

CalPERS for California 2019

CalPERS Investment in California

As of Fiscal Year Ended June 30, 2019

November 16, 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 \$376.3 billion as of June 30, 2019.¹

Approximately \$34.0 billion (or 9.0 percent) of CalPERS' portfolio was invested in California-based companies and projects.²

This report broadly 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, 2019. 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 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 the Board's approved investment policy guiding strategic asset allocation and risk management.

As the world's fifth largest economy, the strength and diversity of California's economy offers 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.

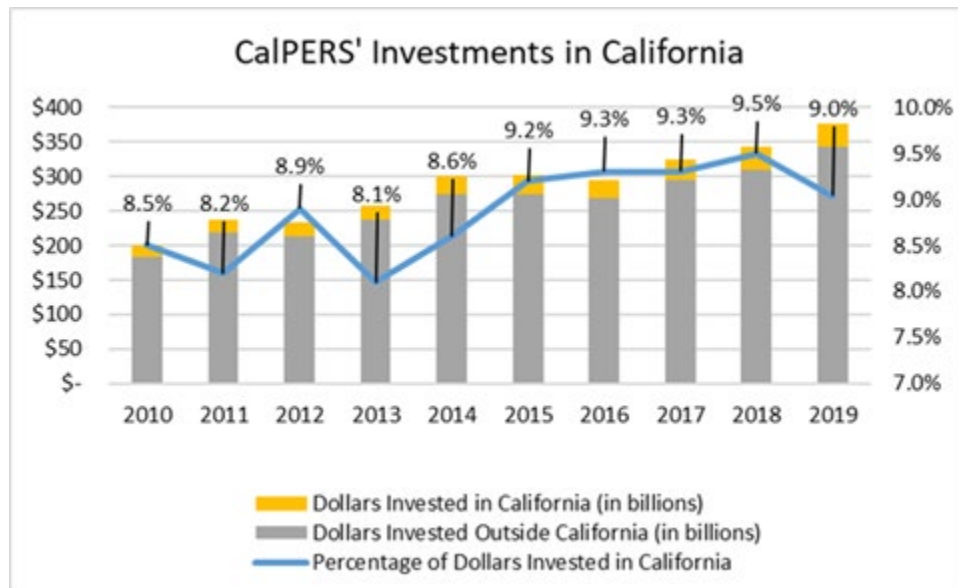
This report offers a snapshot of CalPERS California investments and has been prepared by PCV. The research methods in this report are fully documented in footnotes. The difficulty of attributing ancillary benefits directly to any individual investment is especially notable, which explains why ancillary benefits associated with public market investments are excluded from this report.

CalPERS for California 2019

As of June 30, 2019, CalPERS had invested approximately 9.0 percent or \$34.0 billion of its \$376.3 billion investment portfolio in California.⁵

| CalPERS Investments in California by Asset Class: June 30, 2019 | | | |
|--|--|---|---|
| | Total Portfolio Value (in Billions)⁶ | Dollars Invested in California (in Billions)⁷ | Percentage of Dollars Invested in California |
| Global Equity | \$185.0 | \$16.3 | 8.8% |
| Global Fixed Income | \$114.2 | \$5.8 | 5.1% |
| Private Equity | \$26.5 | \$0.9 | 3.4% |
| Real Assets | \$40.8 | \$11.0 | 26.9% |
| Other | \$9.9 | | |
| Total⁸ | \$376.3 | \$34.0 | 9.0% |

CalPERS has consistently had 8 percent or more of its investment portfolio invested in California since 2010. The following chart shows CalPERS' investments in California.



In addition to the goal of achieving appropriate risk-adjusted returns, CalPERS asset allocation to private market investments indirectly support 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, 2019, PCV estimates that CalPERS' active private markets investments in California supported \$19.9 billion in total economic activity across the 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

CalPERS for California 2019

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, 2019¹⁰ | |
|--|----------------|
| Private Equity | 52,300 |
| Real Assets | 117,300 |
| Total Private Markets | 169,600 |

Public Markets

The largest amount of CalPERS' total assets is invested in the public markets through global equities 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: \$185.0 billion¹¹

Value in CA: \$16.3 billion¹²

Percentage in California: 8.8%

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.

