PHILADELPHIA REGIONAL HOUSE PRICE INDICES

August 29, 2016

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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

- 10-City Composite*
- Philadelphia Region

% Change | 10-City | Philadelphia
--- | --- | ---
1998 to Peak: | +172% | +106%
From Peak: | -11% | -8.5%

*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

*Empirically estimated by Kevin C. Gillen, PhD
**Courtesy Federal Housing Finance Agency (FHFA)

Note: The suburban index includes all counties in the regional index, except for Philadelphia county.
# 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>146.6%</td>
<td>161.9%</td>
<td>140.5%</td>
<td>118.2%</td>
</tr>
<tr>
<td>10-Year</td>
<td>-8.1%</td>
<td>10.5%</td>
<td>-15.3%</td>
<td>-9.9%</td>
</tr>
<tr>
<td>1-Year</td>
<td>4.4%</td>
<td>13.0%</td>
<td>0.9%</td>
<td>2.2%</td>
</tr>
<tr>
<td>1-Quarter</td>
<td>7.1%</td>
<td>6.2%</td>
<td>7.5%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

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

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

*All indices empirically estimated by Kevin C. Gillen, PhD

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## 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>161.9%</td>
<td>158.9%</td>
<td>156.4%</td>
<td>134.8%</td>
<td>146.5%</td>
<td>133.5%</td>
<td>160.4%</td>
<td>122.7%</td>
<td>120.2%</td>
<td>136.4%</td>
<td>119.8%</td>
</tr>
<tr>
<td>10-Year</td>
<td>10.5%</td>
<td>-13.0%</td>
<td>-4.1%</td>
<td>-15.7%</td>
<td>-12.3%</td>
<td>-18.4%</td>
<td>-13.2%</td>
<td>-29.0%</td>
<td>-30.5%</td>
<td>-21.6%</td>
<td>-36.9%</td>
</tr>
<tr>
<td>1-Year</td>
<td>13.0%</td>
<td>1.2%</td>
<td>2.8%</td>
<td>1.2%</td>
<td>2.8%</td>
<td>0.9%</td>
<td>2.2%</td>
<td>-0.4%</td>
<td>-1.0%</td>
<td>-0.2%</td>
<td>-2.1%</td>
</tr>
<tr>
<td>1-Quarter</td>
<td>6.2%</td>
<td>4.8%</td>
<td>5.0%</td>
<td>12.7%</td>
<td>5.2%</td>
<td>3.2%</td>
<td>4.1%</td>
<td>9.0%</td>
<td>10.5%</td>
<td>5.1%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

All county-level indices and appreciation rates estimated by Kevin C. Gillen, Ph.D.
Note: Each county is extruded by its average change in house values during 2016 Q2 in order to reflect its growth (or depreciation) rate relative to other counties.
Median Regional House Price v. Indexed Regional House Price

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

- New Castle
- Mercer
- Burlington
- Camden
- Gloucester
- Salem
- Bucks
- Chester
- Delaware
- Montgomery
- Philadelphia

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Number of Regional House Sales per Quarter: 2005-2016

Q1
Q2
Q3
Q4
Qtly. Average

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

$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 Q2

$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.

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Bucks County House Sales in 2016 Q2

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 Q2

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
Chester County House Sales in 2016 Q2

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.
Delaware County House Sales in 2016 Q2

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.
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 Q2

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
Burlington County House Sales in 2016 Q2

Created by Kevin C. Gillen, Ph.D.
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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 Q2

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 Q2

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 Q2

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.
+$1 Million Dollar House Sales in 2016 Q2

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Philadelphia Region Houses Listed For Sale:
Inventory v. Sales Rate

# Houses Listed For Sale
% Absorbed

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

Source: TrendMLS

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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.
Current Major Homebuilding Projects in the Philadelphia Region
By Total Number of Units Planned

Projects are scaled by the quintiles of the distribution of the number of units planned. Larger dots represent larger projects.
Current Major Homebuilding Projects in Philadelphia Region
By List $Price per Square Foot
1 out of every 720 homes in Philadelphia is currently in the process of foreclosure, which is down from 1 out of every 662 homes in the previous quarter.

In the entire Commonwealth, 1 out of every 1,510 homes in Pennsylvania is in the process of foreclosure, which is also down from 1 out of every 1,230 homes in the previous quarter.

Source: http://www.realtytrac.com/statsandtrends/foreclosuretrends/pa
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South Jersey’s foreclosure rate continues to remain the highest in the region, although the statewide foreclosure rate trended down in Q2.

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 350 homes. This is well above the statewide average of 1 in every 608 homes.

However, the statewide foreclosure rate did decline in Q2, from 1 in every 568 homes to 1 in every 608 homes.
Delaware Foreclosure Rates

Until recently, Delaware had the lowest overall foreclosure rate in the Tri-State area, but has continued to see a recent surge:

- 1 out of every 551 homes in New Castle County, up from 1 out of every 660 homes in the previous quarter, and up from 1 out of every 919 homes nine months ago.

- 1 out of every 375 homes in Kent County, up substantially from 1 out of every 1,244 homes nine months ago.

- Sussex County has shown a recent decline, with 1 out of every 828 homes currently being in the process of foreclosure, compared to 1 out of every 702 homes three months ago.

- But statewide, the foreclosure rate increased from 1 in every 623 homes to 1 in every 566 homes from Q1 to Q2.

Source: http://www.realtytrac.com/statsandtrends/foreclosuretrends/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 30% and are now 8% higher than their previous peak. By contrast, Philadelphia's suburbs fell by a similar amount, yet have only recovered 10% and thus need to rise another 14% to completely erase their losses.

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

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