Missed Opportunity: Three Baseline Evaluations of Federal Opportunity Zones Policy

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Abstract

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The 2017 Tax Cuts and Jobs Act contained the largest federal initiative for place-based investment in over half a century. Opportunity Zones ("OZs") are expected to cost the US government over $15 billion in forgone tax revenue through 2026, exceeding both the Clinton Era Empowerment Zones and the Great Society programs of Lyndon Johnson. Have OZs increased neighborhood investment and, if so, what types of projects and neighborhoods have benefitted? This dissertation presents three baseline evaluations of OZ. The first essay discusses the findings from 76 interviews with community and government officials, program managers, developers, businesses, and fund managers about OZ outcomes in West Baltimore. The second essay uses a difference-in-differences (DID) event study framework, an adjusted interrupted time series analysis, and census tract matching techniques to compare small business and residential lending outcomes in OZs with areas that were eligible but not designated. The final essay combines an online search for OZ supported affordable housing projects, a DID design that examines Low-Income Housing Tax Credit outcomes, and 16 interviews with community development experts to evaluate whether and how OZ is having an impact on affordable housing production. These three analyses show that OZ is a missed opportunity. OZ is stimulating investment conversations and local government capacity, but it is failing at oversight and community engagement and not changing outcomes for distressed community development or affordable housing. OZ is failing because it provides weak incentives for capital gains investors seeking market rate returns, because it does not support investors and developers already active

in distressed neighborhoods, and because of several related design flaws that inhibit mission driven development. The essays propose specific policy changes necessary for OZ to encourage investment in highly distressed neighborhoods and to support affordable housing production.

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Introduction

I first heard of Opportunity Zones ("OZs") by way of a *New York Times* headline that my doctoral adviser forwarded me in the midst, and the mist, of my comprehensive exams: "Tucked into the Tax Bill, a Plan to Help Distressed America." I had spent the previous six years working on business and real estate development for Baltimore City and for a property construction and management company that I had founded there. I had been fanatically researching federal economic and community development programs in pursuit of this doctorate. I was surprised. I was intrigued.

In early 2018, I was one of many students and practitioners of economic development caught off guard to learn that six pages of the nearly 200-page Tax Cuts and Jobs Act of 2017 ("TCJA") contained the largest federal initiative for place-based investment in over half a century. OZs didn't garner much press while they were being incubated, and then lobbied, by a then little-known think tank, the Economic Innovation Group ("EIG"). There wasn't a single congressional hearing or testimony concerning them before their passage. To my knowledge, no community development professional or business operator in Baltimore had even heard of them. By the middle of 2022, when I finished this evaluation, OZs had come and gone as the most discussed economic development policy in decades by the press, academia, and development practitioners alike.

Opportunity Zones promised to address America's intractable problem of economic and geographic inequality. Certain communities, urban, suburban, and rural -- many of which have faced disinvestment for decades -- lack access to jobs, decent shelter, basic neighborhood amenities and services, quality of life, and well-being. Others have developed and prospered like never before.

In Baltimore, where I live, and where I conducted the case study portion of this research, a child's future earnings are predicted to be $4500 less per year than if they grew up in the average American jurisdiction. However, just a 40-minute drive away to the suburbs of the nation's capital -- where I also conveniently met a few interviewees as part of this research -- that same child is predicted to make nearly $3000 more than if they grew up in the average jurisdiction (Chetty et al., 2018). The manifestations of spatial inequality are seen even more granularly in dense urban housing markets. My Baltimore company has purchased equivalent row homes that are only blocks apart for price differences in hundreds of thousands of dollars.

The bi-partisan sales pitch was that OZs would help reverse this neighborhood inequality by bringing economic development to distressed communities -- particularly those that had not rebounded from the great recession of 2008. The basic idea, first outlined in a 2015 white paper by EIG, was that private sector investors have little incentive to invest in depressed places. Previous place-based programs including state enterprise zones, and the federal Empowerment Zones and New Markets Tax Credit programs had failed to correct this because they are over regulated, misaligned, and weak. Businesses have not taken full advantage of these incentives, employment subsidies don't directly attract capital, and large well qualified tax investors haven't been enticed. Individual and corporate tax investors, however, are sitting on trillions of dollars in unrealized capital gains. If venture capitalists, private equity firms, hedge funds, etc. were offered tax relief to invest in low-income-communities, EIG argued, neighborhood investment equations would change.[1]

The underlying notion of OZ is that capital deployment to address geographic disparity must be made by local and private actors; and that the only role for the federal government is to

[1] See Bernstein and Hassett (2015).

reduce barriers -- i.e., taxes -- so that this private capital can flow to where it hasn't. They reflect an ossified animus to tax collection for direct federal investment. They embody how far federal economic development policy has been privatized. As one of my primary sources, Baltimore's Opportunity Zones Coordinator, frequently reminded me during this research, "OZs are not a program, they are a marketplace."

OZs offer preferential tax treatment – the ability to avoid or reduce taxes on realized or future capital gains– for investments made in federally approved investment vehicles know as Qualified Opportunity Funds (QOF). A QOF must hold 90 percent or more of its assets in OZs, census tracts with a median family income not exceeding 80 percent of the area median income (AMI) or census tracts with a poverty rate at or above 20 percent. Census tracts that were contiguous to LICs were also eligible for OZ designation if their AMI did not exceed 125 percent of the adjacent qualifying low-income community tract.

More than 8,700 census tracts were approved by the Treasury Department for OZ designation. Across the country, rural, suburban, and urban census tracts experiencing very disparate levels of poverty, income, employment, and other indicators were selected. An early analysis by the Brookings Institution found that some states selected gentrified areas where access to capital was already abundant.[2]

In Baltimore, 42 census tracts were grouped into five OZ clusters representing different levels of distress. For example, the Southwest cluster, with a population of just over 30,000 residents, experienced $220 million in small business investment between 2012 and 2016 and is positioned for a several billion dollar megadevelopment at Port Covington. By sharp contrast, the West Baltimore OZ cluster, which represents over 40,000 residents, includes some of the most

[2] See Gelfond and Looney (2018).

impoverished households in the country and has seen less than $30 million invested in small business over the same period (Baltimore Development Corporation, 2018). While Baltimore City officials did not recommend Port Covington be included as an OZ, the Governor still nominated it to the Treasury. Such broad and disparate geographic targeting led to early concerns that OZ might direct towards less distressed places considered lower-risk investments.

The policy's flexible guidelines also raised concerns about whether and how OZ would spur capital investment in distressed neighborhoods. QOFs are permitted to finance a wide array of investment activity including market rate housing and luxury hotel development. Regulations do not prevent investors from receiving subsidy for investing in projects that do not need it. As of this writing, nearly four years since the introduction of OZs, the federal government still has not implemented a system to track or audit investments in the zones, to assess what types of projects are being supported, or to confirm the policy is benefitting distressed communities or their residents.

OZs also comes at a great cost. According to the Joint Committee on Taxation (JCT), they are expected to cost the US government over $15 billion in forgone tax revenue through 2026, exceeding the Clinton Era Empowerment Zones and the Great Society programs of Lyndon Johnson.[3] This forgone revenue could be used for other means including direct federal investment in neighborhoods.

So, did this market-based approach to neighborhood development work? Did Opportunity Zones spur investment in distressed neighborhoods. Did they achieve social good? Why or why not? If so, what types of communities and projects benefited? What might OZ tell us about

[3] See Joint Committee on Taxation (2020). Their analysis only estimates forgone tax revenue over 10 years. It is therefore an underestimate as it fails to capture the possibility that the OZ tax deferment date gets extended, and it doesn't capture longer run costs to the Treasury in forgone tax revenues.

place-based development policy? How might it inform federal policy to reverse the course of neighborhood decline and guide the next iteration of place-based development policy? These are the questions that motivated this dissertation.

I answer these questions in three essays: a qualitive case study of OZ outcomes in West Baltimore; an econometric analysis of OZ effects on home and business lending in census tracts across the country; and mixed methods assessment of OZ impacts on national affordable housing development. These essays are sequential but separate; each has been submitted as its own manuscript for peer reviewed publication.

I selected West Baltimore for the case study portion of this research for several reasons that deserve mention. First, my experience working for the Baltimore Development Corporation and running my own real estate practice, allowed me the unique opportunity to leverage my network and knowledge of economic and community development experts and projects in these neighborhoods. This included a hunch that turned out to be correct; if I set out to document all OZ investments in West Baltimore, I would capture the larger picture of OZ activity across Baltimore City.

Second, the cluster of OZ designated census tracts in West Baltimore are highly distressed and serve as a "black swan" for analysis; if I found that OZ designation attracted substantial equity investments, it would be reasonable to assume that neighborhoods with less distress were also able to attract capital. Conversely, if I found negligible effects, I could explore why OZ is not serving the neighborhoods most in need of investment. Third, both the City of Baltimore and the State of Maryland established staff positions to work specifically on OZ. These staff members allowed me to identify investors and OZ related economic development activity in lieu of federal reporting requirements. Fourth, Baltimore's proximity to Washington,

D.C. allowed for meetings with economic development professionals knowledgeable about Baltimore as well as national OZ activity. This included interviews with national tax syndication and community development professionals that would inform the third essay of this dissertation. Finally, grounding the work in Baltimore helped me convince Johns Hopkins University's (JHU's) 21st Century Cities Initiative (21CC) to fund this research and helped me persuade Dr. Sandra Newman, at JHU's Bloomberg School of Public Health, to partner as a co-author and mentor me on this work.

This case study, the first essay, presents the findings from 76 interviews with community and government officials, program managers, developers, businesses, and fund managers about OZ outcomes in West Baltimore. What distinguishes it is the original qualitative interviews, the explanations for how and why OZ is and isn't working, and the detailed policy recommendations for how to overhaul OZ policy that flow from them. The full 81 page manuscript was first published online by 21CC. It was presented to the Brookings Institution for feedback in February of 2021 and an abridged version, incorporating this feedback, was then published in *Cityscape* in March of 2022. Dan Rodricks (2021), the longtime Baltimore Sun columnist covered the work in a column entitled "Opportunity Zones might be good for investors, but what about West Baltimore?"

The second essay uses a difference-in-differences (DID) and adjusted interrupted time series analysis to compare small business and residential lending outcomes in OZs with areas that were eligible but not designated. What distinguishes this work and expands our understanding of OZ is twofold. First, this essay evaluates the impact of OZs on home and small business lending. While there are now a handful of econometric evaluations on OZ, published and seeking publication, they have all overlooked lending outcomes and the rich data on home

and small business loans that exist because of the Community Reinvestment Act. This oversight is likely because OZ incentivizes equity (i.e., capital gains) not debt investments. However, lending is both a good proxy and predictor for equity activity and a vital indicator for neighborhood development in and of itself. Second, this paper goes beyond concurrent evaluations in its depth of sensitivity testing -- to understand whether OZ designation effects vary by neighborhood distress type. This essay was co-authored with a data scientist, Guanglai Li. A version was published in *Housing Policy Debate* in December of 2022.

The final essay includes an exhaustive online search of press releases to document how much OZ equity is supporting affordable housing production, a DID design that leverages HUD's Low-Income Housing Tax Credit (LIHTC) database to assess if designated OZs have increased LIHTC development outcomes, and 16 interviews with community development and tax credit specialists to contextualize the OZ affordable housing nexus. At first thought, affordable housing may seem like a downstream outcome for an OZ evaluation. However, the affordable housing industry is a critical player in distressed community development. Moreover, the industry has a long history of leveraging development incentives not intended for affordable housing (e.g., the New Markets Tax Credit); major players in the industry (e.g., LISC and Enterprise) were optimistic about the prospect of twinning OZ with LIHTC; and OZ advocates frequently celebrate examples of OZ supported affordable projects. Novogradac, the professional services organization, claims that OZ funds with a focus on income-restricted housing had raised nearly $5 billion through 2021 (Novogradac, 2022). (The findings of this research suggest this number is deeply misleading). This essay was co-authored by Tyler Haupert, an assistant professor at NYU Shanghai, and Guanglai Li, a data scientist. At the time of depositing this dissertation, a version was being considered for publication in a peer-reviewed journal.

Together, these evaluations find that OZ is a missed opportunity. OZ is stimulating investment conversations and local government capacity, but it is failing at oversight and community engagement, and it is not changing outcomes for mission driven development or affordable housing production. OZ is failing because it is a weak incentive for capital gains investors who want market rate returns, because it does not sufficiently support investors and developers already active in distressed neighborhoods, and because of several related design flaws that inhibit affordable housing and other mission driven development.

Each essay concludes with suggestions for future research as well as specific policy changes that are necessary for OZ to encourage investment in highly distressed neighborhoods and support affordable housing development. In conclusion, I synthesize these recommendations. As the current Administration is unlikely to terminate OZ, I argue that that there is now sufficient evidence that the policy should be completely overhauled by Congress and the Treasury.

Essay 1. Opportunity Zones in West Baltimore:

A Baseline Evaluation[4]

Introduction

Tucked into the 2017 Tax Cuts and Jobs Act was the largest federal initiative for place-based investment in more than half a century. OZ is expected to cost the US government over $15 billion in forgone tax revenue through 2026, exceeding the Clinton Era Empowerment Zones and the Great Society programs of Lyndon Johnson even when adjusted for inflation.[5]

The stated goal of OZ is to bring economic development to distressed communities.[6] The policy offers preferential tax treatment – the ability to avoid or reduce taxes on realized or future capital gains– for investments made in federally approved investment vehicles know as Qualified Opportunity Funds (QOF). A QOF must hold 90 percent or more of its assets in OZs, census tracts with an official poverty rate of at least 20% and/or a median family income less than or equal to 80% of the greater of metropolitan area or statewide median family income; or census tracts contiguous to these tracts.

More than 8,700 census tracts were approved by the Treasury Department for OZ designation. Across the country, rural, suburban, and urban census tracts experiencing very disparate levels of poverty, income, employment, and other indicators were selected.[7] According

[4] This essay was coauthored with Dr. Sandra Newman. An abridged version was published in Cityscape under the same title. See Snidal and Newman (2022).
[5] This estimate was established using the Joint Committee on Taxation foregone revenue estimates from 2018- 2021 to extrapolate the 10-year (initial "term") of the incentive
[6] See "The Promise of Opportunity Zones" Congressional Testimony (2018).
[7] See Theodos et al. (2018).

to a cursory analysis by the Brookings Institution, some states selected gentrified areas where access to capital was already abundant.[8]

In Baltimore, 42 census tracts were grouped into five OZ clusters: West Baltimore, Southwest Baltimore, East Baltimore, Southeast Baltimore and Central Baltimore. Approved Baltimore OZ selections also represent different levels of distress. For example, the Southwest cluster, with a population of just over 30,000 residents, experienced $220 million in small business investment between 2012 and 2016 and is positioned for large scale investment with a new $5.5 billion megadevelopment at Port Covington. By sharp contrast, the West Baltimore OZ cluster, the focus of this study, represents over 40,000 residents including some of the most impoverished households in the city and has seen less than $30 million invested in small business over the same period.[9] While Baltimore City officials did not recommend downtown or Port Covington to be included as OZ tracts, these census tracts were later selected by the Governor's Office and nominated by the Treasury. Such broad and disparate geographic targeting may direct capital away from very distressed neighborhoods and towards less distressed places considered lower-risk investments.

The policy's flexible guidelines also raise concerns about whether and how the OZ will spur capital investment in distressed neighborhoods. QOFs are permitted to finance a wide array of investment activity including market rate housing and luxury hotel development. There is no indication that regulations will prevent investors from receiving subsidy for investing in projects that did not require subsidy.

In summary, if investments are made in distressed communities or in projects that benefit existing residents, OZ may improve quality of life for distressed community residents. On the

[8] See Gelfond and Looney (2018).
[9] See Baltimore Development Corporation (2018).

other hand, the policy risks funneling taxpayer dollars into neighborhoods that don't require subsidy and supporting projects that lead to displacement of low-income communities and people of color in the neighborhoods that do.

As of this writing, three years into OZ, the federal government has not yet implemented a system to track or audit investments in the zones, to assess what types of projects are being supported, or to confirm the policy is benefitting distressed community residents.

We find that OZ is a missed opportunity. OZ is stimulating investment conversations and local government capacity, but it is failing at oversight and community engagement and not changing development outcomes. Our participant interviews reveal a locality doing its best with a tax policy poorly designed to stimulate development in distressed neighborhoods. OZ is failing West Baltimore because it is a weak incentive for capital gains investors who want market rate returns, because it does not sufficiently support investors and developers already active in distressed neighborhoods, and because of several related design flaws.

In the next section, we review previous evaluations of tax preferences for place-based development. In the methodology, we discuss the case study area, the case study strategy, and the interview and data collection process. In the results section, we summarize Baltimore OZ investments that we document in the Appendix and describe the major findings from our participant interviews. We end with seven recommendations to improve OZ policy for distressed neighborhoods.

Evaluations of tax preferences for placed based development

OZ is a new policy, and this paper is one of the first evaluations of its outcomes.[10] However, tax incentives to attract mobile capital to distressed communities have been advanced by all levels of government for over half a century. Assessments of their outcomes are inconsistent and inconclusive.

By the 1980s, most states had implemented Enterprise Zones (EZ) offering tax incentives and employment credits for investment and job creation in distressed areas. In 1993, the federal government established the Empowerment Zones program; a combination of tax credits, grants, bonding authority and other benefits eligible in distressed urban and rural communities. These programs are the direct predecessors to OZ.

Econometric studies of these programs have generally found nominal net benefits of both state level EZ programs and the federal Empowerment Zones program. For example, Boarnet and Bogart (1996) found that EZ designation had no significant effect on employment or property values in New Jersey; Engberg and Greenbaum (1999) found that EZ designation had no effect on housing prices across 22 states; and the Government Accountability Office (GAO) found that EZ had little or no effect on job creation in Maryland. In the most exhaustive study, Peters and Fisher (2004) found that EZ in 13 states had little effect on economic growth. Positive effects that are documented tend to be found in less distressed areas.

In contrast, Papke (1994) found that EZ designation in Indiana resulted in an eight percent increase in company inventory value; Greenbaum and Engberg (2004) reported that EZ programs across six states led to increased business development; and O'Keefe (2004) concluded that California's EZ raised employment by three percent over six years. Rubin's (1990) analysis,

[10] A few OZ studies have recently been released regarding OZ outcomes nationally including Atkins et al. (2020), Theodos et al. (2020), and Chen et al. (2019).

the most prominent work supporting EZ, found that 30 percent of the 500 companies she surveyed said the New Jersey EZ had affected company location and expansion decisions.

Fewer studies have examined the federal Empowerment Zones program. The GAO conducted two studies in 2006 and 2010 but failed to reach a conclusion due to poor data collection. Oakley and Tsao (2006) found examples of improvements in certain EZs compared to non EZ counterfactual sites -- for example, poverty reduction in Detroit -- but overall, they determined that the zones had little impact. Busso et al. (2013) found greater impacts. Neighborhoods receiving Empowerment Zone designation, according to their study design, experienced a 12-21 percent increase in total employment and an 8-13 percent increase in weekly wages compared to matched zones and these gains came with only modest deadweight losses. However, they found that the program had a nominal effect on rents and vacancy rates. Krupka and Noonan (2009) found that the federal program had a statistically significant and substantially positive effect on housing prices but varying and less impact on indicators of neighborhood quality.

These studies represent a mixture of shift-share and regression analysis including sophisticated quasi experimental designs. All recommend early and periodic performance assessments/reviews/monitoring of zones to help improve understanding of outcomes.

This paper takes this recommendation by reporting on our early assessment of the OZ policy in West Baltimore. Our qualitative approach sets the context for applying OZ to distressed neighborhoods and provides nuance on how and why the policy is and isn't changing development outcomes.[11]

[11] A comprehensive analysis of all peer-reviewed studies of state enterprise zones and the federal Empowerment Zones program is available from the first author upon request.

Methodology

Our case study area is the West Baltimore Opportunity Zones Cluster (WBOZC). We selected the WBOZC for four reasons. First, the first author has a deep network and detailed knowledge of economic and community development experts and projects in West Baltimore. Second, the WBOZC represents highly distressed census tracts that serve as a "black swan" for analysis; if findings indicate the OZ policy attracted substantial capital, this may indicate that OZ neighborhoods with less distress could also attract equity. On the other hand, if we find negligible effects, we can explore why OZ is not serving neighborhoods most in need of investment. Third, both the City of Baltimore and the State of Maryland, unlike most jurisdictions, established staff positions to work specifically on OZ. These staff members could help identify capital flows and economic development activity in lieu of federal reporting mandates. Finally, Baltimore's proximity to Washington, D.C. allowed the first author to meet with economic development experts knowledgeable about Baltimore and national OZ activity.

Table 1: West Baltimore OZ Cluster (WBOZC) Descriptive Statistics

Geography (# of census tracts)	Med Income	Med House Price	Med Rent	Poverty Rate	Unem–ployed	College Educated or Greater	Average Investment Score (1-10)*
West Baltimore OZ (15)	$24,549	$87,000	$955	38%	18%	12%	3.2
Baltimore City OZ (42)	$32,785	$110,200	$943	33%	16%	17%	4.4
Baltimore City (183)	$42,094	$134,800	$961	24%	13%	25%	4.2
Maryland OZ (149)	$46,856	$173,400	$1,063	21%	10%	24%	5.4
Maryland (743)	$74,551	$290,400	$1,156	10%	7%	37%	5.5
USA OZ (8,763)	$33,345	$108,000	$725	31%	12%	18%	5.3
USA (67,148)	$53,657	$178,600	$953	15%	5.8%	29%	5.5

Note 1: Housing, poverty, employment, and education statistics are derived from American Community Survey (ACS), 2011-15 Data.
*Note 2: The Investment Score is the average score assigned to each census tract by the Urban Institute (UI) to capture lending activity before the introduction of OZ. UI established this investment score by census tract, ranging from 1-10, through a composite index which incorporates commercial lending, multifamily lending, single family lending, and small business lending data from ACS, CoreLogic, Home Mortgage Disclosure Act, and Community Reinvestment Act data. Their full methodology can be found online: https://www.urban.org/policy-centers/metropolitan-housing-and-communities-policy-center/projects/opportunity-zones-maximizing-return-public-investment.

An original 35-person participant list was developed using the first author's knowledge and network of economic development contacts. We then held initial meetings with our grant partner, the City Council member for the 7th District of Baltimore City, and Baltimore City's designated OZ coordinator. We also systematically reviewed OZ documents including enabling legislation, congressional testimony, and articles and press releases by government, think tank and advocacy groups, and local and national media. We emphasized actors and institutions engaged in business or project development in and around the WBOZC. Interviewees included developers, project sponsors, fund managers, wealth managers, investors, philanthropies, nonprofit agencies, community development institutions, city and state level officials, businesses, and the city and state designated OZ coordinators.

The interview list was expanded to 76 people using a snowball sampling method; a non-probability method of convenience in which we asked each interviewee for recommendations for and connections to other experts at the end of each interview.

Table 2: Participant Typology for West Baltimore OZ Evaluation

Participant Identification	Number of Interviews
Government Agency	7
Elected Official	6
Banking/Fund Manager/Business	18
Developer/Small Developer	16
Non-Profit/Community Developer	15
Think Tank/Consultant/Philanthropic	14
TOTAL	76

Despite our best efforts, the policy's lack of reporting requirements makes it impossible to verify whether we comprehensively identified OZ activity in the case study footprint or in Baltimore City. Our best guess is that we likely missed investors, developers, and businesses who considered but ultimately abandoned OZ financing or that were privately exploring OZ. The Baltimore City and Maryland State OZ coordinators confirmed that, according to their tracking,

we had comprehensively documented OZ activity. However, they also believed that OZ conversations and even minor investments were going undocumented.

Interviews were conducted in an open-ended and semi-structured fashion. All interviews were conducted by the first author. The author explained the purpose of the research project and described the participant identification process at the opening of each meeting. He then asked selected questions from a list created by the authors. Not all interviewees were asked all questions because questions were tailored in advance of each interview. Frequently these interviews moved away from a question-by-question format and into dialogue and conversation across questions or topics. However, the author was intentional in balancing depth spent on each question with breadth of questions during each interview. Interviews were scheduled for an hour or longer. Interviews were not recorded. However, the interviewing author took extensive notes during and after each interview including capturing direct quotes.

Interviews started in October 2019 and ended in December 2020. Most interviews were conducted in person through February 2020 at offices, restaurants, coffee shops, and other locations across Baltimore City, New York City and Washington, D.C. In response to the advent of the COVID-19 pandemic in March 2020, we "paused" the study from mid-March to August 2020. We then conducted interviews in an online format. For purposes of clarification, we followed up with 29 participants by email, phone call, or meeting.[12] We also requested OZ documentation from certain participants, such as developer proformas, if the document was discussed during the interview and we determined it may be useful to our analysis.

Project development details and investment estimates come from participant interviews, public reporting, and the first author's knowledge of Baltimore development. Where we do not

[12] The first author met with nine participants more than once. These meetings were in person pre pandemic and online thereafter. This includes multiple meetings with the Baltimore City OZ Coordinator.

footnote public reporting, development information and project finance estimates come exclusively from participant interviews and not objective records. Each financing estimate was checked for accuracy with at least three participant sources. Again, it is critical to note, in the absence of public reporting requirements we cannot verify their accuracy.

Results: OZ investments

Three years after the Tax Cuts and Jobs Act (TCJA) of 2017 was signed into law, no OZ deals had closed in the WBOZC. However, we documented six OZ investments across Baltimore City including one in a distressed census tract in East Baltimore. These OZ investments are supporting economic development that benefits city residents at large including investments in transit-oriented development and a minority owned business, the attraction of high paying technology jobs, workforce housing, and the development of a grocery store and other amenities in under-retailed communities. We also documented three projects, two within the WBOZC, that are likely to secure OZ financing within the next year.

Excluding a $154 million OZ investment made in the $5.5 billion megadevelopment at Port Covington, these projects represent $78 million of OZ equity supporting roughly $468 million in real estate and business development projects across Baltimore City. In Maryland, the comparable numbers are roughly $192 million and $800 million, respectively.[13]

Baltimore projects that have received OZ investments are detailed in Appendix A. Projects that we expect to receive OZ capital are described in Appendix B.[14] In Appendix C, we

[13] Novogradac, a national professional services organization that is tracking QOF development, estimates that roughly $12 billion of OZ equity was or is being invested across the country as of the third quarter of 2020. Novagradic OZ fund list URL: https://www.novoco.com/resource-centers/opportunity-zone-resource-center/opportunity-funds-listing. The White House Council of Economic Advisors (CEA) contends that this has spurred roughly $75 billion in total development over the same period. CEA's estimate includes investment that would have taken place without OZ. See Office of the President's Council of Economic Advisers (August 2020).
[14] Summary statistics for Appendices A and B are provided in figure 2.

highlight three developments, that considered OZ, but, as of this report, were not close to securing OZ capital.[15]

[15] We refer to these as OZ "deals" or "investments" rather than as projects. OZ financing was never the sole or primary financing mechanism supporting a business or development.

Table 3: Baltimore OZ Investments

Project/ Business	Description	OZ Investment	Total Investment	Med Income	Med House Price	Med Rent	Poverty Rate	Unemployed	College Educated or Greater	Investment Score (1-10)*
Yards 56	Mixed use development	$30 Million	$150 Million	50,280	124,500	1,061	11%	7%	17%	5
Prosper on Fayette	Workforce housing and hotel	$15 Million	$55 Million	55,277	254,000	1,445	27%	4%	79%	9
Galen Robotics	Business expansion	$1 Million	$7 Million	46,250	167,500	1,341	27%	15%	42%	7
Penn Station	Amtrak Station redevelopment	$10 Million	$90 million	36,607	219,200	908	30%	17%	43%	6
Outlook Studios	Business expansion	$1 Million	Unknown	28,109	182,600	906	49%	20%	12%	2
Port Covington	Mixed use Megadevelopment	$154 Million	$5.5 Billion	103,667	276,000	1,802	9%	6%	71%	10
North Ave Commercial**	Affordable housing & local business	$1.2 Million	$4.5 Million	31,855	122,500	976	33%	21%	24%	2
Madison Park North**	Mixed use development	$10 Million	$100 Million	39,470	252,600	959	35%	16%	34%	1
Northwood Plaza**	Mixed use development	$10 Million	$58 Million	43,221	150,700	935	20%	14%	31%	6

Note 1: Housing, poverty, employment, and education statistics are derived from American Community Survey (ACS), 2011-15 Data.
*Note 2: See Table 1, Note 2, for description and source of "Investment Score." This is the score of each census tract and not an average.
**Note 3: Project, in Appendix B, is an expected not finalized OZ investment.

The projects in Appendix A and B illustrate that OZ capital is flowing into projects with community benefits and in areas that need investment. They demonstrate that OZ is a "gap" equity source that may speed up the timeline of a project or substitute for other capital sources. However, they indicate that OZ does not determine the fate of a project or stimulate entirely new development. Government subsidy programs and/or federal New Markets Tax Credits (NMTC) are more important sources of capital to spur development.

These projects also illustrate that little OZ capital is flowing into deeply distressed neighborhoods. Appendix A includes a $1 million investment for a minority-owned business to expand in distressed East Baltimore. Appendix B includes a $100 million redevelopment project on the edge of the WBOZC and a $4.5 million project providing affordable housing and retail space for existing residents and businesses in one of the more distressed tracts in Baltimore City. However, these projects represent less than 5% of total OZ equity deployed or expected to be deployed in Baltimore. In contrast, 65% of all of OZ capital is flowing into one gentrified census tract, Port Covington, where a $5.5 billion project was already underway.

These projects reveal dedicated government staff, sophisticated developers, and a few mission driven financiers working to leverage OZ for community development. They illustrate a locality doing their best with a federal tax preference that was poorly designed for distressed neighborhoods. In Appendix C, we provide three examples of how OZ is inadequately supporting small developers who are already working to bring investment into distressed communities.

We expect OZ activity to develop beyond its current status. Participants believe OZ investments will maintain their current pace or accelerate. On the real estate development side, the prevailing sentiment among participants is that the larger "lower hanging fruit" and

"investment ready" projects have secured or are close to securing OZ capital and that these projects have established a model for using OZ as an additional capital source in diverse capital stacks. Fund managers expect to raise capital for less sophisticated developers as they learn to navigate this tax preference.

On the business development side, there was a cautious enthusiasm that Baltimore City will continue to successfully leverage OZ as a tool to attract high tech jobs. While participants generally described the policy as poorly conceived for business development, early OZ investments in Galen Robotics and Outlook Studios[16] provide precedent and partners for a replicable model to leverage OZ capital. Fund managers generally felt that Baltimore City, given its well-established bio-tech and university presence, and affordability as compared to nearby New York, Boston, and Washington D.C., was well positioned to raise OZ capital for business development.

However, study participants expect future investments to follow the pattern of investments to date, supporting development that would have happened without OZ. They suggest that most OZ capital will not flow into Baltimore's distressed neighborhoods. Many of our participants, including city and state OZ coordinators, believe it is too early to draw final conclusions about the policy.

