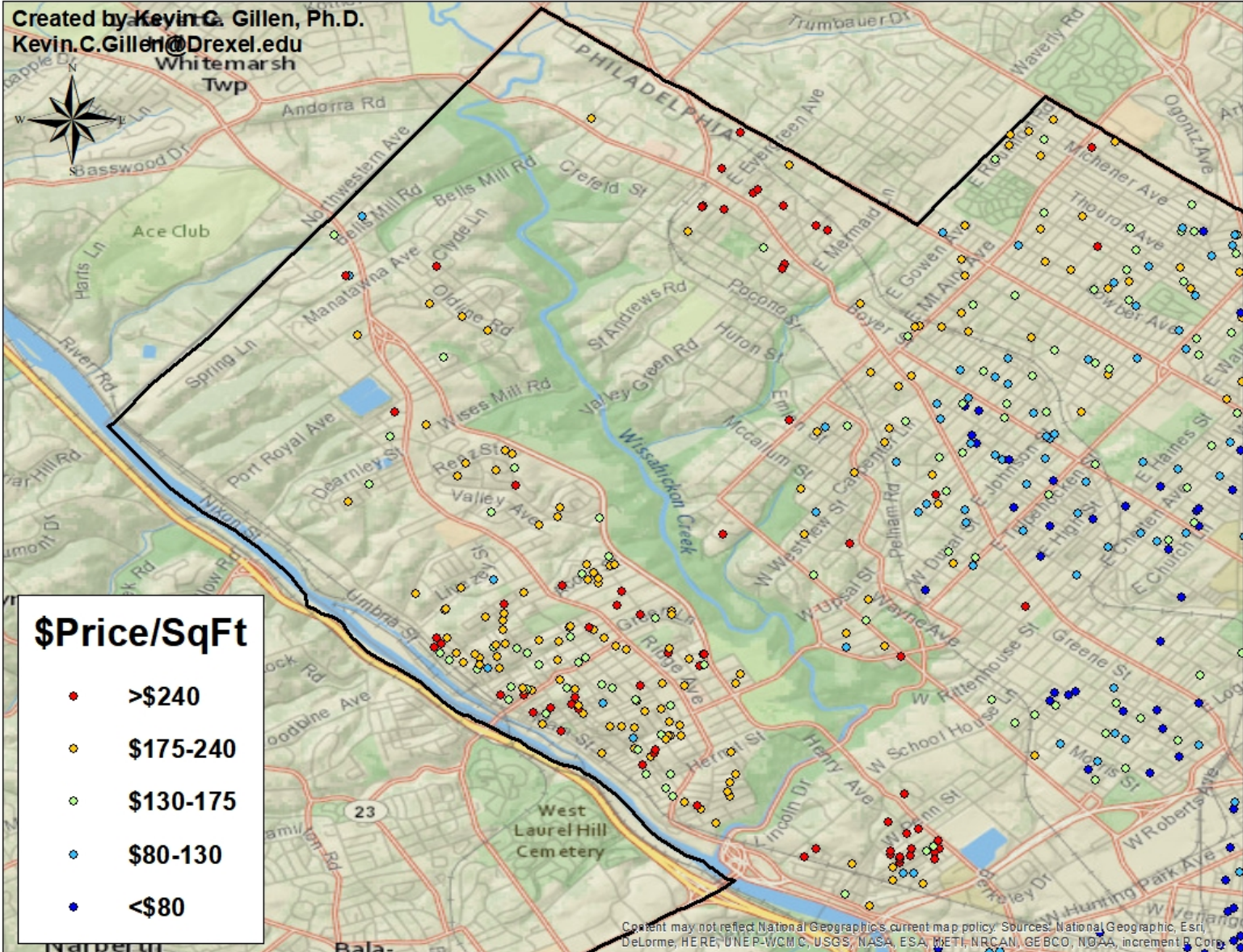
Created by Kevin C. Gillen, Ph.D.
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Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WFP, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPicment P Corp.

