

Policy Evaluation on Joint Powers Authority Middle-Income Property Tax Exempt Developments



A Report for the California Housing Partnership
University of California Berkeley Goldman School of Public Policy

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Executive Summary

California has some of the most expensive housing in the United States. The greatest burden of these prices has been on low-income residents, over half of whom pay more than one third of their income on shelter. As a result, California, its local governments, and the federal government have allocated a significant amount of money to alleviate the issue, with the vast majority being earmarked for low-income Californians. To address the unique needs of middle-income renters, quasi-governmental organizations known as Joint Powers Authorities (JPAs) have acquired over 12,000 units of housing between 2019 and 2021 and subsequently lowered or stabilized rents.

The acquisition procedure works as such: a city joins a JPA via a public benefit agreement. A private developer locates a large multifamily apartment complex, often a newer luxury building, and helps the JPA purchase it using unrated municipal bonds. Since the JPA is tax exempt, it does not have to pay property taxes. The JPA agrees to pass the savings from the forgone property taxes to renters earning between 80% to 120% area median income (AMI), with some notable variation in AMI depending on the agreement. The city has the option to purchase and fully own the property by paying off all outstanding debt between 15 years and bond maturity. The city can then sell the property or maintain its affordability.

At the request of the California Housing Partnership, our team worked to identify the implications of these deals on cities, counties, and residents. To do so, we conducted extensive interviews, analyzed bond documentation and city and consultant reports, and created a predictive model to help determine the savings obtained by renters.

Key Findings:

- **The savings produced by JPA middle-income housing developments differ widely.** Savings are largely dependent on the development, the surrounding real estate market, inflation, income growth, family size, and a household's income. Larger families, those who earn under 80% AMI, hot real estate markets, minimal area-wide income growth, and low inflationary conditions create the most savings. Average monthly savings as a percent of uncapped rents in the first year are mostly between 3% and 10%.
- **The benefits of JPAs are speculative. Current spending of public funds yields a greater social benefit.** While research suggests possible benefits of these developments, little research exists on the impact of subsidizing middle-income renters. JPAs are funded through property tax exemptions that reduce funding for public programs, such as K-12 education, which have a significantly greater social benefit and disproportionately aid low-income people of color.
- **No third party is responsible for regulating or monitoring compliance. Reputational and financial interests may adequately incentivize parties to comply with their agreements.** Since host cities have little direct control over the project, most of their power to enforce rent restrictions lies in their ability to impose reputational costs on project administrators. They could do this by expressing complaints to the JPA or by unofficially "blacklisting" the project

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administrator for future local projects. Project administrators are also incentivized to ensure the project does not foreclose or default as they receive delayed compensation in the form of a B bond.

- **JPA's cost more to taxpayers in total lost tax revenue than the rent savings they produce.** This is in part due to unusually high property acquisition prices. The median JPA development analyzed was 19% more expensive per square foot compared to non-JPA comparable 4- and 5-star properties. Equity growth is an important benefit of this program, especially relative to Low Income Housing Tax Credits (LIHTC). That said, our analysis found that the benefits produced by equity gains do not make up for lost tax revenue.
- **Cities approve or disapprove JPA deals using dubious assumptions and incomplete and often cherry-picked information.** Some cities reported accepting JPA deals before knowing the property acquisition price or other financial details. Even when cities do decide on whether to approve a JPA deal, the information that is used and the assumptions that are made are unreliable. For example, city staff, JPAs, and project administrators consistently undervalue tax losses in reports. They assume that had the development not been purchased, the old tax basis of the property would remain unchanged. Additionally, most staff reports and JPA presentations only show the city loss in tax revenue, which is, on average, just 15% of the total property taxes collected.
- **Other taxing authorities are rarely consulted for deal negotiation or informed of revenue losses until after the deal has been finalized.** The entities who are most impacted by the city's decision to convert a market-rate property to JPA middle-income housing also have the least say in the process.
- **The program includes unusually high transaction fees.** Namely, the project administrator fees are over 15% of the purchase price of the property. In commercial real estate, this is typically about 2.5%. The project administrator fee is also high and the majority of compensation is not tied to performance. As a percentage of total project costs, the developer fee for JPA developments is almost double that for LIHTC properties.
- **Few cities that we interviewed considered the equity implications of JPA deals.** Our analysis found that Black and white households stand to equally benefit from the JPA middle-income housing program in California. While the program offers equal benefits across racial groups, it fails to acknowledge the substantial differences in income and wealth across races. The JPA deal-making process also lacks community participation. That said, bringing in community involvement in a way that accurately represents the voices of community members is incredibly challenging.
- **The long-term viability of JPA projects are dependent on several undependable assumptions.** The ability of the JPA to pay interest and principal on its loans is highly dependent on growth in rents, growth in operating expenses, and unforeseen maintenance needs. Even one or two years of slow rent growth early on in the JPA program could lead to problems paying back interest and principal on the planned schedule.

Recommendations:

1. **Develop legislation that requires JPA development rent reductions to align with affordable housing industry standards:** Legislation would be helpful to ensure that pre-to-post conversion

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rent reductions are substantial and beneficial to middle-income residents. This legislation would also help ensure that cities have the authority to monitor rent reductions and caps on rent increases.

- 2. Establish regulations to govern administrator fees, issuance fees, property appraisals, and annual property maintenance/capital expenditures:** Setting minimum standards on fees could reduce transaction costs and the financial risks to JPA transactions, save taxpayers money, make project administrators more accountable for the condition of these developments, and ensure that cities obtain well-maintained developments when they assume ownership.
- 3. Encourage cities, JPAs, and project administrators to leverage the JPA model to finance new construction of middle-income housing:** Leveraging the JPA model to finance new construction for middle-income housing would help alleviate California's housing shortage by adding to the housing supply.
- 4. Require standardized publicly available settlement statements that include projected rent benefits, all fees and financing costs, and property tax losses broken down by entity:** Cities are approving JPA developments without adequate knowledge of the costs and benefits. Analysis completed by cities and project administrators are largely inaccurate and incomplete. Communities cannot voice their opinions on JPAs because there is no standardized means of presenting transaction details to the public. JPA deals should be presented to the public and office holders in the form of an easy to understand settlement statement, like when getting a home loan, so that stakeholders can make an informed decision.
- 5. Require JPAs to disclose projected lost tax revenue to affected government entities before JPA approval:** Government entities and the public are inadequately informed about the negative impacts of lost property tax revenue. The costs of the lost tax revenue falls disproportionately on low-income people of color. Current spending by local entities and special districts yields a significantly greater societal benefit than spending on JPA middle-income housing, for which the benefits are unclear.
- 6. Develop legislation that requires that vacancies with JPA developments be advertised in communities of color:** Legislation requiring that project administrators advertise vacancies in newly converted JPA developments in communities of color could help ensure that middle-income residents of color facing rent burdens are aware of and have the opportunity to move into JPA developments, therefore benefiting from the rent decreases and rent caps.
- 7. Develop legislation that establishes minimum standards for community input:** Establishing standards for community input can ensure that community members' voices and opinions are heard regarding JPA deals. For example, cities could be required to host at least one public meeting for community members to discuss and provide opinions on the JPA deal. The meeting should be scheduled with advanced notice to the community at a time convenient for working adults to ensure that access to the meeting is equitable.

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I. Introduction

A. The Need for Middle-Income Housing for California’s Renters

California suffers from a statewide lack of affordable housing that affects millions of residents, limits economic growth, and contributes to the ongoing homelessness crisis. The state and its many municipalities invest billions annually to reduce the burden of high housing prices on residents. Most of these resources aim to provide housing for low-income residents. The state invests far less in programs that make housing affordable for middle-income Californians, or those that earn between 80% and 120% of an area’s median income (AMI) (Collins, 2021). As a result, many middle-income renters are unable to afford market rate units and don’t qualify for federal, state, or local housing programs (Orci, 2021).

According to the California Housing Partnership Housing Needs Dashboard, 42% of middle-income renters are cost burdened in California and 6% of these households are severely cost-burdened. A household is considered to be cost-burdened if they spend over 30% of their income on rent and severely cost-burdened if they spend more than 50% of income on rent. Although the unaffordable housing market has hit middle-income renters hard, its impact is most significant on extremely low-income (ELI) renters, or those that earn between 15-30% AMI. According to the California Housing Partnership, 89% of ELI renters are cost burdened and 78% of ELI renters are extremely cost burdened (California Housing Partnership, 2021).

Numerous studies have indicated that housing conditions, location, and affordability are linked to health outcomes (Maqbool et al., 2015) (Elliott et al., 2021) (Braubach, 2011). In particular, access to affordable housing has been shown to free up resources for other essential needs, reduce stress related to finances and/or frequent moves, and improve overall mental health. Likewise, housing that is well maintained and in a safe location near key amenities, such as grocery stores, has notable positive effects on important health indicators. The positive effects of safe and affordable housing on renters is particularly acute for those who previously lived in crowded spaces, unsafe conditions, or dangerous neighborhoods (Maqbool et al., 2015). Low-income renters, who disproportionately live in these poor conditions, stand to benefit most from accessing good quality housing. This discrepancy is implicitly acknowledged by the federal and state government’s overwhelming allocation of housing resources towards programs that assist low-income households. However, middle-income renters, many of whom are rent burdened, will still benefit from affordable housing programs that are dedicated to their unique needs.

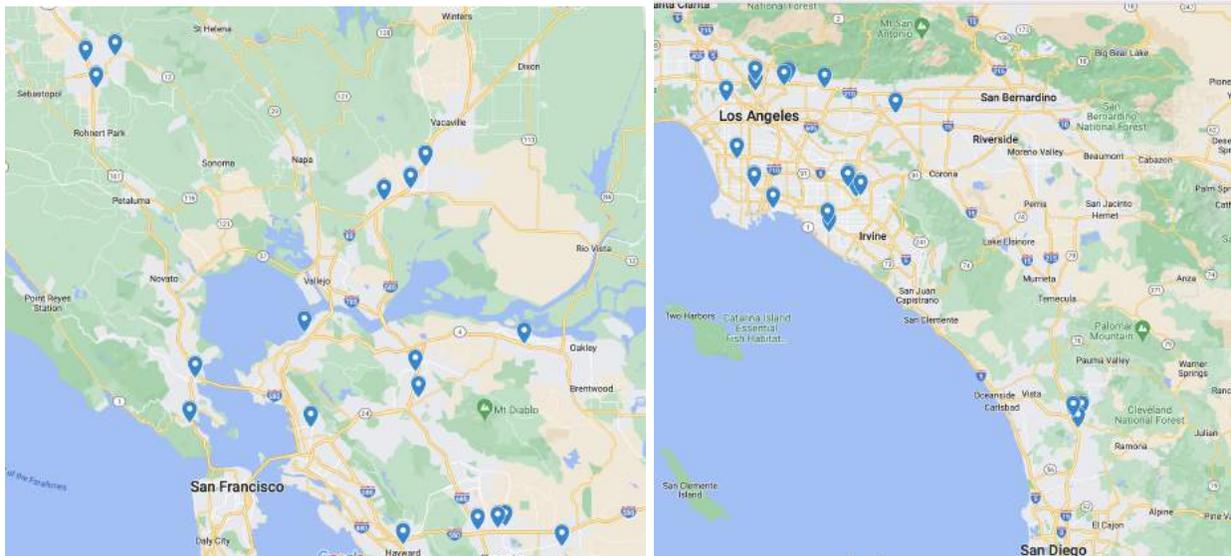
B. Joint Powers Authority Middle-Income Developments

Since 2019, a handful of private companies have leveraged the tax-exempt status of quasi-governmental entities called Joint Powers Authorities (JPAs) to offer rent-restricted housing to middle-income residents. In this model, a private company, acting as a “project administrator,” asks a city to join a JPA and authorize it to sell tax-exempt municipal bonds to finance the purchase of an existing multifamily apartment building (Electronic Municipal Market Access, 2022).

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Because JPAs are government entities, they pay no property taxes on the buildings. The project administrators receive a one-time payment at the time of the transaction, a smaller ongoing annual administration fee, and a deferred compensation package, typically a \$5 million “B-bond” at 10% interest whose payment is subordinate to the publicly-issued bonds. The administrators use operating revenue to pay down the primary bonds, which usually bear between 3% and 5% interest and are amortized over 35 years. The city receives a purchase or sale option at year 15, which continues through the end of the bond term, and retains all equity in the development after the bond debt is retired (Electronic Municipal Market Access, 2022).

Figure 1: Northern California JPA developments (left) and Southern California JPA developments (right)



(Google Maps, 2022)

In exchange for the property tax abatements, administrator fees, and the “B-bond,” the project administrators agree to restrict rents on a proportion of the units within the building and to rent those units to people with moderate incomes. Typically, the administrators agree to restrict rents to 35% of a hypothetical household’s income for those earning between 80 to 120% of AMI, which is higher than the 30% of hypothetical income formula that is used in all other affordable housing programs. Most often, a third of the units are restricted to below 80% AMI, a third to 81-100% AMI, and a third to 101-120% AMI. While the distribution of units across AMI categories differ somewhat between JPA deals, room for allocating a higher percentage of units to lower AMI categories is limited by the project's need to meet debt and fee payment obligations (Electronic Municipal Market Access, 2022).

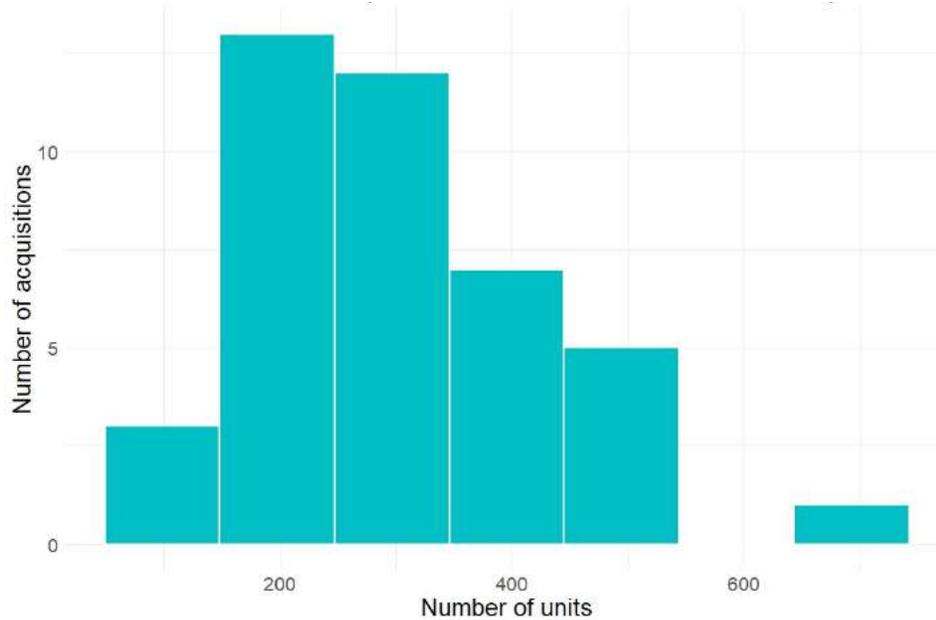
Thus far, JPAs have partnered with at least 26 California cities to purchase over 46 properties using this model. These developments are clustered around California’s major coastal metropolitan areas near the downtowns of mid-sized cities. Some of these cities negotiate terms, while others accept the term sheet as-is.

JPAs acquire almost exclusively large luxury apartment developments that vary in size from 76 to 519 units, with an average size of 272 units. Our analysis of seven case study properties (detailed in Appendix

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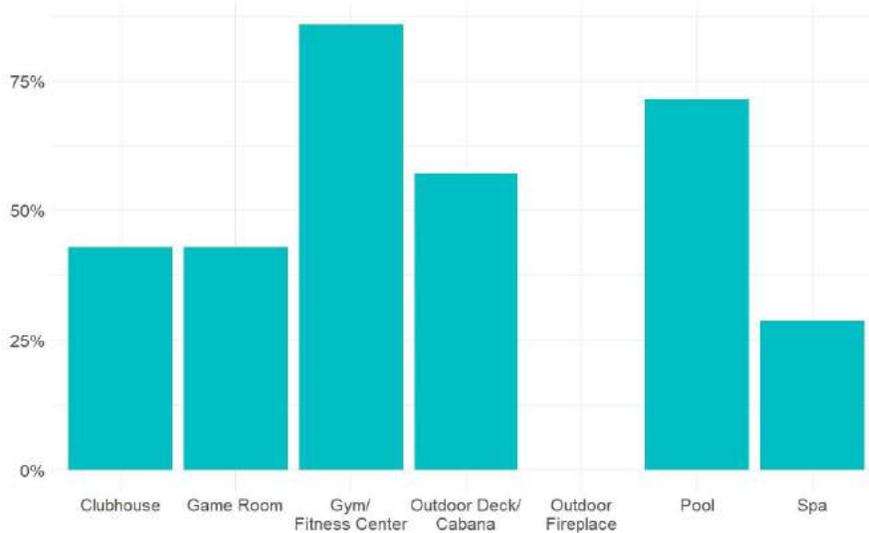
A) found that the majority have numerous luxury amenities, such as a pool, gym or fitness center, spa, and game room.

Figure 2: The number of units acquired in each JPA transaction is fairly variable



(Electronic Municipal Market Access, 2022)

Figure 3: JPA properties offer a wide variety of amenities



(U.S Census Bureau, 2019)

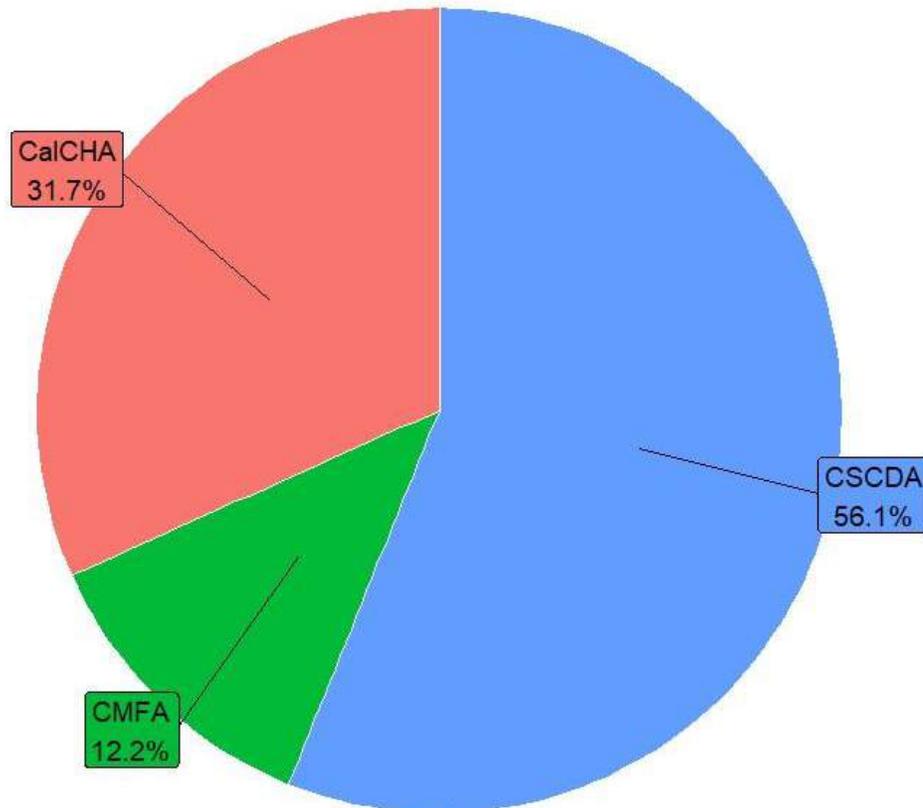
As of April 2022, these transactions have converted over 12,000 market-rate units into rent-restricted units available to people earning under 80%, 100%, or 120% of AMI (Electronic Municipal Market Access, 2022), with some minor variation in AMI restrictions. Over \$7 billion dollars has been borrowed to finance these deals, with an average of \$171 million borrowed per transaction. The average property sale price is \$146 million. Since property tax rates are at least 1% in California, this amounts to annual

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property tax subsidies of more than \$1.46 million per development (Alamo & Whitacre, 2012). In 2020 and 2021, JPAs were responsible for the largest quantity of multifamily housing purchases in the Los Angeles Metropolitan Area and the East Bay (CoStar, 2022).

There are only four JPAs in California that operate in this nascent market, with CSCDA and CalCHA accounting for around 75% of all transactions.

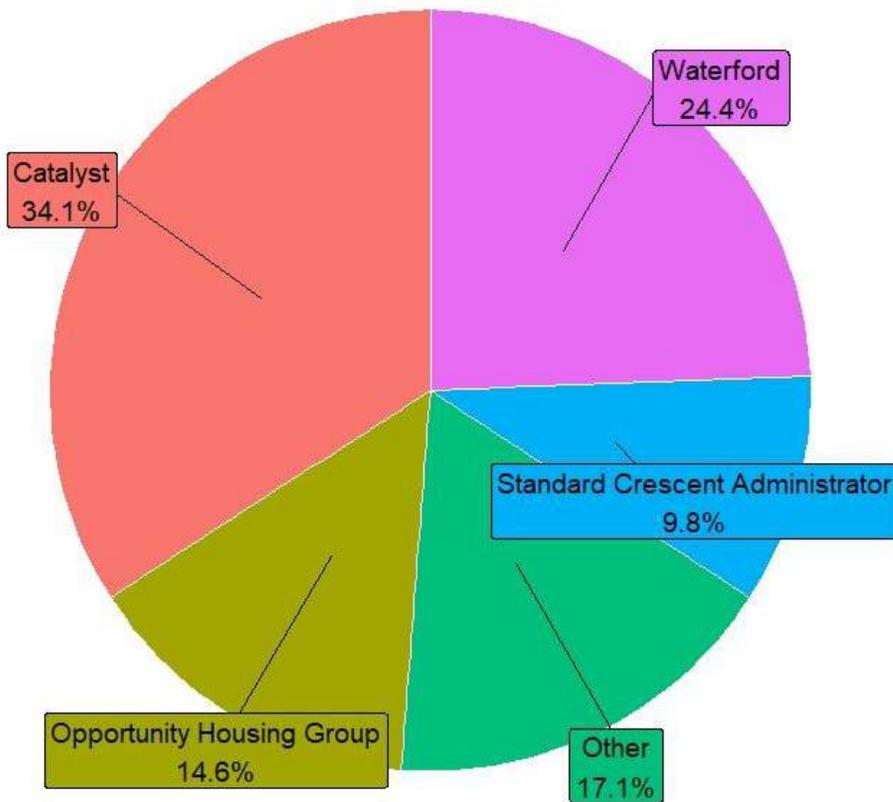
Figure 4: Percent of properties owned by each JPA



*CalCHA stands for California Community Housing Agency, CSCDA stands for the California Statewide Community Development Authority, CMFA stands for the California Municipal Finance Authority
(*Electronic Municipal Market Access, 2022*)

The project administrator market for JPA developments is similarly distributed among a handful of influential real estate firms. The top three project administrators have completed over 76% of these transactions. Catalyst is the market leader with 16 JPA properties under administration and 38% of market share, while Waterford is second with 10 properties under administration and 24% of market share (Electronic Municipal Market Access, 2022).

Figure 5: Percent of properties administered by each property administrator



(Electronic Municipal Market Access, 2022)

Although these programs are new, state and local governments have been using public dollars to increase the stock of middle-income housing (often referred to as “workforce housing”) for decades. New York City (NYC) was an early purveyor of this type of development. In the 1940s, for example, NYC acquired land via eminent domain and provided a private housing developer 25 years of property tax exemptions for the construction and operation of 11,000 apartment units (Schuetz & Ford, 2019). Other localities across the country provide property tax abatements to developers in exchange for a specified amount of middle-income housing units (Schuetz & Ford, 2019).

C. Arguments For and Against JPA Developments

Housing experts disagree on whether JPA middle-income housing programs appropriately address California’s housing needs. Proponents of these deals, including many housing directors and city managers, the JPAs, and project administrators argue the new model benefits the public by reducing rent burdens on middle-income households while exposing cities to minimal liability and providing them with valuable future equity in the buildings. They maintain that these programs, in addition to reducing rent burden, enable middle-income households to live closer to their jobs and urban amenities, reside in higher quality housing, and have additional money to save or spend on necessities.

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Critics, such as some city officials, HR&A Advisors (a consultancy), CSG advisors (a consultancy), and Burbank Housing (an affordable housing non-profit), allege these transactions offer only moderate affordability (which they say cannot be easily enforced), substantially decrease tax revenue, create financial risk for host cities, and pay unnecessarily high fees to their private sponsors. Critics also argue these deals benefit cities at the expense of other local taxing authorities, including school districts, counties, and special districts, who bear most of the burden from the lost tax revenue, yet have little to no say in these transactions.

D. Approach & Methodology

To understand the implications of JPA deals for host cities, current and future residents, and other taxing authorities that receive property tax revenue, we engaged in the following research and analysis activities:

- Interviews of real estate experts, an investment banker assisting with the underwriting process of these deals, city managers and housing department leads of participating cities, policy experts, city attorneys, and JPA project administrators. The detailed list of interviewees is located in Appendix C
- Analysis of public benefit deals, city staff reports, city minutes, Electronic Municipal Market Access (EMMA) bond documentation, CoStar real estate reports, and Low Income Housing Tax Credit (LIHTC) proformas related to cities that participated in JPA deals
- Analysis of detailed reports on JPA deals from consultancies, such as HR&A Advisors
- Creation of models that uses data compiled from EMMA bond documentation to estimate:
 - Capped and uncapped property revenue
 - How much residents are saving, which is calculated by taking the difference of the uncapped and capped property revenue. A more detailed look at the model and its calculations and assumptions is located in Appendix B
 - Long-run estimated property tax loss and administrator fee compensation

E. Evaluation Framework

Our team has evaluated JPA developments against the status quo on the following criteria.

Effectiveness:

- Does this policy increase the number of middle-income Californians with access to affordable housing?
- Does the policy/program deliver meaningful positive impacts to the communities in which they are located?

Efficiency:

- Do the benefits of this policy/program outweigh the costs? Is the affordability benefit greater than the lost tax revenues?
- How efficient are JPA developments at creating affordability for cities and passing that affordability on to tenants?

Equity:

- Does this policy significantly lower rent burdens for historically marginalized communities of color?
- Are the voices heard in JPA deals representative of host cities' populations?

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- Are those benefiting from this program currently rent burdened or living in poor housing conditions?

We begin by evaluating the policy effectiveness of JPA developments. In this section, we identify the steepness of rent reductions across AMI categories, the impact of rent reductions on middle-income tenants, and the enforceability of rent restrictions. Next, we evaluate the efficiency of JPA development deals. To do so, we detail the overall net cost of the program to taxpayers, the risk of a property foreclosing, and how the transaction fees compare to the typical fees in real estate. We then evaluate how equitable JPA deals are. To discern how equitable the program is, we look at who the policy benefits, the distributional impacts of JPA developments, and how impacted government agencies and individuals are brought into the deliberative process for approving JPA deals. Lastly, we provide our recommendations.

II. Evaluating Policy Effectiveness

Overview

In rent-restricted units in most JPA-owned properties, rents are capped at 35% of the income limits for each unit. JPA income limits are a percentage of county AMI, which is higher in every county with a JPA that we examined than for the state overall. **In the short-run, most JPA properties decrease monthly rents for one and two bedroom apartments by around \$150 and \$250**, respectively.

One sample of JPA properties reserved approximately 19% of units for tenants earning up to 80% of AMI, 21% of units for tenants earning up to 100% of AMI, and 26% of units for tenants earning up to 120% of AMI. The size of rent discounts depends significantly on the income limit.

In the long-run, the amount of rent savings depends on the relative growth rates of market rents and AMI. If the AMI outpaces market rent growth, savings for some JPA properties could shrink to zero. If market rent growth outpaces AMI growth, we project that in 40 years, families could save up to \$30,000 annually in real dollars. Long-term savings vary by project, depending largely on the size of the initial rent reduction. In a sample of nine JPA developments, **our projections of annual rent savings per unit ranged from \$1,379 to \$8,625 at year 40.** JPA properties in high rent-growth markets are more likely to deliver rent savings than those in slower growth markets.

