PHILADELPHIA REGIONAL HOUSE PRICE INDICES

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Philadelphia Regional House Price Indices 1980-2016
1980Q1=100

*Empirically estimated by Kevin C. Gillen, PhD
**Courtesy Federal Housing Finance Agency (FHFA)
House Price Appreciation 1987-2016:
Philadelphia Region v. 10-City U.S. Composite

% Change
1998 to Peak: +172%  +106%
From Peak:   -11%    -9%

*Source: Case-Shiller MacroMarkets LLC. 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 Regional House Price Indices 1980-2016
by Philadelphia Area Submarket and U.S.: 1980Q1=100

Note: The suburban index includes all counties in the regional index, except for Philadelphia county.

*Empirically estimated by Kevin C. Gillen, PhD  **Courtesy Federal Housing Finance Agency (FHFA)
### Total House Price Appreciation Rates by Philadelphia Area Submarket and U.S.

<table>
<thead>
<tr>
<th>Period</th>
<th>Philadelphia Region*</th>
<th>Philadelphia County*</th>
<th>Philadelphia Suburbs*</th>
<th>U.S.A.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>37-Year</td>
<td>146.3%</td>
<td>163.3%</td>
<td>139.6%</td>
<td>136.9%</td>
</tr>
<tr>
<td>10-Year</td>
<td>-7.6%</td>
<td>10.6%</td>
<td>-14.8%</td>
<td>5.5%</td>
</tr>
<tr>
<td>1-Year</td>
<td>3.8%</td>
<td>12.9%</td>
<td>0.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>1-Quarter</td>
<td>-0.3%</td>
<td>1.4%</td>
<td>-1.0%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

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

**Source: Federal Housing Finance Agency (FHFA). FHFA numbers are through 2016 Q3.
Philadelphia Regional House Price Indices 1980-2016, by County
1980Q1=100

*All indices empirically estimated by Kevin C. Gillen, PhD
Philadelphia Region House Price Appreciation Rates by County

<table>
<thead>
<tr>
<th>Period</th>
<th>Philadelphia</th>
<th>Bucks</th>
<th>Chester</th>
<th>Delaware</th>
<th>Montgomery</th>
<th>New Castle</th>
<th>Mercer</th>
<th>Burlington</th>
<th>Camden</th>
<th>Gloucester</th>
<th>Salem</th>
</tr>
</thead>
<tbody>
<tr>
<td>37-Year</td>
<td>163.3%</td>
<td>156.9%</td>
<td>155.1%</td>
<td>132.4%</td>
<td>144.2%</td>
<td>132.9%</td>
<td>159.9%</td>
<td>122.0%</td>
<td>116.4%</td>
<td>137.0%</td>
<td>102.7%</td>
</tr>
<tr>
<td>10-Year</td>
<td>10.6%</td>
<td>-13.4%</td>
<td>-3.0%</td>
<td>-16.7%</td>
<td>-12.9%</td>
<td>-17.8%</td>
<td>-15.3%</td>
<td>-27.6%</td>
<td>-33.6%</td>
<td>-19.0%</td>
<td>-55.3%</td>
</tr>
<tr>
<td>1-Year</td>
<td>12.9%</td>
<td>0.3%</td>
<td>2.3%</td>
<td>2.5%</td>
<td>2.1%</td>
<td>0.5%</td>
<td>-3.0%</td>
<td>-1.7%</td>
<td>-0.4%</td>
<td>0.9%</td>
<td>-18.6%</td>
</tr>
<tr>
<td>1-Quarter</td>
<td>1.4%</td>
<td>-1.4%</td>
<td>-0.5%</td>
<td>-0.5%</td>
<td>-0.9%</td>
<td>-0.3%</td>
<td>-2.3%</td>
<td>0.0%</td>
<td>-2.8%</td>
<td>1.7%</td>
<td>-16.2%</td>
</tr>
</tbody>
</table>

All county-level indices and appreciation rates estimated by Kevin C. Gillen, Ph.D.
2016 Q3 House Price Rate of Change by County

Burlington: +0.0%
Camden: -2.8%
Bucks: -1.4%
Philadelphia: +1.4%
Mercer: -2.3%
Burlington: +0.0%

Montgomery: -0.9%
Chester: -0.5%
Delaware: -0.5%
New Castle: -0.3%
Salem: -16.2%
Gloucester: +1.7%

