



Disparities in Appraised Values and Contract Sales Prices in the Philadelphia Metropolitan Area

By

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Introduction

In late 2022, the Federal Housing Finance Agency (FHFA) released a group of [public databases](#) reflective of appraisals conducted in connection with home mortgages purchased by the nation's Government Sponsored Enterprises (GSE) – Fannie Mae and Freddie Mac. The appraisals were for mortgages to purchase homes and refinance existing home mortgages. FHFA details the inclusions and omissions from these databases. For example, there are a non-trivial number of mortgages the GSEs purchase that do not have traditional appraisals but had those waived in favor of an automated valuation estimate of the collateral property's value. [Additionally, the GSE data has a substantial amount of data suppression where FHFA felt privacy concerns made it necessary to not report the activity.](#) Suppression is generally more of an issue in smaller geographies such as census tracts and less so at the county, metropolitan area or national level.¹ Notwithstanding the suppression, the GSE database contains some information available to the public for the first time about tens of millions of appraisals conducted between 2013 and 2021.

The release of these data seems responsive to increased interest in the activities of the nation's appraisal community, especially behavior that might indicate racial bias in the estimation of value. Many have called for greater transparency in the appraisal industry, including the federal [Property Appraisal and Valuation Equity](#) (PAVE) Task Force as well as the [Philadelphia Mortgage Appraisal Bias Task Force](#).

The release of the GSE data presents an opportunity for the broader public to gain greater insight into appraisal activity. In this analysis we focus on the 11-county Philadelphia region.² Reinvestment Fund's analysis of these data sheds light on what we *can and cannot know* about the incidence of appraisal bias in the home appraisal market at the neighborhood level.

County Trends In Appraisal Activity

GSE appraisal data are limited to single family homes. To contextualize the GSE appraisal records, it is helpful to consider the total and owner occupied housing stock. We use the Census' American Community Survey 5-year releases for 2017-2021 (2021), 2013-2017 (2017) and 2009-2013 (2013); this

¹ FHFA generally excludes estimates below "[...a threshold of 11 records](#)".

² For purposes of this Brief, the Philadelphia region includes the counties of Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania; Burlington, Camden, Gloucester and Salem in New Jersey; New Castle in Delaware; Cecil in Maryland.

period generally covers the GSE data release. Philadelphia, the central city and county of the metropolitan area, has the largest number of owner occupied housing units with more than 338 thousand in 2021, representing a 52.4% owner occupancy rate. Salem County has the fewest homes – only 17 thousand housing units, 70.8% of which are owner occupied. Gloucester County has consistently had the highest rate of owner occupancy (about 80.0%). In general, owner occupancy has been relatively stable for each county over the nine years covered by Table 1.

	2021			2017			2013			Trend: Owner Occupied Units
	Total Units	Owner Occupied	% Owner Occupied	Total Units	Owner Occupied	% Owner Occupied	Total Units	Owner Occupied	% Owner Occupied	
Bucks	245200	191523	78.1%	235909	180670	76.6%	230366	179645	78.0%	—————
Chester	198159	148128	74.8%	188613	141800	75.2%	184788	139815	75.7%	—————
Delaware	214252	147690	68.9%	204870	142566	69.6%	204771	144471	70.6%	—————
Montgomery	327065	235392	72.0%	312805	225724	72.2%	307488	225139	73.2%	—————
Philadelphia	646608	338868	52.4%	591280	308695	52.2%	580017	308931	53.3%	—————
Burlington	172400	130332	75.6%	164404	125557	76.4%	164979	128340	77.8%	—————
Camden	196939	128478	65.2%	187012	125008	66.8%	187941	128420	68.3%	—————
Gloucester	109290	87887	80.4%	104810	83431	79.6%	104145	83578	80.3%	—————
Salem	24753	17532	70.8%	24038	17153	71.4%	25003	17925	71.7%	—————
New Castle	218002	147302	67.6%	202654	138618	68.4%	200739	140533	70.0%	—————
Cecil	38672	29284	75.7%	37076	27110	73.1%	36394	26976	74.1%	—————

