The Impact of Qualified Opportunity Zones on Existing Single-Family House Prices

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The views expressed are those of the authors and do not necessarily reflect the position of CoreLogic, Inc., or its management.

Abstract

Established by the Tax Cuts and Jobs Act of 2017 (TCJA),[1] qualified Opportunity Zones (OZs) are a new place-based community development program that attempts to help economically challenged areas by encouraging private capital investment through the use of tax incentives. Although the program started at the beginning of 2018, implementation of the program has been slow, creating challenges for investors. The program's structure may have also inadvertently created an environment ripe for surging property prices. This unintended consequence has the potential to reduce or eliminate investor tax benefits, stimulate community gentrification, and diminish affordability for residents. Recent studies have found evidence of material price "premiums" for some commercial real estate properties located in OZs (Pierzak, 2021; Sage, Langen, and Van de Minne, 2019). Recognizing the policy's potential in driving increased investor interest in single-family home rentals, the authors of this study explore the impact of the program on existing single-family house prices and find that the community development program has led to excess home price appreciation totaling 6.8 percent from 2018 to 2020.

[1] "H.R. 1—An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018" (Tax Cuts and Jobs Act of 2017). 115th Cong., 1st Sess.

Demand, Supply, and Time Constraints

Taxable investors are naturally drawn to tax incentives. By meeting certain criteria, Opportunity Zone (OZ) investors can defer, reduce, or avoid capital gains taxes. The OZ program offers investment managers an ideal setting for funds with long investment lives and lucrative fee structures. Its required holding periods create "sticky" investor money, and the program offers higher risk-return investment opportunities—for example, heavy renovation, redevelopment, and development—while generating attractive fees. The program also does not have a cap on investment. Not surprisingly, OZs have garnered considerable interest from investors and investment managers. The potential demand for the program is substantial. The Economic Innovation Group estimated that U.S. households and corporations had in excess of $6.1 trillion of unrealized capital gains as of the end of 2017 (Lettieri, 2018). The use of leverage can have a further multiplicative effect on this potential demand.

Although potential demand for this place-based community development program is sizable, the menu of investment opportunities, both in terms of geography and property stock, is more limited. Slightly more than 8,700, or only 12 percent of total, census tracts were designated as OZs. These tracts are generally low-income communities (LICs), meaning areas with poverty rates greater than 20 percent or incomes less than 80 percent of the area's median family income. These largely capital-starved areas often have received few recent, large, or programmatic real estate investments.

With December 31, 2026, set as the last possible day to realize deferred capital gains, investors must acquire an OZ investment before the end of 2021 to meet the 5-year holding period criteria. To satisfy the 7-year holding period, investors had to acquire those investments by the end of 2019. As a result, the extra 5-percent step-up in basis benefit has now expired, and the full tax benefits of the OZ program are no longer available. These time constraints can create a sense of urgency to invest. To the extent that investors value each of the individual step-ups in basis tax benefits, a flurry of investment activity was likely to have occurred in the latter half of 2019; another, perhaps more significant, rush is anticipated in the latter half of 2021. An August 2020 progress report from the White House Council of Economic Advisors indicated that, as of the end of 2019, OZs had attracted $75 billion in capital investment and created more than 500,000 new jobs.

Impact on Single-Family Property Prices

With the potential for significant tax-induced demand, a limited menu of investment opportunities, and mandated time constraints that foster an urgency to invest, the OZ program may have inadvertently created an environment ripe for surging property prices. Recent studies that explored the impact of OZs on commercial real estate prices have found evidence of material price "premiums" for some properties located in OZs. An early study, using Real Capital Analytics data and a repeat sales methodology, found OZ price premiums ranging from 14 to 20 percent for development sites and redevelopment properties, such as apartment, office, industrial, and retail (Sage, Langen, and Van de Minne, 2019). Another study, using CoStar and Urban Institute data, focused on existing market-rate apartments and found OZ price premiums in excess of 20 percent for certain segments of the apartment pool (Pierzak, 2021).

By contrast, limited evidence exists on the impact of OZs on single-family property prices. A National Bureau of Economic Research working paper examined the early effect of qualified OZs on home prices using Federal Housing Finance Authority data (Chen, Glaeser, and Wessel, 2019). It found that OZs have had an insignificant impact on home prices.

This study explores the impact of OZs on existing single-family house prices under the expectation that the policy may similarly attract increased single-family home purchase and investment activity in OZs and place upward pressure on prices. OZ tax benefits apply to investors of single-family homes only if the properties are acquired for investment purposes and meet the OZ program's substantial improvement requirement.[2] Meanwhile, the attractions of community redevelopment and gentrification could also stimulate residential buying activities. This analysis is particularly timely given increased investor interest in single-family home rentals and the surge in home prices during the COVID-19 pandemic.

