

## Survey: California County And Local Government Investment Pools Seek Yield In Low-Interest-Rate Environment

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# Survey: California County And Local Government Investment Pools Seek Yield In Low-Interest-Rate Environment

When local governments in California prepare their budgets for an upcoming year, after resolving any revenue and expenditure imbalances, they typically consider the timing of their expected cash receipts and disbursements. Based on what we have seen, it is not uncommon or, in our view, unexpected that a government's cash outflows will exceed its inflows during certain periods of the year. To bridge these cash deficits, governments can utilize internal cash resources or borrow on a short-term basis from the capital markets by issuing tax and revenue anticipation notes (TRANs), many of which we rate. Although not a replacement for lost revenue resulting from state aid reductions or economic weakness, TRANs help local agencies manage relatively predictable mismatches between expected cash receipts and cash disbursements.

After issuing TRANs, local agencies often invest the proceeds along with repayment accounts (later in the year) with their local county investment pools (LCIPs) or other local government investment pools (LGIPs) available in the state. Because the LCIPs are holding and investing the cash proceeds, which are operating funds, on behalf of the local agencies, and because many local agencies -- and all school districts -- invest other idle operating and capital funds with their LCIPs, the agencies' exposure to the LCIPs and LGIPs are credit factors that we consider in our analysis for the TRANs as well as for long-term ratings we maintain on the debt issued by many of the counties and local agencies.

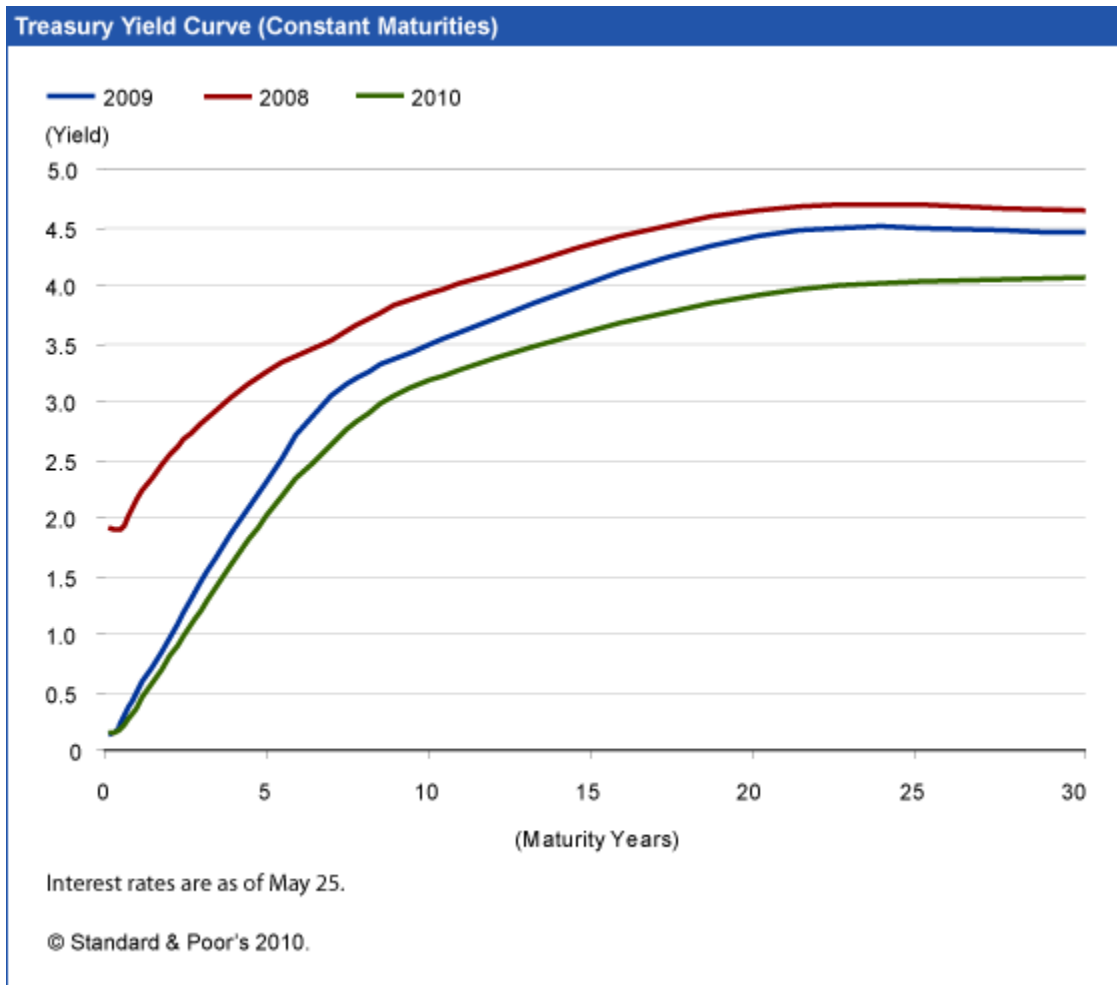
## Market Conditions Overview: No European Vacation