Northwest Philadelphia House Sales in 2020 Q2

Created by **Kevin C. Gillen, Ph.D.**
Kevin.C.Gillen@drexel.edu
Whitemarsh Twp



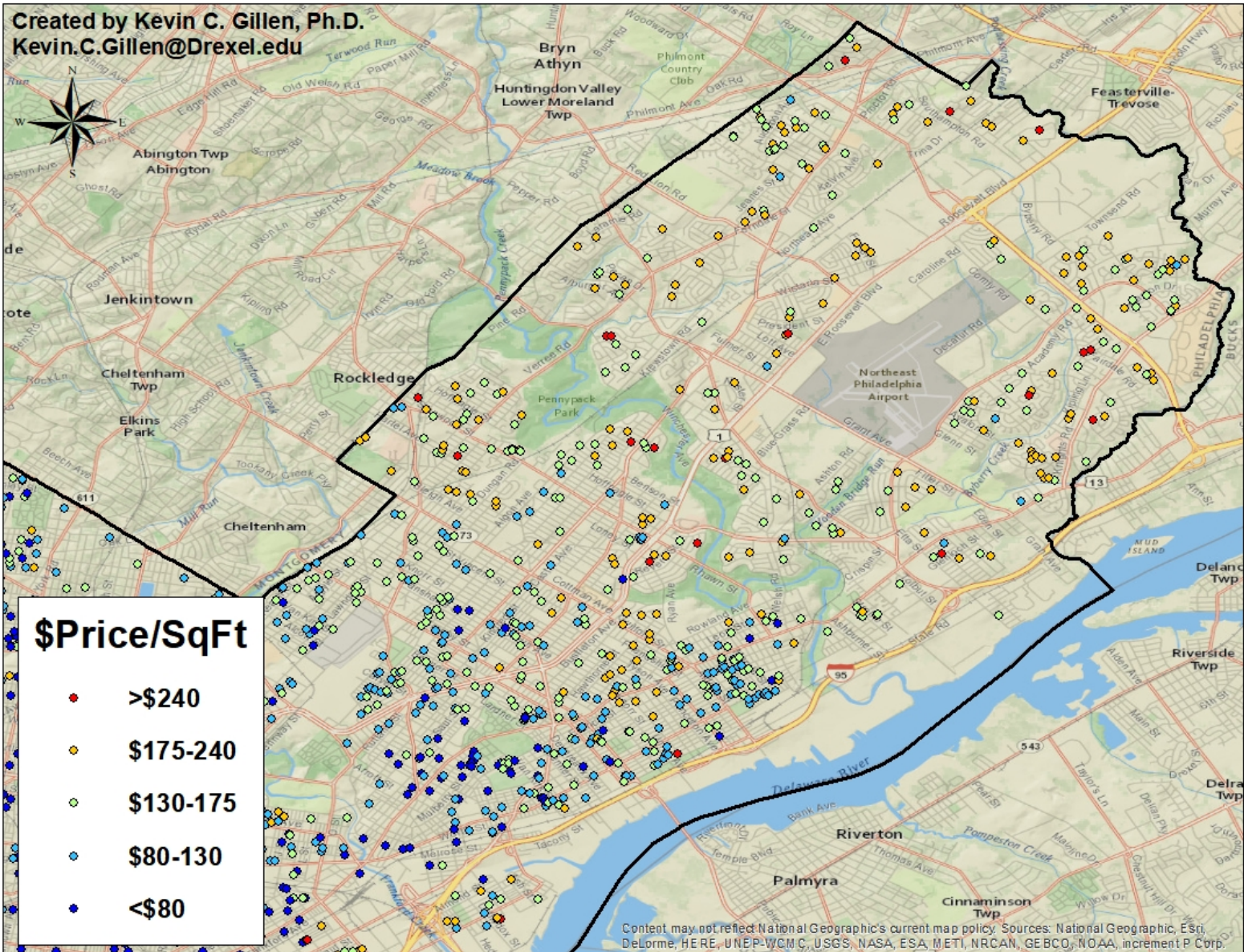
\$/SqFt

- >\$240
- \$175-240
- \$130-175
- \$80-130
- <\$80

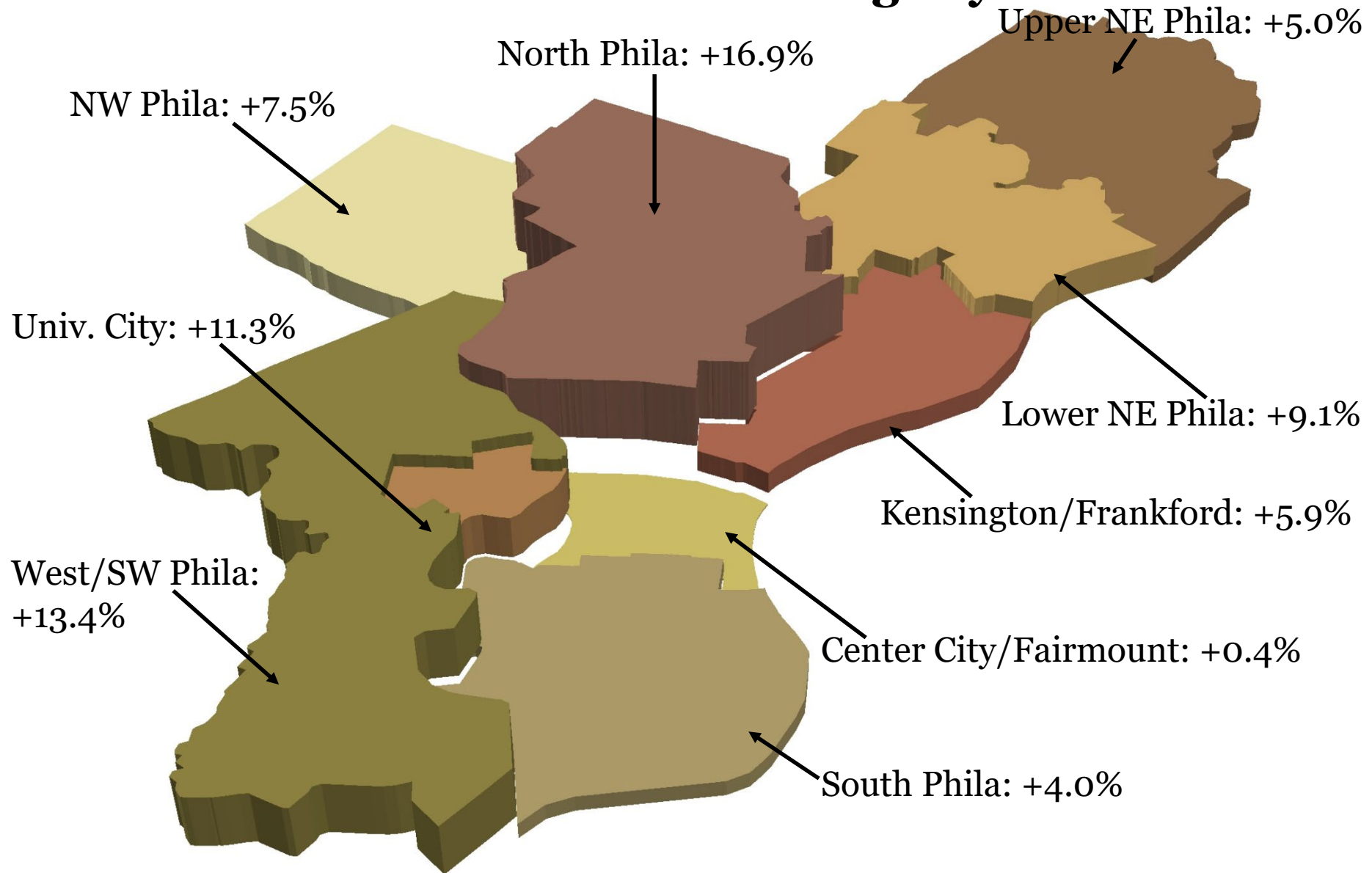
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment, © Corp.

Northeast Philadelphia House Sales in 2020 Q2

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Annual House Price Rate of Change by Submarket



Note: Each submarket is extruded by its average change in house values over the course of the past year (from 2019 Q2 to 2020 Q2) in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

+ \$1 Million Dollar House Sales in 2020 Q2

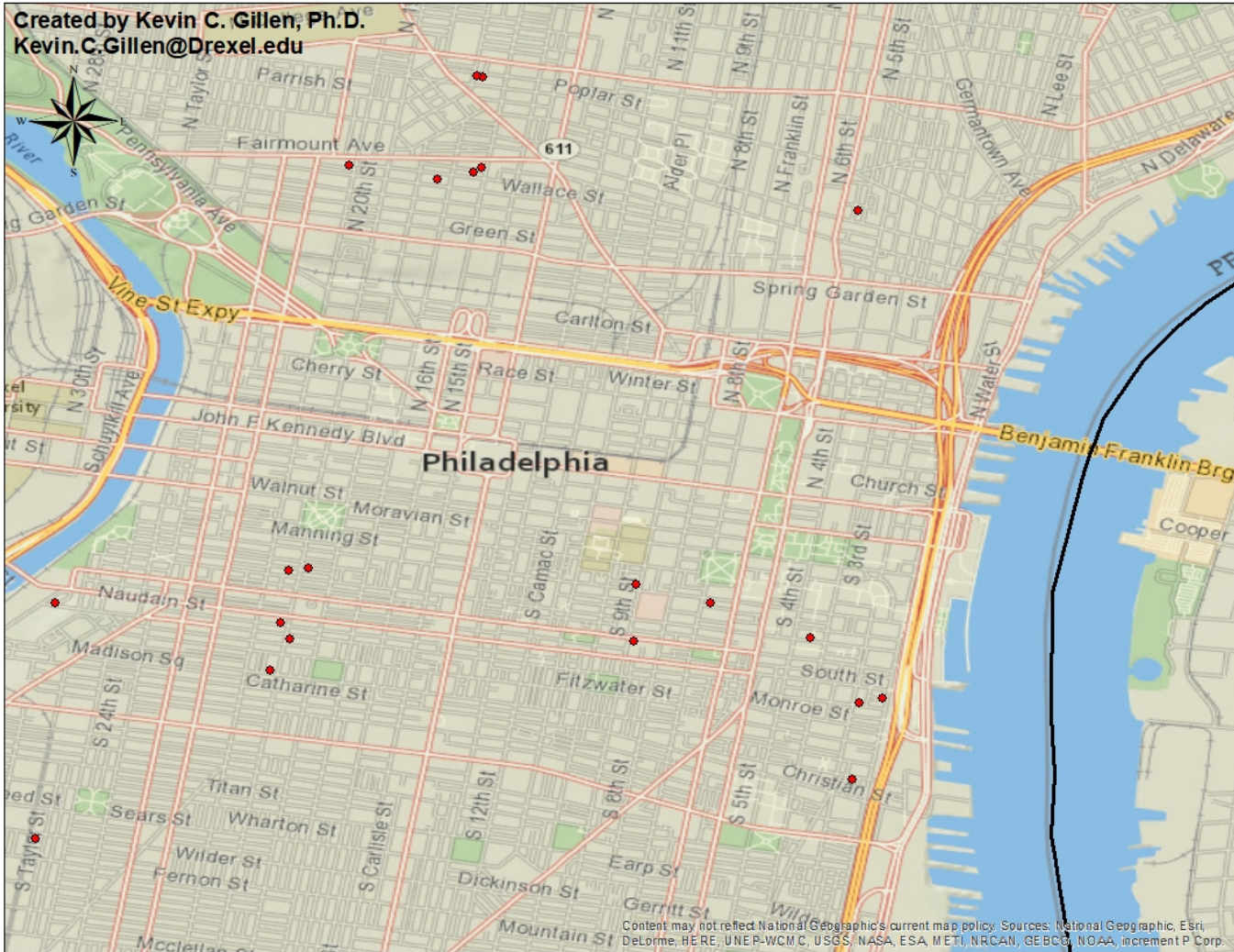
Created by Kevin C. Gillen, Ph.D.
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Price	Address
\$1,000,000	2152 E NORRIS ST
\$1,000,000	1911 KATER ST
\$1,025,000	1914 PANAMA ST
\$1,050,000	819 N ORKNEY ST
\$1,075,000	2007 NORTH ST
\$1,075,000	1642 CAMBRIDGE ST
\$1,085,000	1634 CAMBRIDGE ST
\$1,140,000	120 QUEEN ST
\$1,150,000	705 S 19TH ST
\$1,151,830	129 BAINBRIDGE ST
\$1,165,000	630 S 27TH ST
\$1,175,000	636 N 16TH ST
\$1,200,000	737 W ALLENS LN
\$1,200,000	9001 CREFELD ST
\$1,200,000	1717 WALLACE ST
\$1,240,000	1501 S 25TH ST
\$1,287,500	632 SPRUCE ST
\$1,330,000	264 S 9TH ST
\$1,400,000	1619 NORTH ST
\$1,432,000	8316 NAVAJO ST
\$1,450,000	1905 CATHARINE ST
\$1,475,000	610 S FRONT ST
\$1,475,000	714 SAINT GEO RD
\$1,500,000	8216 SEMINOLE AVE
\$1,649,000	838 LOMBARD ST
\$1,950,000	319 PINE ST
\$2,500,000	8872 TOWANDA AVE
\$3,325,000	1830 DELANCEY PL

