

# What a Municipal Public Bank Can Do for Los Angeles and its People

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# The Case for a Los Angeles Municipal Public Bank

The case for a Los Angeles municipal public bank is, at its heart, very simple.

The City and the people of Los Angeles generate tremendous economic value, but the growing wealth of the city comes with significant inequality. BIPOC communities and working class individuals face persistent issues of unaffordability and financial insecurity. The people of LA deserve a mechanism to ensure that the economic value they create is allocated — to the greatest extent possible — toward democratically determined objectives that distribute wealth across the city and repair historical harms of underinvestment, moving capital in the public interest and not according to profit motives alone.

The Los Angeles City Council <u>seeks</u> a municipal public bank with mandates that respond to public demand for a city-owned and democratically-governed financial institution: to achieve cost savings, support the city's infrastructure goals, build community wealth, increase affordable housing, repair historical harms to BIPOC communities, and support just climate mitigation — all while achieving financial sustainability.

No single bank can solve all these challenges, let alone a small one, as the Municipal Bank of Los Angeles (MBLA) will surely be in its opening years. Instead, as we demonstrate in the pages that follow, MBLA can harness a small but growing slice of Los Angeles' financial and economic might and direct it toward socially productive, democratically accountable ends.

In our proposal, these ends include **growing and protecting the city's affordable housing, strengthening the clean energy infrastructure transition,** and **promoting financial justice.** MBLA can also work in partnership with Community Development Financial Institutions (CDFIs) and in wholesale markets to amplify the bank's financial interventions on the public's behalf.



### What this Report Is — And What It Is Not

This report seeks to offer a modular, sequential plan for establishing a municipal bank in the city of Los Angeles that could act justly and sustainably within a private financial ecosystem and within the bounds of the California Public Banking Act. We refer to this institution as the Municipal Bank of Los Angeles, or MBLA, even though it may assume another corporate form, particularly in the opening years.

Our objective is to inform the debate among municipal leaders and the broader public, about how the City of Los Angeles can use public finance to advance critical socio-economic priorities. We offer **a menu of options for the bank's core business lines** that correspond with the City-established mandates noted above.

Many of these goals could be addressed through the bank's various lending, credit, and subsidy programs. However, financial sustainability will require appropriate sequencing of these lending programs as well as the strategic, sequential adoption of appropriate corporate forms to support them. In this cover note, we first discuss the nature and role of our proposed Municipal Bank of Los Angeles. Then we turn to the lending programs themselves, before outlining the various paths that can be taken toward the eventual incorporation of a chartered bank that would both be the city's financial agent for cash management and an active lender in the community, as well as governance structures that could help make MBLA truly democratic.

The Los Angeles City Council has initiated a process to hire a consultant, who will conduct a feasibility study and build a business plan for a Los Angeles municipal public bank. It is our intention to complement rather than duplicate this process. This is why we neither offer an analysis of Los Angeles' municipal finances nor a business plan for MBLA. Both these tasks stand at the center of the consultant's work.

Rather, the bulk of this report explores a suite of lending programs in three strategic priority areas, each of which is described in greater depth in a corresponding memo: (1) creating and preserving <u>affordable housing</u>; (2) advancing <u>financial justice</u>; and (3) supporting a <u>just climate transition</u>. For each lending program, we give an example of a potential initial capital allocation that will generate specific outputs, like units of affordable housing created. These figures are meant to be illustrations of what a public bank could invest in and what concrete benefits it could provide the city. **They are not strict prescriptions or precise forecasts of outcomes**; several factors could increase or decrease the scale of these programs.

Ultimately it will be up to the public, and its elected representatives, to determine what form the Municipal Bank of Los Angeles will take and which business lines it will prioritize. To that end, we have created a Balance Sheet Simulator tool, which enables political leaders, advocates, and members of the public at large to build customized loan portfolios from among eleven programs across the three priority areas explored in this brief. The <u>Balance Sheet Simulator</u> was also used to construct the three example allocation scenarios presented in Appendix 2. With both the report and the simulator, we intend to offer **a jumping-off point for advocates and policymakers** in Los Angeles and in other places that are exploring the creation of public banks.

### Who We Are

The authors of this report and its supporting memos are researchers, advocates, and practitioners committed to the democratization of finance and the wider and more equitable distribution of its benefits. We are affiliated with the Jain Family Institute, an applied social science research organization in New York City, and the Berggruen Institute, a social and political research center in Los Angeles. Individuals at universities and nonprofits across the country and world have informed this project. Throughout, we have been fortunate to count on generous pro bono legal support from WilmerHale.

# Why a Municipal Public Bank?

In recent years, there has been an unprecedented burst of <u>interest</u> in and advocacy for state and municipal public banking in the United States. Yet the idea, and the practice, are far from new. Indeed, publicly owned subnational banks are important parts of both the retail and investment banking systems in the United States and in many industrialized countries, holding over 20 percent of all assets worldwide according to some <u>estimates</u>. In the US, the most well-known publicly owned bank is the Bank of North Dakota (BND), founded in 1919 to provide loans to farmers. Now a lender to businesses, the BND offers limited checking, savings, and foreign exchange services with a mandate to maintain public access rather than make profits. A newer example is the Territorial Bank of American Samoa, founded in 2012; it is a government owned, full service commercial bank with access to the Federal Reserve backstop.

In addition, there are numerous specialized public financial entities in the US that deliver targeted benefits. One example is the Texas General Land Office, which governs land and mineral rights and has a mandate to fund education at all levels in Texas. It does this through the Texas Permanent School Fund, a sovereign wealth fund with a larger endowment than Harvard University's. The Fund underwrites many of the educational bonds in Texas at an AAA rating, thus substantially reducing borrowing costs for the state's public schools and universities.

Perhaps the world's best known and developed public banking system is in Germany. There, municipally owned banks hold around forty percent of all household deposits. These small municipal institutions are federated into the state run *landesbanken* which act both as clearing houses and commercial banks, amplifying the lending power of the municipal banks.

With the passage in late 2019 of the California Public Banking Act (AB 857), California's local governments have the opportunity to build public banks of their own, bringing the advantages of public banking to Los Angeles and its people.

## MBLA: A Unique Player in a Broader Financial Ecosystem

Banks and bank-like institutions operate within a larger financial system in which formal and informal relationships mitigate the institutions' financial and economic codependencies. The critical capability of a public bank is its ability to steer financial, governmental, and other actors toward goals that are determined by the public, rather than by the profit motive alone. A public bank is therefore a "mission-driven institution." The public determines its mission and priorities, which the bank — to the extent technically possible — executes through financial products and partnerships.

A mission-driven institution can influence the larger financial system in many ways. Three of the most important ways correspond to the functions of monitoring, market formation, and syndication:

- Monitoring. Successful public development banks conduct formal and informal monitoring functions. The act of approving loan applications and working with specific private entities transforms public lenders into warehouses of formal and informal knowledge, which they can then share with clients and other parts of the government.
- Market formation. Monitoring and deliberation allows the public bank to form markets where none yet exist. For example, lending to nonprofits and small businesses for solar projects was extremely difficult until the Green Bank of Connecticut created a set of products to serve that market. In this way, a public bank can be a first mover.

• Syndication. The public bank can "crowd in" investment into underserved areas and communities by combining the power of multiple lenders through syndication and participation agreements. Acting as an organizer of a collective of lenders, the public bank multiplies its capital. A fully mature institution can also use its own balance sheet to create lending and payment networks, through correspondent accounts that allow small and community banks to economize on reserves and thus expand their lending capability.

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There are several key tools that MBLA could use to execute these functions. It could:

- Offer first-round capital to projects that are too small to fund on the private debt market to scale them to the point where larger, private actors consider them safe investments.
- Create loan loss reserve funds by insuring private lending.
- Drive co-investment with other investors by issuing subordinate debt and equity investments.
- Provide warehousing services by taking multiple small loans, underwriting them, and holding them until they can be combined into a loan product that can be sold to other lenders.

Finally, MBLA could partner with Community Development Financial Institutions (CDFIs) to deepen community engagement and achieve mutually beneficial efficiencies. CDFIs hold a specific designation Under the Community Reinvestment Act (CRA), and are given specific federal grants and liquidity support as institutions whose lending is focused on disadvantaged communities and populations. At the same time, CDFIs are financial institutions that must produce profits, which sustain them as going concerns. Moreover, they tend to be small institutions; their individual balance sheets are often constrained.

Partnerships between existing CDFIs and MBLA could be mutually beneficial, while also helping the public at large. Under California Law AB 857, a public bank is explicitly barred from retail banking: it cannot take individual deposits or issue loans or credit to individuals directly. Rather, a public bank must work with CDFIs to provide saving and checking services. These partnerships may allow the public bank, for example, to act as a sponsor for low cost banking services that are otherwise located on the balance sheets of a CDFI. MBLA could also act as a warehouse for CDFI loans. This means that the public bank can act as an aggregator, purchasing small loans issued by CDFIs, which would individually be difficult to place on the secondary market, and restructuring them into larger tranches that can then be sold.

# MBLA's Role in Affordable Housing Construction and Preservation

The Municipal Bank of Los Angeles is mandated to support the city's broader infrastructure, housing, and sustainability goals. Central objectives include increasing affordable housing, building community wealth, and repairing historical harms to underserved communities. The housing-specific business lines we model are meant to satisfy these mandates while achieving cost savings for the city as well as long-term financial sustainability without a profit-seeking model. Finally, in line with the intention of California law to promote partnerships with existing small and mid-sized financial institutions, our proposed interventions work alongside and amplify the efforts of many financial institutions and community development organizations that tackle housing insecurity.

The primary value of the public bank within the landscape of housing finance nonprofits, CDFIs, and governmental agencies is its capacity for greater lending with the backing of the city. On the one hand, the bank can be a first mover and market maker for new forms of affordable housing finance. On the other hand it can promote liquidity and diversify and reduce risk in secondary markets. The bank can also convene and coordinate with informal monitoring functions across the housing finance ecosystem, a task that is at present largely performed through informal networks. While there will be some overlap between the bank's affordable housing aims in this portfolio and those of other financial institutions, MBLA, by its mandate, will serve to support and amplify those goals.

