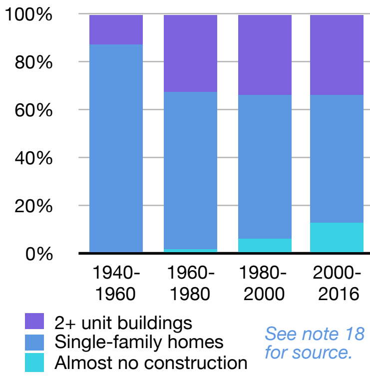
DoubleUp
ADU–Backed Securities

Helping finance ADUs to make high-cost urban areas denser– **and more affordable for all.**

Strong economies, unaffordable housing: Successful cities' dilemma

In big cities across North America, rapid job creation since the end of the Great Recession has contributed to sharp increases in housing costs. The San Francisco Bay Area is a showcase for both phenomena. Home to many fast-growing tech companies, the region permitted about only 125,000 new housing units from 2011-17—while adding over 500,000 jobs.[1] With demand for housing significantly outstripping supply, current residents and new arrivals have been forced to devote more and more of their budgets to shelter; the median home price in San Francisco rose 91% to $1.6M from 2013 to 2018.[2] 1-BR apartments now rent for $3,500/mo., the highest in the nation.[3] Restrictive zoning in the city's residential areas limits new construction to three stories, keeping them low-density.[4] Rising costs push people further from work, making them reliant on carbon-intensive transportation; Modesto and Stockton, medium-sized cities in central California, have become far-flung bedroom communities for the Bay Area, with the nation's highest shares of "super commuters"—people whose one-way treks are 90+ minutes.[5] In 2015, more than 40% of California households had unaffordable housing costs (over 30% of income); 20% faced severe housing cost burdens, spending over 50% of income on shelter.[6] Unaffordable housing has major economic, environmental, and social impacts.

Bay Area census tracts by dominant housing types built



See note 18 for source.

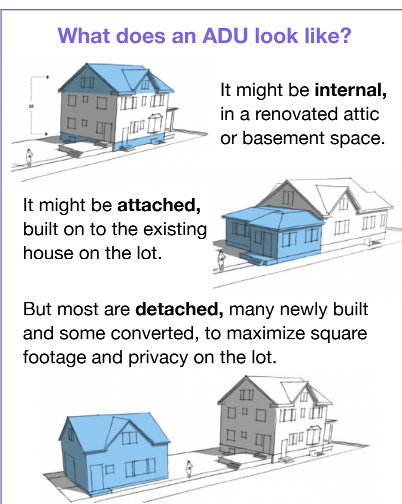
Similar affordability crises have exploded around the continent, from Seattle to Toronto. Housing markets are complex, but rational; supply matters. Corporations, foundations, and governments are trying to get new housing built. In the second half of January alone, Microsoft announced $500M in funding for Seattle-area affordable housing,[7] while a Facebook-led coalition of regional employers and private foundations made a $500M commitment to fighting the Bay Area's housing crisis.[8] These funds come at a time when the technology sector is facing increased pressure for their perceived role in the housing crises, partially driven by a surge in high-tech employment.

New, small, widespread, affordable urban housing: The promise of ADUs

Many cities and state governments with the most pressing crises have turned to ADUs—accessory dwelling units—as part of their approach. ADUs are secondary housing units added to lots containing single-family homes. McKinsey Global Institute estimated in 2016 that up to 790,000 housing units could be added in California alone with large-scale ADU construction, given the state's many single-family-zoned urban neighborhoods.[9]

Four key benefits help ADUs stand out as a (partial) solution to housing crises:

1. ADUs are smaller in size, so rent for less per month—creating so-called naturally-occurring affordable housing, without the need for ongoing government subsidization.
2. ADUs provide homeowners who build them with a new stream of income; in high-cost cities, this can keep vulnerable households in place by offsetting rising expenses.
3. ADUs are built in existing single-family neighborhoods, making them denser and more environmentally efficient—especially contrasted with new urban-sprawl construction.
4. ADUs share land—plus street, transit, and utility networks—with existing houses, leveraging existing infrastructure to house more people (and saving taxpayers money).