The California state code stipulates that public-sector investment managers prioritize capital safety and liquidity above yield. However, with flat or declining tax revenues, even modest investment returns can represent an important source of income during what is a difficult budget cycle for most local governments. Unfortunately, economic and market conditions are not in our view conducive to achieving investment returns that provide a meaningful offset to weak tax revenues. We identify three broad interpretations of the markets and the economy, some of which are in our view contradictory.

First, because fixed-income assets -- such as those held by LGIPs and LCIPs -- will generally experience price declines when interest rates rise, good economic news can actually represent a risk to portfolio value. For example, although we generally regard as favorable recent indications of an improved national economic outlook, we believe they present market risk for U.S. Treasury investors because they facilitate a reallocation of investment funds to higher-risk equities and corporate bonds and away from very safe Treasury bills and notes. As demand for Treasuries softens, their yields are forced up, thereby reducing the market value of these fixed-income assets. LCIPs and LGIPs are particularly exposed to increases in Treasury yields because they often allocate significant portions of their portfolios to Treasury bills and notes (as opposed to corporate securities).

A simultaneous development with opposite implications for yields on U.S. Treasury debt stems from serious credit concerns of international and sovereign investors whose reticence about Greece and other countries in the EU have reinforced the appeal of U.S. Treasuries as a safe-haven investment. As the debt crisis in Greece unfolded during the first half of 2010, we observed investors, apparently fearing the potential for events in Europe to ignite another

global credit crisis, flocking to U.S. Treasury securities, which are deemed free of default risk. This strong demand for U.S. Treasuries compressed yields on the 10-year note, which declined more or less steadily from a high for the year of 4.01% on April 5 to a low for the year of 3.18% by May 25.



A third theme that we see in the public discourse focuses on the U.S. federal government's fiscal condition. Some observers believe higher interest rates -- and eventually inflation -- are inevitable given the very large current federal budget deficits and increase in the government's total debt position, but we do not see this scenario materializing in the market. In fact, we observe that market expectations about future inflation are even lower now than earlier in the year. We interpreted the market's inflation expectations by comparing the spread between nominal and inflation-protected yields on 10-year U.S. Treasuries. This analysis shows that for the ensuing 10 years, the market implied an annual inflation rate of 2.38% on Jan. 4, 2010, whereas by May 21, 2010, the market implied an expected annual inflation rate of just 1.87%. In addition, a very high national unemployment rate, hovering near 10% will, in our view, likely preclude upward pressure on wages, a key source of inflation in the economy. Finally, data from the U.S. Labor Department show that the consumer price index declined 0.1% in April and that the core rate of inflation (excluding volatile prices for food and energy) increased just 0.9% since April 2009, the lowest annual increase since 1966. Taken together, these data suggest to us that subdued inflation expectations are for now warranted. If public fund investors nonetheless believe economic growth or inflation could lead to higher interest

rates, we think they may want to stay invested in short-term Treasury bills. However, with the federal funds rate at 0%-0.25%, and given that the Federal Reserve statement from April 28, 2010, notes that "economic conditions...are likely to warrant exceptionally low levels of the federal funds rate for an extended period," holding short-term Treasury securities is a low-return, if safe, strategy. As we describe later (see the section entitled "Survey Results: Longer Maturities Than In Recent Years"), our survey found that in aggregate, the LCIPs, as indicated by their choices to invest in longer maturity assets, have apparently adopted the more sanguine view of the various interpretations of inflation and interest rate risk described above.