# Key Challenges

# An Urgent Need For New Affordable Housing

Los Angeles is at the center of the U.S. <u>housing crisis</u>. Almost half (<u>47 percent</u>) of households in Los Angeles County pay more than the recommended 30 percent of their income towards housing costs, making it the most cost-burdened county in California, and among the top five nationwide. The <u>median home price</u> in the county is \$862,333, which

makes the estimated median monthly housing cost (including mortgage, taxes, and insurance) just over <u>\$5000 a month</u>. The median household income in Los Angeles County is \$75,000 per year, which means the typical Los Angeles household would have to spend 80 percent of their income on buying an average house. The high-cost burdens of the LA area are <u>closely linked</u> to LA's high levels of homelessness, which (at last count) <u>increased</u> 16 percent in 2020 (relative to 2019) to 41,290 individuals.

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According to Los Angeles's <u>Housing Needs Assessment</u>, the county must add 456,643 homes by 2029 to meet its housing requirements. However, in the last eight years, the county of Los Angeles (of which Los Angeles city is 40 percent of the population) only added 136,000 units of housing. To meet the new standard, the city will need to radically increase its pace of housing production.

## **Complex Capital Stacks**

In Los Angeles, as in many U.S. cities, a typical affordable housing project might have more than 15 sources in its capital stack. The foundation of such a capital stack is often government subsidies offered at low or no interest — this is called soft debt or permanent financing — which are repaid through residual receipts (a portion of cash flow left over once all operating expenses are paid) and/or forgiven or renewed at the end of lengthy terms of thirty to fifty-five-plus + years. With traditional affordable development, equity investment most often takes the form of proceeds from the sale of Low-Income Housing Tax Credits (LIHTC) to <u>outside investors</u>. A final source of funding is the senior debt obtained through federal programs administered by the California Housing Finance Agency (CalHFA), from CDFIs, or through private, conventional lenders like banks. These loans, which are often referred to as hard debt, may cover gaps like bridge acquisition financing or construction financing, depending on the project type. These debt sources typically require all subsidy and equity be committed before a loan is made. The complexity of these funding sources means that development timelines for such projects are much longer than for private developments.

### Minimal Support for Affordable Housing Preservation

These challenges are even more acute in the case of affordable housing preservation. Unsubsidized units, which make up an <u>estimated 80 percent</u> of all affordable housing in Los Angeles County, lack deed restrictions to keep them affordable in the future. Deep-pocketed investors can thus beat community land trusts and others in the acquisition of these units. As of 2020, <u>investment entities owned two-thirds</u> of all residential units in the city. They currently account for <u>one in five</u> new sales. This situation is made worse by a lack of available financing. While senior debt lenders offer loan products at standard market rates for new construction projects, few comparable products exist for preservation and rehabilitation projects.

# **Broad Opportunities**

### The Promise of Transit-Oriented Development

Despite existing zoning restrictions, a 2016 report by the McKinsey Global Institute <u>found</u> that the city could add 1.5 million to 1.9 million housing units in residential areas without zoning changes. The report also found more than forty thousand parcels of transit-served land that utilized less than twenty-five percent of their maximum zoning allowance. Parallel trends have been <u>documented</u> by <u>others</u>.

# Developer Pre-Underwriting

Affordable housing projects have to be underwritten. This involves assessing the individual project as well as the qualities, risks, experience, and track record of the developer. The task is time and labor intensive, both for lenders and developers.

One way to streamline this process is to pre-underwrite specific developer organizations, an innovation that both developers and lenders have called for. As a public financial institution deploying funds locally, MBLA will be well positioned to establish organization-level underwriting with a trusted set of local developers, adding a layer of transparency that can reduce risk, speed timelines, and promote affordability.

# Proposed Lending Programs

## Rapid Acquisition Fund

Community land trusts play an important role in the preservation of sites with fewer than twenty-five units. Many members of the <u>California Community Land Trust Network</u> are particularly efficient at handling these challenging acquisitions. Some larger land trusts have the equity to compete with private investors over the acquisition of such properties. However, many do not.

To solve this problem, we propose that MBLA establish a rapid acquisition fund. With loan terms of one to five years, this fund would deploy capital for the timely acquisition and preservation of sites for affordable housing. In that time, affordable housing organizations could work to replace the acquisition capital with a mix of longer-term loans, including construction loans where necessary, and permanent government subsidies. Once returned to the revolving fund, the rapid acquisition capital will be deployed again for the acquisition and preservation of new sites.

The existing bridge loans that serve this function often carry higher interest rates, making it a challenge to secure financing for unconventional projects. MBLA is likely to offer more competitive terms to a wider set of community-driven projects for three reasons: it is stitched into the landscape of affordable housing creation and preservation; has a mandate to stem displacement; and can conduct more <u>locally rooted</u>, relationship-based risk analysis to offer more competitive terms to a wider set of community-driven projects.

#### Scale of Investment

- 1. Conventional lenders are often able to lend on up to 80 percent of loan to value for acquisition-rehabilitation projects.
- 2. The gap to be addressed through acquisition financing is the remaining 20 percent of value plus predevelopment, rehabilitation, and soft costs. These can vary widely by project.
- 3. Assuming the cost of preservation is on average two-thirds that of new construction, we estimate the average cost of affordable housing preservation at \$450,000 per unit.
- 4. With an initial rapid acquisition fund of \$13.5 million, this loan product can fund \$129 million in acquisition-rehabilitation projects, or 471 preserved affordable units.
- 5. Terms will be made flexible in accordance with uncertain funding timelines, with a range of 1-5 years. Interest rates under 3% are likely to be affordable relative to the market.

#### New Construction Loans

At construction, the simplest new multifamily housing development has three primary items in the capital stack: senior debt, construction equity, and developer cash equity. While debt products typically reflect the broader interest rate environment, construction equity from private investors is consistently more expensive. Replacing private equity investments with construction period loans from a public bank would significantly reduce construction costs for mixed-income housing developments and expand total affordable housing production beyond present subsidy constraints. Construction loans are typically considered <u>risky</u> investments. Because construction loans are short-term and construction is a uniquely complicated process, there are many more opportunities for failures that could lead to default. For this reason, government housing finance agencies and local housing departments rarely make construction loans. In general, gap financing for affordable housing development comes from a mix of local grants and equity proceeds from the sale of Low-Income Housing Tax Credits. However, the availability of such subsidies is limited by both federal and local fiscal constraints. In these circumstances, public construction bridge financing can help unlock additional affordable housing production.

One <u>powerful example</u> of this is the local public housing authority in Montgomery County, Maryland, which has created a \$100 million revolving fund that is used to loan into projects for the construction period at a lower interest rate. While Montgomery Country benefits from a public housing developer, which is absent in Los Angeles, MBLA could still achieve significant increases in total affordable housing production by offering construction period lending products to pre-underwritten developers working with <u>prequalified</u> contractors and subcontractors. This approach cannot wholly mitigate the risk of construction lending. But this product could play a key role in increasing housing production, coupled with a diverse lending portfolio and loan-loss reserve expectations.

MBLA could also partner with public agencies charged with developing new public housing. Proposed California legislation would <u>create</u> a new agency at the state level tasked with building mixed-income public housing. A public bank could be an investment partner in such projects, should this or similar legislation pass.

#### Scale of Investment

- 1. Bridge construction loans make up around 20 percent of the overall cost of new construction.
- 2. New affordable housing in Los Angeles can be assumed to cost around <u>\$700,000 per</u> <u>unit</u>, although this can vary widely by project.
- 3. With an initial fund of \$18 million, this loan product can fund over \$170 million in new construction projects, or 404 new affordable units every year assuming three-year loan terms.
- 4. The fund will grow year-on-year at the scale of the interest rate. Interest rates under 10 percent are likely to be affordable relative to the market.

# Recapitalization of Existing Subsidized Multifamily Housing

By year ten to fifteen of a typical multifamily housing development, there are often recapitalization needs, such as repairs to roofing, HVAC, and plumbing systems. Despite a

requirement that Low-Income Housing Tax Credit (LIHTC) recipient properties hold reserves for such repairs, the Department of Housing and Urban Development <u>found</u> that these reserves are "usually insufficient after 15 years to cover current needs for renovation and upgrading." While developers can apply to review LIHTC after 15 years, the process is complicated and subsidies can be difficult to obtain, leading some to convert properties to market rate.

Few conventional banks offer recapitalization loans for affordable housing projects, in part due to the unique regulations that apply. Subordinate mortgage loans for affordable housing developers would allow for more rapid recapitalization of projects near or in the process of acquiring longer term stability with tax credit renewal. Even small loans could help affordable housing owners make needed upgrades sooner, preventing maintenance problems from worsening and becoming more expensive to fix. MBLA could offer these recapitalization loans, advancing an important social goal that remains largely unaddressed by private banks.

#### Scale of Investment

- 1. There are 9,086 low-income units in LIHTC buildings in the city of Los Angeles that came into service between 2010 and 2015 and are thus up for 15-year renewals.
- 2. To give all LIHTC projects loans of \$10,000 per unit at the fifteen-year mark would cost approximately \$15 million dollars per year, providing repair funds to 1,000 units every year.
- Assuming an average of three-year loan terms (terms should be made flexible in accordance with uncertain funding timelines) and a three percent interest rate, profits from interest can be allocated to the administrative costs of running the loan program.
- 4. With an initial capital allocation of \$2.25 million dollars, the fund could support total loans of \$61 million dollars and give loans to approximately 700 units per year, assuming funds revolve after an average of three years. This fund would be able to give loans to roughly half of all LIHTC projects in Los Angeles hitting the fifteen-year renewal mark every year. Profits from other bank projects could also be reallocated to expand LIHTC recapitalization.