Results: OZ Strengths and Weaknesses

In this section, we discuss our early findings regarding how federal OZ policy is and is not supporting development in the WBOZC and in Baltimore City at large.

[16] See Appendix A, OZ Investments 2 and 6, respectively.

1. OZ is stimulating a new set of investors and development conversations

The greatest benefit of OZ to date has been its ability to stimulate new investment conversations and put Baltimore on the map for a new set of investors. We documented over 50 funds that had connected with Baltimore City and/or individual businesses and projects.[17] The city and state OZ coordinators reported that they were involved in as many as 80 projects across Baltimore City that were potential candidates for OZ investment.[18] While participants described these conversations as "short term," "aspirational," and "very unlikely to materialize," there was broad consensus that OZ had led to a new development "ecosystem" with potential to stimulate new investments even if the investment was not OZ capital. As the city's OZ coordinator summarized: "One of the most important outcomes has been OZ's ability to attract a diverse cadre of new investors to Baltimore City. In the short term, these investors may not do anything here, but in the long term, these relationships represent new doors for attracting capital and development to Baltimore City. We should not underemphasize the importance of new partners even if they don't [materialize] into OZ projects."[19] One developer confirmed: "we're getting looks that we never would have got. This is powerful. Investors are looking at areas that were previously redlined to development because of their race or ethnicity."[20]

Over the course of the study, OZ investors and other interested actors toured Baltimore City, attended conferences and webinars, and made repeated inquiries with city and state OZ coordinators and project sponsors. OZ events were both local and national in scope. For example, in January 2019, the Jack Kemp Foundation hosted over 200 people, including Baltimore's Mayor, Maryland's Lieutenant Governor, and the CEO of the Economic Innovation

[17] It is important to note most of these funds had not actually raised or deployed capital.
[18] Participant Interviews
[19] OZ Coordinator Interviews
[20] Developer/Small Developer Interview 7

Group, the think tank behind OZ policy, to Port Covington to discuss OZ opportunities and challenges. In October 2019, several project sponsors offered tours of OZ sites as part of an annual Baltimore "Homecoming" event where successful professionals with links to Baltimore are invited back to the city to discuss how they can partner, invest, and collaborate on the city's future.[21] That same month, the authors, along with the CEO of Baltimore's Public Housing Agency and the Baltimore City OZ coordinator, were invited to speak about OZ activity in Baltimore at the Council of Large Public Housing Authorities annual meeting. In October 2020, the online database "Opportunitydb" hosted a three-part webinar with several Baltimore OZ project sponsors as discussants.[22] Project sponsors and developers also created marketing material for OZ investors. For example, a mid-sized development firm working in the WBOZC presented the first author with a sophisticated marketing package for the sale of a multi-million-dollar real estate portfolio that the firm was marketing and offering as an OZ investment opportunity.[23]

Participants described this new investor class as interested in mid to high double-digit returns and market rate development opportunities and said that they did not expect this new ecosystem to make large investments in Baltimore's lower-income and Black neighborhoods including West Baltimore. A housing developer in WBOZC noted, "Sure, there may be new groups of investors that drive through [these neighborhoods] as part of an OZ marketing event. But when push comes to shove, OZ doesn't change their bottom line. We all know they are only going to consider the same five or six neighborhoods that outside investors have always looked at."[24] Likewise, the president of a major regional community development organization, which

[21] Developer/Small Developer Interview 15
[22] See Milbergs (2020).
[23] Developer/Small Developer Interview 12
[24] Developer/Small Developer Interview 15

has completed hundreds of residential and commercial renovation projects in Baltimore's neighborhoods, noted that "the moment one of these investors sees the returns we are offering, the OZ conversation halts and we discuss whether our work might be a candidate for their philanthropic coffers."[25] Mission-driven developers suggested their engagement with this ecosystem did not last long given the high levels of returns most investors were looking for and the technical challenges to establishing funds. A few community developers indicated that OZ had created a false sense of hope; enthusiasm around new investors had taken up their time and resources but the conversations dried up and the investors moved on. The head of an economic development non-profit noted that they now "approach OZ investor connections with caution" as they have had so many that have gone nowhere and that is has "eaten up a lot of their time."[26]

Small developers working in West Baltimore were generally unaware and/or skeptical of any new ecosystem. A housing rehabilitation firm in the WBOZC suggested this new ecosystem "works within the existing power structure of development. Our bottom line concerns social outcomes, outside OZ investors are looking for large financial returns. So, the conversation start[s] and end[s] there."[27] Community Development Entities (CDEs) and affordable housing developers indicated that this new network was fragmented from the development activity already taking place in low-income neighborhoods. This critique was structural; because OZ was not compatible with Low-Income Housing Tax Credits (LIHTC) and other debt led development, they were not part of these new OZ conversations. We also found that the philanthropic sector was largely uninvolved with the OZ policy with an exception being the Abell foundation funding

[25] Non-Profit/Community Developer Interview 11
[26] Non-Profit/Community Developer Interview 10
[27] Developer/Small Developer Interview 16

Baltimore City's OZ coordinator position.[28] We discuss OZ's failure to incentivize capital already operating in undercapitalized markets in more detail below.

With few exceptions, participants suggested that this new investment network would serve to expand or substitute for other sources of capital in gentrifying neighborhoods and where projects would have happened without OZ. Mission-oriented developers and elected official participants agreed that due to the OZ's lack of reporting requirements, there was no way to ensure a new development network would translate into positive outcomes for existing residents. One Community Development Corporation (CDC) leader noted "Many of these neighborhoods have a long history of opportunistic land holds and false starts…. Without public information on their bottom lines, in terms of social [outcomes], [a new investment community] discretely poking around Baltimore City shouldn't be assumed a good thing."[29] A mission driven investment fund manager said they were concerned the network included "parasitic" development actors.[30]

2. OZ is spurring new local government development capacity

Related to this new ecosystem was a sentiment, espoused by Baltimore City's OZ coordinator and shared by government actors and many in the development community, that OZ has created a new organizing structure in which the city engages in development. Much of this was the result of new employees, namely, new city and state positions tasked to work with existing local officials to promote development in these zones, connect investors to OZ projects, track OZ activity, and present on OZ opportunities and progress. It is critical to note that these positions were not mandated by the federal government. To the contrary, OZ legislation

[28] Participant Interviews
[29] Non-Profit/Community Developer Interview 3
[30] Banking/Fund Manager/Business Interview 1

mandated no requirement or appropriations for local economic development planning. Consequently, this outcome is best understood as an indirect result of Baltimore and Maryland deliberately establishing new positions. As previously mentioned, the Abell Foundation, a community development philanthropy, funds the OZ coordinator position in Baltimore.

The Baltimore OZ coordinator describes himself as a "matchmaker" for projects and investors. This matchmaking and the database of projects that has flowed from it, is stimulating new and more coordinated conversations within local government about setting priorities, allocating limited local dollars, and identifying resources for projects. OZ, in tandem with a new neighborhood impact investment fund (the "NIIF"), led to "a set of monthly meetings where many of the city's major agency leaders involved in development come together and took the time to go through projects one by one in a way that wasn't as intentional before the incentive."[31] According to leadership at Baltimore City's Department of Housing and Community Development (DHCD), "as a result of the [steps we have taken around OZ], the city now has a point person to connect the dots on investment and development." Another DHCD staff member noted that "the roll out of OZ fit very nicely in the early adaptation of Baltimore's community development strategy."[32]

In Baltimore, development capacity resulting from OZ included the creation of a "development prospectus," a marketing document that the OZ coordinator pitched to developers and investors to tout the city's opportunities and projects. At the state level, this capacity included an interactive website portal where OZ actors can locate projects, information, and

[31] OZ Coordinator Interviews
[32] Government Agency Interviews 1 and 4

contacts about the state's OZ activity.[33] It also encompasses state legislation which extends existing job incentives to all businesses that locate or expand within Maryland's OZ footprint.[34]

Most developer and investor participants shared this sense of new capacity. One developer noted, "the great thing about OZ is now we have this reliable point of contact in the city to get this project to completion because [the city and state] are laser focused on these OZ deals."[35] Another development firm executive said, "Before OZ, we frequently held off on consulting with the city until we had our sources and uses better lined up. After OZ, we may be inclined to check in with the city on other opportunities…."[36] A third developer stated "the new relationships between the city, state and private sector that OZ is creating are critical for Baltimore. They can lead to future projects."[37]

It is noteworthy that eight study participants mentioned that OZ may be redirecting government capacity away from non-OZ opportunities and privileging an elite set of investors and developers with access to capital gains dollars. Relatedly, the city OZ coordinator, as well as leadership at Baltimore City's DHCD, noted that one of the major early challenges of their OZ work was dealing with OZ inquiries from people without any development experience or plan, or that hadn't performed even basic due diligence on the project locations they were inquiring about.[38] The developer of the Yards 56 project[39] noted that "OZ hype [comes with] a challenge. Now you also have a bunch of inexperienced people talking about projects without a lick of development expertise… this is wasted time and energy and it worries me."[40]

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[33] See Maryland Department of Housing and Community Development (2018)
[34] See Opportunity Zones Incentives, S.B. 581, Regular Session 2019 (2019).
[35] Developer/Small Developer Interview 8
[36] Developer/Small Developer Interview 11
[37] Developer/Small Developer Interview 7
[38] Government Agency Interviews
[39] See Appendix A for full discussion of project
[40] Developer/Small Developer Interviews

Five participants were cynical of OZ policy altogether, describing it as a "distraction," "total waste of time" and even a "con." These participants described OZ as a process in which the federal government pushes Baltimore to compete in chasing footloose capital from outside investors instead of leveraging their limited resources to cultivate investment locally. One executive of a regional community development nonprofit stated: "OZ is not the only economic development strategy that needs capacity development or that we should be organizing around [in Baltimore]. We have other zones and programs. For example, this energy would be better served developing a strategy to win [NMTC] through a captive CDE."[41] Two of these participants proposed the OZ effort be redirected toward developing municipal banking.[42] They suggested that the challenge of capital investment in distressed neighborhoods was not lack of equity. Instead, in the Baltimore region, commercial banks lend a trivial amount of their overall loan percentages to Black residents and in Black neighborhoods.[43] One economic development expert described OZ as "the latest in a series of steps to redirect local development capacity to outside and powerful holders of capital."[44] Likewise, a smaller developer described "a process that started with LIHTC where, instead of focusing on the type of development we want and the people capable of getting us there, we [instead] build up a whole new industry that's primary goal is to reduce taxes for the wealthy, not to rebuild neighborhoods for the poor."[45] A program manager at a housing nonprofit commented on "the great irony in OZ…. Once again, the government is telling us that the solution to the problem is to compete for the same capital that ignored us in the first place."[46]

[41] Non-Profit/Community Developer Interview 13
[42] See Vanatta (2019) for the Abell Foundation report on this topic -- which two participants referred us to.
[43] ibid
[44] Think Tank/Consultant/Philanthropic Interview 10
[45] Developer/Small Developer Interviews
[46] Non-Profit/Community Developer Interview 1

13 participants expressed a general concern that OZs primary function was to subvert direct tax expenditures and reduce tax rates for the wealthy. The director of a community development non-profit described OZ as "…a program whose primary purpose is to find new ways to reduce taxes for a bunch of people who…already aren't paying their fair share."[47] Nonetheless, most of these participants supported OZ policy with a 'nothing to lose' explanation.

3. OZ is Failing at Oversight and Community Engagement

Baltimore City and the State of Maryland made good faith efforts to track OZ development. The city held multiple meetings and workshops with neighborhood leaders and community organizations to introduce OZ designated communities to OZ. The OZ coordinator noted that the city was "very intentional with investors. We wanted them to know that we care about investing in distressed neighborhoods."[48] City officials selected low-income neighborhoods for OZ, were deliberate about trying to establish community benefits agreements and employment targets around the policy, and were guiding investors to high priority projects that would be beneficial for Baltimore's lower-income and minority communities.

Even so, OZ is opaque and undemocratic. It offers no planning mechanisms for communities to prevent harmful investment. Participants repeatedly noted that OZ provided no resources to guide equitable development, particularly designated funding to introduce communities to the mechanics of the tax preference or to educate them on how they could identify and connect with investors. Commitments like these, which help build trust with communities, are necessary to stimulate positive development in distressed communities,

[47] Non-Profit/Community Developer Interview 10
[48] Government Agency Interviews

especially those with long histories of race-based disinvestment and deep skepticism of outside investors.[49]

The city coordinator frequently referred to OZ as a "marketplace" and not a "program." He acknowledged that "at the end of the day, these are private sector investors, and we don't control their purse strings." A manager of an investment fund described local ability to steer OZ investment as "like being placed in a sea with a paddle. The federal tax code is a pretty blunt mechanism to just throw at localities for economic development," this participant added.[50]

A Baltimore City councilmember commented that "private and public parties have dumped toxins [into] our water and homes, and then they have made [money] doing that! It is remarkable that the feds are not requiring oversight for a program that is now incentivizing development in these [same] neighborhoods."[51] The two state legislators interviewed for this study indicated that a critical motivator for Maryland's OZ enhancement legislation was to try to establish a mechanism for oversight. A delegate critical to the legislation's passage summarized:

> *My immediate thought was OZ could be full of potential and how are investors going to decide where to invest? But at the same time, how are neighborhoods, and I as a legislator representing those [neighborhoods], going to have any idea on what is happening in the district, where the money is coming from, and who is doing the development? We should know this stuff…not to stop it but to be able to know what is going on (in) our communities and… yes, we should be able to give a bad actor a hard time too! There is no transparency. There is no accountability. There is no way to influence any of this and if you can build another methadone clinic in [a poor neighborhood] that already has a methadone clinic… then that is bullshit. But at the state we can't [create] restrictions without threatening development. The only thing we can do is incentivize better behavior since [the federal legislation] doesn't care what OZ funding [is used] for.*[52]

[49] Non-Profit/Community Developer Interviews and Government Agency Interviews
[50] Banking/Fund Manager/Business Interview 5
[51] Elected Official Interview 2
[52] Elected Official Interview 5

Developer and investor participants were conflicted about how much oversight was needed. Some developers, including those involved in OZ deals, admitted they did not know how the OZ certification process worked. Even the most "laissez-faire" participants believed the existing tracking mechanism, self-certification by Form 8996, was insufficient and undermining trust.

One developer with a history of working in West Baltimore and a proponent of OZ's lack of rules and regulations noted, "In my experience, too much community oversight of private development can lead to misinformed actors that end up scuttling good development… but we have clearly moved too far to the [opposite] end here. In the case of [OZ], there is no community empowerment unless the developer wants to provide it. This program could… at least have some sort of interim reporting so residents know what the hell is going on and so developers have some guardrails."[53] Likewise, a program manager for a national OZ fund noted, "some of the press against OZ is misrepresentative and overly pessimistic. But OZ has laid bare just how far we have moved away from transparency in economic development governance. A lot of parasitic development is happening and [the federal government] should not be incentivizing that."[54] A CDE executive went as far as to describe the reporting requirements as "comically corrupt" and noted that there "is a whole bunch of space between the current criteria and community engagement requirements that stifle development."[55] The developer of an OZ funded project commented: "We are talking millions of dollars. We can all report it."[56]

CDCs and smaller developers were most concerned. A developer working within the WBOZC said, "I have gone out my way to engage with [OZ]…but beyond the city effort and

[53] Developer Interview 5
[54] Banking/Fund Manager Interview 1
[55] Non-Profit/Community Developer Interview 3
[56] Developer Interviews

responsible [developers] … [who were] already communicating about their projects, engagement just means a webinar of white males [discussing] a need for patience to see how the program [works out]. But I want to know where exactly the incentive is being tried."[57] A CEO of a community development organization similarly stated, "I was here for the roll out of the [Community Development Block Grant]… and the Enterprise [Zone] Programs. Those programs may not have succeeded but at least the community knew how they worked. All these zonings are not exactly simple. So why isn't there a grant program to educate the residents on how they work?[58] The message this… sends is [that]the program needs you but it's…not for you." The developer of the WBOZC North Ave project,[59] which expects OZ financing noted, "the potential for unintended consequences is massive. One, all the development may just be concentrated on areas that don't need it much and two, it isn't… but [OZ] leads to development that causes displacement."[60]

Consistent with these views is the incomplete understanding of how OZ works by some institutions, legislators, and developers that participated in our study. We did not find this to be the product of the city and state poorly communicating their OZ efforts. Again, interviews and other documentary sources indicated that Baltimore and Maryland, unlike most jurisdictions, were attempting to build capacity through local coordinators. Moreover, almost all participants had attended city-sponsored events on OZ. However, OZ is a sufficiently complicated economic development tool that requires federal funding for education and engagement. Even the office of a United States Senator, representing Maryland, showed a tenuous grasp of how OZ worked.[61]

[57] Developer Interview 16
[58] Community Developer Interview 1
[59] See Appendix B for this project.
[60] Developer Interviews
[61] Elected Official Interviews

4. OZ is not changing economic development outcomes in distressed neighborhoods

OZ is stimulating new conversations and interest about investment in Baltimore City, but this interest has not materialized into new developments for distressed neighborhoods. In Appendix B, we document two projects likely to receive OZ financing in the WBOZC, the $100 million Madison Park North development and a $4.5 million workforce housing and commercial development focused on minority owned business development, zero energy waste, and affordable housing. Most study participants described these projects as excellent examples of community-oriented development in and around West Baltimore. While OZ offers each project an additional source of capital for development and may speed up timeline to secure project finance, neither project depends on this financing. Both projects were well into the development process before incorporating OZ. Several aspects of OZ explain its inability to attract economic development to truly distressed neighborhoods like West Baltimore, which we discuss next.

OZ investors demand market rate returns

There is a major disconnect between the returns expected/required on OZ investment funds and the returns project sponsors can offer. Investors see the value proposition of an OZ as eschewing future taxes on appreciation. They see the downside of OZ as having to hold their capital in one place for 10 years, which is 5-8 years longer than their typical "exit strategy." Consequently, OZ investment funds typically seek double-digit internal rates of return (IRR) between 10 and 16 percent, while projects in Baltimore's distressed tracts are more likely to generate IRRs no higher than 3-6 percent. In brief, most OZ funds are seeking market rate returns on the same types of investments that other funds are making regardless of the OZ incentive. An established national developer reported that he was "disappointed at the number of national OZ funds that are expecting pre-tax, compounded IRRs of high teens or even 20% for a

10-year hold on 'easy stuff.'"[62] In our research, the lowest IRR we identified that was sought by an investment fund, that was not based upon an existing relationship for a specific project, was about eight percent.

Mission-driven actors and funds willing to accept lower returns for investments have either been unable to raise OZ equity or unable to deploy it in truly distressed census tracts. This is partially because low- income census tracts are not expected to appreciate and partially due to technical design flaws, which we discuss in more detail later in this section. According to the director of a nonprofit impact investment firm, which considered a fund to support projects in the WBOZC: "there are a lot of reasons, from market realities to specific technical issues, that OZ is not going to work for us. [We are] not unique… 95% of mission funds have not raised equity."[63] A manager at a development firm exploring locations for an OZ business in Baltimore noted, "Neighborhoods are on an investment or an extraction path. OZ doesn't offer the value proposition … to reverse extraction."[64] Another project sponsor who had talked to numerous investors but who had not secured OZ capital stated, "OZ is meant for market-rate investments, some as high as 18%. And this does not fit the race and income profile of [distressed] neighborhoods in Baltimore or elsewhere…I hear of 'unicorn' funds where 3-4 percent returns are being accepted…. But these [exist] because there is something else going on like a pet project or an existing relationship…. [Do not] expect these funds to [be invested] in low-income Black and brown neighborhoods."[65]

[62] Developer/Small Developer Interview 5
[63] Banking/Fund Manager/Business Interview 6
[64] Developer/Small Developer Interview 1
[65] Non Profit/Community Developer Interview 10

OZ is a weak incentive that doesn't spur "but for" development

OZ is considered a weak incentive that does not change development outcomes on its own. Participants for this study and reviews of project proformas indicate that OZ's year-five and year-seven step-up basis advantages offered little if any value to investors. One Baltimore developer described them as "worthless." Another noted "we basically don't bother trying to model those into our proformas anymore." Investors and developers alike find the value of the tax preference to be a 10-year investment that shows appreciation -- not the shorter-term deferments or minor reductions on existing capital gains.[66]

Based on interviews for this study, we estimate the overall value of the tax preference to be worth 150 to 400 basis points (1.5-4 percentage points on an IRR). Investors and developers described this value as relatively meager. A developer in the WBOZC noted "game changing tax policy would need to incentivize way deeper than this."[67] Another development team sent us a proposal to layer OZ with a host of other incentives and strategic planning. The proposal reads: "Attracting OZ equity investment for important but challenging projects in highly distressed OZ neighborhoods is proving to be especially difficult."[68] A Baltimore developer with a long track record of community-oriented development responded by email "No need to talk OZ with us. A few conversations with investors and some backroom math and we quickly determined to stick with [NMTC] investments and avoid the headache."[69] The developer of the North Avenue Commercial project[70] commented "I think the development community sees [NMTC] as a [much] more effective program both for navigation and for returns. OZ places a higher risk to

[66] Developer/Small Developer Interviews
[67] Developer/Small Developer Interview 3
[68] Developer/Small Developer Interview 5
[69] Developer/Small Developer Interview 9
[70] This project is detailed in Appendix B.

reward ratio on the developer." The developer of the Yards 56 project[71] noted that "OZ made the capital easier to identify, and it was a critical component of our project, but it was not the 'but for;' if anything [NMTC] were the 'but for.'"[72] A community banking expert explained "There is no balance sheet on a lot of these projects in lower-income neighborhoods. There are great projects with great, dedicated people…but they need additional subsidy. OZ doesn't stop the car from running out of gas…."[73]

That said, several investors and developers pushed back at the notion that development relies on any single policy, program or incentive, or that the concept of 'but for' development truly exists or is an instructive way to judge OZ policy. For example, one developer commented: "big deals, especially in poor neighborhoods, are extremely complicated and anyone who suggests that 'this' program or 'that' assistance didn't matter doesn't… understand the development process. I have deals with over 30 sources. A project doesn't depend on one of them, it depends on all of them."[74] Even with this understanding of development in mind, participants frequently described OZ as being for "investment grade" and "shovel ready" projects. Participants described NMTC, state subsidy programs, and direct subsidy sources like federal EDA grants as more important to supporting development than OZ.

OZ fails to incentivize community developers and investors.

Developers, and institutions investing or interested in investing in West Baltimore do not have readily available access to capital gains dollars. A recurrent theme in participant interviews was that there was no shortage of capital in Baltimore, particularly in the larger and very wealthy Baltimore-Washington region, that could be incentivized to invest in West Baltimore and other

[71] This Project is detailed in Appendix A.
[72] Developer/Small Developer Interviews
[73] Banking/Fund Manager/Business Interview 5
[74] Developer/Small Developer Interview 6

distressed tracts across Baltimore City. However, OZ's favoring of capital gains over other capital sources means it fails to attract these actors. As one real estate developer put it bluntly: "private equity guys with marble floors from New York are not going to come down to do a deal in the 'hood in West Baltimore regardless of the incentive you offer them. But there is private wealth here and there are plenty of people who say 'shit, my grandparents are from Baltimore. I want to make an investment here.'"[75] Another developer similarly stated "OZ is funding some fine projects in Baltimore. But the value proposition is a grocery store in a [middle income] neighborhood. There won't be bigger community transformation without incentivizing … people [already] involved in the development process."[76]

Appendix C highlights three examples of OZ failing to support development in the WBOZC. They include an expert in Black wealth building who is redeveloping single family housing, a nonprofit providing construction contracts and homeownership opportunities for women of color, and a warehouse in an old lumberyard that could be used for adaptive re-use. These are illustrative only. In total, we documented eight plans or projects by small developers in the WBOZC that had seriously explored OZ as a development source but had not used it. We also documented four small businesses that had considered OZ financing to locate in a distressed community in Baltimore City but had not used it.

Participants also indicated that OZ overlooked larger institutional sources of capital that could help turn around disinvestment in low-income neighborhoods. Institutional pension funds and endowments came up in over 10 interviews as under-tapped sources of private capital that should be incentivized to invest in low-income neighborhoods. For example, three participants discussed HopkinsLocal, a 2015 initiative promoting local hiring and investment. Among other

[75] Developer Interviews
[76] Developer Interview 1

investment targets, the initiative has committed to investing $75 million of the Hopkins Endowment into local minority-owned firms in Baltimore City.[77] According to an executive of an economic development nonprofit, "OZ is focused on attracting Silicon Valley dollars, which is all fine and good. But what the local economic development community has been realizing here… is that there is a lot of money sitting smack here in the Baltimore region that needs to stay in Baltimore…not go to Boston or leave the country all together."[78] Similarly, an executive at a development non-profit noted "given all the thought cities have put into anchor institutions and homegrown investment, I was disappointed to learn OZ is still working under the failed idea of chasing corporations…."[79]

Participants frequently mentioned the absence of Community Development Financial Institutions (CDFIs) and CDCs as actors that were "critical to development in distressed communities" but "left on the sidelines" as one CDFI executive described.[80] Participants explained the disconnect through OZs technical design. CDFIs typically engage in debt driven development while OZs incentivize equity. While an OZ fund can be set up as a separate private investment to support nonprofit development, because OZ investors seek high double-digit IRRs, they are often not suited to investing in these lower IRR projects. CDFIs also do not have the resources or human capacity to set up these private funds. Moreover, federal rules about timing requirements for the deployment of capital make it difficult and risky for mission-driven organizations to execute OZ deals.[81] Likewise, CDCs tend to have long planning and

[77] See Johns Hopkins University (https://hopkinslocal.jhu.edu)
[78] Non-Profit/Community Developer interviews
[79] Non-Profit/Community Developer Interview 13
[80] Non-Profit/Community Developer Interview 15
[81] See more on technical design challenges in next section.

development periods including using the 15-year duration LIHTC. This leads to timing challenges in deploying and calling capital.

A few national nonprofits, including Enterprise Community Partners, reported successfully incorporating OZ capital in projects outside of Baltimore. However, executives described these models as "not replicable to scale."[82] Baltimore's one exclusive CDFI,[83] and seven other CDFIs active in Baltimore, are not directly involved in any OZ projects.

Six participants mentioned that OZ didn't properly align OZ with existing affordable housing and public housing redevelopment efforts. Two national affordable housing experts said OZ was providing a new source of capital for workforce housing but that it did not support the development or preservation of deeply affordable housing.[84] As one of these experts summarized, "the [affordable housing] industry does not see OZ as a game changer, but [rather] just as a bridge source for development."[85]

Public housing authorities [PHAs] appear to be largely unfamiliar with the tax preference and how it works.[86] The Housing Authority of Baltimore City (HABC) confirmed this observation: "the mission-driven nature of public housing redevelopment, and the affordable housing toolkit that it works with, don't align with what the investors are looking for…part of this is [because our work] is residential but part of [this]… is that OZ just doesn't work for deeply affordable housing… or schools or infrastructure -- the needs which we are involved in."[87] Another city official reiterated "housing authorities are being expected to engage with OZs

[82] Nonprofit/Community Developer Interviews
[83] Note: Baltimore's Neighborhood Impact Investment Fund (NIIF) was applying for CDFI status and may become a second Baltimore City CDFI.
[84] The authors have compiled a detailed list of findings on how OZ is and is not being used for affordable housing. These are available upon request.
[85] Non-Profit/Community Developer Interview 7
[86] The first author presented this study to the Council of Large Public Housing Authorities at their annual meeting in October of 2019. PHAs were largely unfamiliar with how the tax preference worked.
[87] Government Agency Interview 3

but OZs didn't engage with housing authorities. Frankly, [PHAs] being left out is a shame because [they] are… deeply knowledgeable in the challenges facing distressed neighborhoods and… [they] are thinking critically about how to integrate housing with employment."[88]

All study participants believed that CDFIs should be better integrated into and supported by OZ. However, the need to connect OZ with affordable housing and LIHTC was at times contested.

The disagreement is part of a larger debate about whether the affordable housing sector concentrates poverty in Baltimore City. As one high ranking city official noted, "I think it's a good thing that this incentive isn't geared to pair with LIHTC. Many of our distressed neighborhoods don't need more affordable housing… they need market-rate investments."[89] A program manager of an OZ fund argued "we can't expect OZ to do everything. The goal of this tax preference was never housing… it was business development." Similarly, a developer noted: "economic development has been driven by LIHTC for too long."[90]

OZ was poorly designed to serve distressed neighborhoods

OZ suffers from design flaws that make investment in distressed neighborhoods unlikely. Although Baltimore City selected distressed neighborhoods in need of investment, federal selection criteria forces distressed communities to compete for investment with non-distressed communities both locally and nationally. This limits the likelihood capital will flow to distressed neighborhoods. Nationally, OZ selections have been shown to be of higher and or equivalent levels of distress when compared to areas eligible for OZ investment that were not selected.[91] However, gentrified neighborhoods or neighborhoods already experiencing capital investment

[88] Government Agency Interview 4
[89] Government Agency Interview 5
[90] Developer/Small Developer Interview 10
[91] See Gelfond and Looney (2018) and Theodos et al. (2018).

were also selected.[92] Across the U.S., 56 percent census tracts qualified for OZ designation.[93] In Baltimore, the rate is 92 percent. Selection criteria allowed non-low-income tracts contiguous to low-income tracts to qualify.[94] Studies on OZ selections uncovered that some selections were made using outdated data and that distress was not always defined properly.[95] For example, numerous college campuses, including the University of Maryland, were eligible for selection because students are considered low-income.[96]

Baltimore City officials selected 41 census tracts based on a set on overlapping investment strategies.[97] City government participants noted that OZ selection was also aligned with the new NIIF and with a new "neighborhood investment framework."[98] Of the 41 tracts proposed by Baltimore City, 38 were selected by the Governor, four were added, and the resulting 42 tracts were approved by the U.S. Department of Treasury. It is again noteworthy that two of the four tracts added by the Governor were downtown and Port Covington. Downtown had an area median income (AMI) higher than any census tract that city officials had recommended and Port Covington, had an AMI twice as large as any census tract city officials

[92] Ibid
[93] See Din (2018).
[94] If they did not represent more than five percent of census tracts selected by a state and if the median family income of the tract didn't exceed 125 percent of its adjacent tract.
[95] See Gelfond and Looney (2018).
[96] States had the option of using American Community Survey from 2011 to 2015 or 2012 to 2016. See Gelfond and Looney (2018).
[97] Strategies included: (1) areas where the city has major plans or investment or where a large amount of vacant land is available to investors; (2) opportunities for industrial development; (3) opportunities for business development in commercial projects or pre-existing businesses; (4) opportunities to invest in housing construction projects; and (5) areas where major redevelopment or unspecified projects were underway. See Seigel and Estores (2018).
[98] See Neighborhood Impact Investment Fund (www.baltimoreniif.org). For development framework see Baltimore City Department of Housing and Community Development (2020).

had recommended.[99] The latter was erroneously allowed to be selected because of a mapping error.[100]

Theoretically, it is easy to understand why poor federal criteria for targeting and defining distress is likely to lead to distressed areas receiving little investment. OZ puts localities in competition with each other for a new class of investors with most of the direct costs of the incentive, federal capital gains collections, the federal government's responsibility. For governors to complete with other states, they are incentivized to propose higher income or gentrifying census tracts. These census tracts are likely to offer greater levels of price appreciation and thus receive most OZ investments.