Transaction Activity

This article explores the state of the single-family housing market in OZs from 2015 to 2020 using the CoreLogic, Inc. public record transaction data. The Urban Institute, a nonprofit economic and social policy research organization based in Washington, D.C., provided data on OZ tract designations. Using the binary variable OZ, the data were split into two groups: designated OZs (OZ=1, Policy Group) and OZ-eligible, non-designated census tracts (OZ=0, Control Group). According to the Urban Institute, 42,176 census tracts were eligible for OZ designation, and 8,762 tracts were designated as OZs (Theodos, Meixell, and Hedman, 2018). The 2010 Census defined a total of 74,134 census tracts in the United States and its territories. The examined timeframe, 2015 through 2020, was also broken down into two intervals: the pre-Tax Cuts and Jobs Act of 2017 (TCJA) (2015 through 2017) and post-TCJA (2018 through 2020) periods. Exhibit 1 displays annual existing single-family house transaction activity by dollar volumes and property counts in designated OZs (OZ=1) and OZ-eligible, non-designated census tracts (OZ=0) from 2015 through 2020. Although the OZ program was not available before 2018, the OZ=1 indicator was used in the pre-TCJA period to identify census tracts that were later to become OZs, allowing for comparisons before and after the legislation.

[2] Acquisitions of existing properties must be "substantially improved" within 30 months of the acquisition to be eligible for OZ tax incentives; this window was suspended from April 1, 2020, through December 31, 2020, due to the pandemic. For example, if an existing single-family home is purchased for $300,000, and values of $200,000 and $100,000 are allocated to the land and improvements, respectively, an investment in excess of $100,000 would be necessary to meet the substantial improvement requirement.

Exhibit 1

Annual Existing Single-Family Home Transactions in Designated Opportunity Zones (OZ=1) and Opportunity Zone-Eligible, Non-Designated Census Tracts (OZ=0), 2015–2020

Period	Transaction Dollar Volume & Percentage Change				Transaction Property Count & Percentage Change			
	OZ=1, Policy Group		OZ=0, Control Group		OZ=1, Policy Group		OZ=0, Control Group	
2015	$46,643,744,318		$315,483,981,358		283,134		1,688,606	
2016	$54,208,366,650	16.2%	$357,242,840,396	13.2%	308,096	8.8%	1,812,636	7.3%
2017	$61,322,405,957	13.1%	$397,475,317,804	11.3%	323,722	5.1%	1,890,972	4.3%
2018	$66,592,061,874	8.6%	$425,398,826,496	7.0%	337,961	4.4%	1,925,365	1.8%
2019	$72,575,396,066	9.0%	$455,455,670,623	7.1%	349,185	3.3%	1,975,464	2.6%
2020	$75,308,831,750	3.8%	$480,669,087,360	5.5%	330,333	-5.4%	1,908,354	-3.4%
Pre-TCJA (2015–2017) Total	$162,174,516,924		$1,070,202,139,557		914,952		5,392,214	
Post-TCJA (2018–2020) Total	$214,476,289,691	32.3%	$1,361,523,584,479	27.2%	1,017,479	11.2%	5,809,183	7.7%

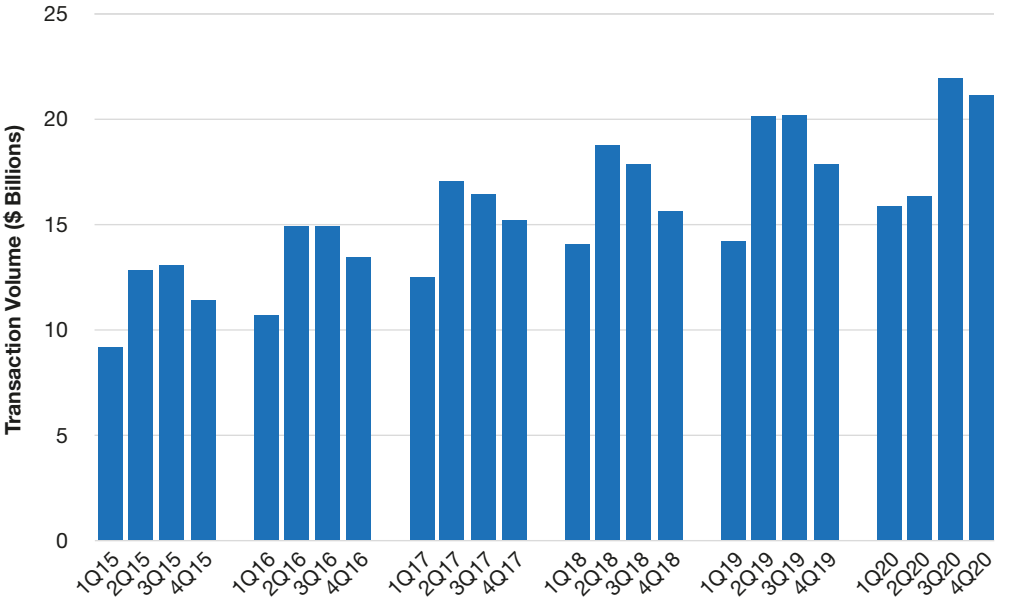
OZ = Opportunity Zone. TCJA = Tax Cuts and Jobs Act of 2017.

