

CalPERS for California 2020

For the Fiscal Year Ended June 30, 2020



CalPERS for California 2020

Introduction

For more than eight decades, CalPERS has built retirement and health security for state, school, and public agency members who work in public service. CalPERS' pension serves more than 2 million members in its retirement system and administers benefits for more than 1.5 million members and their families in its health program. CalPERS is the largest defined-benefit public pension in the U.S., with an investment portfolio valued at approximately \$395.8 billion as of June 30, 2020.¹

Approximately \$43.6 billion (or 11.0 percent) of CalPERS' portfolio was invested in California-based companies and projects.²

This report highlights some of the broad ancillary benefits of all CalPERS investments in California as identified by Pacific Community Ventures (PCV), a third-party research organization.

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Executive Summary

As the nation's largest public pension fund, CalPERS plays a vital role in California's economy, providing retirement and health benefits to over 2 million public employees, retirees, and their families, and 2,890 employers.³

CalPERS for California examines CalPERS' investment portfolio as of fiscal year ending June 30, 2020. It describes the scale and breadth of CalPERS' investments in companies, properties, and projects in California and the additional benefits from CalPERS' private market investments. This report does not examine the financial performance of the investments.

The investment goal of CalPERS is to achieve an appropriate risk-adjusted return. All the investment decisions must be consistent with the fiduciary responsibility of CalPERS Board of Administration and its duty to protect the financial security of its members. Like many other large institutional investors, CalPERS' portfolio is diversified among categories of investments, called "asset classes," to reduce the exposure to any one market risk and maximize the return on investment. CalPERS' investment decisions are guided by its [Investment Beliefs](#) and are made in accordance with various investment policies guiding strategic asset allocation and risk management.

As the world's fifth-largest economy, the strength and diversity of California's economy offer a wide array of attractive investment opportunities for all investors.⁴ Investments in California that CalPERS staff and external managers and advisors select are usually not explicitly directed into California but are the consequence of a typical institutional investment portfolio management process weighing the financial merits of companies, properties, and projects, regardless of location. The size and dynamism of California's economy are the primary drivers of CalPERS' exposure to local communities and the related benefits that this brings, like job creation.

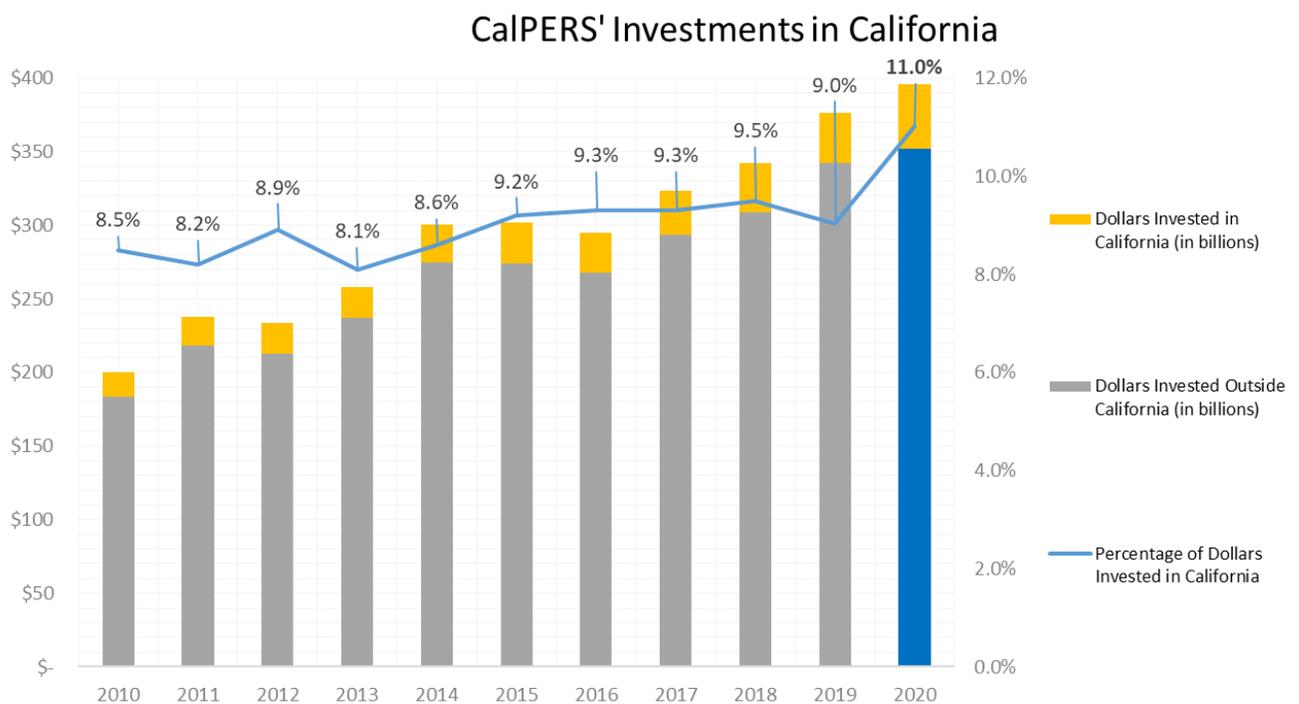
This report offers a snapshot of CalPERS California investments and has been prepared by PCV. The research methods in this report are fully documented in endnotes. The difficulty of attributing ancillary benefits directly to any individual investment is especially notable, which explains why ancillary benefits associated with public market investments are excluded from this report. Furthermore, the analysis in this report utilizes 2010 U.S. Census Bureau data and does not include data from the 2020 Census, as it was not yet available when the report was prepared.

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As of June 30, 2020, CalPERS had invested approximately 11.0 percent (or \$43.6 billion) of its \$395.8 billion investment portfolio in California.⁵

CalPERS Investments in California by Asset Class: June 30, 2020			
	Total Portfolio Value (in Billions) ⁶	Dollars Invested in California (in Billions) ⁷	Percentage of Dollars Invested in California
Global Equity	\$196.0	\$22.4	11.4%
Global Fixed Income	\$102.1	\$7.9	7.7%
Private Equity	\$26.5	\$0.8	3.0%
Real Assets	\$43.0	\$12.5	29.1%
Other ⁸	\$28.2	-	-
Total	\$395.8	\$43.6	11.0%

CalPERS has consistently had 8 percent or more of its investment portfolio invested in California since 2010. The highest reported percentage was at fiscal year ended June 30, 2020 with 11 percent invested in California. The following chart shows CalPERS' investments in California.