# Low and Moderate-Income Homebuyer Mortgage Assistance

The city of Los Angeles <u>runs</u> a low and moderate-income home purchase assistance program that could be relocated to the public bank and expanded to focus on owner-occupied multi-family housing. Currently, the program is aimed at residents who can afford the monthly mortgage payments on a single-family home but who are unable to save for a large down payment. The city contributes up to \$140,000 for a down payment, closing costs, and acquisition fees in the form of a deferred loan, due only at the time of sale or after 30 years. While the program commits significant capital for each family given the high housing costs in Los Angeles, it uniquely transitions low and moderate-income residents from renting to ownership and the city eventually makes a profit on the appreciation at the point of sale, though this can be a slow timeline and uncertain revenue source.

We propose expanding the scope of the home purchase assistance program by allowing the purchase of owner-occupied two to four-unit buildings, where the new owner occupies one of the units while renting the remaining units out to tenants. Including owner-occupied rental properties will make the program more accessible while also benefiting the existing community of renters. While multifamily properties have a larger purchase price, they can be more affordable when offset by tenants' rental income. The price of single-family properties has grown so high that, even with down payment assistance, the monthly payment on a mortgage is out of reach for an increasingly large share of Angelenos.

The program will also benefit renters as local landlords will be more likely than offsite investor owners to cultivate direct relationships with tenants and have a stake in the long-term health and maintenance of the property. Currently, small multi-family properties that go up for sale in Los Angeles are often bought by large investors, who often displace tenants to conduct luxury renovations and then rent out to new tenants at a significantly higher price. This is unlikely to happen with lower-income owner-occupants supported by a public bank deferred loan program. For one, they are less likely to have access to the capital needed for a luxury conversion. More to the point, they are unlikely to seek a large return on investment due to their structural financial advantage. If they purchase a unit in a building that has four or fewer units, owners can still qualify for mortgages backed by the Federal Housing Administration, which gives them better financing terms than non-resident investor-owners. As live-in landlords, owner-occupiers will also face less overhead costs than an offsite company. These factors will likely allow owners-occupiers to comfortably make their monthly payments without enforcing large rent increases.

#### Scale of Investment

- 1. We assume an average loan amount of \$400,000 to support a mix of single-family and multi-family properties, with an average purchase price of \$2 million dollars.
- 2. We assume an average loan term of 10 years and an average home value appreciation of seven percent per year

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- With an initial capital allocation of \$4.5 million, this program would initially support over \$40 million in total lending for over 100 households to buy a home or multi-family property.
- 4. To scale the program more quickly, loans that are showing strong signs of success (i.e. property value appreciation and good payment history on the underlying mortgage) could be packaged and sold on the secondary mortgage market based on expected profits before the loans actually come due.

## Homeowner Accessory Dwelling Unit (ADU) Creation Assistance

While it is critical to help lower-income Angelos move from renting to owning, homebuyer assistance programs do not address the lack of housing supply, which is the underlying issue that makes housing increasingly unaffordable in Los Angeles. While several of the bank's proposed lending programs increase supply, the bank can also increase available housing in Los Angeles by helping low and moderate-income homeowners add housing units to their property.

Over the last five years, California has passed several laws liberalizing zoning rules to allow the construction of additional units on parcels zoned for single-family homes. More recently, the city of Los Angeles has <u>rolled out</u> a series of <u>programs</u> supporting ADU development. These laws are a tremendous opportunity to construct new housing units, but significant barriers remain. Chief among these barriers is <u>financial</u>: the costs of constructing new dwelling units are very high. MBLA can help ameliorate this problem with shared appreciation loans, which ease the homeowner's path to qualifying for financing by sharing the financial return of adding new housing with the homeowner.

According to <u>one</u> 2021 survey, ADUs can cost upwards of \$150,000 to build. As such, only the wealthiest homeowners can afford to build a substantial number of homes. Most incumbent owners will require financing, which current financial <u>products</u> are <u>ill-suited</u> for.

The construction of ADUs offers two new income sources for homeowners: they can rent out a part of the property or split the lot and sell the property with an ADU. Accounting for this potential income increase, the MBLA can unlock a vast market for ADU construction excluded by the present financing system. Of course, construction is an inherently risky process. Some approved loans may not convert to actual rental units. MBLA will guard against such large-scale losses or onerous interest rates by sharing in the increase in home value from the construction of the additional dwelling unit, similar to the terms outlined in the homebuyer assistance program. To qualify for the program, existing homeowners would need to cover ten percent of the estimated construction costs as a down payment. MBLA would cover the remaining costs in the form of a conditional loan. All existing homeowners would need to agree to either rent out the additional unit(s) created or split their existing lot and sell the new lot (with the new housing unit(s)) on the open market. This ensures the funds create new housing supply and makes loan repayment more likely.

The specific loan terms would depend on whether the homeowner wishes to sell or rent the ADU. If the homeowner decides to split their lot and sell the property, MBLA would recoup all loaned construction costs plus 15 percent at the time of sale, taking the deed to the split lot as collateral before construction begins. If the homeowners want to rent the property and preserve their right to ownership, MBLA would structure the loan like a traditional second mortgage using market rate interest rates. However, unlike a traditional second mortgage, payments on the additional mortgage would only come due after ADU construction. This monthly mortgage payment structure would differentiate MBLA's offering from <u>private</u> shared appreciation loans, for which the entire loan amount plus value appreciation is due as an onerous lump sum after roughly ten years, with no monthly payments.

These terms would help maximize the program's appeal, both to homeowners who want a significant payout from a short-term sale and to those who want a continuous stream of rental income. Options would be extended to homeowners depending on the projected value of the ADU for rent or sale. Only homeowners projected to make a significant profit given the loan terms would access these MBLA funds, to facilitate reinvestment and increase the likelihood of project completion. To further the program's impact, MBLA could also work with the city housing authority to direct low-income families with housing vouchers to the newly created ADUs.

#### Scale of Investment

- 1. We assume average construction costs of \$200,000 per deal, creating an average of 1.5 units of housing.
- 2. We assume a 50:50 division of homeowners opting to lot-split and sell vs. preserve and rent.
- 3. With an initial capital allocation of \$6.75 million, this program could initially produce almost 500 units of new housing and over a 7% profit.

# MBLA's Role in the Clean Energy Transition

Los Angeles seeks to reach carbon neutrality by 2045. To achieve this goal, the Los Angeles Department of Water and Power (LADWP) must make large-scale investments in developing both new generation sources and increased capacity. This is a significant financing challenge in which the Municipal Bank of Los Angeles can play a critical role. 17

To evaluate pathways to carbon neutrality, the city commissioned the National Renewable Energy Laboratory (NREL) to conduct scenario analysis of needed energy system improvements and investments. The report, titled <u>LA 100</u>, understands carbon neutrality to mean an energy system dominated by wind and solar generation.<sup>1</sup> Fortunately, due to weather and geography, Los Angeles can position itself to meet 65 to 85 percent of its energy needs using wind and solar. Meeting the remaining needs, however, is more difficult and may require creative financial solutions.

Departing from the LA 100 report, we examine the tradeoffs, needs, and possibilities of using MBLA funds to invest in new green energy capacity and generation to help Los Angeles achieve a carbon neutral grid by 2045.

We do not recommend a particular investment program over another. The options that follow are intended to inform a broader public debate about funding priorities, sequencing, and overall allotment of funds within the larger public bank initiative.

# Key Challenges

# Challenges of the Existing Grid

The electrical grid is one of the most complicated and sensitive infrastructure systems to have been developed. To manage it, LADWP must balance among subsystems to ensure that electricity is available to consumers in any location at a reasonable price, without exceeding demand in ways that could cause outages and accidents. In addition to "in-basin" power sources over which it has full jurisdiction, LADWP must at times draw on

<sup>&</sup>lt;sup>1</sup> Cochran, Jaquelin, and Paul Denholm, eds. 2021. The Los Angeles 100% Renewable Energy Study. Golden, CO: National Renewable Energy Laboratory.

"out-basin" sources available via long-distance transmission lines. Purchased through bids against other users on the "spot market," out-basin energy can be very expensive during peak demand.

Compared to similarly large American municipalities' energy grids, Los Angeles has a new and extensive transmission system. However, expanding this system is difficult due to land use and environmental regulations, as well as the complexity and expense of interconnecting new and existing lines. Several programs from the federal and the California Infrastructure and Economic Development Bank (IBank) seek to correct relevant market failures.

# **Broad Opportunities**

### California's Public Financing Environment

The financing environment for green energy is evolving rapidly, especially in California. The state's Multifamily Affordable Solar Homes Program (SMASH) is one of the country's most active programs for supporting residential solar installations. Its remit includes low income and multi-family buildings. Other state programs are the Solar on Affordable Multifamily Housing program, the California Disadvantaged Communities Single Family Solar Homes program, and the California Low-Income Weatherization Program for Multifamily Properties. In addition, the state has numerous schemes to benefit homeowners with reduced energy costs or rates, self-generation incentives, and opportunities for individuals to sell excess energy into the grid.

These as well as the relevant federal programs usually require bridge financing to cover paying the cost of installation to the contractor. Bridge financing tends to be relatively cheap because the numerous state and federal programs noted above guarantee cashflow to the project, effectively functioning as a government backstop. The key impediment to scale here is rather the vetting of lenders and contractors—a function MBLA could assume should this business line be of interest.

California offers incentives for the development of wind and solar at utility scale. Most of these are structured around Renewable Energy Certificates (REC), traded among utilities to meet legal requirements that they use certain minimum amounts of clean energy. RECs provide a critical, guaranteed cash flow to renewable energy projects.

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### The Inflation Reduction Act: A New Horizon for Public Power

The *LA 100* report concludes that utility scale generation will be necessary, despite the potential of in-basin rooftop solar on private properties. Sources could include in-basin wind (including offshore) and solar at utility and community-scale. Even more important are out-basin renewable and carbon-free resources, including utility scale wind and solar, geothermal power, hydropower, and nuclear energy.