Sources: CoreLogic, Inc., as of April 2021; authors' calculations

Transaction dollar volumes for both the policy and control groups increased annually over the examined timeframe, with OZs generally exhibiting greater percentage gains. An interesting finding was that annual percentage gains for both groups were higher in the pre-TCJA period, suggesting a broad trend of increasing prices—albeit at a decreasing rate—from 2015 through 2020. Transaction property counts for both groups also increased on an annual basis through 2019. In 2020, both property count tallies dropped—likely because of the COVID-19 pandemic. In both the pre- and post-TCJA periods, designated OZ transactions accounted for approximately 13 and 15 percent of total transaction dollar volume and property count, respectively. The annual dollar volume and property count data indicate healthy transaction activity in both examined groups during both periods. These single-family housing markets apparently have not suffered from a lack of buyer interest or capital. Examining the annual dollar volume and property count percentage changes, the authors found that the data also showed that both groups followed similar year-over-year trends, suggesting that the implementation of the program did not result in material, non-trend increases in transaction activity for existing single-family homes in Opportunity Zones. Exhibit 2 displays quarterly existing single-family transaction dollar volume for designated OZs (OZ=1) from 2015 through 2020.

Exhibit 2

Quarterly Existing Single-Family Home Transaction Volume in Designated Opportunity Zones (OZ=1), 2015–2020



OZ = Opportunity Zone. 1Q15 = Quarter 1 2015 (and so on).
Sources: CoreLogic, Inc., as of April 2021; authors' calculations

The quarterly data highlight annual trends and seasonality. Annual transaction dollar volume increases were evident from 2015 through 2020. Quarterly trends showed that the second and third quarters of each year typically accounted for the majority of annual transaction activity, with 2020 a notable exception. The muted dollar volume in Quarter 2 of 2020 was likely related to the start of the pandemic-related stay-at-home orders. A flurry of investment activity was anticipated in the latter half of 2019 due to the approaching expiration of the additional 5-percent step-up in basis benefit, but no such rush was evident in the quarterly data. This lack of elevated activity may have been due to the uncertainty surrounding the OZ program's regulations and its slow implementation in 2018 and 2019. It may also reflect a limited investment focus of the examined single-family housing markets.

Exhibit 3 lists existing single-family home transaction dollar volumes and property counts, as well as average sales prices, by state (and Washington, D.C.; hereafter, D.C.) for designated OZs (OZ=1) and OZ-eligible, non-designated census tracts (OZ=0) from 2018 through 2020.

Exhibit 3

Existing Single-Family Home Transactions by State (and D.C.), 2018–2020 (1 of 2)

State	Transaction Volume ($ billions)		Average Transaction Sales Price		Transaction Count	
	OZ=1	OZ=0	OZ=1	OZ=0	OZ=1	OZ=0
CA	$36.618	$226.563	$359,657	$444,743	101,814	509,424
FL	$14.867	$125.355	$174,588	$205,666	85,154	609,509
TX	$13.681	$77.925	$188,052	$212,361	72,751	366,946
NY	$10.449	$54.281	$336,955	$307,596	31,009	176,468
AZ	$9.400	$54.648	$232,111	$236,336	40,497	231,231
CO	$9.159	$52.113	$301,957	$345,655	30,331	150,767
WA	$8.224	$53.648	$306,801	$337,947	26,806	158,746
NC	$8.192	$56.671	$181,405	$211,176	45,161	268,359
VA	$6.692	$36.769	$204,916	$230,152	32,657	159,758
MA	$6.501	$32.522	$339,451	$396,746	19,152	81,972
TN	$5.842	$35.091	$175,005	$185,829	33,384	188,834
NJ	$5.778	$28.348	$258,596	$253,410	22,343	111,866
OR	$5.540	$33.598	$299,549	$311,827	18,495	107,746
MD	$5.353	$26.200	$213,222	$242,405	25,103	108,082
GA	$4.592	$61.725	$149,300	$202,363	30,756	305,022
PA	$4.482	$28.774	$145,284	$162,067	30,853	177,546
MI	$4.093	$22.694	$118,783	$132,793	34,456	170,900
MN	$4.001	$23.500	$172,015	$203,377	23,259	115,550
OH	$3.876	$23.526	$125,106	$129,513	30,984	181,646
IN	$3.263	$15.747	$128,102	$123,119	25,469	127,902
AL	$3.178	$15.106	$150,981	$157,083	21,050	96,166
SC	$3.116	$27.868	$169,598	$213,577	18,370	130,482
UT	$2.982	$19.530	$276,349	$301,154	10,791	64,849
IL	$2.725	$26.015	$122,768	$171,109	22,193	152,038
WI	$2.478	$16.752	$143,971	$158,604	17,210	105,621
MO	$2.412	$16.864	$125,993	$154,985	19,145	108,811
NV	$2.412	$17.630	$216,250	$240,713	11,153	73,239
LA	$2.106	$13.144	$169,620	$180,074	12,415	72,990
KY	$1.856	$12.989	$121,797	$137,584	15,237	94,408
OK	$1.688	$9.894	$138,769	$142,139	12,164	69,608
NM	$1.668	$7.281	$232,889	$206,019	7,162	35,340
AR	$1.446	$10.895	$122,880	$143,354	11,766	76,001
HI	$1.443	$12.806	$525,009	$591,174	2,748	21,662
ID	$1.436	$14.424	$231,310	$263,540	6,210	54,732
NH	$1.325	$7.384	$213,369	$248,720	6,210	29,686
CT	$1.236	$8.222	$197,874	$209,871	6,248	39,175
IA	$1.102	$9.474	$108,633	$142,440	10,146	66,512
RI	$1.065	$3.502	$277,963	$291,609	3,831	12,008