Participants inside and outside government reflected positively on the city's OZ selections. They described Port Covington as a logical and smart choice for the Governor to compete for OZ investments. However, they also expressed concern regarding its inclusion. A developer active in the WBOZC noted: "now we have a situation where new investors…come in town and do their homework but end up focusing on [Port Covington… not] all the other places that actually need this outside [capital]."[101] Similarly, a banker described Port Covington as "a totally different beast than the other OZs."[102] They felt that the inclusion of downtown and Port Covington made it challenging for distressed neighborhoods to compete successfully for OZ capital.

Participants involved in OZ at the regional and national level recognized this as a federal design flaw. One fund manager said this is "not a story about Port Covington" but rather a

[99] Based on 2011-2015 ACS data, Downtown and Port Covington had AMI's of $55,277 and $103,667, respectively. The census tract with the highest AMI recommended for OZ designation by city officials was $50,280.
[100] Port Covington qualified as a "contiguous" census tract due to a computer program glitch. See Ernsthausen and Elliott (2019).
[101] Developer/Small Developer Interview 2
[102] Banking/Fund Manager/Business Interview 4

challenge with OZs broad selection criteria: "Unfortunately, what you have here is a bunch of places that already weren't going to see development put on a stage against places with development and savvy developers. Investors follow the heard… if the playing field is West Baltimore against gentrifying Brooklyn or [downtown] Portland, West Baltimore isn't happening."[103] An economic development expert confided, "Frankly, I'm concerned, and I think it is totally possible we see 75 percent of [total] investment being made in just a few [non-distressed] neighborhoods."[104] These participants suggested that OZ required a more accurate definition of distress, including the removal of contiguous tracts, and/or a deeper tax incentive for the truly distressed tracts. A national nonprofit focused on equitable development in underserved communities described the selection criteria as the "original sin" of the policy.[105]

Most developers that we interviewed believed that allowing less distressed tracts to qualify for OZ would help spur investment in more distressed tracts. They described Baltimore as requiring "domino effect," "edge" neighborhood led development, and/or "working from your strengths" strategy.[106] They thought projects like the redevelopment of Amtrak's Penn Station, Madison Park North, and Northwood Commons,[107] which are not located in deeply distressed tracts, but still qualify as distressed by OZ definition, may catalyze development in adjacent tracts that are deeply distressed.

Another impediment to using OZ for investment in truly distressed neighborhoods is OZ's short selection period[108] and top-heavy incentive structure that do not align with planning

[103] Banking/Fund Manager/Business Interview 1
[104] Think Tank/Consultant/Philanthropic Interview 10
[105] Non-Profit/Community Development Interview 15
[106] Note "working from your strengths" was the development slogan and strategy of Baltimore Mayor Martin O'Malley and Baltimore City continues to maintain a strategic focus on "Middle Market" neighborhoods. See Baltimore City Department of Planning (2020).
[107] These projects are described in Appendix A and B.
[108] States had 90 days to submit their selections to the Treasury but could ask for a 30-day extension.

processes that help stimulate market interest in disinvested neighborhoods. Study participants indicated that Baltimore's distressed neighborhoods required "development gestation periods" and "market making" in advance of a market-based incentive. These are processes in which public, philanthropic, and nonprofit actors strategically align resources and ideas/plan/proposals to assist neighborhoods to engage with the market. As one city agency executive stated, "Some of our distressed neighborhoods could be poised for development if… given [time] to continue creating market conditions…and with long term planning for future investment. But the … short timeline didn't give the city the ability to be strategic like that."[109] Likewise, an executive at Baltimore's DHCD indicated, "there is a lot of tilling of the soil that needs to be done in some of [Baltimore's distressed] neighborhoods…. [But] the quick designation means [we have to] focus on the short-term deals that you already knew were going to happen."[110]

Participants provided a spectrum of opinions regarding how much planning was necessary to prime distressed neighborhoods for OZ. Ideologically "laissez-faire" developers and investors frequently noted that too much local community or government involvement in projects might dissuade private investor interest in OZ. Nonetheless, participants, including these investors and developers, indicated that the fast, unorganized roll out of OZ, including Treasury Department guidelines disseminated on a piecemeal basis, discouraged transformative or higher-risk investments. Interviewees working at the regional and national level added that states and cities with long-term and clear development plans were seeing greater OZ investment.

Participants suggested that if the federal government had better aligned OZ policy with direct investment programs, particularly targeting infrastructure and housing, and had they given

[109] Government Agency Interview 4
[110] Government Agency Interview 2

localities more time to prepare and align their local tools and resources, additional development and investment might have been stimulated. As one community developer summarized:

> *OZ misses precisely what we have been trying to do with Choice [Neighborhoods]…. We know transformative outcomes require everyone… public, private, nonprofit, and [philanthropic actors] at the table. [But] look at the philanthropic [actors, for example]. They were just expected to align [their funding objectives] with OZ…. Why didn't OZ [engage with] them in the first place?"*[111]

A participant exploring an OZ deal stated, "If you really want to see a whole neighborhood improve, you need some sort of planning process…to connect this to the city's strategy around anchor institutions and innovation processes, [etc.]."[112] Multiple participants suggested that Treasury Department policy should be better aligned with subsidy from the Department of Housing and Urban Development (HUD), the Economic Development Administration (EDA), and/or the Department of Transportation (DOT). A City Council member representing West Baltimore described OZ as "putting the cart before the horse; suggesting these agencies should have provided additional dollars for predevelopment in advance of the OZ tax preference."[113]

OZ rules, particularly those pertaining to capital deployment, also make investment in distressed neighborhoods unlikely. OZ rules and regulations stipulate that capital gains investors must deposit their capital into a QOF within six months of the gain being realized. In turn, QOFs must invest their capital in an OZ property or business within six months. These strict timing hurdles, meant to ensure that tax deferred equity is invested in OZ, create risks and technical problems for investors. The timing is particularly challenging for mission-driven investors

[111] Non-Profit/Community Developer Interview 4
[112] Developer/Small Developer Interview 1
[113] Elected Official Interview 3

whose margins for error are lower. A director at a nonprofit impact investing firm, which decided against pursuing an OZ fund, summarized:

> *"The overarching problem [for us] is technical… holding, calling, and deploying OZ capital flies in the face of how private equity often works. The timing requirements around when an investor has to get money into a fund and then how much time a manger has to move that money into a project… and then how much time a project sponsor has to build that project… are extremely problematic."*[114]

Another fund manager said: "You must be simultaneously raising and investing capital because of limited investment windows …. This is a real challenge and may be why many funds don't materialize and many businesses aren't funded."[115] A third investment fund indicated that deployment rules restricted their OZ venture capital from investing in new start-ups like traditional venture capital.[116] A final mission-driven fund confirmed, "the challenge is timing, timing, timing. Developers are looking at options on property where OZ doesn't give them enough time to do their due diligence."[117] The developer of the OZ supported project, Yards 56[118] noted: "because you have to get money out the door quickly, time pressure may lead to missed opportunities but also dumb inexperienced investments."[119]

Challenges around capital deployment were not the only design shortcoming that surfaced in participant interviews. The CEO of a Baltimore-based software start-up company that had sought but did not secure OZ financing sent by email, "the biggest issue was just uncertainty on how a software business could qualify without intangible assets… It was deemed to be too risky for the investors [given]the potential retroactive penalties and interest on taxes." A more established company which had also considered OZ investment for their expansion

[114] Banking/Fund Manager/Business Interviews
[115] Banking/Fund Manager Interview 6
[116] Banking/Fund Manager/Business Interview 10
[117] Banking/Fund Manager/Business Interviews
[118] This project is detailed in Appendix A.
[119] Developer Interviews

indicated "[OZ policy designers] didn't understand what 'substantial improvement' meant for a small business. Maybe they will figure it out… but we have moved on…. They should have consulted with fund managers about the differences between real estate and business development before [putting this into] the tax code." [120] A consistent theme that emerged from interviews is that OZ would have been more effective had its designers better engaged with venture capitalists and fund managers on the front end.

Finally, OZ has failed to address a historic and racialized hurdle to development in low-income neighborhoods, the "appraisal gap." In Baltimore, historic banking practices, such as redlining, drove down land values in targeted neighborhoods for decades. Part of the legacy is that current bank regulations now prevent investments in these neighborhoods because the as-is built value of many proposed projects remains low. For example, we interviewed an officer at a national bank that was deploying OZ equity for projects that met Community Reinvestment Act compliance standards. This model provided 70 percent equity and 20 precent debt to meet 10 percent project sponsor equity for the development of affordable housing, workforce housing, retail and healthcare facilities in several location across the country. The bank accepted preferred returns as low as three percent, thereby facilitating true mission-based development.

The bank was excited about OZ and interested in investing in distressed neighborhoods. The hope was to deploy over a $100 million dollars in OZ equity in 2021. They were looking at four different OZ projects in distressed Baltimore neighborhoods over the course of our study.

However, as of this writing, they were unable to close on a project explaining "we have found that in low-income neighborhoods, the appraisal gap [remains] a significant challenge in having a developer find true equity… because we have to right size the debt and equity based on

[120] Banking/Fund Manager/Business Interview 17

the appraisal."[121] Similarly, in a conversation about appraisal gaps, a nonprofit developer stated, "I think an OZ type program could be valuable if we decide and figure out how to value low-income Black and brown communities."[122]

Eight participants discussed how neighborhood value is tied to race and how development standards and criteria -- that OZ relies upon -- help maintain and replicate a system that denies wealth building in Black communities. In addition to appraisal gaps, these participants noted that OZ failed to address the lack of sophisticated developers and desirable retail anchors in historically disinvested neighborhoods – both critical to changing the course of development.

They recommended direct government intervention in the form of subsidy or by the Treasury acting as a guarantor in historically redlined OZ tracts. We take these and other ideas up in the policy recommendations that follow.

Restructuring OZ

OZ requires substantial restructuring to stimulate investment in distressed neighborhoods. We propose seven changes below. Recommendations 1-2 include actions that could be taken immediately by Congress. Recommendations 3-7 are illustrative only. We present these five recommendations roughly in order of complexity. They require additional analysis and the convening of development, policy, and legal experts.

1. Institute a reporting requirement

A federal reporting requirement is needed to fully understand OZ successes and failures. Data reporting is also critical to protect against fraud and abuse. The current absence of data

[121] Banking/Fund Manager/Business Interview 4
[122] Non-Profit/Community Developer interview 10

reporting is sending a message that OZ may be a handout to the wealthy that is not designed to benefit distressed communities. While study participants differed in opinion on how comprehensive the data reporting should be, all agreed that the current data collection mechanism, the voluntary form 8996, was insufficient.

As of this writing, legislation requiring detailed reporting requirements is pending. For example, Senate Bill 1344 and House Bill 2593, introduced in May of 2019, would require the Treasury to collect data on the number of funds created their holdings and their asset class.[123] These bills would also require that data be collected on the census tracts that have received QOF investments including measures of poverty reduction, job creation, and new business starts. Data would be collected at both national and state level, to be determined by the Secretary of Treasury. It would be reported to Congress five years after the Bill's enactment and every year thereafter.[124]

The "Opportunity Zone Reporting and Reform Act," which was introduced in November of 2019, requires that QOFs report on a host of information including the identities of all investors, partnerships, and corporations in which the fund holds interest. This Bill also creates penalties for taxpayers that fail to comply with the reporting requirements. Finally, the Bill directs the GAO to report on the effectiveness of the OZ legislation at years five and 10.[125] Several policy research and advocacy organization have also put forth reporting standards that are not too burdensome for development.[126]

[123] See H.R. 2593, 1st Session 116th Congress. (2019).
[124] These bills do not clarify how counterfactuals would be established.
[125] See summary of the proposal by Novagradic (2020).
[126] For example, See Theodos (2019).

The original legislative proposal for OZ included reporting requirements that did not survive passage of the TCJA. Past federal initiatives offer more robust data collection standards than OZ.[127] Data collection should be implemented immediately.

2. Remove non-distressed census tracts from OZ eligibility

Giving localities, which compete for footloose investment, the authority to pick neighborhoods that may not meet the intention of investing in distressed neighborhoods has led to census tracts being designated for OZ that do not represent the ostensible objective of the legislation.[128]

The continued inclusion of non-distressed census tracts that are contiguous to distressed tracts may crowd out other private investment, result in large equity investments going to a few neighborhoods that did not need investment, and reduce the chances that OZ reaches low-income neighborhoods. Removing contiguous tracts will not remove an important "edge neighborhood" development process that participants described in this study.[129] In Baltimore, edge neighborhoods qualified for OZ because they met the definition of low-income.

Census tracts that no longer qualify for low-income status based on up-to-date data and those that were never intended to be eligible for OZ investment, such as college campuses, should also be removed.[130] The aforementioned "Opportunity Zone Reporting and Reform Act" provides an example of a provision to remove these tracts and replace them with more distressed tracts.[131]

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[127] For example, the CDBG program and NMTC programs have federal reporting requirements.
[128] In addition to Maryland´s designation of Port Covington, Portland, for example, has come under harsh criticism for designating its entire downtown in an OZ. See Buhayar and Leatherby (2019). States that generally prioritized less distressed areas can be found in Gelfond and Looney (2018).
[129] See Results section for discussion.
[130] Projects that have already raised or committed OZ equity could be grandfathered in to avoid unfair burden for revoking their OZ status.
[131] See Gelfond and Looney (2018) for additional guidance.

3. Deepen the tax preference for neighborhoods in high distress

OZ is a relatively weak tax incentive that is not luring the private sector to invest in deeply distressed neighborhoods. The step-up basis advantages of OZ are poorly conceived and of little value to investors. Flat tax rate incentive for a large and diverse set of census tracts is resulting in a perverse outcome in which most OZ equity investment is concentrating in a few census tracts least in need of investment. This requires a reconsideration of the original step-up basis advantages provided by the tax preference, which offer 10 and 15 percent reductions for a five and seven year hold on the original investment, respectively.

Conversations with study participants combined with analysis of developer proformas indicates that at some very high level, a reduction in capital gains taxes owed on the original investments might stimulate investment in very distressed tracts.[132] Increasing the incentive would need to be tied to project eligibility and reporting requirements and should only be considered for deeply distressed neighborhoods and long-term investments.

4. Funding for education and engagement

OZ in Baltimore has been heavily dependent on local support and capacity, most notably the creation of economic development coordinators who connect a new class of investors to developers. These positions were supported by local government and philanthropies, not federal policy. Even with local support, community stakeholders and small developers feel there has been insufficient education and engagement at the neighborhood level. This is especially so because many OZ designated census tracts have histories of parasitic and discriminatory development by both public and private actors. Moreover, OZ dollars are primarily available to highly experienced and sophisticated developers with deep contacts in private finance that are

[132] Our analysis in Baltmore suggests this would have to be higher than 50%. However, analyzing the depth of the incentive required in different housing markets across the country is needed before a precise change can be advised.

lacking in truly distressed neighborhoods. To address this deficiency, the federal government should provide grant support for education and engagement around OZ.[133]

5. Fund infrastructure and provide a federal guarantee for OZ investments

Additional OZ investment is likely to be stimulated if the federal government aligns new direct investment with OZ, particularly around infrastructure projects, in highly distressed neighborhoods. This investment would increase opportunities for appreciation which is what drives OZ investments.

A federal guarantee should be added to reduce the developer's risk in deeply distressed tracts.[134] As many distressed neighborhoods were not designated for OZ, and as this would represent an even smaller set of targeted tracts, it is critical that appropriations not be relocated from existing resources. The justification for new expenditures should be made based on saving money from the removal of contiguous census tracts.

6. Incentivize CDFIs

CDFIs have a long history of investing in low-income communities. However, as debt led actors, they were not incorporated into OZ policy, which incentivizes equity investments.[135] In Baltimore, CDFIs are only indirectly engaged in OZ.[136] This is a major shortcoming. CDFIs are trusted community actors that are willing to take on higher risks and lower returns than traditional private equity actors.

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[133] Study participants indicated that the minimum level of support should include Congressional allocations for states to develop OZ coordinator positions and/or development strategy documents. Based on a preliminary analysis, we think this support would cost less than $75 million over five years of the program. At a greater cost, Congress should also consider grant support for predevelopment loans, technical assistance for businesses, and business incubator and start up support.

[134] The amount of risk capital necessary to change project outcomes requires analysis across multiple states and housing markets. According to a preliminary estimate shared by a mission driven investment firm, $95 million per state in guarantee capital, over a five year window (approximately $4.75 Billion total) would generate significant activity in distressed OZ census tracts.

[135] For more on this debt equity disconnect see Tansey and Swack (2019).

[136] For example through the allocation of NMTC to projects that were also recipients of OZ.

Most CDFIs don´t have the capital or capacity to develop QOFs. For CDFIs to make OZ investments, large grant capital would need to be made available so these institutions can develop the personnel and knowledge to make equity investments.

There are shorter term and smaller scale ways to incorporate CDFIs into OZ policy as well. First, legislation could be drafted to treat subordinated debt and royalty debt products, used by CDFI banks, as OZ investments. This would increase CDFI bank lending capacity in distressed neighborhoods.[137] Another possibility is to allow or even require QOFs to partner with CDFI loan funds, bringing OZ under CDFI purview and steering funds towards mission-driven projects. House Bill 7262, introduced in June of 2020, proposes to amend the Tax Code of 1986 to allow QOFs to invest in CDFIs and could result in greater CDFI involvement in OZ.[138]

7. Democratize OZ to non-capital gains dollars

In Baltimore, we identified capital that, if given tax preference, is more likely be invested in distressed neighborhoods than capital gains dollars. OZ misses an opportunity to attract "doctor and dentist" dollars that are geographically and emotionally connected to wealth building in distressed neighborhoods. OZ also fails to engage institutional dollars like university pension funds that operate in and around distressed neighborhoods but often invest in primary or foreign capital markets.[139]

Most capital gains investors already have a diversity of investment options and demand high rates of return that are unlikely to be found in distressed neighborhoods. Moreover, few small businesses and developers have access to these investors. We recommend expanding, or

[137] Note 1: Given the long duration of CDFI supported projects, which typically take months if not years, to engage with communities, special allowance around capital deployment timelines may be necessary for CDFI Banks to effectively invest this capital. Note 2: two study participants suggested that OZ could be amended to treat equity equivalent (EQ2) investments in CDFIs as OZ investments. This deserves additional examination and analysis.
[138] See Community Development in Opportunity Zones Act (2020).
[139] For a discussion of the role pension funds can play in local investment see Baird et al. (2019).

even substituting, the OZ capital gains tax preference to include a refundable tax credit for community-based actors that invest non-capital-gains equity into deeply targeted distress census tracts.[140]

If properly implemented, these changes can encourage development in distressed neighborhoods and prevent waste of future tax dollars for direct federal investment. However, none of these recommendations nor OZ policy can provide the broader framework necessary for a durable urban policy regime.[141]

[140] Such a change requires the convening of community development experts, anchor institutions, philanthropies, tax experts, and even communities themselves – to determine the mechanisms and institutions necessary to pool and manage this capital and determine how such tax preference would pass federal securities regulations.
[141] Based on the history of placed based development policy, and the interviews and findings from this study, Michael Snidal is currently preparing a paper on the components of a durable urban policy regime.

Essay 2. The Nonimpact of Opportunity Zones on Home and Business Lending[142]

Introduction

Signed into law under the Tax Cuts and Jobs Act of 2017 (TCJA), Opportunity Zones (OZs) provide tax relief for capital gains investments made in 8,764 "distressed" census tracts designated by governors and approved by the U.S. Treasury. The stated goal of OZs is to encourage investment in distressed communities. Have OZs increased neighborhood investment? And, if so, what types of neighborhoods are receiving increased investment?

In the Background section, we outline the context, design, and intent of OZs, with an emphasis on the policy's broad and flexible investment criteria. In the Literature Review section, findings from other early evaluations of OZs are synthesized. These studies employ multiple data sources and generally find nominal or noneffects, but they have not examined debt originations, an important proxy for equity investments and a critical indicator and predictor of neighborhood development in low-income communities (LICs).

These studies also have not tested for heterogeneity in effects by neighborhood distress type. By looking at residential and business lending outcomes, and by stratifying neighborhoods by distress levels to examine heterogeneous effects, this study builds on our existing understanding of federal OZ policy.

In the Data and Methodology sections, we discuss the difference-in-differences (DID) method used to examine OZs' impact on lending. We then detail the heterogeneity modeling, the

[142] This essay was coauthored with Dr. Guanglai Li. A version was published in Housing Policy Debate under the same title. See Snidal and Li (2022).

event study framework, matching techniques, and the adjusted interrupted time series (AITS) approach that we use to refine and cross check the analysis. Baseline DID modeling indicates that OZ designation has had no statistically significant effects on small business or home lending activity. Heterogeneity modeling further reveals that effects are nonexistent regardless of neighborhood distress type. Our event study framework provides some support for the DID's pretreatment parallel trends assumption, and the heterogeneity, PSM, and AITS steps improve our counterfactual and ability to rule out considerable OZ impacts. In conclusion, we discuss limitations and future extensions for both policy and research. We recommend that OZs be required to provide transaction-level data, demonstrate benefits for distressed communities, pass a certification process, and be reduced in number.

Background

The TCJA contained the largest federal initiative for place-based investment in more than half a century. OZ is expected to cost the US government over $15 billion in forgone tax revenue through 2026, exceeding the Clinton Era Empowerment Zones and the Great Society programs of Lyndon Johnson even when adjusted for inflation.[143]

The policy offers preferential tax treatment—the ability to avoid or reduce taxes on realized and future capital gains—for investments made in federally approved investment vehicles known as Qualified Opportunity Funds (QOFs). A QOF must hold 90% or more of its assets in OZs, census tracts with an official poverty rate of at least 20% and/or a median family income less than or equal to 80% of the greater of metropolitan area or statewide median family

[143] This estimate was established using the Joint Committee on Taxation forgone revenue estimates from 2018 to 2021 to extrapolate the 10-year initial "term" of the incentive. This estimate does not include inflows of revenue expected in 2026 when the initial capital gains tax deferment may be due. However, it also does not include the likely much larger long-run cost to the Treasury in forgone tax revenues (thus making it a conservative estimate).

income; or census tracts contiguous to these tracts.[144] When capital gains are invested into a QOF, taxes on these gains are deferred for up to 10 years, reduced by 10% in year five, and then 15% (net) in year seven. If capital gains are held in QOFs for 10 years or longer, future capital gains made from these investments become tax free.

Over 8,700 census tracts were approved by the Treasury Department for OZ designation in July of 2018.[145] Across the country, rural, suburban, and urban census tracts experiencing very disparate levels of poverty, income, employment, and other indicators were selected.[146] QOFs are permitted to finance a wide array of investment activity, including affordable housing and small business development but also market-rate housing and luxury hotels. There is no fixed cap on the amount of money that can be channeled to QOFs or a yearly investment limit for OZs.

The stated goal of OZs is to bring investment and economic development to distressed communities.[147] According to the Internal Revenue Service (IRS) the purpose is to "spur economic growth and job creation in low-income communities while providing tax benefits to investors" (IRS, 2022). The Economic Innovation Group (EIG), the think tank that crafted the original OZ white paper and then successfully lobbied for the legislation's passage, argues that the OZs will "encourage private investment in communities that are struggling to attract capital, create jobs, and lift residents out of poverty" (EIG, 2022). EIG's white paper suggests that the policy's flexibility and scalability will make OZs far more effective than previous placed-based

[144] The OZ statute in the TCJA allowed census tracts to be designated OZs if they were LICs under the definitions established for the New Markets Tax Credit program. Census tracts that were contiguous to LICs were also eligible for selection if their area median income did not exceed 125% of the adjacent qualifying LIC tract.
[145] After passage of the TCJA, governors had 90 days—until March 21, 2018—to nominate zones or seek a 30day extension. The first set of designations, covering 18 states, were made public by the Treasury on April 9, 2018. All qualified OZs were officially posted by the Treasury on July 9, 2018.
[146] See Gelfond and Looney (2018) and Theodos et al. (2018).
[147] See The Promise of Opportunity Zones (2018).

initiatives and induce large-scale investment capable of lifting entire communities out of distress.[148]

Opponents of OZs argue that current statute rules and Treasury regulations leave OZs unlikely to deliver on this promise. They raise concerns that investors will receive subsidies for investing in projects and places where investment and gentrification are already underway. Repeated criticism has been leveled against the initial zone eligibility criteria which allowed more than half of all census tracts in the United States to qualify for designation. Opponents of OZs note that broad and disparate geographic targeting directs capital away from very distressed neighborhoods and toward less distressed places considered lower-risk investments.[149]

Literature Review

Tax incentives to attract mobile capital to distressed communities have been advanced by all levels of government for over half a century. By the mid-1980s, most states had implemented Enterprise Zones (EZs) offering tax incentives and credits for investment and job creation in distressed areas. In 1993, the federal government followed with the Empowerment Zones program, a combination of tax credits, grants, bonding authority and other benefits for distressed communities. In 2000, Congress then established the New Markets Tax Credit (NMTC) program which provides tax credits to investors that make equity investments in Community Development Entities that invest in LICs.

These programs are the direct predecessors to OZs. Econometric studies have generally found nominal benefits of both state-level EZ programs and the federal Empowerment Zones

[148] See Bernstein and Hassett (2015) for the original OZ white paper.
[149] See Wessel (2021, "Choosing the Zones") for the most in-depth review of OZ selection and its criticisms.

program—with the exception that several studies find considerable benefits to property values.[150] Causal empirical evaluation of the NMTC program is more limited. Existing studies indicate that NMTC eligibility spurs firm and job growth in certain industries (Harger & Ross, 2016) but that these benefits do not flow to LIC residents (Freedman, 2015). Research also suggests that NMTC investment leads to modest reductions in poverty and unemployment but that these benefits may be driven by residential turnover (Freedman, 2012; Theodos et al., 2022).

While OZ is a relatively new policy, it has already attracted several early evaluations, published and seeking publication. These include evaluations of the types of neighborhoods designated (Barth et al., 2021; Gelfond & Looney, 2018; Kurban et al., 2021; Theodos et al., 2018); the role political affiliations played in designation (Alm et al., 2021; Eldar & Garber, 2022; Frank et al., 2022); case studies of outcomes in Baltimore (Snidal & Newman, 2022) and Chicago (Kim, 2022); and a qualitive assessment of how OZ has supported mission driven development across the country (Theodos et al., 2020). They also include econometric evaluations of OZ designation effects on employment and poverty outcomes (Arefeva et al., 2021; Atkins et al., 2020; Freedman et al., 2021); commercial real estate transactions (Corinth & Feldman, 2021; Sage et al., 2021); and property prices (Chen et al., 2019; Pierzak, 2021).

Econometric evaluations have relied on DID designs (Arefeva et al., 2021; Atkins et al., 2020; Chen et al., 2019; Corinth & Feldman, 2021; Freedman et al., 2021; Pierzak, 2021). The DID method is effective for comparing differences in outcome indicator levels between target and control neighborhoods pre and post intervention but relies upon an assumption of parallel pretreatment trends. These studies provide ample precedent and support for the approach that we

[150] A few studies also find that neighborhoods receiving Empowerment Zone designation experienced improvements in labor market conditions. See Busso and Kline (2008) and Ham et al. (2011). For a comprehensive review of tax preferences, as well as direct expenditure initiatives, for place-based development see Foell and Pitzer (2020).

take below. Specifically, we replicate the DID method used in Chen et al. (2019) and Freedman et al. (2021) as their event study frameworks and matching strategies allow for an assessment of parallel pretreatment trends and a way to mitigate for differential pretreatment trends, respectively. For robustness we supplement these methods with an AITS analysis to compare differences in outcome indicator levels and trends between target and control neighborhoods pre and post OZ.[151]

Other early econometric studies on OZs find that the designation has had limited effects on employment and wages (Atkins et al., 2020; Freedman et al., 2021), poverty (Freedman et al., 2021), property prices (Chen et al., 2019), and commercial investment (Corinth & Feldman, 2021). A few studies find modest OZ designation impacts: Atkins et al. (2020) find some evidence that OZ was associated with higher salaries; Sage et al. (2021) detect some short-term price and liquidity benefits for vacant land and older properties in OZs; Arefeva et al. (2021) find that OZ increased new jobs in metropolitan but not rural areas by between 3 and 4.5%; and Pierzak (2021) finds that OZ increased apartment prices by 7.8%.

These studies offer little examination as to how these benefits may differ by neighborhood distress type. Yet, drawing on tax data released by the Joint Finance Committee, a study by Kennedy and Wheeler (2021) finds that through 2019 roughly 84% of OZs received no OZ investment while nearly 50% of OZ capital was invested in 1% of census tracts that had relatively higher educational attainment, home values, and incomes, lower unemployment and higher shares of prime-age workers. This study provides an early indication that OZ capital may disproportionately flow to census tracts where economic conditions were already improving and/or where it may simply serve the purpose of substitute capital.

[151] Note: Corinth and Feldman (2021) employ a fuzzy regression discontinuity design for evaluation robustness but find outcomes consistent with their DID modeling.

This is the first study to evaluate OZ's impact on debt outcomes. Previous studies have overlooked the policy's lending effects. This is likely because OZ incentivizes equity (i.e., capital gains), not debt investments. However, ignoring whether OZ has had an impact on lending is a major evaluation oversight. First, there are no robust data to directly assess private equity transactions.[152] Early OZ evaluations already rely on proxies for, or other indicators of, economic development (e.g., housing prices and job growth). While commercial real estate transactions capture some equity activity, they too miss the lion's share of transactions that OZ was designed to incentivize: business—not real estate—development. Equity investments, however, are frequently paired or "twinned" with debt investments in both business ventures and real estate development projects; both leverage equity for debt finance. This is specifically the case with OZ, where early qualitative evaluations have indicated that OZ-funded projects have required complex capital stacks that include equity and debt—as well as other subsidies and sources like federal NMTCs (Theodos et al., 2020; Snidal & Newman, 2022). QOFs that successfully raise capital are likely to leverage non-OZ finance to increase their overall purchasing and investment power (Pierzak, 2021).

Second, debt capital is a strong indicator for neighborhood and business development in and of itself. Neighborhood distress has historically been linked to racialized lending discrimination (Jackson, 1995; Squires & O'Connor, 2001; Stegman, 2010). Developers, local governments, and nonprofits depend on debt to rehabilitate commercial properties, construct community facilities, and develop affordable housing. Businesses rely on credit—not just equity—to grow (Benjamin et al., 2004; Berger & Udell, 2003; Cotei & Farhat, 2017).[153]

[152] There is no mandatory federal requirement to report OZ equity investments to the US Treasury or a plan by the Treasury to release voluntary reporting data to the public (Wessel, 2021).