LA DWP is one of the nation's only publicly owned, vertically integrated utilities: in other words, it owns its generation, transmission and distribution and is its own balancing authority. Thus, LADWP has traditionally held equity in its energy infrastructure and generation to mitigate costs. However, this progressive model has not translated to renewable energy projects because current incentives for investment into wind and solar are based on "tax equity." Developers sell their future federal renewable energy tax credits to for-profit investors who pay them up front to then apply the future credits to their tax bills (not unlike the LIHTC program in affordable housing development). As a public entity, neither LADWP nor non-profit community-scale developers generate tax liabilities. As such, they have not historically had access to tax equity.

The exclusion of public and nonprofit entities from tax credits has been reversed through the Inflation Reduction Act's (IRA) "direct pay" provisions. Direct pay allows municipal, state, and nonprofit entities to access tax credits as a direct payment from the IRS, as if they paid taxes. In other words, it makes tax credits act as a grant that can cover as much as 50% of project costs. In a direct pay regime, public banks can act as the financing tools for the debt portion of project costs.

Public banks improve access to Federal direct pay and other new IRA incentives. As of May 2023, direct pay regulations have not yet been released. However, we expect that there will be some penalty assessed on the payout from a direct pay program by the Treasury department for using tax exempt bonds directly in a project's capital stack. Public bank financing can avoid this penalty while retaining preferable rates. Moreover, as a direct-pay-eligible entity itself, a public bank can purchase and monetize tax credits from smaller, non-profit developers who do not have the administrative capacity to apply to federal programs. Finally, the IRA is enabling a whole set of public and non-profit green banks on local and national levels through the Greenhouse Gas Reduction Fund (GGRF). The GGRF program will provide grants to capitalize various lending entities. MBLA is both eligible for such grants, if it is established in time, and can work with new, national lenders to pool resources and create secondary markets for its loans.



# Proposed Lending Programs

## Utility- and Community-Scale Investment

Growing public support for utility-scale and in-basin community-scale development will have a larger effect on the ecosystem than rooftop solar projects, making it critical to achieve Los Angeles' decarbonization goals. Unfortunately, larger-scale power is also far harder to finance. Fewer state and municipal financing programs are available. Analysis by Lazard also confirms our suspicions that utility-scale projects are far more rate- and subsidy-sensitive than small-scale community and rooftop programs. Moreover, the default risk in a utility scale project is concentrated in one borrower.<sup>2</sup>

As discussed above, pre-IRA tax incentives have meant that most utility scale development is privately owned. However, that does not mean that LADWP has not been active in this area. In fact, it operates several clean energy assets, including the country's largest municipally owned renewable energy project, the Pine Tree Wind Farm, which was funded by a combination of municipal bond finance and federal funding under the 2009 American Recovery and Reinvestment Act.<sup>3</sup>

MBLA can operate at a lower profit margin and thus drive down the weighted average cost of capital (WACC) to utility borrowers. In turn, the levelized cost of energy (LCOE) of a project – in other words the average cost of generating a unit of energy over the lifetime of a project. A lower WACC and LCOE may reduce not only the breakeven for building new projects but also reduce the cost to consumers. See Figure 1 below for an illustration of three representative energy project capital stacks ordered according to WACC, and the <u>clean energy memo</u> for a full accounting of the proposed lending programs and projected impact.

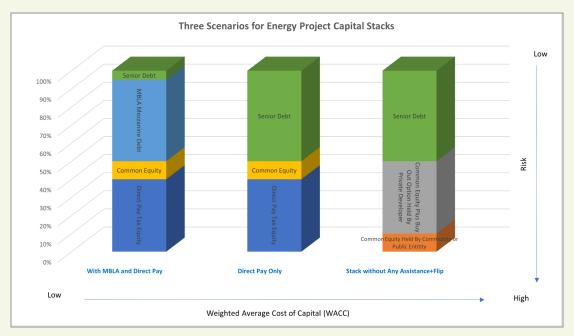


<sup>&</sup>lt;sup>2</sup> "Lazard Levelized Cost of Energy Analysis, Version 15.0," *Lazard Asset Management*, 2021 https://www.lazard.com/media/451086/lazards-levelized-cost-of-energy-version-130-vf.pdf

<sup>&</sup>lt;sup>3</sup> "LADWP Completes Second Utility-Built Solar Array Pine Tree Solar Project Brings 8.5 MW Sun Power to L.A." *LADWP Press Report* , March 22, 2013;

https://www.ladwpnews.com/ladwp-completes-second-utility-built-solar-array-pine-tree-solar-proje ct-brings-8-5-mw-sun-power-to-l-a/

#### Figure 1: Example Energy Project Capital Stacks



## Residential and Commercial Solar and Retrofit Programs

Despite the advantages of larger-scale investments, MBLA may choose to target residential and commercial solar customers with a variety of lending programs. However, it is important to note that California's equivalent programs already strongly promote rooftop solar, even in disadvantaged and low-income communities. Three examples of programs which could be undertaken by MBLA in this market are described below.

#### Solar PPA Bridge Loans

Power Purchasing Agreements (PPAs) are a form of lease agreement that allows a property owner to lease out their rooftop or other eligible property for the installation of solar equipment. The owner can then purchase energy from the lessor. Alternatively, they can allow the lessor to sell energy into the grid for a dividend or a discount off their energy bill. Like other leases, PPAs are limited by the credit of the leasee.

MBLA could lower the credit risk to contractors by creating a fund for PPA loans to qualified contractors who are committed to working with lower-income communities. The loan could leverage two forms of financing. First, the bank could issue loss protection tier debt into the PPA fund's debt structure, thereby attracting other lenders. In other words, MBLA could allow other creditors to take payments before it can receive its own. Second, the bank could invest equity into the structure relying on tax credits and solar renewable energy certificates (SRECs) as an incentive to crowd in private investors.

A public bank is uniquely suited to operate such an arrangement as it both integrates private and public financing and integrates a level of quality control. For example, like earlier green bank arrangements, the PPA fund could use alternative metrics developed by firms such as Inclusive Prosperity Capital (IPC) to allow property owners with low FICO scores to qualify for PPA agreements. Moreover, successful public banks create an infrastructure for other mission lenders like CDFIs to participate in these programs and build ties with contractors and residents in the community.

#### Blending Efficiency Retrofits with PPAs in Low Income Multifamily Developments

One barrier to financing energy efficiency retrofits for residential buildings is that they have no explicit cash flow. Yet energy retrofits are especially important for low-income multifamily housing. Residents in this sector of the housing market spend as much as three times the share of their income on energy as similar households in higher income brackets.

Under a combined efficiency and solar program, building owners could take out an unsecured loan from a financing structure that is analogous to a pure PPA loan. A municipal bank approved contractor would then make an assessment on potential energy savings from retrofits and combine them with the cash flow from the PPA. The savings on the energy bill would be used to pay off the low interest loan through "on bill" financing. In other words, the loan would be paid off using the difference between what the customer actually owed and what they would have owed otherwise. Adding together retrofits and solar PPAs secures cash streams from both, thus making for a lower loan burden than either on its own.

#### CPACE Secured Loan Programs for Commercial Customers

Commercial Property Assessment Clean Energy (CPACE) programs work similarly to retrofit programs that are repaid through on-bill payments. However, in CPACE financing, the loan is secured against the increased value a specific commercial property accrues due to an improvement; the loan is then paid back via the property tax bill. Green banks have <u>proven</u> themselves to be effective CPACE lenders. Further, they have expanded the client eligibility for CPACE loans by using alternative credit metrics

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## Potential Future Opportunities

#### **Funding Transmission**

Transmission financing is still a very gray area for public banks, hampered by problems including frequent land use challenges. Nonetheless, a new line connecting Imperial Valley battery manufacturers to the Salton Sea area is being financed by the California Ibank. We believe that this is a project to monitor closely and take seriously. If successful, MBLA could be a partner in future lending projects to enable this type of green energy-related development.

Another step governments could take to lower the cost of transmission could be to establish a public developer that can build across the state. One model for this is New York State's Public Power Authority, which has achieved AA ratings in commercial bond offerings because of its public ownership structure. Such an entity would be a natural partner for MBLA.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> Louis Sahagun, "DWP Drops Plan to Build 85-Mile Transmission Line Across the Desert *Los Angeles Times*, March 11, 2010; "Fitch Rates NYPA Revenue Bonds AA-" March 18, 2022 https://www.fitchratings.com/research/us-public-finance/fitch-rates-nypa-transmission-project-reve nue-bonds-aa-outlook-stable-18-03-2022#:~:text=Financial%20Profile%3A%20'aa'&text=Overall%2C% 20leverage%20ratios%20are%20expected,the%20Project's%20neutral%20liquidity%20profile.

# MBLA's Role in Financial Justice

This portfolio program addresses some functions that a public bank in Los Angeles could undertake in order to fulfill its mandates to build community wealth and repair historical harms to Black, immigrant, and other working and communities of color. While many banks and financial institutions focus on financial inclusion, a public bank would focus on financial and economic *justice* as a broader effort to build financial security and wealth among historically marginalized groups.

Financial inclusion efforts typically involve improving access to existing banking services, credit, savings accounts, coaching, and other within-system solutions. However, they often leave unaddressed programs or policies that may directly reduce persistent income and wealth inequality, discriminatory lending practices, and structural factors underlying consistent financial precarity. Key bank functions relevant to this mandate include offering small business investment and lending, providing access to affordable or free banking services, and lowering the cost of capital for investments in education or community resources and centers. For MBLA, financial justice is not restricted to creating access to banking services or typical small business lending. In fact, not all issues related to financial justice are ones a public bank is uniquely or well positioned to solve. Firstly, California Public Banking Act AB 857 substantially limits retail banking services that a public bank may offer. Secondly, the landscape of existing small business lending includes considerable federal subsidy programs, CDFI lending backed by philanthropic loan loss funds, and similar programs that MBLA would be unlikely to contribute to as a cost-neutral, profit-generating financial institution.

In this report, we instead focus on a sample of new small business lending products and related alternative credit evaluations, student loans, and longer-term options for retail banking that MBLA may offer to reinforce and build on existing products offered by local banks, CDFIs, and government agencies. We point out ways these portfolio options could contribute to higher wages and wealth creation, with a particular focus on lending in under-financed communities.