Exhibit 3

Existing Single-Family Home Transactions by State (and D.C.), 2018–2020 (2 of 2)

State	Transaction Volume ($ billions)		Average Transaction Sales Price		Transaction Count	
	OZ=1	OZ=0	OZ=1	OZ=0	OZ=1	OZ=0
DC	$1.054	$8.047	$407,140	$623,961	2,588	12,896
WY	$0.932	$0.893	$233,809	$229,882	3,986	3,884
MS	$0.859	$2.219	$179,691	$152,171	4,779	14,585
VT	$0.782	$2.610	$173,466	$197,491	4,509	13,218
WV	$0.741	$3.584	$151,481	$148,436	4,889	24,145
MT	$0.708	$5.882	$245,579	$289,054	2,882	20,350
NE	$0.659	$4.884	$140,836	$140,208	4,677	34,835
DE	$0.542	$4.282	$164,337	$207,436	3,297	20,641
ME	$0.516	$3.544	$195,317	$225,036	2,640	15,750
KS	$0.513	$3.446	$144,448	$146,350	3,551	23,547
ND	$0.343	$1.003	$146,626	$168,849	2,342	5,938
SD	$0.287	$0.520	$163,341	$151,834	1,757	3,428
AK	$0.267	$1.133	$242,523	$259,556	1,099	4,364
Total	**$214.476**	**$1,361.524**	**$210,792**	**$234,374**	**1,017,479**	**5,809,183**

OZ = Opportunity Zone.

Sources: CoreLogic, Inc., as of April 2021; authors' calculations

A review of the table indicates healthy OZ single-family transaction activity across all states and D.C. from 2018 through 2020. It was highest in California, exceeding $36 billion, and lowest in Alaska, at $267 million. A limited number of states accounted for the majority of OZ single-family transaction volume. Four states—California, Florida, Texas, and New York—had 3-year dollar volumes in excess of $10 billion, accounting for 35.3 percent of the total. Ten states—Arizona, Colorado, Washington, North Carolina, Virginia, Massachusetts, Tennessee, New Jersey, Oregon, and Maryland—had dollar volumes between $5 billion and $10 billion; these states collectively accounted for more than $70 billion in transactions, or an additional 33.0 percent of the total. Just 14 states accounted for more than two-thirds of OZ single-family transaction dollar volume from 2018 through 2020.

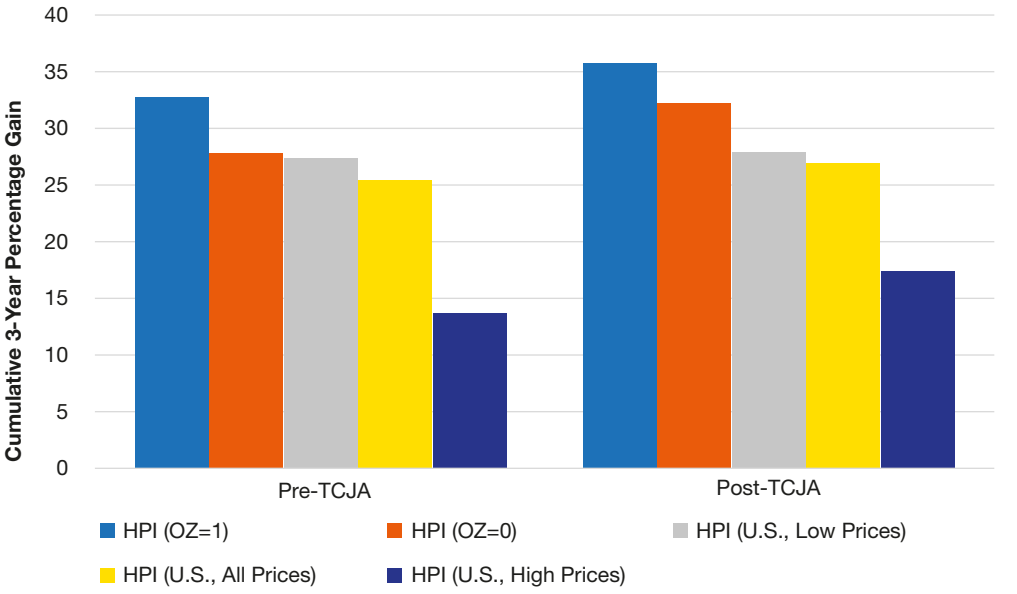
The average transaction sales price highlights the price points for homes in OZs and their non-designated counterparts across the United States. OZs in Hawaii and Iowa had the highest and lowest average sales prices, at $525,009 and $108,633, respectively. Average sales prices exceeded $300,000 in just six states and D.C.; they were below $200,000 in 30 states and below $150,000 in 15 states. An interesting finding was that average OZ sales prices exceeded those in OZ-eligible, non-designated census tracts in nine states: New York, New Jersey, Indiana, New Mexico, Wyoming, Mississippi, West Virginia, Nebraska, and South Dakota.