[153] In small business development, debt finance typically quickly follows equity investments. While venture capital has received significant attention with the financialization of technology-oriented startups, debt finance remains

Likewise, residents depend on mortgage finance to realize homeownership, "buy into" a neighborhood, and build personal wealth.

If OZ is successful, it should affect business and home lending markets. In addition to leveraging debt capital for business development, OZ may support local amenities, provide new jobs, attract people and entrepreneurs, and therefore result in increased borrowing for businesses and homes. These lending outcomes are particularly good proxies for an early policy evaluation as they may be harbingers for future equity investments. While equity investors looking to reap the direct tax benefits of OZ require time to navigate regulatory and accounting hurdles and to raise capital, small businesses and home buyers who anticipate the indirect benefits of future improvements in these zones can invest (i.e., borrow) upon tract designation. If businesses and home buyers do not exercise increased borrowing in designated tracts, then either they are myopic, or they do not expect OZs to spur increased development.[154] Thus, regardless of policy intention, it is important to identify whether and how OZ designation is affecting these lending outcomes in the places it was intended to benefit.

Finally, as a result of the Community Reinvestment Act (CRA) and the Home Mortgage Disclosure Act (HMDA), business and residential lending are two of the best data sources to track neighborhood-level investment across American communities. The CRA provides the most comprehensive publicly available data on small business lending. An analysis compiled by agency members of the Federal Financial Institutions Examination Council (FFIEC) finds that the reporters of CRA small business loans comprise nearly 75% of all small business loan dollars

fundamental to the overall capital structures of small businesses—including those for young firms. See Berger and Udell (2003), Cotei and Farhat (2017), and Ibrahim (2010).

[154] Chen et al. (2019) support their analysis of home prices post OZ designation under a similar theoretical construction. A notable caveat to this theory is that small business and home investors may lack knowledge or be incorrect in their expectations of OZ.

that are outstanding (FFIEC, 2020). Another academic analysis estimates that CRA data cover about 86% of all loans of $1 million or less (Nguyen et al., 2015). Likewise, HMDA is the nation's most comprehensive record of mortgage market activity, releasing over 15 million records from roughly 7,000 institutions on an annual basis (Goodman & Seidman, 2019) and capturing 90% of home lending activity by loan volume (Government Accountability Office, 2021).

In addition to filling this data gap, this evaluation stratifies neighborhoods by different measures of neighborhood distress to test for heterogeneity in effects. Understanding outcomes by varying neighborhood distress type is critical for a robust policy assessment of OZ, especially given the large and diverse set of census tracts that were eligible and designated.

Data

The evaluation period for this study is 2012–2019. Census tracts, which generally have a population between 1200 and 8000 people (United States Census Bureau, 2021) serve as proxies for neighborhoods.[155]

The dependent variables for this study are small business and residential loan originations. For the former, the number and dollar amount of CRA-eligible small business loans of less than $1 million are collected from the FFIEC for all years between 2012 and 2019, summed for totals and averages by census tract for each year.[156] An average number of loans and

[155] Census tracts are frequently used as proxies for neighborhoods in policy evaluations or examinations of "neighborhood effects." They are also frequently the geographic level by which place-based incentives— including OZ—are designated. For a history on census tracts as units of analysis for place-based evaluations, as well as a specific discussion of their validity in representing neighborhoods in regards to OZ policy assignment, see Fraker (2022).

[156] CRA small business loan data has several noteworthy limitations. First, loans are reported by census tract but there is no way to confirm where loan capital is deployed (i.e., the funds might be used to support firm activities in other locations e.g., another office). There is evidence that the data contain a large number of P.O. boxes, compromising the geographical assignment. Second, commercial banks and savings associations typically do not fund startups, meaning the data more likely represent lending for existing businesses. Third, the data do not capture larger commercial real estate loans above $1 million. Finally, the CRA does not provide data on other factors that

average loan amount per capita is established by normalizing these statistics by the number of residents in each census tract by year as provided by the American Community Survey (ACS)'s 5-year estimates.

For the latter, 2012–2019 loan origination counts and amounts for all home purchases, improvements, and refinances—which are reported via the HMDA[157]—are collected from the FFIEC. This data is provided by individual loans and therefore loan numbers and amounts are first aggregated to the census tract level.[158] Total and average number of residential loans and total and average loan amounts are then calculated for each census tract. Loans are separated by single family (1–4 units) and multifamily (over five units) homes and are also separated by race of borrower to allow for sensitivity testing. Only originated loans—not applications where debt was not issued—are considered. Finally, the loan numbers and amounts are exposed to the number of housing units in each census tract from the ACS 5-year estimates to establish an average number of loans and loan amounts per number of housing units by census tract.

OZ data come from the Urban Institute (UI) and include information on the 31,866 eligible OZ tracts, the 8,764 selected OZ tracts, and whether a tract was eligible for selection as a LIC or as a contiguous census tract. These data were originally collected by the U.S. Department of Treasury's Community Development Financial Institutions (CDFI) Fund.

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might be influencing supply and demand of credit (e.g., underwriting standards or small business age) and impacting loan extensions in any given community. See Canner (1999).

[157] HMDA requires most depository lending institutions, including banks, credit unions, and savings associations, as well as non-depository institutions, like mortgage companies, to file mortgage loan applications. This includes investment/business loans for home purchases, improvements, and refinances. For the purposes of studying outcomes in LICs, however, it has two noteworthy limitations: the small number of loans issued in LICs and lack of data on the precise number of multifamily dwelling units associated with multifamily loans make it hard to interpret the effects on area rent levels and multifamily housing markets, specifically and respectively. For more on this and other HMDA limitations see Pettit and Droesch (2009). For the history of HMDA reporting requirements and criteria for lenders see FFIEC (2020).

[158] Total and average number of residential loans and total and average loan amounts are then calculated for each census tract. Loans are separated by single family (1–4 units) and multifamily (over five units) homes and are also separated by race of borrower for sensitivity testing. This separation did not affect the findings.

In addition to population and housing unit counts, yearly census tract characteristics of median household income, percentage African American, change in percentage African American, unemployment, poverty, percentage of population 25 years and older with a college education, median gross rent, and home ownership percentage are assigned from the ACS 5-year estimates (e.g., the 2013−2017 ACS estimate is assigned to 2017).

In addition to indicators of poverty, unemployment, median household income, and home ownership percentage, neighborhood distress is proxied with pretreatment investment indicators developed by UI for all OZ-eligible census tracts. Scores range from 1 (no investment/very distressed) to 10 (high investment activity/low distress) and are based on a composite index of 2011−2015 commercial lending, multifamily lending, single family lending, and small business lending activity.[159]

Only census tracts with complete data are kept. The initial analysis is restricted to census tracts that are designated LICs only.[160] To improve model fit, and because OZ policy was meant to benefit existing residents of distressed communities, atypical census tracts with fewer than 1,200 residents, census tracts with population per housing unit outliers[161] and census tracts with no loan activity altogether are removed.[162] Finally, as the entire territory of Puerto Rico was designated as an OZ, and thus there are no counterfactual tracts in comparable locations, it is removed from the dataset. This resulted in a final of 18,649 control census tracts and 5,479

[159] For additional details on how this index was established, see Table 1 and Theodos et al. (2018).
[160] Non LICs represent roughly 20% of OZ eligible census tracts. However, due to limitations on how many LICs could be selected, less than 3% (230 census tracts) were designated as OZs. Maintaining non LICs for the general comparison would result in a disproportionate number of less distressed neighborhoods being used as controls. Instead, non LIC census tracts are compared as a separate and additional evaluation.
[161] Outliers were identified using box plots. Specifically, people per housing unit was converted to a logarithmic scale and census tracts 1.5 times below the interquartile range or 1.5 times above the third quartile range were removed. This resulted in a sample of census tracts with 1.26 to 4.28 people per housing unit.
[162] Models including census tracts with very low population and housing statistics are also checked. This did not substantially alter the findings.

treatment census tracts. Descriptive statistics for the sample by year as well as for the entire 2012–2019 study period are presented in Table 4.

Empirical Approach

The distribution of the data is examined. The dependent variables of analysis show a highly right skewed distribution. To normalize this data, a logarithmic equation to convert the variables is employed:

$$y = log(\frac{var_{year+1}}{var_{year}})$$

where var is the number of small business loans per capita, small business loan amount per capita, number of home loans per housing unit, or home loan amount per housing unit. The ratio $\frac{var_{year+1}}{var_{year}}$ is the ratio of y compared to the previous year. When the ratio is small, its natural log is the growth rate of var year over year.

DID modeling is used to identify the impact of OZ designation on business and residential lending via the following equation:

$$y_{i,t} = \beta \cdot OZ_i \times Post_t + \gamma_i + \eta_t + \varepsilon_{i,t}$$

where $y_{i,t}$ is the outcome of interest for tract i in year t, OZ_i is a dummy variable that takes a value of 1 if tract i is an Opportunity Zone, and 0 if it is eligible but not designated, $Post_t$is a dummy that equals 1 for 2018 and 2019 and 0 for years before 2018, γ_i is the tract fixed effect, η_t is the year fixed effect, and $\varepsilon_{i,t}$ is the residual.[163]

[163] This model is replicated from Arefeva et al. (2020), Chen et al. (2019) and Freedman et al. (2021): 10,000 simulations that randomly select 1=3 of the census tracts for the DID analysis are run to test and confirm that our model results are not due to chance. We also test the dummy for just 2019, as 2018 is not a full treatment year, but this does not alter the findings.

Neighborhoods are then stratified by equal number of census tracts for 2017 pretreatment levels poverty, unemployment, education, median household income, home ownership percentage, and Black percentage (e.g., the ⅓ highest poverty tracts, ⅓ middle poverty tracts, ⅓ lowest poverty tracts). They are also stratified by neighborhood types based on the UI investment indicators of pretreatment distress (e.g., most distressed if UI investment score =1-3, distressed if UI investment score = 4-7, and least distressed if UI investment score = 8-10). Models examining heterogeneous neighborhood distress types are rerun to cross-check findings and to look for possible variations in effects.[164]

Our DID modeling is extended to an event study framework. This allows us to plot the time pattern impacts of the policy and to confirm or reject the validity of the parallel trends assumption for the dependent variables of interest. Event study plots are constructed using the following model:

$$y_{i,t} = \sum_{j=2013}^{2016} \left\{\beta_j^{pre} \times OZ_i \times 1[j = t]\right\} + \sum_{k=2018}^{2019} \left\{\beta_k^{post} \times OZ_i \times 1[k = t]\right\} + \gamma_i + \eta_t + \varepsilon_{i,t}$$

where variable definitions follow the basic DID as described above, where β_j^{pre} and β_k^{post} represent the OZ effect estimates for each year pre and post treatment measured relative to 2017, and where the first year is 2013 to establish the growth rate. For the event study and the basic DID standard errors are clustered at the census tract level. This allows for serial correlation

[164] Three additional robustness and sensitivity steps are taken. First, based on these indicators, control and treatment groups are split into just two intervals (i.e., less impoverished, and more impoverished), and four intervals (e.g., highest unemployment, high unemployment, less unemployment, least unemployment) and in the case of the UI scores by individual (1–10) scores. Second, Jenks Natural Breaks are considered to partition the data, but this results in poor model fit and is dropped from the analysis. Third, as HMDA data include residential loan originations by race, the dependent variable of home loan originations is stratified to test whether outcomes differ by the race of the borrower. None of these models substantially alter the findings.

between census tracts but assumes that errors are independent across tracts.[165] Plot graphs for other study variables including percentage with bachelor's degree or higher, percentage unemployed, median household income, median gross rent, percentage in poverty, and percentage change in black population are also developed to visualize treatment and control group trends.[166]

In addition to the event study design and to further address the possibility that estimates might be the result of differential pretreatment outcomes, we take three steps to ensure robustness. First, we employ a propensity score matching (PSM) technique to create more refined treatment and control comparison groups. Variables for 2017 of population, unemployment, poverty, and median household income, and census tract population are used to predict OZ designation and construct a propensity score via a logit model. Based on the propensity scores, the closest control census tract is identified for each treated census tract in order to minimize the difference between treatment and control neighborhoods.[167] We match OZ and non-OZ tracts in the same state only and restrict their difference in propensity to be designated OZ to within 0.05.[168]

[165] This event study design framework is replicated from Freedman et al. (2021).
[166] Plot graphs are constructed using the 5-year ACS estimate described in the data section. The United States Census Bureau (2018) recommends conceptualizing these as estimates, not counts. Count data are more accurately recorded in the Census Bureau's Population and Housing Units Estimates (PEP) pages. We use ACS data, however, because we do not seek to predict specific counts but to visualize trends of these covariates and because the PEP pages do not provide yearly data.
[167] PSM designs are roughly modeled after Chen et al. (2019) and Freedman et al. (2021).
[168] As homeownership and therefore rate of loan originations may be depressed in lower income census tracts, we also add home ownership percentage as a matching criterion, but this does not affect the findings.

Table 4: Descriptive statistics for Opportunity Zone-eligible low-income communities

Designated census tracts (treatment)								
	2012	2013	2014	2015	2016	2017	2018	2019
Population	4,212 (1,731)	4,244 (1,761)	4,275 (1,793)	4,297 (1,825)	4,316 (1,852)	4,325 (1,877)	4,327 (1,895)	4,329 (1,926)
Black ratio	0.242 (0.288)	0.242 (0.287)	0.241 (0.285)	0.241 (0.283)	0.239 (0.281)	0.238 (0.279)	0.237 (0.277)	0.236 (0.275)
BA or higher ratio	0.156 (0.101)	0.157 (0.101)	0.16 (0.102)	0.164 (0.104)	0.168 (0.105)	0.173 (0.107)	0.179 (0.11)	0.184 (0.113)
Unemployment rate	0.136 (0.066)	0.144 (0.068)	0.138 (0.067)	0.128 (0.065)	0.115 (0.06)	0.102 (0.056)	0.09 (0.052)	0.082 (0.05)
Median household income	35,335 (10,941)	35,080 (10,809)	35,124 (10,695)	35,136 (10,531)	36,289 (11,046)	38,092 (11,786)	40,133 (12,662)	42,195 (13,548)
Median gross rent	766 (227)	777 (228)	789 (232)	794 (235)	810 (243)	839 (255)	871 (273)	901 (291)
Poverty rate	0.244 (0.109)	0.254 (0.109)	0.261 (0.108)	0.261 (0.106)	0.254 (0.104)	0.244 (0.102)	0.233 (0.101)	0.221 (0.1)
Investment score	5.37 (2.8)	5.37 (2.8)	5.37 (2.8)	5.37 (2.8)	5.37 (2.8)	5.37 (2.8)	5.37 (2.8)	5.37 (2.8)
Small business loan number	56.31 (63.13)	54.9 (65.08)	60.98 (69.07)	66.27 (75.74)	70 (82.16)	71.38 (77.43)	75.88 (82.67)	81.92 (86.74)
Small business loan number per capita	0.0145 (0.0209)	0.0141 (0.0228)	0.0154 (0.0226)	0.0165 (0.0241)	0.0173 (0.0238)	0.0176 (0.0234)	0.0187 (0.0244)	0.0201 (0.0242)
Small business loan amount	2,750,495 (4,828,671)	2,854,260 (4,975,034)	2,891,934 (5,038,735)	3,003,630 (5,009,868)	3,130,122 (5,134,842)	3,152,134 (5,040,403)	3,300,419 (5,250,197)	3,380,061 (5,071,245)
Small business loan amount per capita	735 (1677)	755 (1785)	763 (1811)	780 (1704)	807 (1727)	810 (1674)	846 (1732)	859 (1553)
Home purchase loan number	19.91 (19.14)	22.73 (22.01)	24.88 (24.57)	28.29 (27.96)	32.67 (32.63)	36.08 (35.41)	38.13 (35.58)	40.18 (37.59)
Home purchase loan number per unit	0.0106 (0.0082)	0.012 (0.0095)	0.0131 (0.01)	0.0148 (0.0114)	0.0171 (0.0135)	0.0188 (0.0143)	0.0198 (0.0142)	0.0208 (0.0146)
Home purchase loan amount	3,152,677 (4,716,520)	3,891,096 (5,491,682)	4,503,205 (6,599,507)	5,580,057 (8,077,294)	6,662,857 (9,368,735)	7,777,209 (13,004,595)	8,617,950 (12,462,723)	9,342,114 (13,017,292)
Home purchase loan amount per unit	1,675 (2,278)	2,083 (2,893)	2,423 (3,801)	2,947 (4,023)	3,524 (4,456)	4,076 (6,252)	4,473 (5,734)	4,809 (5,793)
N	5,479	5,479	5,479	5,479	5,479	5,479	5,479	5,479
Eligible but not designated census tracts (control)								
	2012	2013	2014	2015	2016	2017	2018	2019
Population	4,158 (1,675)	4,183 (1,700)	4,210 (1,729)	4,235 (1,755)	4,251 (1,773)	4,273 (1,803)	4,283 (1,826)	4,288 (1,848)
Black ratio	0.195 (0.252)	0.195 (0.251)	0.195 (0.25)	0.195 (0.248)	0.196 (0.248)	0.195 (0.247)	0.195 (0.246)	0.195 (0.245)
BA or higher ratio	0.177 (0.118)	0.178 (0.119)	0.181 (0.119)	0.184 (0.12)	0.189 (0.122)	0.195 (0.125)	0.2 (0.127)	0.205 (0.13)
Unemployment rate	0.119 (0.055)	0.125 (0.056)	0.119 (0.055)	0.109 (0.051)	0.097 (0.048)	0.086 (0.045)	0.077 (0.043)	0.07 (0.041)
Median household income	39771 (11305)	39,500 (11,086)	39,549 (10,930)	39,574 (10,760)	40,887 (11,383)	42,836 (12,262)	44,981 (13,251)	47,287 (14,334)

Median gross rent	824 (250)	835 (250)	847 (252)	852 (256)	871 (265)	901 (280)	937 (299)	969 (318)
Poverty rate	0.204 (0.095)	0.213 (0.095)	0.219 (0.094)	0.219 (0.092)	0.213 (0.092)	0.205 (0.092)	0.196 (0.091)	0.186 (0.091)
Investment score	5.41 (2.82)	5.41 (2.82)	5.41 (2.82)	5.41 (2.82)	5.41 (2.82)	5.41 (2.82)	5.41 (2.82)	5.41 (2.82)
	46.21 (47.8)	45.04 (47.67)	51.12 (54.8)	56.06 (59.8)	59.08 (61.86)	60.03 (63.5)	64.43 (69.1)	70.2 (74.16)
Designated census tracts (treatment)								
2012		2013	2014	2015	2016	2017	2018	2019
Small business loan number								
Small business loan number per capita	0.0117 (0.0137)	0.0113 (0.0135)	0.0126 (0.0146)	0.0137 (0.0156)	0.0143 (0.0166)	0.0145 (0.0168)	0.0154 (0.0176)	0.0167 (0.0187)
Small business loan amount	1,896,111 (3,075,137)	1,965,337 (3,177,665)	2,000,447 (3,230,365)	2,097,916 (3,368,955)	2,204,293 (3,516,559)	2,218,509 (3,506,292)	2,330,161 (3,704,126)	2,405,620 (3,768,512)
Small business loan amount per capita	493 (921)	506 (968)	510 (950)	530 (982)	553 (1040)	553 (1018)	577 (1044)	593 (1067)
Home purchase loan number	22.74(19.65)	25.68(22.16)	28.1(24.35)	32.36(28.7)	37.07(33.53)	40.33(36.06)	42.02(37.11)	43.97(39.37)
Home purchase loan number per unit	0.0126 (0.0093)	0.0142 (0.0103)	0.0155 (0.0112)	0.0177 (0.0128)	0.0202 (0.0146)	0.0218 (0.0155)	0.0226 (0.0157)	0.0235 (0.0162)
Home purchase loan amount	3,599,812 (4,724,954)	4,579,532 (6,304,434)	5,135,083 (6,525,643)	6,422,685 (8,337,847)	7,722,763 (9,898,979)	8,757,385 (11,759,382)	9,390,072 (13,307,223)	10,146,318 (12,466,251)
Home purchase loan amount per unit	1,998 (2,545)	2,528 (3,279)	2,830 (3,381)	3,524 (4,427)	4,191 (4,855)	4,704 (5,655)	5,028 (6,168)	5,397 (5,965)
N	18,649	18,649	18,649	18,649	18,649	18,649	18,649	18,649

Note. Population through poverty rate data are from the American Community Survey. The investment score is the average score assigned to each census tract by the Urban Institute (UI) to capture lending activity before the introduction of OZ. UI established this investment score by census tract, ranging from 1 to 10, through a composite index that incorporates commercial lending, multifamily lending, single family lending, and small business lending data from American Community Survey (ACS), CoreLogic, Home Mortgage Disclosure Act, and Community Reinvestment Act data. Their full methodology can be found online: https://www.urban.org/policy-centers/metropolitan-housing-and-communities-policycenter/projects/opportunity-zones- maximizing-return-public-investment. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council.

Second, we match census tracts based on preintervention small business and home lending trends using $y \sim year$ linear regressions where census tracts are paired within the same state and differences in slopes between treatment control are restricted to within 0.1.[169] These matching techniques allow us to better attribute changes in outcomes to OZ itself, as opposed to the function of preexisting differences between treatment and control groups. They also help address the specific failure to establish support for the parallel trends assumption for small business loans per capita and home loans per capita outcome variables in the full DID design as identified in the event study framework.

Third, we supplement the DID approach with an AITS analysis. Specifically, we replicate the regression specification advanced by Galster et al. (2004, eq. 1) to compare differences in levels and trends for each of the dependent variables between target and control neighborhoods preOZ (i.e., before 2018) and post-OZ (i.e., 2018 and 2019):

$$y_t = c + level_{oz}OZ_t + level_{post-oz}POSTOZ_t + slope_{oz}SOZ_t + slope_{post-oz}SPOSTOZ_t + slopeS_t + slope_{post}SPOST_t + \varepsilon_t$$

where y_t is the outcome at year t; c is a constant term, $level_{oz}$ is the difference in level between OZ and control tracts before intervention, $level_{post-oz}$ is the change in level of OZ tracts after intervention, $slope_{oz}$ is the difference in slope between OZ and control tracts assuming no intervention, $slope_{post-oz}$ is the change in slope of OZ tracts after intervention, $slope$ is the parallel component of slope before intervention, and $slope_{post}$ is the change in slope after intervention due to time but not intervention. OZ is a dummy variable which is 1 if an OZ tract and 0 otherwise, $POSTOZ$ is a dummy variable which is 1 for OZ tracts after intervention and 0

[169] To maintain model stability, we also only keep census tracts with an R squared of the regression of at least .2.

otherwise, SOZ is the slope variable which is 1 in the first year, 2 in the second year, …, for OZ tracts and 0 otherwise, $SPOSTOZ$ is the slope variable which is 1 in the first year and 2 in the second year after intervention of OZ and 0 otherwise, S is slope variable which is 1 in the first year, 2 in the second year, …, for all tracts, and $SPOST$ is the slope variable which is 1 in the first year and 2 in the second year of all tracts after intervention and 0 otherwise. Standard errors are again clustered at the census tract level and the statistical significance is calculated using White's robust standard error (White, 1980).

We run this AITS robustness check for both the full sample and the matched samples. Finally, we consider only contiguous non-LIC communities in isolated PSM DID and PSM AITS evaluations to search for effects in the most well to do communities.[170] All statistical analysis is performed using the R Project for Statistical Computing (R Core Team, 2013).

Results

Baseline DID Analysis

Baseline DID estimates find that OZ designation has no statistically significant ($p < .05$) impact on the growth rates of small business loans or loan amounts per capita. OZ also results in no statistically significant increases in the growth rate of home loans or home loan amounts per housing unit. Regardless of statistical significance, effect size estimates are muted (e.g., modeling rules out an effect size beyond 3.2% for home loan amounts per capita).[171] These findings are presented in Table 5.

[170] We focus on these methods because just 230 of a possible 10,285 non-LIC contiguous census tracts were designated OZs. Full-sample comparisons and matching by pretreatment lending outcomes were not suitable for establishing a counterfactual.

[171] Simulation sampling supports our findings of non-effect. Of the 10,000 simulations, only 2.1% of models demonstrate a statistically significant ($p < .05$) effect regarding the growth of small business loans. Similarly, we find only .02%, 1.1%, and 3.3% of models show any statistically significant effect when considering small business loan amount, home loans, and home loan amount, respectively.

Table 5: Difference-in-Differences (DID) Estimates: The Effects of Opportunity Zones on Small Business and Home Loans and Loan Amounts

Variable	Estimate	*p* value	95% CI	N
Small Business Loans per Capita	-0.0054	0.1643	(-0.0131, 0.0022)	24128
Small Business Loan Amount per Capita	0.0079	0.4489	(-0.0125, 0.0283)	24128
Home Loans per Unit	0.0059	0.3038	(-0.0054, 0.0172)	24128
Home Loan Amount per Unit	0.0145	0.1123	(-0.0034, 0.0323)	24128

Notes: CI = Confidence Interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population and housing unit data are from the American Community Survey. The DID model description can be found on page 12 of the essay. Standard errors are clustered at the census tract level.

Models configured for different thresholds of poverty, as well as models stratifying the data by different levels of unemployment, median household income, educational attainment, homeownership percentage, and UI investment scores consistently show no evidence of OZ designation having statistically significant impacts on residential and business loan growth regardless of neighborhood distress level. Two model outputs, one showing results by tiers of poverty and the other by tiers of UI scores, are provided in Tables 6 and 7.[172]

[172] This modeling can be provided upon request to Michael Snidal.

Table 6: DID Estimates for Small Business and Home Loans and Loan Amounts by Tiers of Poverty

Poverty Rate	Variable	Estimate	*p* value	95% CI	N
Poverty Rate: > 0.238	Small Business Loans per Capita	0.0017	0.8004	(-0.0113, 0.0147)	8043
Poverty Rate: > 0.238	Small Business Loan Amount per Capita	0.0147	0.4080	(-0.0201, 0.0494)	8043
Poverty Rate: > 0.238	Home Loans per Unit	-0.0051	0.6350	(-0.0262, 0.016)	8043
Poverty Rate: > 0.238	Home Loan Amount per Unit	-0.0040	0.8192	(-0.0379, 0.03)	8043
Poverty Rate: 0.17 - 0.238	Small Business Loans per Capita	-0.0120	0.0805	(-0.0254, 0.0015)	8042
Poverty Rate: 0.17 - 0.238	Small Business Loan Amount per Capita	-0.0001	0.9956	(-0.0359, 0.0357)	8042
Poverty Rate: 0.17 - 0.238	Home Loans per Unit	0.0053	0.5833	(-0.0136, 0.0241)	8042
Poverty Rate: 0.17 - 0.238	Home Loan Amount per Unit	0.0204	0.1704	(-0.0088, 0.0496)	8042
Poverty Rate: < 0.17	Small Business Loans per Capita	-0.0009	0.8971	(-0.0151, 0.0132)	8043
Poverty Rate: < 0.17	Small Business Loan Amount per Capita	0.0085	0.6602	(-0.0294, 0.0465)	8043
Poverty Rate: < 0.17	Home Loans per Unit	0.0088	0.3601	(-0.01, 0.0275)	8043
Poverty Rate: < 0.17	Home Loan Amount per Unit	0.0252	0.0960	(-0.0045, 0.0548)	8043

Notes: CI = Confidence Interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population, housing unit, and poverty data are derived from the American Community Survey. The DID model description can be found on page 12 of the essay. Standard errors are clustered at the census tract level. Modeling by tiers of unemployment, education, median household income, home ownership percentage, 2017 Black percentage, as well as modeling by tiers of investment indicators for pretreatment distress yield similar, non-statistically significant, results. These outputs can be provided by request to the first author.

Table 7: Difference-in-differences (DID) estimates for small business and home loans and loan amounts by tiers of distress level

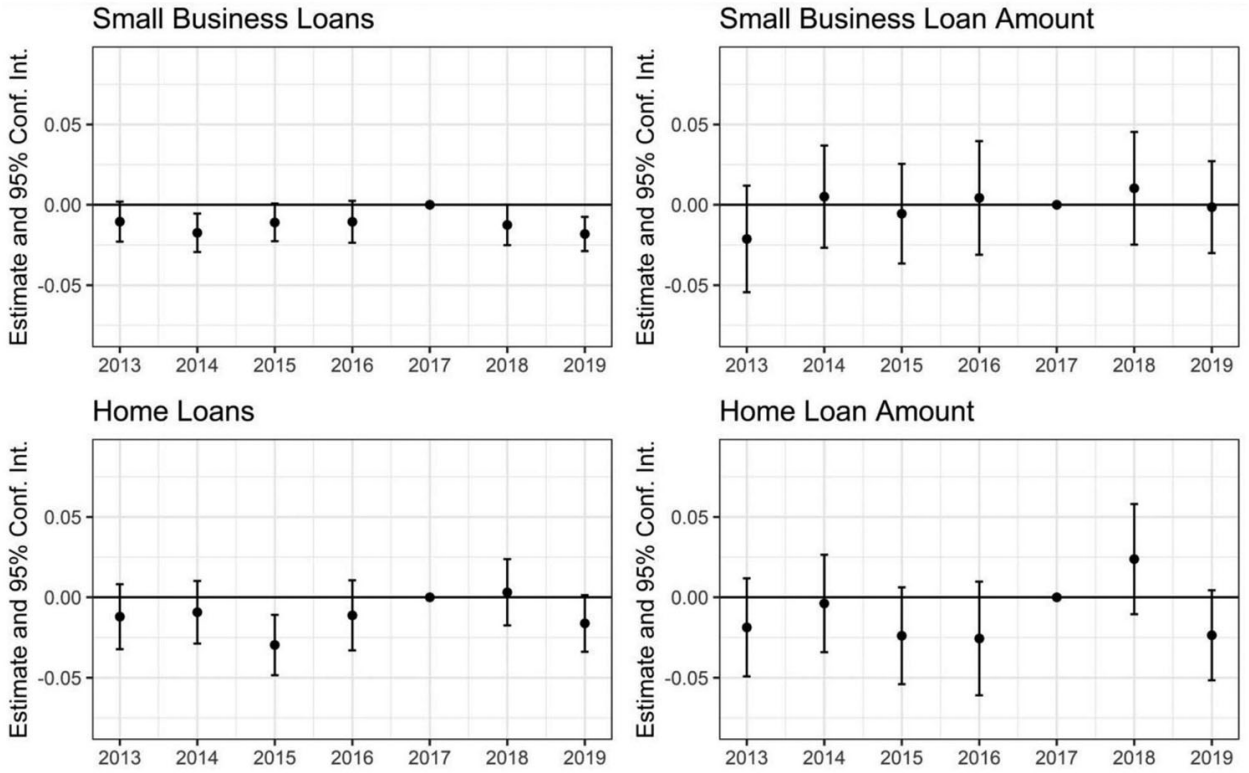
Variable	UI investment/distress score	Estimate	*p* value	95% CI	*N*
Small business loans per capita	Distressed	–0.0091	.1953	(–0.0229, 0.0047)	9928
Small business loans per capita	Less distressed	0.0023	.7144	(–0.0101, 0.0148)	7449
Small business loans per capita	Least distressed	–0.0087	.1577	(–0.0207, 0.0034)	6743
Small business loan amount per capita	Distressed	0.0054	.7716	(–0.0311, 0.0419)	9928
Small business loan amount per Capita	Less distressed	0.0323	.0605	(–0.0014, 0.0661)	7449
Small business loan amount per capita	Least distressed	–0.0160	.3306	(–0.0483, 0.0163)	6743
Home loans per unit	Distressed	0.0059	.5381	(–0.0128, 0.0246)	9928
Home loans per unit	Less distressed	0.0079	.4180	(–0.0113, 0.0271)	7449
Home loans per unit	Least distressed	0.0035	.7365	(–0.0169, 0.0239)	6743
Home loan amount per unit	Distressed	0.0116	.3883	(–0.0147, 0.0378)	9928
Home loan amount per unit	Less distressed	0.0177	.2657	(–0.0135, 0.049)	7449
Home loan amount per unit	Least distressed	0.0148	.4374	(–0.0225, 0.0521)	6743

Note. CI confidence interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. The Urban Institute (UI) Investment Score is an average score assigned to each census tract to capture investment/distress activity before the introduction of OZ. UI established this score by census tract, ranging from 1 to 10, through a composite index which incorporates commercial lending, multifamily lending, single family lending, and small business lending data from American Community Survey (ACS), CoreLogic, Home Mortgage Disclosure Act, and Community Reinvestment Act data. Their full methodology can be found online: https://www. urban.org/policy-centers/metropolitan-housing-and-communities-policycenter/projects/opportunity-zones-maximizing- return-public-investment. In this output, "distressed" refers to census tracts receiving an investment score from 1 to 4, "less distressed" to tracts receiving an investment score from 5 to 7, and "least distressed" to tracts receiving an investment score from 8 to 10. Standard errors are clustered at the census tract level. Modeling by tiers of unemployment, education, median household income, home ownership percentage, and Black population percentage, as well as additional modeling/stratification by tiers of UI investment indicators, yields similar, nonstatistically significant results. These outputs can be provided on request to the first author.