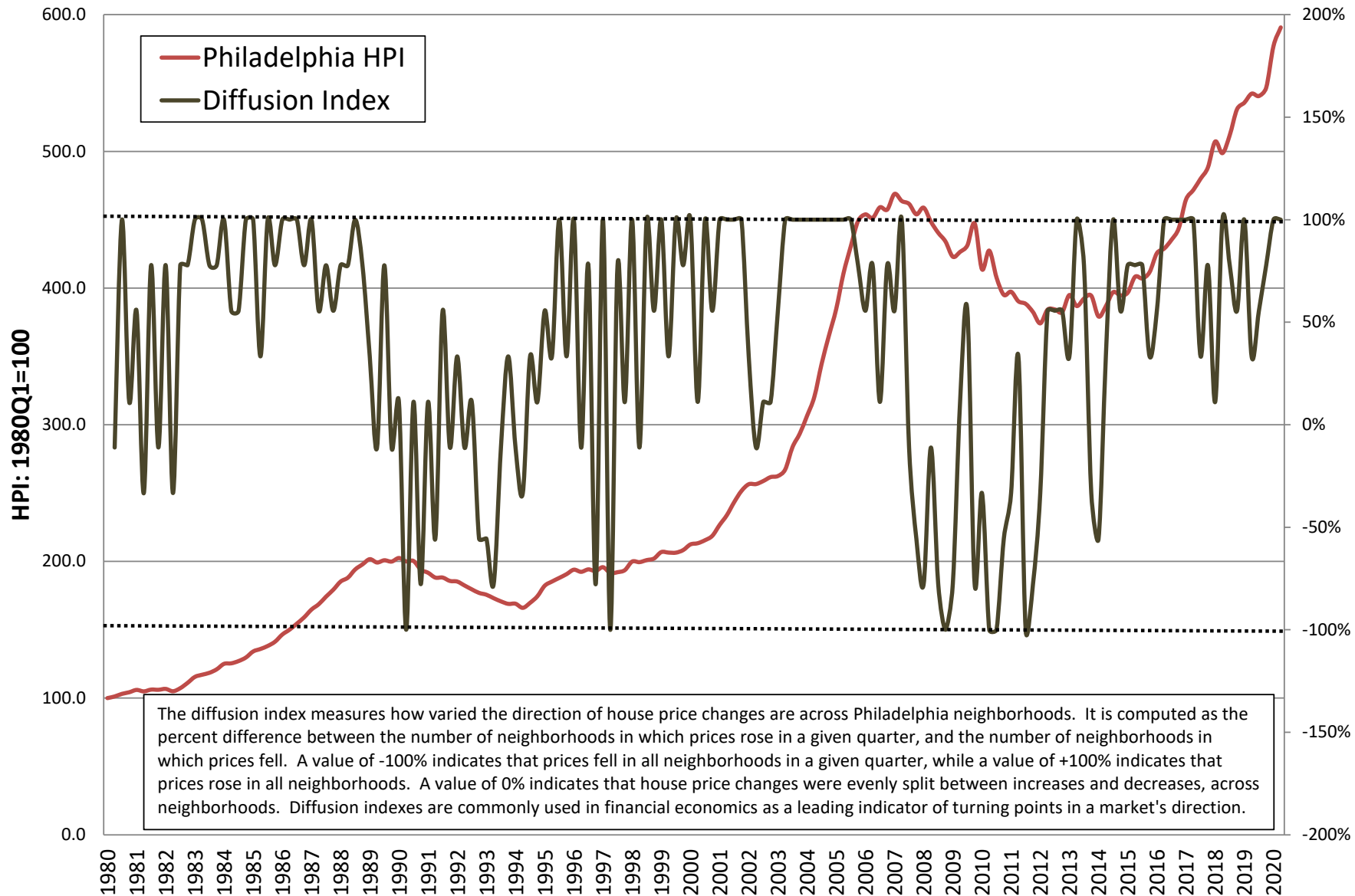
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+ \$1 Million Dollar House Sales in 2020 Q2



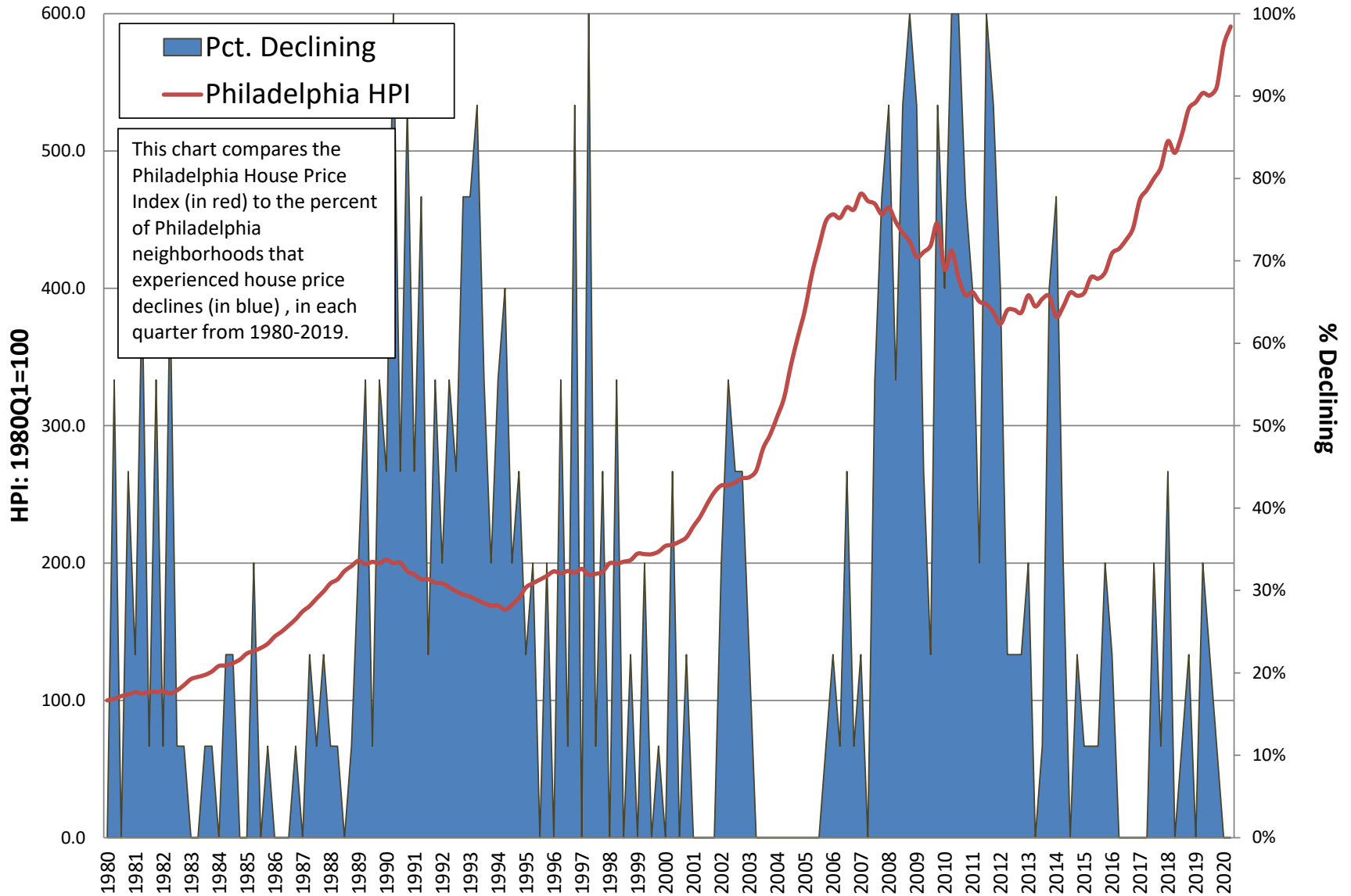
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\$3,325,000	1830 DELANCEY PL