Global Fixed Income

Total Market Value: \$114.2 billion¹³

Value in CA: \$5.8 billion¹⁴

Percentage in California: 5.1%

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 portfolios:

- **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.
- **Short-term investments:** Short-term investments consist of U.S. Treasury and government sponsored securities, money market funds, commercial paper, certificates of deposit, repurchase agreements, asset backed securities, notes and bonds issued by U.S. corporations, and other allowable instruments that meet short-term maturity or average life, diversification, and credit quality restrictions.
- **Whole loans:** Whole loans include remaining California mortgages through the CalPERS’ Member Home Loan Program.¹⁵

The following table shows CalPERS’ Global Fixed Income investments in California.

| CalPERS’ Global Fixed Income Investments in California: June 30, 2019 | | |
|---|---|-----------------------------------|
| | Dollars Invested (in Millions) ¹⁶ | Percentage of Dollars Invested |
| Corporate Bonds | \$2,175 | 37.6% |
| Structured Securities | \$3,519 | 60.9% |
| Short-term Investments | \$45 | 0.8% |
| Whole Loans | \$40 | 0.7% |
| Total¹⁷ | \$5,779 | 100% |

Private Markets¹⁸

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 four categories in which deployed capital may create socially beneficial outcomes¹⁹:

- Low-to moderate-income (LMI) areas²⁰
- High unemployment areas²¹
- High minority areas²²
- Rural areas²³

CalPERS for California 2019

Private Equity

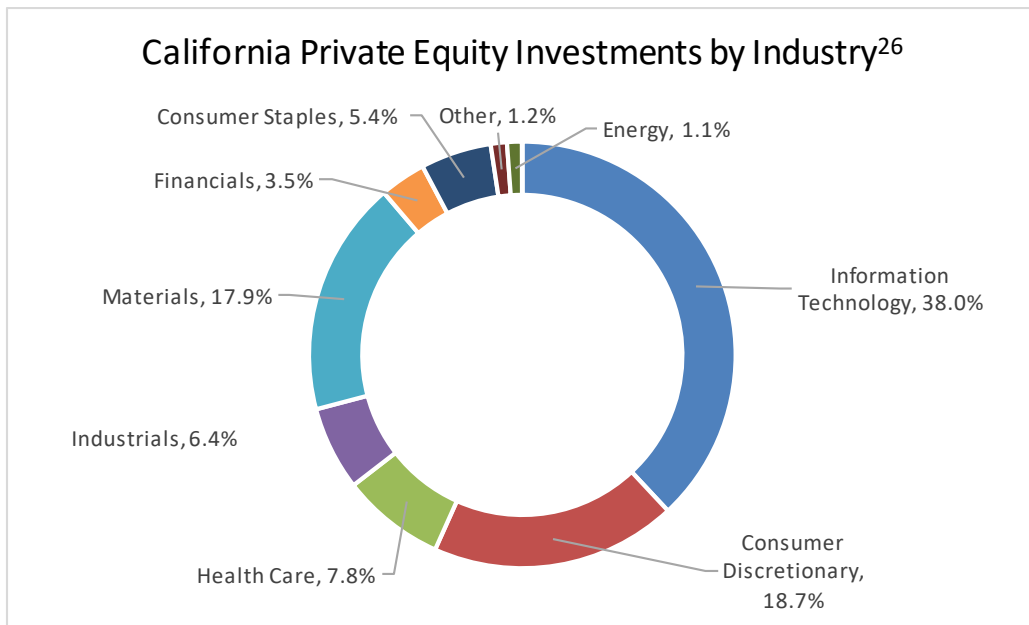
Total market value: \$26.5 billion²⁴

Value in CA: \$0.9 billion²⁵

Percentage in California: 3.4%

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.²⁶

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



These companies are headquartered in California and are estimated to employ 52,300 workers in the state. An additional \$12 billion has been invested alongside the same California-based companies by other limited partners.²⁷ However, these investments are not directly attributable to CalPERS’ specific investments.

| CalPERS’ Private Equity Investments in California: June 30, 2019 | |
|--|--------|
| Total Companies | 184 |
| CalPERS Investments (in Billions) | \$0.9 |
| Estimated Jobs in California ²⁸ | 52,300 |

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Some of CalPERS' private equity investment exposures provide a unique additional ancillary 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 Silicon Valley.²⁹ 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.³⁰ 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, 2019, 14 percent of the private equity investment exposure for the CalPERS' portfolio is invested in California ZIP codes outside of the areas receiving the majority allocated by all sources of institutional private equity capital.

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

| Additional Ancillary Benefits of CalPERS Private Equity Investments in California: June 30, 2019³¹ | | |
|--|----------------------------------|------------------------------|
| | Percentage of investments | Percentage of dollars |
| High Unemployment Areas | 5% | 6% |
| Rural Areas | 8% | 18% |
| High Minority Areas | 80% | 75% |
| LMI Areas | 27% | 34% |
| Limited Capital Access Areas ³² | 14% | 3% |

Case Study: The RealReal, Inc.