Table 1: Total Housing and Owner Occupied Unit Count By County, 2013-2021

Table 2 presents the number of appraisals recorded in the GSE database for each year reported. Appraisal activity associated with home purchases is greatest in Philadelphia and Montgomery counties. From 2013 to 2021, the increase in appraisal activity is most notable in Philadelphia. While the COVID-19 Pandemic impacted many aspects of social and economic life, all counties showed a rise in the volume of appraisals between 2019 and 2021, when interest rates hit exceptional lows.

	Number Of Appraisals For Home Purchases									Trend
	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Bucks	4302	4412	5241	5375	5565	5527	6056	6117	6560	—————
Chester	4272	4296	4843	4780	5517	5693	5898	6365	7144	—————
Delaware	2878	3044	3536	3799	4204	4460	4943	5603	6250	—————
Montgomery	5994	6024	7124	7133	7802	7837	8702	9263	10143	—————
Philadelphia	4882	5584	7340	7894	8823	9541	10781	11627	13833	—————
Burlington	2491	2573	3235	3348	3781	4038	4410	5174	5628	—————
Camden	2130	2485	3083	3448	3784	3847	4517	5413	5670	—————
Gloucester	1409	1688	2037	2245	2403	2564	2932	3481	3718	—————
Salem	180	201	274	295	327	413	497	625	706	—————
New Castle	3463	3526	4143	4135	4654	5061	5288	5849	6638	—————
Cecil	443	581	657	688	834	798	931	1043	1177	—————

Table 2: Number of Appraisals for Home Purchases, 2013-2021

Table 3 presents the number of appraisals associated with mortgage refinances. Mortgage refinance activity is more sensitive to changes in interest rates than home purchase mortgages. Homeowners will generally refinance in greater numbers when interest rates decline in order to benefit from the lower rates.³ When rates rise, as they have recently, there are more limited potential advantages to refinancing (e.g., a need to use some of the available equity in the home). Regardless of interest rates, the volume of appraisals associated with mortgage refinances tends to be greatest in Montgomery and Philadelphia counties, which also have the greatest numbers of homeowner households.

³ There is some scholarship to suggest that [homeowners of color are less likely to apply for and receive mortgage refinances](#).

	Number Of Appraisals For Mortgage Refinances										Trend
	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Bucks	6839	3474	5377	6395	3646	2786	4895	8557	7681		
Chester	6490	3044	4960	5965	3212	2498	4511	7599	6502		
Delaware	4111	2371	3428	4015	2523	1908	3406	5787	5741		
Montgomery	8810	4145	6921	8166	4647	3333	6226	10563	9426		
Philadelphia	6064	3990	5626	6317	5197	4343	6467	9581	10509		
Burlington	3681	2015	3049	3670	2289	1813	3155	5439	5443		
Camden	2879	1858	2416	2915	2081	1576	2480	4742	5099		
Gloucester	2175	1460	1879	2121	1490	1146	1896	3506	3619		
Salem	366	234	285	343	249	195	305	445	610		
New Castle	4627	2659	4046	4808	3235	2483	3727	6104	6252		
Cecil	883	500	690	794	669	530	736	1297	1305		

Table 3: Number of Appraisals for Mortgage Refinances, 2013-2021

Table 4 presents the mean (or average) of appraised values for mortgages associated with home purchases. In the Philadelphia region, the Pennsylvania suburban counties – Bucks, Chester, Delaware, and Montgomery – tend to have the highest average appraised values. That said, the compound annual growth rate in the average appraisal value is greatest in Philadelphia, followed closely by Montgomery and Chester – the two [highest \(per capita\) income counties in the Commonwealth of Pennsylvania](#).⁴