Market failure: Residential financing guidelines prevent mass ADU loans

Despite the potential of ADUs, a market failure in housing finance has prevented wide-scale adoption: construction loans are almost impossible to come by. GSE appraisal rules often do not attribute value to an ADU, meaning they cannot reliably serve as collateral. Lending guidelines require two years' documented rental income before it can be factored into borrowers' resources, putting larger loan balances to support ADU costs out of reach. The vast majority of ADUs built to date have been paid for from homeowners' cash resources; a survey of these pioneers suggests construction costs of about $200K.[10] This is a high bar for many homeowners to cross from their personal resources, even in areas with untapped equity from rapidly rising home values.

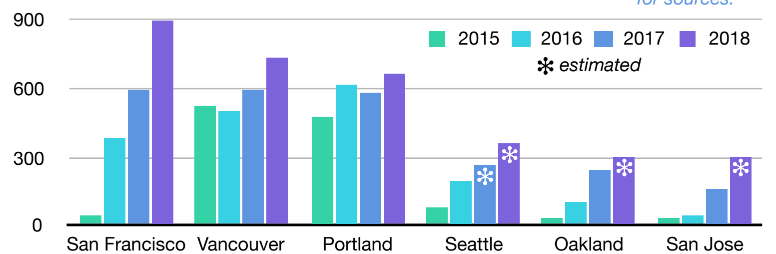
Strategic opportunity: Novel ADU financing products from local lenders

However, a handful of mission-driven, locally-focused lenders—mostly small credit unions and community development financial institutions (CDFIs), such as Portland's Umpqua Bank and Vancouver's Vancity—have launched small-scale, ADU-specific loan products. The Terner Center for Housing Innovation at UC Berkeley has argued that these local lenders have unique potential to support further growth given their knowledge of real estate markets and nascent connections and expertise in the ADU space.[11]

These loans cover construction costs with payments over short terms, typically 3 years, and are repaid by refinancing the primary loan to include the balance once rental income has been established. Institutions lend with strict, specialized underwriting standards—such as requiring a contractor with experience building ADUs, form leases to protect landlords and tenants, and compliance with specified construction draw timelines.

ADU permits issued per city per year

See note 19 for sources.



Investment thesis: expanding the ADU financing market via securitization

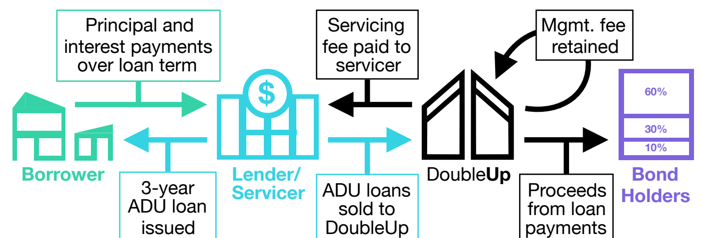
Given the enormous potential public and private benefit from widespread ADU development, we propose to create a new investment vehicle that will borrow a time-tested financial mechanism to stimulate the development of affordable housing, while expanding the residential real estate and financing markets.

DoubleUp will partner with institutions that offer ADU loan products to create private securities backed by said loans. Securitization allows lenders to sell loans otherwise held on their balance sheets to a secondary investor market, unlocking liquidity to enable further lending. By enabling lenders to provide more ADU loans, we believe that DoubleUp ADU-backed securities can:

1. Expand the supply of affordable rental housing in high-cost urban areas
2. Protect neighborhoods by providing new income streams to homeowners
3. Provide a wider range of investors access to high-performing rental markets without requiring large-scale participation
4. Create a mission-driven, return-generating short-term cash-management strategy for large, cash-rich corporations (such as tech companies)
5. Prove the existence of a market for ADU lending, attracting larger institutions to the space, and further enabling wider ADU penetration
6. Help meet state and local government affordable housing production goals
7. Kickstart ADU-centric start-up ecosystems to support new jobs
8. Reduce the environmental impact of new housing (vs. new construction)

Financial instrument description

DoubleUp ADU-backed securities will be based on a standard asset-backed security structure, closely resembling that of private-label mortgage-backed securities. DoubleUp will utilize a special purpose vehicle managed by real estate finance experts. It will then work with CUs/CDFIs to purchase their existing asset-backed ADU construction loans. DoubleUp will package these loans into collateralized debt obligations (CDOs) to sell onwards to institutional investors.