Founded in 2012, The RealReal, Inc (NASDAQ: REAL) is a woman-led eCommerce marketplace bringing mid-to-high-end luxury consignment sales online. The company is a full-service retailer of authenticated, pre-owned, designer brands, jewelry and watches, blue-chip art, and high-end home décor. CalPERS invested in The RealReal through DBL Partners, a longstanding partner. As an impact investor, DBL Partners was founded with a “Double Bottom Line” investment strategy of delivering top-tier venture capital returns by pursuing investments in companies enabling social, environmental, and economic benefits. The DBL Bay Area Equity Fund II, in which CalPERS is a limited partner, invested over \$7 million in The RealReal since 2014. This partnership investment financed scaling of the company’s operational focus on the circular economy. As a result, The RealReal, Inc. has grown to a total of four retail stores and 10 Luxury Consignment Offices across the United States and completed its initial public offering on June 28, 2019. The company has since posted strong growth with a year-over-year increase in revenue of 57% during the Q4 of 2019.

According to the Ellen MacArthur Foundation, a circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

The RealReal, Inc. contributes to a more sustainable California and world through its efforts to reduce greenhouse gas emissions and environmental degradation by bringing circular economy business models into the mainstream. For example, a strategic partnership with Stella McCartney in 2017 incentivizes customers to keep Stella McCartney luxury goods out of landfills by giving them a second life through resale, furthering both brands' missions of extending the lifecycle of luxury goods and creating a greener planet. The company also led the effort to establish National Consignment Day to create awareness for the circular economy, partnered with the Fashion Industry Charter for Climate Action, and participates in the Ellen MacArthur Foundation's Circular Economy 100 Programme. In addition, The RealReal, Inc., partnered with Shift Advantage to develop a sustainability calculator, which shows that the company has offset the equivalent of 65 million car miles in greenhouse gasses and energy savings since 2012.

By offering employees high-quality jobs, The RealReal, Inc. strengthens California communities. As of March 31, 2019, The RealReal had over 1,700 employees. Since 2014, The company has seen a 472% increase in total jobs, amounting to approximately 1,200 new jobs created in California. As outlined in Figure 1, 67% of total jobs in 2018 were for employees who live in low- or moderate-income (LMI) geographic areas.

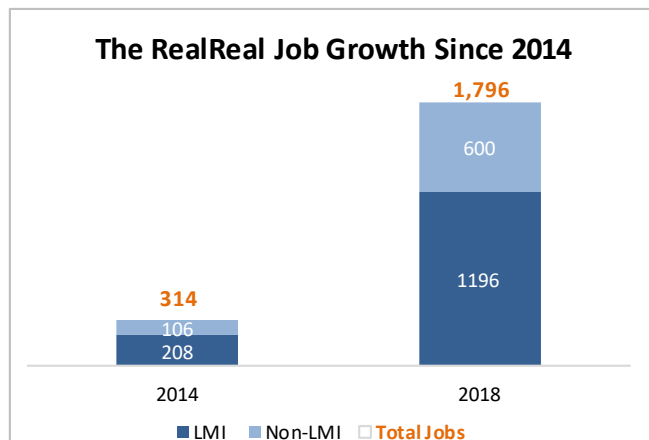


Figure 1: The RealReal job growth since 2014 by LMI geographic area

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The company provides employees stock awards for all positions; top tier medical, dental, and vision; company-sponsored access to One Medical; generous paid time off; 401(k) with company matching; company life insurance plans; and options for long- and short- term disability. The RealReal also offers employees travel assistance, legal assistance, and an employee assistance program. By creating good jobs in California communities and nationwide, The RealReal, Inc. is strengthening local economies.

The RealReal, Inc. also contributes to California communities through its in-kind and financial support of local charities. The company has supported DrawBridge in Hunters Point, San Francisco, whose mission is to provide art programs for homeless and other vulnerable children in an environment that fosters joy and creativity. The RealReal, Inc. has also supported other local nonprofits, including SF Marin Food Bank and Project Glimmer, which focuses on bringing confidence, inner beauty and real-life career skills to foster and at-risk girls striving towards graduation. In addition, the company has started a Volunteer Time Off Program (VTO). The program gives employees 16 hours of paid time off each year to go work in the community at the 501(c)(3) public charity of their choice.

CalPERS' investment through DBL Partners in the RealReal, Inc. provides just one example of how investment in a successful California company can offer high-quality jobs for California residents, and contribute to a more sustainable way of living.