Rental restrictions may deliver stability and decrease household expenditures. However, **JPA transactions deliver these benefits primarily to middle-income rather than low-income earners.**

JPAs submit publicly-available financial disclosures quarterly. Cities are unable to directly enforce rent restrictions. Interviewees expressed mixed opinions about whether the rent restrictions were likely to be followed. Some argued forcefully that reputational and relational costs of violating any of the contracts would incentivize all parties to comply with them.

A. Rent Reductions for JPA Developments¹

1. Defining “Rent Reduction”

Rent reductions are calculated for JPA-owned developments based on the county-level income limits set by HUD each year. The maximum rent values are set by multiplying the 80, 100, and 120% AMI values by a rent-to-income ratio, then dividing by twelve. Almost all of the JPA developments set rent caps under the assumption that residents will spend 35% of their income on rent. HUD defines cost-burdened families as those paying more than 30% of their income on housing, and with a rent-to-income ratio of .35, this would make most people utilizing the JPA’s rent restriction program cost-burdened.

County-level AMIs may also not be the best AMI value to use, as JPA development locations are chosen specifically because housing is expensive and most people who could afford to live in those locations without assistance have higher incomes. Most JPAs fall within Alameda, Los Angeles, Orange, San Diego, Solano, or Sonoma counties. County-level AMIs were 29% or more above the statewide AMI for every county except for Solano county. The statewide AMI may be more appropriate to use than the county-level AMI if JPAs hope to truly assist Californians not able to afford these locations at their current prices. Higher AMI values will increase the number of people who qualify for these capped rents, but it will lower the rental savings.

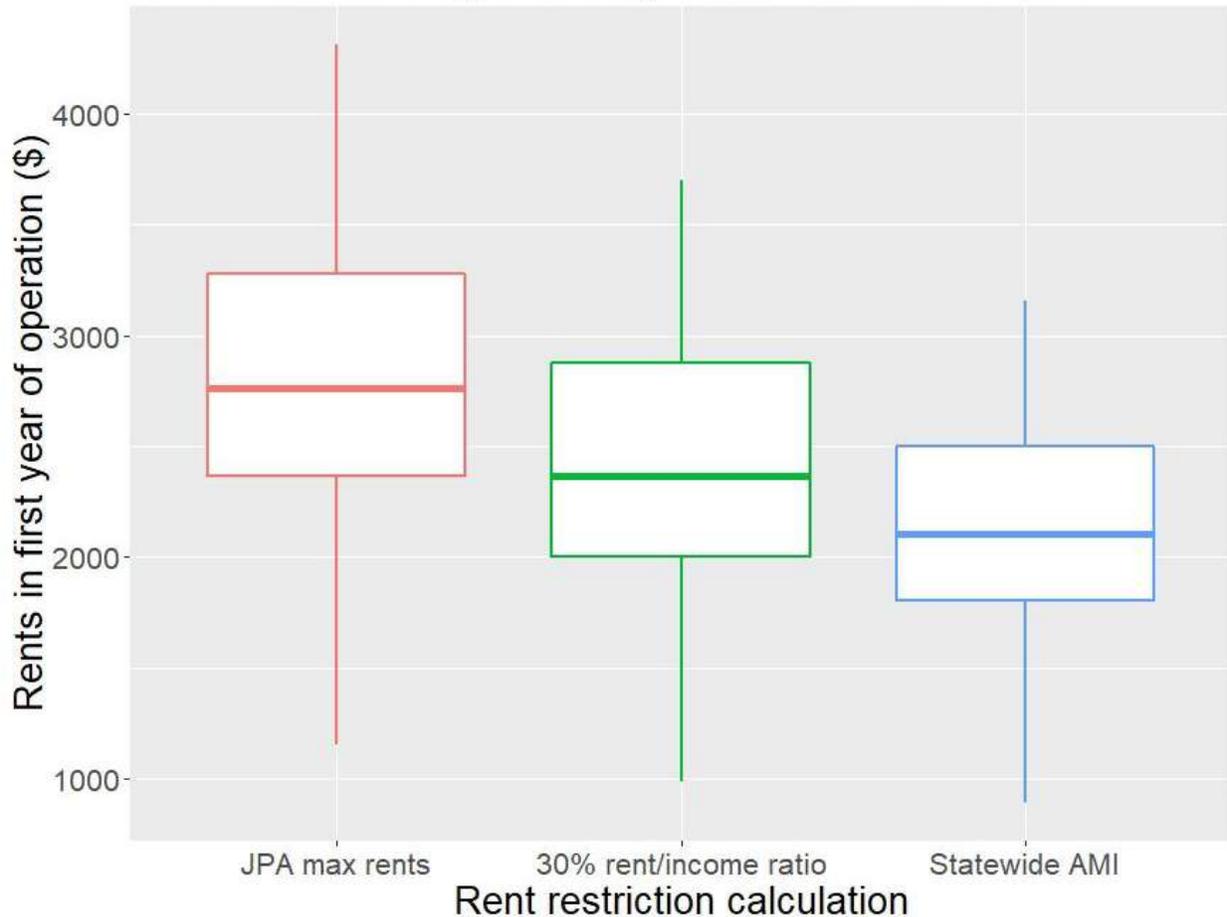
Average Median Income (AMI) Varies by County and Results in Variable Rent Savings Across California	
County	AMI for 2 Occupants (2021)
Alameda	\$ 109,600
Los Angeles	\$ 94,600
Orange	\$ 107,600
San Diego	\$ 97,000
Solano	\$ 77,700
Sonoma	\$ 93,100
Statewide	\$ 72,063

Source: U.S. Department of Housing and Urban Development

¹ All numbers in this section are based on data from 9 JPA-funded developments: 1818 Platinum Triangle, Aster, Latitude33, Verdant at Green Valley, Next on Lex/Brio Apartments, Creekwood, Oceanaire, Annadel Apartments, and The Crescent Apartments. In future iterations, we hope to add more developments to the analysis and some numbers may shift.

If JPAs were to adjust max rent reduction methods to either use a rent-to-income ratio of .3 or to use the statewide AMI values instead of the county-level values, restricted rents would be significantly cheaper.

Figure 6: Changes to the calculation methodology for max rents would result in significantly lower restricted rents



Given that the rent reductions are not as large as they could be, it is possible that JPA-restricted rents could still be unaffordable for those that they are meant to serve. Many JPA bonds are billed as “essential worker bonds,” so one way to measure if they meet their intended affordability goals is to estimate if essential workers like school teachers would be able to afford these rents. According to the California Department of Education, the average salary for a beginning teacher in a Unified School district is between \$45,813 and \$50,897, depending on the size of the school district (California Department of Education, 2021). Even using the .35 rent-to-income ratio instead of the .3 ratio, a beginning teacher would not be able to afford the vast majority of the units currently offered by JPA developments.

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2. Short-Run

In the first year of operation, renters in JPA-owned developments save on average approximately \$150 a month on studios, \$150 a month on one bedroom apartments, \$250 a month on two bedroom apartments, and \$550 on three bedroom apartments (Electronic Municipal Market Access, 2022).²

Savings appear to be most significant for larger apartments, with rent savings increasing exponentially as the number of bedrooms increases. While savings appear larger for 3 bedroom apartments, the majority of units in JPA developments are one and two-bedroom apartments.

² These numbers are based on ten developments found in a variety of locations with varying sizes and market conditions. Developments included in analysis: 1818 Platinum Triangle, Aster, Latitude33, Verdant at Green Valley, Next on Lex/Brio Apartments, Creekwood, Oceanaire, Annadel Apartments, and The Crescent Apartments.

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Figure 7: Average monthly savings in the first year are higher for larger units

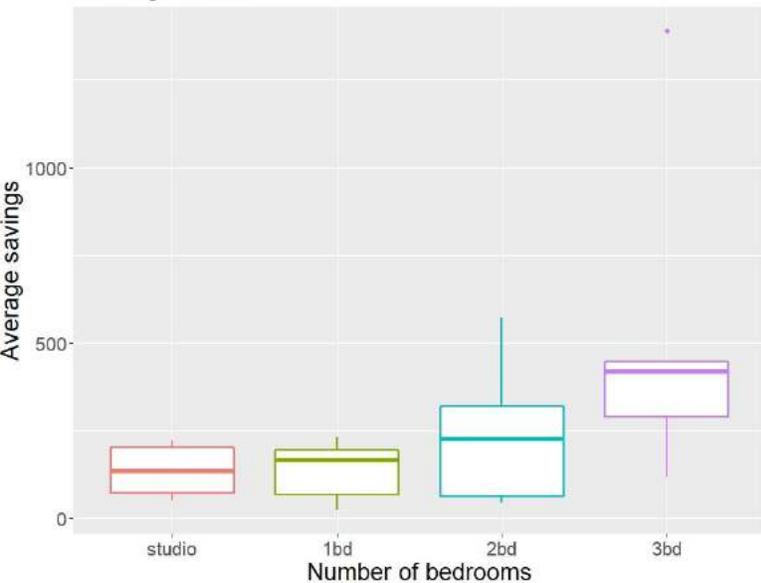
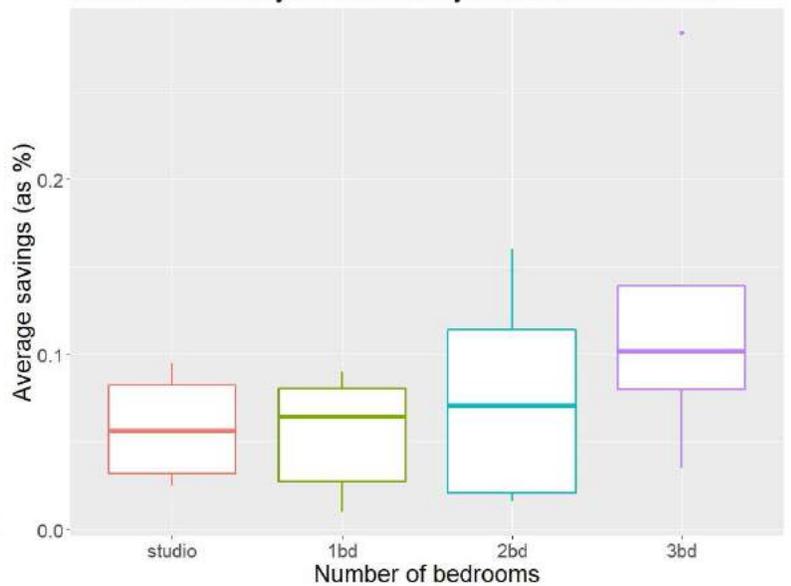
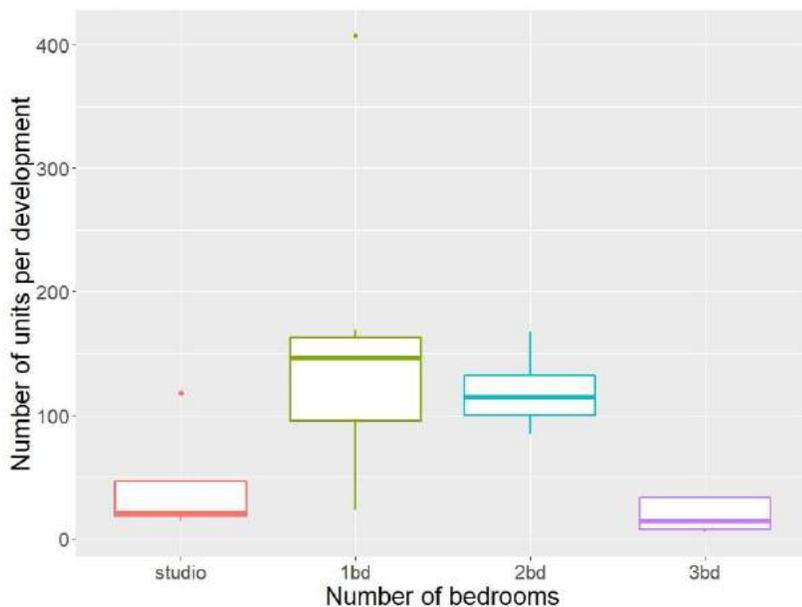


Figure 8: Average monthly savings as a percent of uncapped rents in the first year are mostly between 3 and 10%



These plots display the distribution of average monthly savings³ due to rent restrictions across multiple JPAs, along with the savings as a percent of uncapped rent, and the distribution of apartment sizes.

Figure 9: While savings are greatest for larger units, the majority of units are 1 or 2 bedroom



³ Average monthly rents are found by first calculating the total revenue from all units of each size, then dividing by the number of units in the development of that size. Numbers are calculated both assuming the implementation of rent restrictions and assuming that rents continue as previously without restriction, then average monthly rents are found for both numbers and subtracted to find the average monthly savings

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When averaged across multiple developments, approximately 38% of units remain uncapped and have no rent restrictions during the first year, about 19% are capped to the 80% of AMI level, 21% are capped to the 100% of AMI level, and 26% are capped to the 120% of AMI level (Electronic Municipal Market Access, 2022). The Next on Lex and Brio developments reserve 10% of units for households earning under 50% of AMI and 10% for households earning under 80% AMI. The remaining 80% of units are not rent-restricted.

The pace of conversion from unrestricted to restricted depends on how many tenants qualify for rent restrictions at the time of sale and how quickly non-qualifying tenants move out.

Average Year One JPA Rents Across AMI bands: 38% of Units Receive No Rent Reduction

Average rent					
Rent restriction	Studio	1 bedroom	2 bedroom	3 bedroom	Percent of units with this restriction*
uncapped	\$ 2,269	\$ 2,484	\$ 3,150	\$ 3,838	38%
capped at 80% of AMI	\$ 1,833	\$ 1,997	\$ 2,342	\$ 2,459	19%
capped at 100% of AMI	\$ 2,184	\$ 2,376	\$ 2,832	\$ 3,074	21%
capped at 120% of AMI	\$ 2,226	\$ 2,468	\$ 3,114	\$ 3,562	26%

*Percents will not all add up to 100% because not all developments have the same distribution of capped units

The 120% AMI rent cap benefits renters the least. The difference between the average rent for an uncapped unit and a unit capped at 120% AMI is often less than \$100. Four of the ten JPAs analyzed in this section have calculated 120% AMI rent caps that are actually higher than market rate rents. These are market rates that were determined by the JPAs themselves, and this does not even take into consideration that the market rates in some JPA analyses may be too high. The JPA bond documents typically use other Class A (high quality, professionally managed apartment complexes) in the area to estimate market rate rent values, meaning that the “market rate” rents at a JPA development could potentially be significantly higher than other rents available in the community.

Four JPAs Have Capped Rates in the First Year that are Higher Than Market Rate Rents in the Area

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Development	1 Bedroom		2 Bedroom		3 Bedroom	
	Market rate	100% AMI cap	Market rate	100% AMI cap	Market rate	100% AMI cap
Verdant at Green Valley	\$ 2,150	\$ 2,401	\$ 2,550	\$ 2,702	\$ 3,000	\$ 3,000
Oceanaire	\$ 2,514	\$ 3,154	\$ 3,420	\$ 3,549	\$ 4,898	\$ 3,941
Annadel Apartments	\$ 2,250	\$ 3,144	\$ 2,650	\$ 3,536	\$ 3,340	\$ 3,928
The Crescent Apartments	\$ 2,823	\$ 3,311	\$ 3,900	\$ 3,724	NA	NA

Source: Electronic Municipal Market Access, 2022.

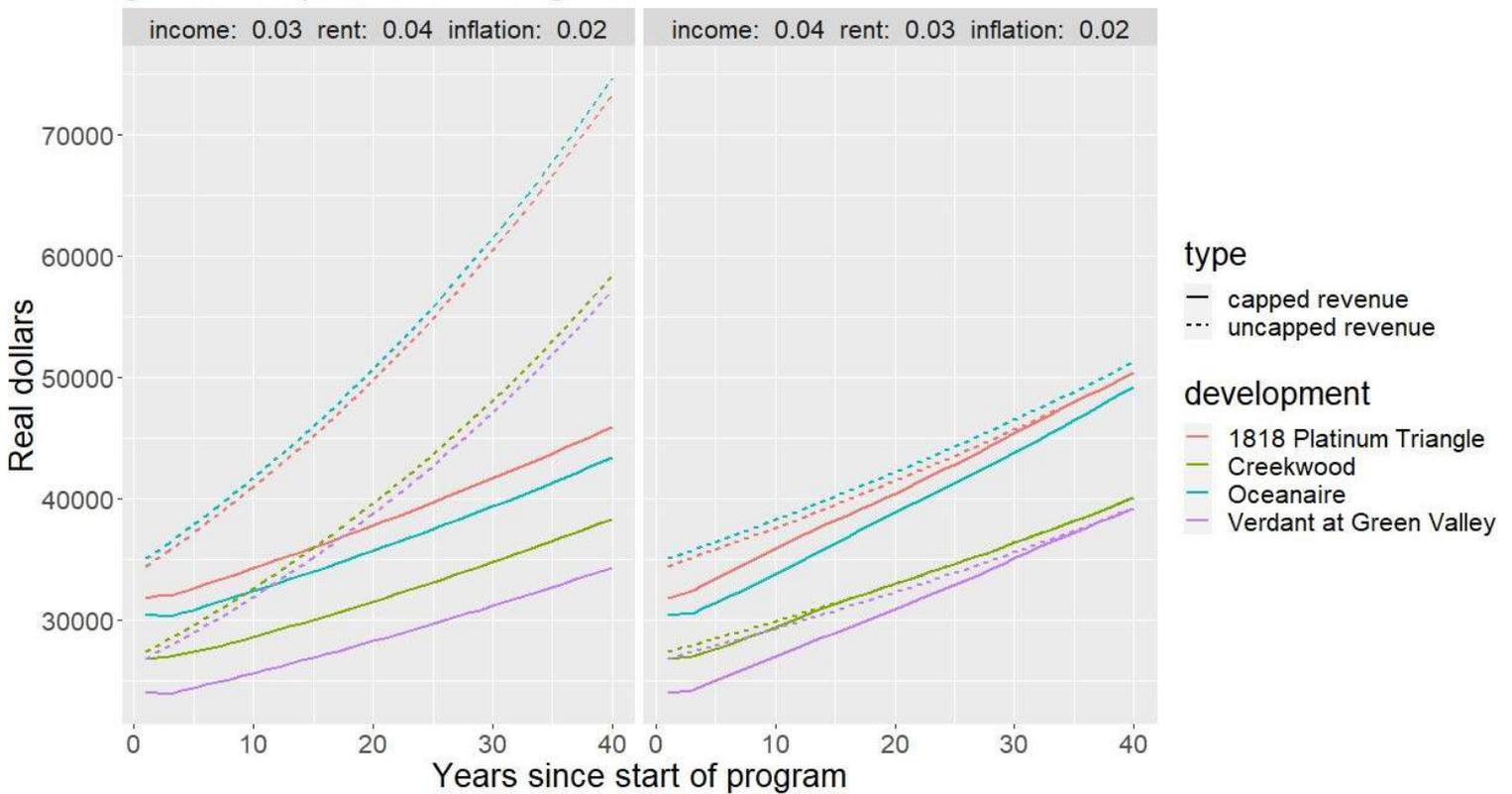
The Regulatory Agreements specify that property managers will charge the lesser of the AMI-capped rent and the market-rate rent, ensuring that nobody will pay *more* rent in a JPA-operated building than they would in a comparable market rate building (Electronic Municipal Market Access, 2022). However, if capped rents exceeded market rates, renters would only benefit if AMI subsequently grew more slowly than market rents.

3. Long-Run

While short-run affordability depends on county AMI levels at the time of the transaction, the allocation of units, and the percentage of existing tenants who qualify for those restricted rents, long-run affordability depends on the relationships between income growth, rent growth, and inflation. **Because rent caps are based on income and uncapped rents are based on market-rate rents, if the cost of rent in the area increases faster than median income over time, then the affordability benefits of the JPA programs increase over time. If income increases faster than rent, on the other hand, then affordability benefits decrease over time.**⁴

⁴ Real dollars are calculated to the year that the JPA program commenced. This means that some developments may display 2019 dollars while others display 2020 or 2021 dollars. This difference does not alter the overall patterns visible in the plots.

Figure 10: Rent restrictions provide significant savings to renters primary when rent growth outpaces income growth



Four developments were chosen to demonstrate typical patterns in uncapped and capped revenue growth over time.⁵ From the revenue projections for these four developments above, we can predict that rent caps lower building revenue at first. However, the impact on building revenue of capping rents either increases or decreases over time, depending on the relative growth rates of AMI and market rent levels. When AMI growth exceeds market rent growth, rent restrictions eventually have zero impact on building revenue. When market rents grow more quickly than AMI, rent restrictions cause significant drops in building revenue. The impact of rental caps also shrinks if inflation is higher than income and rent growth. We can estimate the total savings to all renters in each development from the JPA program by subtracting the annual revenue with rent restrictions from the annual revenue without rent restrictions. Below, we can see these annual savings over time.

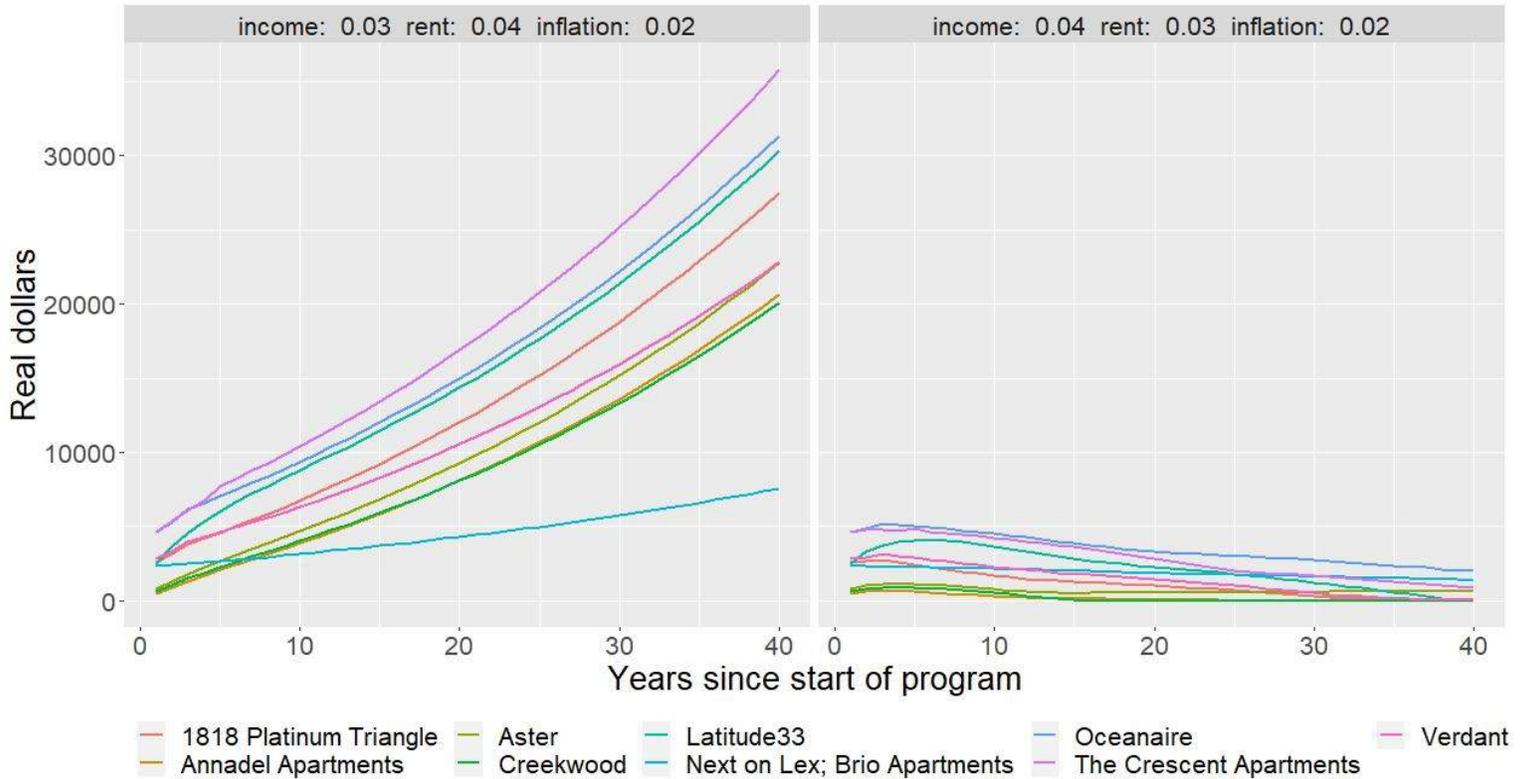
Based on the annual savings per unit averaged across all units in the development, a family moving into a JPA-owned development can expect to initially save between \$2,000 and \$5,000 a year. This amounts to approximately 6% of family income for a family at California’s median income (approximately \$80,000 a year). As time passes, these savings grow or shrink depending on growth rates, interest rates, and

⁵ 1818 Platinum Triangle, Creekwood, Oceanaire, and Verdant at Green Valley were chosen for this analysis. They come from a variety of locations (two in Southern California and two in Northern California) and have more typical rent cap and unit size structures (meaning no 50% AMI rent cap bands and standard target percent capped units). When we compare their revenue projections to other developments, they are fairly representative.

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inflation. Under optimistic assumptions, after 40 years, a family could end up saving \$20,000 to \$30,000 a year in real dollars. On the other hand, if income grows faster than rent, these savings could shrink to \$3,000 or less—with savings at some developments approaching 0.

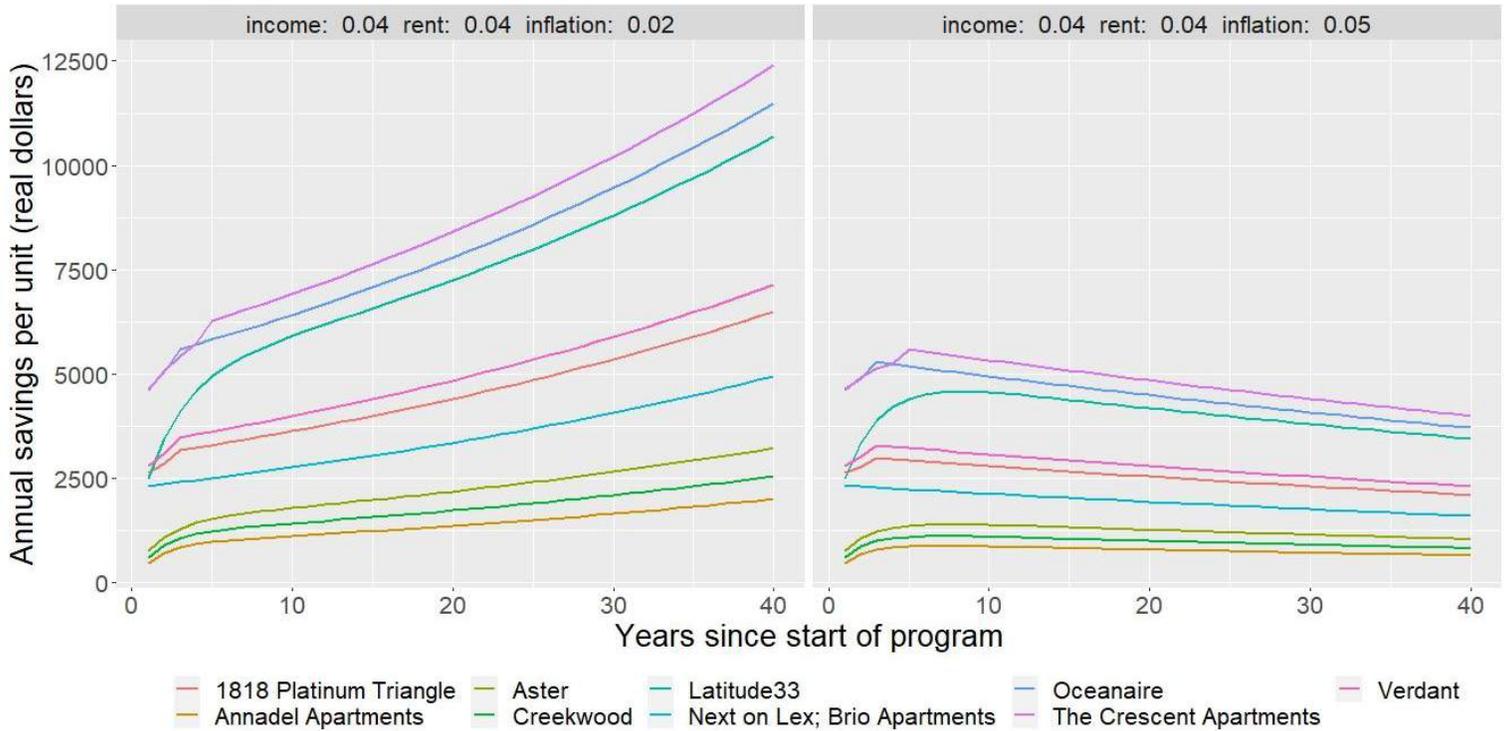
Figure 11: Annual savings in real dollars per unit will be much higher if rent continues to grow faster than income



Rent and income growth have mostly grown at similar rates over the past 20 years.⁶ Given this, the most likely scenario seems to be AMI and market rents growing at the same rate, say 4% a year. Under this assumption, families could be saving up to \$13,000 a year or less than \$5,000 a year, depending on which development they live in and on inflation rates.