	Mean Appraised Value For Home Purchases										Trend	Comp. Ann. Growth Rt.
	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Bucks	\$ 362,100	\$ 364,200	\$ 363,600	\$ 371,400	\$ 389,600	\$ 410,000	\$ 410,700	\$ 440,900	\$ 488,100		3.8%	
Chester	\$ 371,800	\$ 376,900	\$ 381,000	\$ 395,300	\$ 424,800	\$ 428,900	\$ 445,500	\$ 475,200	\$ 525,500		4.4%	
Delaware	\$ 321,500	\$ 311,500	\$ 311,900	\$ 322,400	\$ 342,900	\$ 342,200	\$ 350,200	\$ 360,500	\$ 404,000		2.9%	
Montgomery	\$ 339,500	\$ 337,100	\$ 344,500	\$ 359,800	\$ 380,700	\$ 385,200	\$ 394,500	\$ 428,600	\$ 480,100		4.4%	
Philadelphia	\$ 250,000	\$ 237,900	\$ 246,400	\$ 264,800	\$ 285,000	\$ 287,600	\$ 305,900	\$ 325,400	\$ 359,700		4.7%	
Burlington	\$ 300,100	\$ 299,600	\$ 302,900	\$ 298,200	\$ 300,000	\$ 296,200	\$ 302,600	\$ 320,500	\$ 370,400		2.7%	
Camden	\$ 241,000	\$ 230,300	\$ 232,800	\$ 238,800	\$ 241,000	\$ 235,700	\$ 249,100	\$ 271,200	\$ 304,700		3.0%	
Gloucester	\$ 250,500	\$ 252,700	\$ 246,300	\$ 246,600	\$ 246,400	\$ 247,400	\$ 250,700	\$ 268,800	\$ 313,000		2.8%	
Salem	\$ 208,900	\$ 188,700	\$ 189,800	\$ 205,300	\$ 203,300	\$ 193,400	\$ 198,100	\$ 211,500	\$ 244,300		2.0%	
New Castle	\$ 286,200	\$ 290,500	\$ 296,600	\$ 303,600	\$ 310,200	\$ 308,200	\$ 313,700	\$ 331,200	\$ 362,200		3.0%	
Cecil	\$ 278,200	\$ 261,600	\$ 268,100	\$ 262,000	\$ 267,100	\$ 271,800	\$ 276,400	\$ 308,100	\$ 341,100		2.6%	

Table 4: Mean Appraised Value for Appraisals Associated with Home Purchases, 2013-2021

Table 5 presents the median appraised value for home purchases in each county; this represents the middle value of all appraisals conducted in each county in each year. The median is perhaps more desirable as a reflection of “typical” because it is not influenced by extremely high or low appraised values. However, as Table 5 shows, the general pattern of appraised values is similar using the average as in Table 4 or the median.. Importantly, the compound annual growth rates still reflect the greatest growth in Philadelphia, although somewhat lower than observed in Table 4.