Philadelphia House Price Diffusion Index 1980-2020

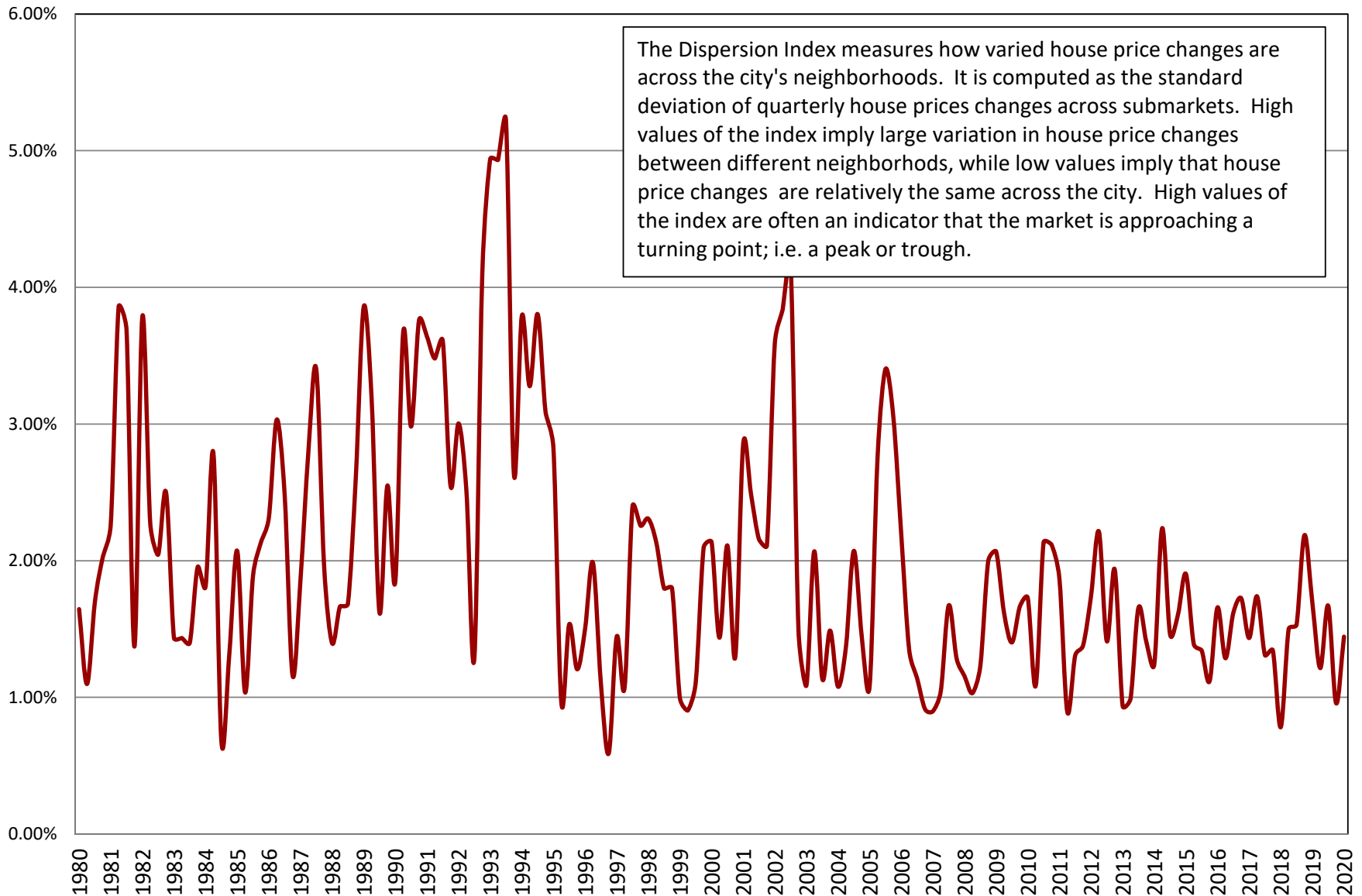


The diffusion index measures how varied the direction of house price changes are across Philadelphia neighborhoods. It is computed as the percent difference between the number of neighborhoods in which prices rose in a given quarter, and the number of neighborhoods in which prices fell. A value of -100% 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 1980-2020: Declines v. House Price Index