Real Assets

Total Market Value: \$40.8 billion³³

Value in CA: \$11.0 billion³⁴

Percentage in California: 26.9%

CalPERS’ Real Assets program includes real estate and infrastructure investment portfolios.³⁵ 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, 2019 | |
|--|---------|
| CalPERS Investments (in Billions) | \$11.0 |
| Number of Investments | 177 |
| Estimated Jobs in California ³⁶ | 117,300 |

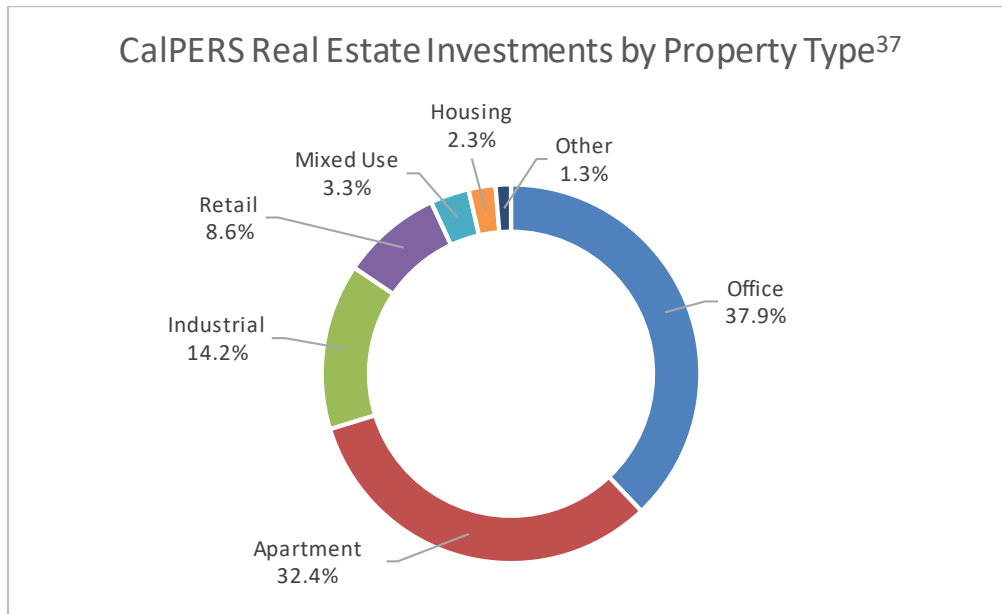
Real Estate

CalPERS’ invests in real estate primarily through separate accounts and funds with third-party investment managers. The investment strategy for the real estate is to invest 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 real estate team’s intent to deploy capital similarly to the current benchmark and strategic plan to focus on core markets. Many of the core real estate markets are concentrated in California. The portfolio in California includes a diverse group of properties that provide additional 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.



In addition to the \$10.7 billion in real estate investments, an estimated \$1.5 billion has been invested alongside CalPERS in the same third-party partnerships.³⁷ However, these investments are not directly attributable to CalPERS.

Combined, CalPERS' investments in real estate properties located in California support an estimated total of 105,600 jobs.³⁸ 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 1,300 jobs. The construction of CalPERS California real estate projects not only support workers within the construction industry, but also indirectly supports workers throughout the state.³⁹

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.⁴⁰ The sales and leasing income from these income-generating properties supports a total of 104,300 jobs.

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| CalPERS' Real Estate Program Investments in California: June 30, 2019 | |
|--|---------|
| CalPERS Investments (in Billions) | \$10.7 |
| Number of Investments | 173 |
| Estimated Jobs in California ⁴¹ | 105,600 |

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, 2019⁴² | | |
|---|----------------------------------|---------------------------------------|
| | Percentage of Investments | Percentage of Invested Dollars |
| High Unemployment Areas | 28% | 16% |
| Rural Areas | 11% | 7% |
| High Minority Areas | 85% | 89% |
| LMI Areas | 53% | 43% |

Case Study: Olympic by Windsor

Completed in 2016, Olympic by Windsor is a 263-unit mid-rise apartment building located in Downtown Los Angeles' South Park neighborhood. Situated on the corner of Olympic Blvd and Olive Street, Olympic by Windsor was one of the first residential projects in this up-and-coming neighborhood. Olympic by Windsor represents a joint venture between real estate developer Hanover Company and GID Investment Advisers, an investment advisor and co-investor to CalPERS.

Olympic by Windsor has seen strong demand from residents. Since May 2017, the apartment building has been generating stable cash flows while it maintained an average occupancy rate of approximately 95 percent.

