CALIFORNIA POLICY CENTER

California City Pension Burdens

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SUMMARY: This study estimates the burden of pension costs on 459 California municipalities. The primary measure we consider is the ratio of required pension contributions to estimated total revenue for each city. We also look at contribution rates per employee and at pension funding levels. We find a wide variation in the impact of pension costs on city finances. While several cities spend more than one-eighth of their revenues on pension contributions, many spend far lower proportions and ten municipalities have no defined benefit pension plans at all.

The most heavily burdened cities are San Rafael, Costa Mesa and San Jose, which have pension cost / revenue ratios estimated at 17.58%, 14.36% and 13.88% respectively. As we discuss in the study, all three of these cities are taking measures to reduce future pension costs, so their rankings are not necessarily a reflection on currently sitting elected officials. Using an alternative measurement of total pension debt (unfunded liability plus pension bonds outstanding) / revenue, the most heavily burdened cities are Oakland, Costa Mesa, and Richmond, which have pension debt / revenue ratios of 203.3%, 182.0%, and 180.9%, respectively.

Prospectively, using data from recently released CalPERS actuarial reports, we project pension costs for most cities through to fiscal year 2020, identifying two cities – Monrovia and Fremont - that may face troubles in the years ahead. Monrovia and Fremont have 2015 pension cost / revenue ratios greater than 10% AND they will both experience dramatic cost growth. Between 2015 and 2020 and assuming a 7.5% CalPERS return, Monrovia is projected to see a 64.15% cumulative increase in pension costs, while for Fremont, the number is 46.51%.

The weighted average funding ratio across all 459 cities was just over 75% as of June 30, 2013. Given strong stock market performance since that time, it is likely that the funding situation improved significantly over the last 18 months. Overall, CalPERS reported that its assets increased by 15% between June 30, 2013 and June 30, 2014. Its actuarial liabilities probably rose during this period as well, but likely at a slower rate.

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INTRODUCTION

California cities that participate in defined benefit pension plans are expected to make a total of $5.1 billion in contributions during fiscal 2015, accounting for nearly 7% of their total revenue. As of June 30, 2013, the average funded ratio for these plans was 75%. Underneath these averages, we observe a great diversity of pension cost burdens and funding rates.

Study data by city and by plan may be found here. This Google Spreadsheet model contains multiple tabs including a city summary and plan details.

California City Pension Burdens - City Summaries

(click on image to view GoogleDoc spreadsheet, select tab "city_summary")

CITY OR TOWN	2015 Pension Contributions	2015 Estimated Revenue	Pension Cost / Revenue Ratio	Pension Burden Rank (1 = Highest)	2013 AAL	2013 MVA	2013 UAAL	2013 Funded Ratio
SAN RAFAEL	18,422,967	104,823,893	17.58%	1	447,641,000	286,344,000	161,297,000	63.97%
COSTA MESA	18,997,065	132,253,907	14.36%	2	625,572,054	405,483,672	220,088,382	64.82%
SAN JOSE	253,967,345	1,829,814,350	13.88%	3	6,595,790,729	4,554,037,020	2,041,753,709	69.04%