## Conservatism Prevails Among California LGIPs and LCIPs

Many California LCIPs' and LGIPs' asset allocations emphasize liquidity and a buy-and-hold approach, and avoid actively trading securities prior to their maturity in an attempt to turn a profit. The state code encourages maintaining liquidity by requiring investment pools to obtain the approval of the local agency governing board before investing in securities with maturities of over five years. Whether or not they hold securities with maturities of more than five years, some LCIP or LGIP portfolios invest funds not needed for immediate liquidity in assets with maturities longer than one year to generate a higher return. Such assets tend to be more sensitive to changes in interest rates, and thus in our view have greater market (interest rate) risk. Relative to short-term holdings, the pools may experience greater losses if interest rates rise and a fund participant requires cash that necessitates the unexpected liquidation of an asset prior to its maturity.

## LCIPs And LGIPs As Investment Vehicles

Investment pools in the 58 California counties are vehicles in which local government agencies may invest their idle funds, including bond and note proceeds. The pools are the legal repository of investable funds for school districts (mandatory participants). Additionally, numerous counties agree to accept and invest funds on behalf of other local agencies within their boundaries (voluntary participants).

Three statewide investment options for local agencies in California are the Pooled Money Investment Account (PMIA)-Local Agency Investment Fund (LAIF), Capital Asset Management Program (CAMP), and CalTRUST.

The LAIF is a \$23.7 billion voluntary pooled money fund that is a part of the state's \$70.9 billion (as of April 30, 2010) PMIA, which is governed by a board composed of the state's treasurer, director of finance, and controller. The LAIF is open to local government units, non-profit public agency-oriented corporations, and public and qualified quasi-governmental agencies. It accepts investments of \$5,000 to \$50 million, with no maximum on bond proceeds. (Invested bond proceeds are subject to a slightly less liquid withdrawal schedule.) The LAIF requests 24 hours' notice to make withdrawals of more than \$10 million, but we believe that publicly available language describing the program suggests even more immediate access depending upon the circumstance. Local governments have access to the treasurer's dedicated investment staff expertise by investing in the LAIF. Technically, the LAIF is not a stable net asset value (NAV) or an SEC Rule 2a-7-like pool, which among other requirements, now limits weighted average maturity (WAM) to 60 days or less. As of March 31, 2010, the LAIF's WAM was 8.13% higher at 213 days than it was at March 31, 2009 (197), and 20.3% higher than it was in 2008 (177 days), and exceeded the then 90-day and now 60-day threshold for a money market fund.

The CAMP cash reserve portfolio is a \$2.77 billion (book value at March 31, 2010) voluntary short-term money

market portfolio established in 1989 and modified in 2005 to allow public agencies to invest as participants (as opposed to as trustees). The portfolio, managed by PFM Asset Management LLC, seeks to preserve principal and maintain daily liquidity while generating a relatively high income that is consistent with the first two goals. Standard & Poor's rates the portfolio 'AAAm', which indicates our view that the pool has an extremely strong capacity to maintain principal stability and to limit exposure to losses due to credit risk. As a true stable NAV or money market fund, the CAMP cash reserve is very liquid and has a WAM of just 56.97 days as of March 31, 2010. The market value of CAMP's assets is relatively insensitive to changes in market interest rates, with an effective duration of just 0.16.

CalTRUST is a joint powers authority structure that public agencies in California organize and make available for investing. Standard & Poor's Fund Ratings, which rates funds by request, maintains a rating of 'AAf/S1+' on CalTRUST's \$404 million (book value at March 31, 2010) short-term account. (CalTRUST also offers medium- and long-term accounts.) These ratings indicate our view of the fund's very strong protection against losses from credit defaults and an extremely low sensitivity to changing market conditions. CalTRUST has an effective duration of 0.33 and a WAM of 208 days as of March 31, 2010.