In addition to achieving appropriate risk-adjusted returns, CalPERS' asset allocation to private market investments indirectly supports the communities in which they are located. The additional benefits of private market investments in California, for instance, include the support of local jobs, infrastructure for communities and commerce, and business expansion, and related economic activity. As of June 30, 2020, PCV estimates that CalPERS' active private markets investments in California supported \$22.4 billion in total economic activity across the

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state. This activity benefits not only businesses and projects receiving allocated capital from CalPERS but also suppliers, workers, and the public sector broadly through tax revenues.⁹

The total number of estimated jobs supported by CalPERS' California investments in private markets is shown below.

Estimated Jobs Supported by CalPERS Private Markets Investments: June 30, 2020¹⁰	
Private Equity	38,314
Real Assets	129,772
Total Private Markets	168,086

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Public Markets

The largest amount of CalPERS' total assets is invested in the public markets through equity and fixed income securities.

CalPERS' investments in public companies and projects cannot be directly tied to the creation of jobs or other ancillary benefits at those companies and projects receiving investment. The public markets investments are intentionally excluded from this analysis due to the less direct relationship between capital being a source and the use of proceeds from this financing by recipient companies issuing the public traded securities that CalPERS holds. Therefore, the CalPERS for California report examines CalPERS' investment exposure in California, but not the job creation or ancillary benefits associated with its public market investments.

Global Equity

Total Market Value: \$196.0 billion¹¹

Value in CA: \$22.4 billion¹²

Percentage in California: 11.4%

Global equity is the principal asset class providing growth exposure in the strategic asset allocation. CalPERS' Global Equity Program invests in securities traded in global public equity markets, including in-house management of index-oriented and active strategies and externally managed active strategies.

Assets in the portfolio are comprised of U.S. and international public equities, foreign currencies, and derivative exposure.

Global equity investments in public companies make up approximately half of the total portfolio. CalPERS invests in public companies primarily as a long-term investor. The largest allocation of global equity is passively managed by an in-house team of investment professionals. CalPERS also develops portfolios, managed both internally and externally, of active strategies seeking additional long-term value creation opportunities.

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Global Fixed Income

Total Market Value: \$102.1 billion¹³

Value in CA: \$7.9 billion¹⁴

Percentage in California: 7.7%

CalPERS' Global Fixed Income program seeks to diversify and reduce overall risk for CalPERS investment programs while enhancing CalPERS total returns. This asset class has exposure to investments in California through the following sectors:

- **Corporate Bonds:** Companies issue corporate bonds to finance a variety of corporate purposes, such as investing in new plants and equipment or to fund the purchase of a company's equity or debt.
- **Structured securities:** Structured securities are investments in debt securities collateralized by a diverse group of loans including residential real estate, commercial real estate and consumer loans. When issuing structured securities, these loans are bundled together and underlying loan principal and interest repayment cashflows are packaged into varying structures offering investors different risk and return profiles.
- **Whole loans:** Whole loans include remaining California mortgages through the CalPERS' Member Home Loan Program.¹⁵

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Private Markets¹⁶

CalPERS investments in private markets include private equity and real assets, including real estate and infrastructure investments. Private market strategies encompass investments in companies, properties, and projects that cannot be accessed publicly.

PCV provides econometric estimates for how CalPERS supports job creation and other ancillary benefits within the state of California through its private market investments. Access to capital is an important factor in business and productivity growth, job and wealth creation, innovation, and sustainable community and economic development.

This section of the report highlights the following five categories in which deployed capital may create socially beneficial outcomes¹⁷:

- Low-to moderate-income (LMI) areas¹⁸
- High unemployment areas¹⁹
- High minority areas²⁰
- Rural areas²¹
- Limited capital access areas²²

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Private Equity

Total market value: \$26.5 billion²³

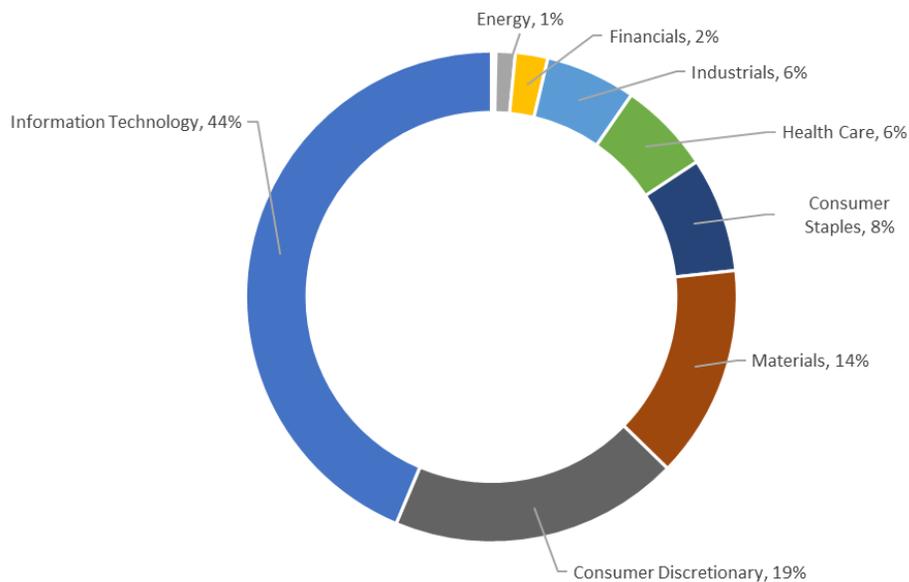
Value in CA: \$0.8 billion²⁴

Percentage in California: 3.0%

The strategic objective of CalPERS' Private Equity asset class is to maximize risk-adjusted rates of return and enhance the equity return of the total investment portfolio. CalPERS is a significant investor in privately held California-based companies in a wide range of industries.

CalPERS' private company exposure is primarily gained through investments in commingled funds managed by a general partner. Investments across a wide range of companies in more than eight different industries is represented in the portfolio. The following chart shows the diversity across industry sectors of the investments in California.