Repeat Sales Home Price Indices

Using a weighted repeat sales methodology, the authors used CoreLogic, Inc. transaction data to construct the following home price indices (HPIs): designated OZs (HPI [OZ=1]); OZ-eligible, non-designated census tracts (HPI [OZ=0]); U.S. low price (HPI [U.S., Low Price]); U.S. all price (HPI [U.S., All Price]); and U.S. high price (HPI [U.S., High Price]). The national low and high price tiers included transactions that were less than 75 percent and greater than 125 percent of median area home prices, respectively. Exhibit 4 displays cumulative 3-year home price gains for the five HPIs in the pre- and post-TCJA periods.

Exhibit 4

Repeat Sales Home Price Index Cumulative 3-Year Home Price Gains in the Pre-TCJA (2015–2017) and Post-TCJA (2018–2020) Periods



HPI = home price index. OZ = Opportunity Zone. TCJA = Tax Cuts and Jobs Act of 2017.
Sources: CoreLogic, Inc., as of April 2021; authors' calculations

The chart reveals an HPI pecking order among the examined markets, in which the lowest priced segments of the single-family market experienced the largest home price gains; this hierarchy continued in both timeframes. Designated OZs, the segment with the lowest average sales price, experienced the largest 3-year cumulative home price gains; they were 32.8 percent and 35.5 percent in the pre- and post-TCJA periods, respectively. OZ-eligible, non-designated census tracts had the next best performance, followed, in sequence, by the national low price, all price, and high price tiers. Cumulative gains across all HPIs in the post-TCJA period were also larger than their respective gains in the pre-TCJA period, but this outperformance was primarily driven by the surge in home prices across all examined segments in 2020. With these substantial home price gains, the single-family home market has not lacked buyer interest or capital, especially at the lower end of the market.

The spread in cumulative 3-year home price gains between OZs and their OZ-eligible, non-designated counterparts was positive in both timeframes. The spread in the post-TCJA period (3.4 percent) was lower than that of the pre-TCJA period (4.8 percent). The existence of a positive spread before and after the legislation suggests that it did not affect the existing single-family home market in OZs. Although no impact was evident, the implementation of the policy has the potential to add more fuel to already thriving for-sale housing markets in Opportunity Zones.

Data

Urban Institute and CoreLogic, Inc. data were used to explore the impact of OZ designation on existing single-family home prices. The Urban Institute data focused on census tract characteristics and included the following variables:

TractPop	is the census tract's population.
TractMedHHInc	is the median household income within the census tract.
TractLIC	is a dummy variable that equals 1 if the census tract is a low-income community (LIC).
TractGentrif	is a dummy variable that equals 1 if the census tract experienced significant socioeconomic change from 2000 through 2016.[3]
TractBAorHigher	is the census tract's proportion of adults older than age 25 who have a bachelor's degree or higher.
TractOwnerOccup	is the homeownership rate within the census tract.
TractMedRent	is the census tract's median monthly apartment rent.
TractVacRate	is the apartment vacancy rate within the census tract.

The CoreLogic, Inc. data captured market, property, and transaction characteristics. It included the following variables:

MarketHPI	is the property's MSA-level, year-over-year HPI growth.[4]
PropSP	is the property's sale price.
PropGLA	is the gross living area of the property.
PropLotArea	is the lot area of the property.
PropBed	is the property's number of bedrooms.
PropBathFull	is the number of full baths in the property.
PropAge	is the property's age.
PropYrSale2015	is a dummy variable that equals 1 if the property sold in 2015.
PropYrSale2016	is a dummy variable that equals 1 if the property sold in 2016.
PropYrSale2017	is a dummy variable that equals 1 if the property sold in 2017.
PropYrSale2018	is a dummy variable that equals 1 if the property sold in 2018.
PropYrSale2019	is a dummy variable that equals 1 if the property sold in 2019.
PropYrSale2020	is a dummy variable that equals 1 if the property sold in 2020.

[3] The Urban Institute developed this variable of socioeconomic change. Its calculation includes changes in educational attainment, median family income, share of non-Hispanic whites, and housing burden from 2000 to 2016.

[4] If a property was not located in a given metropolitan statistical area (MSA), state-level HPI growth was used instead.

After filtering for missing variables and outliers, the final data sample included 7,108,824 observations covering 50 states, excluding Arizona.[5] Exhibit 5 lists market, census tract, property, and transaction-related variables for existing single-family home sales and provides their descriptive statistics for designated OZs (OZ=1) and OZ-eligible, non-designated census tracts (OZ=0) in the pre- and post-TCJA periods.

Exhibit 5

Descriptive Statistics (1 of 2)