Within small business lending, we suggest that MBLA can expand lending for worker cooperatives and other conversions of small businesses to worker-owned enterprises. Lending for employee-ownership transitions is currently occupied predominantly by nonprofits, philanthropies, and CDFIs with limited capacity and unsustained financing.

Using the Bank of North Dakota's existing programs as a model, we also suggest a future role for MBLA in offering low-cost student loans and easing student debt burdens. Finally,

we suggest how MBLA could support no-cost bank account services through other financial institutions pending the outcome of ongoing legislative debate.

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# Key Challenges

# Limited Financing for Worker-Ownership Conversions

Partially due to government regulations, and partly because of challenges related to debt-capacity analysis, small business lending to worker cooperatives and cooperative conversions is very rare. For federally-subsidized small business loans, the Small Business Administration <u>currently</u> requires an owner with at least a 20 percent stake in a business to sign a personal guarantee for an important federal Small Business Administration program called a 7(a) loan. Worker-owned co-ops typically have more than five owners, none of whom have a 20 percent stake in the business, which puts this crucial program out of reach.

CDFIs and other nonprofits have stepped in to try to fill the space, but they operate on a small scale, which makes it unsustainable to finance these conversions at scale. Nonetheless, they have developed methods for successful small business conversions to broad-based employee ownership, which can serve as a starting point for MBLA. Even with these small resources, co-op lending involves a difficult tradeoff: Should workers be allowed to simply share in profits, or should they have a genuine degree of control over firm management? Often the former takes priority over the latter, but lenders can favor transitions that ensure workers have a voice within the business's governance.

# A Crisis of College Affordability

National data shows that postsecondary institutions serving predominantly Black communities have some of the highest tuition prices, particularly in areas where for-profit institutions outnumber public ones. Data also makes clear that student debt is exacerbating rather than ameliorating wealth inequality and the racial wealth gap. In Los Angeles, average student debt burdens are higher than the state overall, at \$35,500. Median student debt stands at \$16,100.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> These and other statistics concerning college affordability and student debt are drawn from JFI's <u>analysis</u> of Experian credit bureau data, sampling over 1 million borrowers each year.

# **Broad Opportunities**

# Supercharging Worker Ownership for a "Silver Tsunami"

MBLA could supercharge worker ownership at small businesses in Los Angeles by making employee ownership transitions the core of its financial justice lending portfolio. This could grow wages for thousands of workers across Los Angeles and increase community wealth through shared ownership of small businesses.

The need is particularly acute in light of the so-called "silver tsunami" effect: As the aging population increases at an unprecedented rate, thousands of workers are retiring each day, among them many small business owners without an exit plan. The boomer generation represents 73 million people. Since 2001, about 10,000 of them have turned 65 per day; <u>by 2030</u>, all baby boomers will have reached retirement age. Baby boomers retiring in the next ten years own 360,000 businesses in California, employing an estimated 3.9M workers. In Los Angeles, that number is 106,000 businesses—employing almost a million people. It is estimated that six out of ten will try to sell their business in the coming decade. Many will not find buyers. This means that the majority will either sell their business to private equity or liquidate it, threatening thousands of jobs and local economies.

A public bank with an expressed interest in keeping businesses operating and workers employed via employee ownership financing could considerably mitigate the effects of the silver tsunami and redirect that business turnover to community wealth building. Employee-owned businesses directly build wealth and wages in historically marginalized communities. According to the <u>2019 Worker Cooperative Economic Census</u>, worker co-ops are over 50 percent Black and Latinx owned. In addition, employee-owners have been <u>shown</u> to earn 33 percent more than their counterparts in non-employee-owned firms.

## Lowering the Cost of Higher Education Debt Service

An important community wealth-building opportunity and reparative economic investment is in higher education for Angelenos, particularly communities of color. The Bank of North Dakota, while also conceived of as a partner-bank institution for most lending, also provides loans directly to students in North Dakota and nearby Midwestern states. Indeed, direct lending comprises 30 percent of BND's overall loan portfolio. The interest rates and loan origination fees are both lower than for federal student loans with flexible repayment plans of up to 25 years.

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The opportunity is particularly notable in California. Despite the state's high average student debt burdens, California's network of free community colleges and robust public university system help to make average tuition and fees across all campuses among the lowest in the country, at roughly \$6,000 as of 2018. Only Wyoming, Nevada, and New Mexico have lower average costs of college. This suggests an opening for MBLA to lower the cost of debt service for higher education students in California, in ways that build on the BND's successful public program.

# Proposed Lending Programs

## Employee Ownership Transition Lending for the Silver Tsunami

Without intervention, the "Silver Tsunami" of small business owner retirements will cause many businesses to liquidate or be bought out by exploitative private equity funds. However, the Silver Tsunami can be an opportunity to reshape Los Angeles' economy by transitioning these businesses to employee ownership. Employee ownership grows workers' wages, builds community wealth, and makes businesses more productive by giving employees a shared stake in the business' success.

Broadly, employee ownership (EO) involves a sale of a business from a single owner (or sometimes a handful of owners) to a broad-based employee ownership structure, in which the full base of employees has access to becoming an employee-owner. However, there are several different types of employee ownership: Employee Stock Ownership Plans (ESOPs), worker cooperatives, and Employee Ownership Trusts (EOTs).

Worker cooperatives are businesses that are 100% worker owned. Usually, employees pay a small equity buy-in and the Board of Directors is made up of employee owners who are elected by the full body of workers. All the employees share business profits based on their hours worked.

Employee Stock Ownership Plans (ESOPs) involve transferring a company's shares to a trust, which employees then earn as a retirement benefit. These types of transactions are complicated to set up but have important tax advantages, which makes them suitable for transitioning larger businesses to employee ownership.

The last type of employee ownership transition is called the Employee Ownership Trust (EOT). For an EOT, the owner sets up a trust that owns all or some of their business, typically with the purpose of maintaining the well-being of employees. Employees do not

J F T buy into ownership but still receive a share of the business's profits. Control of the company is shared between workers and management.

MBLA would focus on providing financing for all three different forms of employee transitions via intermediate regulated lending institutions like banks, CDFIs, or loan funds, which will in turn lend the capital toward the creation of more broad-based employee ownership. These intermediary institutions would provide the expertise and technical assistance needed to execute these transitions, while MBLA would provide competitive financing to increase lending in this space.

There are two forms of financing that can be used to fulfill EO transitions. The most common are "independent transitions" where the company remains independent and private for the entire process. In contrast, the "capital forward" approach enables an EO fund to approach a business owner much in the way an acquirer would, and in a similar fashion to a private equity firm. We suggest that MBLA works with intermediating institutions that provide both types of financing. However, regardless of the type of financing or transition being provided, we suggest that MBLA focuses on institutions that prioritize companies with frontline workers, low- and moderate-income workers, and workers of color for EO transitions. Similarly, we suggest MBLA focuses on providing financing to funds that prioritize meaningful employee-owner decision-making power and/or majority governance by the employee owners.

MBLA can provide low-cost capital to a variety of intermediary institutions to facilitate employee ownership transitions. MBLA's lending to employee ownership (EO) transitions could also incentivize other, mainstream financial institutions to purchase seasoned EO loans. The California IBank has recently provided loan guarantees to EO transition lending, unlike federal SBA 7(a) that de facto excludes EO transitions from their loan guarantees. If MBLA gives preference to intermediaries that secure such loan guarantees, the bank could seed a viable secondary market for EO lending in the long term and make the case for federal SBA 7(a) loans to extend to EO transition lending as well.

#### Scope of Investment

- 1. With an initial capital allocation of \$4 million, this loan product can fund almost \$40 million worth of employee ownership transitions.
- 2. An annual interest rate of 3 4.5% will be attractive for a variety of intermediary lenders that finance employee ownership transitions, while creating incentives for lenders (and philanthropy) to invest in pipeline efforts within the Los Angeles market.
- 3. In the first ten years, we anticipate this level of funding from MBLA can support nearly 1,500 Angelinos to be on a path to becoming business owners through



employee ownership, assuming a mix of over 30 small and mid-sized businesses making an EO transition.

 These loans will be provided to intermediary institutions providing EO loans, with separate pools of funds available to 1. Independent transitions (smaller, \$250K - \$1M per transition), 2. Capital forward transitions (larger, \$2M - \$10M per transition) and 3) CDFI or Community Bank funds (\$2M - \$5M per transition).

Note that these estimates are on the high end of what could be feasible given the environment of capable intermediaries. Still, this investment would require a concerted effort to engage with intermediaries—both those that are already active and those that aren't yet active in EO transition pipeline development in the LA region, to engage them and utilize the attractive low interest rate as an incentive for them to increase and focus their work in Los Angeles. Additionally, if the public bank were expanded to include Los Angeles County, the potential pipeline for transitions would be significantly expanded, making an investment at this level more likely to be able to attract dedicated EO lenders and intermediaries.

#### Low-Interest Student Debt for Angelenos

We propose that at a future stage of MBLA's development, the bank could operate a student loan program that would closely mirror the Bank of North Dakota program. This is notwithstanding the need for further regulatory clarity on the bank's ability to indirectly provide student loans under AB857. MBLA may not be the best vehicle for solving all of the issues related to higher costs of education and ballooning student debt burdens, but it can mitigate some of the debt burden through lower-cost student loans and debt refinancing programs.

#### Scope of Potential Future Investment

- 1. Student loans would range from \$500 to \$50,000 loans to Los Angeles residents
- 2. Option of either a 6.29 percent fixed interest rate or a 6.44 percent variable interest rate with a zero percent loan fee. The variable interest rate would be capped at ten percent, and repayment plans are flexible for up to 25 years.
- 3. The loans may be spent on most expenses and are not limited to tuition, room, and board.
- 4. Applicants who are US citizens may apply using the FAFSA. Undocumented applicants will be required to fill out the California Dream Act Application (CADAA), in keeping with the process used across the state.
- 5. Non-residents may apply for a similar loan, but with the added charge of a loan fee of 3.75 percent, and a higher fixed interest rate (7.29 percent) or variable interest rate (7.44 percent).