SAN GABRIEL	5,124,429	38,198,183	13.42%	4	167,720,595	120,761,819	46,958,776	72.00%
SONORA	892,361	7,108,772	12.55%	5	26,883,963	18,981,580	7,902,383	70.61%
WEST COVINA	10,304,114	84,893,591	12.14%	6	432,067,628	303,057,951	129,009,677	70.14%
EL CERRITO	4,837,781	40,189,354	12.04%	7	145,282,544	101,630,593	43,651,951	69.95%
HEMET	7,083,161	60,907,403	11.63%	8	222,090,425	153,659,468	68,430,957	69.19%
MONTCLAIR	4,267,343	36,721,464	11.62%	9	174,251,559	128,797,730	45,453,829	73.91%
EUREKA	5,507,187	48,722,417	11.30%	10	163,522,430	110,251,422	53,271,008	67.42%
CORONA	20,593,975	183,906,784	11.20%	11	574,532,393	378,531,665	196,000,728	65.89%
EL CAJON	11,781,843	105,802,628	11.14%	12	429,729,286	292,163,555	137,565,731	67.99%
HERMOSA BEACH	4,330,474	39,374,676	11.00%	13	134,755,992	98,285,311	36,470,681	72.94%
FOSTER CITY	5,185,144	48,319,867	10.73%	14	186,068,399	133,606,560	52,461,839	71.81%
RICHMOND	24,795,689	234,178,451	10.59%	15	917,559,077	703,708,056	213,851,021	76.69%
ORANGE	17,353,503	164,072,449	10.58%	16	688,535,949	498,357,918	190,178,031	72.38%
LOS GATOS	4,566,479	43,225,331	10.56%	17	147,482,191	106,202,355	41,279,836	72.01%
CHICO	10,017,258	94,967,151	10.55%	18	316,951,412	217,418,836	99,532,576	68.60%
MONROVIA	6,231,567	59,132,054	10.54%	19	249,766,395	179,165,316	70,601,079	71.73%
FREMONT	26,777,512	255,758,600	10.47%	20	900,558,450	624,989,870	275,568,580	69.40%
BERKELEY	37,552,704	358,964,917	10.46%	21	1,337,285,641	935,552,357	401,733,284	69.96%
NEWARK	5,217,388	50,409,379	10.35%	22	231,972,542	161,298,098	70,674,444	69.53%
BELL GARDENS	3,632,771	35,179,774	10.33%	23	101,684,981	73,314,307	28,370,674	72.10%
EL MONTE	10,632,845	102,987,073	10.32%	24	394,232,262	285,268,177	108,964,085	72.36%
OAKLAND	106,496,859	1,058,410,932	10.06%	25	4,302,883,978	2,966,152,634	1,336,731,344	68.93%
MONTEREY	10,579,089	108,168,070	9.78%	26	334,309,151	233,140,133	101,169,018	69.74%
PLEASANT HILL	3,227,451	33,092,355	9.75%	27	153,099,979	120,058,932	33,041,047	78.42%
ARCADIA	8,856,911	92,305,684	9.60%	28	312,708,284	207,821,674	104,886,610	66.46%
HAYWARD	24,383,977	255,539,222	9.54%	29	875,808,556	588,668,647	287,139,909	67.21%
COMPTON	8,911,571	95,218,674	9.36%	30	353,290,910	249,172,812	104,118,098	70.53%
DALY CITY	9,979,639	106,845,110	9.34%	31	496,975,785	394,513,235	102,462,550	79.38%
SIMI VALLEY	9,407,643	100,798,377	9.33%	32	353,901,127	252,701,176	101,199,951	71.40%
SAN BERNARDINO	26,829,554	287,860,087	9.32%	33	1,096,804,537	810,107,500	286,697,037	73.93%
YUBA CITY	5,968,217	64,323,203	9.28%	34	198,271,588	148,387,626	49,883,962	74.84%
PIEDMONT	3,486,551	37,606,440	9.27%	35	82,347,551	66,460,528	15,887,023	80.71%
CONCORD	12,191,302	131,680,171	9.26%	36	419,400,580	276,978,736	142,421,844	66.04%
SAN DIEGO	281,722,606	3,043,382,436	9.26%	37	8,080,753,257	5,813,313,000	2,267,440,257	71.94%
PLEASANTON	14,998,502	163,644,705	9.17%	38	493,807,366	337,083,388	156,723,978	68.26%
SOUTH SAN FRANCISCO	12,040,840	131,595,253	9.15%	39	423,400,148	295,878,923	127,521,225	69.88%
SALINAS	13,966,482	152,792,844	9.14%	40	431,360,545	296,544,768	134,815,777	68.75%
MURRIETA	5,296,758	58,013,885	9.13%	41	87,648,267	64,878,899	22,769,368	74.02%
LA MESA	5,912,763	65,644,566	9.01%	42	224,218,530	161,532,502	62,686,028	72.04%
DIXON	2,100,867	23,352,047	9.00%	43	52,833,604	37,568,118	15,265,486	71.11%
CLAYTON	546,875	6,091,963	8.98%	44	13,914,012	10,380,219	3,533,793	74.60%
REDONDO BEACH	10,308,496	115,819,398	8.90%	45	444,659,670	324,937,448	119,722,222	73.08%