Event Study Framework

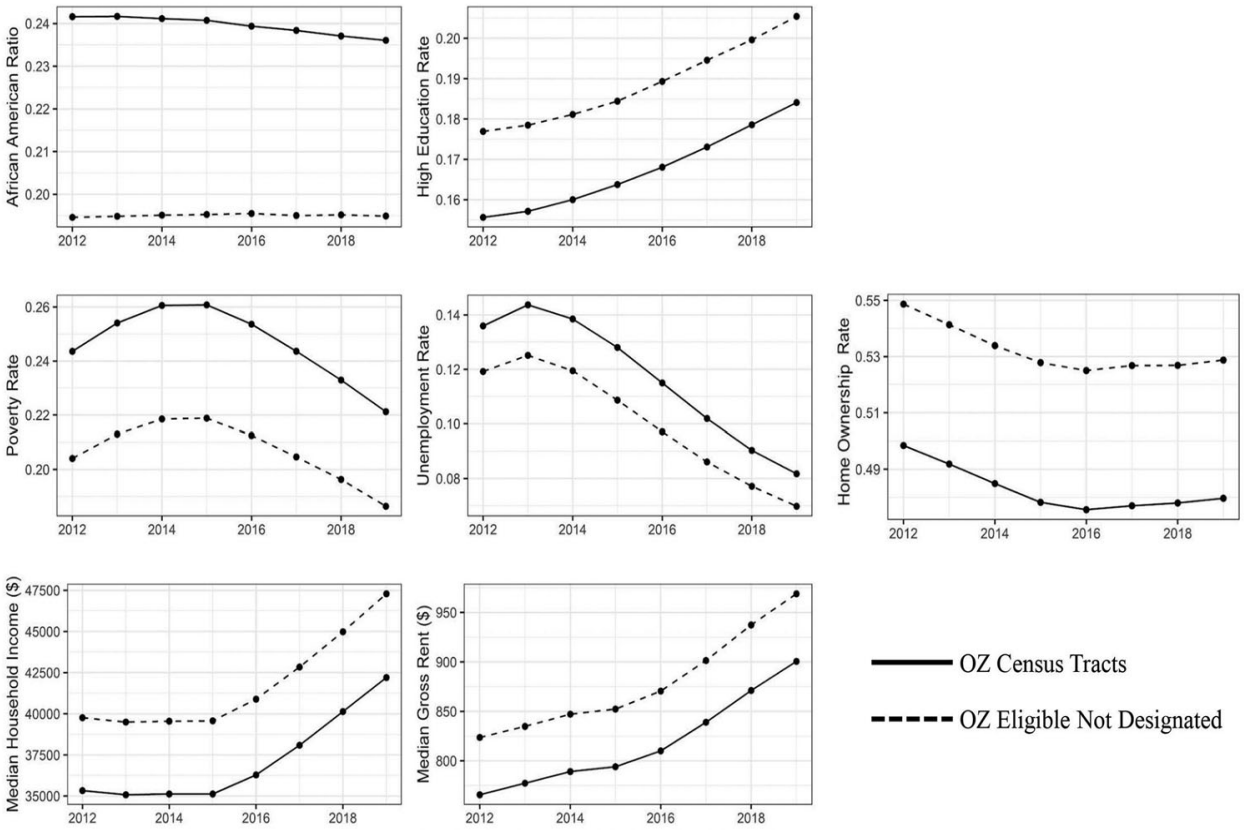
The major assumption of the DID design is that business and residential lending in LIC OZs (the treatment) and LICs that were OZ eligible but not designated (the control) demonstrate parallel pretreatment trends. Event study plots show point estimates and 95% confidence intervals. In each case, 2017 is the reference year and the interaction with the dummy variable for 2017 is omitted. Event studies indicate that control and treatment areas exhibit parallel trends for small business loan amount per capita and residential home loan amounts per housing unit. They do not point to violations of the parallel trends assumption necessary to interpret these DID estimates as causal. While event study plots do not reveal a clear violation of parallel pretreatment trends, they also do not confirm this condition for small business loans per capita and home loans per residential unit. We therefore introduce census tract matching techniques to improve the counterfactual. Year over year event study plots are displayed in Figure 1.

Additional diagnostics indicate parallel trends across other neighborhood and quality of life indicators between OZ designated and OZ eligible but not designated LICs, including educational attainment, unemployment, median household income, poverty, median gross rent, percentage African American, and home ownership percentage. Indicators generally demonstrate a decline in the average level of neighborhood distress in both treatment and control groups, with college education trending up, unemployment trending down, median household income and gross rents trending up, and percentage below the poverty line trending down. These variable trend plots are presented in Figure 2.



Note. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population and housing unit data are from the American Community Survey. The event study model can be found on page 14 of the article. The plots show estimates and 95% confidence intervals from event studies with tract and year fixed effects that compare outcomes in designated Opportunity Zones (OZ) to low-income census tracts that were eligible but not designated OZ. In each estimate 2017 is the reference year and the interaction with the dummy variable for 2017 is omitted. Confidence intervals are based on standard errors clustered at the census tract level.

Figure 1: Event study plots for small business and home lending



Note. OZ ¼ Opportunity Zone. Data from the American Community Survey 5-year estimates.

Figure 2: Covariate trend plots

These diagnostics reveal that localities picked LICs that were, on average, more distressed than eligible neighborhoods that were not selected. This finding is consistent with early evaluations of OZ selection (Gelfond & Looney, 2018; Theodos et al., 2018) and other recent policy assessments (Alm et al., 2021; Frank et al., 2022). The average number of home purchase loans and the average amount of home purchase loans per housing unit is lower in OZs compared to the control. Likewise, on average, OZ census tracts have lower education levels, higher unemployment, lower median household income and gross rent, and higher poverty than LICs that were eligible but not designated as OZs.[173]

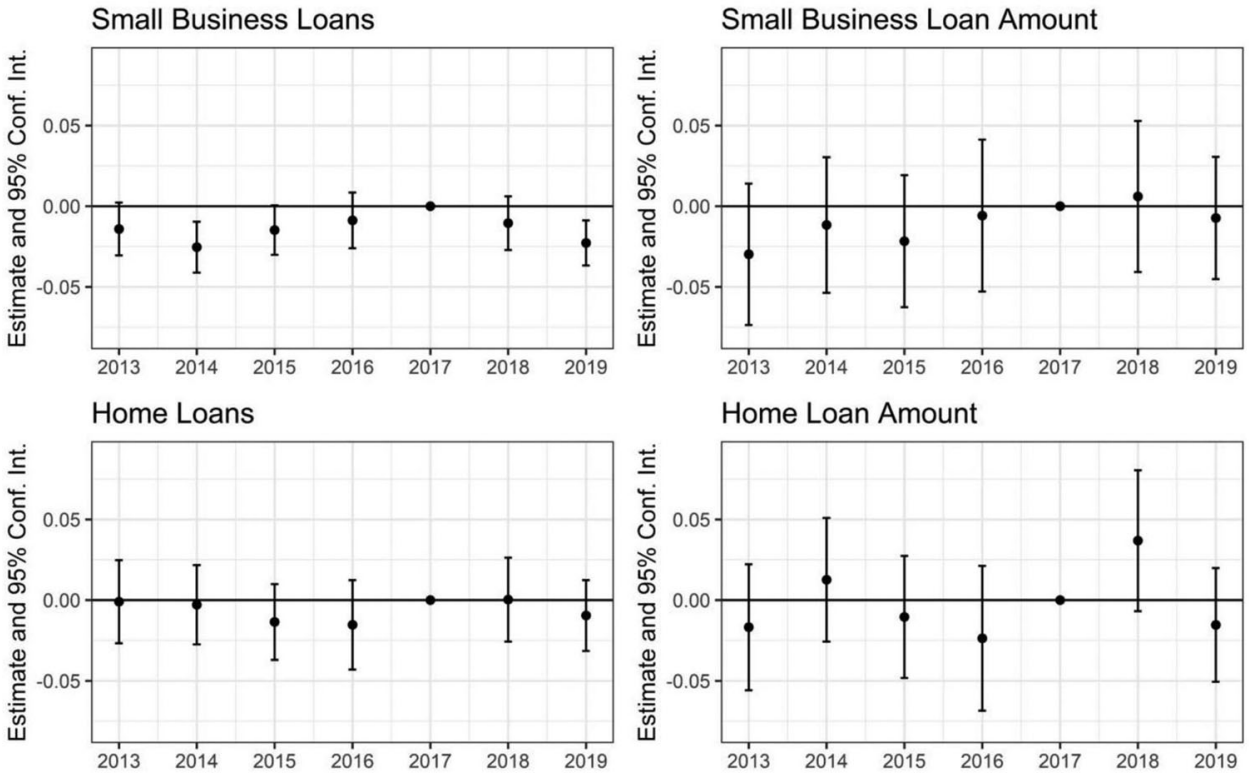
[173] There is one noteworthy exception: the average number of business loans and loan amounts per capita is higher in OZs than in the control group. A likely explanation is that localities favored census tracts where existing business districts and commercial land uses were in place as opposed to selecting neighborhoods with heavier residential land use—as the ostensible goal of the legislation was to encourage business development.

Matched Tract Analysis

Event study plots leave open the possibility that full-sample DID findings are biased by pretreatment trajectories between treatment and control tracts for home loans per housing unit and business loans per capita. It is also possible that bias went undetected in event plots and covariate diagnostics. However, after optimizing the counterfactual by PSM, as well as by matching census tracts based on pretreatment trends in the dependent variable, additional DID modeling supports the baseline findings.

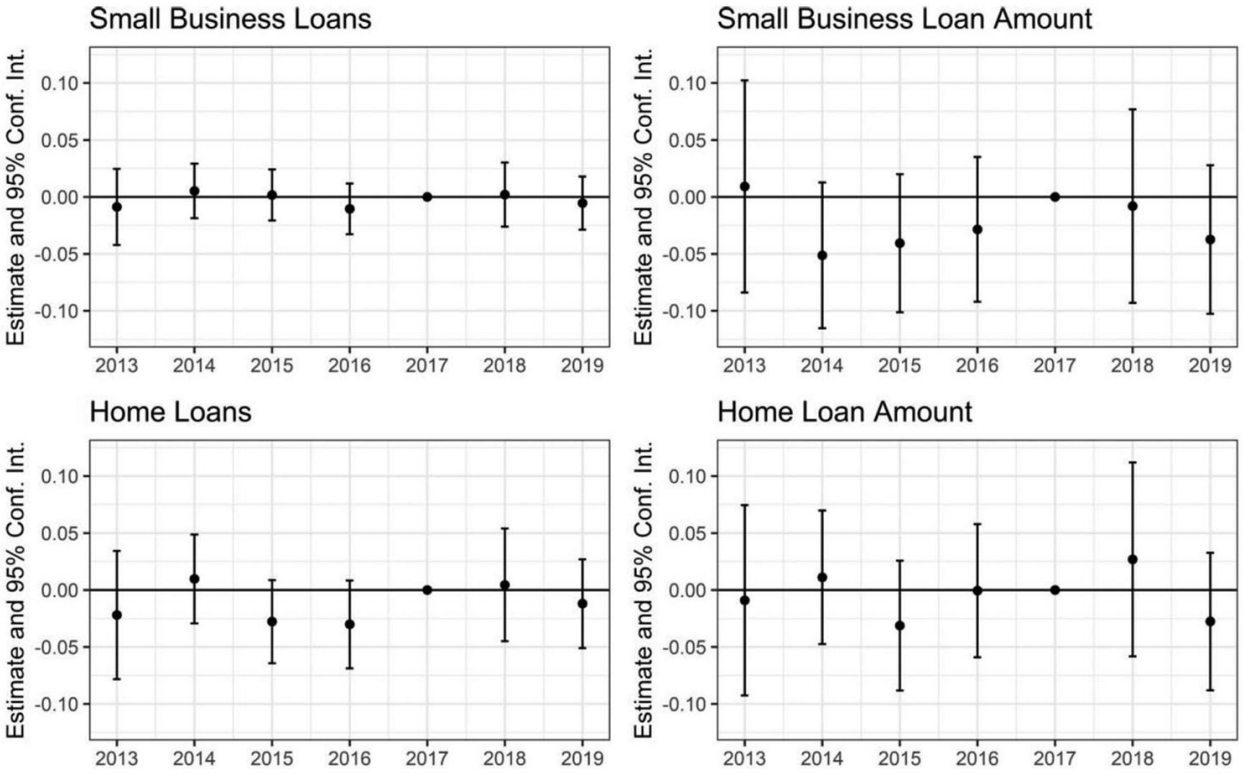
For the PSM, most designated OZ tracts find a reasonable matching pair. The difference in the propensity scores of two census tracts in a matched pair for tracts matched by employment, poverty, income, and census tract population is less than .05, leaving 10,932 census tracts for analysis. When census tracts are matched by pretreatment trends in the dependent variables of analysis with a difference in slope within 0.1, between 3,446 and 3,740 census tracts are left for analysis.

Event study plots of the PSM census tracts indicate an improved counterfactual for home loans per unit—alleviating concern that this variable may be biased by pretreatment trajectories. Event study plots of census tracts matched based on preintervention trends indicate no violation of the parallel trends assumption for all dependent variables of analysis. Event study plots for matched tracts are presented in Figures 3 and 4.



Note. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population and housing unit data are from the American Community Survey. The event study model can be found on page 14 of the article. The plots show estimates and 95% confidence intervals from event studies with tract and year fixed effects that compare outcomes in designated Opportunity Zones (OZ) to low-income census tracts that were eligible but not designated OZ in propensity score matched tracts only. In each estimate 2017 is the reference year and the interaction with the dummy variable for 2017 is omitted. Confidence intervals are based on standard errors clustered at the census tract level.

Figure 3: Event study plots for propensity score matched census tracts



Note. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population and housing unit data are derived from the American Community Survey. The event study model can be found on page 14 of the article. The plots show estimates, and 95% confidence intervals, from event studies with tract and year fixed effects that compare outcomes in designated Opportunity Zones (OZ) to low-income census tracts that were eligible but not designated OZ in census tracts matched by pretreatment trends in the dependent variable only. In each estimate 2017 is the reference year and the interaction with the dummy variable for 2017 is omitted. Confidence intervals are based on standard errors clustered at the census tract level.

Figure 4: Event study plots for census tracts matched by pretreatment dependent variable trends

DID modeling based on both matching methods confirms that OZ has resulted in no statistically significant effects on residential and business lending. These findings are presented in Tables 8 and 9. Based on the PSM DID estimates, we rule out effect sizes of increases by more than .05% on the number of small business loans, 3.92% on small business loan amount, 1.7% on number of home loans, and 4.23% in home loan amounts. We rule out similar effect

sizes when matching census tracts by pretreatment trends in the dependent variable—again supporting the case for negligible OZ effects.[174]

Table 8: Difference-in-differences (DID) estimates for small business and home loans for propensity score matched (PSM) census tracts

Variable	Estimate	*p* value	95% CI	*N*
Small business loans per capita	–0.0040	.4153	(–0.0137, 0.0057)	10,510
Small business loan amount per capita	0.0132	.3207	(–0.0128, 0.0392)	10,510
Home loans per unit	0.0019	.8015	(–0.0131, 0.017)	10,510
Home loan amount per unit	0.0184	.1328	(–0.0056, 0.0423)	10,510

Note. CI confidence interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population, unemployment, poverty, and median household income (used for the PSM) and housing data are derived from the American Community Survey. The PSM description can be found on page 14 of the article. Census tracts are matched in the same state only and their difference in propensity to be designated OZ is restricted to within 0.05. The DID model description can be found on page 12 of the article. Standard errors are clustered at the census tract level.

Table 9: Difference-in-differences (DID) estimates for census tracts matched by pretreatment dependent variable trends

Variable	Estimate	*p* value	95% CI	*N*
Small business loans per capita	0.0008	.9189	(–0.0138, 0.0153)	3,740
Small business loan amount per capita	–0.0005	.9822	(–0.0403, 0.0394)	3,446
Home loans per unit	0.0103	.4005	(–0.0137, 0.0342)	3,560
Home loan amount per unit	0.0056	.7669	(–0.0312, 0.0423)	3,506

Note. CI confidence interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population and housing data are derived from the American Community Survey. The description of matching by pretreatment dependent variable trends can be found on page 15 of the article. Census tracts are matched in the same state only and differences in slopes between treatment control are restricted to within 0.1. The DID model description can be found on page 12 of the article. Standard errors are clustered at the census tract level.

AITS Analysis

The AITS analysis supports the DID findings of noneffect. For small business loan amount, home loan number, and home loan amount, AITS modeling suggests comparable pretreatment

[174] These results are similar to those of Chen et al. (2019) who rule out increases on housing prices above 1.3%, and Freedman et al. (2021) who rule out effect sizes on employment for zone residents above .2% and reductions in the poverty rate larger than 1.6% with 95% confidence. To some contrast, Pierzak (2021) finds statistically significant positive effects on apartment prices by 7.8% and Arefeva et al. (2021) find statistically significant positive effects on employment between 3 and 4.5%.

trends for all outcomes except small business loans per capita, and no evidence of statistically significant effects. The AITS modeling does reveal a statistically significant effect on levels—but not trends—of small business loans per capita, but the effect size is negative and nominal and the modeling further indicates that this finding may be the result of different pretreatment trajectories (i.e., business loan number slopes are not comparable before intervention). AITS modeling of matched samples provides similar results. The full-sample AITS model is provided in Table 10.

Table 10: Adjusted interrupted time series (AITS) estimates: The effects of Opportunity Zones on small business and home loans and loan amounts

Variable	Term	Estimate	*p* value	95% CI	N
Small Business Loans per Capita	Level post OZ	-0.0280	0.0003	(-0.0433, -0.0127)	24128
Small Business Loans per Capita	Trend pre OZ (i.e. parallel trends check)	0.0037	0.0094	(9e-04, 0.0064)	24128
Small Business Loans per Capita	Trend post OZ	0.0043	0.3882	(-0.0055, 0.0141)	24128
Small Business Loan Amount per Capita	Level post OZ	0.0346	0.107	(-0.0074, 0.0765)	24128
Small Business Loan Amount per Capita	Trend pre OZ (i.e. parallel trends check)	0.0036	0.3376	(-0.0037, 0.0108)	24128
Small Business Loan Amount per Capita	Trend post OZ	-0.0246	0.0741	(-0.0517, 0.0024)	24128
Home Loans per Unit	Level post OZ	-0.0164	0.2142	(-0.0422, 0.0095)	24128
Home Loans per Unit	Trend pre OZ (i.e. parallel trends check)	0.0039	0.0879	(-6e-04, 0.0084)	24128
Home Loans per Unit	Trend post OZ	0.0019	0.823	(-0.0144, 0.0181)	24128
Home Loan Amount per Unit	Level post OZ	0.0341	0.1152	(-0.0084, 0.0766)	24128
Home Loan Amount per Unit	Trend pre OZ (i.e. parallel trends check)	0.0033	0.3471	(-0.0036, 0.0101)	24128
Home Loan Amount per Unit	Trend post OZ	-0.0248	0.0706	(-0.0516, 0.0021)	24128

Note. CI confidence interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population and housing data are derived from the American Community Survey. The AITS model description can be found on page 15 of the article. Standard errors are clustered at the census tract level. The *p* value is calculated using White's robust standard error.

Contiguous Non-LIC Analysis

Finally, we consider only contiguous non-LIC communities in an isolated and PSM DID and PSM AITS to search for effects in the most well-to-do communities. Even in these less impoverished and higher income census tracts, where deployment of OZ capital is most expected, we find no evidence of increased lending growth rates. PSM DID estimates for

contiguous non-LIC census tracts are displayed in Table 11. The PSM AITS analysis is consistent with these results.

Table 11: Difference-in-differences (DID) estimates: The effects of Opportunity Zones on small business and home loans and loan amounts in propensity score matched non low-income communities

Variable	Estimate	*p* value	95% CI	*N*
Small business loans per capita	0.0111	0.6350	(-0.0347, 0.0568)	390
Small business loan amount per capita	0.0042	0.9426	(-0.1111, 0.1195)	390
Home loans per unit	-0.0004	0.9909	(-0.0611, 0.0604)	390
Home loan amount per unit	-0.0096	0.8236	(-0.094, 0.0748)	390

Note. CI confidence interval. Small business and home loan data are derived from the Federal Financial Institutions Examinations Council. Population, unemployment, poverty, and median household income and housing data are derived from the American Community Survey. The PSM description can be found on page 14 of the article. Census tracts are matched in the same state only, and their difference in propensity to be designated OZ is restricted to within 0.05. The DID model description can be found on page 12 of the article. Standard errors are clustered at the census tract level.

Discussion

This evaluation finds that OZ designation has no effect on small business and residential lending. Debt is often twinned with equity for small business development, making it a reliable proxy to test for equity outcomes. Home and business lending are also critical indicators and predictors of investment on their own. These findings provide evidence that OZ is failing at its stated purpose of stimulating investment in distressed communities.

Our finding of noneffect on home lending outcomes is in line with recent analyses which indicate that OZ designation has had a nominal effect on housing prices (Chen et al., 2019; Council of Economic Advisers, 2020). Our finding of noneffect on small business lending is also reasonably consistent with evaluations that suggest OZ designation has, at best, had modest impacts on employment (Atkins et al., 2020; Freedman et al., 2021). Both findings support an emerging scholarly literature, based on early evaluations that examine a range of outcomes, that

finds OZ is largely ineffective (Chen et al., 2019; Corinth & Feldman, 2021; Freedman et al., 2021; Kim, 2022; Snidal & Newman, 2022; Theodos et al., 2020).

This study also advances the OZ evaluation literature by demonstrating the policy's failure to stimulate development across neighborhood distress types. This finding is consistent with qualitative reporting to date, which indicates (a) that there was original enthusiasm but ultimately very little OZ capital committed to mission-driven projects; (b) that even in gentrifying and "investment-ready" neighborhoods, OZ tax benefits are not strong enough to change investor behavior; and (c) that OZ capital is being used for projects that were planned or underway before OZ commenced (Kim, 2022; Snidal & Newman, 2022; Theodos et al., 2020).

While we find that OZ designation has no effect on home and business lending, across all census tracts and by neighborhood distress type, this does not mean that OZ capital is not being invested, or that the policy is not benefiting certain investors or projects. To the contrary, popular news reporting (Tankersley, 2021; Wessel, 2021) and qualitative evaluations (Kim, 2022; Snidal & Newman, 2022; Theodos et al., 2020) document numerous examples of OZ-capitalized projects. They provide suggestive evidence that OZ equity is being invested primarily in market-rate development, in appreciating neighborhoods, and in projects offering high rates of return on investment. Moreover, the only direct data source on OZ (2019 tax filings released by the Joint Committee on Taxation) shows that early OZ investment is spatially concentrated in census tracts with relatively higher educational attainment, incomes, and employment rates (Kennedy & Wheeler, 2021). Thus, OZ capital is likely flowing into the least distressed neighborhoods and to projects that would have occurred without it. These investments, therefore, go undetected in this and other early evaluations of OZ.

Limitations and Future Research

Analytical limitations guide our recommendations for future research. First, like all OZ evaluations to date, estimates only tell us only about early designation effects. We capture 1.5–2 years of postintervention lending outcomes, while it is possible that effects will change over time in certain census tracts or that long-term effects may increase across census tracts. Relatedly, as OZ became legislation in late 2017, but OZ designations were not finalized until mid-2018, the models do not provide perfect "cut-off" points and the stability of the coefficients may be somewhat compromised given the short posttreatment evaluation period. However, previous studies of place-based development suggest the former is unlikely (Neumark & Kolko, 2010) and given the onset of the COVID-19 global pandemic in 2020, incorporating future data to enhance model stability is likely to introduce new and equally concerning validity threats. Second, while no evidence of positive lending outcomes is documented, it is possible that OZ impacts are too small to detect, or that OZ funds were used for project improvements like higher quality finishes that do not create spillover effects at our level of analysis. Relatedly, outcomes for original zone residents cannot be determined.[175]

Third, heterogeneity modeling does not test for all neighborhood characteristics but rather focuses on neighborhood distress levels. A few other econometric evaluations suggest the possibility of different designation effects by neighborhood land use and housing type.[176] Qualitative reporting also indicates that OZ investments may be contingent upon various other

[175] Evaluations of place-based policies suggest that original residents are unlikely to be the main beneficiaries (Busso et al., 2013; Freedman, 2015) and OZ has been structured so most benefits accrue to the capital gain holding class—who are unlikely to be the residents of distressed communities (Eastman & Kaeding, 2019).
[176] For example, Sage et al. (2021) find that OZ increased the value of vacant and deteriorating but not other properties; Pierzak finds statistically significant and considerable OZ effects on existing market-rate apartment properties; and Atkins et al. (2020) find OZ may have greater, albeit still nominal, job growth effects on urban over rural census tracts.

conditions that we do not control for, including developer capacity and local government education and engagement around the tax preference (Kim, 2022; Snidal & Newman, 2022; Theodos et al., 2020).[177] Finally, the policy cannot be wholly evaluated; due to a lack of public data provision by the Treasury, this and other early evaluations of OZ cannot document how much the policy has cost to date. There is no available data to test for OZ investment effects. Like other causal empirical literature on OZ to date, we cannot compare outcomes in census tracts that have received OZ investments against those that have not.

Therefore, our recommendations include (a) continued evaluation of OZ to look for changing and long-term effects; (b) tracking studies based on panel data that estimate the costs and benefits to original residents; and (c) if data become available, assessments on how much the policy costs and evaluations of OZ investment impacts. In lieu of public data provision—which we call for below—researchers should consider using public information acts to holistically document and assess OZ investments at state and local levels. Finally, we recommend continued analysis across different neighborhood characteristics and outcomes, as well as evaluations that compare OZ effects with other incentives intended to spur investment in LICs (e.g., NMTCs).[178] These evaluations can help policymakers better understand whether, how, and where OZ and other place-based incentives might best be targeted.

Policy Implications

This evaluation contributes to a growing scholarly consensus that OZ designation has not stimulated new or increased economic development. We add that OZ designation has not spurred

[177] Likewise, we do not account for other subsidies or incentives that OZ census tracts may receive.
[178] As discussed in the literature review, limited research has documented statistically significant outcomes for neighborhoods receiving NMTC program designation (Freedman, 2015; Harger & Ross, 2016) and investment (Theodos et al., 2022).

increased business lending, and that home borrowers and operating businesses do not anticipate that OZ will bring future improvements to these zones. Our findings of noneffect in severely depressed neighborhoods, where home and business lending are minimal to begin with, is particularly noteworthy. Not only were these the neighborhoods that OZ policy promised to benefit the most, but the costs to enter these housing markets are low and only a few new loans or loan amount increases would result in considerable changes to growth rates.

A noneffect at taxpayer expense should be concerning to policymakers considering that the average income of OZ investors receiving tax benefits is over $1 million (Kennedy & Wheeler, 2021). While a cost analysis cannot be performed, the evidence suggests that future tax dollars, which could be used for direct investment in distressed neighborhoods or impoverished residents, are being forfeited primarily for the benefit of capital gains investors.

As of the writing of this evaluation, OZ looks unlikely to be terminated. While facing academic and popular news media criticism, the policy continues to have broad support from local government and the real estate development community, and both the Biden Administration and Congress seem poised to keep it in the tax code.[179] Therefore, OZ investments should be required to demonstrate benefits for distressed communities and/or their residents and pass a certification process that includes a "but for" test.[180]

Moreover, Congress should require transaction-level data on the investors, investments, and locations to better understand how and where OZ capital is being deployed, and they should reduce the number of census tracts eligible for the incentive. It is now well documented that

[179] See Tankersley (2021) and Wessel (2021) regarding current support from Congress and the Biden Administration for OZ.

[180] Qualitative reporting indicates that OZ might lead to increased investment in LICs if the incentive were increased only in the most distressed census tracts (see Snidal & Newman, 2022) and expanded to benefit community actors, like community development financial institutions, that have a history of investing in LICs (see Kim 2022; Snidal & Newman, 2022; Theodos et al. 2020).

many designated census tracts are not distressed communities, including contiguous non-LIC census tracts, college campuses, and even sites where multimillion dollar real estate projects were already planned and underway (Gelfond & Looney, 2018; Snidal & Newman, 2022; Theodos et al., 2020; Wessel, 2021). It is possible that these designations may crowd out future private investment or reduce chances for OZ to reach truly distressed communities. Worse, the inclusion of these census tracts allows neighborhoods that do not need or experience new investment to provide tax benefits for wealthy capital gains investors. This serves to worsen the very geographic inequality that OZ was intended to redress.