6. Refinancing student loans would be available only to Los Angeles residents attending a California-based institution.

By comparison, the Bank of North Dakota's student loan portfolio, which comprises 24 to 30 percent of the overall bank portfolio each year, disbursed \$127 million in 2020. For a state of 775,000 people, this significantly impacts higher education financing. In Los Angeles, a city of 3.8 million people, the student loan option from the municipal bank would be one of a number of financing options available, providing competitive and flexible repayment rates. However, as the program scales and complements non-bank solutions, the bank could contribute to generational wealth-building by facilitating higher education wage premiums at a lower cost.

# No-Cost Bank Accounts Through Bank-to-Bank and Fintech Partnerships

No or low-cost bank accounts are often the core focus of financial inclusion efforts by community and private banks or credit unions. However, as noted above, the California Public Banking Act, AB 857, does not enable public banks to directly serve retail consumers. Under these circumstances, there are two ways MBLA could help bank the unbanked. Should legislation for "CalAccounts" or "FedAccounts" be passed, the bank could take consumer deposits or manage state or federal accounts. Even if not, the legislation as it currently stands could allow MBLA to offer accounts that are owned and operated by partner financial institutions.

The City of Los Angeles has recently begun to offer such account services in partnerships with private banks through the <u>Angeleno Connect</u> program. This program began as a means to distribute emergency cash, particularly during the COVID-19 pandemic; it is now transitioning toward permanent accounts administered by fintech company MoCaFi (Mobility Capital Finance, Inc.), with deposits held by Sunrise Banks. This program could, in the future, work in partnership with MBLA, helping ensure direct public accountability.

# Capitalization, Paths to Incorporation, and Democratic Governance

# Capitalization

A standard bank is a specific kind of financial institution that is a member of the Federal Reserve, has Federal Deposit Insurance Corporation insurance if it is a depository institution, and is chartered within a state as a bank holding company. A typical bank's capital structure has three elements: (1) assets, composed of loans to customers and various forms of equities from which it earns revenue; (2) liabilities, which are client deposits; and (3) and capital, which consists of the bank's common stock and retained earnings. By retaining capital levels adequate to meet the regulatory capital ratio requirements, banks can amplify their lending power sustainably with leverage, and play an outsized role in developing their communities. If we take Basel III capital ratio requirements of 10.5 percent as an example (including a capital conservation buffer), \$100 million in capital becomes \$952 million in loanable funds.

Banks are unique actors in the financial system because they make what economists call "inside money." In other words, a bank's liabilities are in and of themselves cash-like and trade in the money market. As an example, we can take a simplified two-bank transaction between a loan customer from Bank A paying for a product from a depositor of Bank B (a graphical illustration of this transaction can be found in the Appendix).

When the borrower from Bank A takes out a loan, a corresponding deposit is created on the bank's balance sheet in the name of that borrower. The borrower can then go to the depositor of Bank B to make a purchase with this new deposit. When the purchase is done, funds from Bank A are transferred to Bank B. In this transaction, purchasing power has been created even as no new cash was issued by the US treasury.

However, there is a second step to bank clearing and money creation. Now that Bank B has more cash in its deposits, it will try to earn a return on this by lending that cash into the money market. At this point, Bank A can borrow from Bank B to make up for its temporary shortfall while waiting for interest payments for its customers.

In reality, we do not live in a world with only two banks, which makes this simple set of transactions far more complicated. What makes chartered banks unique is that they belong to the Federal Reserve system, which, at its simplest, is a clearing house for banks to balance their accounts with one another at the end of the day. The Federal Reserve can issue emergency liquidity for a member bank if it temporarily cannot make its payments. But this is usually at a high cost.

Banks create purchasing power by pulling forward payments from the future into the present. This makes banks uniquely valuable to the economy. However, when banks make mistakes, the consequences for an economy and financial system can be disastrous. This is why the legal challenges to establishing a bank holding company are high and why banks are heavily regulated.

First, banks must maintain a certain capital adequacy ratio, which is calculated as capital holding relative to risk weighted assets, the value of the bank's loans and deposits at various levels of probable risk and liquidity. Capital is divided into two forms: tier one capital, which is the bank's common stock and disclosed reserves (retained earnings), and tier two capital, which includes profits from revaluation of assets and subordinate debt. While banks pursue a range of capital ratios, from seven to eight percent on the low end to 15 percent on the high end, it is generally advisable to be above ten percent given new guidelines since the Global Recession of 2008.

Second, banks must meet a Liquidity Coverage Ratio, which is calculated as High Quality Liquid Assets (HQLA) relative to cashflows. HQLA is divided into three tiers. Tier One HQLA include cash reserves and Federal debt; they are taken at their face value. Tier Two A HQLA are somewhat less liquid equities such as municipal debt and money market shares; they are discounted at 85 percent from their value. Tier Two B consists of less liquid instruments such as shares of publicly listed companies; it is discounted at 50 percent. Small- to medium-sized banks in the United States are required to keep an HQLA of at least five percent.

While some of these requirements will not be legally enforceable in the case of the Municipal Finance Corporation or non-depository institution, which is the form of organization planned as MBLA's first stage, they will be fundamental to its conversion into a chartered bank, as envisioned in stage two. Thus they should be considered from the outset of MBLA's operations.

A final consideration relevant to the question of capitalization is philanthropic support of MBLA. Given MBLA's status as a mission-driven institution, we recommend the exploration of opportunities to advance new strategies for blended finance that involve the

strategic use of philanthropic funds. One promising opportunity could center on the creation of philanthropic credit guarantees, which could serve to backstop major transactions at little or no cost to philanthropists themselves. Consolidating new forms of "risk philanthropy," in which philanthropists lower the cost of capital for business lines chosen by the public and its elected representatives, could help expand MBLA's impacts while reinforcing publicly accountable forms of private giving.

# Paths to Incorporation

No matter how it is approached, the creation of a new municipal public bank will be a complex process involving many regulatory hurdles. To overcome them, we propose a two-stage process. The first stage entails the creation of a Municipal Finance Corporation (MFC) as a series of interlinked loan funds, which can be achieved quickly as it faces fewer regulatory roadblocks. As the established MFC begins to build a track record of community impact and fiscal responsibility, we propose its transformation into a full-fledged public bank, either through the creation of a de novo institution or the acquisition of an existing bank charter.

### Stage 1: Establishing a Municipal Finance Corporation

A municipal finance corporation (MFC) can be an intermediate step toward establishing a public bank with its own charter. LA's MFC would be a non-bank financial institution capable of making loans and equity investments, but incapable of receiving deposits. This non-bank municipal financial corporation would function as a rotating strategic investment fund, borrowing in private markets or issuing debt securities, which could then be purchased by the city and held in its investment pool.

Since the financial crisis of 2008, the number of new bank charters issued has fallen precipitously, turning the complex regulatory approval process described in the next section of this report into a punishing gauntlet with no guarantee of immediate success. To avoid these delays, an MFC could be created via a process similar to that used to establish Housing Finance Agencies, with no need for approval by the Federal Deposit Insurance Corporation and far lower capital requirements.

The MFC structure could thus allow the city to quickly initiate lending toward its goals and social mandates in climate, housing, and financial justice, without holding deposits. The lending programs of the MFC could serve as a proof of concept for the public bank and expand the pool of finance for strategic city priorities, all while demonstrating responsibility and transparency. An MFC can be funded in a variety of ways. For example, it can issue a series of bonds that the city treasurer purchases to finance the corporation at a favorable rate. The city may also choose to issue a promissory note to the MFC, against which the corporation can borrow. Finally, the MFC can issue preferred bonds to philanthropies, which can invest their money into the MFC at a low, mission-oriented return, or use standard, municipal bond markets to borrow additional funds against its capitalization.

Assets	Liabilities
Loans and Interest Payments	Private Market Municipal Bonds*
Cash Deposits at CDFIs	Bonds Issued to City Treasurer*
Commercial Paper	Charitable Bonds Issued to Private Foundations*
Short Term T-Bills	
Promissory Notes from the City*	

Table 1: Components of a Municipal Finance Corporation (MFC) Balance Sheet

\*Potential Sources of Funding for the MFC as either assets or liabilities.

The MFC model will also allow for simplified cooperation with existing CDFIs. An MFC will have to make formal deposits with a partner bank that will manage its cash and transactions. Thus, it would be a potential source of CDFI deposits to catalyze further their mission lending. In addition to cash deposits, the MFC may invest some of its capital into short-term Treasury Bills and commercial paper.

This approach presents far fewer regulatory hurdles, likely offering us the fastest path to incorporation and the commencement of lending operations. As such, we believe it has a greater chance of success than the initial establishment of a full-fledged bank. We therefore believe this option deserves careful consideration by municipal leaders and the public.

## Stage 2: Conversion to a Full-Fledged Bank

Following the establishment of LA's MFC, we suggest that MBLA leaders begin working to undertake the MFC's conversion into a chartered bank. This process, which is likely to take at least two years and can be conducted at the same time MFC's interlinked lending programs are developed, would ensure ongoing impact even as the regulatory process unfolds. We envision two principal paths that this process of bank conversion can follow:

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establishing a de novo bank or acquiring an existing bank charter. Evaluating and choosing between them will be the first step in the conversion process.

### Option 2A: Establishing a De Novo Bank

Creating a new bank with its own charter would maximize independence but bring the greatest technical complexity and regulatory hurdles. Chartered by the State of California, a de novo bank would need to be approved by the Federal Deposit Insurance Company to receive FDIC-insured deposits, extend loans, and make equity investments.