⁶ See Appendix D, Section 1

Figure 12: Even assuming equal rent growth and income growth, the magnitude of savings is highly dependent on inflation



As an example, let’s look at a family of three earning 100% of AMI that moved into a two bedroom apartment at The Crescent Apartments. Assuming income and rent growth of 4% and inflation of 2%, after 35 years this family would be saving around \$1,500 a month in rent in real dollars, adding up to \$18,000 a year. If, however, inflation was high, this benefit would shrink. While an average inflation rate of 5% over the course of multiple decades is unlikely, for the purpose of demonstrating the impact inflation can have on benefits to renters we will examine how much savings can shrink if inflation is higher than rent or income growth. In a world with 5% inflation, this same family of three would be saving around \$600 a month in rent in real dollars after 35 years of the program, adding up to \$7,200 a year. While not an insignificant sum, this is markedly less than the almost \$20,000 in savings that would occur under more favorable circumstances

Savings also vary across the different developments when projecting rent savings over a forty year period. Given our assumption of 4% income growth, 4% rent growth, and 2% inflation, average savings per unit per year range between \$1,300 and almost \$9,000, depending on the development. This demonstrates that among existing JPAs, some offer significant long-term savings while others offer more modest savings.

Projected Rent Benefits Vary Widely Between Projects Over 40 Year Projection		
Development	Units	Average savings per unit per year
1818 Platinum Triangle	265	\$ 4,543

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Annadel Apartments	390	\$ 1,379
Aster	313	\$ 2,212
Creekwood	309	\$ 1,754
Latitude33	198	\$ 7,321
Next on Lex; Brio Apartments	699	\$ 3,469
Oceanaire	216	\$ 8,039
The Crescent Apartments	130	\$ 8,625
Verdant at Green Valley	286	\$ 4,994
<i>Source: Electronic Municipal Market Access, 2022.</i>		

The differences between JPAs in the table is largely a function of the year 1 rent savings projected out over 35 years. The chart shows the importance of strong year 1 savings as a predictor of long-term rent savings benefit. JPAs are not very effective at reducing rents for residents in cities like Hayward where the market rent is near the area median. Hayward had the second smallest rent reduction at \$1,754 of those JPAs in our sample.

It is extremely difficult to predict rent growth, income growth, and inflation rates over the course of several decades, so all projected numbers should not be understood as a precise prediction.

Additionally, the 4% rent cap only applies if AMI grows more rapidly than 4%. If AMI grows by a lower rate in any year, rent increases are capped at that rate.

We reviewed market rental growth rates from CoStar reports for ten JPA developments.⁷ Fairfield-Vallejo, Escondido, and Orange County stood out as markets in which rent growth is most likely to exceed 4%. However, it is unclear whether these markets will sustain high rent growth in the coming decades. These and other high growth markets in California are largely suburban. One key factor pushing rental growth in suburban markets is their affordability relative to nearby high-cost markets. If the high growth suburban markets continue at their current growth rates, they will lose their relative affordability and could experience declining rental growth.⁸ In parts of Los Angeles and the Bay Area, rents have grown less than 4% annually over the past 13 years. (CoStar, 2022).

4. Rent Stability

All observed JPA developments cap rent increases at 4%. Many (but not all) developments are new and are not subject to the statewide rent cap for multi-unit properties that limits rent increases to 5% +CPI for

⁷ See Appendix 3, “Historic Rent Appreciation for Ten Select Cities” for more detail.

⁸ Some examples of this phenomena include strong growth in Sacramento and Orange County as a result of their affordability relative to the Bay Area and Los Angeles, respectively.

multi-unit properties that are more than 15 years old. Many city officials we interviewed said the 4% rent cap on these buildings was a significant benefit for their communities. Rent stability could possibly be a benefit to families and individuals and helps them plan for the future.

In our interviews, economics experts emphasized that risk mitigation has a cost to society—individuals often pay greater than the expected value of the actual risk to reduce uncertainty. Certainty about housing expenses could make middle-income renters feel more confident in their economic situation and make them more willing to take needed risks with their money to make investments such as starting a business or investing in index funds. Rent stability to consumers has potential value in theory. However, the extent to which some renters will use their unlocked money that was previously tied in risk averse behavior to invest otherwise is difficult to measure. In general, unlike low-income households, middle-income earners are more likely to substitute excess earnings towards entertainment and recreational purchases, instead of towards needs-based purchases.

B. Possible Impacts of Reduced Rent on Middle-Income Earners

Research is not readily available on the societal benefits of rent decreases for middle-income households. Our team assumes that there may be some economic benefits, as these individuals can spend money saved on rent elsewhere in the community. Future research on the effects of rent decreases on middle-income households would be beneficial in continuing to evaluate the societal benefits of JPA developments.

Rent reductions and housing stability do have well being implications for low-income residents. Multiple studies connect housing instability amongst low-income families with health problems and/or poor health (Einstein et al., 2020). When low-income families with children under four experience housing instability, such as falling behind on rent, moving twice in one year, and/or homelessness, the children of these families are 20% more likely to be hospitalized and 25% more likely to experience a developmental delay (Einstein et al., 2020). **However, middle-income households are less likely than low-income households to experience these wellbeing issues, as they are less likely to face severe housing instability (Taylor, 2018).** When families move into JPA developments, they pay less in rent and face caps on how much their rent can be increased year-over-year. As a result of these changes, they may experience benefits that extend to the whole family, but these benefits would be more significant if they were low-income families.

Individuals experience well being benefits such as improved mood when their commute times are shorter (Humagain & Singleton, 2020). Similarly, long commute times are also shown to negatively impact individuals' job performance (Bai et al., 2021). Residents in JPA developments report decreased commute times and improved job performance after moving into the JPA developments. René Maher, a resident in a Larkspur JPA development and a fifth-grade teacher reported better job performance when her commute was reduced from two hours to eight minutes (Khoury, 2021).

Similarly, opportunities to move into JPA developments with subsidized rental rates may keep individuals facing high housing costs in the state of California. In a national survey, over 50% of mayors surveyed said high housing costs were one of the top three reasons that residents were leaving their cities (Einstein et al., 2020). As an example of this phenomenon and the potential benefit of JPA developments, art teacher Victoria Dries and school administrator Nicky Dries-Belmares decided to stay in California instead of moving out-of-state because of the opportunity to live at Long Beach’s Oceanaire at below market prices (Khouri, 2021). Keeping residents in California by lowering their housing costs is especially beneficial to the public when those individuals are public servants, such as teachers or school administrators. Further, research demonstrates that communities and students benefit when teachers live in the communities in which they teach (Simmons, 2017). Teacher-student relationships are easier to develop when teachers understand their students’ environment and stronger teacher-student relationships lead to better learning (Simmons, 2017). As such, keeping teachers in the communities in which they teach and/or providing opportunities for teachers to move into the communities in which they work provides positive benefits to students in the form of better learning outcomes (Simmons, 2017).

Benefits of JPA Development Rent Decreases and Rent Caps

As an example of the benefits that JPA development residents experience from rent reductions and year-over-year rental increase caps, a housing programs manager for a city hosting a JPA development shared in an interview that families living in these developments in their city have expressed a sense of increased stability now that their rents are “more controlled.” Families expressed appreciation for the 4% cap on year-over-year rent increases that is written into the JPA deal. The host city has experienced some of the fastest appreciation or rental rates in California. The interviewee noted that JPAs would not work in all areas of the city as many areas of the city were more affordable, but the neighborhood where the JPA development was located and downtown were experiencing a rapid increase in rental prices due to new restaurants and investment in those neighborhoods. The interviewee shared that rent increases were expected to continue into the coming years and that JPAs provided an opportunity to “lock in” lower rents.

2. Off-Setting Shifts in Rental Market

While JPA developments may produce benefits to residents and communities, it is important to note that thus far, almost all JPA developments have converted existing market-rate housing to middle-income housing, which does not help to address California’s housing supply problem. California’s housing supply is approximately 4 million units below demand (Conklin, 2021). California’s population is expected to grow from 39 million to 50 million by 2050. In the last ten years, approximately 80,000 new homes have been built in California annually. To meet the housing need, 100,000 additional units should have been built annually. As such, our team believes that the potential benefits of JPA developments for residents and communities would be far more significant if new middle-income housing was being built. As of now, JPA developments are simply shifting existing supply from residents paying market-rate to those paying reduced rents.

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Based on supply and demand, our team assumes that there will be shifts in the overall housing market that will reduce the benefit of the program. Specifically, some tenants in the upper income bands with AMI between 120%-140% are likely to see their rents increase as part of this program because the supply of housing for middle-upper income will be reduced. While these residents are more capable of affording higher rents, their rent burden will increase, undoing some of the positive society-wide impacts of this program. On the other hand, middle-income residents opting to move into a JPA development could reduce demand for below 80% housing, possibly leading to lower prices in that market segment.

C. Compliance and Enforcement

We cannot accurately measure the risk of a JPA or project administrator violating its agreements to restrict rents for middle-income tenants and perform necessary maintenance on a building. Some individual city staff and outside experts we interviewed expressed significant concern with the enforcement mechanisms available to host cities. Others expressed confidence that reputational incentives and legal liability will ensure JPAs, project administrators, and Trustees for the bondholders comply with the agreements.

1. Reporting and Oversight

JPAs submit publicly-available reports on project performance and compliance with rent restrictions. However, **no third party or independent regulator is responsible for assuring compliance** with these agreements.⁹

JPAs File Ongoing Publicly Available Reports				
Report	Filer	Recipient	Public?	Contains (partial list)
“Certificate of Continuing Program Compliance” (Annual)	JPA or Property Manager	Project Administrator	<input type="checkbox"/>	<ul style="list-style-type: none"> Statement that units allocations were met Tenancy dates for middle-income residents
Public debt reporting (Annual)	JPA	California Debt and Investment Advisory Commission		<ul style="list-style-type: none"> Contents required by CA Gov Code § 8855(k) Debt issued and remaining Use of proceeds Repayments
Financial disclosure (Quarterly)	JPA	Trustee for bondholders; publicly available		<ul style="list-style-type: none"> Leases, occupancy Revenues Expenses

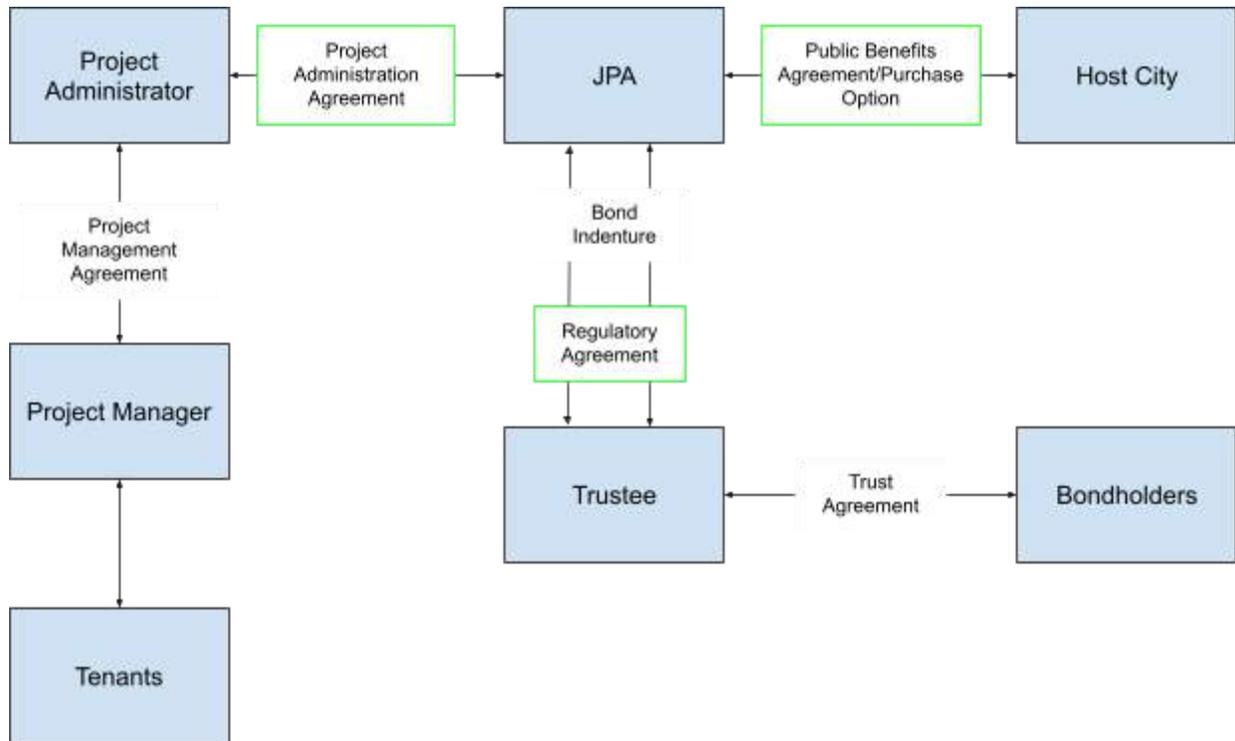
⁹ JPAs report annually to the California Debt and Investment Advisory Commission (CDIAC), however this body does not appear to have responsibility for auditing these transactions. The California Debt and Investment Advisory Commission is responsible for collecting and analyzing data on all public bond issuances in California for the purpose of recommending policy changes and providing technical assistance.

		on EMMA database.		<ul style="list-style-type: none"> • Debt payments
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2. Enforcement Mechanisms

Interviewees who we asked about enforcement agreed unanimously that after the Project Benefit Agreement is signed, **cities have little direct control over the project until year 15** when they acquire the right to force a sale. This arises from the financial structure of the transactions, in which cities are not direct parties to most critical contracts. These purchases have a very similar financial structure to typical local government projects financed by municipal bonds.

Figure 13: JPAs connect project administrators, host cities, and investors



JPAs are Parties to the Key Financing and Regulatory Contracts		
Contract Name	Parties	Major Provisions (Partial)
Public Benefits Agreement/Purchase Option	JPA & Host City	<ul style="list-style-type: none"> • City gets the right to force a sale after 15 years • City retains surplus proceeds from a sale (after debt repaid)

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		<ul style="list-style-type: none"> ● City receives host fee (sometimes)
Project Administration Agreement	JPA & Project Administrator	<ul style="list-style-type: none"> ● Administrator hires property manager ● Administrator rents to income-qualified tenants ● JPA can terminate the agreement with 30 days notice
Regulatory Agreement	JPA & Trustee for Bondholders	<ul style="list-style-type: none"> ● JPA causes property manager to maintain rent restrictions ● JPA reports compliance ● JPA discloses ongoing financial performance
Bond Indenture	JPA & Trustee for Bondholders	<ul style="list-style-type: none"> ● JPA makes interest and principal payments
Property Management Agreement	Project Administrator & Property Manager	<ul style="list-style-type: none"> ● Property manager leases to tenants, collects rents ● Property manager oversees regular maintenance

This arrangement shields host cities from legal liability, but it would prevent them from suing a project administrator if, hypothetically, the administrator violated its agreements. The city could sue a JPA, hoping to cause the JPA to sue the project administrator to remedy the situation.

Because host cities have little direct control over the project, most of their power to enforce rent restrictions lies in their ability to impose reputational costs on project administrators. They could do this by expressing complaints to the JPA or by unofficially “blacklisting” the project administrator for future local projects. We are not aware of any alleged contract violations to-date. Thus, **our analysis of this risk remains speculative.**

Some interviewees expressed confidence that JPAs, project administrators, and trustees for the bondholders have strong financial and reputation incentives to comply with their agreements. Project administrators such as Waterford, who are “repeat players” in affordable-housing development, have an interest in future transactions that require the trust and support of city leaders, financial institutions, and the public at large. **Multiple interviewees, including city officials in cities with JPA developments, doubted the administrator would risk their reputation** by going back on these commitments.

Further, project administrators’ B-bonds, which act as delayed compensation, may incentivize administrators to avoid default and foreclosure on the property. This could incentivize project administrators to seek additional financing or loan its own resources.

III. Evaluating Policy Efficiency

Overview

JPAs cost taxpayers money in the short-run and long-run despite analyses conducted by cities and project administrators that say otherwise. In year one, **JPAs cost more to taxpayers in total lost tax revenue than the rent savings they produce**¹⁰. In the long-run, the median yearly lost tax revenue is between \$5,081 to \$6,866 per unit. The future equity benefits of these deals are also overstated and do not offset the tax loss. When property value at time of projected bond repayment is given a 10% discount in our models, **the annual median loss per unit in the eight properties analyzed is \$2,563**. Compared to the discounted rent reduction benefit, **JPAs are generally projected to run mostly at a loss in the long-run**.

JPA developments carry some **risk of default during the first three years** when projected revenue from rent is not enough to cover interest payments. Although no defaults have been recorded, Catalyst has loaned millions to Santa Rosa's Annadel development because of revenue shortfalls. Maintenance and repair allowance for JPAs are higher than the commercial real estate lender standard of \$300 per unit, but it appears likely that **JPAs will need to put aside more money than they currently plan to in years 15 to 35 as these developments age**. The fixed \$500,000 emergency fund per JPA that does not vary by property value or property size also appears ill conceived.

Of the deals we examined, the median project administrator costs and issuance costs are 14.6% and 3.1%, respectively. This is greater than LIHTC benchmarks. **JPA acquisition costs are inflated** most likely due to a lack of incentive among all parties involved to keep the sale price low—we estimate that **the median JPA is acquired for 19% more than the market comparable**. The inefficiencies and excess costs of these properties make them more risky and less financially secure than they could be.

A. Estimated Tax Revenue Loss

1. Short-Run Losses

City staff, JPAs, and project administrators **consistently undervalued tax losses** by assuming that the properties would not have been sold otherwise. The city of Berkeley made this assumption in their review of the K Street Flats apartments in 2021. From discussions we had with those we interviewed concerning sourcing properties, we believe most prior owners could have sold the buildings to private buyers. The chart below compares expected tax revenues for ten developments under scenarios in which the buildings were held by the previous owners or sold to private buyers instead of the JPA.

¹⁰ See Appendix D, section 2

Year One Tax Loss Across All Entities is More Than Most Cities Calculate				
JPA Development	Assuming Property Would Not Have Sold Otherwise	Assuming Property Sold at Same Price to Private Buyer	Difference	Lost Tax per Unit, Assuming Property Would have Sold to Private Buyer
Latitude33	\$728,344	\$1,129,932	55%	\$5707
Aster	\$1,184,387	\$1,978,168	67%	\$6320
Next on Lex/Brio	\$2,320,060	\$4,456,352	92%	\$6375
Creekwood	\$1,219,408	\$1,561,650	28%	\$5054
Annadel	\$541,612	\$1,991,780	268%	\$5107
K Street Flats	\$1,098,682	\$1,207,649	10%	\$6862
Monrovia Station	\$1,387,305	\$1,260,108	-9%	\$4828
1818 Platinum Tri	\$923,551	\$1,481,673	60%	\$5591
Oceanaire	\$496,401	\$1,454,887	193%	\$6736
Westgate/Hudson	\$1,578,228	\$2,908,644	84%	\$6060
Median			64%	\$5707

Source: *Electronic Municipal Market Access, 2022.*

Additionally, most staff reports and JPA presentations only show the city loss in tax revenue, which is, on average, only 15% of the total property taxes collected (California Board of Equalization, 2018). Our interviews with housing directors and city administrators showed difficulties in assessing the benefits and tax losses of these developments. For instance, CSCDA’s presentation to Monrovia shows a city tax loss of \$191,933 in year one of their JPA development and projected resident rent savings of \$592,454. However, our team’s calculations, computed by multiplying the property value by Monrovia’s ad valorem rate, show a loss of \$1,260,101 in year one. The city manager of Fairfield reached a similar conclusion on the Park Crossing development, concluding that the year 1 loss of property taxes to all government entities outweighed the rent savings (Chatwin, 2021).

None of the ten developments analyzed would have rental savings greater than the lost tax revenue in year one. More details on the specifications of the tax analysis in both the short and long-term can be found in appendix B3 under “Tax Costs Model and Specifications.”

2. Long-Run Losses

Because Proposition 13 restricts tax increases on property to 2% per year (Picker, 2005), effective property taxation decreases over time, as general inflation and rent growth are higher than 2%. Thus, the JPA model is likely to deliver greater value in the long-run in terms of greater relative rental savings to property tax loss. The assumptions underlying growth in rents and projected values of real estate are often key to determining the extent of the benefits and costs. However, the long-term losses in tax revenue have been generally understated in past analyses. In our reviews of long-range property tax models developed by cities, project administrators, and JPAs, **all analyses assume the property would never have sold and been reassessed over the next 35 years.**

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As a result, city models greatly underestimate the extent of property tax loss. To provide a complete picture, we conducted a scenario analysis of the 10 properties. The range of tax losses estimated over the next 30 years is included below and the scenarios and assumptions for property resale are shown and explained in the appendix “Tax Costs Model and Property Values by Selected Developments.” All values are in 2022 dollars.

Projected Tax Loss for JPAs Over 30 Years Across All Entities is High		
JPA Development	30 Year Total Tax Loss Range	Loss Per Unit/Per Year
Latitude33	\$33,627,960 to \$44,246,760	\$5,661 to \$7,449
Aster ¹¹	\$59,345,040 to \$75,973,733	\$6,320 to \$8,091
Next on Lex/Brio	\$131,069,168 to \$167,795,218	\$6,250 to \$8,002
Creekwood	\$46,846,800 to \$59,973,441	\$5,054 to \$6,470
Annadel	\$59,753,400 to \$80,189,304	\$5,107 to \$6,854
K Street Flats	\$36,224,058 to \$46,374,169	\$6,861 to \$8,783
Monrovia Station	\$29,729,318 to \$47,446,905	\$3,797 to \$6,060
1818 Platinum Triangle	\$43,578,609 to \$61,684,419	\$3,632 to \$5,140
Oceanaire	\$43,646,616 to \$55,876,554	\$6,736 to \$8,623
Westgate/Hudson	\$69,995,149 to \$111,709,701	\$4,861 to \$7,758
Median		\$5,384 to \$7,603

Source: Electronic Municipal Market Access, 2022.

These intervals show a range of possible outcomes, which our team believes are more realistic concerning future assumptions of rent growth and sales than those presented in city and JPA reports. Without further discounting, the lost tax revenue for these developments over 30 years is still mild compared to the expected equity growth. Reviewing the ten JPAs in the tax loss dataset, the lost tax revenue over the 30-year period amounts to between 25% to 50% of the original purchase price of these developments. In inflation adjusted dollars, equity growth covers the expense of the lost tax revenue.

B. Equity Growth

Equity growth is perhaps the most promising yet misunderstood aspect of these developments. We have reviewed several slide decks from project administrators and JPAs that report speculative, unsupported, and non-inflation-adjusted numbers to cities claiming a risk-free financial windfall to cities at the time of sale (at 15 or 30 years). One projection, completed by Waterford and CSCDA for the City of Milpitas’s potential Turning JPA development, claimed a 45.56x return to the city over 30 years (CSCDA, 2021). Given the rent cap of 4% sets a ceiling on likely property value, as property values are a

¹¹ Debt for Aster is projected to be paid off in 29 years, but this calculation assumes the property will not be sold until the end of year 30 (Electronic Municipal Market Access, 2022).

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function of rental income in commercial real estate under the market capitalization formula, our team is skeptical of this projection.¹²

The 4% cap in rent assumes cities will not take proactive measures to undermine rent savings for tenants. Ironically, **in the event of a future sale, the very rent restrictions that had been delivering value to society in terms of reduced rent would then become a significant drag on the value of the property.**¹³ When the development is taken out of the regulatory agreement and city ownership is assumed, statewide rent control laws capping annual rent increases to 5% +CPI up to a maximum of 10% would still be in effect, and all current leases in contract would still be valid provided the current the California Tenant Protection Act is extended past the 2030.¹⁴ Under these conditions, a city could decide to reduce the rent savings benefit by 1) converting to condominiums to get around rent control or 2) holding the property for up to a few years to allow current leases to expire and tenant turnover to occur. Alternatively, the city could unlock value by 1) refinancing or using the development as collateral for another project or 2) as the debt would be retired, using property cash flow to fund other efforts. Options for cities at the point of debt retirement or upon taking ownership are described in figure 14 on the following page.

Several city administrators and housing experts we interviewed noted the speculative nature of real estate appreciation. Financial experts we talked with noted that municipalities typically need to be fairly conservative with their finances. However, real estate has historically been a strong investment in California with robust year-to-year growth over the last 40 years. Assuming growth will continue at current rates is speculative, however it can be more reasonably approximated by taking a historical average stretching from the Great Recession to today. By factoring in these corrections, rent growth, and the appreciation for similar properties (CoStar, 2022), we expect rental and property value appreciation in the next 30 years, absent the impact of rent cap restrictions, to be 2.29% to 4.76% annually. Adjusting for inflation, cities could typically expect a 3-5x equity gain relative to the foregone tax revenue of all agencies.

Figure 14: City Post-JPA Options: Equity Gains and Maintaining Reduced Rents are Competing Goals



multi-unit residential would experience a greatly reduced appreciation rate in any long range projections.

¹³ Upon transfer out of the JPA, the property would no longer be tax exempt, or at the very least, no city would in good conscience allow the property to remain tax exempt if the property was to be transferred to the private market.

¹⁴ Extension of the current law is uncertain. Over the last 22 years, California has grown consistently more liberal in its politics. While housing policy at the state level does not align on traditional Democratic and Republican lines, it would seem more likely that 2030 would bring about a more renter friendly than the current legislation. In estimating for the future, the status quo rent caps seem more likely than an outright sunset of the law in 2030.

Equity gain is a strength of the JPA model compared to LIHTC construction. When comparing interview responses, the ability of private investors to profit from LIHTC equity garnered agreement from those in favor and opposed to JPA developments. Neither the state, federal, or local government captured the appreciation of LIHTC construction at the 15 year mark when the investors often sell. LIHTC also gets a property tax exemption that inflates the value of an LIHTC property at the time of sale.

On the other hand, using projected property appreciation as an offset for lost tax revenue requires discounting to best account for the time value of money and risk. Imagine, for instance, if in year one, instead of spending money on this program, the municipality invested in free tutoring for students that improved life outcomes. Just as interest in a bank account can compound over time, the impacts of the lost tax revenue can also be compounded. Given the nature of such long-term projections, Keyser Marston Associates Inc. applied a 10% discount rate to the property values and a 4.5% discount to the tax revenue for the Escondido JPA developments (October 27, 2021 City Council Meeting Agenda., 2021).¹⁵ Fairfield also applied a similar discounting in their already mentioned analysis of the Park Crossing development.

The impact of a discounting is shown in the table below which provides strong evidence that **equity gain is an overstated benefit**. In the table, we have our six case study cities plus Creekwood and Annadel. We assess the properties under three assumed rent growth rates: 2.28%, 3%, and the projected market appreciation rate of the property. To simplify the analysis, we include lost tax revenue from only one of the tax loss scenarios: reassessment on purchase and reassessment in year 15. The projects for each development are based on each JPA’s repayment period as outlined in the initial Emma filing. More information about the assumptions in this model can be found in the appendix “Property Values and Tax Losses Assuming a Discount Rate.”