The SPV will develop standard underwriting criteria for the loans it plans to purchase that are in-line with recent regulation of CDOs. Underwriting criteria will include standards for borrower credit rating, maximum loan-to-value ratios, construction and delivery guidelines for ADUs, and standards regarding the loan structure, including terms, interest rates, and amortization schedules. Each security will have an overall term of three years, to match the standard term structure of the ADU construction loans, but exact terms will vary depending on tranche.

Market opportunity: Total addressable market and scalability

DoubleUp's securitization platform can easily scale with market growth. We project a multi-billion dollar total addressable market, limited primarily by the size of lending programs. Initially, DoubleUp securities would capture only a fraction of total ADU construction financing, but we expect to scale aggressively over the next 5-10 years.

As noted earlier, McKinsey estimates that California could add up to 790,000 housing units through ADU creation.[12] A Bay Area poll suggests that 25% of the region's homeowners would be open to an ADU—which could lead to an estimated 400,000 housing units.[13] Assuming a loan size in line with construction costs in the $200K/unit range, California alone could be a **$158B addressable construction lending market for CUs/CDFIs/other lenders to serve, roughly half of which could be in the high-cost Bay Area.** While some portion of homeowners are likely to continue self-financing construction, as loans become more accessible from CDFI and CU programs, they are likely to see more uptake.

The prospects for ADU expansion beyond California are robust. Other states, including Connecticut, Illinois, Massachusetts, Oregon, Vermont, Florida, Washington, D.C., and Washington State have adopted strategies to facilitate urban and suburban ADU growth. Several high-cost Canadian cities, including Vancouver, Toronto, and Ottawa, have policies in place enabling ADUs. DoubleUp's securities, similar to mortgage-backed securities, will be location-agnostic, allowing them to take in loans from around the country—and thus participate in the expansion and diversification of the market over time.

Pilot program size and investment criteria

DoubleUp would focus initially on partnerships with CDFIs and CUs providing ADU loans in Seattle, Portland, San Francisco, Oakland, and San Jose. All five have large areas of single-family zoning,[14] regulatory supports enabling and encouraging ADU construction, and demand already sufficient to warrant lender participation.

- We estimate an individual loan offered by a CU/CDFI in the amount of $200K/ADU
- We expect ADU permits issued in these pilot cities to average 600/city/year[15] *(see bar chart on prior page)*
- Targeting 5 cities, so we expect ~3,000 ADU permit applications per year in total
- Assume that locally-financed ones are 25-50% in these more sophisticated pilot cities and you get to 750-1,500 ADU loans per year
- 750*200K = $150M; 1,500*200K = $300M; $150-300M per year in loans to securitize
- Target pilot program size is $100M for the first year
- Smallest likely baseline of 250-500 locally-financed ADUs = $50-100M loans per year

Summary terms, contracts, fees, and cash flows

Pilot Program Size: $100M to fund purchase of ~500 ADU loans in 5 initial cities.

Legal Final Maturity: 3 years to coincide with existing CU/CDFI loan product.

Contracts with CU/CDFIs: Double-Up will enter into an agreements with partner CU/CDFIs to purchase their ADU construction loans once they have amassed enough to construct each round of the security, thus avoiding costly investment banking warehouse fees. Given the strength of the market, we expect to be able to construct the first security in about 6-8 months, eventually declining to 2-4 months once the market improves.

Use of Funds: Loan funds will be bridge financing to construct 500 additional naturally affordable housing units in high-cost cities. The SPV will pay a small servicing fee of 0.25% of outstanding principal per month to the CUs/CDFIs to cover the cost of servicing the loans, including collecting monthly loan payments, maintaining records of payments and balances, following up on delinquencies and other standard servicing tasks. The management team of the SPV will also collect a small fee that increases in step with the decreasing servicing fee to keep proceeds to bond holders consistent.