The development boasts cutting-edge sustainability features, which reduce the property's environmental footprint and energy costs. Of the 263 units, which have an average size of 795 square feet per unit, 20 are considered green apartments. These green apartments are net-zero energy solar equipped and include an iPad mini energy tracking system, Nest thermostats, occupancy sensors, LED lighting, reclaimed wood flooring, allergen-free, energy performance windows, recycled glass countertops, ultra-low flow shower heads, and enhanced insulation. On average, these sustainability features save tenants an average of \$900 to \$1,200 per year on energy costs.

Olympic by Windsor benefits the community by creating employment opportunities and supporting local vendors. During the construction of Olympic by Windsor, there were between 400 and 500 jobs supported by workers from across the region. The ground floor of this development also has 14,862 square feet of dedicated retail space. Once this space is leased out to retail and restaurant tenants, the development will generate additional local jobs in the South Park neighborhood.

Additionally, Olympic by Windsor allows residents to be able to live closer to their places of work through reduced commute times. The development also offers its residents high-quality amenities, including a 24-hour fitness center with world-class, smart-connected Technogym equipment, executive conference room space, flex space with yoga classes, and more.

CalPERS' investment in Olympic by Windsor through its partnership with GID Investment Advisers provides consistent cash flows to CalPERS' members and beneficiaries. Olympic by Windsor demonstrates the development of real estate property that produce stable, attractive returns to CalPERS' members and beneficiaries while benefitting the environment, strengthening communities, and improving residents' quality of life.

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 11,700 workers in the state. In addition to \$0.3 billion in investment capital allocated by CalPERS, an estimated \$0.7 billion has been invested alongside in the same infrastructure projects by other investors.⁴³ However, these investments from other funding sources are not directly attributable to CalPERS.

| CalPERS' Infrastructure Investment in California: June 30, 2019 | |
|--|--------|
| CalPERS Investments (in Billions) | \$0.3 |
| Number of Investments | 4 |
| Estimated Jobs in California ⁴⁴ | 11,700 |

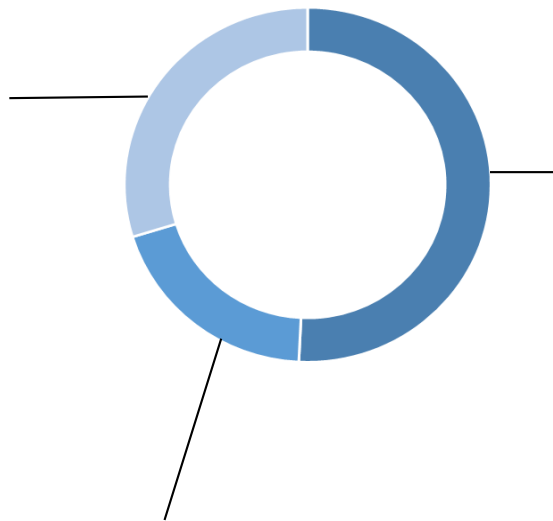
The Economic Impact of CalPERS Private Markets Investments in California

CalPERS’ private markets investments in California generate an estimated \$19.9 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.⁴⁵ A more detailed explanation of the methodology employed by PCV to estimate total economic impact is included in the endnotes.

CalPERS Total Economic Impact in California: \$19.9 billion⁴⁶

Induced Effects - \$5.9 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 - \$10.1 Billion

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

Indirect Effects - \$3.9 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.