JPA's Lose Money Over Repayment Period When Future Property Equity is Included, Provided Proper Time Value of Money Discounting is Applied					
Property	Assumed Rent Growth	Lost Tax Revenue Assuming Reassessment Yr 0, Yr 15	Property Value at Projected Debt Retirement YR	Net Loss or Gain	Net Loss or Gain per Unit per year

¹⁵ Keyser Marston does not explain their differences in discount rate between the property value and the tax revenue, but we believe the difference is related to the timing of access to funds. Tax revenue loss occurs every year over the bond repayment period while property value is only accessible when the development is sold. There is less uncertainty, risk, and time value loss associated with tax revenue loss than there is for the value of the JPA development in year 35 when the bond debt is retired.

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Latitude33	2.28%	\$ 26,685,084	\$ 7,598,064	\$ (19,087,021)	\$ (2,754)
Latitude33	3.00%	\$ 28,200,249	\$ 9,712,491	\$ (18,487,758)	\$ (2,668)
Latitude33	Property Market	\$ 30,586,139	\$ 13,620,550	\$ (16,965,590)	\$ (2,448)
Aster	2.28%	\$ 42,466,527	\$ 19,757,437	\$ (22,709,090)	\$ (2,502)
Aster	3.00%	\$ 44,590,942	\$ 24,214,709	\$ (20,376,233)	\$ (2,245)
Aster	Property Market	\$ 42,890,859	\$ 20,615,209	\$ (22,275,650)	\$ (2,454)
NextonLexBrio	2.28%	\$ 97,995,514	\$ 39,286,866	\$ (58,708,649)	\$ (2,625)
NextonLexBrio	3.00%	\$ 103,186,850	\$ 49,174,002	\$(54,012,847)	\$ (2,415)
NextonLexBrio	Property Market	\$ 97,995,514	\$ 39,286,866	\$ (58,708,649)	\$ (2,625)
Creekwood	2.28%	\$ 37,174,744	\$ 10,182,972	\$ (26,991,772)	\$ (2,496)
Creekwood	3.00%	\$ 39,285,506	\$ 13,016,740	\$ (26,268,765)	\$ (2,429)
Creekwood	Property Market	\$ 37,596,349	\$ 10,718,905	\$ (26,877,444)	\$ (2,485)
Annadel	2.28%	\$ 42,734,075	\$ 19,554,220	\$ (23,179,855)	\$ (1,981)
Annadel	3.00%	\$ 44,870,179	\$ 24,134,353	\$ (20,735,825)	\$ (1,772)
Annadel	Property Market	\$ 48,233,846	\$ 32,249,212	\$ (15,984,634)	\$ (1,366)
K Street Flats	2.28%	\$ 28,745,189	\$ 7,765,327	\$ (20,979,862)	\$ (3,406)
K Street Flats	3.00%	\$ 30,377,325	\$ 9,926,301	\$ (20,451,023)	\$ (3,320)
K Street Flats	Property Market	\$ 29,071,192	\$ 8,174,019	\$ (20,897,174)	\$ (3,392)
1818 Platinum Triangle	2.28%	\$ 35,216,085	\$ 9,271,663	\$ (25,944,422)	\$ (2,720)
1818 Platinum Triangle	3.00%	\$ 37,254,990	\$ 11,935,258	\$ (25,319,731)	\$ (2,654)

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1818 Platinum Triangle	Property Market	\$ 40,465,602	\$ 16,900,204	\$ (23,565,398)	\$ (2,470)
Oceanaire	2.28%	\$ 34,635,275	\$ 9,493,679	\$ (25,141,596)	\$ (3,326)
Oceanaire	3.00%	\$ 36,601,846	\$ 12,135,627	\$ (24,466,219)	\$ (3,236)
Oceanaire	Property Market	\$ 37,126,621	\$ 12,900,385	\$ (24,226,236)	\$ (3,205)
MEDIAN					\$ (2,563)

Source: Electronic Municipal Market Access, 2022.

Under these discount conditions, **all developments show a negative return during the bond repayment period** (Electronic Municipal Market Access, 2022). Repayment speed is key to delivering the most value to taxpayers as properties with short repayment periods, such as Aster, had lower costs. Failure to retire the bond debt on schedule makes these deals more expensive in terms of increasing lost tax revenue. These projections also do not figure in losses in federal and state income tax revenue, or vehicle license fees¹⁶ that are occurring through the repayment period. Overall, the **equity gains of these developments is not enough to offset the costs**. Providing a proportional discount to the rent benefit shown in the Effectiveness section, the rent savings is below the lost tax revenue for all studied developments.

C. Transactional Efficiency

1. Project Administrator Compensation Packages

Project administrators profit from these transactions in three ways. First, they receive an initial payment at close of the transaction, which is generally \$2 million. According to our interviews, a portion of this amount goes to paying the upfront cost to the project administrators for sourcing and completing the research for potential JPAs which is done at the expense of the project administrator with no guarantee that the city will agree to the deal. Second, project administrators receive on-going payments for their role as project administrators. This payment is typically around \$300,000 annually with an annual 3% adjustment. Lastly, a subordinate bond is issued to the project administrator. This bond is typically in the amount of \$5,000,000, which is paid to the project administrator when the development is sold or the bond debt is retired and the city retains ownership. As interest on the subordinate bond debt, the project administrator is paid a preferred interest rate of 10% or \$500,000 per year on the \$5,000,000 bond.

¹⁶ Milpitas and Escondido noted lost vehicle license fees as part of their lost tax revenues for JPA developments in their meeting minutes. For more information about how vehicle license fee taxes are kept by cities, see Coleman Advisory Service. "The VLF for Property Tax Swap of 2004 Facts for Local Officials. Rev. Oct 2006." Californiacityfinance.com, <http://www.californiacityfinance.com/VLFswapNtakeFAQ.pdf>

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An important distinction within the compensation package is which forms of compensation are revocable. If the development goes into default, the project administrator would potentially lose their \$5,000,000 bond, but outside of default, their future earnings for which they can be denied are only tied to the project administrator fees, which can be revoked within 30 days by the JPA. We completed a detailed analysis of the project administrator fees for several developments including Union South which is administered by Standard Properties. Our numbers were drawn from the EMMA filing (Electronic Municipal Market Access, 2022) and we applied a 2% inflation adjustment. Details of costs over the 35-year proforma of the project are below.

Projected Project Administrator Compensation for South Union, Carson		
Fee Category	Cost	Percentage of Total Fees
Initial Payment to Project Administrator	\$2,750,000.	10%
B-Series Bond Value at Time of Redemption	\$3,000,166	11%
B-Series Bond Interest Payments (10% annual)	\$12,031,861	36%
Project Administrator Fees	\$10,113,333	43%
Total	\$27,895,360	100%

Source: Electronic Municipal Market Access, 2022.

As can be seen in this example, the initial payment, which is the most prominently mentioned fee/payment in the disclosures and information communicated about the development, is the smallest component of the compensation package. Standard Properties' initial payment is among the highest of the JPAs, with \$2 million as the most common. The initial payment is a small percentage of the total cost for JPA developments. Furthermore, 57% of the overall compensation package is guaranteed absent foreclosure of the property based on the pro forma in the EMMA documentation (Electronic Municipal Market Access, 2022).

Understanding the level of compensation for project administrators for JPAs requires context. The administrator fee in our analyzed development above is 15% of the purchase price of the property. In commercial real estate, from our discussions with real estate experts, the commission on the transaction might be around 2.5%. That said, project administrators are not simply selling the property, they are also administering the property for up to 35 years. However, it is somewhat difficult to value a service provided to a development that only exists because the property is a JPA.

An expanded analysis of project administrator fees is shown in the table below. It shows the total calculated compensation over the pro forma projections, adjusted to 2022 dollars. For comparison purposes, we randomly selected 5 LIHTC applications from the California Housing Partnership's 273 provided applications for low-income tax credits to survey developer fees. The average developer fee was 8% of total project costs, compared to a median cost of 14.60% below. Additionally, **the median projected guaranteed money over projected debt service period is 63.75% compensation.** Keeping

the property out of bankruptcy is all that is required for the administrator to receive the majority of the compensation.

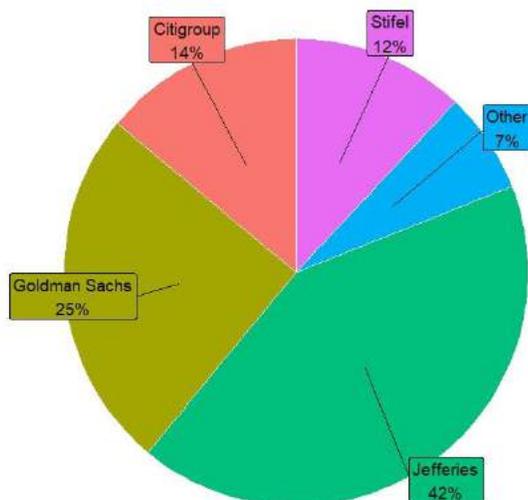
High Guaranteed Compensation for Project Administrators Across Several Developments Over Projected Debt Service Period			
Development	Total Compensation	As % Borrowing Cost	% Based Guaranteed Even if Removed From Project
Union South	\$27,895,360	12.53%	63.75%
Oceanaire	\$25,937,604	18.90%	68.62%
K Street Flats	\$22,119,398	18.21%	58.43%
Latitude33	\$17,606,577	14.60%	49.34%
1818 Platinum Tri	\$25,183,436	17.01%	49.75%
Verdant	\$19,833,039	16.04%	78.03%
Creekwood	\$20,291,111	12.66%	50.85%
Annadel	\$19,034,268	9.78%	77.62%
Aster	\$22,211,602	12.75%	69.68%
Median		14.60%	63.75%

Source: Electronic Municipal Market Access, 2022.

2. Issuance Costs

Issuance costs include issuer fees, origination fees, underwriter fees, bond counsel, real estate counsel, and title/escrow fees. Outside of the project administrator initial payment, the issuance costs are the main transaction costs of these transactions. Neither the Emma filings nor public records we have obtained delineate the exact breakdown of these fees, but about 2/3rds of the issuance costs appears connected to the bond financing costs for the issuer fee, origination fee, and underwriting fee according to two sources that spoke off the record.

Figure 15: Three underwriters service the majority of JPA transactions



Like the project administrators of JPA transactions, the underwriters of these acquisitions have similar market consolidation, as shown in the graph below (Electronic Municipal Market Access, 2022). The top three firms: Jefferies, Goldman Sachs, and Citigroup, have completed 81% of the transactions. It is common practice in the real estate world for lenders and real estate professionals to have a strong working relationship, as their interests are aligned. Closing the deal means loan origination fees and commissions for the parties involved. However, the strong relationship in these transactions between investment banker and project administrator is particularly striking: only 1 of the 43 financings studied deviated from the standard pairing of investment banker and project administrator. For instance, all ten of Waterford’s JPAs were done with Goldman Sachs and 15 out of 16 of Catalyt’s transactions were completed with Jefferies.

Pulling data from all JPA developments, we found that issuance costs in these transactions ranged from 1.8% to 5.2% of total borrowing cost, with a **median issuance cost of 3.1% of total borrowed** (Electronic Municipal Market Access, 2022). We found no systematic relationship between the size of the borrowing and the issuance costs. When Jefferies served as the underwriter, issuance costs as a percentage of total borrowing were 0.89% lower. Underwriter selection seems to have an impact on issuance costs, raising some doubt about if the taxpayers are in fact getting the best value. The full regression model output is in appendix “Issuance Regression Output.”

To compare JPA issuance costs to the alternative, we randomly sampled five LIHTC applications completed with the California Housing Partnership to benchmark issuance costs. Based on data gathered by California Housing Partnership, issuance costs for these new construction affordable housing developments ranged from 1.29% to 2.28% in our sampling of LIHTC deals, with a median issuance cost of 1.53% (California Housing Partnership, 2022). One housing financial expert said that the issuance fees should be around 2% for similar LIHTC deals and another expert shared a potential alternative model for JPA developments with an issuance fee of .5% in their model.

3. Property Purchase Price

Acquisition cost is an important component of the financial stability of a JPA deal. Because these transactions are highly leveraged with typical loan to value ratios above 120%, excess cost increases risk of default. Through our interviews, we learned these developments are usually acquired off-market and without official listing of the property on the MLS. Project administrators approach apartment complex owners with offers. Once the seller agrees, the project administrator presents the development to city officials for approval.

As these properties are not officially listed on the open-market, it is uncertain if the purchase price represents the best value to the California taxpayer without further analysis. According to the EMMA filings, all JPA developments were appraised at or above the purchase price (Electronic Municipal Market Access, 2022). However, several of the experts and officials we interviewed raised doubts about if the

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purchase price reflected the market value of these properties if they were to be sold privately. Additionally, one of our team members (Testa) notes from his experience in the industry that appraisers are typically reluctant to appraise properties below the agreed to price and there is always a degree of subjectivity. For example, Crescent West Hollywood did not appraise at the sale price using the income capitalization approach. The appraisal company, Newmark, gave greater unequal weight to the sales comparison approach in their analysis to make the property appraise at the contract price (Electronic Municipal Market Access, 2022).

The future property tax exemption of being a JPA is not supposed to inflate the value of the properties, but according to one city administrator we interviewed, price is so far from the mind of the cities when agreeing to these deals that one city did not know the actual price of property being acquired for a JPA. The Project Administrators should be making a good faith effort to get market price for the property being acquired. However, we came across many examples where this was not the case. Sellers have, at least in one instance, hired lobbyists to convince cities to approve JPAs because of the premium the sellers are receiving in these transactions. In the case of Milpitas, the seller Lion Living, hired the former mayor to lobby the city for a development that sold at least 10% over the market price.

CoStar provides comprehensive sales comparables by property type for commercial real estate transactions. Using Costar data from ten JPA developments that were selected on the basis of being a representative sample, we conducted a sales comparison of those ten JPA developments to non-JPA developments. The developments that were included in the Costar analysis were those properties designated by Costar as comparable four and five star multifamily apartment complexes. JPA developments were some of the more expensive transactions conducted. **The median JPA development analyzed was 19% more expensive per square foot compared to non-JPA comparable 4 and 5 star properties.** Summary of key comparative statistics are below (CoStar, 2022).

Taxpayers Significantly Overpay for JPA Properties	
JPA Developments Sell for More Than Comparable Sales	
Median sale price per unit is \$109,202 more expensive . The median JPA unit sells for \$520,767 while the JPA comparable sells for \$442,398.	
Median sale price per unit is 26% more expensive .	
Median sale price per square foot is 19% more expensive .	
Median most affordable comparable is 51% cheaper per square foot.	

Source: CoStar, 2022.

More discussion of the property sales price is provided in the appendix “Property Purchase Price Comparative Market Analysis Assumptions and Analysis by Development,” noting some of the difficulties with this analysis, but the number's directional nature is consistent with the sentiment of those

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we interviewed. More critical staff reports, such as Fairfield’s analysis of the Park Crossing development, note the contract for Park Crossing was above that of a comparable sale. Financial experts we interviewed voiced a belief that project administrators pursued sellers with lucrative over-market offers with the understanding that the price premium could be funded with the property tax savings.

The variance in purchase price value relative to comparables yields some interesting insight. **The most expensive property relative to comparables was the Annadel Santa Rosa development with the comparable sale 1/3rd the price per square foot as the Annadel** (CoStar, 2022). In interviews, our team learned that this development is in financial trouble, requiring the project administrator Catalyst to contribute money into the development to prevent default on the bond payments. This serves as a cautionary tale of overpaying for these properties. The best value property relative to comparables was Antioch Mira Vista Hills, which varies significantly from the other JPA deals as it is an older development that required over \$16 million in capital improvements after purchase (CoStar, 2022). Most JPA projects are newer developments, but perhaps there is upside to purchasing older properties.

D. Risks

1. Risk of Default and Foreclosure

Critics of JPA transactions argue that they include a significant risk of default and foreclosure (CSG, HR&A, California Housing Partnership, November 2021). **In the event of a foreclosure, the bondholders have the right to sell the building. Subsequent purchasers would not be obligated to maintain any rent restrictions or income qualifications for tenants.** The primary reason that JPA developments are at risk of foreclosure is their high borrowing amount to property equity ratio. While a traditional conventional home mortgage is 80% loan to value, the median JPA borrowing is **117% of loan value with a high of 137%** for the Antioch Mira Vista development (Electronic Municipal Market Access, 2022).¹⁷

Proceeds from a sale would be distributed according to each transaction’s specified hierarchy of creditors. Typically, investors in the “A-series” bonds are entitled to repayment, often at an increased rate, of the remaining principal on these bonds. Next, proceeds would go to the project administrators who own the subordinate “B-bonds” and any later bonds issued after the transaction was completed. Finally, additional proceeds go to the host city and potentially the other taxing authorities if specified in the Public Benefits Agreement. **The amount available to the host city depends on the magnitude of debt remaining at the time of foreclosure and the sale price of the property.**

In the graph below, the red line represents projections of annual net operating income for the 1818 Platinum Triangle development in Anaheim based on JPA-provided assumptions on rent prices, other

¹⁷ This calculation does not include the subordinate bond issued for the project administrator and is based on the numbers provided in the official bond offering document on the “Total from Source & Use of Funds” page.

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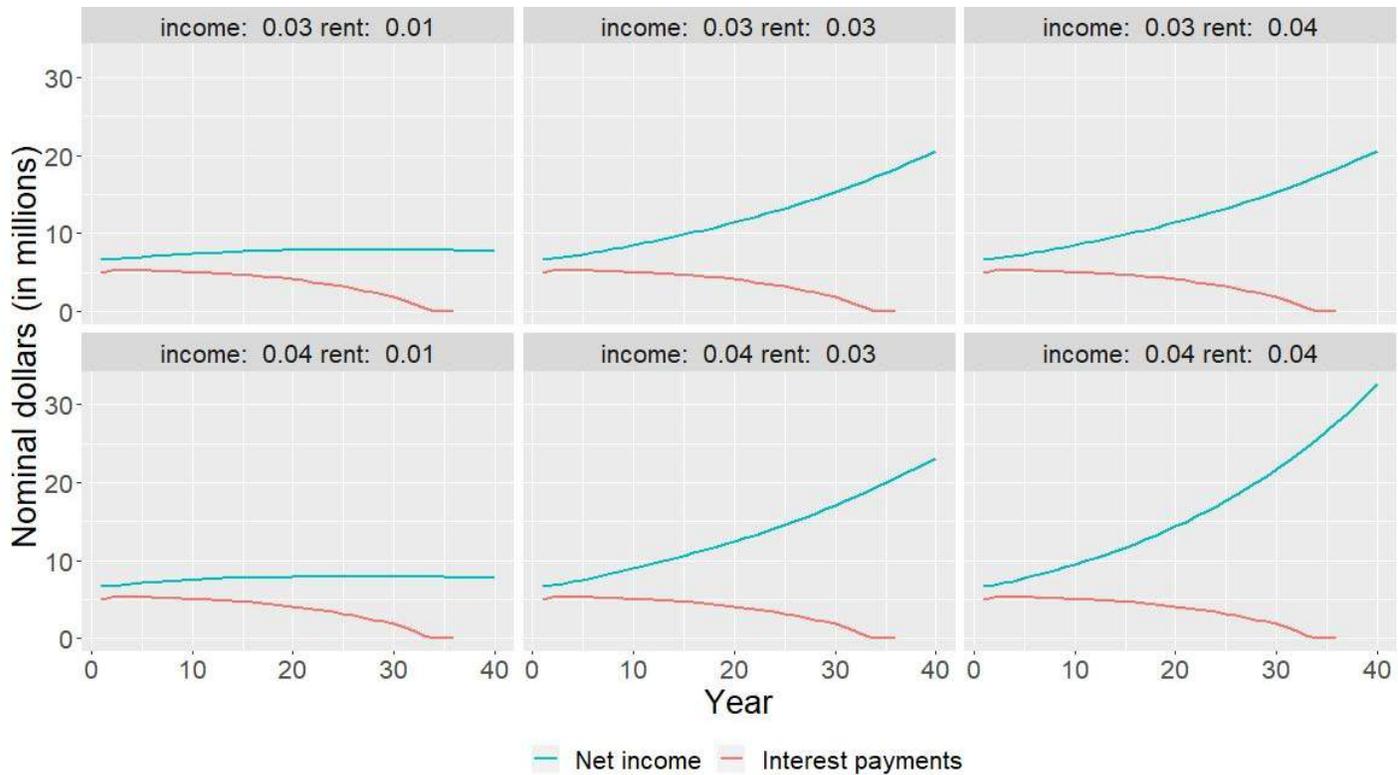
income streams, other income growth, operating costs, and operating cost growth. The blue line represents annual interest payments required to amortize the bonds over their 35-year term.

The ability of the JPA to pay interest and principal on its loans is highly dependent on growth in rents, growth in operating expenses, and unforeseen maintenance needs. Most bond documents we have seen assume rents will rise by 3%. However, some bond documents we saw estimate historical rent growth by beginning their analysis around the early 2000's or 2010's when rent prices were still recovering from economic disruptions. This methodology could lead to overestimates of reasonable growth rates for rents. Even one or two years of slow rent growth early on in the JPA program could lead to problems paying back interest and principal on the planned schedule. JPA bond documents also typically assume 3% annual growth in operating costs. If these costs, or unforeseen maintenance costs, grow more quickly than anticipated, projects could face even more risk of default and foreclosure.

JPAs are not required to pay principal until the bonds are mature, and if they are paying only interest then the risk of being unable to meet these obligations is low. The graph below shows the same net income to interest payment comparison as above, but without the principal payments. **If JPAs only pay the minimum debt service they are legally required to pay, there is little risk of running into issues meeting their financial obligations.** However, if they do not pay any of the principal off over the course of the bond maturity schedule, they risk being unable to pay the lump sum of the principal at the date of bond maturity.

Figure 16: Annual net income compared to annual interest due: 1818 Platinum Triangle

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As currently structured, the **JPA does not appear very resilient to dips in income, especially in its early years of operation.** To build a safe cushion and ensure the organization’s ability to pay interest regularly, administrators could increase rents or reduce the number of units operating under rent restrictions. Alternatively, the project administrator could seek additional financing by selling more bonds on the property or loaning its own resources to meet a building’s obligations.¹⁸ **One troubled JPA property is the Annadel apartments in Santa Rosa. There, rent revenues have been insufficient to cover debt payments.** The project administrator, Catalyst Housing Group, has loaned the project \$1.3 million in new bonds. Additionally, the property withdrew over \$700,000 from its coverage reserve fund in April, 2022 to make interest payments. The project administrator considered refinancing the existing bonds but notified its bond holders in 2021 that it would not pursue a refinancing until further notice.

2. Maintenance Risks

Properties that are well maintained reduce liability risk that might incur from harm caused to residents, and proper maintenance and repair ensures that the city will have a highly valued asset when it takes over the property. In the EMMA documentation, several properties noted a high level of initial borrowing for a Capital Expense Fund for improvements to the property, such as Huntington Beach’s Breakwater

¹⁸ Galen Wilson, Waterford’s financing partner at Goldman Sachs, told us additional bond financing would be most appropriate for unforeseen capital expenses like roof repairs.

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Apartments which borrowed \$23.5 million for repairs. This initial spending on property repairs is a strong aspect of this program praised by one of the housing officials we interviewed.

Each EMMA official statement also noted that each development set aside a \$500,000 fund for extra expenses in the event of an emergency, but this funding level does not appear well conceived as it is a fixed number that does not vary by development size or age of development. A \$70 million development has the same \$500,000 reserve as a \$350 million development. To better understand the maintenance allowance for these developments, we have a chart concerning maintenance funding below. Notice that each of the properties has a yearly maintenance/reserve contribution/capital expenditure lower than the LIHTC benchmark comparable from our LIHTC dataset (California Housing Partnership, 2020).

Maintenance and Capital Expenses Allowance Per Unit By Year 3¹⁹ Are Below LIHTC Benchmark	
Property	Cost Per Unit
Median LIHTC Benchmark	\$1402
Latitude33	\$1030
K Street Flats	\$1045
Verdant	\$500
Aster	\$517
Millenium South Bay	\$580
Creekwood	\$611
Oceanaire	\$478
Annadel	\$432
The Crescent Apartments	\$660

Source: Electronic Municipal Market Access, 2022; California Housing Partnership LIHTC Applications

All developments reviewed include a 3% increase in maintenance and repair costs, but how each development adjusts capital expenses over the 30-35 year pro forma varies. One expert we interviewed noted that the commercial real estate lender standard for monthly maintenance was typically \$300 per unit, but that \$2,000 per month was a more appropriate benchmark for developments that were 15 years or more older. The general assumption for multi-unit residential real estate is 1% of the property value per year (Boucher, 2022). None of the properties above meet that standard, but most JPAs are new construction requiring less maintenance in the early years of the property life cycle. Some JPAs have increases in maintenance allowance in year 10 in their proformas. Several developments fit this trend of adjusted contributions to maintenance and capital expenditures after year 10: Platinum Triangle increases \$325 per unit, Aster increases \$275 per unit, Latitude increases \$197 per unit, and Oceanaire increases

¹⁹ Year 2 is selected for the maintenance costs because year 1 includes proportions. For some properties, year 3 is selected instead of year 2 if property expenses had not yet stabilized as some developments have about \$20,000 in additional one time costs in year 2. Numbers are not inflation adjusted.

\$328 per unit.²⁰ These numbers are not adjusted for inflation and the impact of the increase in these four developments is partly offset in later years as the capital expenditure portion becomes fixed and thus devalued by inflation in the later years of the pro forma.

While the increase in the later years is helpful, maintenance allowance is still below the appropriate benchmarks. Additionally, considering that these reserve/maintenance funds are necessary for funding repairs ranging from repaving the parking lot to plumbing issues that might arise over the years, **it seems unlikely the reserve and maintenance allowance provided for these developments will be enough to cover future maintenance needs.** A few city officials we interviewed noted concern that 15 years down the road, there are not funds preallocated to conduct maintenance on the city's JPAs as would be needed.

IV. Evaluating Policy Equity

Overview

Our interviews with dozens of city officials found that few considered the equity implications of JPA deals. Localities have limited public resources to invest in public services, and any effort to use these resources to benefit a select number of residents will shift dollars away from others. Our research found that public schools, public health services, and colleges—services that disproportionately serve low-income people of color, are losing funding under this policy. The programs that are receiving less funding deliver far greater social benefit than JPAs—education spending, for instance, yields a return to society that is at least seven times greater.

While we are pleased to see the program offer equal access across racial groups, **there are no efforts to ensure inclusivity in decision making.** There is a lack of community participation in the JPA approval process or on-going governance. Almost all interviewees talked of an expedited approval process for JPAs with little to no public debate. Additionally, other government entities were not informed or included in the decision making process in a manner that was substantive.

A. Vertical Equity

1. Beneficiaries of JPA Programs

The United States housing market has historically been used by federal, state, and local governmental agencies to systematically exclude Black households from accessing safe and affordable housing. As a result, Black individuals have been less able to build wealth, move into safe communities with good schools and jobs, and have convenient access to vital amenities like grocery stores and greenspace. Decades of racist policy left Black Americans with significantly less wealth and poorer health outcomes than white Americans (Rothstein, 2018). The impacts of these policies are apparent in data on rent burden

²⁰ Some of the other developments in the chart had an even 3% increase in capital expenditures per year. Others could not be shown in this calculation because data for some years is missing in the pro forma of some developments.

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by race. American Community Survey data (ACS) pulled from PUMS indicates that Black households are far more likely to be rent burdened and/or significantly rent burdened than their white counterparts across 6 of the 8 California counties with JPAs.

Intentional government action resulted in these enormous disparities; only intentional government action can reduce these disparities and rectify historical wrongs. As such, in order to assess the true impact of these programs, it is essential to pinpoint the groups that benefit from this program and the groups that do not. Unfortunately, data on the demographic groups that middle-income housing programs assist does not exist. Our team was also unable to access the demographics of those who reside in JPA middle-income properties and receive capped rents. Therefore, in order to assess the demographic groups that this program has helped and will help, we leveraged ACS 2019 data from IPUMS USA to determine the household income distribution of racial groups in California. In particular, we wanted to know the demographic breakdown of households that are likely eligible for capped rents in this program.

Our analysis found that Black and white households stand to benefit equally from the JPA middle-income housing program in California. Area Median Income in California varies by county and number of members within a household. To avoid running summary statistics on 58 different counties and 8 different household sizes within each, we calculated the percent of total households, by race, that earned between specified income levels that approximated the range of income a household would need to earn to qualify for capped rent. According to the United States Census Bureau the median household income in California, between 2016 and 2020, was \$78,672. Given typical AMI qualifications for JPA properties are 80% to 120% AMI, the range of eligible households in California is \$0 to \$94,406 (120% AMI). Note that this analysis assumes that black and white households in California are the same size, on average.