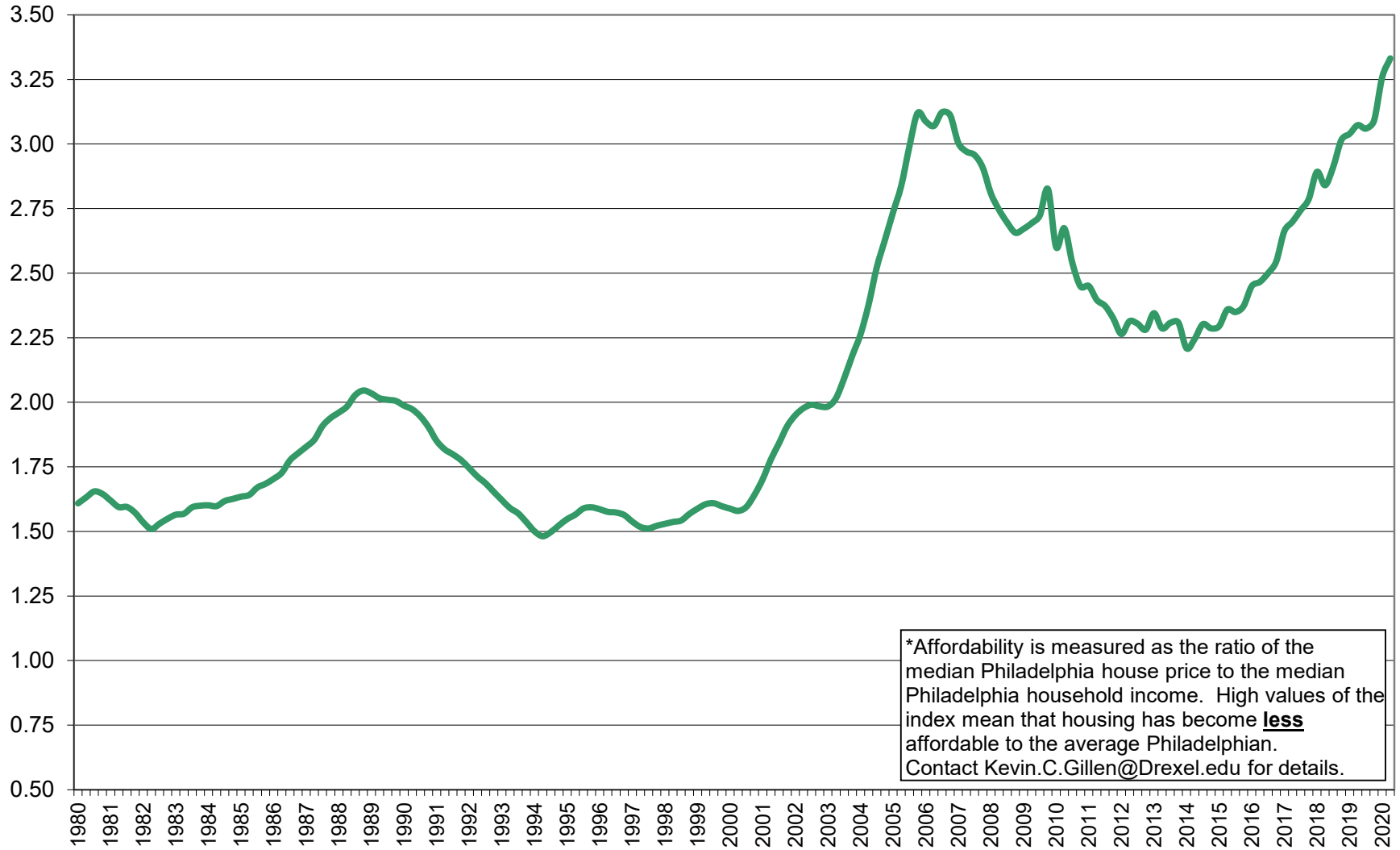


Dispersion Index of Philadelphia Housing



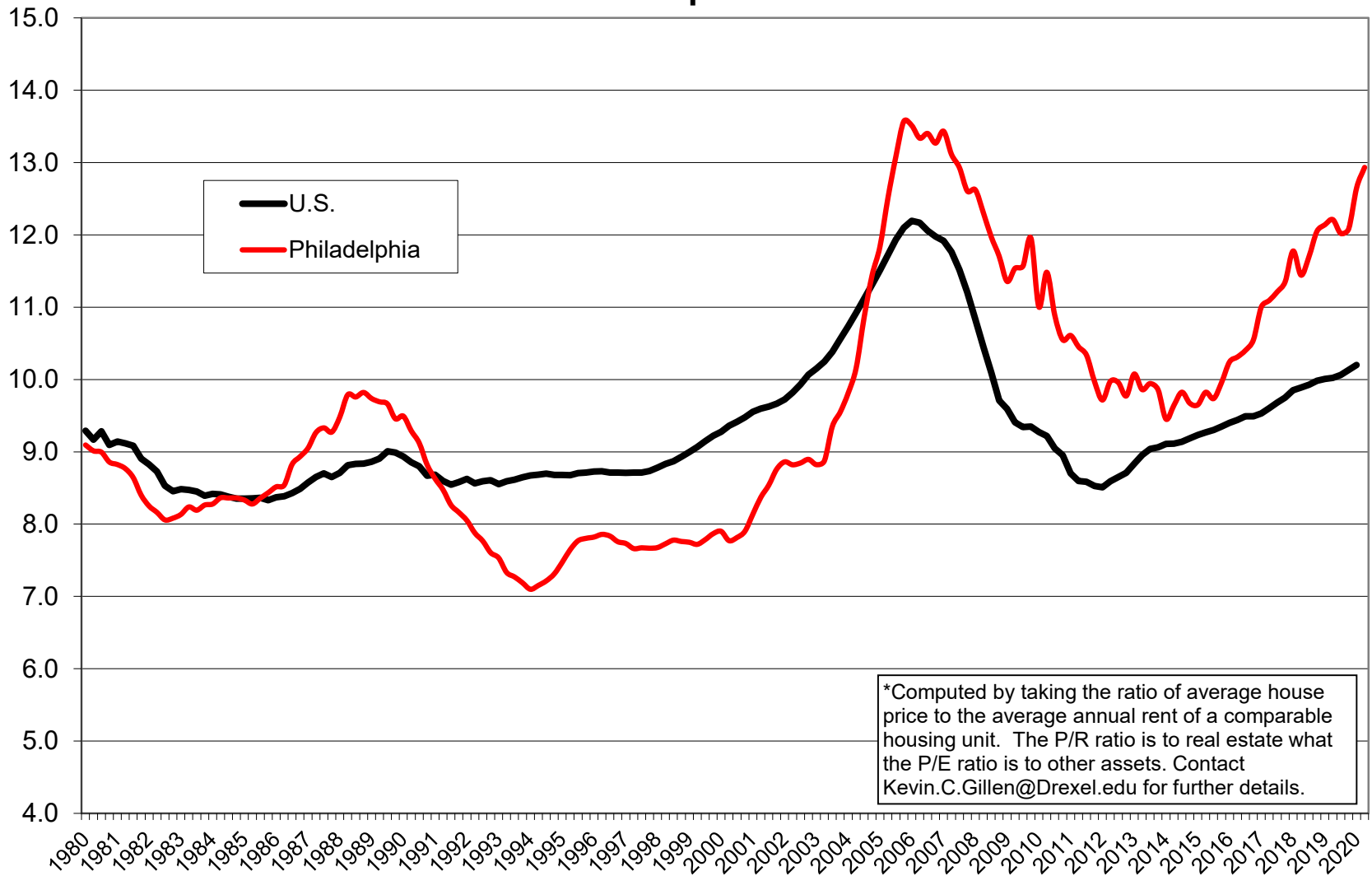
The Dispersion Index measures how varied house price changes are across the city's neighborhoods. It is computed as the standard deviation of quarterly house prices changes across submarkets. High values of the index imply large variation in house price changes between different neighborhoods, while 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 approaching a turning point; i.e. a peak or trough.

Philadelphia Housing Affordability* Index: 1980-2020



*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.

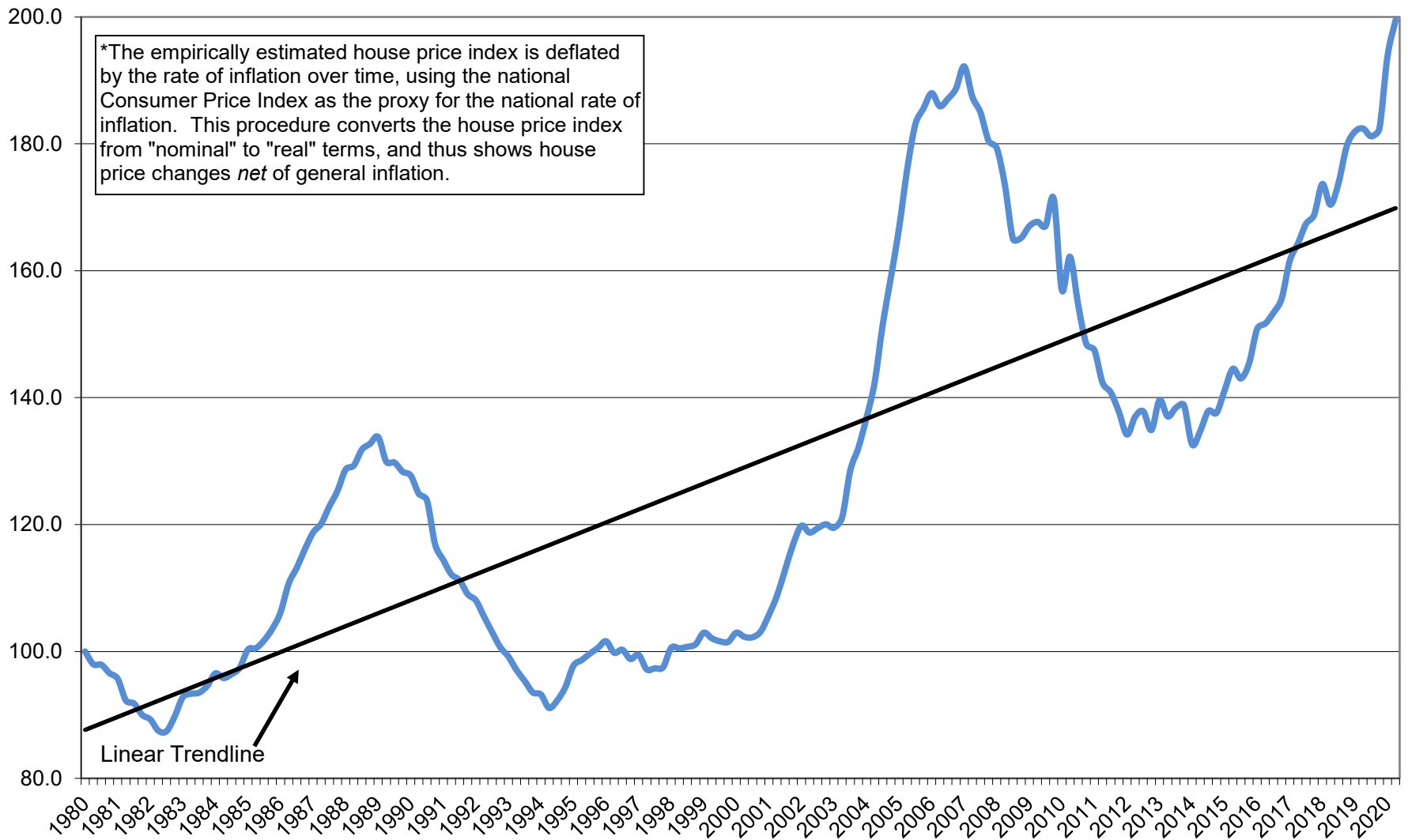
Average House Price-to-Rent Ratios*: 1980-2020 Philadelphia v. U.S.



*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.