Essay 3. Low Value and Hard to Stack: Opportunity Zones and the Low-Income Housing Tax Credit[181]

Introduction

Established by the Tax Cuts and Jobs Act (TCJA) of 2017, Opportunity Zones (OZs) intended to spur investment in undercapitalized communities. Early evaluations find that OZs have had nominal effects on employment and poverty outcomes (Atkins et al., 2020; Arefeva et al., 2021; Freedman et al. 2021); commercial real estate transactions (Corinth & Feldman, 2021; Sage et al., 2021); property prices (Chen et al., 2019; Pierzak, 2021); and home and business lending (Snidal & Li, 2022).

Investment in distressed communities, however, has historically been driven by affordable housing development -- the majority of which is supported by the Low-Income Housing Tax Credit ("LIHTC").[182] Conceptually, OZ can easily be combined with LIHTC via a process called "twinning" or "stacking." OZ proponents therefore argue that the incentive provides a new pool of investors for affordable housing and may increase the value of LIHTC (Layser, 2021). Moreover, the LIHTC industry has historically been adept at leveraging tax preferences not designed specifically for affordable housing production, particularly the New Markets Tax Credit (NMTC), and early qualitative reporting provides some evidence of OZ

[181] This essay was coauthored with Dr. Tyler Haupert and Dr. Guanglai Li. At the time of depositing this dissertation, a version was being considered for publication in a peer-reviewed journal under the same title.
[182] The federal Low-Income Housing Tax Credit (LIHTC) was established under the Tax Reform Act of 1986 and is the primary public subsidy for affordable housing development in the United States. LIHTC provides an incentive for taxable entities to invest equity in rental properties in which units are reserved for households making 60% or less of the area median income. Since its inception, LIHTC has facilitated the development, rehabilitation, and preservation of over three million affordable housing units -- the majority of national construction and preservation of affordable housing development -- and roughly one-third of multifamily housing development. See U.S. Department of Housing and Urban Development. (2022) and Joint Center for Housing Studies (2022).

financed affordable housing projects (Snidal & Newman, 2022; Theodos et al., 2020). This study, therefore, seeks to determine whether OZ has stimulated affordable housing development.

To answer this question, we conduct a background search of popular press announcements and OZ tracking websites to document evidence of OZ supported affordable housing development. We then use a difference-in-differences (DID) approach to compare LIHTC project development in OZs with areas that were eligible to be OZs but not designated. We find limited evidence of OZ supporting affordable housing projects. We also find that OZ has no statistically significant effects on LIHTC outcomes. Finally, we triangulate this analysis with interviews with affordable housing experts to understand why the tax preference is failing to stimulate affordable/LIHTC development. In conclusion, we discuss research limitations, we outline how OZ could better encourage affordable housing development, and we consider whether that would be desirable for goals of efficiency and distressed community development.

Background

Opportunity Zones offer tax relief for capital gains investments in over 8,700 "distressed" census tracts. Specifically, when capital gains are moved into federally approved investment vehicles known as Qualified Opportunity Funds (QOFs) that invest in OZ census tracts, the taxes owed on these gains are deferred for up to ten years, reduced by 10 percent in year five, and by a net of 15 percent in year seven. If investments are held in QOFs for ten years or longer, then future capital gains made from the original investments become tax free.

OZ census tracts were first proposed by state governors and then designated by the US Treasury. To qualify, census tracts had to meet the low-income community (LIC) criteria defined by the federal NMTC program: census tracts with a median family income not exceeding 80 percent of the area median income (AMI) or census tracts with a poverty rate at or above 20

percent. Census tracts that were contiguous to LICs were also eligible for OZ designation if their AMI did not exceed 125 percent of the adjacent qualifying low-income community tract.

The goal of OZ policy is to "spur economic growth and job creation in low-income communities while providing tax benefits to investors" (Internal Revenue Service, 2020). The Economic Innovation Group (EIG), the policy organization that introduced and advocated for OZ legislation, argued that the policy's flexibility would encourage private investment across a range of development activities where previous place-based development policy had failed (The Promise of Opportunity Zones, 2018). There is no fixed amount of capital that can be channeled into QOFs or yearly investment limits for OZs. Moreover, QOFs are permitted to invest in a wide range of activities including small business development, housing, and industrial development.

In theory, QOFs can make large and unlimited investments in affordable housing production. Utilizing OZ and LIHTC as part of the same affordable housing development is also conceptually straightforward. An investor can place capital gains into a fund that qualifies as a QOF and meets the requirements necessary to be both the LIHTC limited partner and a qualified OZ business that owns a LIHTC building (Wallace & Novogradac, 2019). As a limited partner, the QOF then purchases the tax credits allocated to the project's developer and simultaneously captures the OZ and LIHTC tax benefits (Layser, 2021; Williams, 2022). As long as stacking the tax credits makes the investment as or more profitable as investing in market rate development, OZ investors should be expected to invest in affordable housing.

Indeed, with the passage of OZ, there was advocacy for the policy to support affordable housing, including for OZ to be an important new tool to leverage LIHTC development. In congressional testimony, the CEO of the Local Initiatives Support Corporation, one of the largest

national community development organizations in the country, stated ".... like the Low-Income Housing Tax Credit and New Markets Tax Credit, we believe the Opportunity Zones initiative has tremendous potential to attract new investment capital into low-income urban and rural communities." They highlighted their intention to use OZ to "increase the stock of quality affordable and workforce housing." Likewise, the head of Enterprise Community Partners testified that they were exploring QOFs that "foster inclusive economic growth by promoting the availability of affordable homes." They encouraged the Department of Treasury and the Internal Revenue Service to release additional guidance on certifying and structuring QOFs to support low-income housing (The Promise of Opportunity Zones, 2018). This advocacy follows a long history of the industry lobbying Congress for additional funding streams to support affordable housing development (Orlebeke, 2000).

Historically, LIHTC developments have successfully leveraged other tax incentives, including some, such as Historic Tax Credits, that are explicitly permitted to be used in concert with LIHTC (U.S. Department of Housing and Urban Development, 2022), and others, such as New Markets Tax Credits (NMTC) that cannot be directly paired with LIHTC but can still be combined via the formation of a complex condominium structure (Novogradac, 2016).

While lobbying efforts to modify OZ for the benefit of affordable housing production were largely unsuccessful, early messaging from community development professionals still took a positive stance on the prospect of combining LIHTC and OZ incentives (Local Initiatives Support Corporation, 2019). LIHTC tax consultants released their own detailed guidance related to the potential structure of OZ-LIHTC investments (Sciaretti et al., 2018).

Moreover, popular press reporting and qualitative evaluations of OZ to date (Snidal & Newman, 2022, Theodos et al., 2020) offer some evidence of QOFs being established for the

specific purpose of supporting affordable housing as well as a few examples of low-income housing projects receiving OZ investments. For example, the private equity firm Virtua Partners reportedly raised over $100 million in Opportunity Funds to invest in both commercial real estate and affordable housing projects in OZs (Combating Inequality: The Tax Code and Racial, Ethnic, and Gender Disparities, 2021). For a second example, The National Equity Fund, one of the nation's largest syndicators of LIHTC, partnered with Silicon Valley Bank to establish a $110 million "Affordable Housing Opportunity Zones Fund" (National Equity Fund, 2021). According to Novogradac, a community development and tax policy professional services organization, by the end of 2021, "QOFs with some focus on income-restricted housing had raised $4.79 billion, while those with at least some focus on workforce housing had raised $1.11 billion" (Novogradac, 2022).

Finally, online publications from syndication professionals indicate that LIHTC developments located in OZs receive slightly higher offers for tax credits from investors relative to non-OZ developments. They also suggest that previously stalled projects may move forward by leveraging OZ private equity investments (Anderson, 2020). Developers with properties in QOZs explicitly market these increased returns to potential investors (Head, 2019). Therefore, OZs may result in increased project budgets due to higher bids from investors and, in turn, lead to increased LIHTC unit development.

Still, given the policy's flexible investment criteria, investors have a range of investment options when investing OZ capital. Investment returns provided by OZ - LIHTC deals may not be competitive with other investment opportunities. Stacking the tax preferences may not outweigh the administrative cost or burden of layering OZ capital into a LIHTC project. Regulatory hurdles to incorporating both tax incentives and the lack of official guidance from the

Treasury on pairing OZ with LIHTC may deter risk averse investors (Layser, 2021; Williams, 2022). Finally, there is no rule that prevents investors, including LIHTC investors, from investing OZ capital into projects that would have gone forward without OZ. In summary, it is possible that many QOFs with intentions to invest in affordable housing have not materialized, that reporting by organizations like Novogradac, which report how much capital has been "raised" but not how much has been invested are inaccurate or misleading. It is also possible that where OZ investments have been made in LIHTC, this represents substitute capital rather than new or expanded investment. These possibilities motivate our analysis. Evaluating OZs' impact on affordable housing can help inform whether and how OZ has advanced distressed community development.

Literature Review

Early evaluations of OZ include econometric modeling for effects on employment and poverty (Atkins et al., 2020; Arefeva et al., 2021; Freedman et al., 2021); commercial real estate transactions (Corinth & Feldman, 2021; Sage et al., 2021); property prices (Chen et al., 2019; Pierzak, 2021); and home and small business lending (Snidal & Li, 2022).

These studies rely on, and provide precedent for, the Difference-in-Differences (DID) technique used below. They find that OZ has had limited effects on employment and wages (Atkins et al., 2020; Freedman et al., 2021); poverty (Freedman et al., 2021); property prices (Chen et al., 2019) commercial investment (Corinth & Feldman, 2021); and home and business lending (Snidal & Li, 2022). Some positive but modest impacts have been documented for salaries (Atkins et al., 2020); property values of vacant and older lots (Sage et al., 2021); job growth in metropolitan areas (Arefeva et al., 2021) and apartment prices (Pierzak, 2021).

Early evaluations of OZ also include a qualitative assessment of mission driven development across the country (Theodos et al., 2020) and case studies that consider a range of outcomes in Baltimore (Snidal & Newman, 2022) and Chicago (Kim, 2021). These evaluations, which rely mainly on interviews with community development experts and professionals, find that OZ has primarily been used as a real estate - not business - development tool.

Qualitative assessments document evidence of affordable housing projects considering or incorporating OZ finance. At the same time, they indicate that OZ policy has simulated more investment conversation than investment capital, and that where OZ capital has been deployed, it is likely acting as substitute capital, in more well to do neighborhoods, and for projects that were already underway (Kim, 2021; Snidal & Newman, 2022; Theodos et al., 2020). This is the first study to evaluate OZ's effects on affordable housing development specifically. It is also one of the first analyses to combine quantitative and qualitative evaluation approaches--to understand both the case and the cause for OZ's effect (or lack thereof).

Data and Methodology

We first conduct a desktop search to estimate how many affordable housing projects have received OZ finance. We then use a Difference in Differences (DID) technique to test whether OZ spurs increased LIHTC development. Finally, we supplement this analysis with 16 interviews that ask affordable housing experts how and why (or why not) OZ is affecting affordable housing development.

Desktop Review: OZ-affordable housing activity

OZ lacks transaction-level reporting requirements. There is no way to confirm the exact amount of OZ capital that has been invested into affordable housing projects, or the number of affordable housing projects that have been supported by OZ finance. However, affordable

housing is frequently celebrated by the development community. It also often receives public subsidy at local levels, meaning government administrations and agencies involved in development "groundbreakings" or "ribbon cuttings" are likely to report it. That is, unlike OZ activity that might be depicted as a community disamenity (e.g., warehouses or storage facility) or that may work against the ostensible purpose of the legislation (e.g., luxury hotel or market rate condominiums for gentrifying communities), we suspect that OZ supported affordable housing development is voluntarily reported, and even celebrated, by the press and local government. It is unlikely that these projects go unreported by development and business blogs and journals on the internet.

Additionally, there has been a consolidated effort to track mission driven development outcomes, like affordable housing, by organizations that championed and lobbied for OZ legislation. Most extensively, EIG established an "Opportunity Zones Activity Map;" an interactive web portal specifically for the purpose of documenting projects with social impact, including affordable housing, across the country (Economic Innovation Group, 2019). Some states also track OZ developments via online web portals or OZ project profiles. For example, Maryland has established an "Opportunity Zone Information Exchange" which includes detailed information on OZ projects, businesses and funds. Similarly, Ohio has created an online "marketing platform" for opportunity zones that shares details on places and projects receiving or looking for investment.[183]

Therefore, to establish a baseline estimate of the number of affordable housing projects receiving OZ capital, and to get a general sense of whether OZ equity is flowing into affordable housing development, we conduct a state by state "desktop" search for projects receiving OZ

[183] See Maryland Department of Housing and Community Development (2018) and State of Ohio (2019).

finance. Specifically, we use Google's search engine to search for "opportunity zone," "OZ project," "affordable housing opportunity zone," and "opportunity zone groundbreaking" by State (e.g. "OZ groundbreaking Ohio"). This includes searching by cities (e.g. "Opportunity Zone Chicago") with a population over 300,000. We then create a spreadsheet documenting every OZ capitalized affordable housing development that had a press release or news announcement found in these searches. For each project, we detail available project information including total number of affordable units, depth of affordability, total project cost, and amount of OZ equity.[184] Finally, we cross check these projects and figures with EIG's record of social impact projects as well as state tracking websites. Following the definition provided by the U.S. Department of Housing and Urban Development we count "affordable" or "low-income" housing as units with applicant income eligibility not exceeding 80 percent of the AMI (U.S. Department of Housing and Urban Development, 2022). We consider units with applicant income eligibility above 80% but not exceeding 120% AMI to be "workforce" not affordable housing.

Quantitative Analysis

We replicate the DID models and event study designs used in Chen et al. (2019) Freedman et al. (2021) and Snidal and Li (2022) to test whether OZ stimulates new or increased LIHTC development. We model four different dependent variables to ensure robustness: the number of LIHTC projects, units, low-income units, and amount of LIHTC dollars allocated for each year between 2012 and 2020. These variables are provided by project and at the address level via HUD's LIHTC Database.

[184] This analysis was conducted by, and this spreadsheet is available upon request to, the first author.

We obtain OZ data from the Urban Institute (UI) which was originally collected by the U.S. Department of Treasury's Community Development Financial Institutions (CDFI) Fund. This includes the 31,866 census tracts that were eligible for OZ designation, the 8,762 census tracts that were later approved OZ by the Treasury, and whether the census tract was eligible for OZ selection as an LIC or as a contiguous census tract. We also collect study area characteristics of median household income, percent African-American, unemployment, poverty, percent of population 25 years and older with a college education, and median gross rent from the American Community Survey's 5-year estimates.

We consider the counterfactual at multiple levels of analysis including control and treatment groups at the census tract, county, state, and metropolitan region. Specifically, we sum project, unit and dollar level data between OZ designated and OZ eligible but not designated census tracts. We then aggregate the control and treatment census tracts to the county, state and core-based statistical area (CBSA) level, respectively.[185]

We cannot demonstrate parallel pre-existing trends in treatment and control groups necessary for a reliable DID counterfactual at the census tract, county, or state level. However, aggregating OZ eligible census tracts to the CBSA level, and then comparing OZ designated CBSAs with OZ eligible but not designated CBSAs, provides us with treatment and control groups that supports a pre-treatment parallel trends assumption. Thus, we select CBSAs, that were aggregated by OZ eligibility at the census tract level, as our unit of analysis. Due to

[185] Defined by the US Office of Management and Budget, CBSAs consist of one or more counties anchored by an urban center of at least 10,000 people plus adjacent counties that are socioeconomically integrated with the urban center by commuting ties.

incomplete LIHTC data, we remove 2019 and 2020 from the analysis, leaving one year of post treatment data.[186]

Descriptive statistics of the control and treatment are provided in Table 12 and year over year scatterplots for LIHTC average number of projects, average number of units and low-income units, and average dollar amount in LIHTC allocation are provided in Figure 5 for 2012-2018.

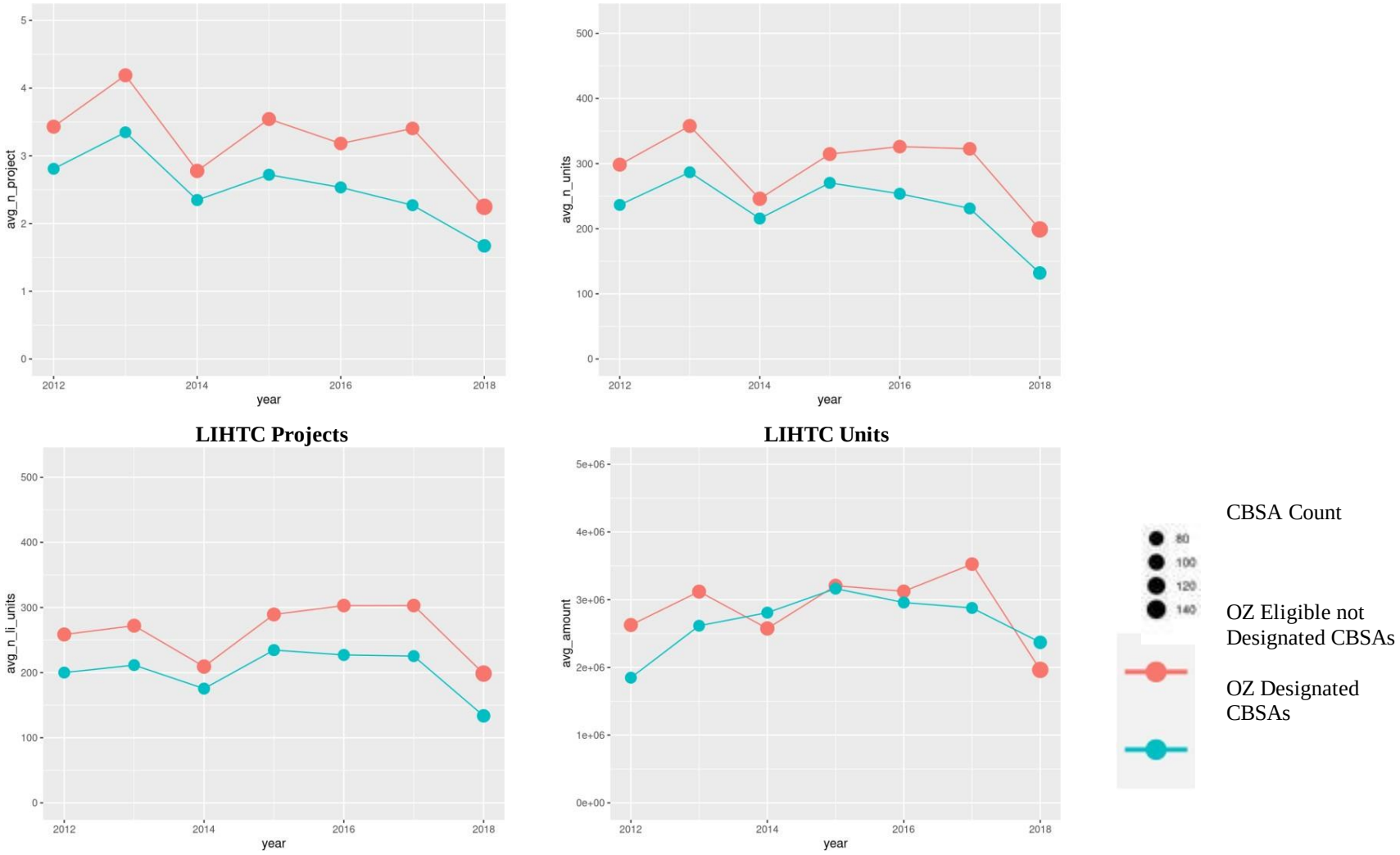
[186] For a check on the sample and robustness we take two additional steps. First, we rerun models with the data disaggregated by census region to ensure our nationwide sample does not mask heterogeneity and produce a Type II error. Census region is a common variable of interest for researchers using econometric methods to investigate regional variation in housing-related processes like mortgage lending (Faber, 2013; Haupert, 2019) and LIHTC production (Freedman & McGavock, 2015). This check supports the findings. Second, as partial 2019 LIHTC data was available at the time of submission, we also test our models with an extended sample through 2019 increasing the post intervention period. We test the dummy for both 2018 and 2019 and just 2019. While results incorporating 2019 data are preliminary, they also support the findings.

Table 12: Descriptive Statistics of Sample: OZ Eligible but not Designated and OZ Designated CBSAs

Control CBSAs (OZ Eligible but not Designated Census Tracts Aggregated to CBSAs)							
Year	2012	2013	2014	2015	2016	2017	2018
Population	388809 (766903)	391783 (772631)	395195 (779817)	398439 (786560)	400789 (790646)	403997 (798317)	405775 (797423)
Black Ratio	0.135 (0.146)	0.136 (0.146)	0.136 (0.146)	0.136 (0.146)	0.137 (0.147)	0.138 (0.147)	0.138 (0.147)
BA or Higher Ratio	0.203 (0.071)	0.205 (0.071)	0.207 (0.071)	0.211 (0.072)	0.215 (0.073)	0.22 (0.074)	0.226 (0.075)
Unemployment Rate	0.106 (0.029)	0.112 (0.03)	0.106 (0.029)	0.097 (0.028)	0.087 (0.027)	0.078 (0.024)	0.07 (0.022)
Median Household Income	42310 (6969)	42139 (6932)	42590 (7016)	42865 (7298)	43973 (7443)	45557 (7876)	47387 (8523)
Median Gross Rent	772 (168)	787 (167)	797 (170)	805 (172)	821 (179)	848 (190)	877 (207)
Poverty Rate	0.185 (0.044)	0.191 (0.045)	0.195 (0.043)	0.195 (0.045)	0.192 (0.045)	0.185 (0.046)	0.179 (0.046)
Number of Projects	3.06 (5.11)	3.24 (6.03)	2.69 (3.14)	3.33 (3.79)	2.97 (3.54)	3.05 (3.77)	2.09 (2.24)
Amount allocated	2726274 (6797377)	3474655 (9819409)	2686378 (6266996)	3427314 (8012198)	3469384 (6628358)	3578501 (6008281)	2337943 (3836670)
Number of Units	269 (618)	279 (697)	228 (368)	269 (357)	284 (514)	255 (413)	179 (338)
Number of Low-Income Units	242 (520)	254 (618)	205 (331)	241 (321)	261 (483)	235 (393)	176 (336)
N	108	101	113	102	96	100	126

Treatment CBSAs (OZ Designated Census Tracts Aggregated to CBSAs)							
Year	2012	2013	2014	2015	2016	2017	2018
Population	87029 (191353)	87779 (193302)	88609 (195901)	89286 (197696)	89861 (199096)	90326 (200812)	90556 (199924)
Black Ratio	0.203 (0.206)	0.203 (0.205)	0.204 (0.204)	0.205 (0.205)	0.204 (0.203)	0.203 (0.202)	0.203 (0.201)
BA or Higher Ratio	0.165 (0.075)	0.167 (0.075)	0.169 (0.075)	0.172 (0.076)	0.175 (0.076)	0.181 (0.078)	0.185 (0.078)
Unemployment Rate	0.136 (0.047)	0.144 (0.048)	0.137 (0.048)	0.127 (0.045)	0.114 (0.043)	0.1 (0.037)	0.089 (0.033)
Median Household Income	32863 (7013)	32798 (7106)	32900 (7362)	33061 (7074)	34282 (7570)	35759 (8011)	37585 (8353)
Median Gross Rent	712 (147)	726 (150)	738 (150)	744 (152)	757 (155)	783 (161)	811 (181)
Poverty Rate	0.259 (0.066)	0.269 (0.066)	0.276 (0.067)	0.277 (0.066)	0.269 (0.069)	0.258 (0.067)	0.246 (0.066)
Number of Projects	2.35 (3.22)	2.8 (3.38)	2.32 (2.61)	2.61 (3.25)	2.54 (3.13)	2.29 (2.64)	1.65 (1.38)
Amount allocated	1997974 (3602770)	3221670 (4822179)	3030491 (8451330)	3235992 (7085334)	3129360 (6243967)	3152794 (5505506)	2672834 (4363799)
Number of Units	206 (438)	257 (437)	216 (454)	248 (486)	247 (577)	226 (367)	129 (161)
Number of Low-Income Units	187 (379)	224 (321)	185 (333)	212 (427)	220 (468)	219 (345)	128 (157)
N	74	59	71	75	74	70	86

Notes: Population through poverty rate data are derived from the American Community Survey. LIHTC data comes from HUD's LIHTC Database. Project, unit, and dollar address/project level data are summed by OZ eligible but not designated census tracts, and OZ designated census tracts, which are then aggregated to core-based statistical areas (CBSAs). A log scale, as described in the essay, is used to address notably large standard deviations that are the result of variable CBSA sizes



Notes: LIHTC data comes from HUD's LIHTC Database. Project, unit, and dollar address/project level data are summed by OZ eligible but not OZ designated census tracts, and OZ designated census tracts, which are then aggregated to core-based statistical areas (CBSAs).

Figure 5: Scatterplots of LIHTC Outcomes

Difference-in-differences (DID) modeling is then used to identify the impact of OZ designation on LIHTC development. The DID model incorporates fixed effects by CBSA and by year and is represented by the following equation:

$$log(y_{i,t}) = \beta \cdot OZ_i \times Post_t + \gamma_i + \eta_t + \varepsilon_{i,t}$$

Where $y_{i,t}$ is the outcome of interest for tract i in year t, OZ_i is a dummy variable that takes a value of 1 if tract i is an Opportunity Zone, and 0 if it is eligible but not designated, $Post_t$ is a dummy that equals 1 for 2018 and years after and 0 for years before 2018, γ_i is the CBSA fixed effect, η_t is the year fixed effect, and $\varepsilon_{i,t}$ is the residual. This DID model is extended to an event study framework to plot year over year pattern impacts of the policy. This allows us to confirm or reject the validity of the parallel trends assumption for the LIHTC outcomes of interest. All statistical analysis is performed using the R Project for Statistical Computing (R Core Team, 2013).

Qualitative Analysis

To supplement this quantitative evaluation, we synthesize feedback from interviews with 16 professionals with practical knowledge and experience working with LIHTC and OZ. Interviewees include three executives/directors at national nonprofits, and one at a regional nonprofit focused on affordable housing and other mission driven development; two for profit developers working on OZ financed affordable housing projects; two LIHTC syndicators; three directors at Community Development Financial Institutions; three managers at commercial banks that finance LIHTC projects; one urban ("think tank") policy expert with a focus in place based development incentives, and one for profit consultant in community development tax credits. These interviews were conducted between October 2019 and December 2020 in person and

online as part of a larger qualitative research project documenting OZ effects. Interviews were semi-structured, open-ended, and conducted by the first author in “one-on-one" meeting settings at coffee shops and via online video. They were not recorded but extensive notes were taken during each interview to capture direct quotes.

Results

Desktop Review: OZ-affordable housing activity

Through July of 2022, the desktop review provides evidence of no more than 60 projects across 25 states (and no territories) that may have incorporated low-income housing units (< 80% AMI) and received OZ finance. Across these 60 projects, OZ equity has supported less than 3000 low-income units. This number is likely an overestimate and includes some instances of workforce housing (80%-120% AMI) being misreported as low-income housing. For comparison, LIHTC subsidizes the costs of building more than 107,000 low-income units across more than 1400 projects on a yearly basis (Scally et al., 2018).

The total cost for these 60 projects, including their non affordable development components, is approximately $3.2 billion. It was only possible to verify or estimate the amount of OZ equity committed to each project in 13 of the 60 projects. In the other 47 projects, only the use of OZ capital -- not a precise OZ capital amount -- was reported as being planned or secured for the project. Still, these 13 projects provide suggestive evidence that when OZ equity is involved in affordable housing development, it plays the role of gap financing, and not a primary capital source. Specifically, across these 13 projects, OZ provided approximately $136 million in equity for approximately $843 million in development, or roughly 14% of development costs. After removing an outlier, a $56 million OZ equity investment in a senior housing project in Tukwila, Washington, that number falls to 8.7%. In brief, the vast majority of this $3.2 billion in

affordable housing related development is most likely being supported by non-OZ related equity and debt. While Novogradac (2022) documented that QOFs with some focus on income-restricted housing had "raised" $4.79 billion by the end of 2021, our desktop analysis suggests that this number is deeply misleading. Based on this desktop search and analysis, we suspect very little of this money has actually been allocated to affordable housing development.

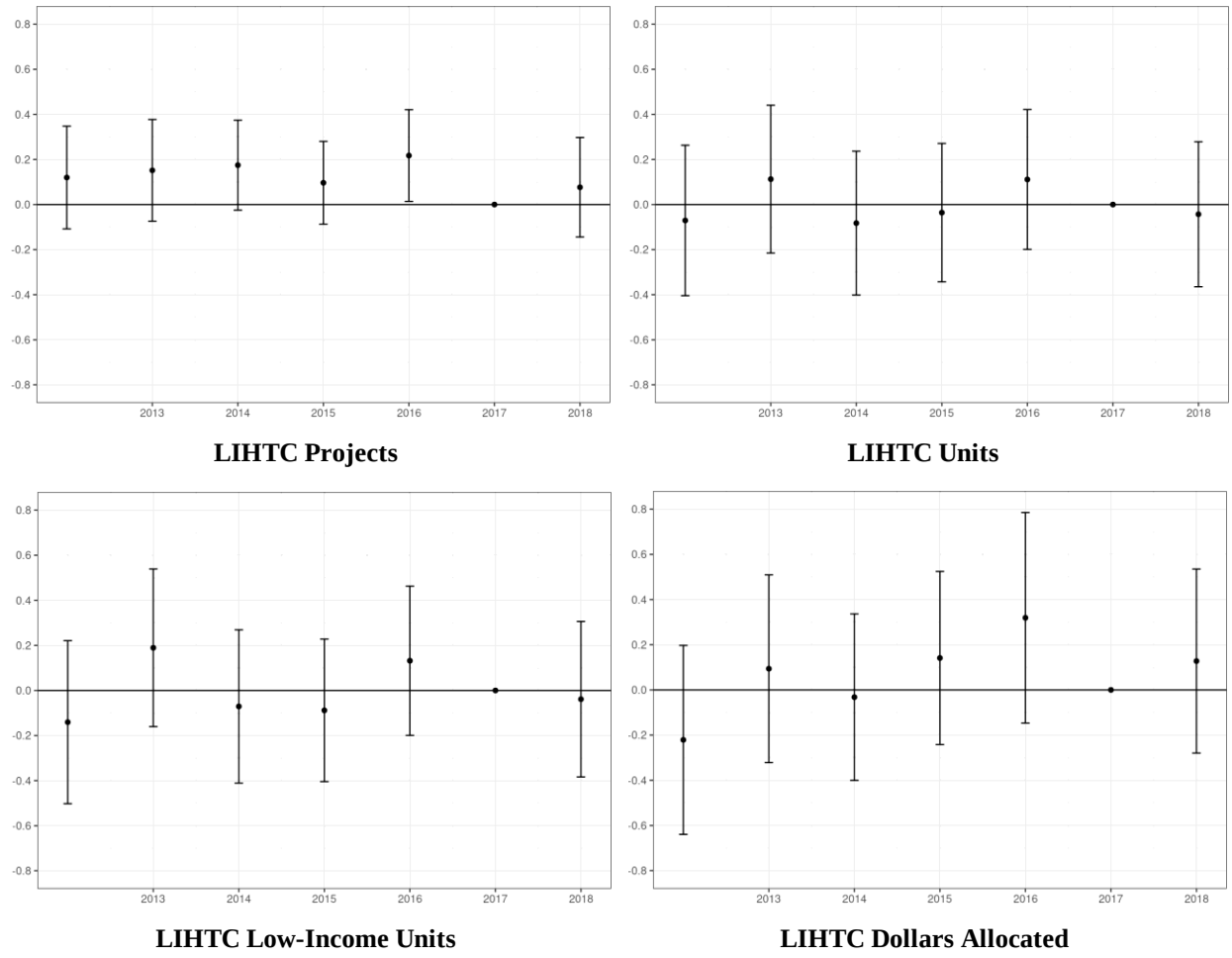
It is possible that some OZ supported affordable housing development is not documented online. However, EIG tracked only 6 projects that our search criteria failed to identify. Moreover, we did not document a single OZ supported affordable housing project that EIG had not listed in its activity portal. Therefore, we believe our desktop search represents a reasonably complete list of affordable housing projects that may have received OZ finance.