In addition to the funds mentioned above, Standard & Poor's rates eight of California's LCIPs:

- Contra Costa County (AAAf/S1+)
- Orange County Educational Money Market Fund (AAAm)
- Orange County Money Market Fund (AAAm)
- San Bernardino County (AAAf/S1+)
- San Diego County (AAAf/S1)
- San Mateo County (AAAf/S1 )
- Solano County (AAAf/S1)
- Ventura County (AAAf/S1+)

We understand that, to meet the cash flow needs of their participating agencies, LCIPs require relatively high awareness of the participants' seasonal cash flow patterns. However, California LCIPs are not strictly money market or stable NAV funds, subject to SEC Rule 2a-7-like guidelines. This means that the pools can and, based on what we have seen, do typically invest a portion of the assets under their management with a longer-term perspective, with the goal of generating a higher rate of return than may be available in the money markets. In addition to the market dynamics mentioned above, in our opinion, investing in assets with maturities of more than one year introduces increased volatility of market values because Governmental Accounting Standards Board Statement No. 31 requires that these assets be reported at market value. Assets with maturities of one year or less may be reported at amortized cost, or book value.

Several pools are divided so that a portion of the asset base is managed separately to preserve liquidity, with the other portion invested in securities with longer maturities providing higher yields. This approach more formally segregates assets by strategy type than those that involve laddered and barbelled fixed-income portfolio compositions. Laddered portfolios hold a portion of assets in short maturity investments intended to satisfy liquidity needs of the pool and invest the remainder of the funds across a relatively evenly weighted selection of asset maturities. Barbelled portfolios are those with greater weightings of asset maturities at the shorter and longer maturities with relatively fewer intermediate maturity holdings.

Results from our annual and event-driven periodic surveys suggest to us that most California LCIPs manage their assets conservatively and that legislative reforms put in place following the 1994 Orange County bankruptcy continue to mitigate instances of significant risk taking. We have seen that enacted reforms tend to emphasize safety and liquidity while placing restrictions on practices associated with aggressively seeking yield. In 2006 (updated for 2010), the California Debt and Investment Advisory Commission (CDIAC) published its "Local Agency Investment Guidelines," which assist local officials with interpretation of legal requirements and provides consensus investment practice guidelines from CDIAC's working group. Nonetheless, although we believe LCIP managers typically adhere to investment practices that reflect what we consider to be a prudent set of objectives, we believe that increased risk taking in an attempt to produce higher rates of return and revenues can be an alluring strategy. Moreover, we believe that the incentive to seek higher rates of return may be greatest just when local governments can least afford unexpected losses.

Even with jobs reports and various other indicators suggesting an economic recovery is underway, if the past is a guide, we expect that state and local governments may endure a lag before realizing improved tax revenue collections. Compared with early in the recession, many governments have exhausted portions of their reserve funds and have fewer budgetary options with which to address projected shortfalls. Relentlessly low rates at the short end of the yield curve could in our view make investing longer on the curve more attractive, at a time when some governments are looking for any uptick in revenue.

## Survey Topics Reflect Market Conditions

Evolving financial markets have resulted in a broadened menu of investment options, some of which are complex. Along with other institutional investors, governmental investors face holding assets that could entail unexpected credit exposure, market value declines, or severely constrained liquidity, making the determination of market value difficult. In light of this environment and given that most county pools in California are not rated, our survey focused on aspects of fund management that we believe could present credit risk to participating agencies. In addition to reporting investment pool statistics such as market and book value, we explored aspects of investment management practices and the extent to which the counties invested in various investment instruments that we considered prone to credit or liquidity risk.

Similar to other investors, counties are subject to market conditions, particularly the interest rate environment. Unlike some investors however, counties also face relatively inflexible cash outflow needs while serving a highly important role for local entities' operations and TRAN borrowings. They also retain considerable investment strategy independence despite the state reforms that were put in place following the Orange County bankruptcy in 1994. Our review thus considered whether the county pools held asset types that recently demonstrated strain through limited liquidity, weakening credit, or declining values, or that were issued by subsequently distressed, bankrupt, or insolvent institutions. Specifically, we surveyed the county treasurers, or their designates responsible for the management of the LCIPs, as to whether they experienced or held any of the following:

- Removal or liquidation of any distressed assets (where the issuer had filed for bankruptcy or insolvency);
- Depressed liquidation price of any distressed asset sales;
- Exposure to asset-backed commercial paper (ABCP);
- Federal Deposit Insurance Corp. (FDIC)-backed CDARS or FDIC NOW Accounts; and
- Significant market value fluctuations.