Variable	Pre-TCJA (2015–2017)		Post-TCJA (2018–2020)	
	OZ=1 n=460,326	OZ=0 n=2,954,726	OZ=1 n=511,312	OZ=0 n=3,182,460
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
TractPop	5,047 (2,228)	5,421 (2,821)	4,972 (2,193)	5,423 (2,877)
TractMedHHInc($)	39,290 (11,779)	49,409 (14,222)	38,645 (11,724)	48,824 (14,084)
TractLIC	0.9634 (0.1878)	0.6048 (0.4889)	0.9653 (0.1829)	0.6081 (0.4882)
TractGentrif	0.0312 (0.1738)	0.0195 (0.1383)	0.0278 (0.1645)	0.0182 (0.1335)
TractBAorHigher	0.1859 (0.1153)	0.2385 (0.1363)	0.1813 (0.1118)	0.2336 (0.1327)
TractOwnerOccup	0.5038 (0.1803)	0.6072 (0.1776)	0.5046 (0.1791)	0.6090 (0.1769)
TractMedRent ($/unit/month)	866 (229)	967 (271)	853 (222)	954 (263)
TractVacRate	0.1309 (0.0907)	0.1174 (0.1004)	0.1361 (0.0923)	0.1213 (0.1040)
MarketHPI	0.0566 (0.0284)	0.0574 (0.0281)	0.0560 (0.0267)	0.0568 (0.0267)
PropSP($)	176,372 (153,164)	204,701 (174,955)	212,392 (175,326)	242,135 (193,736)
PropGLA(sf)	1,538 (611)	1,625 (647)	1,522 (610)	1,619 (650)
PropLotArea(Acres)	0.4369 (1.0464)	0.5230 (1.2055)	0.4302 (1.0392)	0.5250 (1.2111)
PropBed	2.9581 (0.8897)	3.0024 (0.8484)	2.9506 (0.8869)	3.0012 (0.8451)
PropBathFull	1.6890 (0.6736)	1.7929 (0.6725)	1.6608 (0.6724)	1.7750 (0.6753)
PropAge(Years)	59.4360 (32.5729)	50.8398 (29.2823)	59.8855 (33.2357)	50.4329 (30.0897)
PropYrSale2015	0.3109 (0.4629)	0.3141 (0.4642)	n/a n/a	n/a n/a
PropYrSale2016	0.3364 (0.4725)	0.3372 (0.4728)	n/a n/a	n/a n/a

[5] In Arizona, public records contain no information on the number of bedrooms or bathrooms in a dwelling.

Exhibit 5

Descriptive Statistics (2 of 2)

Variable	Pre-TCJA (2015–2017)		Post-TCJA (2018–2020)	
	OZ=1 n=460,326	OZ=0 n=2,954,726	OZ=1 n=511,312	OZ=0 n=3,182,460
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
PropYrSale2017	0.3527 (0.4778)	0.3487 (0.4765)	n/a n/a	n/a n/a
PropYrSale2018	n/a n/a	n/a n/a	0.3330 (0.4713)	0.3297 (0.4701)
PropYrSale2019	n/a n/a	n/a n/a	0.3433 (0.4748)	0.3394 (0.4735)
PropYrSale2020	n/a n/a	n/a n/a	0.3237 (0.4679)	0.3309 (0.4705)

n/a = not applicable. OZ = Opportunity Zone. SD = standard deviation. TCJA = Tax Cuts and Jobs Act of 2017.
Sources: CoreLogic, Inc., as of April 2021; Urban Institute, as of December 4, 2018; authors' calculations

By comparing the two groups, the authors discovered some notable differences in the census tract and property variables. The tract-level data showed that OZs were predominantly low-income communities with lower household incomes, lower levels of educational attainment, and lower homeownership rates than their OZ-eligible, non-designated counterparts. More than 96 percent of designated OZ census tracts were low-income communities; approximately 60 percent of non-designated tracts were LICs. OZ median household income was more than $10,000 per year, or approximately 20 percent, lower than that of non-designated tracts. According to the U.S. Census Bureau's Current Population Survey, the percentage of the U.S. population older than 25 years of age with a bachelor's degree or higher was 36.0 percent as of 2019. Reported educational attainment levels in OZs and non-designated tracts were approximately one-half and two-thirds of the current national average, respectively. Homeownership rates were also considerably lower than the national average of nearly 66 percent; OZs had a rate of approximately 50 percent, and non-designated tracts had a rate of roughly 60 percent. OZ apartments also had lower monthly rents and higher vacancy rates. All these measures would seem to indicate that the "right" locations were selected for this new place-based community development program.

From a property perspective, notable differences between the two cohorts included property size, age, and price. Compared with existing single-family homes in non-designated tracts, OZ homes tended to be smaller—in terms of both living and lot area—and older. With an average age of approximately 60 years, OZ single-family home stock is likely ripe for significant renovation or redevelopment. On average, OZ single-family homes were also less expensive compared with the other cohort by 13.8 percent and 12.3 percent in the pre- and post-TCJA periods, respectively.

Empirical Results

Using a difference-in-differences design, the authors examined single-family house price changes in designated OZs during the pre- and post-TCJA periods. The methodology allowed for the calculation of "premiums" for existing single-family homes in designated OZs versus OZ-eligible

census tracts. The dependent variable in the ordinary least squares (OLS) estimation was the natural log of property sales price, lnPropSP. Independent variables included market, census tract, property, and transaction measures. TractPop, TractMedHHInc, TractMedRent, PropGLA, PropLotArea, and PropAge were natural log transformed. In addition, 49 state dummies were included as the class variable. Exhibit 6 displays the OLS regression results for the full sample. The adjusted R^2 for the regression was 48.8 percent, and all the independent variable coefficients were significantly different from zero at the 99-percent level of confidence.