Quantitative Modeling

Event study plots with fixed year effects for the average number of LIHTC projects, units, low-income units, and amount allocated in LIHTC dollars generally support the case for parallel pre-treatment trends between OZ designated CBSAs and OZ eligible but not designated CBSAs. For each outcome variable there is some evidence of a general upward trend and higher amounts over the study period, with post 2017 reflecting a possible continuation of that trend for LIHTC dollars but indicating no change, or even a downward shift, in the case of LIHTC projects, units, and low-income units. These trends are presented as point estimates with 95% confidence intervals in Figure 6. In each case, 2017 is the reference year and the interaction with the dummy variable for 2017 is omitted.

While the number of projects and dollars invested in OZs increases slightly in OZs in 2018 relative to comparable non-OZs, these increases are not statistically significant. Likewise,

the total number of units and low-income units in OZs decreases slightly in 2018 relative to comparable non-OZs but not at a statistically significant level.



Notes: LIHTC data comes from HUD's LIHTC Database. The plots show estimates and 95% confidence intervals from event studies that compare outcomes in designated Opportunity Zone (OZ) census tracts that were aggregated to Core Based Statistical Areas (CBSAs) with census tracts that were OZ eligible but not designated also aggregated to CBSAs. In each estimate 2017 is the reference year and the interaction with the dummy variable for 2017 is omitted. Standard errors are clustered at the CBSA level.

Figure 6: Event Study Plots for LIHTC Outcomes

Table 13 presents DID estimates for the effects of OZ assignment on the average levels of LIHTC projects, units, and amount allocated in LIHTC dollars. Again, for all variables, estimates indicate no statistically significant ($p < .05$) impacts of OZ on LIHTC outcomes. Moreover, estimated coefficients are muted for all variables and negative in the case of projects, units, and low-income units. In the case of LIHTC projects and units, we can rule out

considerable effect sizes; beyond 9.6% and 13.5% respectively. These results are in line with OZs' minimal impact on other economic indicators, as outlined in the literature review, as well as our limited findings of OZ supported affordable housing units as documented in the desktop analysis.

Table 13: Difference-in-Differences (DID) Estimates: The Effects of OZ on LIHTC Outcomes

LIHTC Outcome	Estimate	Confidence Interval	*p* value	CBSAs
Projects	-0.0514	(-0.1984, 0.0955)	0.4929	329
Units	-0.0458	(-0.257, 0.1354)	0.6708	329
Low-Income Units	-0.0396	(-0.2616, 0.1825)	0.7270	328
Dollars Allocated	0.0794	(-0.2066, 0.3254)	0.5864	315

Qualitative Interviews

Interviews with 16 professionals experienced and knowledgeable in affordable housing development and finance support and contextualize our findings of OZ having no impact on affordable housing outcomes. Interviewees confirmed that the affordable housing industry was originally optimistic that OZ might be a transformative tool but that this optimism did not materialize into new LIHTC or other affordable development. They provided some examples of OZ equity being used in LIHTC projects across the country. However, they also reported that these investments represented minor and substitute capital for projects that would have taken place without OZ. Interviewees put forth two dominate explanations as to why OZ has not stimulated new or expanded LIHTC development: OZ is a low value incentive for both OZ investors and LIHTC developers and the Treasury's final regulations guiding OZ make it challenging and risky to stack the two tax incentives. Below we detail these general findings and specific challenges.

First, interviewees confirmed our background analysis of popular press accounts and congressional testimony: the LIHTC industry was enthusiastic about the OZ tax preference with

the passage of the TCJA in 2017. Tax syndicators and community development professionals believed OZ had the potential to attract a new set of investors to partner in LIHTC projects, provide increased capital to affordable housing deals, and increase the value of LIHTC. Specifically, they believed high net worth individuals with capital gains, previously uninterested or unaware of affordable housing, might consider OZ-LIHTC investments. These investors would leverage OZ to invest in LIHTC for personal profit and would complement traditional financial institutions that invest in LIHTC to meet Community Reinvestment Act obligations.[187] The industry also believed that OZ might increase the amount that existing investors would pay for LIHTC and, in turn, increase the value and scope of individual projects.

One tax syndicator at a Chicago based affordable housing equity fund recalled, "we had this thought…when the legislation first came out, that if you could pair OZ [with LIHTC] then gosh there could be a huge benefit to the financial institutions and a bump in pricing to the LIHTC deals. We could do more with more. That's what we are good at." The other syndicator similarly noted, "...when this thing was rolling out, leadership from the nation's largest affordable housing developers were calling and saying 'we have deals that are going to be in 'OZones, we need to capitalize on this…. We can [target] these investors.'" A community development expert stated, "The LIHTC industry is always looking for [investment opportunities], so even cynical [affordable housing] developers were showing up at OZ conferences preparing for this [new source of] dollars." The CEO of an affordable housing nonprofit said, "Sure, there was uncertainty with the enactment of OZ, we had concerns about program abuse… displacement from luxury [development], but overall we believed it could have

[187] Traditional depository banks invest in LIHTC not only to reduce their future tax liability but also to meet Community Reinvestment Act requirements. They thus tend to be less sensitive to pricing than purely economic investors. See Amstadt (2017) for additional discussion.

tremendous impacts much like [the] New Markets [Tax Credit] to fuel [affordable housing] development in low-income communities. We brought a lot of energy to support OZ." This interviewee then noted, "We [intended] to raise billions of dollars from corporations and high net worth individuals from the foundation [community]."

Interviewees described their enthusiasm as tempered when recommendations from the affordable housing industry were not adopted by the Treasury Department in their final OZ rules and regulations. A community development expert at an urban policy think tank summarized, "...major partners in the [affordable housing] industry fought hard for final [regulations] on the technical provision of debt treatment, the methods for asset [evaluation], [and] for specific guidance on pairing OZ with LIHTC and [the NMTC]. The Treasury did not implement these recommendations." This interviewee then added, "so instead of a transformative tool for investing in affordable housing...they [saw it as] a trivial one. But… they still tried very hard to make it work." A senior manager at Enterprise Community Partners similarly stated "OZ may add some marginal value for complicated 4% LIHTC deals, but the Treasury ignored our [requests]. So, the affordable housing industry isn't seeing this as a game changer, just another bridge source [of capital]."

Interviewees mentioned multiple affordable housing projects that had received OZ capital across the country. Some of these projects they were working on and had precise financial figures for. Others they had heard about at conferences, on online webinars, or through their colleagues. Interviewees were directly involved in OZ funded affordable or workforce housing projects in Georgia, California, Colorado, Florida, Maryland, Illinois, and New York and they noted knowledge of other projects in other states across the country.

Interviewees, however, described the amount of OZ capital that had been invested into income restricted housing as "meager," "relatively little," and "insubstantial." Three interviewees specifically mentioned an estimate from Novogradac, that somewhere between $10-$15 billion in OZ equity had been raised for residential housing investment since OZ's inception through 2020. All three, however, believed very little of this was supporting affordable housing.

Interviewees reported that the majority of LIHTC projects were not leveraging OZ as a capital source, either from a new class of investors or from traditional financial institutions. "There are some examples of traditional banks making major investments in LIHTC because they [happened to have] capital gains, but these projects are exceptions…we just aren't seeing a lot of this or new [investors]," the community development specialist reported. The tax syndicator at the affordable housing equity fund said, "It has been beyond hard to attract non-bank investors to support affordable development with OZ. We are interested but have found they are not." One LIHTC developer summarized OZ's effect as "a lot of early excitement that hasn't resulted in [investment in] affordable housing."

Interviewees also explained that where OZ had been invested in affordable housing projects, it was serving as substitute capital for projects that were already underway or that would have already taken place without OZ as opposed to new or expanded development. A developer working on an OZ affordable housing development in Maryland said, "OZ worked…as a gap equity source for us…but it was a small piece of the pie. No, we didn't need it. I don't think you'll find any [affordable housing] project that needs OZ." This developer also noted he wouldn't make the same statement about the NMTC or Historic Tax Credits -- which they believed were "critical" to the completion of many LIHTC deals. A CDFI executive similarly noted, "[LIHTC] projects using OZ are some of the most complicated development

projects out there. They include not just OZ and traditional debt and equity but also [NMTC], tax increment financing, ...and historic tax credits. I don't think of them as OZ projects. They are affordable [housing] projects with a touch of OZ." Another interviewee noted, "affordable housing is driven by [LIHTC]. Twinning them with OZ finance doesn't change that." 4 interviewees shared specific development financials for 6 different OZ-LIHTC projects. In all six of these projects, OZ financed as little as 2% and no more than 13% of the developments.

Interviewees cited 2 primary reasons that OZ is not spurring new or expanded LIHTC development. First, OZ does not offer sufficient returns to incentivize capital gains investors. Interviewees reported that LIHTC projects offer internal rates of return (IRRs) between 5-8 percent while most OZ investors seek IRRs between 12-16 percent. They explained that the additional return value of pairing OZ with LIHTC was not more than a 1-3% increase in the total IRR. A nonprofit affordable housing director noted, "the [returns] that OZ investors can get from [LIHTC] simply don't compete with what investors can probably make [by] putting their [money] into non-OZ investments and taking the tax hit."

A commercial bank manager summarized this return mismatch as the following, "OZ incentivizes wealthy [investors] to put their capital gains where they get [the] most profit. LIHTC developments are safe, but they aren't as profitable investments…the same investors get the same [OZ] bump for investing in much more lucrative [non-affordable] multifamily projects." The community development tax policy expert similarly said, "for [OZ] investors to be attracted to [LIHTC] deals, they would need to be as profitable as market [rate] deals. They are not. What we are seeing is LIHTC deals [with OZ financing] that were [already] deals because of [CRA] requirements. Three interviewees said that OZ's lack of a specific regulation around rent restriction was preventing investment in LIHTC. That is, by not preventing OZ investments in

only luxury or even market rate residential development, OZ legislation pushed investors away from LIHTC. These interviewees suggested OZ be amended to require rent restrictions, a policy recommendation we take up in the conclusion.

Interviewees described Treasury rules and regulations as the other primary reason OZ is failing to spur new or expanded LIHTC development. Optimistic about OZ as a tool for LIHTC development, the affordable housing industry repeatedly lobbied the Treasury to address these technical challenges before the final rules and regulations were issued. Three technical provisions, in particular, make it difficult for the affordable housing industry to attract OZ investors and twin OZ with LIHTC.[188]

First, the Treasury's rules around QOF asset holding conflict with how LIHTC deals are structured. Treasury rules restrict the amount of nonqualified financial property that can be held by a QOF.[189] Specifically, LIHTC projects usually include both low-income and market rate housing components -- where market rate investors invest in the market rate component of the project and tax equity investors and the same market rate investors invest in the LIHTC side of the project. Conceptually, the market rate investor could benefit from the OZ -LIHTC pairing, increase their returns, and ultimately their total investment amount. However, because they invest in both sides of the project, investors are disqualified from these benefits via the Treasury's nonqualified financial property rule. That is, their holding in the LIHTC side of the project renders their OZ investment in the market side of the project nonqualified. This prevents OZ investment in typical LIHTC deal structures.

[188] Interviewees were deeply knowledgeable in how LIHTC works including the rules and regulations that govern the program. For a technical overview of LIHTC see Scally et al. (2018).
[189] Specifically, during at least 90% of the time in which the QOF holds or leases tangible property, at least 70 percent of the use of that property must be in the OZ. Moreover, less than 5 percent of the average of the aggregate unadjusted bases of the property of such entity is attributable to nonqualified financial property.

Second, all interviewees reported that OZ timing rules align poorly with how LIHTC development occurs. Specifically, the Treasury's rules stipulate that capital gains must be invested into a QOF within 180 days of being accrued and that QOFs must invest in an OZ within 180 days. That is, OZ capital is regulated to be deployed within a year. The typical equity investment timeline for LIHTC, however, generally occurs post construction -- a 2-to-3-year period. This creates a risk for OZ investors by requiring them to prematurely commit capital to LIHTC projects. One commercial banker explained, "timing is such an inhibiting factor [for OZ-LIHTC pairing]. LIHTC is a competitive program. Trying to match when an investor has capital gains with when we are about to have [OZ] allocated credits makes this a hairball… it's very hard to pull together."

Third, the Treasury also has a "substantial improvement threshold" regulation which requires that, in the case of property rehabilitation, the developer must improve (i.e., invest in) the property at least as much capital as the adjusted basis of the cost of that property. LIHTC rules and regulations, in sharp contrast, require a substantial improvement of only 20%. Therefore, it is particularly challenging to invest OZ capital in LIHTC rehabilitation projects unless they require an investment that far exceeds their typical cost. As the manager at Enterprise Community Partners noted, "[OZs] substantial improvement requirement virtually eliminates the possibility of OZ-LIHTC for affordable rehabilitation -- unless the property is severely, severely distressed."

Interviewees also mentioned other Treasury rules and regulations that hindered OZ-LIHTC pairing but these were less pervasive. For example, two interviewees reported that LIHTC investors are deterred from OZ because of a rule that requires investors in QOFs to take

an initial basis of zero. This rule limits tax loss claims which LIHTC investors sometimes seek in their deal structures.

It is also noteworthy that we documented two divergent commentaries from interviewees regarding OZs indirect effects on LIHTC. First, three interviewees believed that while OZ was not benefiting LIHTC outcomes directly, by encouraging market rate and commercial development in or near neighborhoods that often have a large amount of LIHTC, OZ may indirectly offer improved amenities, jobs, and increased quality of life for LIHTC residents. For example, one CDFI director commented, "The big benefit for affordable housing is that some of the luxury [development]… [will result in] jobs for residents that live in rent restricted housing. [These residents] are the people that are going to work [in retail jobs created]" In contrast, two interviewees, both on the nonprofit side of affordable housing development, argued that these very same "gentrification" outcomes might hurt quality of life for LIHTC residents by driving up neighborhood costs like groceries, and changing the character of the neighborhood, without also promoting additional affordable housing.

Finally, while all interviewees noted that OZ was not originally designed to incentivize affordable housing, they also all believed that with major modifications to the policy, OZ could be a transformative tool to benefit LIHTC development. There were a host of divergent opinions on whether these modifications were possible, and five interviewees specifically noted that for political reasons, they thought changes to OZ were unlikely. We explore possible modifications to OZ policy for it to encourage affordable housing development below.

Conclusion

Limitations and Future Extensions

This study is subject to several limitations. First, while DID modeling finds that OZ is not stimulating LIHTC outcomes, and the desktop and qualitative analysis suggest there is minimal use of and little value for OZ in affordable housing development, we do not directly test whether OZ increases housing supply or affordability. Other early evaluations, however, find that OZ has had no impact on single family home prices (Chen et al., 2019) and residential lending activity (Snidal and Li, 2022) and that OZ may even be leading to modest increases in apartment prices (Pierzak, 2021). They do not indicate that OZ is providing affordability benefits via increased residential supply.

Second, quantitative data extends only through 2018, one year after the establishment of OZ. Despite this limitation, our data sources should facilitate the detection of OZ impacts in year 1, if they were to exist, and qualitative interviews support a finding of non-effect through 2020, three years after OZ was enacted. Furthermore, assuming affordable housing projects are largely reported by local government and the popular press, the desktop analysis demonstrates that a very limited number of affordable projects and units received any OZ finance through mid-2022.

However, it is possible that investors, banks, and affordable housing developers will realize new ways to adjust to OZ rules and regulations and leverage the tax preference. It is also possible that investor opportunity costs will decline to a level that makes affordable housing development a more appealing investment opportunity. Interviewees indicated the possibility of projects that planned to incorporate OZ finance but had not yet been awarded LIHTCs and these are not reflected in our quantitative analysis. As LIHTC data from subsequent years becomes available, future research should confirm longer term policy impacts.

Third, our quantitative analysis is limited by our use of average number of units, projects, and LIHTC allocation amount as dependent variables of analysis. While these outcomes are strong proxies for increased project funding streams, it is possible that use of OZ funding is too small to detect on the aggregate level, or that OZ is moving LIHTC development activity around, or having an effect on all areas regardless of designation. It is also possible that OZ generated capital surpluses are being invested outside of OZs or to address project costs such as additional on-site services or higher quality finishes or furniture -- which would not impact project or unit counts. While our interviews suggest these outcomes are unlikely, and highlight that OZ finance for affordable housing is typically substitute capital, future researchers should continue gathering qualitative data on how developers incorporate OZ funds into LIHTC and other affordable projects. Additionally, researchers should seek to collect granular LIHTC budget data that would reveal how funds are distributed within projects.

Finally, our collection of interviews only captures early perceptions of the challenges to stacking OZ with LIHTC. The attitudes of industry professionals may change with the passage of time, especially if additional examples of pairing the two tax preferences emerge or if rates of return stemming from LIHTC projects become more attractive to OZ investors. It is also possible that OZ investors will come to view LIHTC investments as a form of social impact investing that is desirable despite limited returns. Future research should monitor these trends.

Policy Recommendations

Several policy interventions might make OZ a more viable tool for promoting affordable housing development. First, the incentive could be increased for projects that support low-income housing so that these projects are competitive with market rate OZ investments. For example, the 10 and 15 percent step up basis advantages of the OZ tax preference -- which are

currently of marginal value to OZ investors (Snidal & Newman, 2022) -- could be raised specifically for affordable housing and other mission driven development. Alternatively, OZ investors could be made subject to a rent restriction rule by which properties receiving OZ benefits must pledge to maintain rents below a given threshold. For example, a proposed 2019 bill introduced by Oregon Senator Ronald Wyden would require that 50% of all units in an OZ residential investment be rent-restricted (Opportunity Zones Reporting and Reform Act, 2019). While no evidence to date suggests that OZ is providing affordability via increased market rate housing production, it is worth qualifying this recommendation; rent restrictions might be ineffective, or even counter effective, if they stimulate a negative shock to housing supply that outweighs their affordability benefits.

Second, QOFs investing in LIHTC projects could be offered a longer grace period for the completion of capital expenditures for those projects. The current period of 180 days is extremely challenging for OZ -- LIHTC projects, the latter which often require multiple years to complete capital expenditures. The allowable period for OZ investors could be extended from 180 to 360 days or more to facilitate the twinning of these incentives in the same residential investment. Similarly, exceptions could be made for delays that are common in LIHTC developments during the entitlement process.

Finally, the OZ statute could be amended to align the substantial improvement threshold with the 20% threshold of LIHTC for affordable housing investments. This threshold reduction would impact OZ's use in LIHTC rehabilitation projects, in which project costs rarely amount to the adjusted basis of the property, as current OZ rules require.

While these recommendations would reduce barriers to pairing LIHTC with OZ, it is important to consider whether increasing program compatibility is a worthy policy goal. Layser

(2021) argues that further facilitating OZ-LIHTC twinning would be inefficient from a tax policy perspective, since most LIHTC projects are likely to proceed without OZ finance. Our qualitative analysis generally supports this sentiment; offering both tax incentives on a single project would likely amount to offering a subsidy where the desirable social activity - affordable housing development - would have taken place without one.

Still, press reporting and qualitative analysis indicate that OZ is currently supporting non-mission development, like market rate housing and hotel development, that would have taken place without OZ (Snidal & Newman, 2022; Theodos et al., 2020; Wessell, 2021). Therefore, directing payments towards affordable housing might shift some unnecessary taxpayer subsidy from market to mission driven development. Moreover, increasing the step-up basis or regulating rent restrictions for OZ development, may encourage workforce or affordable housing components in non LIHTC projects. Research utilizing more granular data on project budgets and qualitative data about developers' decision-making processes related to the use of OZ is necessary to inform bolder conclusions about the tax efficiency of projects that utilize both programs. This requires stringent OZ reporting requirements, which a host of other policy evaluations have already called for.

Finally, a growing body of literature suggests that LIHTC development may (positively or negatively) affect poverty concentration (Ellen et al., 2016; Freedman & McGavock, 2015; McClure, 2019; McClure & Johnson, 2015); minority segregation (Dawkins, 2013; Horn & O'Regan, 2011; Rohe & Freeman, 2007) income distribution (Freedman & McGavock, 2015) and property values (Ellen et al., 2007). Studies also find that LIHTC projects may provide housing opportunities for voucher holders in some areas (Williamson et al., 2009); improve the quality of services in racially and minority concentrated communities (Davidson, 2009); and

encourage community improvements (Ellen et al., 2009). In considering OZ modifications that encourage LIHTC development, policy makers must also engage with the broader debate of whether LIHTC advances or hinders goals of distressed community development.

Conclusion

This dissertation presents three evaluations of federal Opportunity Zones ("OZs"). The first essay, a qualitative case study, finds that OZs are spurring investment conversations and increased local government capacity for economic development but are not changing investment outcomes or supporting much mission driven work in Baltimore. The vast majority of OZ equity invested in Baltimore is substitute capital supporting a $5 billion megaproject that was already in the pipeline. Participant interviews reveal a locality doing its best with a tax policy that was poorly designed to benefit distressed communities or their residents.

The second essay, an econometric evaluation of OZ effects on debt outcomes, finds that OZ designation has no effect on small business and residential lending in census tracts across the country. Debt is often paired with equity in business and real estate development making it a strong proxy to test for private equity outcomes. Lending is also a critical indicator of economic development on its own. These findings provide additional support that OZ is failing at its stated purpose of stimulating economic development. They indicate that this failure is consistent across neighborhood distress types. Even in gentrified census tracts, OZ designation isn't spurring new or increased investment.

The third essay, a mixed methods assessment of OZ impacts on affordable housing, finds evidence of only 60 affordable housing projects in the nation receiving OZ investment -- a finding which indicates that the capital raise numbers being touted by policy advocates like the Economic Innovation Group may be deeply misleading. It also finds that OZs are not associated with statistically significant increases in LIHTC development. These findings are contextualized by interviews with 16 community development and tax credit experts that shed light on the ways

in which OZ and LIHTC are incompatible, despite early hopes that OZs would lead to increased affordable housing output.

Given lack of public data available on OZ, this dissertation cannot absolutely confirm the absence of OZ effects. OZs may be supporting new projects or improvements that are too small to detect at the census tract level. These effects may have eluded the press and this qualitative investigation in Baltimore. It is possible that long run effects will change; that in the future, investors will leverage the tax benefit for new investments in distressed neighborhoods. This evaluation also does not estimate effect sizes in census tracts that receive OZ equity or document how much the policy has cost. Future research should include continued monitoring to look for changing and long-term effects. It should evaluate OZ investment -- not just designation -- impacts. It should assess how much the policy is costing.

Still, the findings from these essays provide overwhelming evidence that nearly four years since their announcement, OZs have not delivered on their promise. They contribute to a growing consensus, which now includes evaluations of the policy across a range of outcomes, that OZ is an ineffective economic development tool.[190] At the same time, this dissertation and popular news reporting document large sums of OZ capital being invested into real estate projects that were already underway in investment ready and gentrifying neighborhoods.

Moreover, the only direct data source on OZ, partial 2019 tax filings released by the Joint Committee on Taxation, reveals that just 5 percent of OZs accounted for 87 percent of total OZ equity investment and that these neighborhoods have relatively higher rates of educational attainment, incomes, and employment. These filings also show that the average household income for OZ investors is over $1 million (Kennedy & Wheeler 2021). It is reasonable to

[190] See Atkins et al. (2020); Chen et al. (2019); Corinth and Feldman (2021); Freedman et al. (2021); Kim (2021); and Theodos et al. (2020).

conclude, therefore, that OZ capital is primarily flowing into less distressed neighborhoods and supporting development that would have occurred without taxpayer subsidy. Future tax dollars, which could be used for direct investment in distressed neighborhoods, or as direct cash transfers to impoverished residents, are being forfeited primarily for the benefit of wealthy investors. OZ policy should be ended or heavily amended to benefit distressed communities.

During the 2020 presidential campaign, President Biden called for a review of OZs by the Treasury (Tankersley, 2021). At the completion of this research in July 2022, there was still no indication such a review would take place. Even in the face of continued and growing criticism from academia and the popular press, OZ policy remains popular with local legislatures and the development community. The Biden Administration and Congress seem poised to keep it in the tax code.

Congress and the Treasury, therefore, should implement the recommendations advanced across these three essays for the benefit of distressed communities and taxpayer protection. First, OZ data collection requirements did not survive passage of the 2017 Tax Cuts and Jobs Act. They remain desperately needed. Senate Bill 1344 and House Bill 2593, both of which have been introduced, would mandate the Treasury to collect data on the number of existing funds, their holdings, and their asset class. They would also require data collection on census tracts that have received investments including measures of poverty reduction, job creation, and new business starts.[191]

Second, neighborhoods that have gentrified, that no longer qualify for low-income status based on up-to-date data, and that do not meet the intentions of distressed community investment should be made ineligible for future OZ benefits. In addition to requiring the IRS to provide

[191] See essay 1 and H.R. 2593 (2019).

publicly available lists of Qualified Opportunity Zone Funds, House Bill 5042 would revise census tract eligibility requirements based on median family income and exclude certain allowable property investment types including self-storage, parking, stadiums, and residential rental property without affordable housing benefits.[192] In addition to these eligibility restrictions, OZ investments should be required to pass a certification process that demonstrates they provide benefits for distressed communities and/or their residents and pass a "but for" test.[193]

Congress can and should act immediately to take up these short-term recommendations. These changes would allow researchers and the public to fully understand the successes and failures of OZ, prevent policy fraud and abuse, and reduce the use of taxpayer funded subsidy for investments that don't require it.

More transformational recommendations are detailed in essay 1. They include increasing the step-up basis advantages of the tax incentive for the most distressed neighborhoods, providing dollars for education and infrastructure, and incentivizing Community Development Financial Institutions and non-capital gains holding investors.[194] Finally, essay 3 provides avenues to amend OZ to encourage affordable housing development. Recommendations include requiring rent restrictions in the use of OZ for residential real estate, providing a longer capital deployment timeline for OZ supported affordable housing development, and aligning OZ's substantial improvement threshold with the Low-Income Housing Tax Credit.[195] These longer-term recommendations require additional analysis and the convening of development, policy, and legal experts. If properly designed and implemented, they can encourage development in

[192] See essays 1 and 3 and Opportunity Zone Reform Act (2019).
[193] See essay 2.
[194] See essay 1.
[195] See essay 2.

distressed neighborhoods and prevent waste of future tax dollars for direct federal investment. If not, Opportunity Zones will remain a missed opportunity at best.

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Appendix A

OZ Investments

OZ Investment #1

Yards 56

OZ Investment: $30 Million

Total Investment: $150 Million

Complete Phase 1 of Retail at Yards 56. Image Source: Yards 56

Neighborhood retail replaces blight next to a middle-income neighborhood

Two OZ Investments were made in the "Yards 56" Shopping Center in the Greektown/Bayview neighborhood of East Baltimore. Yards 56 was developed by MCB Real Estate, a Baltimore headquartered commercial real estate investment firm that owns and operates approximately eight million square feet of commercial real estate and another roughly two million square feet under development across the East Coast and Mid Atlantic. MCB is managed by two partners with deep ties to Baltimore. We conducted an interview with one of the partners, Dave Bramble, who grew up in West Baltimore and who is viewed as one of the most sophisticated developers in Baltimore and along the Interstate 95 Corridor.

Yards 56 sits directly across from Johns Hopkins Bayview Hospital with a 6,000-person workforce and is blocks from Interstate 95. The development replaces the former site of the Porcelain Enamel Manufacturing Company (PEMCO) plant that operated for nearly a century at

that location before it closed in 2006. The site was contaminated and suffered repeated vandalism and crime. The developer reported that the PEMCO building repeatedly caught on fire before and after their acquisition of the site.[196]

When completed, Yards 56 will contain an independently operated grocery store, national chain retail including a Chipotle, Panda Express, LA Fitness, 220 apartments, medical office space and a hotel. The project is also expected to create around 300 full-time and part-time jobs. Through a partnership with Civic Works, a Baltimore based organization that focuses on job employment for out-of-school and unemployed youth, some portion of these jobs will go to Baltimore residents.[197]

The project is being developed in two phases with a total cost of $150 million. We estimate about $30 million of OZ equity was invested in the first $77 million phase of the project. The OZ investment is coming from two different funds, one operated by Prudential Financial and the other a single asset fund established by the developer. The second $73 million phase of the project may raise additional OZ equity.

The development was complicated in terms of environmental remediation and financing. In addition to OZ, the project was supported by NMTC, EPA Brownfield Tax Credits, and state subsidy for predevelopment.[198]

The Yards 56 development pre-dates OZ policy. The developer indicated that the passage of OZ legislation was well-timed with the company's capital raise for the project. While the development would have gone forward without OZ, it made the capital easier to identify.

[196] Participant Interviews
[197] See Prudential (2019).
[198] Participant Interviews

Further, by providing a substitute for traditional private equity, OZ allows Yards 56 to remain a long-term community asset. The project was one of the first OZ deals in Maryland and was the first OZ commitment made by Prudential Financial – a Fortune 500 financial institution.

OZ Investment #2

Prosper on Fayette

OZ Investment: $15 Million

Total Investment: $55 Million

Rendering of Prosper on Fayette. Image Source: Maryland Information Exchange

Student housing on the westside of downtown

An OZ investment was made in a 314-bed student housing project, by the name of "Prosper on Fayette," that includes a boutique hotel, ground floor retail, and a parking garage developed by Javelin 19 Investments, a Washington, DC based real-estate investment, development, and advisory firm.