California renters by AMI and percent Black and white household		
AMI Categories	Percent of Black Households	Percent of White Households
Under 80%	47.3%	33.4%
*80% to 120%	17.4%	17.3%
80 - 100%	9.2%	9%
100% to 120%	8.2%	8.3%
0% to 120%	64.7%	50.6%

Source: IPUMS USA, 2019.

*Although the under 80% AMI category includes anyone that makes under 80% AMI, it is unlikely that individuals earning significantly below 80% AMI can afford the rents at this level. We include 80 to 120% AMI to acknowledge this fact. The 80 to 120% AMI category is also noticeably whiter than the under 80% AMI category.

When city officials were asked about how they incorporated equity into their analysis of JPA deals, none said that they seriously considered it. **This made it clear to us that this program is not designed to**

improve equity and is not viewed as such. The ACS data we collected support the notion that this program should not be used to boost equity, particularly equity across racial lines. **Although Black and white households qualify at approximately equal rates, this program does not provide much help in improving racial equity in California.** Given Black households have been historically excluded from the housing market, any policy that seeks to achieve racial equity must prioritize assisting Black Americans. This program does not do that.

The program, however, does help middle-income renters who do not qualify for traditional affordable housing programs and cannot afford market rate apartments in California. Although these foregone property tax dollars are not going to low-income households who are arguably in greater need and receive a higher marginal benefit from each dollar spent on them, it does provide an essential service for Californians who struggle with market rents but earn too much to qualify for traditional affordable rental housing programs.

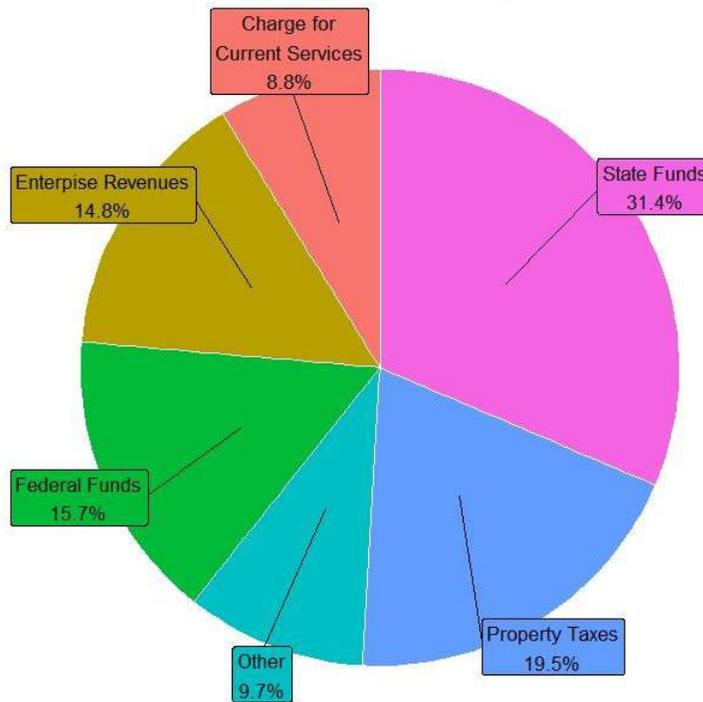
2. Negative Distributional Impacts of JPAs

Localities have limited public resources to invest in public services, and any effort to use these resources to benefit a select number of residents will shift dollars away from others. During our interview, a prominent project administrator maintained that since JPAs are privately funded deals that do not impact the limit the federal government sets on tax exempt bonds used for private projects that have a public benefit, and participating cities build equity in an appreciating asset, there is little to no long-term cost to the public. As the efficiency analysis showed, this is not the case.

Moreover, the impact of forgone tax revenue does not fall evenly across taxing authorities, according to a California housing expert: “Per the most recent [CA Property Tax Overview](#) (published by the [Board of Equalization](#) in 2018), “Today, it is California’s counties, cities, schools, and special districts that depend on the property tax as a primary source of revenue. The property tax raised more than \$62.1 billion for local governments during 2016-17. These funds were allocated as follows: counties 15 percent, cities 12 percent, schools (school districts and community colleges) 54 percent, and special districts 19 percent.” As a result, public schools, fire districts, and county agencies that receive property taxes lose the most revenue while receiving almost no benefit. This is concerning as property taxes account for almost $\frac{1}{3}$ of the total revenue California counties receive.

California counties spend tax revenues in the following manner: 28.1% on public protection such as police and fire, 26.5% on public assistance programs such as Calworks, 15.5% on enterprise activities such as airports, and 15.2% on healthcare spending for services including public hospitals and mental health (Graves, 2018). Reducing spending on public assistance and healthcare would disproportionately impact low-income and minority communities.

Figure 17: From the California Budget & Policy Center: “State and Federal Funds Comprise Nearly Half of Total County Revenue, 2015-16”



(Graves, 2018)

Despite this significant hit to revenue, our conversations with city officials involved in these deals made clear that other taxing authorities are rarely consulted for deal negotiation or informed of revenue losses until after the deal has been finalized. **This means that the entities who are most impacted by the city’s decision to convert a market-rate property to JPA middle-income housing also have the least say in the process.** Notably, some city officials informed us that the state will reimburse public schools for lost tax revenue. These officials are only partly correct. Under the Local Control and Accountability Plan (LCAP) approved in 2013, money for education from property taxes is collected locally and redistributed to school districts by the state based on student enrollment with additional funding provided to schools with low performing student groups (California Department of Education, 2021). Under this system, loss of property taxes for a JPA development is mostly backfilled by the state—but what city officials do not mention is that the result is less money for the state to distribute to schools across California. All schools lose funding because of JPAs, not just the schools in the same city as the JPA. For cities, they received the concentrated benefit of having the development, but are outsourcing the funding losses to schools across California. Public schools disproportionately serve low-income students of color in California.

In fact, some of these deals are made without the city fully knowing its financial implications. In our conversation with officials from a city with a few JPA developments, for example, we found that they agreed to JPA-funded acquisitions before seeing the purchase price. In this instance, only the JPA and project administrator were party to the financials before anything was finalized.

That said, county agencies, fire agencies, and school districts do benefit in one critical way. **These “workforce housing” programs target middle-income earners, such as those earning a teacher, fire, or police officer salary. Proponents of this program argue that diverting tax revenue from public schools and fire districts has notable upside for these entities, as the middle-income workers that dominate these professions are the purported targets of the JPA middle-income housing deals.**

Teachers who once may have considered leaving the area altogether due to unaffordability may decide to stay as a result of the decreased, capped, rents. This suggests that employees of the county agencies that are losing money do stand to benefit from these programs through reduced rents.

The revenue hit that cities take from these deals is minimal. According to a project administrator, as these deals have matured, cities have begun to more regularly receive city host fees from the JPA to cover lost tax revenue. California banned these fees, known as payment in lieu of taxes (PILOT) fees through AB 1760 under Governor Jerry Brown. The rationale for the ban was that PILOT fees decreased affordability of units and diminished the financial viability of low-income housing (AB 1760). These fees might have a similar, possibly smaller, effect on middle-income housing developments. County agencies, schools, and special districts do not receive fees from project administrators as it would be impossible for them to do so without taking a significant loss. Our research found only one public benefit agreement, Anaheim’s agreement for Platinum Triangle, that required the city to reimburse the county for lost tax revenue in the event that the property was sold.

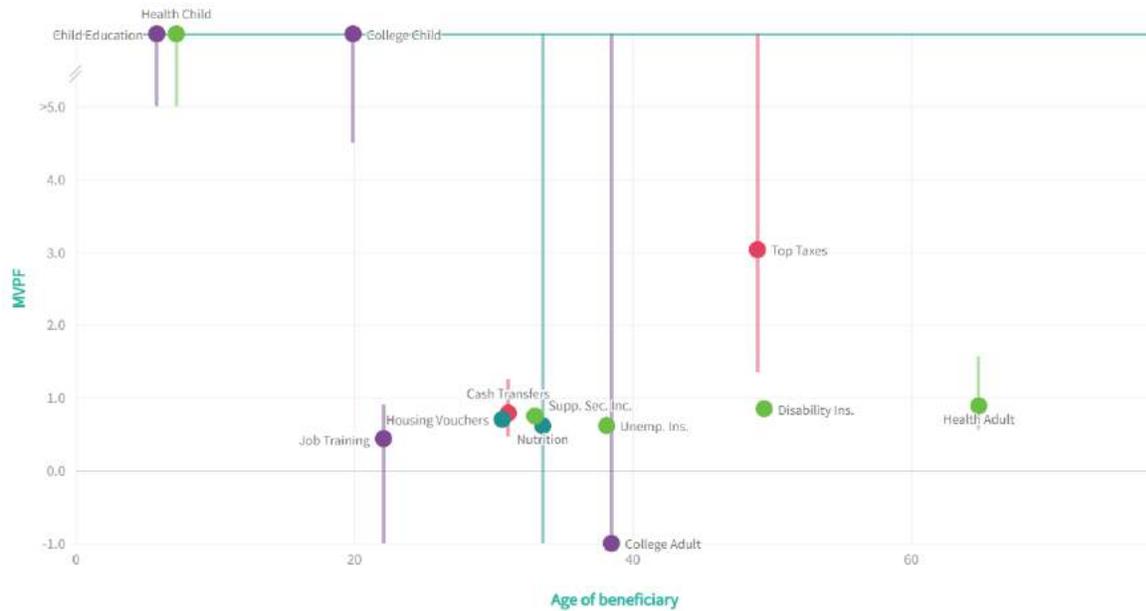
Our team was concerned by the program’s redistribution of limited public resources. In particular, **public school dollars are being shifted towards subsidizing middle-income housing.** Education and affordable housing are important, and this report does not make any assertions on which one is more important or how we think limited state dollars should be distributed to each. We do think, however, that moving dollars away from the beneficiaries of public schools to subsidize luxury apartment units for people who can already afford to live in many parts of the state without being “cost burdened” raises serious concerns.

3. JPA Spending’s Benefit to Society Compared to Current Government Spending

Current government spending by school districts, community colleges, and counties yield a greater return to society than JPA developments and support a population that is far less white and less resourced. Hendren & Sprung-Keyser (2020) of Harvard University completed an aggregation of 133 historic policy changes to evaluate the marginal value per public fund dollar (MVPF). Notice below the high value of child education, children’s healthcare, and college compared to housing vouchers.

Figure 18: Graph from Hendren & Spring-Keyser (2020): Spending on Education Has Higher Return to Society while JPA Return is Likely Much Lower

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Note: Y axis indicates MVPF, marginal value of public funds, and X axis represents the age of the beneficiary receiving the benefit. The Y axis ends at 5, but extends out to infinity. Each point represents a policy area. The lines extending from each point represent the margin of error at 95% confidence.

JPA's return to society is likely significantly lower than housing vouchers or cash transfers as these policies target lower-income residents where margin value per public dollar is high according to Hendren and Sprung-Keyser and the consensus view of the Economics literature. JPA return per \$1 is at least seven times less effective than current spending on education.²¹ Counties also spend money on other forms of infrastructure that can be compared when judging the impact of reducing revenue to other public funds. For traditional yield infrastructure spending, a locality can expect a yield of \$2.20 per dollar invested according to infrastructure estimates by the CBO (Katseff et al, 2020). A Georgia study noted a return of \$2.79 of economic activity per \$1 invested in LIHTC (Sweaney et al., 2006).

B. Equitable Process: Inclusion in Development Approval Process and On-Going Operations

Our team did not uncover evidence in our interviews with city officials and project administrators that city residents were involved in the decision-making process regarding the creation of JPA developments in their cities. Our team also found limited evidence indicating city residents participated in public hearings about the developments, despite these hearings and council meetings being open to the public. Across the multiple deals, evidence showed that residents only voiced opinions about a small number.

Community Participation in JPA Development Decision-Making Process

²¹ Hendren & Spring-Keyser define the range for education programs as being from 5 to infinity. Estimating the return to society at \$5 is a conservative estimate within that range.

As an example of the limited community participation in the JPA development decision-making process, a housing programs manager for a JPA development host city, shared in an interview that while the JPA deal discussions were included on the City Council's publicly-available agendas and that these Council meetings were open to the public, the interviewee believes community input was "limited at best." They largely attributed this limited public participation to the speed with which these deals went through. As such, our team does not believe that development residents or city residents were involved in the decision-making process or the setting of the deal terms/rent reduction amounts.

We also did not uncover any evidence in our interviews with project administrators that residents of JPA developments are being included in the decision-making process regarding ongoing community operations, such as how the developments are managed, year-to-year rent increases, and/or amenities offered in the developments.

Community input and participation in the JPA deal decision-making process may be limited because almost all of the deals thus far are not new construction. In many locations across the country, public input is required for development proposals of "sufficient scale" or that "require exceptions to current land use regulations" (Einstein et al., 2020). Given the JPA deals to-date have been mostly done through the purchase and conversion of existing market-rate apartment buildings to middle-income housing, cities may not be required to solicit community input on the deals.

V. Final Policy Recommendations

A. Benefits and Pitfalls of JPA Developments

Those in support of JPA deals argue that the developments reduce rent burdens on middle-income households, expose cities to minimal liability, and provide cities with future equity in the buildings. Critics of JPA deals argue that these transactions only moderately reduce rents, create financial risk for host cities, decrease tax revenue to a variety of local agencies, and pay high fees to their private sponsors. Our research and analysis support many of these benefits and concerns.

1. Affordability

Benefits

Renters who qualify to live in JPA developments pay less in rent than they most likely would otherwise. In the first year of operation, renters save a median of approximately \$150 to \$250 a month depending upon the number of bedrooms in the unit. Savings are most significant for larger apartments.

Pitfalls

Rent reductions are fairly modest. Almost all the JPA developments use a rent-to-income ratio of .35. Given the JPA developments' rent-to-income ratios, most people utilizing the JPA's rent restriction programs would be considered cost-burdened despite the rent decreases the programs offer. Further, JPA

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development rent restrictions are calculated based on county-level AMI values. JPA developments are located in high cost-of-living cities and counties and therefore use AMI values that are higher than state average. If JPAs adjusted their rent reduction methods to either use a rent-to-income ratio of .3 or to use the statewide AMI values, restricted rents would be significantly lower than they are at present. We cannot measure the risk of a JPA or project administrator violating its agreements to restrict rents. Some interviewees expressed concern with existing enforcement mechanisms available to host cities while others expressed confidence that JPAs, project administrators, and trustees for the bondholders have strong financial and reputation incentives to comply with the agreements.

In the long-run, affordability is not guaranteed. Affordability is dependent on income growth, rent growth, and inflation and may increase or decrease depending on how these factors change over time. As such, long-term affordability cannot be guaranteed. Additionally, the impact of the 4% cap on rent increases will only be felt in some California markets where rents have historically grown more than 4% annually.

It is not clear if the benefits of reduced rent extend beyond the economic payoffs. While housing stability has wellbeing implications for low-income renters, research has yet to show similar impacts for middle-income renters.

2. Public Benefit and Risks

Benefits

In the long-run, rental savings experienced by residents in JPA developments exceed property tax losses. However, the long-term losses in tax revenue have been generally understated in past analyses completed by cities, JPAs, and project administrators. The lost tax revenue from JPA developments are partly offset by the expected equity growth although that growth is not as substantial as many promoters of JPAs have suggested.

Residents have reported personal and community benefits from JPA developments. Some JPA development residents reported decreased commute times and improved job performance after moving in. Other JPA residents reported that the opportunity to move into a JPA development kept them in the state of California when they were considering moving out-of-state in pursuit of lower housing costs. JPA developments also provide opportunities for teachers to live in the communities in which they work, which helps to improve teacher-student relationships and learning outcomes.

Pitfalls

JPA developments are costly to the public and carry risk. In a JPA development's first year, total lost tax revenue exceeds rent savings. JPA deals also include project administrator fees and issuance costs that exceed LIHTC benchmarks, adding to the cost of these developments. Additionally, there is a risk of default, as annual income from the JPA developments may not always be sufficient to pay interest to bondholders. Experts also suspect that many of these developments are sold at prices above market value, further increasing the cost of the project and the possibility of default. There is also concern that JPA

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deals do not allocate adequate funding for future maintenance and other expenses, further increasing the risk these deals present.

Existing JPA deals do not help to address California’s housing supply shortage. JPA deals to-date have only converted existing housing supply to middle-income housing. Repurposing existing housing does little to address the overall housing shortage in California. JPAs have yet to leverage bond-financing to develop new housing in the state.

Host cities have no direct enforcement mechanisms for ensuring project administrators adhere to regulatory agreements and reduce rents as promised.

3. Proposals and Reports

Benefits

JPAs submit publicly-available reports on project performance and compliance with rent restrictions. These annual and quarterly reports include statements that unit allocations were met; tenancy dates for middle-income renters; details on the debt issued and remaining; information on leases, occupancy, revenues, expenses, and debt payments; and more. However, JPAs do not provide reports of ongoing operations directly to host cities, except when specified in Public Benefits Agreements.

Pitfalls

JPA development proposals are not transparent or standardized. Proposals provided by JPAs and project administrators to potential host cities when pitching JPA developments underestimate costs and overstate the future equity benefits. Due to limited staff support, many cities that were approached by JPAs and project administrators reported being unable to conduct their own analyses of the deals’ benefits and costs. As a result, they reported frequently relying upon the projections provided by the JPA and/or project administrators. Many of these cities appeared to be unaware that the projected costs were likely understated and the projected benefits were likely overstated. Cities and their residents lack transparency into how these projections are developed.

4. Equity and Community Involvement

Benefits

JPA developments provide housing opportunities to Californians who do not qualify for traditional affordable housing programs and may struggle to pay market rents. Many of these individuals work in professions that serve the community as teachers, police officers, or firefighters.

Pitfalls

Public funds are shifted from school districts and fire departments to middle-income housing subsidies, often without the knowledge or consent of these entities. JPA deals shift public funds between groups by forgoing tax revenues, which would otherwise go to not only the cities in question but also to local school districts and fire departments, and shifting these public dollars to middle-income renter assistance. Few of these entities were made aware of the taxes the cities had committed to forgoing on their behalf by agreeing to the JPA deals. This lack of community participation and transparency

presents equity issues and raises questions around who should bear the burden of providing subsidies to middle-income families.

JPA programs do not proactively work to support communities of color who have been historically marginalized. Black and White households are potentially equally likely to be eligible for rent caps via JPA programs. As such, JPA programs do not specifically work to lower rent burdens for historically marginalized communities of color.

Residents lack transparency into JPA deal decisions and opportunities to voice their concerns and opinions. In the JPA development deals we investigated, city residents were not involved in the decision-making process. Further, JPA development residents are not included in the decision-making process regarding ongoing community operations, such as how the developments are managed, year-to-year rent increases, and/or amenities offered in the developments.

B. Policy Recommendations

Based on the research and analysis provided above, a series of recommendations on how JPA deals could potentially be improved are outlined below. Each recommendation is evaluated on how it would improve the efficiency, effectiveness, and/or equity of JPA deals, as compared to the status quo, to help address the pitfalls of JPA deals outlined above.

Summary of Recommendations

Our recommendations are summarized below and outlined in detail in sections 1 through 4.

- **Affordability:**
 - Develop legislation that requires JPA development rent reductions to align with affordable housing industry standards.
- **Public Benefit and Risks:**
 - Establish regulations to govern administrator fees, issuance fees, property appraisals, and annual property maintenance/capital expenditures.
- **Reporting:**
 - Require standardized publicly available settlement statements.
- **Equity and Community Involvement:**
 - Require cities to backfill lost tax revenue of other entities to prevent negative distributional impacts.
 - Develop legislation that requires vacancies within JPA developments be advertised in communities of color.
 - Develop legislation that establishes minimum standards for community input.

1. Affordability

Recommendation: Develop legislation that requires JPA development rent reductions to align with affordable housing industry standards.

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Pitfall Addressed: Rent reductions are fairly modest.		
	Impact: High	Difficulty: Medium
<p>Benefits: Assembly Bill 1850, titled “Public housing: unrestricted multifamily housing,” was introduced by Assembly Member Christopher Ward in February 2022. AB 1850 would prohibit a public entity from acquiring unrestricted multifamily housing unless each unit in the development meets specified criteria, including that the aggregate initial monthly rents for all units post-conversion are at least 10% less than average aggregate monthly rent charged for all units over the 12-months prior to conversion and that the initial rents for at least 50% of the units are at least 20% less than the small area fair market rent (Ward, 2022). The bill also limits increases to the initial rents postconversion to the lesser of the annual increase in the AMI for the county or 3%. AB 1850 also requires that the city or county monitor the property for compliance with the regulatory agreement for the term of the regulatory agreement consistent with the monitoring standards and protocols of the California Tax Credit Allocation Committee.</p> <p>If AB 1850 is not passed, similar legislation would be helpful to ensure the efficiency of JPA developments. Legislation of this nature would help ensure that pre-to-post conversion rent reductions are substantial and beneficial to middle-income residents. Legislation like AB 1850 would also help ensure that cities have the authority to monitor rent reductions and caps on rent increases and the ability to take action against the JPAs and/or project administrators if rent reductions and/or caps on rent are not in alignment with requirements set out by the legislation.</p> <p>If legislation of this nature was implemented, JPA developments would be more efficient as compared to existing developments, as the affordability benefits would increase in comparison to the lost tax revenues.</p> <p>Trade Offs: According to proponents of JPA developments, one benefit of these deals is the lack of red tape involved in creating and operating a JPA development, especially as compared to other affordable housing programs. Legislation like AB 1850 may decrease the speed at which JPA developments can be pitched and created.</p>		

2. Public Benefit and Risks

Recommendation: <i>Establish regulations to govern administrator fees, issuance fees, property appraisals, and annual property maintenance/capital expenditures.</i>		
Pitfall Addressed: JPA developments are costly to the public and carry risk.		
	Impact: Medium	Difficulty: Medium
<p>Benefits: Current administrator and issuance fees vary widely by property and are higher than the comparable LIHTC benchmarks. Maintenance/capital expenditure proforma are insufficient for the long-term maintenance of these properties. By setting minimum standards, regulations could reduce transaction costs and thus greatly reduce financial risks to these transactions, save taxpayers money, make project administrators more accountable for the condition of these developments, and ensure that</p>		

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cities obtain well-maintained developments when they assume ownership.

If regulations of this nature were adopted, JPA developments would become more efficient than existing developments. With decreased fees and expenditures, more of the public funds being spent on these developments could be allocated towards reducing rents.

Trade Offs: Reducing profits for project administrators and underwriters will reduce their incentives to participate in these deals. Having strong regulations would likely reduce the number of new middle-income developments that would be proposed and agreed to by cities.

3. Reporting

Recommendation: *Require standardized publicly available settlement statements that include projected rent benefits, all fees and financing costs, and property tax losses broken down by entity*

Pitfall Addressed: JPA development proposals are not transparent or standardized.

	Impact: High	Difficulty: Medium
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Benefits: Requiring proper discounting of time value of money; a clear and easy to understand listing of costs, including where lost tax revenue is coming from; and a streamlined delineation of the contract requirements and regulatory rights will bring transparency and efficiency to these transactions. City staff reports and project administrator presentations have shown a clear pattern of misunderstanding and misrepresentation of long-term housing finance. Having standardized forms and reports could accelerate the use of this model, as cities will have a clearer understanding of the decisions they are being asked to make.

If these requirements were put in place, JPA programs would become more efficient as compared to the existing model. Cities would have better insight into the costs and benefits of JPA developments and could therefore make decisions about if and how JPAs could create affordability for cities and pass that affordability on to tenants.

Trade Offs: Identifying a government agency to enforce or develop the regulatory framework for the standardized form is a difficult task. It is likely that those that benefit from the status quo will lobby against a regulator framework of this nature. Developing state-wide consensus around which accounting standards to use could prove difficult, as well. Finally, fully and accurately accounting for costs and benefits will likely lead to fewer JPA developments, as cities will be more hesitant to sign on to these deals when they have the full financial picture.

4. Equity and Community Involvement

Recommendation: *Require JPAs to disclose projected lost tax revenue to affected government entities before JPA approval.*

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Pitfall Addressed: Public funds are shifted from school districts and fire departments to middle-income housing subsidies, often without the knowledge or consent of these entities.

Impact: Medium **Difficulty:** Medium

Benefits: Local entities and the public are not informed of lost funding to their programs that occur because of JPAs. Local government entities such as K-12 school districts, county health services, community college districts, and fire districts provide essential services to high-need citizens. The beneficiaries of these programs are disproportionately low-income people of color. As part of a JPA deal, both the host city and many of these other local government entities lose out on tax revenue. However, only the city faces a potential benefit at the end of the deal term through the sale of the property. Legislation that requires JPAs to disclose projected lost tax revenue to all affected government entities before JPA deals receive approval from cities would help to ensure that all involved are aware of the implications of the deals and have opportunities to push back if needed.

If this requirement was instituted, JPA deals would become more equitable, as other government entities that serve high-need citizens would have an opportunity to voice concerns.

Trade Offs: Passing legislation that accomplishes this goal may be difficult. Cities may be opposed to this change, as it may prolong the decision-making process surrounding JPA deals. Counties and other government entities that would stand to benefit from this change may be less active in their support of the legislation, as the benefits they receive are diffuse and they would still need to voice their opposition upon being informed of the deals.

Recommendation: *Develop legislation that requires vacancies within JPA developments be advertised in communities of color.*

Pitfall Addressed: JPA programs do not proactively work to support communities of color who have been historically marginalized.

Impact: High **Difficulty:** Medium

Benefits: Legislation could require that when project administrators are advertising vacancies in newly converted JPA developments, that they do so in communities of color within the city. A requirement of this nature could help ensure that middle-income residents of color facing rent burdens are aware of and have the opportunity to move into JPA developments, therefore benefiting from the rent decreases and rent caps. This would help ensure JPA programs are serving communities of color who have been historically marginalized.

If this requirement was put in place, JPA developments would become more equitable because they would better serve communities of color.

Trade Offs: Cities would either need to accept JPA and project administrators' best efforts in meeting this requirement or would need to monitor compliance. Monitoring compliance would add to the workload of city staff who are often already stretched thin and potentially take resources away from

other efforts.

Recommendation: *Develop legislation that establishes minimum standards for community input.*

Pitfall Addressed: Residents lack transparency into JPA deal decisions and opportunities to voice their concerns and opinions.

Impact: Medium	Difficulty: Low
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Benefits: Legislation should establish minimal standards for community input into JPA deals. For example, cities could be required to host at least one public meeting for community members to discuss and provide opinions on the JPA deal. The meeting should be scheduled with advanced notice to the community at a time convenient for working adults to ensure that access to the meeting is equitable. All current residents of the development should also be made aware of the meeting. Before such a meeting, standardized settlement statements should be provided to the public for review. Establishing minimum standards for community input can ensure that community members’ voices and opinions are heard regarding JPA deals. Hosting meetings at a time convenient for working adults can help ensure that access to these meetings is equitable and that all community members, including those in middle-income communities, who are most likely to be impacted by the deals, have opportunities to learn about the deals and voice support or concerns. Inviting middle-income community members to voice their opinions and participate in the decision-making process surrounding JPA developments in their communities can help ensure that these developments fulfill the needs of community members they are designed to serve.

If these standards were established, JPA deals would become more equitable because the decision-making process would include the voices of those most impacted by the deals.

Trade Offs: Local institutions such as community meetings often create equity issues themselves. Participatory politics can often empower an “unrepresentative group of residents” to stop new housing projects in an effort to “defend” their neighborhoods (Einstein et al., 2020). Cities would need to actively work to ensure public meetings on JPA developments are accessible to all, especially to middle-income residents who are most likely to benefit from the deals. To do so, cities may need to take actions outside of their normal protocol, such as increasing advertising for the meetings and hosting the meetings outside of working hours, all of which may be burdensome to the city staff’s time and resources.

C. Future Research

JPA’s developments have only existed in California since 2019. California is one of the first states to explore the JPA middle-income housing model. As such, research on the effectiveness, benefits, and costs of the model is limited. Additional future research would be beneficial in continuing to evaluate the public benefit that JPA middle-income housing developments provide.