California Private Equity Investments by Industry



These companies are headquartered in California and are estimated to employ 38,314 workers in the state. In addition to the \$0.8 billion in private equity investments, an estimated \$13 billion has been invested alongside CalPERS by other investors.²⁵ However, these investments are not directly attributable to CalPERS' investments.

CalPERS' Private Equity Investments in California: June 30, 2020	
Total Companies	144
CalPERS Investments (in Billions)	\$0.8
Estimated Jobs in California ²⁶	38,314

Some of CalPERS' private equity investment exposures provide a unique additional ancillary

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benefit by deploying capital to areas that have traditionally had limited access to institutional private equity assets. Private equity investment has historically been clustered in geographic regions such as the Silicon Valley.²⁷ Specifically, between 2008 and 2017, 90 percent of private equity capital in the United States was invested in just 600 ZIP codes across the country, representing 18 percent of United States ZIP codes.²⁸ For the purposes of this analysis, any company that is located outside of these 600 ZIP codes is in an area that has historically had limited access to institutional equity capital. As of June 30, 2020, 16 percent of the private equity investment exposure for the CalPERS portfolio is invested in California ZIP codes outside of the 600 ZIP code areas receiving the majority allocated by all institutional private equity capital sources.

PCV estimates 76 percent of the investments in California are in areas with a high minority representation in their population. The following table also shows PCV's estimates for high unemployment, LMI, rural, and limited capital access areas:

Additional Ancillary Benefits of CalPERS Private Equity Investments in California: June 30, 2020²⁹		
	Percentage by Number of Investments	Percentage by Dollars Invested
High Unemployment Areas	7%	8%
Rural Areas	5%	14%
High Minority Areas	76%	68%
LMI Areas	24%	25%
Limited Capital Access Areas	13%	6%

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Case Study: Utility Telecom

Company Name	Utility Telecom
Headquarters	Stockton, California
Industry	Competitive Local Exchange Carrier (CLEC)
CalPERS Private Equity Program	Emerging Manager
General Partner	CVF Capital Partners
Alternative Investment Vehicle	Central Valley Fund II

Utility Telecom, a leading telecommunication provider founded in Stockton, California in 1996, provides affordable, powerful, and reliable Voice over Internet Protocol (VoIP) and internet services for businesses and organizations throughout California and Nevada. The company offers critical data networking and unified communications to over 5,000 business customers in California and Nevada, including enterprise, government, and wholesale customers.

Utility Telecom benefits California communities by creating quality jobs in historically underserved communities such as Stockton, California. The company employs 80 workers across customer service, operations, and engineering and has had 31 percent employee growth since receiving investment from the Central Valley Fund. Over 90 percent of Utility Telecom's positions are full-time. Employees are also eligible for paid-time off, employer-subsidized health insurance, and retirement benefits. In addition, Utility Telecom supports career growth and professional development through ongoing development and education, and regularly offers web-based, interactive television, and live classroom trainings. To enhance employee training, Utility Telecom purchased a property near its headquarters to serve as a dedicated on-site training facility and meeting space. The company also offers an educational assistance program to support employees interested in continuing their education with local colleges and universities.

During the COVID-19 pandemic, Utility Telecom has retained its 80-person workforce and continues to serve customers as an essential business. The company has sought to keep workers safe, engaged, and supported by providing steady supplies of personal protective equipment, conducting daily safety trainings and briefings, sanitizing and cleaning equipment, and checking-in on workers' well-being. Utility Telecom has also sought to support its customers during this time, especially its small business customers, those based in rural communities, and businesses in fitness, hospitality, and other industries that have been particularly disrupted by COVID-19. For those customers who were experiencing financial difficulties, Utility Telecom offered important flexibility and where needed, deferred billing and offered cost reductions while maintaining service levels.

Utility Telecom is especially dedicated to supporting Stockton and neighboring communities. The company partners with many local nonprofits, makes donations to local high schools, and prioritizes hiring and recruiting from nearby schools, community colleges, and four-year colleges. In 2020, the company created an annual scholarship program to support students interested in pursuing a higher education in mechanical engineering, electrical engineering, or civil engineering with educational expenses as part of increasing educational interest in the

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telecommunications and technology industry in Stockton.

Utility Telecom received an \$8.75 million investment in 2015 from Central Valley Fund II, managed by CVF Capital Partners, which provided critical expansion capital that enabled Utility Telecom to grow operations in Southern California and Nevada by acquiring other leading telecom companies. For the last 20 years, CalPERS has partnered with CVF Capital Partners, including through CalPERS' Emerging Manager Program. CVF Capital Partners' funds focus on providing mezzanine debt and preferred equity investments to small and medium-sized businesses across California and the Central Valley. The Central Valley Fund has invested a majority of its capital in businesses owned by women and/or minorities, or businesses located in low- to moderate-income communities.

CVF Capital Partners' investment in Utility Telecom demonstrates its commitment to investing in successful California companies that produce attractive returns, provide quality jobs, and support local communities.

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Real Assets

Total Market Value: \$43.0 billion³⁰

Value in CA: \$12.5 billion³¹

Percentage in California: 29.1%

CalPERS' Real Assets program includes real estate and infrastructure investment portfolios.³² These investments are acquired and managed through separate accounts, joint ventures, and commingled funds. Real Assets play a strategic role within the total fund by providing benefits of stable and predictable cash yield, diversification of equity risk, and inflation protection. Investments in this asset class benefit California communities by creating jobs, contributing to local economic development, and providing critical community resources.