This approach would involve three steps. First, MBLA would apply for federal depository insurance (FDIC), as required by California law. This will entail an evaluation both of the bank's capital adequacy and of its governance model, likely taking multiple years. It may be further complicated by FDIC officials and California state regulators, who have express reservations about models of governance which depart from those already widely employed by private financial institutions, particularly including sortition or appointment by elected leaders and the public. Second, it would seek state-level incorporation as a mutual benefit corporation or public benefit corporation. Finally, it would apply for a formal bank charter from the California Department of Financial Protection and Innovation, a process likely to take approximately two years. Given recent trends, the outlook for new charters is challenging. Applications are likely to face a great deal of regulatory scrutiny. Successful applicants may need assistance from a specialized regulatory consulting firm.

Wholesale lending among financial institutions would be possible through the establishment of a de novo bank. However, California law does not envision public banks as consumer-facing, deposit-taking institutions. Nonetheless, it is useful to observe that such services could be offered through a bank-partnership model, in which MBLA would collaborate with an existing bank, likely a mission-driven and/or local institution, which would use its charter to backend these operations, likely in exchange for an origination fee and a portion of interchange fees. That said,deposit-taking and related consumer services are not among the core business functions we envision for MBLA, particularly in its initial five years of operation.

# Option 2B: Acquiring an Existing Bank Charter

As an alternative, MBLA could move from the MFC stage to full-fledged bank status by purchasing an existing community bank with core functions that mirror the basic business lines intended for MBLA. In the private sector, most banks expand into new

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regions or markets by acquiring a bank with an existing charter. The advantage of this approach is that once the acquisition is approved, the charter to operate in a new state is already available for use, as is the existing technology and operational stack. This may be an option worth considering for MBLA, given the time and expense to acquire a de novo charter, as well as the inherent regulatory uncertainty that application of new charters entails. (This could be even greater in the case of MBLA, a new sort of entity with varied activities in areas sometimes marked by novel forms and a lack of pricing history.) This is the preferred option of most financial market participants who wish to move into banking.

At the same time, a public bank could present unique downsides to this tried-and-true private-sector strategy. Beyond the potential cost of the acquisition, which could approach or exceed \$100 million, existing charters come with legacy lending programs, which may introduce liabilities that are politically or financially undesirable for a public balance sheet. While it is common for banks to close some lines of business upon acquisition of a preexisting charter, it may prove harder for a public bank to shut down lines of business than it would be for a bank only accountable to shareholders.

# Governance

For MBLA to be a truly democratic institution, it is not enough for it to be answerable only to public representatives. Active citizen deliberation must be integrated into its processes in a manner that acknowledges the deep and persistent inequalities shaping the City of Los Angeles. In addition to a board of governors, which, like any bank, will handle MBLA's operational divisions, we propose a bank design with five governance features: a people's assembly, standing commissions, exploratory juries, people's investment boards, and people's review panels. Such governing, oversight, and planning assemblies of residents have been implemented in <u>Paris, Brussels, Bogota, Toronto</u>, and elsewhere as part of a <u>growing movement</u> to empower the public to input directly and deliberatively on policies or investments serving them. These various boards create alternatives to representative class of financiers that critically inform or wholly determine public investment decisions, often with limited transparency. Instead, the structure described below suggests ways to incorporate both financial expertise and public input in the bank's everyday functions. We imagine an overall governance structure that looks something like Figure 2.

#### People's Assembly

People's assemblies are a promising way to coordinate public deliberation about how to allocate the investment of our new public bank. Assemblies use random selection or stratified sampling, similar to jury selection, to bring manageably sized groups of



residents together to deliberate and make collective decisions about the bank's mandates. Unlike voting, which collects an individual's top-of-mind opinions, people's assemblies are deliberative and therefore promote discerning judgments. While governance by lot is an idea with its roots in ancient Greece, recent years have seen a renewed turn toward assembly governance that the OECD has described as a "<u>deliberative wave</u>."

MBLA's assembly would serve as the highest decision-making body and core mandate-generating layer of governance. The people's assembly would be composed of 99 residents selected through stratified sampling to ensure fair representation of demographic groups. They would be responsible for identifying the broad priorities of the bank for the next investment cycle. These priorities would be made on multi-year time horizons and set the broad mission of the bank until the next assembly convenes.

**People's Research Juries** filled by lot People's Review Board gives one are issues audits and to research social impact Plebeian + Issue Commissions reports to pubic 2 ø. information solicits filled by People's Assembly reviews mandates stratified lot Any residents aged 16+ each commission has one veto filled Board of by lot **Banking Experts** Issues mandates for investments Hires + Manages People's Investment Panels filled Operational by lot 20 C Divisions of Bank oversees mandates

Figure 2: A Democratic Governance Structure for MBLA

People's Research Juries

A research jury could play a similar role for MBLA. As the People's Assembly identifies poorly understood areas of possible interest for investment, a research jury could be



tasked with convening, deliberating, and marking recommendations. These smaller research juries would be selected by lot to commission studies and generate recommendations, similar to a model begun in 2019 with 30 randomly-selected citizens in the "<u>Assembly of Parisians</u>."

#### People's Investment Panels

Our peoples' assembly could also form specific peoples' investment panels — much like the Belgian citizen panel, or <u>bürgerdialog</u> — to oversee specific parts of their mandate for the bank. These 25-person standing boards could rotate people in and out over the course of the four-year plan, with the purpose of overseeing actual investment allocation in given mandate areas. There might be, for instance, a small business lending panel, a housing panel, a green infrastructure and technology panel, a financial inclusion panel, and so on. The actual content of the mandates would be an issue of democratic deliberation.

#### People's Review Board

An additional review board would be charged with reviewing the bank's operations to ensure that it is achieving its mandates through financial and social impact reporting. Like other deliberative assemblies, these standing panels would be filled by lot and would meet in the second and fourth year of the cycle. A similar <u>planning panel</u> was established in Toronto in 2015.

### Plebeian and Issue-Based Commissions

This final set of institutions takes inspiration from the class-based institutions of the past, such as the tribunate of the Roman Republic. We propose the creation of three such commissions: a workers commission, a green commission, and an indigenous commission. Each of these commissions would consist of 31 lottery-selected participants. Inclusion of historically excluded groups would be prioritized. For example, the workers commission could exclude members of the wealthiest 20 percent of families using recent US Census data. The green commission could include ecological experts and movement practitioners. Finally, the indigenous commission could exclude non-indigenous people.

These commissions could help set the mandates for the bank along with the People's Assembly. They would have two basic powers. First, they would review the initial mandate recommendations of the People's Assembly, retaining the power to veto only one of them, to ensure they don't capture the process. Second, they would have the power to propose one area of inquiry for the People's Research Juries to investigate and make mandate recommendations for the next People's Assembly process. Together these fives governance features — a people's assembly that creates investment mandates, standing commissions that ensure compliance with mission, exploratory juries that research new areas, people's investment boards that oversee the allocation of funds, and people's review panels that issue public facing reports — could imbue MBLA with both democratic processes and democratic legitimacy. In doing so, the public bank could avoid capture by private interests and function in a way that reflects the will and needs of the people of Los Angeles and maintain fidelity to the goals and mandates of its establishment.

## Appendix 1: Sample Unified Balance Sheet

This sample unified balance sheet presumes an initial capitalization of \$100,000,000, a capital ratio requirement of 10.5%, and an average financing cost of 3% (based on the Muni AA- tax-free rate).

Lending Portfolio	Product	Portfolio Share	Balance Sheet Share	Loaned Amount	Loan Loss Rate	Loan Loss Adjusted Amount	Interest Rate	Financing Cost	Net Margin (Yearly)	Equity Appreciation (Yearly)
Housing	Rapid Acquisition Fund	30.0%	0.135	\$128,571,429	1.00%	\$127,285,714	3.0%	3.0%	0.00%	0.00%
Housing	New Construction Loans	40.0%	0.18	\$171,428,571	1.00%	\$169,714,286	10.0%	3.0%	7.00%	0.00%
Housing	Recapitalization of Existing Subsidized Multifamily Housing	5.0%	0.0225	\$21,428,571	1.00%	\$21,214,286	3.0%	3.0%	0.00%	0.00%
Housing	LMI Mortgage Subsidy	10.0%	0.045	\$42,857,143	3.00%	\$41,571,429	0.0%	3.0%	-3.00%	7.00%
Housing	ADU Creation Assistance - Rentals	7.50%	0.03375	\$32,142,857	1.00%	\$31,821,429	7.0%	3.0%	4.00%	0.00%
Housing	ADU Creation Assistance - Sales	7.50%	0.03375	\$32,142,857	1.00%	\$31,821,429	0.0%	3.0%	-3.00%	7.50%
Financial Justice	Independent Transition Employee Ownership Loans (Large)	75.00%	0.075	\$71,428,571	2.00%	\$70,000,000	4.5%	3.0%	1.50%	0.00%
Financial Justice	CDFI or Community Bank Investment Loans (Medium)	18.75%	0.01875	\$17,857,143	2.00%	\$17,500,000	4.5%	3.0%	1.50%	0.00%
Financial Justice	Independent Transition Employee Ownership Loans (Small)	6.25%	0.00625	\$5,952,381	2.00%	\$5,833,333	4.5%	3.0%	1.50%	0.00%
Climate	Utility Scale Power	50.0%	0.225	\$214,285,714	0.00%	\$214,285,714	3.5%	3.0%	0.50%	0.00%
Climate	Distributed Community Solar	50.0%	0.225	\$214,285,714	0.00%	\$214,285,714	4.3%	3.0%	1.30%	0.00%

Lending Portfolio	Product	Net Profit (Yearly)	Project Capital Stack Share	Unit Cost	Loan Term (Years)	Output Scaler**	Scaled Unit Cost	Total Unit Output*	Yearly Unit Output*	10-Year Output*
Housing	Rapid Acquisition Fund	0.00%	20%	\$450,000	3	1	\$450,000	1414	471	4,714
Housing	New Construction Loans	7.00%	20%	\$700,000	3	1	\$700,000	1212	404	4,041
Housing	Recapitalization of Existing Subsidized Multifamily Housing	0.00%	100%	\$10,000	3	1	\$10,000	2121	707	7,071
Housing	LMI Mortgage Subsidy	4.00%	20%	\$2,000,000	10	1	\$2,000,000	104	10	104
Housing	ADU Creation Assistance - Rentals	4.00%	90%	\$150,000	15	1	\$150,000	236	16	157
Housing	ADU Creation Assistance - Sales	4.50%	90%	\$150,000	2	1	\$150,000	236	118	1,179
Financial Justice	Independent Transition Employee Ownership Loans (Large)	1.50%	100%	\$7,500,000	9	75	\$100,000	700	77.78	778
Financial Justice	CDFI or Community Bank Investment Loans (Medium)	1.50%	100%	\$2,500,000	7.5	35	\$71,429	245	32.67	327
Financial Justice	Independent Transition Employee Ownership Loans (Small)	1.50%	100%	\$500,000	9	25	\$20,000	292	32.41	324
Climate	Utility Scale Power	0.50%	50%	\$30.38	10	1	\$30	14107025	1410703	14,107,025
Climate	Distributed Community Solar	1.30%	50%	\$27.88	10	1	\$28	15372002	1537200	15,372,002

\*Output for housing programs is the number of units built or preserved; for financial justice programs, of worker-owners of newly transitioned businesses; and for climate, of green megawatt hours produced.