We also surveyed key investment policies and practices to understand and assess the pools' tendency toward exposure to losses and their ability to withstand stress in the market. By ascertaining the presence of certain practices that we believe either enhance or minimize investment risk exposure, we sought an understanding of the investment managers' orientation to market risk beyond that related to the most recent developments. Some practices also suggest to us manager sophistication. Among the practices surveyed were:

- What portion of the pool, if any, is composed of voluntary participants;
- What is the frequency of marking-to-market?
- Does the LCIP monitor portfolio duration?
- Does the LCIP monitor portfolio weighted average life?
- If investments include illiquid assets, how are they valued?
- Do investments include repurchase agreements? If yes, is there a margin policy? And if there is a margin policy, is collateral other than Treasury securities accepted?
- Is leverage through reverse repurchase agreements or securities lending permitted? If yes, may pools invest in securities with maturities that exceed the agreement? What is the limit to pool leverage?

Even though California law limits county investment agreements from entering reverse repurchase agreements that exceed 92 days or that represent more than 20% of portfolio balance, we think leverage warrants special attention given recent market conditions. Leveraging the pool by investing with borrowed funds can magnify losses associated with declining asset prices as well as force losses to be realized (as opposed to being carried on paper) if reverse repurchase agreement (repo) dealers require the borrower (the county pool, in this case) to meet margin requirements. Once initiated, this process can quickly deteriorate, as declining asset values can force the investor (LCIP) to post additional collateral to meet margin requirements. Losses are amplified because these margin requirements continue to increase as long as asset values decline. In our view, an increase in Treasury yields, though unexpected, could initiate this portfolio-damaging spiral. In practice, we have seen many counties use reverse repos as a cash generating technique rather than simply as a leveraging technique, allowing them to use assets as collateral in exchange for cash to meet an unexpected cash disbursement.

We believe that some LCIPs may be better positioned than others to weather periods of restricted market liquidity. Episodes of upheaval may be unpleasant, though endurable, if they occur at a time of limited cash outflow needs. When diminished market liquidity and losses are coupled with the need for large cash outflows from a pool, the results can be much more deleterious than if these market events occur when cash outflows are limited. We believe that, although large cash outflows from LCIPs are usually somewhat predictable, they are often also inflexible in their timing. Thus, aside from closely monitoring the participants' expected cash needs, investment officials must maintain sufficient liquidity in the pools they manage to meet expected and unexpected withdrawals.

## **Survey Results: Longer Maturities Than In Recent Years**

We received full or partial survey responses from all 58 counties. Some counties participated by providing partial or full data and only partial or ambiguous responses to our questionnaire regarding portfolio management activities. In aggregate, California LCIPs at March 31, 2010, had a WAM of 466 days, which is notably (23%) longer than the composite WAM at the same time in 2009 (380 days) and 2008 (385 days). Compared to March of 2007, the current composite WAM is a full 37% longer. October, 2007 showed a composite WAM of 356 days. WAMs appear to have drifted longer since the Federal Reserve, which began easing monetary policy in August of 2007,

made clear in recent statements its intent to sustain the very low federal funds rate (0%-0.25%). The WAM range, as of March 31, 2010, spanned 66 days to 4.12 years. Investment pool liquidity is subject to intrayear fluctuation and is likely higher for many counties during much of the year because local governments receive large cash inflows during April, when tax payments are received. As compared with 2009 results, fewer counties (three, as opposed to eight) have market values below their respective book values.