California City Pension Burdens - Plan Details by City

(click on image to view GoogleDoc spreadsheet, select tab "plan detail")

City or Town	Plan Name	2015 Contribution Rate	2015 Contribution Amount	2016 Contribution Rate	2016 Contribution Amount	Actuarially Accrued Liability (AAL)
ADELANTO	MISCELLANEOUS PLAN OF THE CITY OF ADELANTO	4.57%	168,106	5.87%	186,397	7,042,101
ADELANTO	SAFETY POLICE PLAN OF THE CITY OF ADELANTO	0.00%	45,965	0.00%	3,931	404,406
AGOURA HILLS	MISCELLANEOUS PLAN OF THE CITY OF AGOURA HILLS	11.03%	347,766	11.18%	381,082	14,019,246
ALAMEDA	MISCELLANEOUS PLAN OF THE CITY OF ALAMEDA	17.20%	4,481,102	19.78%	4,847,067	228,267,503
ALAMEDA	PLAN 1079		1,652,448			12,755,000
ALAMEDA	PLAN 1082		47,093			887,000
ALAMEDA	SAFETY PLAN OF THE CITY OF ALAMEDA	44.12%	9,686,629	46.04%	10,608,971	334,257,793
ALBANY	CITY OF ALBANY POLICE AND FIRE RELIEF OR PENSION FUND		82,401			12,710,552
ALBANY	MISCELLANEOUS FIRST TIER PLAN OF THE ALBANY MUNICIPAL SERVICES JOINT POWERS AUTHORITY	16.32%	287,224	17.92%	282,090	9,738,721
ALBANY	MISCELLANEOUS PLAN OF THE CITY OF ALBANY	16.42%	235,678	22.85%	318,823	14,099,178
ALBANY	MISCELLANEOUS SECOND TIER PLAN OF THE ALBANY MUNICIPAL SERVICES JOINT POWERS AUTHORITY	8.01%	13,443	6.68%	21,258	31,867
ALBANY	MISCELLANEOUS SECOND TIER PLAN OF THE CITY OF ALBANY	8.01%	4,397	6.70%	10,834	17,977
ALBANY	PEPRA MISCELLANEOUS PLAN OF THE ALBANY MUNICIPAL SERVICES JOINT POWERS AUTHORITY	0.00%		6.22%	4,028	539
ALBANY	PEPRA SAFETY FIRE PLAN OF THE CITY OF ALBANY	0.00%		11.11%	16,909	1,821
ALBANY	SAFETY FIRE PLAN OF THE CITY OF ALBANY	22.25%	613,717	26.61%	622,213	27,186,443
ALBANY	SAFETY FIRE SECOND TIER PLAN OF THE CITY OF ALBANY	0.00%		15.25%	15,659	22,808
ALBANY	SAFETY POLICE PLAN OF THE CITY OF ALBANY	22.25%	711,289	24.86%	737,990	28,962,740
ALHAMBRA	MISCELLANEOUS PLAN OF THE CITY OF ALHAMBRA	19.94%	3,529,621	22.38%	3,746,139	132,263,273
ALHAMBRA	SAFETY PLAN OF THE CITY OF ALHAMBRA	37.90%	5,983,710	39.98%	6,433,434	212,967,351
ALISO VIEJO	MISCELLANEOUS PLAN OF THE CITY OF ALISO VIEJO	11.03%	160,037	9.32%	150,377	3,191,873
ALTURAS	MISCELLANEOUS PLAN OF THE CITY OF ALTURAS	24.84%	107,241	32.38%	151,947	5,822,068
ALTURAS	PEPRA SAFETY FIRE PLAN OF THE CITY OF ALTURAS	0.00%		11.14%	5,078	108
ALTURAS	SAFETY PLAN OF THE CITY OF ALTURAS	32.42%	130,202	36.78%	134,988	3,872,191
AMERICAN CANYON	MISCELLANEOUS PLAN OF THE CITY OF AMERICAN CANYON	15.78%	861,548	15.82%	834,527	20,797,213
AMERICAN CANYON	PEPRA MISCELLANEOUS PLAN OF THE CITY OF AMERICAN CANYON	0.00%		6.61%	6,269	4,815
ANAHEIM	MISCELLANEOUS PLAN OF THE CITY OF ANAHEIM	24.27%	27,992,304	26.37%	31,003,133	1,101,160,179
ANAHEIM	SAFETY FIRE PLAN OF THE CITY OF ANAHEIM	34.23%	8,590,833	38.10%	8,936,277	352,186,495
ANAHEIM	SAFETY POLICE PLAN OF THE CITY OF ANAHEIM	32.81%	15,489,199	35.47%	16,256,613	586,150,652
ANDERSON	MISCELLANEOUS PLAN OF THE CITY OF ANDERSON	16.69%	324,214	24.45%	452,289	19,881,806
ANDERSON	PEPRA MISCELLANEOUS PLAN OF THE CITY OF ANDERSON	0.00%		6.03%	1,902	2,768
ANDERSON	SAFETY PLAN OF THE CITY OF ANDERSON	26.88%	240,765	34.40%	254,905	11,774,641
ANDERSON	SAFETY SECOND TIER PLAN OF THE CITY OF ANDERSON	21.37%	34,952	15.13%	52,158	46,150
ANGELS	MISCELLANEOUS PLAN OF THE CITY OF ANGELS	22.43%	293,123	23.57%	321,481	8,346,842
ANGELS	PEPRA MISCELLANEOUS PLAN OF THE CITY OF ANGELS	0.00%		6.13%	6,411	4,787
ANGELS	PEPRA SAFETY POLICE PLAN OF THE CITY OF ANGELS	0.00%		10.77%	5,436	5,932
ANGELS	SAFETY FIRE PLAN OF THE CITY OF ANGELS	15.37%	20,078	12.21%	17,907	176,039
ANGELS	SAFETY POLICE PLAN OF THE CITY OF ANGELS	41.42%	195,754	39.94%	198,590	4,731,264
ANTIOCH	MISCELLANEOUS PLAN OF THE CITY OF ANTIOCH	26.25%	3,080,957	27.48%	3,514,064	139,659,447
ANTIOCH	SAFETY PLAN OF THE CITY OF ANTIOCH	34.26%	3,719,355	36.80%	3,988,478	127,982,108
ANTIOCH	SAFETY SECOND TIER PLAN OF THE CITY OF ANTIOCH	0.00%		18.24%	83,646	19,598
APPLE VALLEY	MISCELLANEOUS PLAN OF THE TOWN OF APPLE VALLEY	20.14%	1,317,912	20.23%	1,275,831	32,814,821
APPLE VALLEY	MISCELLANEOUS SECOND TIER PLAN OF THE TOWN OF APPLE VALLEY	11.03%	21,133	7.87%	24,301	49,585
APPLE VALLEY	PEPRA MISCELLANEOUS PLAN OF THE TOWN OF APPLE VALLEY	0.00%		6.08%	8,580	9,216