Conclusion

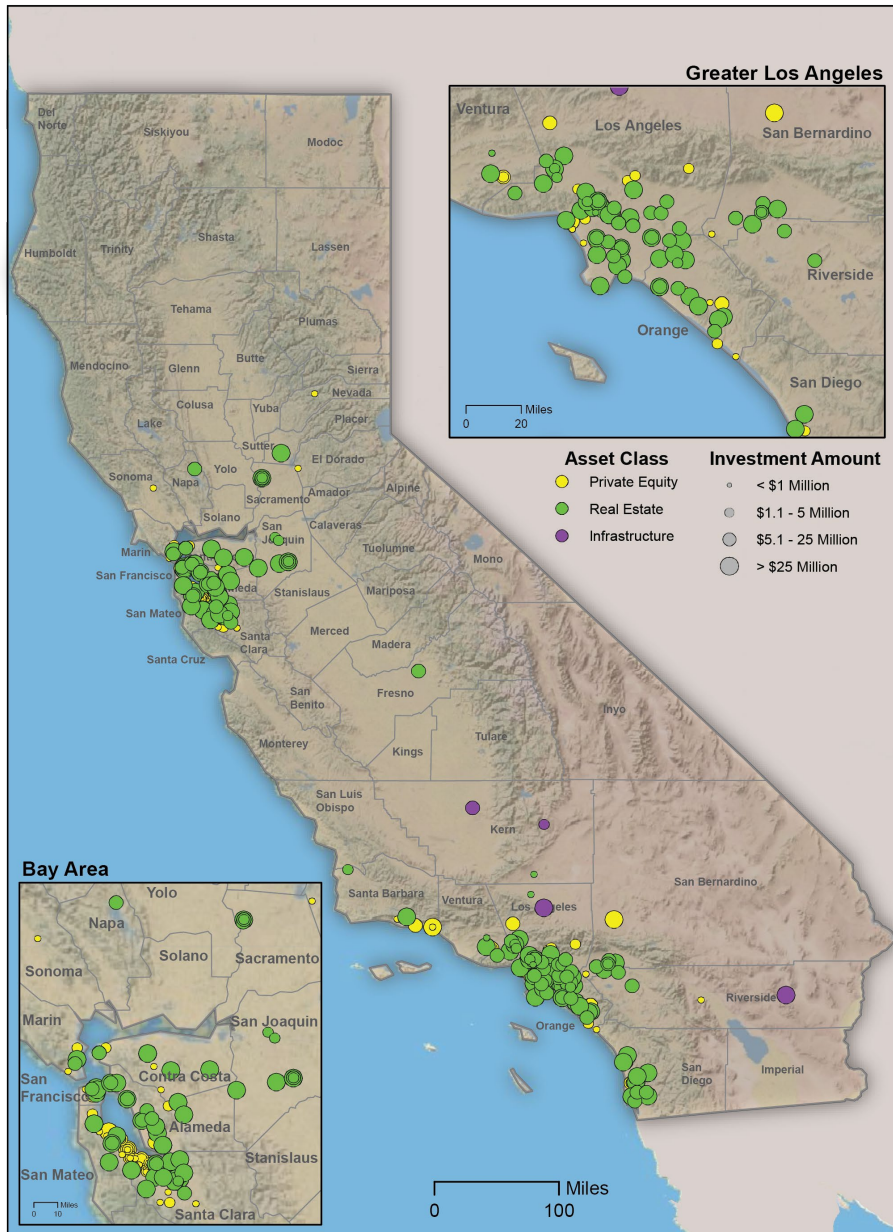
CalPERS invested \$34.0 billion (or 9.0 percent) of its \$376.3 billion investment portfolio in California, including in the state's underserved communities during this reporting period. Assets allocated to private market investments had a multiplier effect of generating an estimated additional \$19.9 billion in economic activity in California and provide significant ancillary benefits beyond an attractive rate of return.

CalPERS expects to continue to pursue 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