	Median Appraised Value For Home Purchases										Trend	Comp. Ann. Growth Rt.
	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Bucks	\$ 325,000	\$ 325,000	\$ 323,000	\$ 330,000	\$ 345,000	\$ 350,000	\$ 360,000	\$ 385,000	\$ 420,000		3.3%	
Chester	\$ 337,000	\$ 340,000	\$ 344,000	\$ 358,000	\$ 385,000	\$ 387,000	\$ 395,000	\$ 417,000	\$ 460,000		4.0%	
Delaware	\$ 275,000	\$ 263,000	\$ 265,000	\$ 275,000	\$ 291,000	\$ 282,000	\$ 290,000	\$ 287,500	\$ 320,000		1.9%	
Montgomery	\$ 301,000	\$ 295,000	\$ 304,000	\$ 318,000	\$ 330,000	\$ 332,000	\$ 345,000	\$ 366,000	\$ 400,000		3.6%	
Philadelphia	\$ 205,000	\$ 195,000	\$ 200,000	\$ 215,000	\$ 229,900	\$ 235,000	\$ 247,000	\$ 269,000	\$ 290,000		4.4%	
Burlington	\$ 273,000	\$ 270,000	\$ 270,000	\$ 265,000	\$ 265,000	\$ 264,000	\$ 273,000	\$ 287,000	\$ 330,000		2.4%	
Camden	\$ 213,000	\$ 206,000	\$ 205,000	\$ 205,000	\$ 205,000	\$ 201,000	\$ 215,000	\$ 237,500	\$ 270,000		3.0%	
Gloucester	\$ 230,000	\$ 234,000	\$ 225,000	\$ 228,000	\$ 230,000	\$ 227,300	\$ 232,000	\$ 245,000	\$ 285,000		2.7%	
Salem	\$ 192,000	\$ 175,000	\$ 170,000	\$ 185,000	\$ 180,000	\$ 180,000	\$ 170,000	\$ 187,000	\$ 210,000		1.1%	
New Castle	\$ 263,000	\$ 270,000	\$ 278,000	\$ 279,000	\$ 285,000	\$ 281,000	\$ 289,000	\$ 305,000	\$ 329,000		2.8%	
Cecil	\$ 257,000	\$ 240,000	\$ 243,000	\$ 235,000	\$ 246,000	\$ 251,000	\$ 250,000	\$ 280,000	\$ 310,000		2.4%	

Table 5: Median Appraised Value for Appraisals Associated with Home Purchases, 2013-2021

Table 6 presents the mean appraised values for those properties for which there was a mortgage refinance. In general, the mean appraised values for mortgage refinances are a bit higher than those for

⁴ As of the end of 2021, the [10-year house price appreciation rate](#) is reported by the [Lindy Institute for Urban Innovation of Drexel University](#) to be higher in Philadelphia than its surrounding metropolitan area.

home purchases – perhaps reflecting the fact that, typically, homeowners that successfully refinance have properties of greater value than the average homebuyer in any given year. That said, the suburban Pennsylvania counties tend to have not only the highest appraisals for home purchases, they also have the highest average appraised values for mortgage refinances. Further, the compound annual growth rates are similar although a bit lower than observed with home purchases.

	Mean Appraised Value For Mortgage Refinances									Trend	Comp. Ann. Growth Rt.
	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Bucks	\$ 382,100	\$ 376,400	\$ 394,700	\$ 404,900	\$ 389,100	\$ 414,300	\$ 451,900	\$ 480,000	\$ 507,900		3.6%
Chester	\$ 412,100	\$ 406,500	\$ 426,400	\$ 438,900	\$ 445,500	\$ 453,500	\$ 511,200	\$ 523,400	\$ 566,400		4.1%
Delaware	\$ 359,400	\$ 333,100	\$ 356,500	\$ 375,700	\$ 353,700	\$ 363,200	\$ 422,500	\$ 465,900	\$ 464,900		3.3%
Montgomery	\$ 378,300	\$ 366,700	\$ 382,200	\$ 400,500	\$ 385,700	\$ 403,100	\$ 447,100	\$ 483,800	\$ 523,900		4.2%
Philadelphia	\$ 258,300	\$ 231,500	\$ 259,900	\$ 278,600	\$ 255,200	\$ 249,900	\$ 328,300	\$ 376,700	\$ 355,800		4.1%
Burlington	\$ 321,200	\$ 299,800	\$ 318,600	\$ 332,400	\$ 311,100	\$ 311,000	\$ 344,800	\$ 361,800	\$ 368,500		1.7%
Camden	\$ 252,700	\$ 244,300	\$ 249,300	\$ 268,800	\$ 251,400	\$ 251,400	\$ 284,600	\$ 302,800	\$ 317,100		2.9%
Gloucester	\$ 255,700	\$ 250,700	\$ 256,700	\$ 275,500	\$ 262,500	\$ 250,800	\$ 276,800	\$ 295,200	\$ 315,200		2.6%
Salem	\$ 226,900	\$ 218,400	\$ 216,300	\$ 233,000	\$ 225,300	\$ 208,700	\$ 234,400	\$ 252,400	\$ 258,800		1.7%
New Castle	\$ 313,000	\$ 287,500	\$ 310,000	\$ 320,800	\$ 298,800	\$ 310,700	\$ 348,400	\$ 368,800	\$ 378,900		2.4%
Cecil	\$ 287,600	\$ 308,300	\$ 302,700	\$ 305,000	\$ 301,400	\$ 305,400	\$ 322,500	\$ 341,800	\$ 360,100		2.8%