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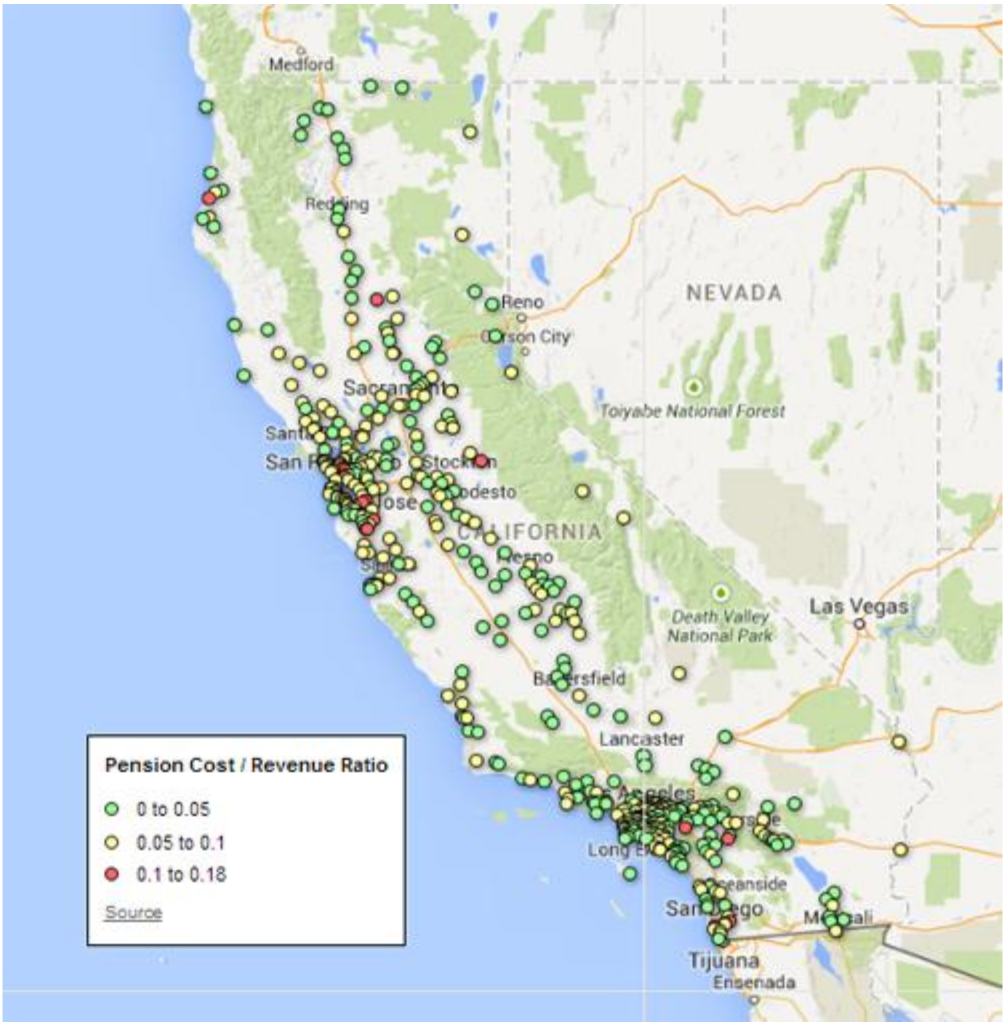
The city level data can also be viewed on a map:

California City Pension Burdens - Plan Summary by City

(click on image to view Google Map, then click circles to view individual summaries)



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METHODS

We collected most of the cost and funding data for this study from CalPERS plan-specific actuarial valuations. The vast majority of city pension plans are administered by CalPERS, but several large California cities operate their own plans. In these cases, we gathered data from actuarial valuations and audited financial statements published by the plans themselves, and from the State Controller's Office retirement plan data set. Large cities that maintain their own plans include Los Angeles, San Diego, San

Jose, San Francisco, Fresno, Oakland and Sacramento (some of these cities have both internally administered plans and CalPERS plans). A few cities participate in county pension systems. In these cases, we consulted actuarial reports and financial statements provided by these county plans.

In all cases, we derived revenue estimates from State Controller Office data posted at http://bythenumbers.sco.ca.gov. We used the total of general and functional revenues reported in the controller's data set. This provides a larger denominator and thus lower pension/revenue ratios than one might derive from considering only general fund revenue. Dividing pension costs by general fund revenue is inappropriate because public employees may be paid from special governmental funds or enterprise funds controlled by the municipal government. When evaluating total pension costs, it is best to consider total governmental revenue.

Total 2015 revenues were estimated by adding 6.25% to 2014 city revenue data recently published by the State Controller. According to the SCO data set, the median city's revenue increased by 6.25% between 2013 and 2014. We applied this rate of increase to the 2014 data as a proxy for fiscal 2015 actuals, which won't be available until late this year. Ideally, the 2015 revenues would be taken from individual municipal budgets, but many cities do not forecast total revenues. Budgets often include only general fund projections.

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FINDINGS

In general, pension costs do not represent a near-term threat to municipal solvency, but in many cities, the burden of financing pension benefits is crowding out other spending priorities or adding to pressure for tax increases. A number of cities are spending more than 12% of total revenue on pension contributions.

A city's pension burden relative to revenues is a product of a number of factors including: (1) the generosity of plan benefits, (2) the size of the municipal workforce relative to the city's size and wealth, (3) growth rates and (4) tax rates. Thus, a city may be able to support very generous pension benefits if it has a small workforce, has rapidly growing revenue and/or imposes additional sales taxes.

The study includes data for 459 of the state's 482 towns and cities. Of the 23 cities not in our list, ten offer retirement plans that do not provide defined benefits. As discussed later, these cities provide employees with defined contribution and/or deferred compensation plans. Most of the remaining 13 are small towns that do not issue audited financial statements or provide retirement plan information on their web sites.

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MOST HEAVILY BURDENED CITIES

Cities with the highest pension expenses relative to revenue are listed below:

Rank	City or Town	County	2015 Pension Contributions	2015 Estimated Revenue	Pension Cost / Revenue Ratio
1	San Rafael	Marin County	18,422,967	104,823,893	17.58%
2	Costa Mesa	Orange County	18,997,065	132,253,907	14.36%
3	San Jose	Santa Clara County	253,967,345	1,829,814,350	13.88%
4	San Gabriel	Los Angeles County	5,124,429	38,198,183	13.42%
5	Sonora	Tuolumne County	892,361	7,108,772	12.55%
6	West Covina	Los Angeles County	10,304,114	84,893,591	12.14%
7	El Cerrito	Contra Costa County	4,837,781	40,189,354	12.04%
8	Hemet	Riverside County	7,083,161	60,907,403	11.63%
9	Montclair	San Bernardino County	4,267,343	36,721,464	11.62%
10	Eureka	Humboldt County	5,507,187	48,722,417	11.30%
11	Corona	Riverside County	20,593,975	183,906,784	11.20%
12	El Cajon	San Diego County	11,781,843	105,802,628	11.14%
13	Hermosa Beach	Los Angeles County	4,330,474	39,374,676	11.00%

14	Foster City	San Mateo County	5,185,144	48,319,867	10.73%
15	Richmond	Contra Costa County	24,795,689	234,178,451	10.59%
16	Orange	Orange County	17,353,503	164,072,449	10.58%
17	Los Gatos	Santa Clara County	4,566,479	43,225,331	10.56%
18	Chico	Butte County	10,017,258	94,967,151	10.55%
19	Monrovia	Los Angeles County	6,231,567	59,132,054	10.54%
20	Fremont	Alameda County	26,777,512	255,758,600	10.47%

Cities with the highest burdens typically have responsibility for both safety and non-safety employee pensions. Cities with relatively low burdens generally do not have a safety plan, perhaps because they rely on the County or another authority for police and fire services.