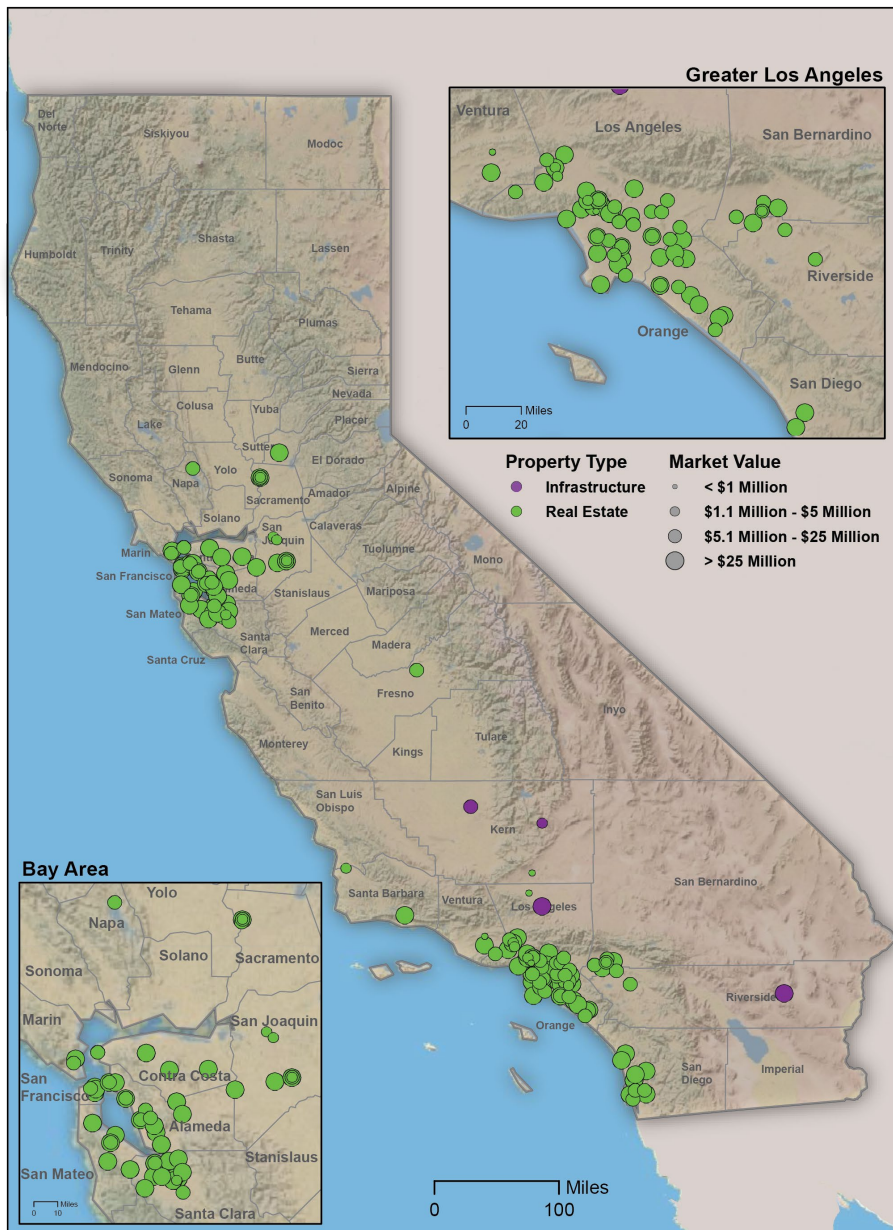


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CalPERS Private Equity Investments in California



CalPERS Real Estate and Infrastructure Investments in California



Endnotes

¹ CalPERS Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2019; Investment Section, page 101, table titled “Summary of Investments – PERF”.

² CalPERS Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2019; Investment Section, page 102, table titled “Portfolio of California Investments at Fair Value – PERF (Dollars in Millions)”.

³ About CalPERS: Facts at a Glance for Fiscal Year 2018-19 publication.

⁴ Forbes. Best States for Business: California. December 2019.

⁵ See endnotes 1 and 2.

⁶ To promote consistency between CalPERS’ financial reports and the CalPERS for California Report, beginning in 2019, total investment values shown in this chart were derived from the CalPERS Comprehensive Annual Financial Report (CAFR). Prior to 2019, CalPERS investment portfolio values were derived from data provided by Wilshire Associates.

⁷ See endnote 2.

⁸ Due to rounding, numbers presented may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

⁹ Total economic activity in California is calculated using data from CalPERS’ California private market investments in private equity, real estate, and infrastructure. For more information on the calculation methodology, see endnote 47.

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 10.

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 See endnote 2.

¹⁷ See endnote 8.

¹⁸ The analysis in this section uses the demographic and income characteristics of 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, 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. The data used to determine the appropriate status of relevant populations is available by ZIP code and uses 2010 U.S. Census and 2010 California Employment Development Department data.

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Calculating the LMI status of a ZIP code is more complex. The following method is applied using U.S. Census Bureau 2010-2014 American Community Survey data for every tract in the United States:

1. The number of census tracts and percentage of each census tract that geographically overlaps with every ZIP code is determined using geographic information systems (GIS) data.
2. The percentage of land in a ZIP code that overlaps with LMI census tracts is calculated for every ZIP code by combining partial census tracts.
3. The ZIP code is considered to be LMI if more than 50 percent of the total land in a ZIP code overlaps with LMI census tracts.

In the United States 46 percent of all ZIP codes are classified as LMI using this analysis. In California, 65 percent of all ZIP codes are classified as LMI, including 85 percent in the urban core comprising the central business districts of San Francisco, Oakland, Los Angeles, and San Diego.

¹⁹ 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 merits of the underlying opportunity.

²⁰ Low- to moderate-income (LMI) areas are predominantly (50 percent or more) composed of LMI residents (46 percent of U.S. ZIP codes fall into this category). 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 (based on US Census Bureau and 2006-10 American Community Survey data, consistent with past research methodology included in the [California Initiative \(PDF\)](#) publication. 1.5 times the 2006-10 national average of 6.8 percent is 10.2 percent)

See the [Milken Institute](#) Center for Capital Access and Job Formation for extensive literature on the lack of access to capital in LMI communities.

²¹ 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, 2019, the California average unemployment rate was 4.2 percent; therefore, any ZIP code with an unemployment rate above 5.3 percent is considered a high unemployment area.