Newer investment alternatives include FDIC NOW accounts (related to the temporary liquidity guarantee program) and the Certificate of Deposit Account Registry Service (CDARS) program. With FDIC NOW accounts, banks can issue CDs covered under the TLGP. Banks will typically pay 50 basis points or less to the depositor. It remains with the depositor to verify that the issuing bank's NOW account meets all statutory requirements for FDIC NOW accounts. Under the CDARS program, participating financial institutions can place the depositor's investment in CDs issued by other participating banks, with a limit of \$250,000 allocated per bank to allow them to qualify for FDIC protection (in increments of less than the standard FDIC insurance maximum so that both principal and interest are eligible for full FDIC insurance). These investments are not marketable securities and we do not consider them liquid assets. However, they may represent an opportunity for somewhat higher yields than might otherwise be available. Our survey found that 13 LCIPs had exposure to these programs.

Nineteen LCIPs regularly monitor asset values by marking values to market on a monthly basis, and six do so on a daily basis. Several LCIPs report that they strive to follow a conservative buy-and-hold approach necessitating less frequent monitoring of valuation. Four LCIPs mark-to-market quarterly, and four do so annually. Three counties report that they conduct no mark-to-market valuation due to a pure buy-and-hold approach. Several LCIPs report that they do not book the changes in market value but do track them. We included these responses in the tallies above. Twenty-two LCIPs either did not respond to the question or reported that they do not formally track market values. One LCIP marks assets to market value upon an asset sale or at maturity. Several LCIPs receive valuations from custodians of holdings that provide market-based price estimates. Limited marking-to-market could be dangerous, in our view, because unexpected liquidation could lead to realized losses of an unknown magnitude if they occur when asset prices are depressed or market liquidity is diminished.

Considering the role of investment income for local agencies in California, we queried the LCIPs about their asset allocation adjustments in an environment of very low Treasury yields. Several counties reiterated their commitment to safety and liquidity. For several LCIPs, a portion of their tactical response has been to inform participants that yield expectations should be low. Some LCIPs have notified participating local agencies that for their budget assumptions, returns from invested cash could be less than 1%. Careful monitoring of demands on cash flows allows several LCIPs to continue with laddered or barbelled strategies, where a portion of funds is invested with longer (one-, three-, or five-year) time horizons while preserving adequate liquidity for withdrawals. Other strategies include investing in callable, government-sponsored enterprises (GSE), and federal agency debt. One LCIP described a more sophisticated duration management approach that employed selecting high-quality credit securities and doing in-house credit analysis.

Although the LCIPs are not stable NAV pools, they typically demonstrate low market value fluctuations on a month-to-month basis. Many of the LCIPs do not actively track NAV. Of the 21 that do or that regularly compare book-to-market value, 12 did not experience wider value fluctuations than 1% during the past year. Several captured capital gains and experienced a surge in market values to 10% or more above book value for a period of time. No LCIPs reported material liquidation of distressed assets, representing an improvement over the past two years, when numerous counties held distressed assets at some point in the year prior to the survey. Similarly, as



compared with before 2007, a majority of county pools now have no ABCP in their portfolios.

## The Effect Of 'Hot Money'

Broadly speaking, managing cash flows is more predictable when participants are required to invest their funds with the LCIPs. As noted above, some LCIPs allow voluntary participants, such as cities and special districts, to invest. In our survey, 25 of 40 that responded to the question indicated that they do accept voluntary participants. Because voluntary investors can suddenly and unexpectedly withdraw their funds to invest in higher-yielding alternatives (known as "hot money"), pool managers may be incentivized to compete for their participation by boasting relatively impressive investment returns. Thus, we think that investing in less liquid assets may be the best way to compete for voluntary participants, giving rise to contradictory objectives. Alternatively, managers may need to remain invested in assets with shorter-than-desired maturities, thereby reducing returns, so that they can meet unexpected claims on funds.