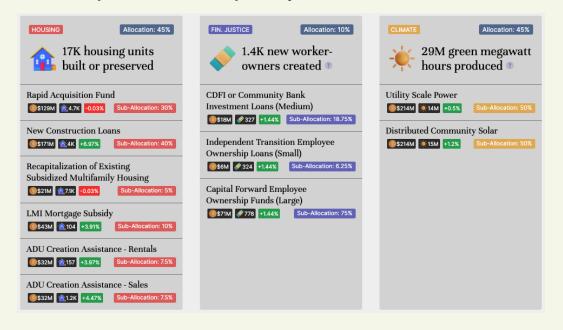
\*\*Financial justice scalars represent the average number of worker-owners involved in large, medium, and small businesses transitioned to employee ownership, respectively.

## Appendix 2: Example Allocation Scenarios

The following scenarios were constructed using the <u>Balance Sheet Simulator</u> tool accompanying this series, which enables users to build their own customized loan portfolios for MBLA. All work from the same assumptions undergirding the sample unified balance sheet in Appendix 1: an initial capitalization of \$100,000,000, a capital ratio requirement of 10.5%, and an average financing cost of 3%. Each of these assumptions can be adjusted using the <u>Balance Sheet Simulator</u>, as can the capital allocations across and within each of the three lending areas. Readers are invited to use the simulator to build their own custom balance sheets.

## Scenario 1: Sample Unified Balance Sheet

This scenario allocates MBLA's loanable funds according to the sample unified balance sheet in Appendix 1 above, with 45% in housing, 45% in clean energy, and 10% in financial justice.



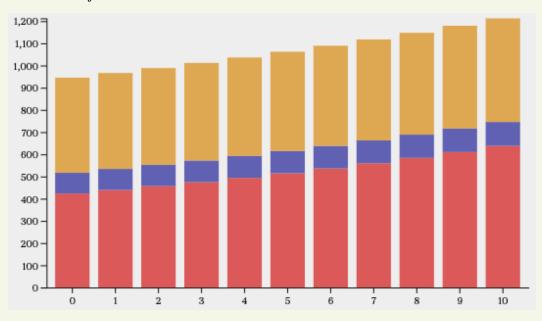
Scenario 1 Portfolio Allocations and Projected Impacts

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Scenario 1 Portfolio at a Glance

Rapid Acquisition Fun New Construction Loans		Utility Scale Power
		Distributed Community Solar
Recapitalization of Exist Subsidized	in ADU Creation Assistance - Rentals	
LMI Mortgage Subsidy		
	ADU Creation Assistance - Sales	
CDFI or In Capital Fo Commun Tr Funds (La Bank E Investme	rward Employee Ownership rge)	
Investine		

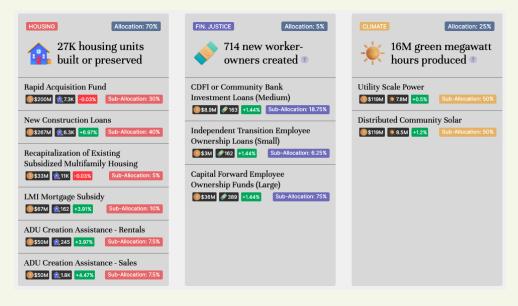
Scenario 1: Projected Balance Sheet Growth over Ten Years



## Scenario 2: Prioritizing Housing

This scenario prioritizes allocating lendable funds to affordable housing creation and preservation, with 70% in housing, 25% in clean energy, and 5% in financial justice.

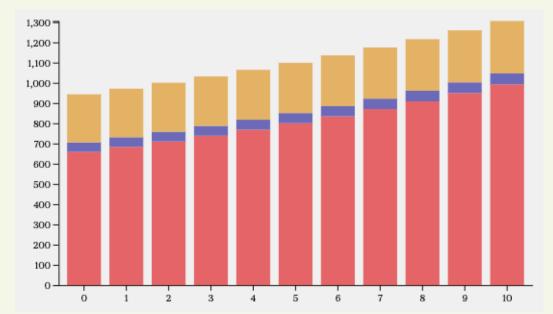
Scenario 2 Portfolio Allocations and Projected Impacts



Scenario 2 Portfolio at a Glance

Rapid Acquisition Fund	New Co	nstruction Loans		Capital Forward Employee Ownership Funds Scale Power uted Community Solar
Recapitalization of Existing Subsidized	AD	U Creation Assistar	nce - Rentals	
LMI Mortgage Subsidy	AD	U Creation Assistar	nce - Sales	



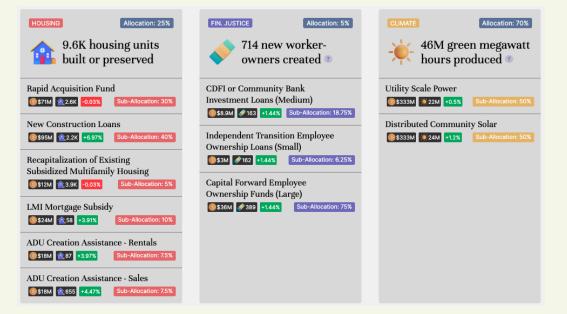


Scenario 2: Projected Balance Sheet Growth over Ten Years

## Scenario 3: Prioritizing Green Energy

This scenario prioritizes allocating lendable funds to investment in green energy production, with 70% in climate, 25% in housing, and 5% in financial justice.

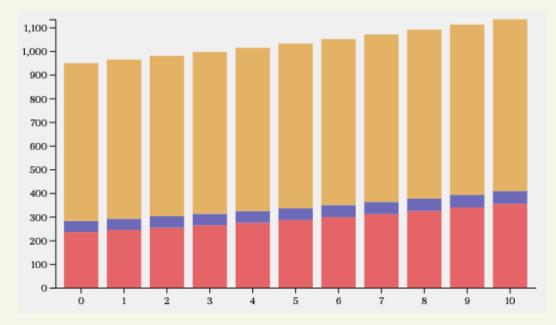
Scenario 3 Portfolio Allocations and Projected Impacts



### Scenario 3 Portfolio at a Glance

Rapid Acquisition Fund	New Construction Loans	Utility Scale Power	Distributed Community Solar
Recapitaliza LMI Mortga Subsidy CDFI or Emp Fund	Creati Creati		

Scenario 3: Projected Balance Sheet Growth over Ten Years



J F I



# **Appendix 3: A Simplified Banking Transaction in Four** Steps

Step 1: Bank 1 makes a \$10 loan at X% to company A resulting in a new deposit in the bank of \$10

Assets	Liabilities
<ul> <li>\$10 loan to</li></ul>	<ul> <li>+\$10 to deposit of</li></ul>
Company A at X% <li>Commercial paper</li> <li>Treasuries</li>	Company A <li>Deposits</li>

Bank 1 Makes a \$10 Loan to Company A

Step 2: Company A uses its loan to buy something from Company B, which has an account at Bank 2. This results in Bank 1 paying \$10 to Bank 2 and closing Company A's deposit.

Bank 1 Pays Bank 2 by Taking \$10 Away from Deposits

Assets	Liabilities
<ul> <li>\$10 loan to</li></ul>	<ul> <li>-\$10 deposit from</li></ul>
Company A at X% <li>Commercial paper</li> <li>Treasuries</li>	Company A <li>Deposits</li>

#### Bank 2 Adds \$10 to Company B's Deposit

Assets	Liabilities			
<ul> <li>Loans</li> <li>Commercial paper</li> <li>Treasuries</li> <li>+\$10 deposit (payment) from Company A</li> </ul>	<ul> <li>+\$10 to deposit of Company B</li> <li>Deposits</li> </ul>			



**Step 3:** Bank 1 borrows \$10 from Bank 2 to cover the period between making payment to Company B's account and the repayment of Company A's loans. The bank needs the \$10 to satisfy demand for cash from its depositors. It borrows at rate Y which is lower than rate X. The loan is still profitable as long as the bank's borrowing cost is lower than company A's.

k 1 Borrows \$10 to P	ay Withdrawing Depos	tors Bank 2 Lends its Nev	w Extra \$10 to Bank
Assets	Liabilities	Assets	Liabilities
<ul> <li>\$10 loan to Company A at X%</li> <li>Commercial paper</li> <li>Treasuries</li> </ul>	<ul> <li>Deposits -\$10</li> <li>+\$10 overnight loan at Y%</li> </ul>	<ul> <li>Loans</li> <li>Commercial paper</li> <li>Treasuries</li> <li>+\$10 loan to Bank 1 at Y%</li> </ul>	<ul> <li>Deposits</li> <li>+\$10 to deposit of Company B</li> </ul>

Step 4: Company A pays back its loan. Bank 1 pays interest to depositors.

Bank 1
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Assets	Liabilities
<ul> <li>-\$10 loan to Company A at X%</li> <li>+\$10 + X% repayment from Company A</li> <li>Commercial paper</li> <li>Treasuries</li> </ul>	• Deposits + interest payments