CalPERS' Real Assets Investments in California: June 30, 2020	
CalPERS Investments (in Billions)	\$12.5
Number of Investments	184
Estimated Jobs in California ³³	129,772

Real Estate

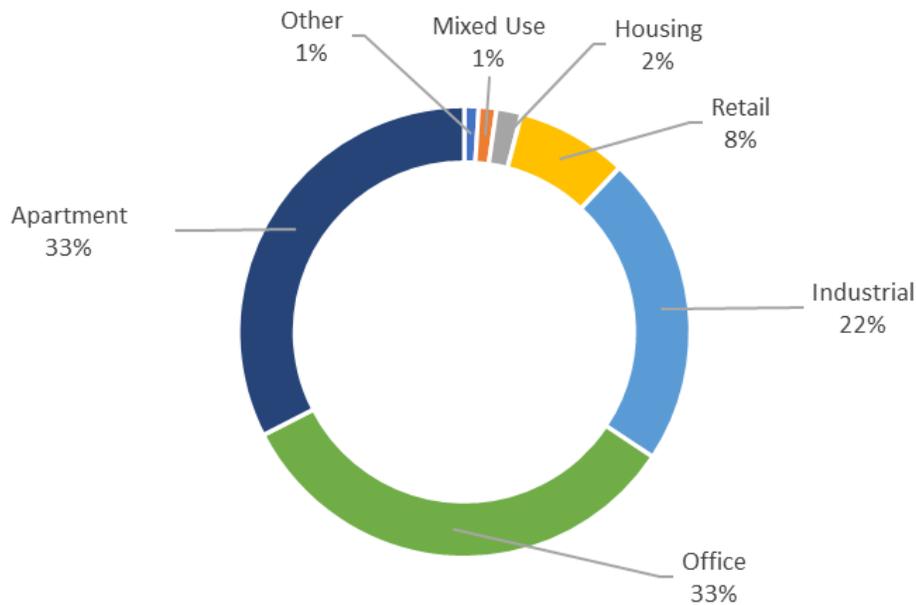
CalPERS invests in real estate primarily through separate accounts and funds with third-party investment managers. The investment strategy for real estate is to invest primarily in core assets with stable income, diversified by property type and geography.

The real estate portfolio is more heavily weighted to California than any other asset class. This weighting reflects the fact that many core real estate markets in the current benchmark are concentrated in California. The portfolio in California includes a diverse group of properties that provide ancillary benefits in the areas in which they are located, including the creation of construction jobs and economic activity connected to construction, the accommodation of new retail, industrial and commercial employers, and the anchoring of communities with real assets.

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The following chart highlights the exposure of the California real estate investments to the six property types.

CalPERS Real Estate Investments by Property Type



In addition to the \$12.2 billion in real estate investments, an estimated \$1.3 billion has been invested alongside CalPERS by other investors.³⁴ However, these investments are not directly attributable to CalPERS' investments.

Combined, CalPERS' investments in real estate properties located in California support an estimated total of 118,438 jobs.³⁵ This figure encompasses jobs at the development and construction phase, as well as from income-generating properties. The real estate projects in the development and construction phase support an estimated total of 823 jobs. The construction of CalPERS California real estate projects supports workers within the construction industry and indirectly supports workers throughout the state.³⁶

CalPERS' real estate investment portfolio includes income-generating properties with high occupancy levels such as apartments, mixed use developments, retail centers, office buildings, and industrial centers. These properties provide housing, as well as infrastructure and operating space for retail, professional service providers, and manufacturers. The properties with high occupancy levels also support workers in property management, service, security, and other related industries.³⁷ The sales and leasing income from these income-generating properties supports a total of 117,615 jobs.

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CalPERS' Real Estate Program Investments in California: June 30, 2020	
CalPERS Investments (in Billions)	\$12.2
Number of Investments	180
Estimated Jobs in California	118,438

Real estate investments are often in central business districts and concentrated in urban areas, where property investments of all types are more readily available. These urban districts typically include a larger proportion of LMI, high unemployment, and areas with higher minority representation in their population.

Ancillary Benefits of CalPERS' Real Estate Investments in California: June 30, 2020³⁸		
	Percentage by Number of Investments	Percentage by Dollars Invested
High Unemployment Areas	21%	22%
Rural Areas	9%	8%
High Minority Areas	82%	85%
LMI Areas	52%	42%

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Infrastructure

CalPERS also seeks stabilized cash flow from its infrastructure investments within the water, energy, waste, transportation, technology, and communications sectors. CalPERS invests both directly and in partnership with third-party investment managers. Infrastructure investments have the potential to benefit local economic development and provide essential community services within the state.

Infrastructure investments in California are estimated to employ 11,334 workers in the state. In addition to \$0.3 billion in infrastructure investments, an estimated \$0.75 billion has been invested alongside CalPERS by other investors.³⁹ However, these investments from other funding sources are not directly attributable to CalPERS.

CalPERS' Infrastructure Investment in California: June 30, 2020	
CalPERS Investments (in Billions)	\$0.3
Number of Investments	4
Estimated Jobs in California ⁴⁰	11,334

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The Economic Impact of CalPERS Private Markets Investments in California

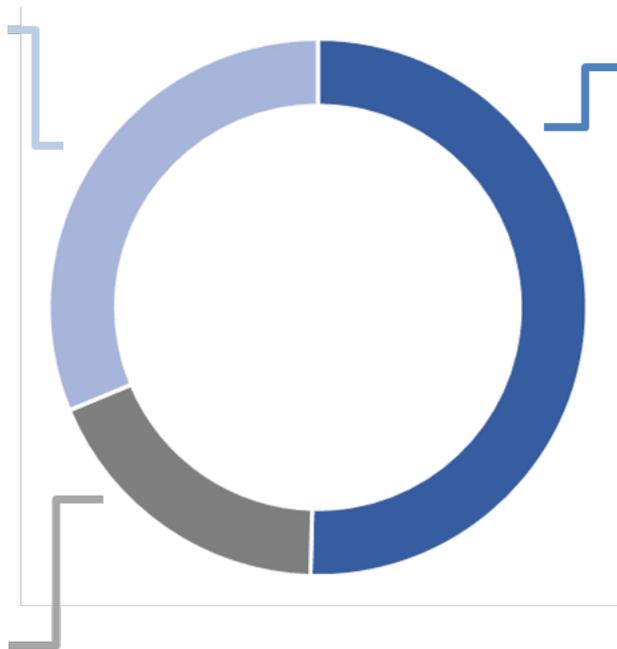
CalPERS' private markets investments in California generate an estimated \$22.4 billion in economic activity across the state through the multiplier effect — the direct effects, indirect effects, and induced effects within the California economy are described in the chart below. A more detailed explanation of the methodology employed by PCV to estimate total economic impact is included in the endnotes.⁴¹

CalPERS Total Economic Impact in California: \$22.4 billion⁴²

Induced Effects - \$7.0 Billion

Induced effects capture the additional household spending that occurs in California as a result of increases in income. The additional output by capital recipients increases household income for employees at:

- a. Companies receiving capital from CalPERS;
- b. their suppliers; and
- c. other companies that benefit broadly from the growth of the companies receiving CalPERS' investment capital and their suppliers.