The city with the highest pension contribution/revenue ratio is San Rafael, which spends more than one-sixth of its revenue on retirement fund contributions. This burden is partially a legacy of generous retirement benefits. Police officers and firefighters were entitled to pensions equal to 3% of salary per year employed with a retirement age of 55. Miscellaneous employees – those who are not uniformed public safety officers – received 2.7% per year at age 55. While San Rafael's pension formula for safety employees is not unusual (in fact, some cities provide 3% of salary per year at age 50), the formula for miscellaneous employees is more generous than most California cities. As of June 30, 2013 the city had 220 active and 202 retired employees in the miscellaneous category.

Recent reforms have resulted in less generous benefits for new employees. The city has documented its efforts at pension reform at http://www.cityofsanrafael.org/pensions/.

In 2011, San Rafael lowered the benefit for new miscellaneous employees from 2.7% to 2%. It did not lower the benefit rate for new public safety employees, but reduced their cost of living allowance (COLA) in retirement from 3% to 2%. It also changed the Final Average Pay (FAP) used for to calculate the pension benefit from the last year's salary to the average of the final three years' salary. This reform reduces pension spiking, a practice under which employees work substantial overtime in their final year or are awarded extraordinary salary increases to maximize their pension benefits.

In 2013, the city further reduced new employee benefits after the implementation of [California's Public Employees' Pension Reform Act (PERPA)](). New miscellaneous employees must wait until age 62 to receive benefits, which continue to be based on 2% per year times final average pay. For new safety employees, the rate is now 2.7% instead of 3% while the retirement age has risen from 55 to 57.

It is worth emphasizing that these changes apply only to new employees – hired from 2011 onwards. Most employees will be eligible for the more generous, pre-2011 retirement benefits for many years to come, implying that San Rafael's high pension burden will be a fact of life for some time.

Also contributing to San Rafael's relatively high annual pension costs is the aggressive approach its plan administrator, the Marin County Employee Retirement Agency (MCERA) is taking toward paying down unfunded liabilities. Most plans, including those administered by CalPERS and other county systems, amortize their unfunded balances over a period of 30 years; MCERA has implemented a 17-year amortization period. More rapidly amortizing UAAL promotes fiscal sustainability, so, at least to this extent, San Rafael's high pension contributions could be seen as positive.

The second most burdened city is Costa Mesa. Like San Rafael, the city has a legacy of generous benefits. By 2011, police and fire employees were in plans that paid 3% at age 50, while miscellaneous employees received 2.5% at 55. In some cases, existing employees had benefitted from plan enhancements after being hired. For example, in 2010, the fire union negotiated a reduction in retirement age from 55 to 50. This change applied to current employees even though the enhanced benefit had not been funded by previous contributions made by the firefighters or the city.

The City's Mayor Pro Tem, Jim Righeimer, noted that another factor contributing to Costa Mesa's high pension burden is its inability to outsource services to the private sector. California cities fall into two legal categories under state law: chartered and general law. As a general law city, Costa Mesa, operates under many more rules specified under the state's government code (section 34000). In Costa Mesa City Employees Assn. v. City of Costa Mesa, 209 Cal. App. 4th 298 (Cal. App. 4th Dist. 2012), the Court of Appeals found that Costa Mesa could not outsource services to private companies, unless these services required specialized training or expertise. The ruling only applies to general law cities; charter cities have the flexibility to reduce future pension costs by outsourcing basic functions like street sweeping and animal control.

Although the city has been unable to outsource miscellaneous positions, it has taken some steps to limit pension costs. The council made some reductions for new employees starting after March 2012, and made further cuts after PERPA took effect in 2013. The benefit formula for new safety employees is 2.7% at 57; new miscellaneous employees receive 2% at 62.

Costa Mesa has also established a Pension Oversight Committee whose work is documented at http://www.costamesaca.gov/index.aspx?page=1603.

The city with the third highest pension burden is San Jose, with fiscal 2015 contributions of over $250 million accounting for almost 14% of total revenue. Public employee retirement costs have been an issue in San Jose for a number of years now, and the city's experience illustrates the difficulty municipalities encounter when they try to limit these expenditures.

According to a city presentation, total retirement costs for San Jose have quadrupled since fiscal 2003. In that year, San Jose contributed $72 million to pension contributions and retiree health benefits. In the current fiscal year, that cost has risen to over $300 million (including $50 million in health costs).

In 2012, Mayor Chuck Reed placed Measure B on the ballot. Among other changes, the proposal gave currently employed city workers the option of accepting lower pension benefits or substantially increasing their own contributions to retain existing benefits. Most proposed reforms only apply to new employees, because there is a presumption that existing employees have a contractual right to the pension benefit formula available at the time of hire (unless the formula is enhanced as we saw in Costa Mesa's case). Because the San Jose reform threatened to reduce the benefits of existing employees, it drew substantial union opposition.