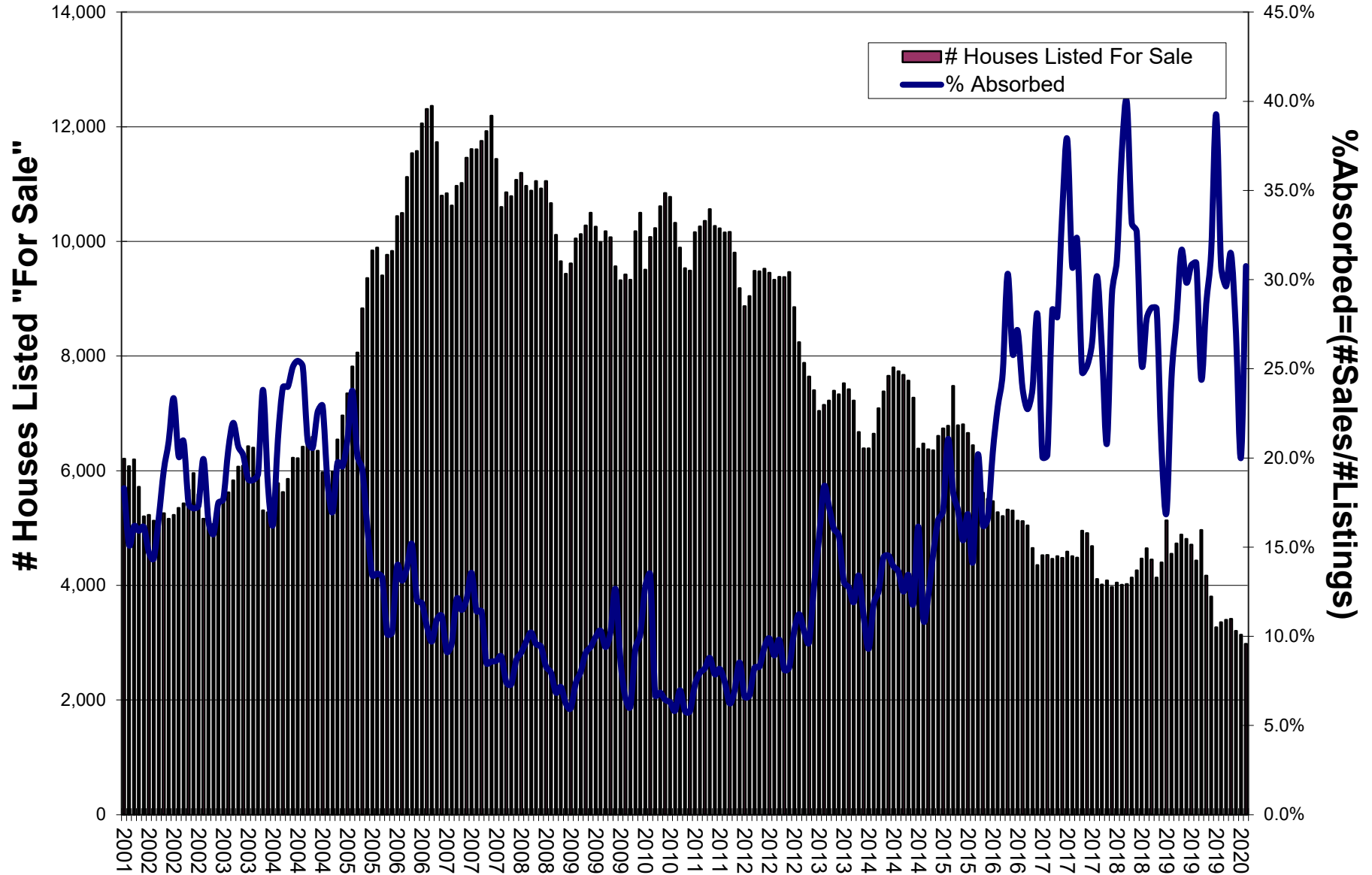
Inflation-Adjusted* Philadelphia House Price Index 1980-2020