Exhibit 6

OLS Regression Results for Full Sample

Dependent Variable: lnPropSP	Adjusted R^2=0.4878	n=7,108,824	
Independent Variable	**Coefficient**	**Standard Error**	
Constant	-2.9582	0.0125	***
lnTractPop	-0.0657	0.0005	***
lnTractMedHHInc	0.6770	0.0012	***
TractLIC	0.0756	0.0005	***
TractGentrif	0.2713	0.0015	***
TractBAorHigher	0.5020	0.0020	***
TractOwnerOccup	-0.8683	0.0015	***
lnTractMedRent	0.7654	0.0010	***
TractVacRate	-0.3099	0.0022	***
MarketHPI	3.7869	0.0077	***
lnPropGLA	0.4678	0.0008	***
lnPropLotArea	0.0576	0.0002	***
PropBed	-0.0164	0.0003	***
PropBathFull	0.1387	0.0004	***
lnPropAge	-0.0935	0.0003	***
OZ	0.0387	0.0015	***
PropYrSale2015	-0.1192	0.0008	***
PropYrSale2016	-0.0682	0.0008	***
PropYrSale2018	0.0696	0.0007	***
PropYrSale2019	0.1847	0.0008	***
PropYrSale2020	0.2155	0.0007	***
OZ*PropYrSale2015	-0.0180	0.0021	***
OZ*PropYrSale2016	-0.0104	0.0021	***
OZ*PropYrSale2018	0.0142	0.0020	***
OZ*PropYrSale2019	0.0240	0.0020	***
OZ*PropYrSale2020	0.0300	0.0020	***

**** Significantly different from zero at the 99-percent level of confidence.*

OLS = ordinary least square. OZ = Opportunity Zone.

Sources: CoreLogic, Inc., as of April 2021; Urban Institute, as of December 4, 2018; authors' calculations

The variables of most interest in this estimation related to the impact of the policy were the sets of time and OZ*time interaction binary variables. The set of time dummies captured the "base"

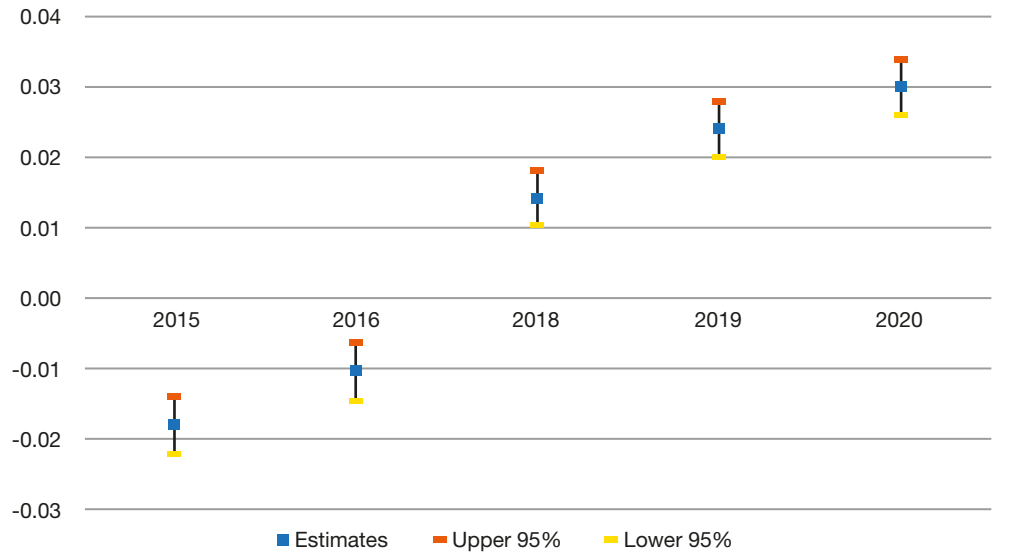
price changes for existing single-family homes in OZ-eligible census tracts. The coefficients for the OZ*time interaction variables captured the policy treatment effect—that is, any additional price changes accruing to existing single-family homes in designated OZs.

PropYrSale2017 and OZ*PropYrSale2017 were omitted from the equation to act as points of reference for their respective series. Percentage differences were calculated by transforming the remaining coefficients. The strength of the single-family market in OZ-eligible tracts was evident throughout the examined timeframe. All else being equal, the sales price is expected to be 11.2 percent lower in 2015 compared with 2017 for existing single-family homes in OZ-eligible census tracts. It is expected to be 24.0 percent higher for a property that sold in 2020 compared with 2017. Again, the OZ-eligible census tracts appear to have not suffered from a dearth of buyer interest or capital for single-family homes.

The results from the OZ*time interaction variables suggest that the OZ policy influenced existing single-family home prices. Exhibit 7 displays a visual of the evolution of the policy parameters. Before becoming OZs, those low-income communities' home price growth trailed behind the control group by 1.8 percent in 2015 and 1.0 percent in 2016. Afterward, the OZ tracts outperformed the control group and led in additional home price appreciation by 1.4 percent in 2018, 2.4 percent in 2019, and 3.0 percent in 2020. Cumulatively, OZ tracts led the control group with a 6.8-percent increment in home price appreciation. The modest discounts in the pre-TCJA period and moderate premiums in the post-TCJA period indicate that the policy has had an economically meaningful impact on existing single-family house prices in Opportunity Zones.