Despite this opposition, Measure B passed with a 69% majority. Unions and other opponents then attempted to overturn the measure in court. In December 2013, Superior Court Judge Patricia Lucas ruled that the increased employee contributions were unlawful. But the judge agreed that the city could obtain the same cost savings by reducing employee pay. As of this writing, the city has not attempted to implement such a pay cut.

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FUNDING LEVELS

There was less variation in funding levels across cities and differences appeared to be idiosyncratic. The vast majority of plans are administered by CalPERS, which requires all member cities to pay the full Actuarially Required Cost (ARC) it computes each year. CalPERS uses the same calculation procedures for each member. Thus there should not be issues with deliberately skipped or reduced payments, as we see in other states. Cities with large non-CalPERS plans also appear to pay their full ARCs each year.

The weighted average funding ratio across all 459 cities was just over 75% as of June 30, 2013. Given strong stock market performance since that time, it is likely that the funding situation improved significantly over the last 18 months. Overall, CalPERS reported that its assets increased by 15% between June 30, 2013 and June 30, 2014. Its actuarial liabilities probably rose during this period as well, but likely at a slower rate.

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CITIES WITHOUT DEFINED BENEFIT PLANS

A review of audited financial statements identified ten California cities that rely exclusively upon defined contribution and deferred compensation plans to provide for their employees retirement needs. Because the city makes its contribution upfront or makes no contribution at all, it cannot have an unfunded actuarially accrued liability. Further, it could be argued that many of these cities do not have a pension burden at all, because matching contributions can be suspended during a fiscal emergency.

The list of cities relying exclusively upon defined contribution and/or deferred compensation plans is as follows:

City	**County**
Danville	Contra Costa County
Holtville	Imperial County
Huron	Fresno County
Lafayette	Contra Costa County
McFarland	Kern County
Mendota	Fresno County
Orinda	Contra Costa County
Rio Dell	Humboldt County
San Juan Bautista	San Benito County
Trinidad	Humboldt County

While most of these cities are small, Danville and Lafayette have populations of 43,000 and 25,000 respectively, suggesting that medium sized cities can attract employees without offering defined benefit retirement programs.

Steven Falk, City Manager for Lafayette told us via e-mail:

"… Lafayette's non-PERS status has little or no apparent impact on the City's ability to hire and retain lower-skilled and administrative employees, such as caretakers, landscape workers, recreation workers,

administrative assistants, etc. The lack of a PERS program, however, does appear to have some impact on the City's ability to attract and retain higher level professionals with skill sets that are particular to the municipal operation, such as urban planners, civil engineers, transportation planners, community development employees, etc. We have had occasions where candidates have retracted their job applications upon learning that Lafayette does not participate in PERS."

The city contacts out public safety services to Contra Costa County, so it has not had to test whether it could recruit police officers and firefighters without the benefit of PERS membership.

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EMPLOYER CONTRIBUTION RATES

Thus far our analysis has focused on total employer contribution *amounts*. Historically, CalPERS and other multi-employer plans have quoted contribution *rates*. The contribution rate is the percentage of current employee payroll that must be contributed to the pension plan. For example, if a public employee has a salary of $100,000 and the employer's contribution rate is 40%, the city must pay CalPERS $40,000 to keep the covered employee in the defined benefit plan. This rate excludes employee contributions, which are typically withheld from each employee's salary but have been paid –partially or fully – by municipal employers.

The plans with the highest contribution rates tend to be smaller plans with declining balances. In these cases, contributions are primarily funding pension payments to members that have already retired and there is a small, declining numbers of active employees across which these payments may be allocated. For example, Taft's First Tier Police plan has a 227.5% contribution rate. As of June 30, 2013, the plan had only one active member and 28 retirees.

Among larger plans, Rialto's Safety Plan has one of the highest contribution rates: 48.8% in fiscal 2015, with a projected increase to 50.3% in fiscal 2016. The city's contribution rate appears to be especially high because of a 2008 decision to increase the plan's benefit formula to 3% at 50. Because the increase applied to existing employees (whose contributions had been based on less generous benefits), the plan has required catch-up contributions to avoid greater underfunding. After the new formula took effect in 2011, the employer contribution rate jumped from 19.3% to 38.3% and has continued to rise.

Another large plan with a relatively high contribution rate is Berkeley's police plan with a 2015 rate of 46.6% rising to 48.6% in 2016. Police have been eligible for the 3% at 50 benefit formula for several years. A new contract negotiated in 2012 scaled back the formula for new hires to 3% at 55. This change should slow the increase in contribution rates as more new hires join the force. One aspect of the Berkeley plan that pushes up contribution rates is the provision of a "sick leave credit". This plan feature allows retirees to add unused sick pay to their length of service at retirement. Each sick day adds 0.004 years to the employee's service period for purposes of calculating his or her pension benefit rate. For example, if a police officer retires with 100 sick days and a $100,000 final average pay, she would be entitled to an extra 100 x 0.004 x 3% x $100,000 = $120 per year.

As one might expect, the most heavily burdened cities also have plans with high contribution rates. San Rafael's overall contribution rate is 57.7%, Costa Mesa's fire plan has a 47.5% rate and San Jose's public safety plan has a 70.8% rate.

* * *

MOST HEAVILY INDEBTED CITIES (INCLUDING PENSION OBLIGATION BONDS)

No discussion of California's city pension burdens would be complete without taking into account Pension Obligation Bonds. This is the practice of borrowing money to make an annual employer contribution to the pension system, on the assumption that the interest rate paid on the bond will be less than the earnings that will accrue to investing the bond proceeds in the pension fund. We have identified 58 cities that had outstanding pension obligation as of June 30, 2013. These cities are listed below along with the face value of POBs they issued. These amounts include principal that has already been repaid. Also, some cities, including Oakland and Richmond, have issued zero coupon capital appreciation pension obligation bonds that do not pay any interest. The issuance amounts shown below often reflect the maturity value of these zero coupon bonds rather than the proceeds each city received.