The project is being developed in a section of downtown referred to as the "westside," a historic central retail district that suffered from heavy disinvestment through the 1990s. But since then, the area has slowly experienced redevelopment and adaptative reuse projects, adding serval thousands market rate apartments. Over the past 10 years, large mixed-use redevelopment

projects have been completed and others are underway including a $40 million redevelopment of the city's historic Lexington Market.[199] Prosper will be adjacent to the new market.

However, the westside still suffers from high vacancy and street level drug activity. Developers we interviewed believed that additional market rate housing was critical to infill this vacancy and blight and to attract new retail. A series of mayoral administrations have seen the westside as critical to revive Baltimore's downtown by connecting the central business district to Campden Yards, historic Mount Vernon, the Inner Harbor, and West Baltimore.[200] It is served by both the city's light rail and the city's one line Metro system. The area also encompasses the Bromo Tower Arts & Entertainment District which was established by the State of Maryland in 2012 to encourage revitalization. The designation provides income, property and amusement tax deductions for artists, property owners, and entertainment venues, respectively.[201]

The completed Prosper development will replace surface parking lot and will provide market rate housing for University of Maryland medical campus students. Javelin 19 was unwilling to discuss the project with us and there has been little public reporting on the development to date. We estimate the total project cost to be around $55 million with OZ equity filling about $15 million of project costs.

[199] On development of Lexington Market see Milligan (2018).
[200] For a summary of redeveloping downtown's "westside" see Brodie (2020).
[201] See details on Bromo Arts and Entertainment District (https://www.bromodistrict.org).

OZ Investment #3

Galen Robotics

OZ Investment: $1 Million

Total Investment: $7 - $25 Million

The Wicomico Building where Galen Robotics is leasing 5000 square feet as part of an OZ investment. Image Source: Michael Snidal

Robotics company settles permanently in Southwest Baltimore

The third deal we documented is the College Park based Verte Opportunity Fund providing OZ equity to Galen Robotics, an operating business that specializes in computational sensing and robotics. Galen Robotics expands the benefits and possibilities of minimally invasive surgeries by providing surgeons with mechanical hand technology that removes or reduces tremors in surgeries that are sensitive to the most microscopic hand movements. Examples include removing brain tumors and cysts on vocal cords and fitting hearing equipment in the ear.Specifically, the technology is a steady robotic hand that prevents human surgeon hand movements from being amplified during surgery.[202]

The technology was developed and incubated at the Laboratory of Computational Sensing and Robotics at Johns Hopkins University (JHU) in Baltimore City and then commercialized and licensed to Galen Robotics in 2016. The company was originally located in Silicon Valley but continued to hire Baltimore engineers. Subsequently, Galen rented temporary space in the Port Covington innovation hub known as City Garage. Exploring opportunities for a

[202] For more on technology see Galen Robotics (www.galenrobotics.com).

permanent location in Baltimore, the company connected with the city's OZ coordinator who, in turn, connected Galen Robotics to the Verte OZ Fund.

The Verte OZ Fund was launched in 2019 as a national fund with a focus on community investing in technology innovation including logistics, biotech, and the carbon economy. Verte is expecting to raise $100 million and to develop an investor base "interested in taking part in impactful venture capital opportunities."[203]

In late 2019, Galen Robotics located their headquarters in 5000 square feet of the "Wicomico" building which the Baltimore City OZ coordinator had recommended for location. Wicomico, in the Southwest Baltimore Opportunity Zone Cluster and Pigtown neighborhood of Baltimore City, is an old industrial warehouse that has been repurposed with eight floors and over 400,000 square feet of open and flexible office space. It is a well-known startup and incubator space in Baltimore City that is currently developing the "Baltimore Innovation Center" which will be dedicated to shared space, networking, and access to consultants and venture capital for early- stage growth companies.[204]

Verte's investment was reportedly part of a larger $7 million equity raise by Galen Robotics. We estimate but cannot confirm that the fund invested a little under $1 million in what, if successful, could ultimately be a $25 million capital raise. We also believe Verte accepted slightly below market rate returns on their investment; around an 8-10% IRR. Local reporting suggests that OZ financing was not a "make or break" for Galen's decision to permanently relocate from Silicon Valley and that local government support, including a $250,000 tax break from the State of Maryland were more important.[205] The building is also in a state Enterprise

[203] For more see Verte Opportunity Fund (https://verteoz.com).
[204] See *Baltimore Innovation Center*
[205] See Cohn (2020).

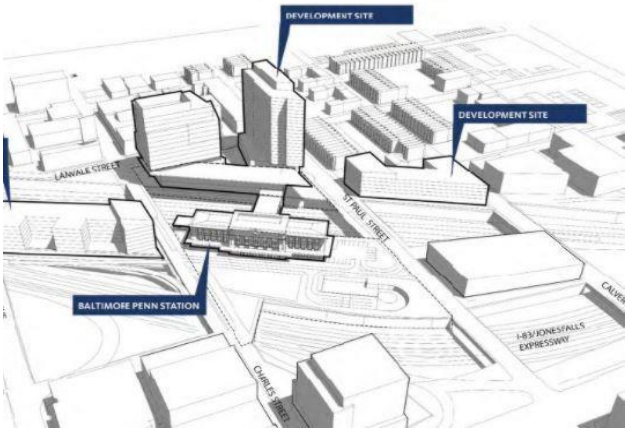
Zone and Small Business Administration (SBA) HUBZone, which gives businesses preferential consideration for federal contracts.[206] Engineer talent in the region and the company's connection to JHU were the most important drivers in Galen's decision to make Baltimore their headquarters.[207]

OZ Investment #4

Amtrak Penn Station

OZ Investment: $10 Million

Total Investment: $70 - $600 Million



Rendering of Future Penn Station Office Space.
Image Source: Amtrak.

Support for the redevelopment of Baltimore's Penn Station in center city

Blueprint Local, a national investment platform, invested OZ equity into the redevelopment of Baltimore's Penn Station. The station, a historic landmark, sits in the center of the city and is the eighth busiest Amtrak station in the country, accommodating around one million passengers annually.[208] It also provides MARC commuter rail service to Washington, DC's Union Station.

To the south of Penn Station is Baltimore's Mount Vernon neighborhood, which has experienced a residential building boom over the last 15 years. Mount Vernon is also home to

[206] See U.S. Small Business Administration (2020).
[207] See Cohn (2020).
[208] See Amtrak (2015)

several landmarks and cultural institutions including the Washington Monument, the Walters Arts Museum, the Center Stage Theatre, the Joseph Meyerhoff Symphony Hall, and the Peabody Institute. The University of Baltimore's Law School opened its Angelos Law Center, a student facility directly south of the station in 2013. To the north of Penn Station is "Station North," three neighborhoods that were designated the city's first Arts and Entertainment District in 2002.

Several developers and city agency participants described Station North as a model of successful redevelopment in Baltimore City. They described its multi-modal transit opportunities, diverse housing stock, rehabilitated movie theaters, restaurants and bars, and more than 400 artists living in the area. They believe this bodes well for opportunities for continued growth without displacement.[209] The Maryland Institute College of Arts campus sits directly to Penn Station's west.

Station North has gentrified. However, developers and investors who were interviewed thought its continued development might serve as a catalyst for development for severely distressed neighborhoods directly to its east and southeast. For example, just several blocks southeast of Penn Station, disconnected by the 1955 urban renewal highway project, Interstate 83, is Johnston Square, one of the poorest and highest crime neighborhoods in Baltimore City that has long suffered from unemployment, disinvestment, and population decline. Two developers that we spoke with mentioned that the redevelopment of Penn Station may be large enough to attract interest and investment to Johnstone Square. A third developer suggested the same but argued the development proposal needed to be even larger.[210]

The station has only a single retail establishment on site. It is also poorly connected to nearby public transit, surrounded by several underused parking lots, and lacks integration into

[209] For additional discussion of neighborhood change in Station North see Morton (2005).
[210] Participant Interviews

the surrounding neighborhoods. Interstate 83 isolates the station from the South and West while the railroad tracks and undeveloped surface parking lots disconnect it from the North.

The redevelopment plan will help mitigate several of these design failures and better leverage the station's ability to stimulate broader neighborhood development. The plan includes building a new passenger concourse, creating new entrances and a landscaped plaza, establishing a lounge for first class and frequent Amtrak users, and restoring the existing historic headhouse to include a boutique hotel along with office and retail space. The headhouse, expected to cost $70 million, is the first phase in a multi-phase and multi-firm effort to redevelop 5-10 acres of land surrounding the station. The goal is to eventually include 1.6 million square feet of residential, office and retail space, resulting in a $600 million investment in Baltimore City. Amtrak has committed $90 billion to the project. The development team, "Penn Station Partners," includes several of Baltimore's most established developers including Bill Struever, at Cross Street Partners, and Beatty development, the developer of Baltimore's Harbor Point.

The OZ investor, Blueprint Local, a fund at Brown Advisory, was founded by the former CEO of Village Capital, a Washington, DC-based venture capital firm that invests in startups with a social mission.[211] Their platform is based in the "new localism" ideology, which espouses that local and metropolitan governance and innovation, not the federal government, are key to solving the problems of economic inequality, climate change and other major challenges of our time. Blueprint is focused on investing in locally supported opportunities and wholistic neighborhood redevelopment as opposed to "one off" projects. Baltimore's OZ coordinator helped connect the fund to the developers and both developer and government agency

[211] See Village Capital (2020).

participants described Blueprint as uniquely dedicated to community impact.[212] We estimate their OZ investment at about $10 million in the $70 million headhouse phase of the Amtrak project.

OZ Investment #5

Outlook Visual Effects

OZ Investment: $1 Million

Total Investment: Unknown

The completed Hoen & Lithograph Co. Campus renovated by Cross Street Partners. Outlook Studios received an OZ equity investment as part of their relocation and expansion into the building.
Image Source: Cross Street Partners.

Business relocation and expansion for East Baltimore

OZ capital was invested in Outlook Visual Effects Company, a full-service animation studio focusing on children and pop culture. The studio was founded by Trevor Pryce, a former football player for the Baltimore Ravens. The company received funding to expand operations in a move from an office at the Maryland Institute College of Arts to the redeveloped Hoen Lithograph Building in East Baltimore. This building had been vacant for nearly 40 years and was recently redeveloped by Cross Street Partners. While the building is only half a mile to the northeast of Johns Hopkins Medical Campus, this area of East Baltimore is disconnected from the campus by the Amtrak railroad tracks and has high rates of vacancy and crime and other neighborhood disparities.

[212] See Blueprint Local (https://blueprint-local.com).

We estimate about $1 million is being invested by the Verte OZ fund[213] to expand Outlook's business operations in this distressed census tract. The city OZ coordinator connected the company to Verte. Outlook's expansion will provide professional education and employment opportunities for local animators and actors and offer pathways for women and people of color to pursue careers in the arts sector.[214]

However, Outlook had investors before OZ. Moreover, their move would not have been possible without the $30 million redevelopment of the Hoen building. That development was supported with NMTC and state historic tax credits. It was also subsidized with a $1.6 million grant from the EDA, a $1 million grant from the State of Maryland, and $1.1 million from Baltimore City's DHCD.[215] Study participants believe the building redevelopment may continue to help attract OZ equity investments for other operating businesses.

[213] Described in Appendix A, Investment 3.
[214] See Rao (2019).
[215] Grant financing information from Simmons (2019).

OZ Investment #6

Port Covington

OZ Investment: $154 Million

Total Investment: $5.5 Billion

An early rendering of the future campus at Port Covington.
Image Source: Sagamore Development

Additional equity for Port Covington

Goldman Sachs is investing about $154 million of OZ equity in the $5.5 billion megadevelopment being constructed at Port Covington.[216] Weller Development, the team overseeing the redevelopment of Port Covington, as well as Goldman Sachs, which, before this OZ capital commitment, had invested over $230 million into the Port Covington project, are expected to explore additional OZ equity for building on this site.

We were unable to confirm how this equity investment is specifically being used for the project.[217] It is possible the original $154 million investment, as well as future OZ investments, may lead to expanded or enhanced development. However, we think it is more likely serving as substitute capital for the already planned 1.1 million square feet of mixed-use waterfront development.

Port Covington was previously underutilized industrial land but in no way represents a distressed community. The development was praised by study participants for its community benefits agreement with six neighboring low-income communities in South Baltimore. This

[216] See Simmons (2020).
[217] Participant Interviews

agreement will provide $139 million for workforce development, economic development, and other local benefits.[218] However, these benefits existed before OZ and there is no indication that OZ directly increases community benefits.

[218] See details on Port Covington Community Benefits Agreement and Memorandum of Understanding (2021).

Appendix B

Future OZ Investments

Madison Park North

OZ Investment: $10 Million

Total Investment: $100 Million

Developer rendering for the vacant "murder mall" site in the WBOZC. Image Source: MCB Real Estate

Supporting transformative redevelopment on the edge of West Baltimore

In addition to the completed OZ deals discussed above, we expect three other projects to receive committed OZ capital in the near future. Two of these projects are located within the original WBOZC study footprint.

The first is the redevelopment of Madison Park North, a site which sits on the edge of West Baltimore. Before its demolition, this site was regularly referred to as "Murder Mall;" a 200-unit private mixed-use development complex well-known for its slumlord, high crime, drug activity, and blight. Before demolition, most of the storefront retail was shuttered. The site is located within a mixed income and racially diverse neighborhood (Reservoir Hill) and directly across from an upper middle-class neighborhood (Bolton Hill). It is adjacent to the Maryland Institute College of Arts, has easy access to Interstate 83, and is in walking distance to Penn

Station, the city's light rail line, and Druid Hill Park, one of the city's largest parks which includes amenities such as the Maryland Zoo, and a conservatory and botanic gardens.

However, Madison Park North also borders some of the most distressed and violent neighborhoods in the city. The center of the 2015 Freddie Gray uprising is less than half a mile away. Study participants, including the developer of the project, the councilmember representing the district, and city agency heads, all described the revitalization of Madison Park North as critical to creating an anchor to redevelop West Baltimore.

Murder Mall was demolished with state support in 2016. Redevelopment was originally expected to begin in 2018 but the project has stalled and changed due to a host of legal and development obstacles including negotiations with Amtrak over land rights. The site is being redeveloped by the same developer as Yards 56, partnering with another development firm, MLR partners. Like MCB Real Estate, MLR partners has deep roots in Baltimore City. Dave Bramble, one of the developers grew up around the corner from the site. He described a fear of walking through the complex as a child (his mother worked in an office building in the complex) and said he was personally committed to the project: "The deal is near and dear to my heart." He believed it was the most impactful project he was working not only in Baltimore City but in the country.[219]

The current development plan includes about 160 townhomes, 420 apartments and street level retail including a community grocery store. Affordable housing is not included. There has been some local media criticism regarding the project's lack of affordability.[220] However, public and private development that participated in this study and were directly involved in the projects, defended this market rate housing decision. They noted the site's history of concentrated

[219] Developer Interviews
[220] For example, see the *Baltimore Fish Bowl (2017)*

poverty, existing LIHTC housing that was already in the neighborhood, and the need for market rate housing to support new retail, like the grocery store, that would benefit people of all incomes.

The projected cost of Madison Park North is $100 million. The developer was in conversation with several QOFs to serve as capital sources when we met with him in 2020. We do not know the expected size of the investment(s) nor the identity of the investors. Our best estimate is that it will be no more than 10 percent of the capital stack or $10 million. The project was being planned well before OZ legislation. $2 million in Maryland State grant money to support predevelopment of the site was critical to moving the project forward. The development will also include NMTC financing. The developer described OZ as an important but not necessary source of capital for the project. He also noted that support from and collaboration with city and state government were more important to the project.[221]

[221] Developer/Small Developer Interviews

North Ave Commercial

OZ Investment: $1.2 Million

Total Investment: $4.5 Million

A zero-energy mixed used development for indigenous residents and businesses is expected to secure OZ capital. The developer is intending to have a community mural competition to shape the outcome of the development.
Image Source: Schreiber Brothers Development

Gap equity for mission driven community development in West Baltimore

We documented one project in the heart of the WBOZC that has a commitment for OZ capital to support affordable housing and retail space for existing residents and business. Schreiber Brothers, a construction firm founded in 2017, is developing two buildings and roughly 24,000 square feet into a "live where you work" model, which will include five ground floor commercial spaces dedicated to local minority owned businesses and16 apartment units. Half of the apartment units will be affordable to renters with incomes at or less than 80 percent of the area median income, one of the income-eligibility standards used by HUD for affordable housing.[222] The units will include three-bedroom apartments for families, but the hope is to offer a variety of unit sizes to support non-conventional definitions of "family." The commercial tenants will have first right of refusal to live in the apartments. The project design and location aim to reduce costs for community businesses and residents. The building is being designed as zero energy; it will combine energy efficiency and renewable energy to consume only the

[222] The company is seeking to make these units even more affordable at ≤ 60 percent of the area median income.

amount of energy that is produced on site through renewable resources. The goal is to achieve close to zero utility costs. The development team is also engaging with the community around its recent Black Arts District designation including incorporating a mural to be produced through a community competition.

The development is in the Penn North neighborhood, an area of historical disinvestment that was the center of the 2015 Freddie Grey uprising. The neighborhood suffers from high vacancy rates, blight, and crime. The developer describes their company as "social and economic justice driven." They focus on West Baltimore as their geography of development with the goals of undoing redlining, preventing displacement and gentrification, and building intergenerational wealth. Their development strategy is community partnered development, building zero energy buildings, mixed use design, and rent to own models. The developer repeatedly referred to the firm as a "for profit doing non-profit work."

The project is expected to cost about $4.5 million and include around $1.2 million in OZ equity. The developer stated that this equity may speed up their capital raise but that they were committed to getting the project done and are not dependent on it. He also noted that "OZ wasn't designed for this kind of mission driven development, rather we are repurposing it to make sure it meets the goals of the community."

Schreiber Brothers described their use of OZ as a "unicorn," noting "a somewhat unique situation where we as a developer are committed to bending over backwards to making this project work because of the mission…where the city is committed to getting OZ projects done…. [And thus] where the city has made a connection to a fund that needs to get the capital out on a timeline that just happens to work well for us."

The investment is being made by the Woodforest CEI-Boulos Opportunity Fund which was created by Woodforest National Bank and CEI-Boulos Capital Management, LLC. The latter is a joint venture between Coastal Enterprises Inc., a national CDFI, and the Boulos Company, a commercial real estate firm with most of its activity and assets based in Maine and New Hampshire. The city's OZ coordinator introduced the developer to the fund. The developer stressed DHCD and the city support in locating below market rate OZ capital.

However, the developer was generally concerned that OZ might be used for gentrification projects and not serve the communities most in need of new capital sources. He suggested the OZ model being used for the project was not replicable for most mission driven development. Still, his hope is to find a way to leverage OZ equity in at least two other projects in the WBOZC in the future.[223]

[223] Developer/Small Developer Interviews

Northwood Plaza

OZ Investment: $10 Million

Total Investment: $58 Million

The Northwood Commons development (rendering) will replace a blighted shopping center and fill a hole in a food desert.
Image Source: MCB Real Estate

Desired retail and community benefit next to an HBCU

In addition to OZ financing for the Yards 56 project, and the OZ investment we expect for Madison Park North, MCB Real Estate may secure OZ equity for a third project in their joint venture redevelopment of Northwood Plaza Shopping Center, again with MLR partners. To be called "Northwood Commons," the shopping center will serve Morgan State University and the neighborhoods of Original Northwood, New Northwood, and Hillen surrounding it. Original Northwood is a racially diverse upper middle-class community, New Northwood is a predominantly Black middle-class community, and Hillen is a predominantly Black lower middle-class community. Morgan State recently invested $60 million in a state-of-the-art business school that is immediately adjacent to Northwood Commons.

The old shopping center has a history of civil rights activism. Read's Drug Store, a former tenant, was the site of the first successful anti-segregation sit-ins in the country. During Jim Crow, racial covenants prevented Black families from purchasing homes in Northwood and students of color were not permitted to use the restaurants or movie theatre in the shopping center. However, the center became a source of blight and crime, including violent crime,

starting in the 1970s. In 2008, it made national headlines when a city councilmember, Ken Harris, was shot to death outside a club located there.[224] It continue to fall into disrepair over the past 20 years as the city, the university, the developers, and the property owners negotiated a development plan. News articles describe the negotiations as challenging both physically and emotionally.[225] The developer noted that it "was a lot of work and collaboration for everyone to begin to change the feeling of distrust between the community, the university and the private owners of the property."[226] The site has had high vacancy and, in the years following the murder of the councilman, has offered little beyond a McDonalds, a sandwich shop, and a liquor store.

Northwood Commons will be a $58 million project that will include a 30,000 square foot grocery store, a Barnes and Noble bookstore collaboration with Morgan State, 20,000 square feet of office space, and a building for the Morgan State Public Safety department. OZ capital had not been committed to the project as of the writing of this paper but according to the State's information exchange, they were considering $10 million in gap finance.[227] More important than this possible OZ investment was direct subsidy from the university and bond and grant support from the State of Maryland.[228]

[224] See Collins and Ross (2020) for more on this history.
[225] ibid
[226] Developer/Small Developer Interviews
[227] See Maryland Department of Housing and Community Development (2018).
[228] Developer/Small Developer Interviews

Appendix C

Missed Opportunities

A small developer, Venroy July, sits in front of six vacant rowhomes that he is currently redeveloping in the Hollins Market neighborhood of the WBOZC. July sees an unrealized opportunity for OZ: to incentivize regional capital held by Black professionals like himself to invest in West Baltimore neighborhoods. Image Source: Michael Snidal

Single-family rowhome development near Hollins Market

The first author conducted three interviews with a partner at a Baltimore law firm, Venroy July, who was redeveloping single family housing in the WBOZC. July was born in Jamaica, raised in the Bronx, and is now a resident in West Baltimore. He has been redeveloping homes in the Hollins Market neighborhood of the WBOZC for nearly seven years. He describes his redevelopment work as part of a vision for "a neighborhood where young Black and brown professionals come together to live, work and play right next to downtown Baltimore." He has been trying to convince his professional and friend network to join him in investing in the neighborhood. He is currently renovating six adjacent rowhomes, encompassing an entire half block, for rental housing that he intends to ultimately transition to homeownership. July describes the Hollins Market WBOZC neighborhood as "uniquely positioned next to the University of Maryland Biopark campus, transit, I-95, and downtown Baltimore, and [having]

enough land and vacant housing to attract new residents and businesses without driving up livability costs for existing residents."

July took interest in OZ from its inception, exploring it as an incentive to raise new equity sources for redevelopment work and envisioning it as "a tool to be used for Black empowerment in the redevelopment of historically Black neighborhoods." He, like many other development experts interviewed for this study, believes the small investor community is fundamental to wealth building and redevelopment in Baltimore's distressed neighborhoods. "The $100 million dollar projects aren't likely for West Baltimore, OZ or no OZ, and if they do come, it may result in [displacement]. But the small investor community is connected to this place and they are committed to it. People like me doing 'onsie-twosie' projects… we can help create a neighborhood that Black people will buy into. We can help bring back young Black professionals here…places we can walk to our nice jobs, go to brunch, and build wealth. But we need to be able to scale…we need to be able to make a splash."

July recognizes that OZ's 10-year exit strategy creates a challenge for outside investors looking for a quick exit, and that's precisely why he thinks OZ should incentivize investors already committed to deploying long-term "patient" capital. In June of 2019, he wrote an article for *Black Enterprise* arguing that the tax preference be "democratized" to non-capital gains holders.[229] He suggested that Black investors take collective action to pool resources to invest in distressed OZ neighborhoods, generate capital gains, and recycle those investments back into distressed neighborhoods through an OZ fund. This article, buttressed by conversations with July, highlight a critical shortcoming of OZ: it incentivizes a class of outside wealthy individuals and corporations with capital gains dollars who, by and large, are not interested in providing

[229] See July (2019). We pursue a similar recommendation to democratize OZs. See recommendations in Essay 1.

patient capital to distressed communities. At the same time, OZ excludes existing stakeholders who are already committed to long-term investments in these neighborhoods but who do not have the resources to engage in transformative development.

A $21 million affordable mixed-use development (front) raises next to Coppin Heights University. The developer and CDC and nonprofit partners have not received serious interest from OZ investors to renovate the (back) warehouse. Redevelopment opportunities like these do not provide rates of return that most OZ investors are looking for.
Image Source: The Baltimore Sun

Adaptive reuse project next to Coppin State University

Following the 2015 Freddie Gray uprising, Osprey Property Companies, a real estate and affordable housing development firm based in Annapolis, Maryland, commenced the redevelopment of five-acre site just a mile to the west from where the uprising was centered. The "Walbrook Mill" project sits on the West North Avenue commercial corridor immediately serving the Walbrook, Panway Braddish, New Community Action, and Coppin Heights neighborhoods, which all suffer from high levels of poverty, unemployment, and segregation.

They are all over 90% Black.[230] Within a three-block radius, the developer had identified over 60 vacant homes on North Avenue and described the neighborhood as a "retail amenity desert."[231]

[230] ACS Census data 2011-2015
[231] Developer/Small Developer Interviews

The site is also adjacent to the Coppin State University campus. With State grant support, the University has invested hundreds of millions of dollars in a new physical education complex, a health and human services building, and a science and technology center.[232] Coppin is a Historically Black Institution that offers undergraduate and graduate degrees as well as certificate programs. Over 60 percent of its students are working adults with young children, over 75 percent are female, and almost 70% are first generation college students.[233]

Walbrook Mill replaces vacant single-family rowhomes, a nuisance business known for drug activity, and an abandoned warehouse and railroad depot that belonged to the former Walbrook Lumber Co. In 2009, the president of the lumber yard consolidated operations in suburban Baltimore County. They cited high crime and utility costs, but also that the business was not included in the State Enterprise Zone or federal Empowerment program, in their decision to leave.[234]

Osprey's projects are primarily located outside of Baltimore City. They describe Walbrook as an opportunity to make an impact in the city. Developer participants, including the councilmember representing the district, described Walbrook as having the potential to encourage investment beyond its development footprint and help connect the university area to Mondawmin Mall, a retail center to the north of the site, Druid Hill Park, and the Madison Park North redevelopment.[235]

The project was made possible because the developer collaborated with the Coppin Heights CDC and a housing nonprofit, Neighborhood Housing Services. The collaboration secured state grant funding for site acquisition and predevelopment and is committed to

[232] For more on Coppin State University investments see Mullin (2010).
[233] See Coppin State University (2020).
[234] See Lumber Yard President on reasons for leaving see Zulver (2013).
[235] The Madison Park North development is described in Appendix B.

attracting desired neighborhood retail for students and residents. In addition to this state and community level support, the developer noted a $2 million DOT grant for streetscaping, as well as the LIHTC program, as critical to the project.

The first $21 million phase of the project includes affordable housing, a bank branch, and a retail complex with a food hall that will feature eight local restaurateurs. On the back of the site sits a vacant 16,000 square foot warehouse. The developer has been trying to attract OZ capital for its redevelopment. With 20-foot vaulted ceilings, the developer, as well as three other developer participants we spoke to, felt the building was perfect for adaptive reuse. In a 2019 editorial, the *Baltimore Sun* highlighted the warehouse as an ideal opportunity and location for federal OZ designation to stimulate development.[236]

However, OZ is not providing a deep enough incentive to attract investors. An urban agriculture company approached Osprey about locating on the site but neither the developer nor the company could attract OZ funding. According to the developer, investors likely see the $2 million redevelopment of the warehouse as "not worth the headache" and not offering high enough returns. The developer also described a downtown development project they were working on as receiving much greater attention from OZ investors given its expected appreciation.

Investors did not expect the neighborhoods around Coppin to experience rapid appreciation. Unless OZ offered a greater front-end subsidy through the year-five and year-seven step up basis advantages, investors would not see the returns they were looking for. "What we are seeing is that [OZ] doesn't change a neighborhood, a neighborhood needs to be changing for OZ," the developer noted.

[236] See Rodricks (2019).

Black Women Build (BWB) provides homeownership and contracting apprenticeships for women of color in West Baltimore. OZ policy does not provide the capacity building support necessary for BWB or other innovative nonprofits to tap into private investment from a new class of OZ investors or to partner with private developers that have access to capital gains dollars.
Image Source: Baltimore Magazine

Homeownership and Black wealth building

The first author conducted two interviews with Black Women Build (BWB), a nonprofit that creates home ownership and builds wealth by training Black women in carpentry, electrical, and plumbing through the renovation of vacant properties in West Baltimore. The organization was founded by Shelley Halstead in 2017.

Halstead joined the carpenters union in her youth in Seattle. She continued to cultivate her carpentry skills by purchasing, renovating, and selling homes in Seattle, Portland, and Baltimore. After working for an LGBTQ advocacy nonprofit in Washington DC, she moved to Baltimore with a mission, and grant support, to help Black women gain skills to renovate and maintain homes.

BWB buys and acquires vacant homes through grant funding and property write downs. Halstead interviews and trains selected participants to assist in restoring homes through a construction training program. If the participants complete the program, they become the owners of one of the homes that they worked on. The homeownership element of the program includes wrap around support including financial literacy training.

When Halstead was first interviewed in January of 2020, BWB was working on their second set of housing rehabilitations. The organization had acquired four boarded up row homes on Etting Street in the neighborhood of Druid Heights, about half a mile to the southeast of the major redevelopment of Madison Park North.[237] Druid Heights is an inner-city community that suffers from high poverty, unemployment, and vacancy due to historic segregation laws and redlining. However, according to Halstead and several development experts that participated in this study, it offers several assets that make it particularly well suited for redevelopment and growth. These include proximity to downtown and transit, a 40-employee CDC that was a partner and participant in this research, and a professional/merchant class housing stock with high ceilings, cornices, and marble stoops that offer high rehabilitation value.

The homes acquired by BWB were previously scheduled for demolition by Baltimore City with funding from the State of Maryland. Halstead convinced the city to give her title to the properties and, after vetting participants, enrolled a new three-person cohort to rebuild and eventually live in the homes. Her plan is to expand the Etting Street project to another set of vacant homes on the same block and build neighborhood stability through homeownership.

In addition to grant funding and land write downs, BWB is supported by low-interest loans and the sale of rehabbed homes. Halstead has been examining opportunities for additional capital sources since founding BWB. When OZ was publicized, she inquired about OZ and attended a city hosted workshop on the tax preference. However, she determined that OZ hadn't been structured to support the work that BWB was undertaking. First, BWB conducts its work as a nonprofit. It might be possible for her to "side car" OZ investments, a process where a for profit OZ fund simultaneously invests in properties in which the non for profit renovates.

[237] The Madison Park North project is described in Appendix A.

However, the OZ did not allot resources for her to explore such an option and, ultimately, Halstead didn't have the time or capacity to see if this financing structure was possible. Second, BWB does not have access to capital gains or a network of capital gains that could support their work. Third, even if a third party, like Baltimore City, connected her to OZ funds, the rates of return OZ investors were seeking were incompatible with the appreciation trends in the neighborhoods like Druid Heights that BWB is working in. These incompatibilities have led Halstead to describe OZ as "just hype."