Direct Effects - \$11.3 Billion

Direct effects capture capital recipients' increase in output of goods and services resulting from investments in California businesses and projects.

Indirect Effects - \$4.1 Billion

Indirect effects capture the economic activity resulting from increased output from capital recipients. The increase in outputs increases the demand for goods and services from suppliers, causing suppliers to hire additional employees and purchase additional goods in order to meet that demand.

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Conclusion

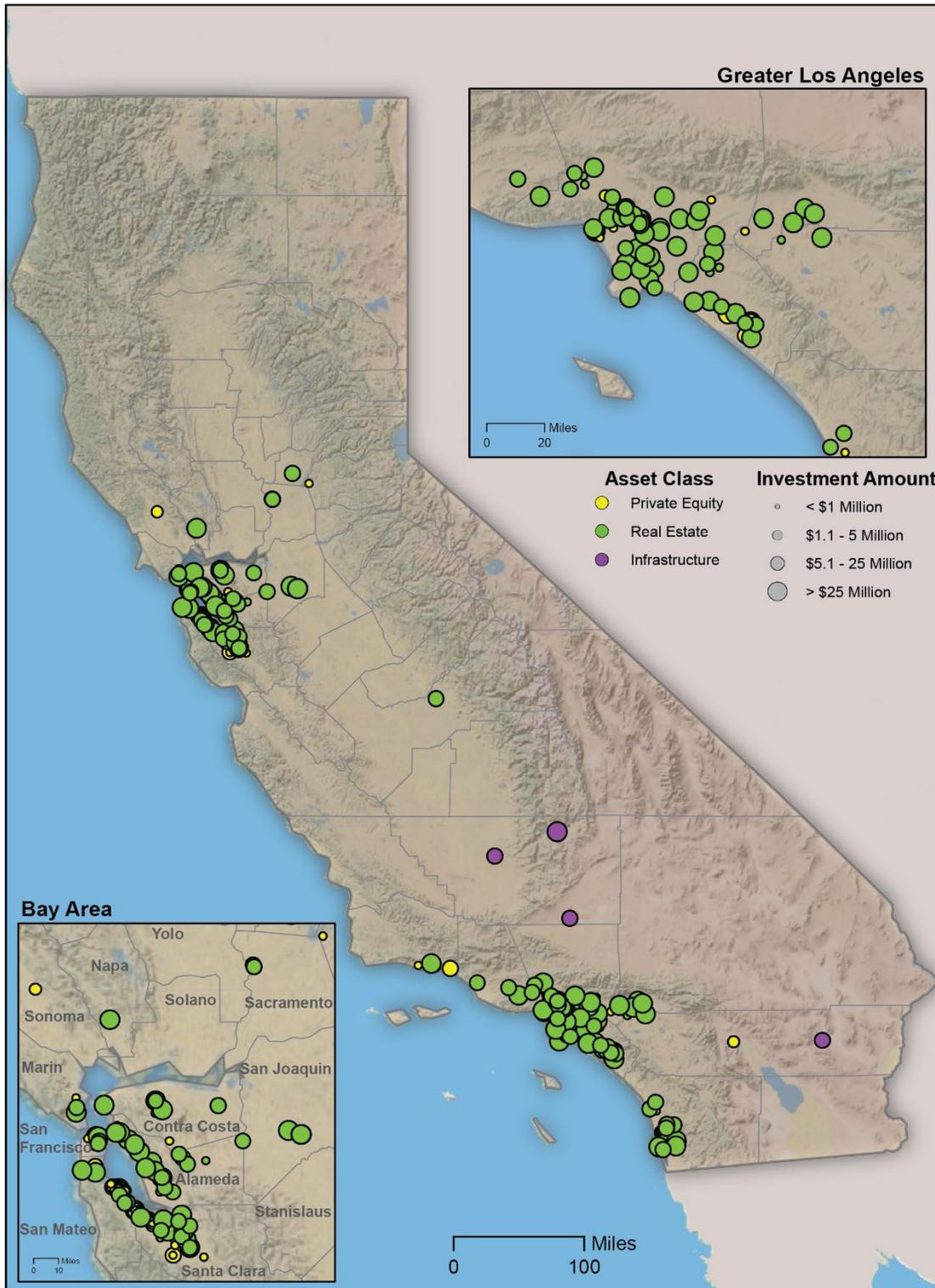
CalPERS' California investments, including in the state's underserved communities, totaled \$43.6 billion (or 11.0 percent) of its \$395.8 billion investment portfolio as of June 30, 2020. Assets allocated to private market investments had a multiplier effect of generating an estimated additional \$22.4 billion in economic activity in California and provide significant ancillary benefits beyond an attractive rate of return.

CalPERS expects continued exposure to California-based investment opportunities grounded in the historic strength of the state's economy, seeking attractive risk-adjusted financial returns.