Table 6: Mean Appraised Value for Appraisals Associated with Mortgage Refinances, 2013-2021

Table 7 offers the median appraised values for homes that experienced a mortgage refinance. As observed with home purchases, the median values tend to be a bit lower than averages, and growth was somewhat more muted. By either measure, the compound annual growth rate of appraised values for mortgage refinances is greatest in Philadelphia.

	Median Appraised Value For Mortgage Refinances									Trend	Comp. Ann. Growth Rt.
	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Bucks	\$ 340,000	\$ 340,000	\$ 350,000	\$ 362,500	\$ 340,000	\$ 355,000	\$ 383,000	\$ 410,000	\$ 425,000		2.8%
Chester	\$ 365,000	\$ 360,000	\$ 375,000	\$ 400,000	\$ 390,000	\$ 385,000	\$ 430,000	\$ 455,000	\$ 470,000		3.2%
Delaware	\$ 303,000	\$ 280,000	\$ 305,000	\$ 325,000	\$ 305,000	\$ 300,000	\$ 345,300	\$ 390,000	\$ 365,000		2.4%
Montgomery	\$ 330,000	\$ 320,000	\$ 330,000	\$ 345,000	\$ 329,000	\$ 335,000	\$ 375,000	\$ 400,000	\$ 420,000		3.1%
Philadelphia	\$ 205,000	\$ 185,000	\$ 200,000	\$ 216,000	\$ 200,000	\$ 200,000	\$ 245,000	\$ 290,000	\$ 270,000		3.5%
Burlington	\$ 290,000	\$ 275,000	\$ 290,000	\$ 302,300	\$ 278,000	\$ 280,000	\$ 310,000	\$ 320,000	\$ 325,000		1.4%
Camden	\$ 224,000	\$ 210,000	\$ 223,000	\$ 235,000	\$ 220,000	\$ 215,000	\$ 239,000	\$ 260,000	\$ 275,000		2.6%
Gloucester	\$ 240,000	\$ 227,000	\$ 240,000	\$ 260,000	\$ 244,300	\$ 231,000	\$ 260,000	\$ 278,000	\$ 293,000		2.5%
Salem	\$ 210,000	\$ 205,000	\$ 205,000	\$ 210,000	\$ 205,000	\$ 203,000	\$ 218,000	\$ 231,000	\$ 240,000		1.7%
New Castle	\$ 285,000	\$ 275,000	\$ 285,000	\$ 295,000	\$ 270,000	\$ 270,000	\$ 310,000	\$ 325,000	\$ 330,000		1.8%
Cecil	\$ 265,000	\$ 265,000	\$ 270,000	\$ 280,000	\$ 269,000	\$ 275,000	\$ 290,000	\$ 309,000	\$ 322,000		2.5%

Table 7: Median Appraised Value for Appraisals Associated with Mortgage Refinances, 2013-2021

The next few tables report the degree to which appraisals are greater than (Table 8) or less than (Table 9) the agreed upon contract price; the remainder of appraisals – not shown here – are those for which the appraisal is essentially equal to the contract sales price. FHFA uses the percent of appraisals below the contract sales price in the national and metropolitan datasets to describe the degree to which [neighborhoods of different racial compositions experience undervaluation in appraisals](#).

Table 8 shows that across the period studied, there is relative stability and then a decline (2019-2021) in the percent of appraisals that are above the contract sale price; that is the case in all counties.