Positive social, environmental, and economic impacts and key metrics

Type	Positive impact	Measurement approach
Social	Expand the supply of affordable rental housing in high-cost urban areas seeing job growth	# of ADUs financed and built
Social	Help state and local governments meet affordable housing goals	# of ADUs financed and built
Social	Serve renters that may have been otherwise priced out; preserving and increasing socio-economic diversity	Median income of renters
Social	Increase income of homeowners in areas where home prices have skyrocketed, helping them to stay in their homes	Median rental income to borrowers
Environ-mental	Infill development through ADUs reduces the environmental impact of greenfield housing development	Vehicle Miles Traveled (VMT) avoided and acres of land of greenfield development saved as calculated by # of ADUs financed and built
Economic	Create a mission-driven, return-generating short-term cash-management strategy for large, cash-rich corporations (such as tech)	Total dollar amount of investment by large corporations and other institutional investors

Capital structure, pricing considerations, and target investor pools

- **Senior tranche** (targeting $60M, offered at $104, 3.49% interest): This tranche will be structured to meet the needs of firms seeking alternatives for secure cash management and will be particularly attractive to large firms in high-cost cities (e.g., $1B+ tech firms such as Apple's Braeburn Capital and Microsoft/PFBF) that stand to benefit from association with support of solutions to their local housing crises. The payments will follow a standard payment waterfall and will benefit from around $40 million of credit enhancement from the lower tranches more than enough to cover conservative assumptions regarding default, prepayment, and other risks.[16] Additionally, this tranche will benefit from covenants that will accelerate cash flows towards the senior and junior tranches, in the case cash flows fall below the contracted rates, including an interest coverage test and over-collateralization tests.
- **Mezzanine tranche** (targeting $30M and 8-10% interest). This tranche will have priority on receiving payments over subordinate tranches. While it will be protected from the majority of default and prepayment risk, given the untested nature of the product, the potential risk will drive a higher interest rate. The target investor for this category is hedge funds or market-rate impact investing funds.
- **Credit-enhancement grant / Junior tranche** (targeting $10M): This tranche will receive the residual cash flow and assume initial loses. In the pilot round, the target investor will be large LLC foundations with an interest in housing that can invest directly (e.g., Chan-Zuckerberg Initiative) or institutional foundations with program areas in housing that have active program-related and mission-related investment arms (e.g., Ford Foundation, MacArthur Foundation). At maturity, this will be replaced by a junior tranche, targeting a 12-15% interest rate to compensate for increased risk. The target investors for this group will be institutional or traditional large investors who will consider holding a small stake of this pool as part of a balanced portfolio.
- **Manager incentives:** We will require the manager to invest at least 20% of the capital for the junior tranche, or 30% of the credit-enhancement grant, in order to align the manager's incentives with the success of the project.

Conclusion

DoubleUp ADU-backed securities will create a new investment vehicle that will stimulate the development of ADUs as urban infill affordable housing for high-cost cities, creating social good while providing institutional investors with a secure financial product, diversified across the risk-return spectrum, that allows them access high-performing rental markets and participate in this social, environmental, and economic good.

Risks and mitigations

Type	Risk	Mitigation strategy
Financial	Real estate market volatility in high-cost regions that could result in decrease in increased loan default. Correlation of defaults.	Diversification to markets in different geographic regions, including multiple West Coast cities in the pilot, and expanding nationally thereafter. Tranching based on risk/return profiles, specifically consolidating risk in mezzanine tranche for investors that have that risk appetite.
Policy	Cities are slow to adopt zoning and regulatory changes to expand ADU feasibility.	Start pilot in multiple cities simultaneously that have recently adopted ADU-friendly regulations and programs; expand thereafter as regulatory barriers in other cities are reduced (dozens are in the process).
Market	Assessors of houses after ADU construction do not account for full value of ADU, hurting the homeowner's ability to refinance.	CU/CDFIs provide short-term loans that allows homeowners to build and begin leasing ADUs, which provides a bridge to meeting the two-year rental income standard that Fannie Mae requires to include ADU rental cash flow in primary mortgage financing. Home appraisal standards may similarly shift as ADU market grows.
Market	High appraisal values of homes after ADU construction result in significant propertyy tax increases, disincentivizing production.	SPV can work with other interested parties to advocate for property tax exemptions at the state level that excuse or delay properties from being reassessed for tax purposes after building an ADU (modeled after California property tax exemptions for solar upgrades or earthquake retrofitting).[17]
Market	Market demand for ADUs is below projection; CU/CDFI loan issuance is slower than expected.	Work with established lenders first in our pilot program; in scaling, we are protected by large, multi-billion-dollar TAM and we can enter cities as markets make sense. Additionally, as part of our agreement with CUs/CDFIs, we will purchase loans only when a minimum aggregate loan amount is met.
Opera-tional	Successful construction of ADUs relies too much on individual homeowner's ability to implement.	The underwriting standards of CUs/CDFIs mitigate this risk. We have reviewed a term sheet from a prospective partner CDFI; their requirements included that the borrower contract with an experienced ADU designer/builder, successfully complete an ADU workshop and property management class (or engage a third-party PM), and have permitted plans.
Opera-tional	There is little renter protection considering this new dwelling type and new landlords.	Similar to the standards mentioned above, homeowners might be required by loan terms to use a standard lease and are restricted from setting the ADU lease above 100% AMI (including utilities) during term of loan. Additionally, underwriting criteria could require the homeowners add additional, specific insurance to cover the ADU, a product that is increasingly available.