1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

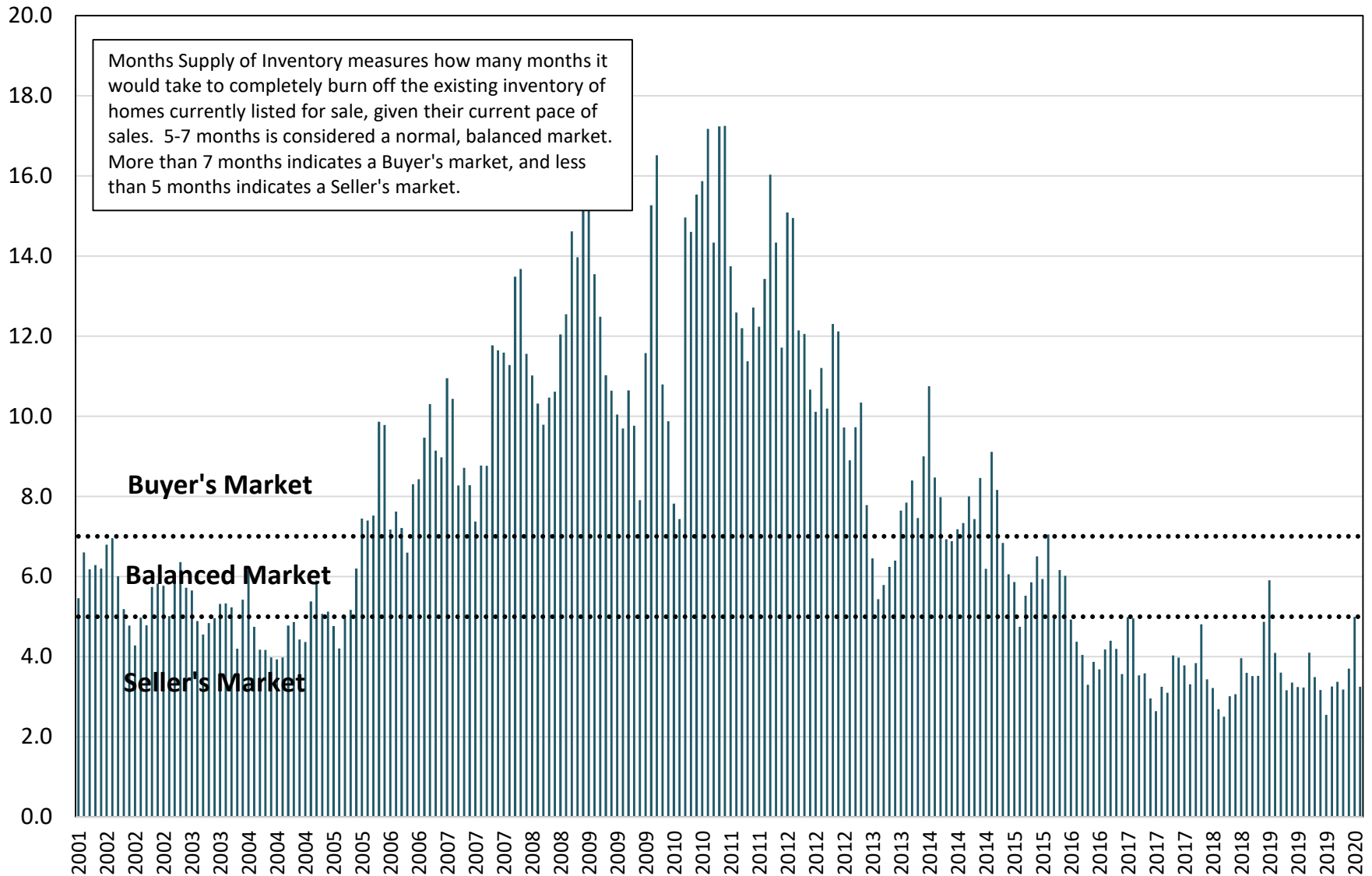


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Trend MLS

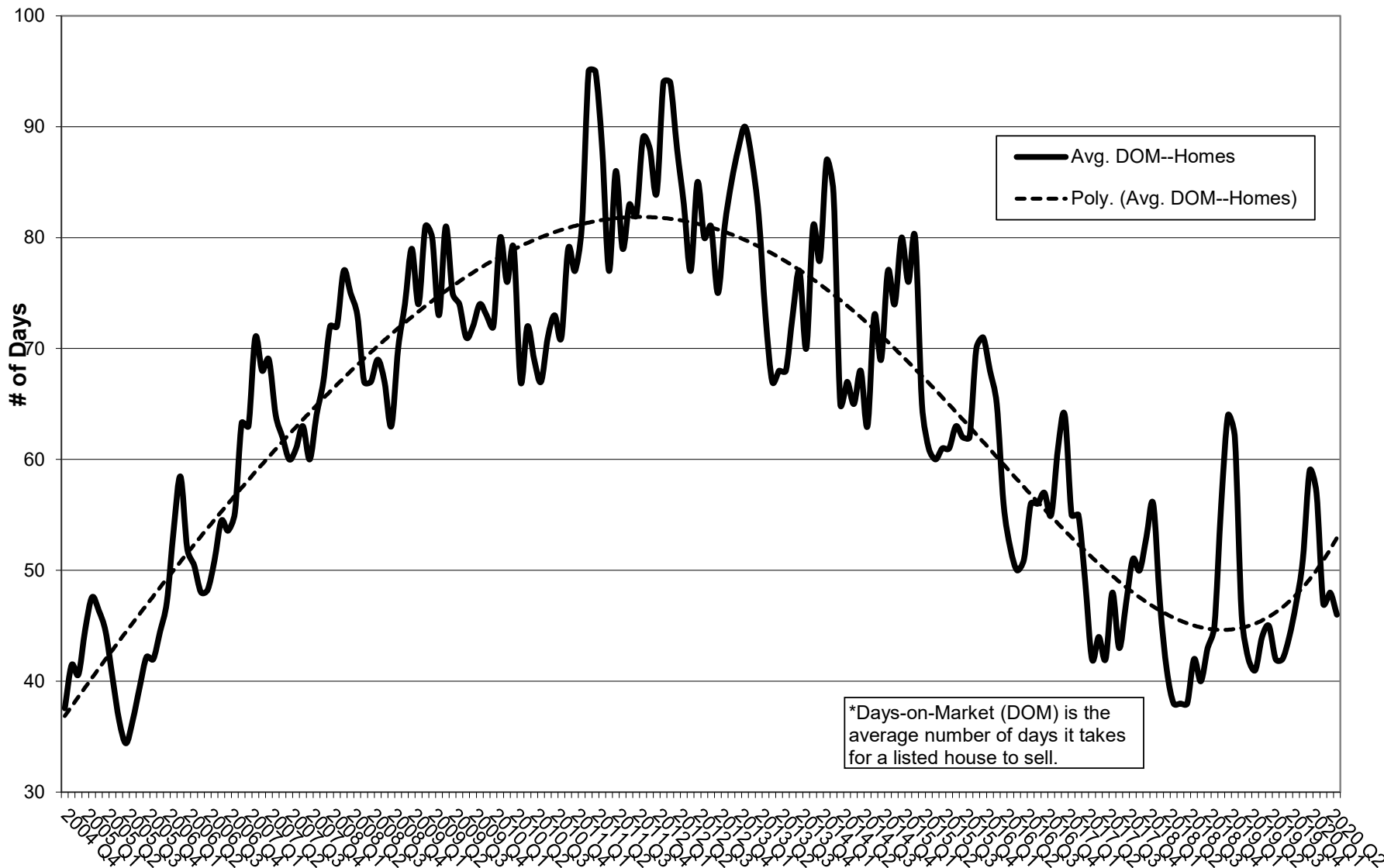


Months Supply of Inventory in Philadelphia



Source: Trend MLS

Average Days-on-Market* for Philadelphia Homes

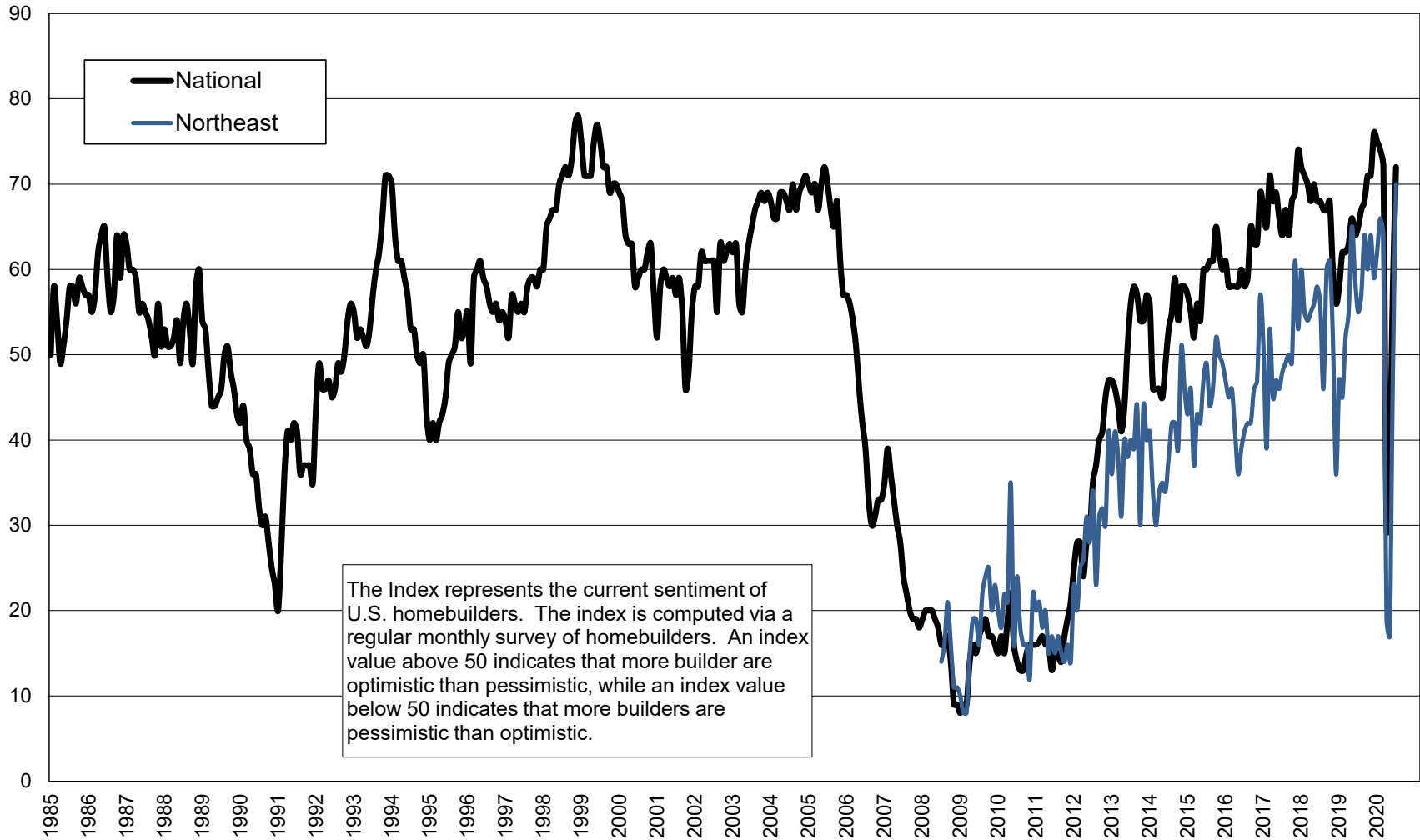


*Days-on-Market (DOM) is the average number of days it takes for a listed house to sell.

Source: Trend MLS

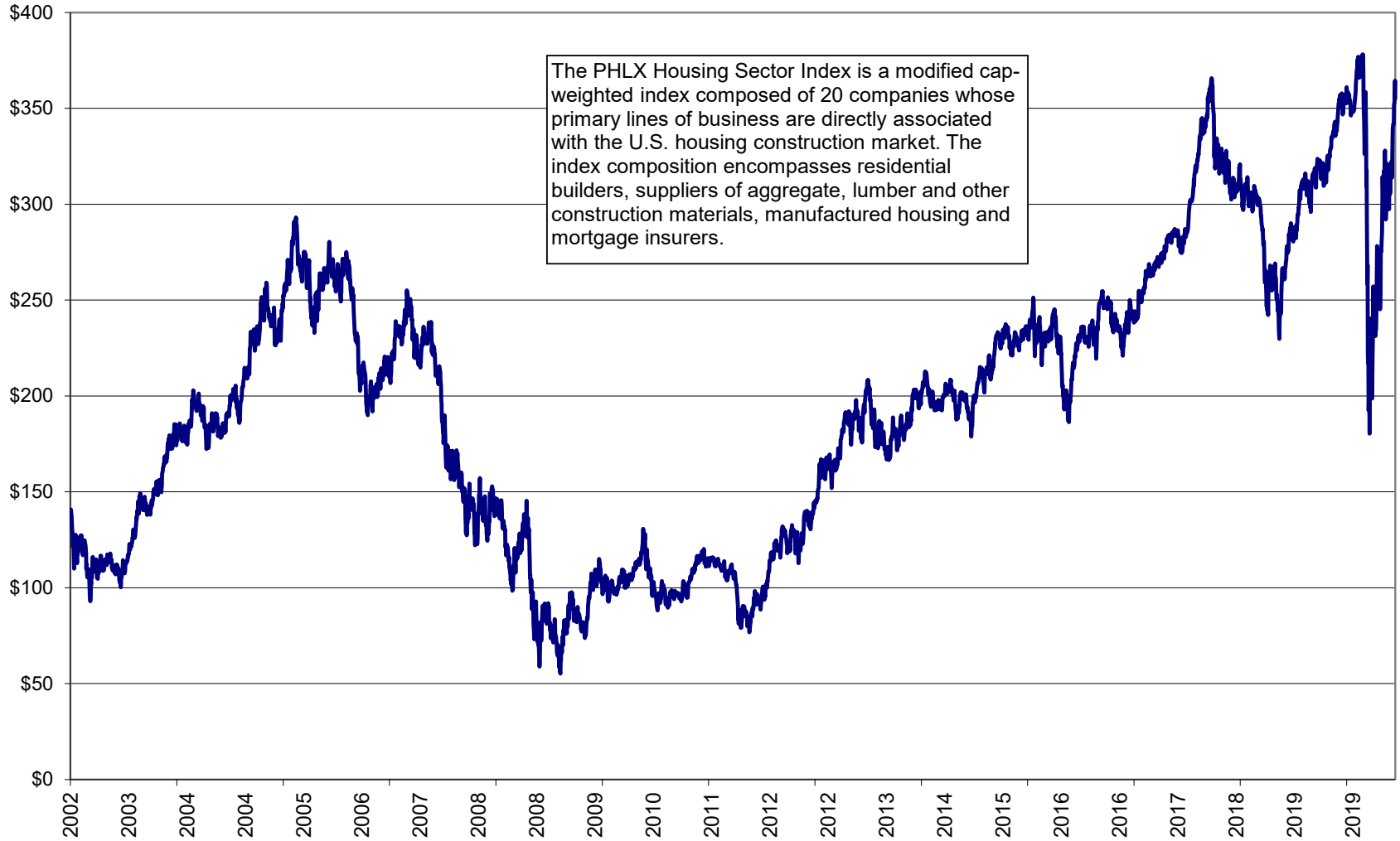


Index of Homebuilder Sentiment: 1985-2020 (Seasonally Adjusted)