City	County	Amount Issued
Auburn	Placer County	4,965,000
Azusa	Los Angeles County	7,215,000
Baldwin Park	Los Angeles County	12,810,000
Bell	Los Angeles County	9,225,000
Benicia	Solano County	13,972,596
Berkeley	Alameda County	12,415,000
Brisbane	San Mateo County	4,745,000
Burlingame	San Mateo County	32,975,000
Capitola	Santa Cruz County	5,170,000

Carmel-By-The-Sea	Monterey County	6,280,000
Claremont	Los Angeles County	6,000,000
Colton	San Bernardino County	31,149,399
Daly City	San Mateo County	36,235,000
Fairfield	Solano County	36,865,000
Fresno	Fresno County	205,335,000
Hawthorne	Los Angeles County	30,700,000
Huntington Park	Los Angeles County	23,000,000
Inglewood	Los Angeles County	64,986,301
La Verne	Los Angeles County	8,380,000
Long Beach	Los Angeles County	164,500,000
Marina	Monterey County	4,315,000
Merced	Merced County	7,355,000
Mill Valley	Marin County	6,775,000
Millbrae	San Mateo County	11,521,660
Monrovia	Los Angeles County	12,750,000
Monterey Park	Los Angeles County	17,405,000
Novato	Marin County	18,296,066
Oakland	Alameda County	757,930,000
Oceanside	San Diego County	42,780,000
Oroville	Butte County	7,260,000
Pacific Grove	Monterey County	19,365,355
Pacifica	San Mateo County	20,510,000

Palm Springs	Riverside County	19,832,588
Paradise	Butte County	10,918,154
Pasadena	Los Angeles County	159,380,000
Pinole	Contra Costa County	16,800,000
Pittsburg	Contra Costa County	39,566,055
Pomona	Los Angeles County	42,280,684
Port Hueneme	Ventura County	10,679,956
Porterville	Tulare County	3,765,000
Redlands	San Bernardino County	25,862,392
Richmond	Contra Costa County	239,500,729
Riverside	Riverside County	150,480,000
Sacramento	Sacramento County	183,365,000
San Bruno	San Mateo County	13,175,000
San Leandro	Alameda County	18,305,000
San Marino	Los Angeles County	7,095,000
San Rafael	Marin County	4,490,000
San Ramon	Contra Costa County	17,650,000
Santa Cruz	Santa Cruz County	24,150,000
Santa Rosa	Sonoma County	32,715,000
Scotts Valley	Santa Cruz County	4,460,000
Seaside	Monterey County	6,880,000
Sonoma	Sonoma County	2,925,000
South Gate	Los Angeles County	24,400,000

Stockton	San Joaquin County	125,310,000
Union City	Alameda County	22,997,973
Yuba City	Sutter County	7,685,000

Finally by combining unfunded actuarially accrued liabilities and outstanding pension obligation bond debt, we find the cities that have the highest overall pension debt burden - based on 2013 total revenue. In the table that follows, we have used 2013 revenues from the State Controller's Office, except in the case of Oakland which had an anomalous value in the SCO data set. The 2013 POB column reflects our calculation of unpaid principal plus unamortized premia on zero coupon bonds as of June 30, 2013.

California Cities, Ranked by Pension Debt as Percent of Total Revenue - Top 20

Rank	City	2013 Total Revenue	2013 UAAL	2013 POB Outstanding	Total Pension Debt	Debt / Revenue
1	OAKLAND	902,343,411	1,336,731,344	497,326,504	1,834,057,848	203.3%
2	COSTA MESA	120,941,625	220,088,382		220,088,382	182.0%
3	RICHMOND	229,667,716	213,851,021	201,590,579	415,441,600	180.9%
4	WEST COVINA	75,202,992	129,009,677		129,009,677	171.5%
5	SAN RAFAEL	98,069,848	161,297,000	4,490,000	165,787,000	169.0%
6	NEWARK	42,011,267	70,674,444		70,674,444	168.2%
7	PARADISE	16,283,406	13,598,638	11,809,914	25,408,552	156.0%
8	PACIFIC GROVE	24,393,663	24,510,771	12,451,649	36,962,420	151.5%
9	FOSTER CITY	36,608,718	52,461,839		52,461,839	143.3%

10	INGLEWOOD	159,019,773	166,164,169	58,076,302	224,240,471	141.0%
11	MAYWOOD	9,228,259	12,978,485		12,978,485	140.6%
12	EL CAJON	99,209,121	137,565,731		137,565,731	138.7%
13	STOCKTON	362,091,530	370,970,850	125,310,000	496,280,850	137.1%
14	BERKELEY	296,093,704	401,733,284	1,865,000	403,598,284	136.3%
15	PLEASANT HILL	25,049,832	33,041,047		33,041,047	131.9%
16	WHITTIER	66,526,402	86,998,800		86,998,800	130.8%
17	FREMONT	211,801,362	275,568,580		275,568,580	130.1%
18	DOWNEY	100,912,444	130,989,072		130,989,072	129.8%
19	ORANGE	147,030,133	190,178,031		190,178,031	129.3%
20	CONCORD	111,190,625	142,421,844		142,421,844	128.1%

*   *   *

As can be seen on the above table, some cities, such as Richmond, actually have more debt carried in the form of pension obligation bonds than they have in the form of an unfunded pension liability. Omitting consideration of pension bond debt clearly favors a city like Richmond, but in reality their pension contributions are significantly understated unless the pension bond debt is taken into account. Using this ratio also validates the precarious situation Costa Mesa finds themselves in, since even though they have no pension bond debt, their unfunded liability is 66% greater than their entire annual revenue. It is also interesting to see that some of California's larger cities, including Oakland and Stockton, have relied heavily on the use of pension obligation bonds to finance their annual pension fund contributions.