²² 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 (above 25 percent). See [MBDA Study Finds Capital Access Remains Major Barrier to Success for Minority-Owned Firms](#) for more information on access to capital in minority communities. U.S. Department of Commerce Minority Business Development Agency, January 29, 2010. According to the MBDA study, minority-owned firms receive fewer loans and smaller equity investments than non-minority owned firms, even when controlling for firm size.

²³ 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 (above 3.67 percent). See [Advancing Rural America](#), U.S. Small Business Administration (SBA) Office of Advocacy, for more information on access to capital in rural

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areas. According to the SBA, rural businesses access to capital has historically been limited and may be constrained further as bank mergers replace community banks with larger entities that are less interested in non-credit card, small-sized loans.

²⁴ See endnote 1.

²⁵ See endnote 10. CalPERS private equity data includes the direct private equity partnership investments, direct investments, and externally managed investments. 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 enhancing its data collection methodology, which is expected to more accurately identify California-based companies in subsequent reports

²⁶ See endnote 10.

²⁷ 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.

²⁸ 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.

²⁹ Thomson Reuters. US Private Equity Investments 2008-2017.

³⁰ See endnote 29.

³¹ 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.

³² According to data from Thomson Reuters analyzing all private equity transactions between 2002 and 2011, 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.

³³ See endnote 1.

³⁴ See endnote 2.

³⁵ For purposes of this report, forestland investment portfolios were excluded from the analysis.

³⁶ See endnotes 38 and 44 for methodology.

³⁷ Value of the 173 California 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. Methodology Value of the 173 California real estate investments includes all other capital invested alongside CalPERS in the same real estate investments in the same third-party funds, partnerships, and real estate investment trusts.

³⁸ Estimated jobs supported by CalPERS' real estate investments in California are determined using the IMPLAN Version 4.0 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

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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 nonresidential 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.

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 | 1,300 |
| Sales of Goods and Services | 101,300 |
| Rental/Leasing | 3,000 |
| Total Estimated Jobs in California | 105,600 |

The following table outlines rental income per square foot, retail sales per square foot, rent to revenue ratios, and IMPLAN industry codes used in this analysis.

| Assumptions for Real Estate IMPLAN | | | | | |
|------------------------------------|-------------------------------|------------------------------|-------------------------|-----------------------|--|
| Property Type | Rental Income per Square Foot | Retail Sales per Square Foot | Revenue per Square Foot | Rent-to-Revenue Ratio | IMPLAN Industry Codes and Description |
| Land | | | | | 58: Other Construction |
| Mixed Use | | | | | 58: Other Construction 440: Real Estate 405: Retail: General Merchandise |
| Housing | | | | | 440: Real Estate |

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| | | | | | |
|------------|---------|----------|--------|------|--|
| Retail | \$24.86 | \$325.00 | | | 57: Construction of New Commercial Structures, Including Farm Structures 440: Real Estate 405: Retail: General Merchandise |
| Office | \$34.47 | | | 4.0% | 57: Construction of New Commercial Structures, Including Farm Structures 440: Real Estate 447-460: Various Professional Services (Legal, Accounting, Architectural, Technical, Scientific, Etc.) |
| Apartment | \$1.69 | | | | 440: Real Estate |
| Industrial | \$9.02 | | | 2.1% | 440: Real Estate 395: Wholesale Trade |
| Hotel | | | \$0.99 | | 411: Hotels and Motels, Including Casino Hotels |

Sources: CassidyTurley, IBIS World, RetailSales, and Hotel News Now.

³⁹ 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.

⁴⁰ 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.

⁴¹ See endnote 44 for methodology.

⁴² Ancillary benefits are based on the California real estate investments for which valid ZIP code data was available.

⁴³ Value includes all other capital invested alongside CalPERS in the same infrastructure projects.

⁴⁴ California infrastructure supports an estimated 11,700 jobs statewide. This estimate is derived from the IMPLAN version 4.0 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.

⁴⁵ The total economic impact of the private markets investments is calculated using the IMPLAN Version 4.0 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.

⁴⁶ 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

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. Sector/industry data was available for \$0.7 billion of CalPERS' private equity investments in California, which was distributed across 59 industries based upon each company's business classification and the amount of capital that company has received. For the \$0.4 billion of investments where sector/industry data was not available, PCV's analysis assumes they reflect the same industry/sector distribution as the wider portfolio. Accordingly, the remaining \$0.4 billion has been distributed pro rata amongst the portfolio's 59 sectors.

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. This methodology is described in greater detail above in endnote 37.

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. This methodology is described in greater detail above in endnote 44.