The California state code considers the impact of the withdrawal of funds on the stability, liquidity, and predictability of investments in the pool. For example, among the reporting requirements mandated by state code for local agencies is one that requires the treasurers to affirm that their portfolios have sufficient liquidity to meet expected cash flow needs over the ensuing six months. In practice, treasurers responsible for LCIPs must be aware of the cash flow needs of the mandatory and voluntary participants to satisfy this reporting requirement. Language in the code leaves the specifics of implementation of withdrawal policies up to individual LCIPs. We believe that excessive risk and reduced pool liquidity can be part of a voluntary investment pool if management responds to the incentive (of ranking yield as the dominant investment objective) created by accepting voluntary participants. Although all pool managers must be concerned with the liquidity of their investments and still seek a reasonable rate of return, managers of voluntary pools have the added challenge of potentially needing to meet unexpected withdrawals because they have failed to achieve a competitive rate of return. In late 2007, the Florida LGIP, overseen by the State Board of Administration, experienced a run on the pool as voluntary participants withdrew \$14 billion (almost half of the pool's assets), forcing the board to implement a temporary freeze on withdrawals. Scenarios such as this can have credit and rating implications if participants need funds that are frozen in an LGIP to pay for operations or to make debt service payments.

## Duration, Weighted Average Maturity, And Weighted Average Life

State law precludes LCIPs in California from investing in individual securities with a final maturity of more than five years without approval of their governing boards. This restriction constrains portfolio WAMs typically to five years or less (unless the security was purchased prior to the adoption of the governing code). Monitoring portfolio duration in addition to WAM enhances the measurement of pool interest rate sensitivity relative to solely relying on WAM. Duration expresses the percentage change in the price of a bond given a parallel 100-basis-point shift in the yield curve. Like WAM, portfolio duration takes a weighted average of all the individual assets in the pool. However, unlike WAM, the duration calculation incorporates all cash flows as well as recognizes the effects of bonds with options (callable bonds, for example), making it a more precise and accurate measure of potential market value volatility. In our view, the main drawback to duration is the greater complication in tracking it. WAM is simpler primarily because it considers only the final maturity date of assets in the portfolio. In the case of floating-rate securities, the interest reset date is used as the final maturity when calculating WAM. This can

understate potential interest rate sensitivity of portfolio values, a heightened risk when in an environment of tight credit and widening interest rate spreads. The CDIAC's working group recommends-- but does not require -- that LCIPs monitor portfolio duration in addition to WAM as a best practice. Similarly, the SEC recently amended its Rule 2a-7 so that WAM is calculated to a security's reset date and weighted average life (WAL) to its final maturity, regardless of reset date. In recent years we have expanded our survey to include duration, and in 2010 we have included WAL. Our survey found that 36 LCIPs monitor and can report their current portfolio duration, up from 33 LCIPs in 2009. For the 36 LCIPs that track portfolio duration precisely, the mean duration is somewhat lower in 2010 at 0.86 than in 2009, when it was 1.06 years. In 2008 the mean duration was 0.80 for the 32 counties that tracked the statistic at that time. In our 2010 survey, 31 LCIPs indicated that they track WAL.

We note that in aggregate and compared with 2009, our survey found a longer composite WAM and a shorter mean effective duration. We view this as a counterintuitive finding from the survey because, other factors being equal, portfolio duration tends to increase with WAM. However, we note that some of the counties with the longer WAMs do not track the duration of their portfolio, which we believe explains the unexpected divergence of the two measures in the data.

## Repurchase And Reverse Repurchase Agreements

Many highly liquid investment pools take advantage of the repurchase agreement (repo) market to deploy idle cash more productively. Repos entail purchasing an asset from a dealer who agrees to buy the asset back from the investor on a prearranged date for a prearranged price. In effect, the investor is lending cash and holding assets as collateral. If market volatility is such that the collateral loses value during the repurchase agreement period, the investor becomes exposed to the credit risk of the dealer (borrower). To help mitigate this risk, California law stipulates that the value of the assets accepted as collateral must be equal to 102% of the funds invested by the local government agency. Slightly more than half of the counties surveyed invest in repurchase agreements, with at least two allowed to do so by policy though not doing so at present. All counties that participate in repurchase agreements adhere, at a minimum, to the overcollateralization rule. More than half of the counties that invest in repos accept only Treasuries or government agency obligations as collateral. Several counties accept assets other than Treasuries, such as federal government agencies, GSEs, or medium-term corporate notes, as long as the investments are allowable under the state code; however, those that do tend to require overcollateralization that exceeds the state's 102% requirement. Although the state does not limit the length of repurchase agreements, several counties reported that they have policies limiting their investments in repos to 30 days or less, though generally their practice is to do repo investing of even shorter durations.