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

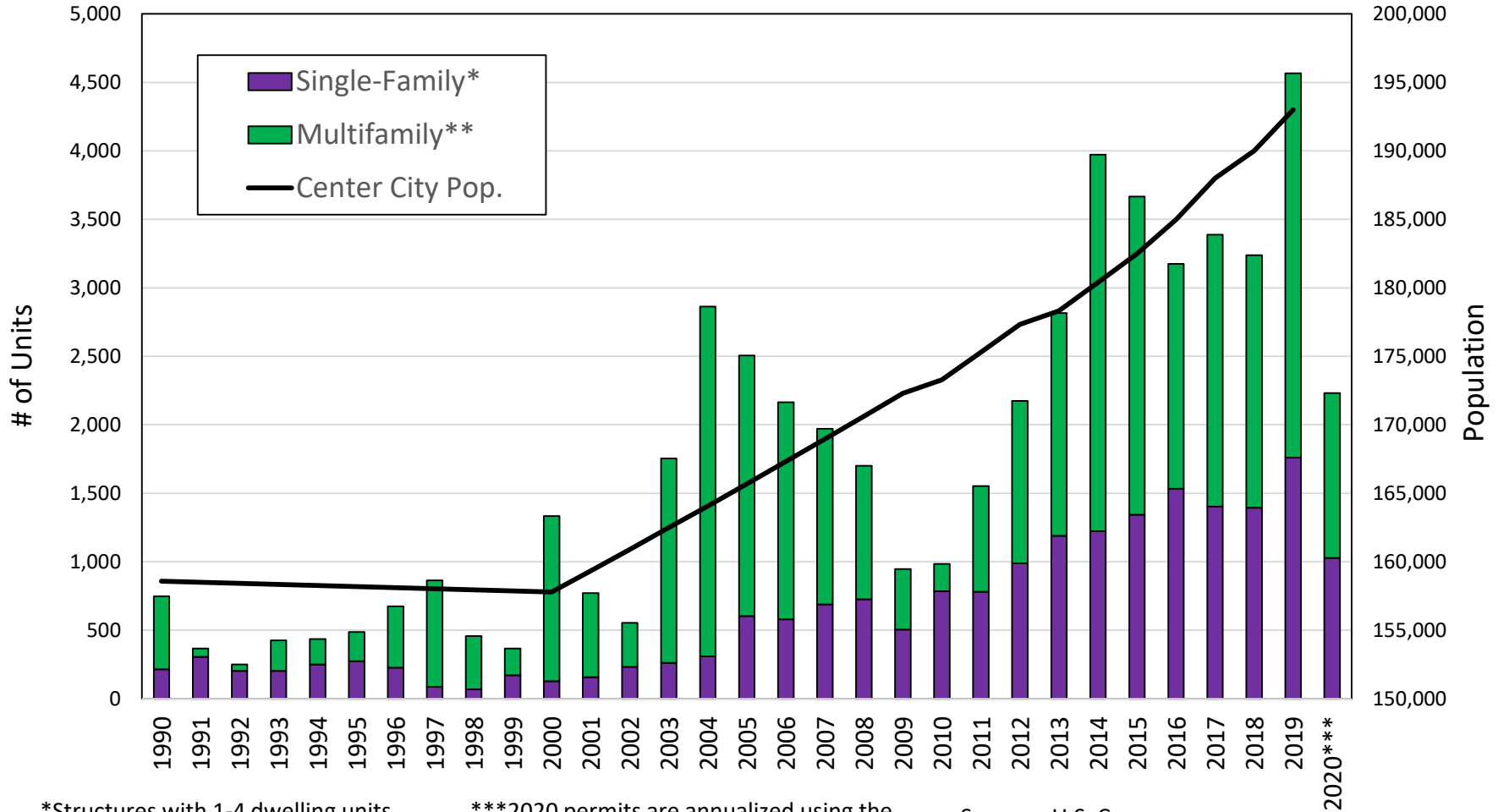
Philadelphia Stock Exchange Housing Sector Index: 2002-2020



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 1990-2020: Single-Family v. Multifamily



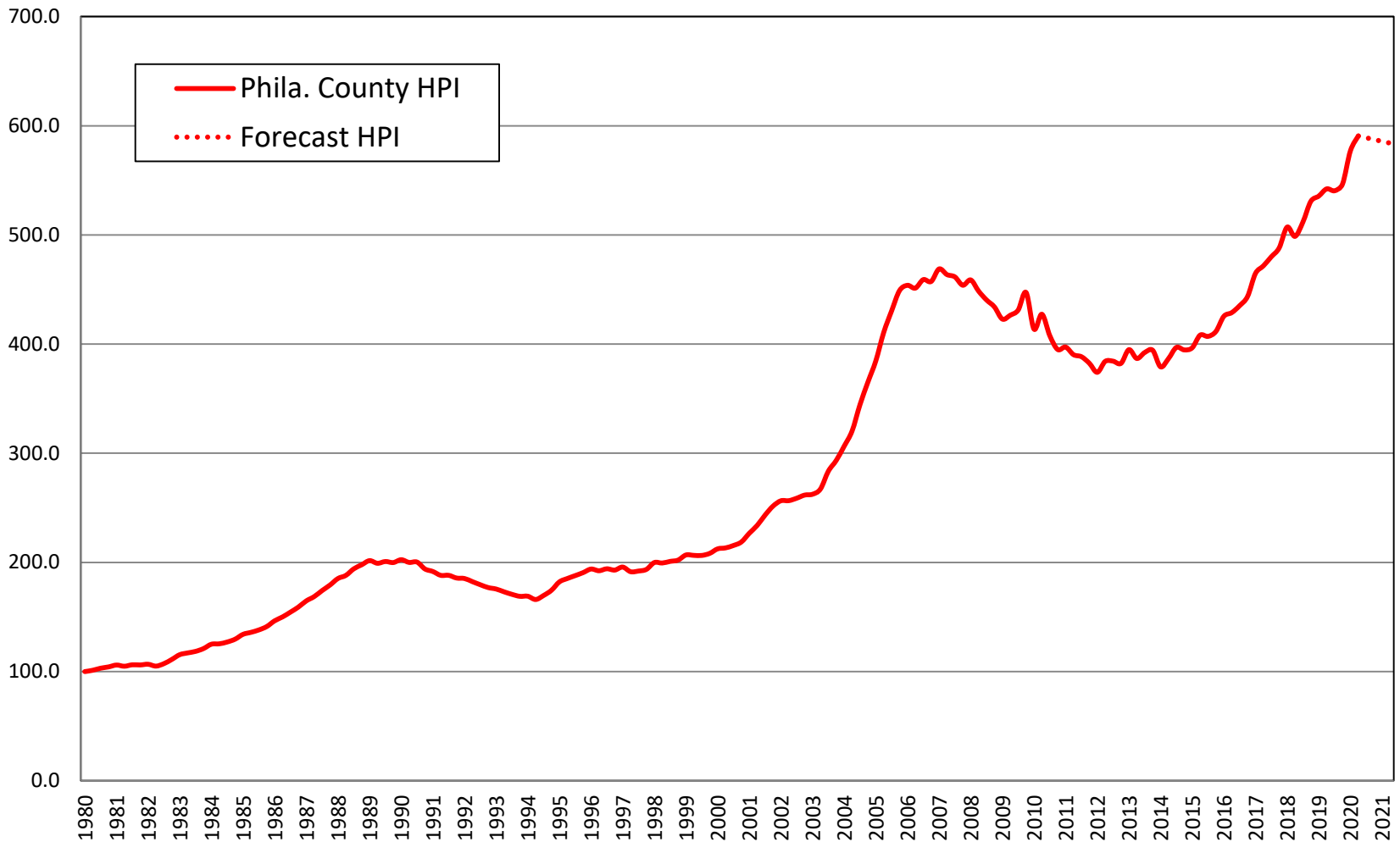
*Structures with 1-4 dwelling units
 **Structures with >=5 dwelling units

***2020 permits are annualized using the number of permits filed YTD.

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 has remained negative. It is currently projecting a decline of 1.1% over the next 12 months, which is the same forecast that is was projecting last quarter.

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