NOTES

1. https://www.biabayarea.org/san-francisco-bay-area-jobs-housing-imbalance
2. https://www.stanforddaily.com/2018/10/02/me-asl-the-not-so-radical-case-for-de-zoning-san-francisco/
3. https://www.zumper.com/blog/rental-price-data
4. https://www.fastcompany.com/90242388/the-bad-design-that-created-one-of-americas-worst-housing-crises
5. https://www.apartmentlist.com/rentonomics/increase-in-long-super-commutes/
6. https://calbudgetcenter.org/resources/californians-parts-state-pay-can-afford-housing/
7. https://blogs.microsoft.com/on-the-issues/2019/01/16/ensuring-a-healthy-community-the-need-for-affordable-housing/
8. https://www.baysfuture.org/press-release-bay-area-philanthropy-business-and-community-advocates-unite-to-launch-landmark-regional-housing-partnership/
9. Woetzel, Mischke, Peloquin, and Weisfield, "A Tool Kit to Close California's Housing Gap: 3.5 Million Homes by 2025," McKinsey Global Institute, 2016 (October); Exhibit A3 outlines assumptions: California single-family housing = 7.41 million per 2013 ACS; In-home ADU uptake = 5%; Detached ADU uptake = 1%; In-home ADU unit uplift = +1 unit; Detached ADU unit uplift = +1.5 units.
10. http://www.buildinganadu.com/cost-of-building-an-adu/
11. Chapple, Wegmann, Mashhood, and Coleman, "Jumpstarting the Market for Accessory Dwelling Units: Lessons Learned from Portland, Seattle and Vancouver," 2017, Terner Center for Housing Innovation.
12. Woetzel, Mischke, Peloquin, and Weisfield.
13. http://www.bayareacouncil.org/community_engagement/new-poll-finds-that-25-of-homeowners-would-add-an-in-%c2%adlaw-unit-creating-400000-new-and-affordable-housing-units/
14. www.citylab.com/equity/2018/11/single-family-zoning-home-prices-affordable-housing-nimby/575659/
15. Of note: LA has seen a boom in permit applications: ~4,000 in 2018, per https://planning.lacity.org/Documents/ExternalAffairs/HousingProgressRpt/Q3_2018/Q3.pdf.
16. We assume similar default/prepayment behavior to 2nd-lien HELOCs and mortgages. Default rates for these products since 2003 averaged 2.93% according to the American Bankers Association Consumer Credit Delinquency Bulletin. Even with add'l assessment risk, we believe 10% credit enhancement will be more than enough to cover potential losses.
17. https://www.acgov.org/assessor/decreasetax/exclusions/new-construction.htm
18. https://www.buildzoom.com/blog/pockets-of-dense-construction-in-a-dormant-suburban-interior
19. https://data.vancouver.ca/datacatalogue/issuedBuildingPermits.htm; http://www.sfexaminer.com/city-easing-onerous-approval-process-accessory-dwelling-units/; https://accessorydwellings.org/2019/01/14/adu-permit-trends-in-portland-in-2017-and-2018/; Terner Center