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For example, additional research on the demographics of renters in JPA developments would be helpful in evaluating who is being served by these programs and the programs' equity. Research on the wellbeing implications of rent reductions and caps on rent increases for middle-income households would also be helpful in understanding the non-financial benefits that JPA development renters may receive upon moving into these developments.

Similarly, our financial research and modeling was limited based on available data. Additional research into JPA developments' property management fee structure would be helpful in understanding if and how these fees could be minimized. Further research on how the tax losses that stem from JPA developments affect other local government entities would be beneficial in evaluating the impacts these deals have on the communities in which they are located. Additionally, given how new JPA developments are, continued monitoring of the financial performance of these deals over time would be beneficial to evaluating their costs and benefits.

Additionally, JPA developments have thus far only been leveraged to purchase and convert existing housing stock to middle-income housing. Leveraging the JPA model to finance new construction for middle-income housing could be beneficial in helping to address California's housing shortage. Additional research is needed to understand the costs and benefits of utilizing the JPA model in this way.

VI. About the Authors



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Truman is a JD/MPP student earning degrees at both the Goldman School of Public Policy and Berkeley Law. He obtained an undergraduate degree from Oberlin College in 2014. After college, Truman worked in the Virginia General Assembly and on several political campaigns. He came to UC Berkeley for its culture of public service. He is active in student groups including the American Constitution Society and Election Law @ Berkeley.



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Sonia Schrager received her undergraduate degree in business and journalism from the University of North Carolina-Chapel Hill in 2017. After graduating, she moved to Atlanta, GA, where she worked on Deloitte's Corporate Citizenship team, focused on empowering Deloitte professionals to make an impact in their communities and helping students prepare for college and careers. Her policy interests include education, health, and gender policy.



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Joseph Testa was a high school social science teacher and school site leader for twelve years before attending the Goldman School. He holds a Masters in Political Science from San Francisco State, specializing in the subfield of American Politics in 2012. As of July 2021, Joseph is a licensed real estate salesperson in California. He assists his family in managing 18 residential leases in northern California.

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Haley Tiu is a data scientist-turned policy wonk specializing in housing policy and economics. Haley studied statistics and Chinese at UC Berkeley as an undergraduate student, then went on to work as a data scientist for five years--first at Beghou Consulting and then at McKinsey & Co. At GSPP Haley has turned her focus to policy issues related to housing and climate change, aiming to analyze these issues from an economic and quantitative perspective.



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Bailey is a first-year Masters of Public Policy student at the Goldman School of Public Policy. He received his undergraduate degree in Public Policy from Vanderbilt University in 2018. After graduating, he worked for KPMG as a State and Local Government Consultant where he helped state governments modernize their technical infrastructure. Bailey's passion for making cities more livable led him to pursue the opportunity to work with the California Housing Partnership.

VII. Appendix

A. Case Studies

Case Study 1: Aster in Dublin, California

GENERAL PROJECT INFORMATION

JPA: CalCHA

Total Debt: \$174,195,000

Project Administrator: Catalyst

Property Management Company: FPI Management, Inc.

Number of units: 313

Source: Electronic Municipal Market Access, 2022

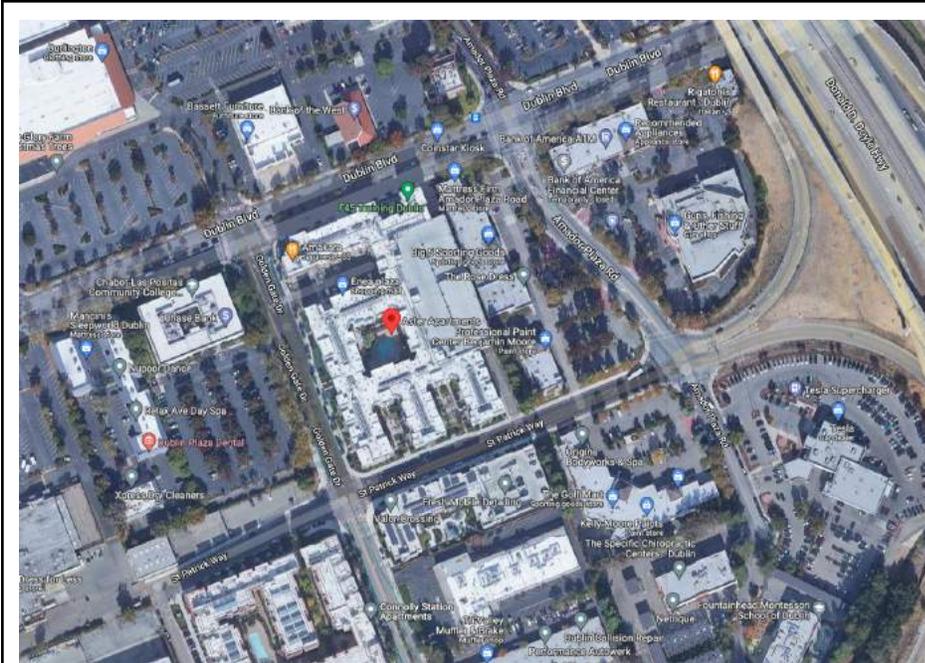
Aster Apartments Building Exterior and Pool



Source: AsterDublin.com

Aster Apartments Location

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Source: Google Maps

COST STATISTICS

Property Sale Price: \$163,000,000
First Series Bond Value and Interest Rate: \$166,200,000; 4%
Second Series Bond Value and Interest Rate: \$57,995,000; 4%
Administrator Series Bond Value and Interest Rate: \$5,000,000; 10%
Cost of Issuance: \$4,729,090
Debt to Price Ratio: 107%
Source: Electronic Municipal Market Access, 2022

RENT REDUCTION STATISTICS

STUDIO:

- **Pre-to-Post Conversion; 120% AMI:** \$106 decrease
- **Pre-to-Post Conversion; 100% AMI:** \$206 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$306 decrease

1B:

- **Pre-to-Post Conversion; 120% AMI:** \$86 decrease
- **Pre-to-Post Conversion; 100% AMI:** \$186 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$286 decrease

2B:

- **Pre-to-Post Conversion; 120% AMI:** \$34 increase
- **Pre-to-Post Conversion; 100% AMI:** \$66 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$313 decrease

Source: Electronic Municipal Market Access, 2022

SELECTION RATIONALE AND TAKEAWAYS

Case Study Selection Rationale: Aster was selected as a case study because its price (\$163M) is close to the average price of all JPA developments to-date (\$144M). The borrowing cost (\$174M) is also close to the average borrowing cost (\$174M). The per unit price (\$0.52M) is close to the average per unit price (\$.48M), as well. Finally, the development is similar in size (313 units) to the average JPA development (299 units) (Electronic Municipal Market Access, 2022). These factors led our team to believe that Aster would serve as a fairly representative case study of the “average” JPA deal.

Timeline and Description of Events: In February 2020, the Dublin City Attorney shared details with the Dublin City Council regarding joining the CalCHA program. This opportunity was presented to the City by Catalyst. The City Council asked city staff to further analyze the program. In June 2020, Dublin city staff provided a staff report to the City Council regarding the opportunity. The report recommended that the City Council authorize the city to become a member of CalCHA and authorize the City Manager to enter into purchase option agreements with CalCHA. The City of Dublin then began working with Catalyst Housing Group on the potential acquisition of the Aster development through CalCHA. CalCHA partnered with Catalyst Housing Group, LLC to issue \$174M to acquire Aster (Smith, 2020). Catalyst entered into a Real Estate Purchase Agreement and Joint Escrow Instructions dated September 18, 2020 to close the deal (Electronic Municipal Market Access, 2022).

Learnings: The rent reductions at the Aster development for residents in the 80% and 100% AMI brackets exist but are small. Residents in the 120% AMI bracket also experience slight rent reductions, except when renting 2-bedroom units. For studios and 1B units, market rents are approximately \$100 below pre-conversion rents (Electronic Municipal Market Access, 2022). Therefore, when post-conversion 80%, 100%, and 120% AMI studio and 1B rents are compared to market rents, the rent reductions are even smaller. For 2B units, market rent is approximately \$600 above pre-conversion rent. Therefore, when comparing 2B post-conversion rents against market rents, rent reductions are larger than when post-conversion rents are compared against pre-conversion rents.

According to an interview with staff from the City of Dublin, the city was approached by CalCHA and Catalyst about this project, which appears typical of how these JPA developments are initiated. While the City of Dublin’s staff developed a staff report analyzing the proposal, it is not clear that staff conducted independent research/analysis outside of reviewing and summarizing the information provided to the city by Catalyst/CalCHA, which also appears to be typical of other cities’ review processes. City staff worked with Catalyst to set the deal terms. The City proposed indemnification and/or liability insurance protecting the City against liability for CalCHA projects, but Catalyst rejected this proposed term.

Case Study 2: K Street Flats in Berkeley, California

GENERAL PROJECT INFORMATION

JPA: CALCHA

Total Debt: \$121,485,201

Project Administrator: HCF Developments

Property Management Company: Sequoia Equities

Number of units: 176

Source: Electronic Municipal Market Access, 2022

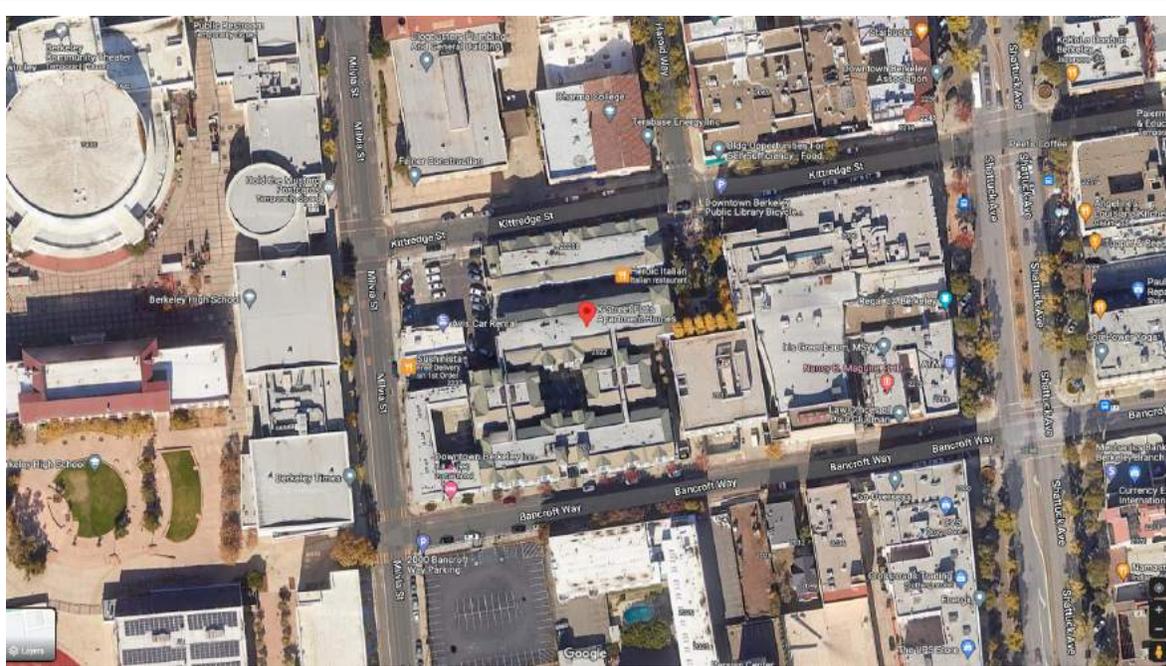
K Street Flats Building Exterior



Source: Elevatetosequoia.com

K Street Flats Location

Policy Evaluation on Joint Powers Authority Middle-Income Developments



Source: Google Photos

COST STATISTICS

Property Sale Price: \$99,135,354
First Series Bond Value and Interest Rate: \$70,000,000; 3%
Second Series Bond Value and Interest Rate: \$52,700,000; 4%
Administrator Series Bond Value and Interest Rate: \$5,000,000; 10%
Cost of Issuance: \$4,729,090
Debt to Price Ratio: 123%
Source: Electronic Municipal Market Access, 2022

RENT REDUCTION STATISTICS

- 1B:**
- **Pre-to-Post Conversion; 120% AMI:** \$168 decrease
 - **Pre-to-Post Conversion; 100% AMI:** \$249 decrease
 - **Pre-to-Post Conversion; 80% AMI:** \$340 decrease
- 2B:**
- **Pre-to-Post Conversion; 120% AMI:** \$47 decrease
 - **Pre-to-Post Conversion; 100% AMI:** \$140 decrease
 - **Pre-to-Post Conversion; 80% AMI:** \$254 decrease
- 3B:**
- **Pre-to-Post Conversion; 120% AMI:** \$305 decrease
 - **Pre-to-Post Conversion; 100% AMI:** \$421 decrease
 - **Pre-to-Post Conversion; 80% AMI:** \$687 decrease

Source: Electronic Municipal Market Access, 2022

Case Study 3: Latitude 33 in in Escondido, California

GENERAL PROJECT INFORMATION

JPA: CMFA

Total Debt: \$120,630,000

Project Administrator: Ascenda Latitude33 Administrator, LLC

Property Management Company: Greystar California, Inc.

Number of units: 198

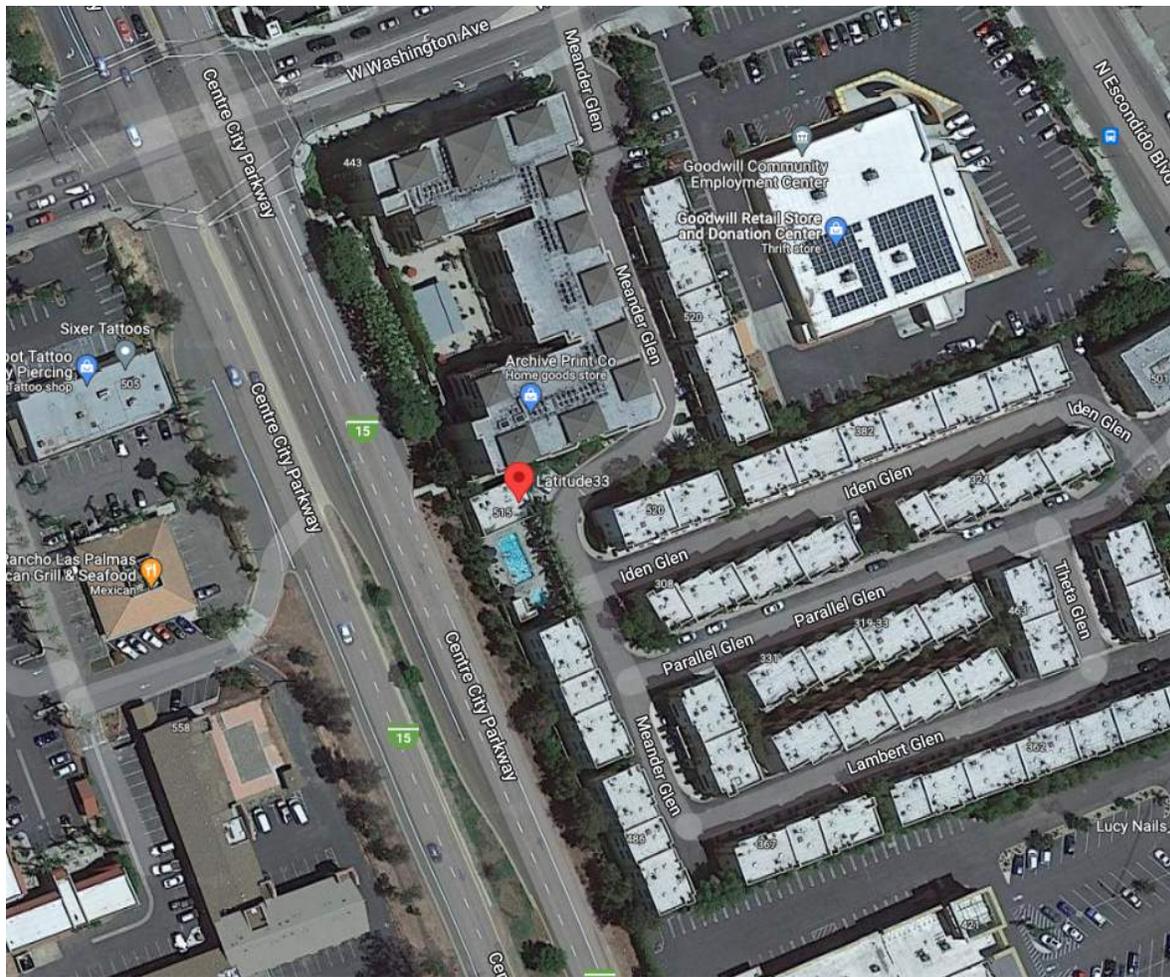
Source: Electronic Municipal Market Access, 2022

Latitude 33 Building Exterior



Source: Latitude33escondido.com

Latitude 33 Location



Source: Google Maps

COST STATISTICS

Property Sale Price: \$97,000,000
First Series Bond Value and Interest Rate: \$87,300,000; 3%
Second Series Bond Value and Interest Rate: \$33,330,000; 4%
Administrator Series Bond Value and Interest Rate: \$4,125,000; 8%
Cost of Issuance: \$3,680,206
Debt to Price Ratio: 124%
Source: Electronic Municipal Market Access, 2022

RENT REDUCTION STATISTICS

- 1B:**
- **Pre-to-Post Conversion; 120% AMI:** \$168 decrease
 - **Pre-to-Post Conversion; 100% AMI:** \$249 decrease
 - **Pre-to-Post Conversion; 80% AMI:** \$340 decrease
- 2B:**
- **Pre-to-Post Conversion; 120% AMI:** \$47 decrease

- **Pre-to-Post Conversion; 100% AMI:** \$140 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$254 decrease

3B:

- **Pre-to-Post Conversion; 120% AMI:** \$305 decrease
- **Pre-to-Post Conversion; 100% AMI:** \$421 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$687 decrease

Source: Electronic Municipal Market Access, 2022

SELECTION RATIONALE AND TAKEAWAYS

Case Study Selection Rationale: Latitude 33 was chosen as a case study due to a few unique attributes. The JPA involved with the Latitude 33 development is CMFA (Electronic Municipal Market Access, 2022). CMFA is the JPA organization for only 4 of 41 transactions, while CalCHA and CSCDA are the JPA organizations for 13 and 23 transactions, respectively (Electronic Municipal Market Access, 2022). Our team was interested to learn if developments associated with CMFA were different than those associated with CalCHA and/or CSCDA in significant ways. Similarly, Latitude 33 stood out because it is located in a California Qualified Opportunity Zone within Escondido. Opportunity zones are census tracts that are considered low-income communities (S. of California, n.d.). Our team was interested in investigating if the impacts of a JPA development would be different in a low-income community than in a moderate- or high-income community.

Timeline and Description of Events: In January 2021, Escondido became a member of its first JPA organization, CalCHA. No specific JPA development project was approved at that time. In September 2021, City Council asked that when city staff review and recommend JPA middle-income housing proposals for consideration, that they prioritize the “financial sustainability of the project (including the availability of fund to pay for any necessary capital improvements or maintenance and the potential monetary benefits to the city at sale), the reputation of the developer, the ability to meet Regional Housing Needs Assessment (“RHNA”) obligations, and the age of the housing stock” (October 27, 2021 City Council Meeting Agenda., 2021).

In October 2021, Escondido city staff requested that City Council adopt a resolution authorizing the city to join CMFA Special Financing Agency as a member, support CMFA’s issuance of bonds for the “production, preservation, and protection” of middle-income housing, and authorize the Escondido mayor to enter into a public benefits agreement with CMFA for the acquisition of two JPA developments, Solana on Grand and Latitude 33, for their conversion to middle-income housing. At the same time, city staff also asked the City Council to authorize the city to join CSCDA Community Improvement Authority, support CSCDA’s issuance of bonds for middle-income housing, and authorize the mayor to enter into an agreement with CSCDA to acquire three JPA developments, Rowan, Haven 76, and Alcove. City staff informed the City Council that “adoption of the resolutions will enable the purchase of market rate housing to convert the units to 30-year deed-restricted middle-income housing. Each project would provide income and rent-restricted rental housing for households earning between 80% to 120% of the Area Median Income (“AMI”)” (October 27, 2021 City Council Meeting Agenda., 2021).

Keyser Marston Associates Inc. (KMA) conducted a financial analysis of these proposals, which were shared with the City Council. In its analysis of the Latitude 33 project, KMA estimated that over the 30-year bond period, Escondido and other taxing entities would forgo \$46.2 million in ad valorem

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property tax revenues and property tax assessments. KMA concluded that the annual host charge fees paid through project revenues would total \$4.4 million over the 30-year time period. KMA also leveraged CMFA/Ascenda’s cash flow projections to estimate that the sale of the development after 30 years could potentially yield up to \$120.6 million in net proceeds to the city. However, KMA acknowledged that the net proceeds would be “very sensitive to the operations of the project, future market conditions, and other factors over which the city has no control.” A city report concluded that Latitude 33 would have a net positive value in year 16 of the 30-year time period (October 27, 2021 City Council Meeting Agenda., 2021).

Latitude 33 was sold by Latitude Del, LLC to Ascenda Capital LLC on July 16, 2021, after which the city of Escondido agreed to the JPA deal (October 27, 2021 City Council Meeting Agenda., 2021).

Learnings: The rent reductions at the Latitude 33 development for residents in the 80%, 100%, and 120% AMI brackets are slightly larger than the reductions seen at some other case study developments. Rent reductions are largest for 3-bedroom units, especially for residents in the 80% AMI bracket. For 1B, 2B, and 3B units, market rents were approximately \$400, \$600, and \$400 above pre-conversion rents at Latitude 33 (Electronic Municipal Market Access, 2022). Therefore, when comparing post-conversion rents against market rents, rent reductions are larger than when post-conversion rents are compared against pre-conversion rents, as is done in the “rent reduction statistics” section above.

Case Study 4: Next on Lex/Brio Apartments in Glendale, California

GENERAL PROJECT INFORMATION

JPA: CALCHA

Total Debt: \$457,994,008

Project Administrator: Catalyst

Property Management Company: Greystar California, Inc.

Number of units: 699

Source: Electronic Municipal Market Access, 2022

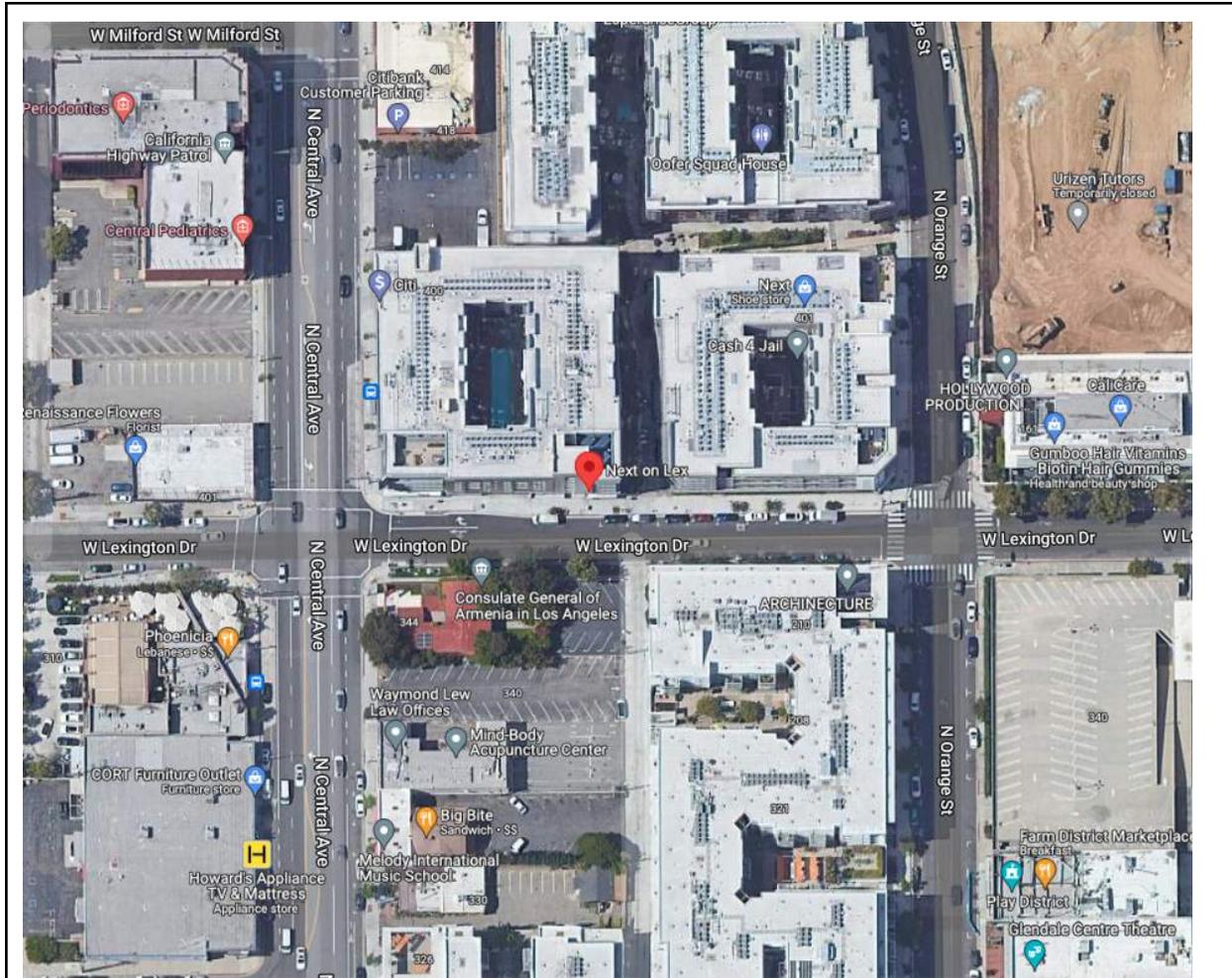
Next on Lex Building Exterior



Source: Nextonlex.com

Next on Lex Location

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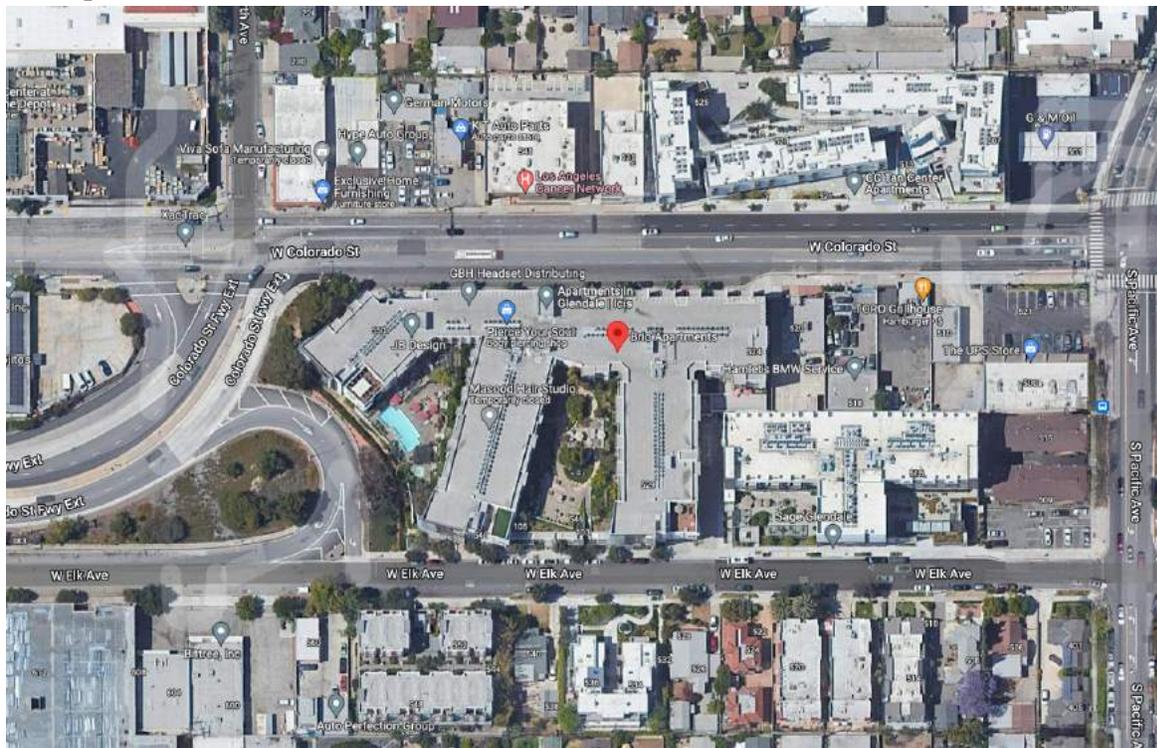
Source: Google Maps