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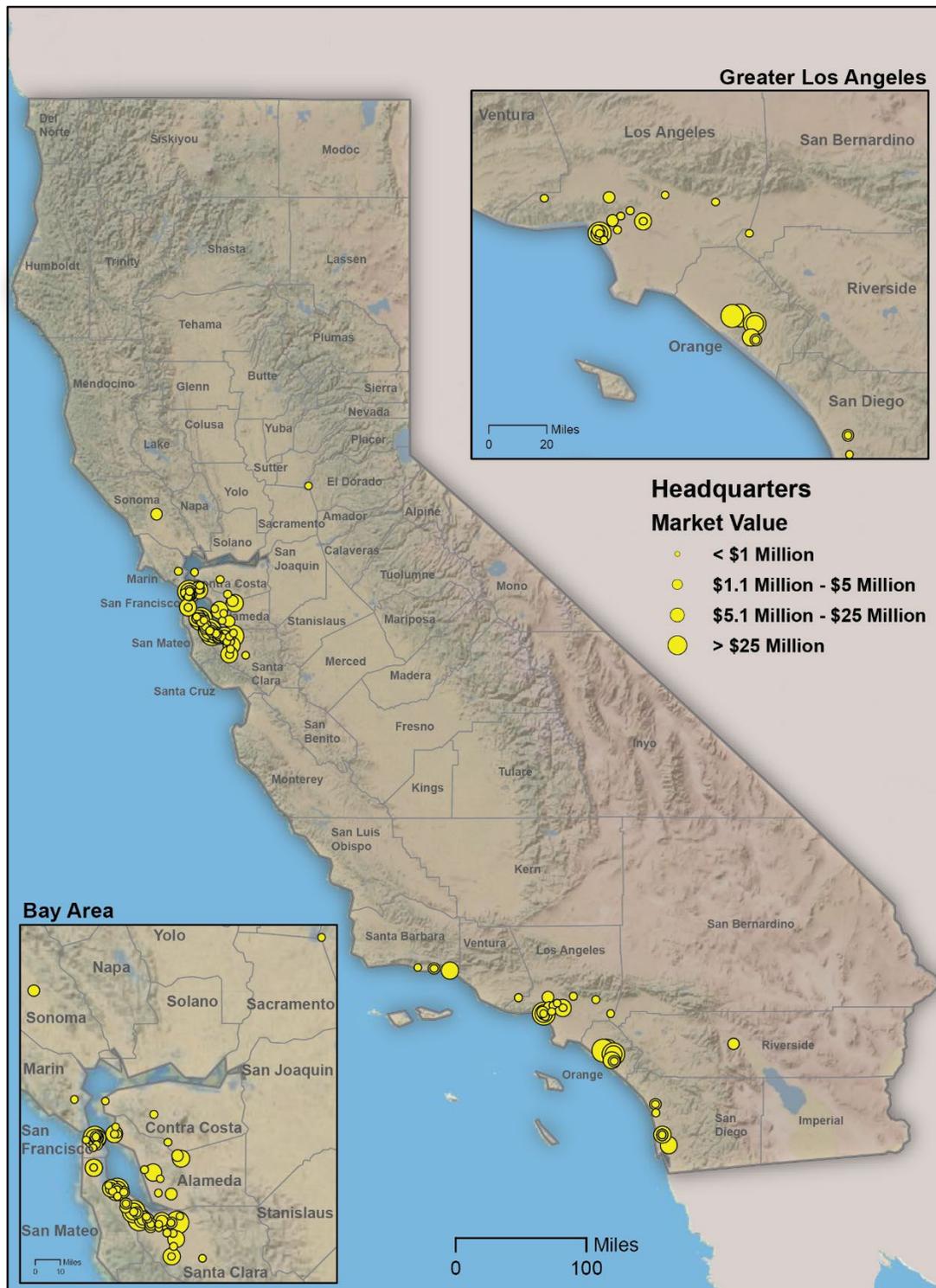
Location of Investments in California

CalPERS Private Market Investments in California



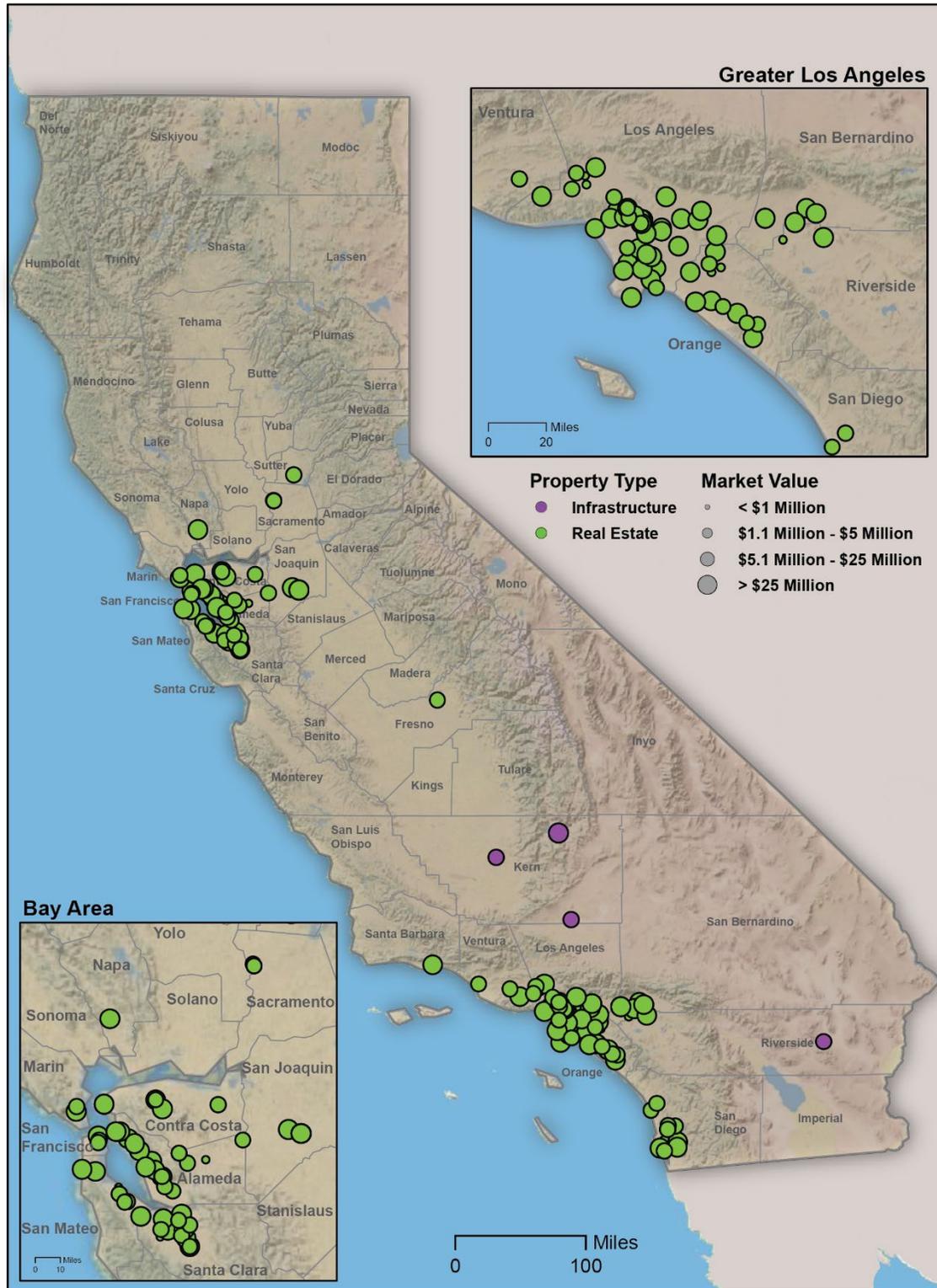
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CalPERS Private Equity Investments in California



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CalPERS Real Estate and Infrastructure Investments in California



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Endnotes

¹ CalPERS Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2020; Investment Section, page 105, table titled "Summary of Investments – PERF".