WHAT THE FUTURE HOLDS

In February, 2014 CalPERS adjusted its actuarial assumptions with the effect of further increasing employer contribution rates. The rate increase will be phased in over five fiscal years. When the change is fully implemented, in fiscal 2020-21, CalPERS projects a further increase in safety officer contribution rates of between 5.3% and 9.3%.

In addition to listing contribution rates for the upcoming fiscal year, CalPERS actuarial valuation reports have also provided projected rates for future fiscal years to assist agencies with multi-year financial planning. In theory, this data could be used to compare projected future burdens among cities.

Unfortunately, there are complexities inherent in creating such a comparison and these challenges have been exacerbated by a change in this year's CalPERS actuarial reporting. In some cases, the reports provide an employer contribution rate, but, in most others, they list both a normal cost rate and a lump sum Unfunded Actuarial Liability (UAL) payment. This makes comparisons across plans more difficult. Further, non-CalPERS plans often do not provide projected rates at all. Consequently, a systematic comparison of contribution rates across plans and cities is impossible, but we can consider some specific cases.

One city that can expect to face sharply increased pension burdens is Monrovia, a medium-sized community northeast of Los Angeles. Between fiscal 2016 and 2020, the city's UAL payment is projected to rise from $1.6 million to $2.9 million. During the same period, contribution rates for the city's miscellaneous plan are projected to rise from 30.9% to 38.8%.

Assuming that CalPERS estimated 2016 covered payroll increases three percent annually, Monrovia's actuarially required contribution is projected to rise from $6.2 million in fiscal 2015 to $10.2 million in fiscal 2020. Since the city's 2015 pension burden already exceeds 10%, the city will be hard pressed to find this additional $4 million.

CalPERS projections assume a 7.5% annual increase in the value of system assets. This assumption – which is closely related to the discount rate applied to unfunded liabilities – is controversial. However, the system easily exceeded this rate in four of the last five years – benefitting from the bull market in stocks that followed the Great Recession.

Since future portfolio returns are unpredictable, CalPERS provides a sensitivity analysis that shows contribution rates (or UAL payments) under different return scenarios. The worst scenario reflects a -3.8% annual return between July 1, 2014 and June 30, 2017. Under this scenario and using a 3% covered payroll growth assumption, Monrovia's fiscal 2020 contribution would rise to almost $12.5 million.

Of course, the city's pension burden would not grow as much if the market continues to do well. CalPERS most rosy scenario calls from an 18.9% annualized returns during the same period. If this were to happen, Monrovia's fiscal 2020 ARC would be $6.4 million – little changed from the fiscal 2015 level.

A larger city facing a sharp increase in an already heavy pension burden is Fremont in Alameda County. The city's safety plan has a contribution rate of 40.7%. In fiscal 2016 this will rise to 44.7%, and by fiscal 2020, the rate will reach 55.3% assuming median CalPERS returns. If CalPERS underperforms, the 2020 rate will stabilize at 43.0%; in the event of underperformance the rate will escalate to 65.8%.

The city's miscellaneous plan has an employer contribution rate of 24.1%. This is expected to rise to 25.8% in fiscal 2016 and 31.3% in fiscal 2020. Once again, the range of potential 2020 outcomes is wide: from 23.3% under bull market conditions and 38.1% if the bears prevail.

In absolute dollars and assuming 3% covered payroll growth, Fremont's pension cost is expected to rise from $26.8 million in fiscal 2015 to $39.2 million in fiscal 2020. Under the bull market scenario, the 2020 cost would be $30.0 million; while it would reach $47.1 million in the bear market case.

* * *

CONCLUSION

The impacts of public employee pension costs vary widely across California cities. By offering new employees defined contribution plans or more modest defined benefit formulas, heavily burdened municipalities can gradually reduce the share of their budgets devoted to this legacy cost. Substantial towns including Lafayette and Orinda show that it is possible to fill openings – at least among non-safety employees – without offering defined pension benefits.

There are cautionary lessons as well. As San Jose has learned, it is very difficult to pare back generous pension benefit packages once they have been granted. And, as Costa Mesa has discovered, sweetening benefits for existing employees is a recipe for trouble.

Given prevailing court rulings to date, there is little municipalities can do to lighten their pension loads in the near term. By projecting pension contributions for the next several fiscal years, CalPERS has provided a way for cities to anticipate and hopefully reserve for the obligations they face shortly beyond the current budget year. We hope that systems outside CalPERS will provide similar multi-year projections in their own actuarial valuation reports.

The CalPERS projections are buried deep inside plan-specific valuation reports available only in PDF form. By extracting the relevant data from these valuation reports and then aggregating them by city, we hope we have provided policymakers and citizens with an accessible tool that they can use to assess and address growing pension costs in their respective communities.

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Marc Joffe founded Public Sector Credit Solutions in 2011 to educate policymakers, investors and citizens about government credit risk. PSCS research has been published by the California State Treasurer's Office, the Mercatus Center and the Macdonald-Laurier Institute among others. Prior to starting PSCS, Marc was a Senior Director at Moody's Analytics. He has an MBA from New York University and an MPA from San Francisco State University.