Brio Apartments: Building Exterior and Pool



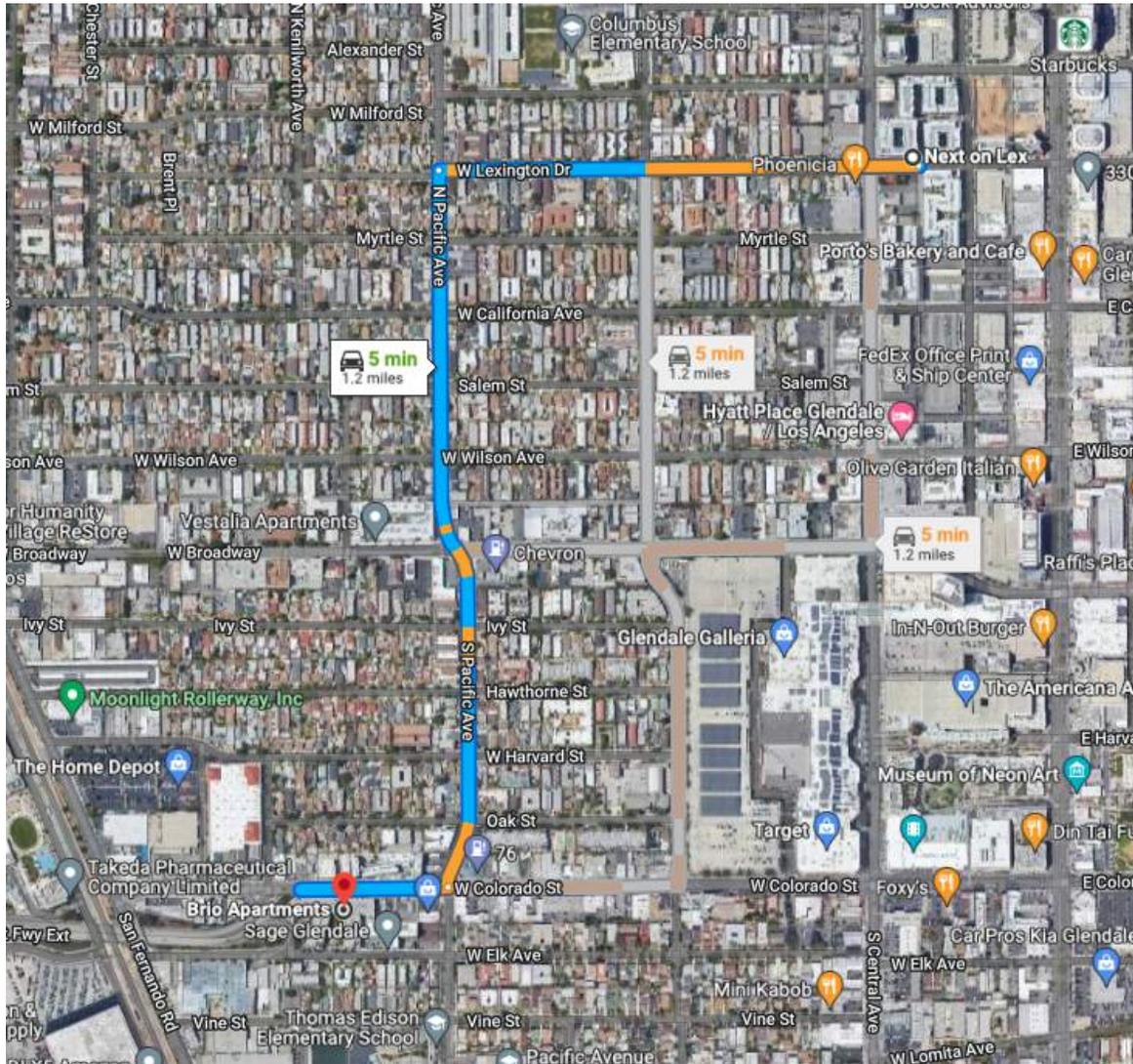
Source: Thebriopartments.com

Brio Apartments Location



Source: Google Maps

Next on Lex to Brio Apartments Distance



Source: Google Maps

COST STATISTICS

Property Sale Price: \$403,190,500
First Series Bond Value and Interest Rate: \$250,000,000; 4%
Second Series Bond Value and Interest Rate: \$184,220,000; 4%
Administrator Series Bond Value and Interest Rate: \$10,000,000; 10%
Cost of Issuance: \$8,121,749
Debt to Price Ratio: 114%

Source: Electronic Municipal Market Access, 2022

RENT REDUCTION STATISTICS

Studio:

- **Pre-to-Post Conversion; 50% AMI:** \$1,320 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$556 decrease

1B:

- **Pre-to-Post Conversion; 50% AMI:** \$1,187 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$399 decrease

2B:

- **Pre-to-Post Conversion; 50% AMI:** \$2,030 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$1,143 decrease

3B:

- **Pre-to-Post Conversion; 50% AMI:** \$2,698 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$1,713 decrease

Source: Electronic Municipal Market Access, 2022

SELECTION RATIONALE AND TAKEAWAYS

Case Study Selection Rationale: We chose this transaction due to its unique characteristics. This transaction was one of the largest in terms of total units acquired and total amount borrowed. This is because CALCHA and Catalyst purchased two large apartment units in one transaction. Additionally, these properties differ significantly from other “Essential Housing” deals in that 10% of units are restricted to 50% AMI, 10% of units are restricted to 80% AMI and the rest are effectively unrestricted (Electronic Municipal Market Access, 2022)..

Timeline and Description of Events: On February 11, 2020 the Housing Authority of Glendale authorized the city to become a member of CalCHA. The city joined CSCDA on January 19, 2021. CalCHA issued bonds to purchase Next on Lex and the Brio Apartments in March 2021 (Electronic Municipal Market Access, 2022). The Glendale City Housing Authority agreed to have CalCHA acquire these buildings via one bond issuance—the city council was not involved in this deal nor the subsequent deal with CSCDA and Waterford to purchase Altana Apartments.

The application period for the 140 rent restricted apartments across the two properties was open from July 26, 2021 to August 16, 2021. 6,423 individuals applied for a spot in one of these units. Roughly 2,000 were current city residents (City of Glendale, 2021).

Learnings: In a September 14, 2021 Glendale City Council and Glendale Housing Authority meeting, council members generally expressed significant support for these projects. They were excited by the combination of rent reductions and potential for significant financial windfall at the end of bond maturity. Notably, the foregone property taxes as presented to the city council in this meeting did not address the revenue hit that other taxing authorities would experience (City of Glendale, 2021).

One council member had more significant reservations about these properties. Namely, he was frustrated by the lack of control the city council was given over the previous deals, “I like to think that as a member of the city council that I have some control over land use and affordable housing. And I feel that in this case I feel that I did not have any say in it. Aside from the very general and vague direction we gave to staff a year and a half or maybe two years ago to enter into this program.” He also expressed concern that the city had looked to these properties as a way to attract higher earning residents to the city when they were initially built—now, these properties are aimed at less wealthy residents who have less money to spend in the city. A different council member, who was enthused by

the program, wanted the city to consider having the JPAs look at lower quality buildings such that rents could be even more affordable (City of Glendale, 2021).

In this meeting the council passed an agreement that would require the Housing Authority to bring future prospective JPA properties to them for approval. Prior to the vote a council member feared that this agreement could prevent future JPA middle-income housing deals from ever happening due to the quick timeline of real estate transactions. The director of the Housing Authority assured him that requiring city council approval for future JPA deals would not add significant delay that could derail future deals (City of Glendale, 2021).

The rent reductions on the restricted units are significant given the unusual AMI requirements. In order for CSCDA and Catalyst to make this viable, far fewer units are rent restricted than is typical. It is unclear why Glendale, CalCHA, and Catalyst approached this deal in a way that increased the city's stock of low income housing, not middle-income housing.

Case Study 5: Oceanaire in Long Beach, CA

GENERAL PROJECT INFORMATION

JPA: CSCDA

Total Debt:

Project Administrator: Waterford

Property Management Company: Greystar California, Inc.

Number of units: 216

Source: Electronic Municipal Market Access, 2022

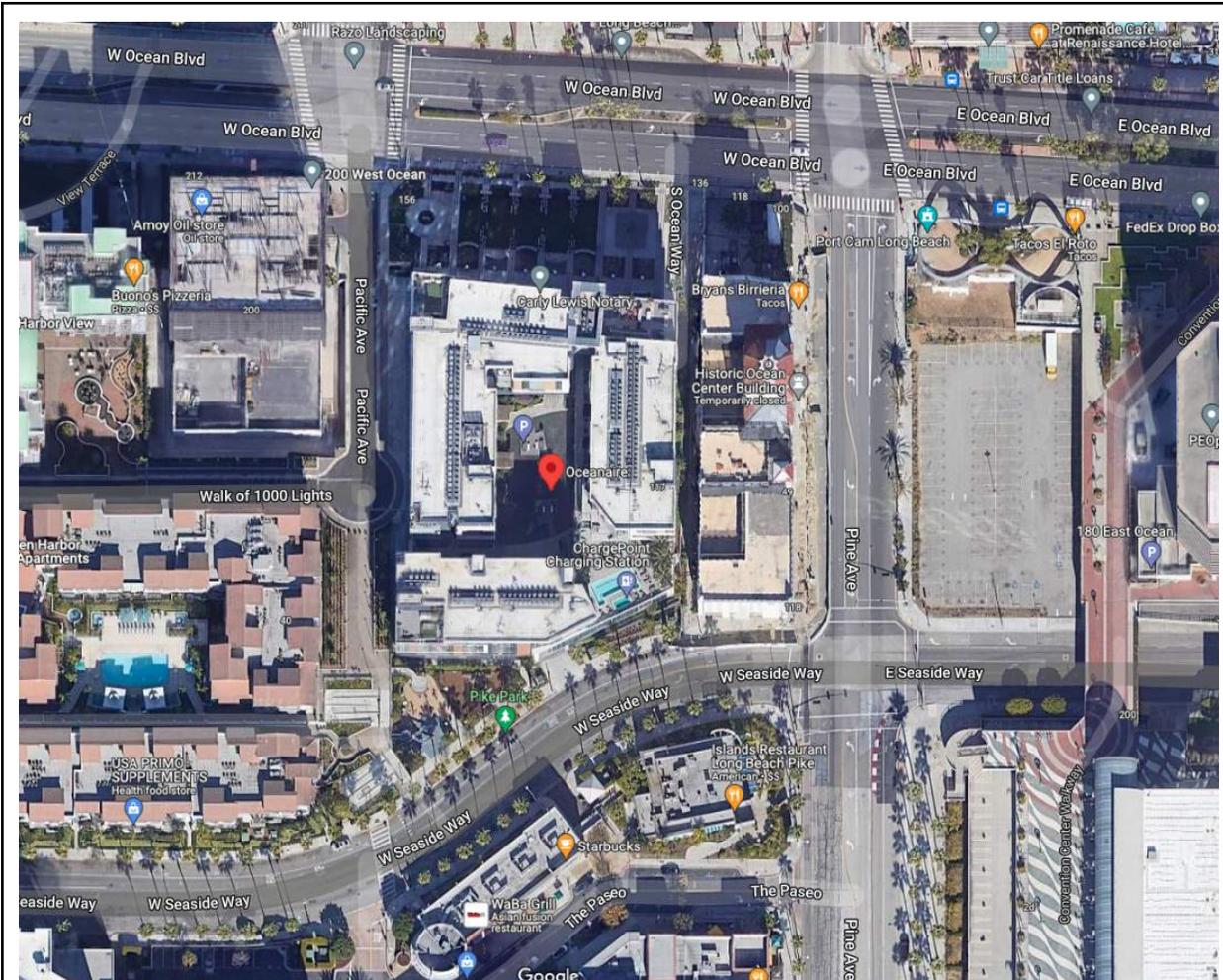
Oceanaire Building Exterior



Source: Oceanairepts.com

Oceanaire Location

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Source: Google Maps

COST STATISTICS

Property Sale Price: \$121,200,200

First Series Bond Value and Interest Rate: \$25,000,000; 3.2%

Second Series Bond Value and Interest Rate: \$105,730,000; 4.0%

Administrator Series Bond Value and Interest Rate: \$5,000,000; 10.0%

Cost of Issuance: \$4,655,438.2

Debt to Price Ratio:

Source: *Electronic Municipal Market Access, 2022*

RENT REDUCTION STATISTICS

Studio:

- Pre-to-Post Conversion; 120% AMI: \$411 increase
- Pre-to-Post Conversion; 100% AMI: \$50 decrease
- Pre-to-Post Conversion; 80% AMI: \$510 decrease

1B:

- Pre-to-Post Conversion; 120% AMI: \$562 increase

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- **Pre-to-Post Conversion; 100% AMI:** \$36 increase
- **Pre-to-Post Conversion; 80% AMI:** \$490 decrease

2B:

- **Pre-to-Post Conversion; 120% AMI:** \$20 decrease
- **Pre-to-Post Conversion; 100% AMI:** \$611 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$1,203 decrease

3B:

- **Pre-to-Post Conversion; 120% AMI:** \$674 decrease
- **Pre-to-Post Conversion; 100% AMI:** \$1,331 decrease
- **Pre-to-Post Conversion; 80% AMI:** \$1,988 decrease

Source: Electronic Municipal Market Access, 2022

SELECTION RATIONALE AND TAKEAWAYS

Case Study Selection Rationale: The primary reason for selecting Oceanaire as a case study is because significant analysis of this deal had already been conducted. This allowed us to expand our case study analysis without taking on significant additional work and enabled us to use existing analysis by a highly reputable consulting firm as a basis for comparison.

Timeline and Description of Events: In 2020, Waterford and CSCDA approached the Long Beach City Council with an opportunity to convert Oceanaire into middle-income housing. On November 17, 2020, the Long Beach City council requested that the City Manager, Department of Development Services, and the City Attorney study the consequences of signing off on this Waterford and CSCDA housing deal. HR&A was contracted to conduct this analysis on behalf of the city. A summary of their findings is located in “Learnings.”

On February 16, 2021, a Long Beach city staff report recommended that the mayor and city council adopt a resolution to support CSCDA’s issuance of bonds to acquire Oceanaire and enter into a Public Benefit Agreement with the JPA. Bonds were issued in March 2021 and the building was acquired.

Learnings: HR&A determined that the affordability benefits were modest and identified risks and uncertainties with the agreement—namely, that the agreement relies on rosy financial projections to pay off debt obligations and that it incentivizes the city to hope for housing prices to increase. Following HR&A’s review of the draft agreement, CSCDA and Waterford agreed to increase the number of units in the 80% AMI category, and provide an annual monitoring fee to the city. HR&A found that the only significant reductions in rent would be at the 80% AMI level, and that only 26 of the 129 units designated for 100% and 120% AMI households would be below market rent.

HR&A was also concerned by Waterford’s lack of a capital expenditure plan. This meant it was unclear whether Waterford would provide sufficient dollars to cover necessary renovations in the long-term. Also of concern was that the benefit to the city relies on rents increasing by 3% YOY. If rent rises by less than this, then the city may not make a profit and other taxing authorities will not be reimbursed by the city for their lost tax revenue.

City staff was encouraged by Waterford’s success as a substantial property owner in the City of Long Beach.

Given these uncertainties, the city decided to conduct this as a pilot project.

While the rent caps on units for 120 AMI earners are higher than the pre-conversion rents, this does not mean residents are being charged these prices

According to an interview we conducted with a Long Beach city official, the city did not consult the county when negotiating with Waterford and CSCDA. The city had also seriously entertained creating their own JPA for the purposes of issuing bonds for this program. The city is the seventh largest in the state and has issued its own bonds for other purposes. Long Beach determined that it was not in their best time and financial interest to issue bonds, so they agreed to have CSCDA do so on behalf of the

city.

Case Study 6: 1818 Platinum Triangle in Anaheim, California

GENERAL PROJECT INFORMATION

JPA: CSCDA

Total Debt: \$148,041,692

Project Administrator: Waterford

Property Management Company: Greystar

Number of Units: 265

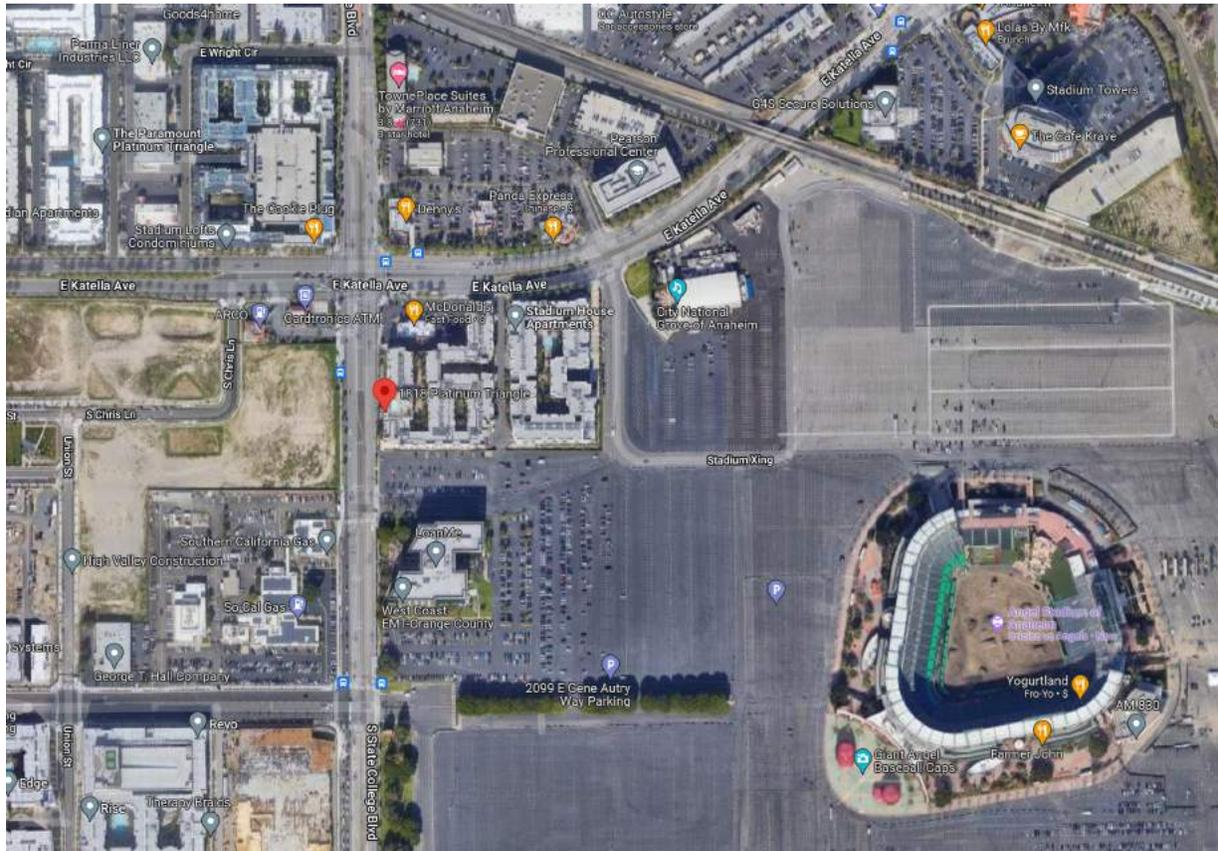
Source: Electronic Municipal Market Access, 2022

1818 Platinum Triangle Exterior



Source: 1818pt.com

1818 Platinum Triangle Location



Source: Google Maps

COST STATISTICS

Property Sale Price: \$127,300,000
First Series Bond Value and Interest Rate: \$40,000,000; 3.35%
Second Series Bond Value and Interest Rate: \$78,890,000; 3.25%
Third Series Bond Value and Interest Rate: \$33,500,000; 4.0%
Administrator Series Bond Value and Interest Rate: \$5,000,000; 10.0%
Cost of Issuance: \$5,359,879
Debt to Price Ratio: 116%

Source: Electronic Municipal Market Access, 2022

RENT REDUCTION STATISTICS

- 1B:**
- **Pre-to-Post Conversion; 120% AMI:** \$93 decrease
 - **Pre-to-Post Conversion; 100% AMI:** \$158 decrease
 - **Pre-to-Post Conversion; 80% AMI:** \$223 decrease
- 2B:**
- **Pre-to-Post Conversion; 120% AMI:** \$93 decrease
 - **Pre-to-Post Conversion; 100% AMI:** \$177 decrease

- **Pre-to-Post Conversion; 80% AMI:** \$261 decrease

Source: Electronic Municipal Market Access, 2022

SELECTION RATIONALE AND TAKEAWAYS

Case Study Selection Rationale: We selected 1818 Platinum Triangle as a case study because it was close to the median in sale price, debt, and per unit price. Additionally, we wanted to include a project from Anaheim because it has the most JPA deals of any city in California.

Timeline and Description of Events: In 2020, Anaheim joined CSCDA and authorized bond issuances for three JPA purchases. On September 28th, 2021, the Anaheim City Manager released a staff report recommending the City Council adopt a resolution allowing the City Manager to enter a Public Benefit Agreement with CSCDA for 1818 Platinum Triangle. The staff report recommended accepting an annual host city charge of \$225,000.

The staff report explained that the recommendation to permit another transaction came from a working group led by Councilmember O’Neil on housing affordability. The staff report estimates the 1818 Platinum Triangle deal will lose the city \$165,000 in lost property taxes in the first year.

Learnings: From our interview with a City of Anaheim staff member, we learned that this was the 4th in a line of 5 JPA transactions. The interviewee told us that the City Council was familiar with these transactions by the time it considered 1818 Platinum Triangle.

Further, we were told that the host fee in this transaction was not present in the earlier transaction. Further, the Public Benefits Agreement for 1818 Platinum Triangle specifies that Anaheim will use surplus funds from a sale of the property to compensate other taxing entities for their forgone property taxes.

The city also attempted to negotiate with the project administrator to get deeper rent discounts for tenants with incomes up to 60% of AMI. The city successfully negotiated the allocation of units to people making up to 80% of AMI, increasing the number of units with this rent restriction above the proposed number.

The interviewee made clear that they conducted the primary analysis on the JPA proposals, though they received help from Kaiser Marshall and Associates.

B. Modeling

1. Rental Savings Model and Specifications

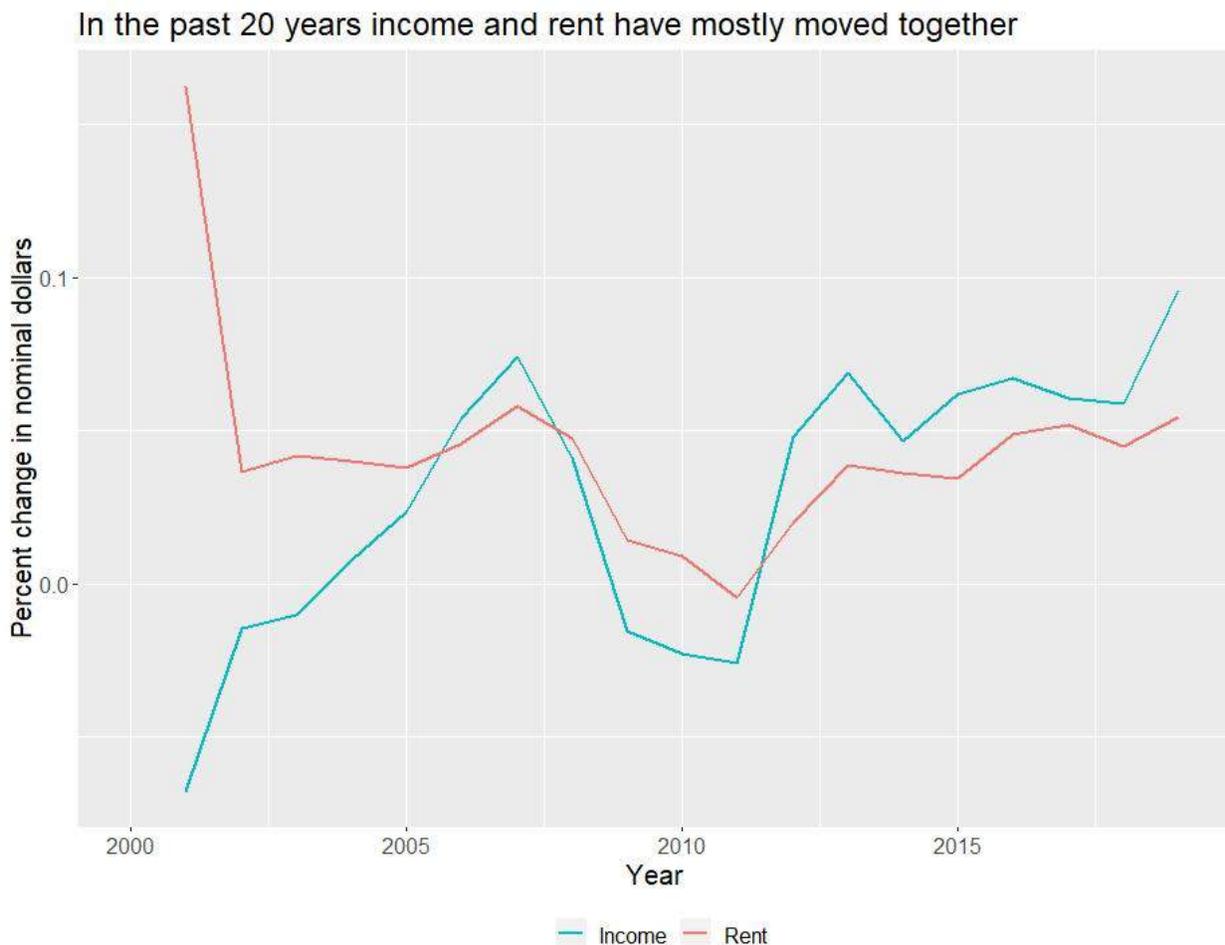
Rent Revenue:

Two different sets of rents are determined based on JPA specifications in bond documentation. Uncapped rent represents rent paid by residents living in units not under rent restriction, and capped rents represent rent paid by residents living in units under one of the several rent restriction categories (e.g. 80% AMI,

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100% AMI, 120% AMI). Uncapped rents are increased each year by the lesser of rent growth and 10%. Some developments will eventually be older than 15 years old, and then be subject to the statewide restriction that rent increases must not exceed 5% plus CPI. **This rule was not implemented in the model.** Capped rents are increased each year by the lesser of 4% and income growth. Income growth and rent growth are determined by a list of rent growth and income growth numbers per year, and can be changed to generate outputs assuming different patterns in income and rent growth. Income and rent growth options were chosen at 1%, to represent very slow growth, 3%, to represent moderate growth, and 4%, to represent high growth. These numbers were chosen based on income and rent growths in California over the past 20 years, which have averaged out to roughly 3 to 4% per year.

Historically, rent growth and income growth have followed similar patterns. Data from the Census of average rent and average family income in California show that the percent change in income and rent year over year has tended to follow a similar trend, with the exception of a big disconnect in the early 2000s.



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The percentage of units subject to capped rents is determined by assumptions provided by the JPA about the number of units occupied by income-qualifying households at the start of the program. This initial percentage of capped units is increased each year by the turnover rate multiplied by the percentage of uncapped units, as it is assumed that whenever a tenant leaves they will be replaced by a tenant qualifying for the income restricted rental units. In some cases, instead of an initial estimate of the number of tenants qualifying for rent restrictions at the start of the program, JPAs instead state that the number of units that are rent restricted will be 100% after a certain number of years. In these cases, the percentage of units that are capped is assumed to be 100% after the given number of years, and the number of units that are capped is back calculated using the given turnover rate. If turnover rate is not provided, a turnover rate of 40% is assumed.