² CalPERS Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2020; Investment Section, page 106, table titled "Portfolio of California Investments at Fair Value – PERF (Dollars in Millions)". Real assets and private equity investments in California are as of March 31, 2020.

³ CalPERS Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2020.

⁴ [Forbes. Best States for Business: California. December 2019.](#)

⁵ See endnotes 1 and 2.

⁶ See endnote 1.

⁷ See endnote 2.

⁸ "Other" investments are defined as Short-Term Investments which consist of U.S. Treasury and government-sponsored securities, money market funds, commercial paper, certificates of deposit, repurchase agreements, asset-backed securities, notes, bonds issued by U.S. corporations, and other allowable instruments that meet short-term maturity or average life, diversification, and credit quality restrictions.

⁹ Total economic activity in California is calculated using data from CalPERS' California private market investments in private equity, real estate, and infrastructure.

¹⁰ For methodologies for calculating the number of jobs supported in California, please refer to individual asset class sections within the report.

¹¹ See endnote 1.

¹² See endnote 2.

¹³ See endnote 1.

¹⁴ See endnote 2.

¹⁵ The CalPERS Member Home Loan Program was launched in 1982 and offered a unique mortgage benefit for members, including reduced lender fees through preferred mortgage lenders, lower closing costs through participating partners, and a down payment assistance program that allowed members to borrow against their CalPERS retirement for up to 100% of their required down payment. CalPERS' Board of Administration suspended the program in December 2010.

¹⁶ The analysis in this section uses the data from the 2010 U.S. Census and California Employment Development Department demographic and income characteristics by ZIP codes. If the ZIP code in which an investment is located is determined to be an LMI, high unemployment, high minority, or rural area (based on the appropriate status of relevant populations), then the investment and the dollars associated with the investment are in the defined community. In the case of high unemployment, rural, and high-minority areas, the calculations are relatively straightforward.

¹⁷ To determine the dollar amounts invested in these areas, the market value of each investment is attributed to the ZIP code provided for a given company, property, or project. Dollars invested in all ZIP codes that match the given criteria are summed and reported as a percentage of the total market value for each asset class invested in California. The proportion of CalPERS' investments in LMI, high unemployment, high minority, and rural areas reflects the demand for capital in the asset classes in which CalPERS' invests. For example, CalPERS invests in companies and properties in central business districts and other economic hubs that offer attractive investment opportunities. These areas tend to be more ethnically and economically diverse, but CalPERS' investment is not a result of these characteristics; rather, all investment decisions are based on the investment

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merits of the underlying opportunity.

¹⁸ Low- to moderate-income (LMI) areas are predominantly (50 percent or more) composed of LMI. A census tract is determined to be LMI based on the following criteria:

- Median income of the tract is at or below 80 percent of the metropolitan statistical area median or below 80 percent of the statewide, non-metropolitan area median income
- At least 20 percent of the population is estimated to live in poverty
- The unemployment rate is at least 1.5 times the national average

For more information about LMI communities, see the [Federal Reserve System's](#) research on their experiences during COVID-19.

¹⁹ High unemployment areas are defined by the State of California Employment Training Panel as being 25 percent higher than the California average. At June 30, 2020, the California average unemployment rate was 10.0 percent.

²⁰ High minority areas are defined as ZIP codes in which the percentage of the minority population is higher than the median percentage of the minority population in all California ZIP codes.

For more information about high minority areas, see [the U.S. Department of Commerce, Minority Business Development Agency's](#) research on access to capital for minority businesses.

²¹ Rural areas are defined as ZIP codes in which the percentage of the rural population is higher than the median percentage of the rural population in all California ZIP codes.

For more information about rural areas, see the [Economic Innovation Group's](#) research on their economic condition.

²² Based on analyzing data from Thomson Reuters for U.S. private equity investment between 2008 and 2017, nearly 95 percent of all private equity in California has been committed to 6 percent of California ZIP codes. ZIP codes not included in this 6 percent are considered limited capital access areas.

²³ See endnote 1.

²⁴ CalPERS private equity data as of June 30, 2020. This number may differ from total portfolio numbers in other reports due to varying standards for defining a California company. The vendor responsible for capturing private equity-related portfolio company information is continuing to enhance its data collection methodology, which is expected to identify California-based companies more accurately in subsequent reports.

²⁵ Includes capital invested alongside CalPERS in the same companies in the same private equity fund, not the total market value of the company. This figure excludes co-investments for private equity investments in the California Emerging Ventures program, for which this information was unavailable.

²⁶ Estimated jobs in California is determined by applying the total number of California jobs supported by the [California Initiative \(PDF\)](#) to the entire California Private Equity portfolio. Due to the small number of California Initiative companies still active and reporting in 2017, this report applies a weighted average of private equity jobs created per CalPERS' dollar invested between 2010 and 2016. Weighting is based on the number of companies in the portfolio each year.

²⁷ Thomson Reuters. U.S. private equity investments data from 2008 to 2017.

²⁸ See endnote 27.

²⁹ Private equity ancillary benefits in California were determined using private equity California investment amounts and ZIP code data from direct partnerships and does not include data from other externally managed investments.

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³⁰ See endnote 1.

³¹ See endnote 2.

³² For purposes of this report, forestland investment portfolios were excluded from the analysis.

³³ Estimated jobs supported by CalPERS' real estate investments in California are determined using the IMPLAN Version 6.1 economic multiplier model software package. [IMPLAN](#) is used by hundreds of government agencies, colleges and universities, nonprofit organizations, corporations, and business development and community planning organizations for analyzing economic impacts.