Note: Each county is extruded by its average change in house values during 2016 Q3 in order to reflect its growth (or depreciation) rate relative to other counties.
Median Regional House Price v. Indexed Regional House Price: 1980-2016Q3

*Empirically estimated by Kevin C. Gillen, PhD
Median House Price by County, Smoothed*: 1980-2016

*The price data was smoothed by applying a 3-period moving average, in order to eliminate seasonal noise.
Number of Regional House Sales per Quarter: 2005-2016

Q1
Q2
Q3
Q4
Qtly. Average
Number of Regional House Sales 2005-2016
with Price>=1m

Qtly. Average
Philadelphia Region House Sales in 2016 Q3

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

$Price/SqFt
- >$175
- $140-175
- $115-140
- $80-115
- <$80

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.
Philadelphia County House Sales in 2016 Q3

$Price/SqFt

- >$175
- $140-175
- $115-140
- $80-115
- <$80

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.
Bucks County House Sales in 2016 Q3

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.
Montgomery County House Sales in 2016 Q3

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.

$Price/SqFt
- >$175
- $140-175
- $115-140
- $80-115
- <$80
Chester County House Sales in 2016 Q3

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

$Price/SqFt
- >$175
- $140-175
- $115-140
- $80-115
- <$80

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.
New Castle County House Sales in 2016 Q3

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.
Mercer County House Sales in 2016 Q3

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.
Burlington County House Sales in 2016 Q3

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.
Camden County House Sales in 2016 Q3

$Price/SqFt
- >$175
- $140-175
- $115-140
- $80-115
- <$80

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.
Gloucester County House Sales in 2016 Q3

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.
Salem County House Sales in 2016 Q3

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.

- >$175
- $140-175
- $115-140
- $80-115
- <$80
+$1 Million Dollar House Sales in 2016 Q3

Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu
Philadelphia Region Houses Listed For Sale: Inventory v. Sales Rate

Source: TrendMLS

# Homes Listed "For Sale" vs. % Sold = (#Sales/#Listings)

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Philadelphia Region Avg. DOM*: Houses v. Condos

DOM is the average "days-on-market": the average number of days it takes for a listed home to sell. In a market that is evenly balanced between buyers and sellers, 40-60 days is considered the typical norm.
1 out of every 877 homes in Philadelphia is currently in the process of foreclosure, which is down from 1 out of every 720 homes in the previous quarter.

In the entire Commonwealth, 1 out of every 1,243 homes in Pennsylvania is in the process of foreclosure, which is up from 1 out of every 1,510 homes in the previous quarter.

Source: http://www.realtytrac.com/statsandtrends/foreclosurerates/pa
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South Jersey’s foreclosure rate continues to remain the highest in the region, and the statewide foreclosure rate trended up in Q3.

Of the top five counties in NJ with the highest foreclosure rate, four of them are located in South Jersey, with an average foreclosure rate of 1 in every 339 homes. This is well above the statewide average of 1 in every 597 homes.

The statewide foreclosure rate increased slightly in Q3, from 1 in every 608 homes to 1 in every 597 homes.

Delaware Foreclosure Rates

This quarter, Delaware saw significant improvements in its foreclosure rates:

• 1 out of every 767 homes in New Castle County, down from 1 out of every 551 homes in the previous quarter.

• 1 out of every 599 homes in Kent County, down from 1 out of every 375 homes in the previous quarter.

• 1 out every 994 homes in Sussex County, down from 1 out of every 828 homes in the previous quarter.

• Statewide, the foreclosure rate declined from 1 in every 566 homes to 1 in every 786 homes.

Source: http://www.realtytrac.com/statsandtrends/foreclosurerates/de
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The length of each bar below the horizontal axis represents the total % decline in house prices in each major U.S. metro area from peak to trough. The total rebound (to date) in house prices is represented by the blue component of each bar, with the remainder represented by the red component. A red bar that is above the horizontal axis indicates a metro area which has fully erased its losses and whose house price levels are now above their peak during the bubble. For example, Philadelphia county’s house prices fell by an average of 22% from peak to trough. To date, they have rebounded by 32% and are now 10% higher than their previous peak. By contrast, Philadelphia’s suburbs fell by a similar amount, yet have only recovered 9% and thus need to rise another 15% to completely erase their losses.

*Empirically estimated by Kevin C. Gillen, Ph.D. All other metros courtesy of S&P Case-Shiller.