Anecdotally it has been [reported](#) that when prices were rising rapidly, the use of comparable sales that occurred before the appraisal along with offers above the asking price were causing an unusual number of appraisals to come in below the contract sales price. The largest percentage point declines are observed in Gloucester and Camden counties; the fewest percentage point drops were in Philadelphia and Chester counties. The lowest percentages in 2021 are observed in Camden, Gloucester, and Salem counties; the highest percentages are in Cecil County.

	Percent Of Appraisals Above Contract Price (Home Sales)										Trend
	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Bucks	61.5%	67.2%	65.6%	62.7%	61.4%	61.9%	62.5%	55.1%	52.3%		
Chester	63.5%	64.4%	64.1%	65.3%	65.0%	65.7%	65.4%	61.4%	59.4%		
Delaware	61.2%	62.1%	62.8%	65.0%	63.5%	59.2%	61.3%	56.3%	53.3%		
Montgomery	62.7%	64.0%	66.1%	65.0%	62.9%	63.7%	64.0%	57.8%	53.5%		
Philadelphia	61.6%	60.7%	61.0%	59.4%	59.2%	58.7%	62.1%	60.2%	58.6%		
Burlington	64.3%	69.1%	67.5%	69.1%	67.7%	66.1%	67.1%	55.8%	51.4%		
Camden	69.2%	68.2%	67.6%	68.2%	67.8%	66.0%	65.3%	54.6%	49.0%		
Gloucester	67.7%	71.4%	68.3%	67.3%	68.5%	67.6%	67.9%	55.2%	47.7%		
Salem	67.8%	71.1%	61.3%	67.8%	63.6%	68.5%	61.4%	54.6%	48.9%		
New Castle	69.5%	72.7%	68.3%	69.0%	68.9%	65.2%	66.2%	60.4%	54.3%		
Cecil	79.5%	78.1%	80.5%	81.3%	81.8%	77.6%	78.2%	73.7%	68.6%		

Table 8: Percent of Appraisals That Estimated Values Greater Than the Contract Sales Price, 2013-2021

Table 9 displays the percent of appraisals coming in below the contract sales price. As expected, based on Table 8, these percentages increased substantially between 2019 and 2021. The largest percentage point increases were in Burlington, Gloucester and New Castle counties. Philadelphia saw the smallest change, and in fact, went from being the county with the highest percentage of appraisals below the contract sales price to the county with the lowest percentage. The counties with the largest 2021 percentage of appraisals coming in below contract sales prices are observed in the Burlington, Camden and Gloucester counties; the lowest percentages were observed in Philadelphia and Cecil counties.

	Percent Of Appraisals Below Contract Price (Home Sales)										Trend
	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Bucks	8.2%	4.8%	5.6%	6.8%	7.0%	6.4%	5.9%	10.8%	15.5%		
Chester	8.1%	5.9%	7.0%	6.5%	6.6%	6.8%	5.3%	9.4%	13.6%		
Delaware	6.8%	6.3%	6.3%	5.7%	6.4%	6.6%	6.3%	8.2%	12.0%		
Montgomery	7.1%	5.3%	5.4%	5.7%	6.7%	6.3%	5.9%	9.3%	14.3%		
Philadelphia	7.0%	6.4%	8.2%	8.5%	8.4%	8.7%	7.4%	7.4%	8.5%		
Burlington	7.2%	5.4%	6.6%	6.2%	7.7%	6.2%	6.0%	11.2%	16.9%		
Camden	6.0%	5.7%	6.2%	7.0%	6.8%	6.5%	6.2%	10.8%	16.0%		
Gloucester	6.2%	6.1%	5.1%	6.0%	5.5%	5.1%	5.6%	10.3%	17.3%		
Salem	10.0%	5.0%	9.5%	4.7%	5.8%	4.8%	4.4%	6.9%	12.9%		
New Castle	5.5%	3.4%	4.3%	4.0%	5.0%	5.4%	4.8%	9.6%	15.1%		
Cecil	6.3%	5.9%	5.5%	5.1%	4.9%	5.6%	5.2%	8.2%	11.0%		