After the percentage of units subject to capped rents is determined, the number of units capped at each rent restriction category (e.g. 80% AMI, 100% AMI, 120% AMI) is determined by multiplying the percent of capped units by the target percent of units capped at each level. This results in a list of rents (uncapped, capped at 80% AMI, capped at 100% AMI, and capped at 120% AMI) and the percentage of units leased at each rent value. Then the number of units for each size (studio, one bedroom, two bedroom, three bedroom) is multiplied by the rent, the percent of units rented at that value, and the number 12 to get the annual revenue generated by that size of bedroom. All these revenue values are added up for each size bedroom to get annual rent revenue for the development for that year, and this process is repeated for each year as rents increase based on the growth assumptions. After all revenue values have been calculated, inflation assumptions are used to calculate the real dollar values for each year. Both nominal and real dollars are available in the output.

Forgone Taxes:

Forgone taxes are calculated by first pulling the appraised value of the property at sale and setting that as the appraised value. Each year the appraised value is increased by the lesser of 2% or that year's assumed inflation rate. Then, appraised value is multiplied by the ad valorem tax rate to determine the forgone taxes for each year. Both appraised value and forgone taxes are converted to real dollars based on the assumed inflation rate. Both nominal and real dollars are available in the output.

Operating Costs:

Initial operating costs are pulled from the bond issuance documentation, then increased each year by the rate of operating cost growth assumed in the bond issuance documentation (typically 3%). Inflation assumptions are then used to calculate the real dollar values for each year. Both nominal and real dollars are available in the output.

Other Income:

The initial other income value is estimated roughly based on the historical information provided in the bond issuance documentation. This value is then increased each year by the rate of other income growth assumed in the bond issuance documentation. If this information is not provided, a growth rate of 3% is assumed. Inflation assumptions are then used to calculate the real dollar values for each year. Both nominal and real dollars are available in the output.

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Assumptions:

The main output used in our calculations assumes constant growth rates for income, rent, and inflation. It is also possible to submit a series of rates that changes over time to the model, but that has not been used in the outputs presented in this report.

2. Rental Savings Complete Output by Development

Below is the output for a single development for a single set of growth assumptions (income growth is 3%, rent growth is 3%, and inflation is 2%). It only includes uncapped rent revenues and capped rent revenues, while the full output also includes the appraised value of the development, the value of forgone taxes, operating costs and other income. We have limited the output to the below because the full model output is nearly 40,000 lines long. A separate file with the full output has been submitted along with this report.

year	nominal_dollars	type	real_dollars	assumptions	development
1	\$ 8,434,222	capped revenue	\$ 8,434,222	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	\$ 9,129,168	uncapped revenue	\$ 9,129,168	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	\$ 8,641,069	capped revenue	\$ 8,471,636	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	\$ 9,403,043	uncapped revenue	\$ 9,218,670	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3	\$ 8,828,952	capped revenue	\$ 8,486,113	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3	\$ 9,685,134	uncapped revenue	\$ 9,309,049	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
4	\$ 9,093,821	capped revenue	\$ 8,569,311	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
4	\$ 9,975,688	uncapped revenue	\$ 9,400,314	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
5	\$ 9,366,636	capped revenue	\$ 8,653,323	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
5	\$ 10,274,959	uncapped revenue	\$ 9,492,474	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
6	\$ 9,647,635	capped revenue	\$ 8,738,160	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
6	\$ 10,583,208	uncapped revenue	\$ 9,585,537	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
7	\$ 9,937,064	capped revenue	\$ 8,823,828	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
7	\$ 10,900,704	uncapped revenue	\$ 9,679,513	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
8	\$ 10,235,176	capped revenue	\$ 8,910,336	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
8	\$ 11,227,725	uncapped revenue	\$ 9,774,410	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
9	\$ 10,542,231	capped revenue	\$ 8,997,693	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
9	\$ 11,564,557	uncapped revenue	\$ 9,870,238	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
10	\$ 10,858,498	capped revenue	\$ 9,085,905	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
10	\$ 11,911,494	uncapped revenue	\$ 9,967,005	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
11	\$ 11,184,253	capped revenue	\$ 9,174,983	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
11	\$ 12,268,838	uncapped revenue	\$ 10,064,721	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
12	\$ 11,519,780	capped revenue	\$ 9,264,934	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
12	\$ 12,636,904	uncapped revenue	\$ 10,163,394	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
13	\$ 11,865,374	capped revenue	\$ 9,355,766	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
13	\$ 13,016,011	uncapped revenue	\$ 10,263,036	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
14	\$ 12,221,335	capped revenue	\$ 9,447,489	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
14	\$ 13,406,491	uncapped revenue	\$ 10,363,654	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
15	\$ 12,587,975	capped revenue	\$ 9,540,112	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
15	\$ 13,808,686	uncapped revenue	\$ 10,465,258	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
16	\$ 12,965,614	capped revenue	\$ 9,633,642	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
16	\$ 14,222,946	uncapped revenue	\$ 10,567,859	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
17	\$ 13,354,583	capped revenue	\$ 9,728,090	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
17	\$ 14,649,635	uncapped revenue	\$ 10,671,465	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
18	\$ 13,755,220	capped revenue	\$ 9,823,463	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
18	\$ 15,089,124	uncapped revenue	\$ 10,776,087	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
19	\$ 14,167,877	capped revenue	\$ 9,919,772	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
19	\$ 15,541,797	uncapped revenue	\$ 10,881,735	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
20	\$ 14,592,913	capped revenue	\$ 10,017,024	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle

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20	\$	16,008,051	uncapped revenue	\$	10,988,419	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
21	\$	15,030,700	capped revenue	\$	10,115,231	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
21	\$	16,488,293	uncapped revenue	\$	11,096,148	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
22	\$	15,481,621	capped revenue	\$	10,214,399	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
22	\$	16,982,942	uncapped revenue	\$	11,204,934	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
23	\$	15,946,070	capped revenue	\$	10,314,541	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
23	\$	17,492,430	uncapped revenue	\$	11,314,787	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
24	\$	16,424,452	capped revenue	\$	10,415,664	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
24	\$	18,017,203	uncapped revenue	\$	11,425,716	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
25	\$	16,917,186	capped revenue	\$	10,517,778	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
25	\$	18,557,719	uncapped revenue	\$	11,537,733	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
26	\$	17,424,701	capped revenue	\$	10,620,893	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
26	\$	19,114,450	uncapped revenue	\$	11,650,848	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
27	\$	17,947,442	capped revenue	\$	10,725,020	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
27	\$	19,687,884	uncapped revenue	\$	11,765,072	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
28	\$	18,485,866	capped revenue	\$	10,830,167	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
28	\$	20,278,521	uncapped revenue	\$	11,880,415	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
29	\$	19,040,442	capped revenue	\$	10,936,345	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
29	\$	20,886,876	uncapped revenue	\$	11,996,890	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
30	\$	19,611,655	capped revenue	\$	11,043,564	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
30	\$	21,513,482	uncapped revenue	\$	12,114,507	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
31	\$	20,200,005	capped revenue	\$	11,151,834	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
31	\$	22,158,887	uncapped revenue	\$	12,233,276	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
32	\$	20,806,005	capped revenue	\$	11,261,166	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
32	\$	22,823,653	uncapped revenue	\$	12,353,210	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
33	\$	21,430,185	capped revenue	\$	11,371,570	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
33	\$	23,508,363	uncapped revenue	\$	12,474,320	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
34	\$	22,073,090	capped revenue	\$	11,483,056	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
34	\$	24,213,614	uncapped revenue	\$	12,596,618	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
35	\$	22,735,283	capped revenue	\$	11,595,635	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
35	\$	24,940,022	uncapped revenue	\$	12,720,114	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
36	\$	23,417,342	capped revenue	\$	11,709,317	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
36	\$	25,688,223	uncapped revenue	\$	12,844,821	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
37	\$	24,119,862	capped revenue	\$	11,824,115	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
37	\$	26,458,870	uncapped revenue	\$	12,970,750	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
38	\$	24,843,458	capped revenue	\$	11,940,037	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
38	\$	27,252,636	uncapped revenue	\$	13,097,915	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
39	\$	25,588,761	capped revenue	\$	12,057,097	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
39	\$	28,070,215	uncapped revenue	\$	13,226,326	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
40	\$	26,356,424	capped revenue	\$	12,175,303	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
40	\$	28,912,321	uncapped revenue	\$	13,355,996	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle

A separate output from the same model includes individual rent values for uncapped and capped units of various sizes. Below is a sample of that output for a single development and a single set of assumptions (income growth is 3%, rent growth is 3%, and inflation is 2%). It only includes the first 3 years, as this output is even longer than the previous one. The full output is almost 130,000 lines long, and the full dataset has been submitted alongside this report.

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ye	size	num_un	rent_type	rent	perc	real_rent	assumptions	development
1	studio	NA	uncapped	NA	0.138888889	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	studio	NA	capped50	NA	NA	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	studio	NA	capped80	NA	0.172222222	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	studio	NA	capped100	NA	0.344444444	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	studio	NA	capped120	NA	0.344444444	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	1bd	152	uncapped	2757	0.138888889	2757	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	1bd	152	capped50	1236.875	NA	1236.875	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	1bd	152	capped80	1979	0.172222222	1979	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	1bd	152	capped100	2473.75	0.344444444	2473.75	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	1bd	152	capped120	2757	0.344444444	2757	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	2bd	100	uncapped	3417	0.138888889	3417	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	2bd	100	capped50	1595	NA	1595	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	2bd	100	capped80	2552	0.172222222	2552	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	2bd	100	capped100	3190	0.344444444	3190	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	2bd	100	capped120	3417	0.344444444	3417	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	3bd	NA	uncapped	NA	0.138888889	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	3bd	NA	capped50	NA	NA	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	3bd	NA	capped80	NA	0.172222222	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	3bd	NA	capped100	NA	0.344444444	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
1	3bd	NA	capped120	NA	0.344444444	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	studio	NA	uncapped	NA	0.083333333	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	studio	NA	capped50	NA	NA	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	studio	NA	capped80	NA	0.183333333	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	studio	NA	capped100	NA	0.366666667	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	studio	NA	capped120	NA	0.366666667	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	1bd	152	uncapped	2839.71	0.083333333	2784.029412	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	1bd	152	capped50	1273.98125	NA	1249.001225	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	1bd	152	capped80	2038.37	0.183333333	1998.401961	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	1bd	152	capped100	2547.9625	0.366666667	2498.002451	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2	1bd	152	capped120	2839.71	0.366666667	2784.029412	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle

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2 2bd	100	uncapped	3519.51	0.083333333	3450.5	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 2bd	100	capped50	1642.85	NA	1610.637255	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 2bd	100	capped80	2628.56	0.183333333	2577.019608	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 2bd	100	capped100	3285.7	0.366666667	3221.27451	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 2bd	100	capped120	3519.51	0.366666667	3450.5	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 3bd	NA	uncapped	NA	0.083333333	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 3bd	NA	capped50	NA	NA	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 3bd	NA	capped80	NA	0.183333333	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 3bd	NA	capped100	NA	0.366666667	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
2 3bd	NA	capped120	NA	0.366666667	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 studio	NA	uncapped	NA	0	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 studio	NA	capped50	NA	NA	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 studio	NA	capped80	NA	0.2	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 studio	NA	capped100	NA	0.4	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 studio	NA	capped120	NA	0.4	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 1bd	152	uncapped	2924.9013	0	2811.323818	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 1bd	152	capped50	1312.200688	NA	1261.246336	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 1bd	152	capped80	2099.5211	0.2	2017.994137	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 1bd	152	capped100	2624.401375	0.4	2522.492671	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 1bd	152	capped120	2924.9013	0.4	2811.323818	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 2bd	100	uncapped	3625.0953	0	3484.328431	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 2bd	100	capped50	1692.1355	NA	1626.427816	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 2bd	100	capped80	2707.4168	0.2	2602.284506	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 2bd	100	capped100	3384.271	0.4	3252.855632	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 2bd	100	capped120	3625.0953	0.4	3484.328431	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 3bd	NA	uncapped	NA	0	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 3bd	NA	capped50	NA	NA	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 3bd	NA	capped80	NA	0.2	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 3bd	NA	capped100	NA	0.4	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle
3 3bd	NA	capped120	NA	0.4	NA	income: 0.03 rent: 0.03 inflation: 0.02	1818 Platinum Triangle

3. Tax Costs Model and Specifications

Modeling tax losses requires prediction and forecasting. For growth in real estate appreciations, we assume the market cap rate will remain as it is, at historic highs over the next 30 years. Market capitalization is the expected rental income as a percentage of property value. In high value markets, market caps can be as low as 3% generally. If the market declines significantly, this dynamic can change and these properties will have less value than predicted.

When modeling tax loss, 2% inflation is assumed which is the industry standard despite more recent high inflation forecasts and recent increases in CPI. Our model specifications, as shown on the next page, have five different scenarios: worst, likely, EMMA, best, and property market. The worst scenario assumes an increased rental growth rate of 2.28% which is the rental appreciation rate of the East Bay from 2008-2021. The likely scenario is 2.8% which is based on the median growth rate of the Costar projects we sampled. The EMMA scenario is based on the 3% growth rate in rents assumed by EMMA in the bond documentation. The best scenario is capped at 4% because that is the rent cap rate established by JPAs. The property market rate is % growth for the development based on change in rent growth from the Costar state for similar properties over the last 13 years.

Within each of the scenarios described above, there are four different scenarios for estimating the property value based on the number of sales and resales of the property. The first scenario uses the cost basis of the property before acquisition. The following scenarios assume a) one sale end of year 15 b) sale ends of

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year 10 and year 20 c) sale end of year 8, end of year 16, and end of year 24. In the readout in appendix 11, the one sale is highlighted as the most likely outcome, hence the yellow coloring. Commercial real estate properties typically sell every 10 years in California in some markets, and the one sale assumption is considered a conservative estimate (Chu & Uhler, 2016). The 10% discount analysis is completed by turning the inflation factor to 10% in the model.

4. Tax Costs & Property Values by Select Development

Efficiency Analysis: Estimated Tax Losses and Projected Values for 10 Selected Properties

Property	Scenario	Adjusted			Property Value (@yr 30)	Property Min	Property Max
		Lost Rev Assum No Resale	Lost Tax 1 Resale (@yr 15)	Lost Tax 3 Resale (@8, 16, 24)			
Latitude33	Worst	\$ 33,627,960	\$ 34,381,857	\$ 34,756,846	\$ 105,314,498	\$ 33,627,960	\$ 44,246,760
Latitude33	Likely	\$ 33,627,960	\$ 35,866,728	\$ 37,005,547	\$ 122,619,636	\$ 33,627,960	\$ 44,246,760
Latitude33	Emma	\$ 33,627,960	\$ 36,468,542	\$ 37,926,460	\$ 129,982,032	\$ 33,627,960	\$ 44,246,760
Latitude33	Best	\$ 33,627,960	\$ 39,754,392	\$ 43,050,635	\$ 173,686,779	\$ 33,627,960	\$ 44,246,760
Latitude33	Property Market	\$ 33,627,960	\$ 40,506,874	\$ 44,246,760	\$ 184,522,130	\$ 33,627,960	\$ 44,246,760
Aster	Worst	\$ 59,345,040	\$ 60,675,482	\$ 61,337,244	\$ 176,971,785	\$ 59,345,040	\$ 75,973,733
Aster	Likely	\$ 59,345,040	\$ 63,295,912	\$ 65,305,647	\$ 206,051,553	\$ 59,345,040	\$ 75,973,733
Aster	Emma	\$ 59,345,040	\$ 64,357,966	\$ 66,930,831	\$ 218,423,415	\$ 59,345,040	\$ 75,973,733
Aster	Best	\$ 59,345,040	\$ 70,156,678	\$ 75,973,733	\$ 291,865,412	\$ 59,345,040	\$ 75,973,733
Aster	Property Market	\$ 59,345,040	\$ 61,411,024	\$ 62,445,190	\$ 184,325,854	\$ 59,345,040	\$ 75,973,733
NextonLexBrio	Worst	\$ 131,069,168	\$ 134,007,576	\$ 135,469,140	\$ 437,750,568	\$ 131,069,168	\$ 167,795,218
NextonLexBrio	Likely	\$ 131,069,168	\$ 139,795,043	\$ 144,233,735	\$ 509,681,157	\$ 131,069,168	\$ 167,795,218
NextonLexBrio	Emma	\$ 131,069,168	\$ 142,140,631	\$ 147,823,108	\$ 540,283,717	\$ 131,069,168	\$ 167,795,218
NextonLexBrio	Best	\$ 131,069,168	\$ 154,947,699	\$ 167,795,218	\$ 721,947,001	\$ 131,069,168	\$ 167,795,218
NextonLexBrio	Property Market	\$ 131,069,168	\$ 134,007,576	\$ 135,469,140	\$ 437,750,568	\$ 131,069,168	\$ 167,795,218
Creekwood	Worst	\$ 46,846,800	\$ 47,897,047	\$ 48,419,440	\$ 141,143,142	\$ 46,846,800	\$ 59,973,441
Creekwood	Likely	\$ 46,846,800	\$ 49,965,606	\$ 51,552,085	\$ 164,335,594	\$ 46,846,800	\$ 59,973,441
Creekwood	Emma	\$ 46,846,800	\$ 50,800,989	\$ 52,835,001	\$ 174,202,724	\$ 46,846,800	\$ 59,973,441
Creekwood	Best	\$ 46,846,800	\$ 55,381,475	\$ 59,973,441	\$ 232,776,095	\$ 46,846,800	\$ 59,973,441
Creekwood	Property Market	\$ 46,846,800	\$ 48,477,681	\$ 49,294,049	\$ 147,486,877	\$ 46,846,800	\$ 59,973,441
Annadel	Worst	\$ 59,753,400	\$ 61,092,997	\$ 61,759,313	\$ 188,371,808	\$ 59,753,400	\$ 80,189,304
Annadel	Likely	\$ 59,753,400	\$ 63,731,458	\$ 65,755,022	\$ 219,324,812	\$ 59,753,400	\$ 80,189,304
Annadel	Emma	\$ 59,753,400	\$ 64,800,820	\$ 67,391,389	\$ 232,493,635	\$ 59,753,400	\$ 80,189,304
Annadel	Best	\$ 59,753,400	\$ 70,639,434	\$ 76,496,516	\$ 310,666,558	\$ 59,753,400	\$ 80,189,304
Annadel	Property Market	\$ 59,753,400	\$ 72,956,632	\$ 80,189,304	\$ 344,600,325	\$ 59,753,400	\$ 80,189,304
K Street Flats	Worst	\$ 36,224,058	\$ 37,036,157	\$ 37,440,094	\$ 107,632,887	\$ 36,224,058	\$ 46,374,169
K Street Flats	Likely	\$ 36,224,058	\$ 38,635,660	\$ 39,862,397	\$ 125,318,979	\$ 36,224,058	\$ 46,374,169
K Street Flats	Emma	\$ 36,224,058	\$ 39,283,935	\$ 40,854,405	\$ 132,843,451	\$ 36,224,058	\$ 46,374,169
K Street Flats	Best	\$ 36,224,058	\$ 42,823,454	\$ 46,374,169	\$ 177,510,312	\$ 36,224,058	\$ 46,374,169
K Street Flats	Property Market	\$ 36,224,058	\$ 37,485,129	\$ 38,116,382	\$ 112,470,491	\$ 36,224,058	\$ 46,374,169
Monrovia	Worst	\$ 37,062,000	\$ 37,892,884	\$ 38,306,166	\$ 108,571,647	\$ 29,729,318	\$ 47,446,905
Monrovia	Likely	\$ 37,062,000	\$ 39,529,387	\$ 40,784,502	\$ 126,411,995	\$ 29,729,318	\$ 47,446,905
Monrovia	Emma	\$ 37,062,000	\$ 40,192,658	\$ 41,799,457	\$ 134,002,095	\$ 29,729,318	\$ 47,446,905
Monrovia	Best	\$ 37,062,000	\$ 43,814,054	\$ 47,446,905	\$ 179,058,535	\$ 29,729,318	\$ 47,446,905
1818 Platinum Triang	Worst	\$ 43,578,609	\$ 44,555,587	\$ 45,041,536	\$ 138,211,707	\$ 43,578,609	\$ 61,684,419
1818 Platinum Triang	Likely	\$ 43,578,609	\$ 46,479,837	\$ 47,955,638	\$ 160,922,470	\$ 43,578,609	\$ 61,684,419
1818 Platinum Triang	Emma	\$ 43,578,609	\$ 47,259,731	\$ 49,149,053	\$ 170,584,667	\$ 43,578,609	\$ 61,684,419
1818 Platinum Triang	Best	\$ 43,578,609	\$ 51,517,877	\$ 55,789,491	\$ 227,941,515	\$ 43,578,609	\$ 61,684,419
1818 Platinum Triang	Property Market	\$ 43,578,609	\$ 55,190,996	\$ 61,684,419	\$ 283,588,061	\$ 43,578,609	\$ 61,684,419
Oceanaire	Worst	\$ 43,646,616	\$ 44,625,119	\$ 45,111,826	\$ 131,589,054	\$ 43,646,616	\$ 55,876,554
Oceanaire	Likely	\$ 43,646,616	\$ 46,552,371	\$ 48,030,475	\$ 153,211,591	\$ 43,646,616	\$ 55,876,554
Oceanaire	Emma	\$ 43,646,616	\$ 47,333,483	\$ 49,225,753	\$ 162,410,807	\$ 43,646,616	\$ 55,876,554
Oceanaire	Best	\$ 43,646,616	\$ 51,598,273	\$ 55,876,554	\$ 217,019,302	\$ 43,646,616	\$ 55,876,554
Oceanaire	Property Market	\$ 43,646,616	\$ 48,056,202	\$ 50,338,006	\$ 171,144,872	\$ 43,646,616	\$ 55,876,554
WestsgateHudson	Worst	\$ 87,259,326	\$ 89,215,572	\$ 90,188,608	\$ 306,063,474	\$ 69,995,149	\$ 111,709,701
WestsgateHudson	Likely	\$ 87,259,326	\$ 93,068,580	\$ 96,023,639	\$ 356,355,415	\$ 69,995,149	\$ 111,709,701
WestsgateHudson	Emma	\$ 87,259,326	\$ 94,630,195	\$ 98,413,266	\$ 377,751,906	\$ 69,995,149	\$ 111,709,701
WestsgateHudson	Best	\$ 87,259,326	\$ 103,156,463	\$ 111,709,701	\$ 504,766,009	\$ 69,995,149	\$ 111,709,701

Note: Property Min and Max referring to the minimum and maximum 30 year property tax loss.

5. Issuance Regression Output

Regression Analysis: Issuance % of Borrowing Cost by Goldman Sachs, Jefferies, Total Borrowing

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<i>Regression Statistics</i>				
Multiple R	0.600005			
R Square	0.360006			
Standard Error	0.574212			
Observations	41.000000			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	3.4930713	0.2473243	14.1234457	0.0000000
Goldman Sachs	-0.1226240	0.2326452	-0.5270857	0.6012803
Jefferies	-0.8859382	0.2101489	-4.2157638	0.0001538
Total Borrowing	0.0000000	0.0000000	-0.1152698	0.9088546

We investigated several possibilities for the wide variance in issuance cost. We ran a multivariate regression analysis with issuance cost as a percentage of amount borrowed as the Y variable, total borrowed as an X variable, and Jefferies and Goldman Sachs as dummy variables, defined by equation $Y=3.49-.12X-.89X$. Our output indicates that for each \$100 million borrowed, we could expect having Jefferies as the underwriter would result in \$890,000 in issuance cost savings.

C. Historic Rent Appreciation for Ten Select Cities

In order to gain a benchmark for rental appreciation, we pulled historical market rental data for comparable 4 and 5 star properties from the appendixes of ten JPA development Costar reports. The pulled data is displayed in the chart below.

Development	2010	2021	Annual % Change	Annual Change (Assuming 2008-2010 was Flat)
Verdant Fairfield	\$1,513	\$2,327	4.89%	4.14%
Oceanaire Long Beach	\$2,139	\$3,023	3.76%	3.18%
Next on Lex Glendale	\$2,472	\$3,206	2.70%	2.28%
Annadel Santa Rosa	\$1,638	\$2,566	5.15%	4.36%
Platinum Triangle Anaheim	\$1,920	\$3,108	5.63%	4.76%
Mira Vista Hills Antioch	\$2,309	\$3,037	2.87%	2.43%
Union South Carson	\$2,471	\$3,206	2.70%	2.29%
Aster Dublin	\$2,309	\$3,037	2.87%	2.43%
K Flats Berkeley	\$2,309	\$3,037	2.87%	2.43%
Latitude 33 Escondido	\$1,965	\$3,041	4.98%	4.21%
Median			3.31%	2.80%

Source: Costar, 2022

The median rental appreciation for apartments in this dataset was 3.31% but there is a wide range from 2.7% to 5.63% annual average rental increase since 2010. Costar reports only show changes going back to 2010, but this comparison is somewhat problematic as 2010 followed two years of sluggish rent growths due to the Great Recession. In fact, in the Bay Area, rents from 2007-2011 were largely unchanged due to the recession. If we assume no rent growth from 2008-2010, the average annual change was 2.8%.

The totality of these numbers show that the Bond underwriting assumption of 3% is perhaps a reasonable assumed rent growth, but that some rental markets will underperform this assumption meaning that the rent savings will be lower than anticipated in some markets, especially in the Bay Area and part of Los Angeles County. The market context of these developments plays a role in how effective the policy will be in the long-run.

D. Comparative Market Analysis Assumptions and Analysis by Development

A number of factors complicate comparative market analysis for JPA developments. In most keys, the volume of comparable sales within the time frame queried is not large. While Costar provides a list of

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comparables, their selection of comparables is imperfect. For instance, the dataset for many of the properties in Los Angeles County including large multi-unit developments in Ventura County. This valuing properties that are not local appeared to cut both ways, overvaluing some properties and undervaluing others. Additionally, a close analysis of each property and comparable for quality differences was not conducted. We depended on Costar’s designation of a property based on stars to assess similarities between properties.

For transparency in our analysis, the top comparable properties are listed below in the chart:

JPA’s Properties are Significantly More Expensive than Nearby Comparables					
Property	\$/Unit	\$/SQFT	Comparable	\$/Unit	\$/SQFT
1020 Jennings Ave - Annadel Apartments	\$497,436	\$787	1018 Bellevue Ave	\$270,000	\$275
275 W Lexington Dr - Next on Lex	\$587,045	\$760	416 E Broadway	\$521,739	\$473
515 Meander Glen - Latitude33	\$489,899	\$416	Palmilla Apartments	\$276,321	\$276
546 W Colorado St - Brio Apartments	\$536,585	\$590	416 E Broadway	\$521,739	\$473
150 W Ocean Blvd - Oceanaire	\$555,556	\$463	Elevate Long Beach	\$341,875	\$283
615 E Carson St- Union South Bay	\$616,246	\$797	The Enclave	\$419,934	\$357
1818 S State College Blvd. - 1818 Platinum Triangle	\$480,226	\$458	3099 W Chapman - Allure	\$503,546	\$549
2020 Kittredge Street - K Flats	\$568,182	\$799	Hillside Village 1797 1801 Shattuck Ave	\$709,308	\$544
2201 San Jose Dr - Mira Vista Hills	\$242,857	\$352	Marina Heights 2 Marina Blvd	\$182,120	\$235
3900 Business Center Dr - Verdant at Green Valley	\$377,622	\$354	The Parc	\$267,045	\$230
6775 Golden Gate Dr - Aster	\$520,767	\$615	Avana Stoneridge Pleasanton	\$487,488	\$690

Source: Costar, 2022.

E. Miscellaneous Analysis

1. Foregone taxes in the first year of operation have exceeded total rent savings in each of the JPAs analyzed.

Development	Units	Foregone taxes	Total savings for renters
1818 Platinum Triangle	265	\$ 1,452,620	\$ 694,900
Aster	313	\$ 2,008,600	\$ 236,300
Latitude33	198	\$ 1,125,200	\$ 496,300
Verdant at Green Valley	286	\$ 1,111,000	\$ 799,600
Next on Lex; Brio Apartments	699	\$ 4,354,560	\$ 1,619,500
Creekwood	309	\$ 1,584,000	\$ 184,400
Oceanaire	216	\$ 1,478,640	\$ 1,002,300
Annadel Apartments	390	\$ 2,024,000	\$ 183,100
The Crescent Apartments	130	\$ 974,400	\$ 598,200

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G. Indigenous Land Acknowledgement

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