Exhibit 7

Difference-in-Differences Estimates of the OZ*Time Interaction Variables with 95-Percent Confidence Intervals



OZ = Opportunity Zone.

Sources: CoreLogic, Inc., as of April 2021; Urban Institute, as of December 4, 2018; authors' calculations

Next, to examine whether the price gains could more or less have accrued to properties acquired for investment purposes, the authors partitioned the data by age. Investment-related renovation and redevelopment activities are more likely for older properties, so investor purchases could conceivably be more concentrated in older homes. If true, it will result in a larger premium accruing to older homes in the OZ tracts. By contrast, relatively newer homes are anticipated to possess a smaller proportion of investment homes and so have a smaller OZ premium. The median property age was about 50 years and was used to divide the full sample into two groups. Exhibit 8 displays the OLS regression results for the age subsamples.

Exhibit 8

OLS Regression Results for Age Subsamples

	Dependent Variable: lnPropSP Age ≤ 50 Adjusted R^2=0.4899 n=3,693,692			**Dependent Variable: lnPropSP Age > 50 Adjusted R^2=0.5034 n=3,415,132**		
Independent Variable	**Coefficient**	**Standard Error**		**Coefficient**	**Standard Error**	
Constant	-0.6394	0.0143	***	-5.0261	0.0206	***
lnTractPop	-0.1467	0.0006	***	0.0586	0.0009	***
lnTractMedHHInc	0.5380	0.0014	***	0.7756	0.0020	***
TractLIC	0.0742	0.0006	***	0.0344	0.0009	***
TractGentrif	0.2251	0.0019	***	0.2795	0.0022	***
TractBAorHigher	0.3928	0.0024	***	0.5845	0.0030	***
TractOwnerOccup	-0.6463	0.0017	***	-1.2102	0.0026	***
lnTractMedRent	0.5785	0.0012	***	0.9642	0.0016	***
TractVacRate	0.0254	0.0023	***	-0.9063	0.0043	***
MarketHPI	2.8487	0.0089	***	4.4523	0.0122	***
lnPropGLA	0.6187	0.0009	***	0.3621	0.0013	***
lnPropLotArea	0.0364	0.0002	***	0.0500	0.0004	***
PropBed	-0.0064	0.0004	***	-0.0288	0.0004	***
PropBathFull	0.1041	0.0005	***	0.1651	0.0006	***
lnPropAge	-0.1098	0.0004	***	-0.1805	0.0014	***
PropYrSale2015	-0.1262	0.0009	***	-0.1110	0.0012	***
PropYrSale2016	-0.0689	0.0009	***	-0.0665	0.0012	***
PropYrSale2018	0.0619	0.0009	***	0.0792	0.0012	***
PropYrSale2019	0.1597	0.0009	***	0.2065	0.0012	***
PropYrSale2020	0.1958	0.0008	***	0.2340	0.0012	***
OZ	0.0450	0.0019	***	0.0363	0.0021	***
OZ*PropYrSale2015	-0.0094	0.0027	***	-0.0298	0.0031	***
OZ*PropYrSale2016	-0.0038	0.0026		-0.0158	0.0030	***
OZ*PropYrSale2018	0.0116	0.0026	***	0.0148	0.0029	***
OZ*PropYrSale2019	0.0185	0.0026	***	0.0281	0.0029	***
OZ*PropYrSale2020	0.0151	0.0026	***	0.0396	0.0029	***

*** Significantly different from zero at the 99-percent level of confidence

OLS = ordinary least squares. OZ = Opportunity Zone.

Sources: CoreLogic, Inc., as of April 2021; Urban Institute, as of 12/4/18; authors' calculations

As expected, the transformation of the OZ*PropYrSale2020 coefficient in the younger subsample yielded an OZ premium of 1.5 percent, less than that of the full sample. In the older subsample, the premium for OZ homes related to OZ*PropYrSale2020 was 4.0 percent, compared with 3.0 percent for the full sample. When the sample was limited to existing single-family homes older than 75 years, the same premium rose to 4.8 percent.[6] These elevated premiums are consistent with the authors' conjecture that older single-family properties were more likely candidates for investment activity. They also further confirm that the OZ policy has had an economically meaningful impact on single-family home prices.

Conclusions

Although the intent of the OZ policy is to encourage private investment into capital-starved areas, existing single-family homes in designated OZs and OZ-eligible, non-designated census tracts have not lacked buyer interest or capital. Transaction activity by dollar volume and property count in both groups was healthy in the pre- and post-TCJA periods. Repeat sales home price indices showed considerable strength in home prices in the years before and after the legislation. Designated OZs, the lowest priced segment of the examined groups, posted the highest annualized home price gains in both the pre- and post-TCJA periods.

This analysis indicates that the OZ policy has had an economically meaningful impact on single-family house prices. Before their designation as qualified Opportunity Zones, these low-income communities showed lagging home price appreciation rates. In the 3 years after becoming OZs, however, the gaps were eliminated and reversed. This study also found evidence consistent with greater demand for older single-family houses as they likely attracted more investor interest and buying activities. Planned future research will investigate this further. The OZ policy has the potential to even further fuel the significant existing home price gains experienced in qualified Opportunity Zones.

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[6] OLS regression results for this estimation are available from the authors upon request.

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