Table 9: Percent of Appraisals That Estimated Values Below the Contract Sales Price, 2013-2021

While Tables 8 and 9 reflect the degree to which a particular kind of mismatch is observed between the contract price and the appraised value, Table 10 essentially evaluates that relationship for the average appraisal. It shows that, typically, in every county, across all appraisals in each year, the appraised value is just a little bit higher than the contract sales price. That is, for example, in Philadelphia across all homes purchased in 2021, the appraisals were typically about 2% above the contract price. A \$200 thousand property would likely have had an appraised value of approximately \$204 thousand. There is little apparent variation across the metropolitan area counties. Analyses for a metropolitan area a county may obscure patterns across neighborhoods. To test for consistency in the ratio of appraised value to the contract sales price at the neighborhood level requires a census tract level examination.

	Mean Ratio Contract Price/Appraised Value (Home Sales)										Trend
	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Bucks	98.3%	98.1%	98.0%	98.4%	98.6%	98.4%	98.4%	98.8%	98.9%		
Chester	98.5%	98.5%	98.4%	98.4%	98.8%	98.7%	98.5%	98.9%	99.0%		
Delaware	97.9%	98.4%	98.3%	97.9%	98.2%	98.6%	98.4%	98.8%	98.8%		
Montgomery	98.4%	98.1%	98.4%	98.3%	98.4%	98.5%	98.4%	100.0%	99.1%		
Philadelphia	98.1%	98.3%	98.5%	98.5%	98.4%	98.4%	98.3%	98.3%	98.2%		
Burlington	98.0%	97.5%	97.4%	97.4%	97.3%	97.3%	97.8%	98.7%	98.7%		
Camden	97.6%	97.6%	97.2%	97.4%	97.1%	97.1%	97.7%	98.6%	98.7%		
Gloucester	98.0%	97.8%	97.1%	97.1%	97.2%	97.1%	97.5%	98.5%	98.9%		
Salem	97.0%	95.8%	96.8%	95.5%	96.5%	95.6%	96.2%	97.7%	99.2%		
New Castle	98.3%	98.0%	98.2%	98.2%	98.2%	98.6%	98.5%	99.0%	98.9%		
Cecil	96.1%	96.3%	94.8%	95.2%	95.8%	96.1%	96.4%	97.2%	97.6%		

Table 10: Ratio of Contract Price to Appraised Value

A Detailed Look at Philadelphia

The PAVE report and research briefs by both [Fannie Mae](#) and [Freddie Mac](#) as well as [academic](#) and [think-tank scholars](#) make the case that there are differences in the experiences of aspirational homeowners or homeowners wishing to refinance their mortgages when an appraisal is conducted. For example, when an appraised value is less than an agreed upon contract sales price it raises the specter of an issue with the appraisal. And further, when that disparity occurs more frequently for buyers of color, or people of color who wish to refinance their existing mortgage, it suggests the problem is not just a matter of a benign difference of opinion but that racial discrimination is impacting the valuation.

A detailed look at the census tract GSE file offers an opportunity to understand the degree to which there is consistency or inconsistency in how appraised values relate to contract sales prices for specific neighborhoods.⁵ This closer look is focused in Philadelphia as it is the most populous county with the largest number of owner occupied housing units in the region, and it is also the most racially diverse. This analysis also focuses on 2020 as it was only partially impacted by the pandemic and represents a time before the regionwide shift in the relationship between appraised values and home prices is manifest.