To determine jobs supported by CalPERS' real estate investments, the IMPLAN model examines the state of California as the geographic area of the study, capturing and accounting for economic benefits resulting from real estate investments statewide. Methodologies specific to property type and development phase were used in defining input values for the IMPLAN model to best capture the economic impacts resulting from the construction/ operation of various property types. The methodologies are described as follows:

Construction of Residential and Nonresidential Properties

Total net asset values for residential and non-residential properties including apartments, single-family housing, senior housing, office, and retail under the predevelopment, development, and redevelopment categories were uploaded directly to the IMPLAN model for analysis where they are matched with construction activities. Total net asset values for retail properties includes entertainment, land and other CalPERS' real estate investments.

Sales of Goods and Services

Property square footage data for retail properties with current occupants is multiplied by industry data on retail sales. Property square footage for other non-residential properties including the office and industrial sectors are multiplied by property-specific data on rental income. Total rental income amounts are subsequently divided by a rent-to-revenue to derive total sales of goods/services for each tenant property. Mixed use establishments are assumed to be 60 percent apartment, 30 percent retail, and 10 percent office. For hotels, the process property square footage is multiplied by revenue per square foot to determine industry sales. Total sales of goods and services at tenant properties are then uploaded to IMPLAN where they match industry activities.

Rental/Leasing

Property square footage data for properties with current occupants including apartment, office, industrial, and retail are multiplied by industry data on property-specific rental income. Mixed use establishments are assumed to be 60 percent apartment, 30 percent retail, and 10 percent office. Housing leasing income was not included in the IMPLAN analysis because accurate square footage data was unavailable. The total rental income amounts are uploaded directly into the IMPLAN model for analysis where they match with rental, leasing, and property management activities.

As with other asset classes, this analysis does not imply that the jobs created and sustained by CalPERS' investments in real estate are directly attributable to the system. Rather, it is an estimate of employment directly related to the properties in question, for which CalPERS' investments play an important enabling role.

Estimated California Jobs from CalPERS CA Real Estate Investments

Construction of Residential and Nonresidential Properties	823
Sales of Goods and Services	114,174
Rental/Leasing	3,441
Total Estimated Jobs in California	118,438

³⁴ Value includes real estate investments includes all other capital invested alongside CalPERS in the same real estate investments selected by the same third-party funds, partnerships, and real estate investment trusts.

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³⁵ Estimated jobs supported by CalPERS' real estate investments in California are determined using the IMPLAN Version 6.1 economic multiplier model software package. [IMPLAN](#) is used by hundreds of government agencies, colleges and universities, nonprofit organizations, corporations, and business development and community planning organizations for analyzing economic impacts.

³⁶ California real estate projects in the development and construction phase indirectly support workers across the state through the purchase of goods and services needed for construction of these projects, and through the personal consumption by construction workers tasked to these particular projects.

³⁷ California investments in income generating real estate properties directly support tenant businesses through the provision of critical infrastructure and operating space. Additionally, tenant businesses indirectly support workers across the state through the purchase of goods and services needed for day-to-day business operations and through the personal consumption of workers at their businesses on household purchases.

³⁸ Ancillary benefits are based on the California real estate investments for which valid ZIP code data was available.

³⁹ Value includes all other capital invested alongside CalPERS in the same infrastructure projects.

⁴⁰ California infrastructure supports an estimated 11,334 jobs statewide. This estimate is derived from the IMPLAN version 6.1 economic multiplier model software package. Stage of development, land acquisition costs, and development costs were examined for California infrastructure projects. For each project, net asset values less land acquisition costs were inputted directly into the IMPLAN model using IMPLAN Industry Code 58: Construction of other new nonresidential structures.

⁴¹ The total economic impact of the private markets investments is calculated using the IMPLAN Version 6.1 economic multiplier model software package. IMPLAN utilizes social accounts to analyze the consequences of projected economic transactions in a particular region. Used by over 2,000 public and private institutions, IMPLAN is a widely employed and accepted regional economic analysis tool. Social accounts describe the structure and function of a specific economy. IMPLAN employs input-output analysis in conjunction with region-specific social accounts or social accounting matrices (SAM) and multipliers to analyze economic impacts.

California private markets investments in private equity, real estate, and infrastructure are input separately into the IMPLAN economic multiplier model using the specific industries and sectors receiving investment. Public markets investments are intentionally excluded from this analysis due to the more indirect relationship between the investment of capital and the use of this capital by recipient public companies.

IMPLAN cannot be applied to public market investments in California, for the following reasons:

1. Attribution: PCV is not able to directly tie CalPERS capital allocation to the operations and economic activity occurring at California headquartered public companies given CalPERS is often one of many investors in these businesses.
2. Overestimation: Applying the IMPLAN economic multiplier model to CalPERS' public market investments in California would overstate the total economic impact.
3. Area of study limitations: IMPLAN is an input-output economic multiplier model that requires a set geographic area of study. As California headquartered, public companies have a significant number of facilities and operations in and outside of California it is difficult to specify what proportion of CalPERS' investment in these companies is injected directly into California's economy, limiting the accuracy of the resulting total economic impact figure.

⁴² To determine the total economic impact of the California private markets investments in private equity, real estate, and infrastructure, the IMPLAN model examines the State of California as the geographic area of study, capturing and accounting for economic benefits statewide. Methodologies specific to each asset class were used in determining the input values for the IMPLAN model to best capture the economic impacts resulting from CalPERS' investments. The methodologies are described below:

Private Equity Investments

CalPERS for California 2020

The amount of private equity investment in California private companies are uploaded directly into the IMPLAN model alongside an industry spending pattern that matches each company's industry or sector. Only CalPERS' direct partnership investments and investments through third party investment managers were included in this analysis.

Real Estate Investments

The amount of investment in California real estate projects are uploaded into the IMPLAN model to capture the economic impacts resulting from the construction/operation of various property types. The same methodology that is used to calculate jobs supported by CalPERS' real estate investments in California is used to calculate the total economic impact.

Infrastructure Investments

The amount of investment in California infrastructure projects are uploaded into the IMPLAN model to capture the economic impacts resulting from the construction/operation of various projects. The same methodology that is used to calculate jobs supported by CalPERS' infrastructure investments in California is used to calculate the total economic impact.