The GSE's census tract appraisal data underrepresent activity in a lot of Philadelphia neighborhoods, and disproportionately, communities of color. Overall, the county database shows that there were over 11,600 appraisals for home purchases in 2020. However, there were only approximately 9,600 appraisals in the census tract database, net of those that were suppressed. In other words, approximately 17% of appraisals were missing from the census tract data. Were these to be random, that would not be a significant issue. However, it appears that GSE data suppression leads to reporting appraisal data in approximately 35-40% of the city's mixed and predominantly Black neighborhoods but 74% of the city's predominantly White neighborhoods. The implication of the disproportionality of the missing data is that ***these data do not offer an opportunity to fully understand what is happening in communities of color since many of these communities are not even represented in the data.***

⁵ We use "tract" and "neighborhood" interchangeably; although tract boundaries do not always reflect common definitions of neighborhood boundaries, they are a closer approximation than zip code or block group.

Philadelphia Profile

Philadelphia is a city of 1.59 million people as of 2021, up from 1.54 million in 2013. There are an estimated 646.6 thousand occupied housing units, 52.4% of which are owner occupied. The number of households rose from 580 thousand in 2013, however the owner occupancy rate is estimated to have dipped slightly from 53.3% in 2013. The estimated number of Black households is 259 thousand, 47.9% of which are owner occupied. The number of Black households is up slightly from 246.8 thousand, but the owner occupancy rate dipped from 48.7% since 2013.

White households numbered 276.7 thousand in 2021 with a 57.3% owner occupancy rate; almost 10 percentage points higher than the Black rate. The number of White households rose slightly from 265.5 thousand in 2013 and the owner occupancy rate dropped from 58.8%.

Economically, the White population of Philadelphia has substantially higher incomes (median = \$71,406) than the Black population (median = \$39,352). And in general, Philadelphia's owners have higher incomes (\$66,347) than renters (median = \$39,347).

With that limitation, in Philadelphia’s predominantly White neighborhoods (under 20% Black), the typical tract had 7.1% of the appraisals come in below the contract sales price. In contrast, in mixed-race neighborhoods (between 20% and 79.9% Black), 9.2% were below the contract price. And in Black neighborhoods (80% Black or higher), it was 9.4%. Thus, ***the share of properties with undervaluations was about 31% greater in Black and mixed-race neighborhoods than predominately White neighborhoods.***

It is also possible to categorize neighborhoods based on their median home sale prices, using administrative data from the City of Philadelphia for calendar years 2019 and 2020.⁶ In the lowest price neighborhoods (under \$150 thousand), 10.3% of appraisals were below the contract sales prices, in a typical census tract. However, in modestly priced neighborhoods (between \$150 and \$224 thousand), 7.3% of appraisals were undervalued in the typical neighborhood. In middle priced neighborhoods (between \$225 and \$449 thousand), 6.9% were undervalued. And in the highest price neighborhoods (\$450 thousand and above), the average share of undervalued appraisals was 4.9%. These data show that ***the typical lower priced neighborhood has twice the share of undervalued home appraisals than the typical higher priced neighborhood.***

Thus, overall, undervaluation in home appraisals appears to be a more common challenge in communities of color and in lower priced neighborhoods. And there is reason to believe that these data understate the degree of difference because of the vastly disproportionate amount of data suppression observed in communities of color.

In closing, the GSE’s release of data is a positive step forward. But it falls far short of the reporting obligations that the home mortgage lending industry has operated under for more than 40 years under the [Home Mortgage Disclosure Act of 1975](#). The GSE data are aggregated, have a substantial amount of suppression thwarting neighborhood level analysis, have very limited transaction details, and do not offer a way to identify the appraiser (or appraisal company or Appraisal Management Company). It therefore does not offer the same opportunity for regulators, scholars or the general public to monitor the industry and potentially identify problematic actors. Appraisals are critical to peoples’ ability to obtain a home and maximize the utility of its economic (and social) value. The GSE release is a step forward, but there remain many steps to go to achieve reasonable transparency.

⁶ The median home sales price in Philadelphia, as reported by [K. Gillen at the Drexel University Lindy Institute of Urban Innovations, was \\$210,000 in 2020; it was \\$166,750 in 2019.](#)