Borrowing through reverse repurchase agreements (reverse repos) or securities lending programs represents the other side of a repo agreement and can be a method of generating cash against assets held in a pool. If the borrowed cash is used for investments and not simply to meet unexpected cash flow needs, the pool is said to be leveraged. Although leverage may enhance the rate of return to a pool of assets, in our view it also can potentially magnify losses. We therefore view the use of leverage in a pool to generate increased returns as a more aggressive investment strategy. Following the Orange County bankruptcy, the legislature limited reverse repos to 20% or less of portfolio value and agreement lengths to 92 days or less. More than two-thirds of the counties surveyed said they do not participate in reverse repos, many of them by policy. Those that do tend to be the larger counties, and of these, at least two have policies limiting reverse repos to a more conservative 10% of portfolio value. No counties permit using borrowed funds to make investments with maturities that extend beyond the term of the reverse repo

agreement, what we consider a particularly aggressive method of seeking to boost rates of return called mismatching. Also, at least one county reported that although it has a policy against using leverage to enhance returns through reverse repo securities lending, it retains the ability to borrow cash using the reverse repo market in the event of emergency. Other counties may view reverse repo investing similarly, but did not indicate their use in this way.

Aside from repos and reverse repos, the majority of the counties surveyed reported that they had no derivative exposure.

Robert Tu and Andrew Magee provided valuable research for this report.

2010 California Investment Pool Survey Results							
County	BV (mil. \$)	MV (mil. \$)	MV as % BV	Effective duration (years)	WAM (days)	Assets maturing <90 days (%)	Mandatory participants (%)
Alameda	3,214.8	3,220.9	1.002	0.56	347	49.0	N/A
Alpine	6.1	6.2	1.028	1.68	642	2.2	N/A
Amador	69.3	N/A	N/A	N/A	465	61.0	100.0
Butte	403.6	437.9	1.085	N/A	801	37.3	92.8
Calaveras	123.1	124.5	1.011	1.01	478	44.5	N/A
Colusa	27.3	27.8	1.016	3.00	1095	40.0	N/A
Contra Costa	1,984.3	1,985.4	1.001	0.37	128	72.0	91.3
Del Norte	23.3	23.3	1.000	0.46	1505	53.7	N/A
El Dorado	400.254	400.535	1.001	N/A	66	63.3	52.0
Fresno	2,174.1	2,183.9	1.004	0.90	742	12.7	99.9
Glenn	53.7	53.7	1.001	0.77	393	14.0	N/A
Humboldt	250.5	249.5	0.996	N/A	695	43.1	85.0
Imperial	392.6	393.9	1.003	N/A	N/A	0.5	100.0
Inyo	50.7	50.7	1.000	N/A	507	17.7	100.0
Kern	2,279.4	2,273.1	0.997	0.59	531	38.0	95.0
Kings	211.4	213.8	1.011	0.54	386	36.9	88.7
Lake	134.3	134.5	1.002	0.25	352	57.0	N/A
Lassen	67.7	67.8	1.000	2.84	150	0.0	96.2
Los Angeles	23,612.4	23,699.8	1.004	1.34	518	52.5	90.9
Madera	272.6	271.8	0.997	N/A	566	13.0	98.0
Marin	821.8	823.0	1.001	0.26	95	52.0	70.0
Mariposa	29.7	30.1	1.014	N/A	661	16.0	100.0
Mendocino	174.6	174.9	1.002	0.05	278	52.9	99.0
Merced	635.2	634.2	0.998	N/A	263	38.0	98.0
Modoc	11.3	11.3	1.001	N/A	829	N/A	100.0
Mono	70.0	63.3	0.905	0.40	614	25.3	99.5
Monterey	1,043.5	1,046.4	1.003	0.35	174	50.5	100.0
Napa	414.1	415.2	1.003	1.17	428	39.9	99.0
Nevada	142.1	141.9	0.999	0.71	247	39.9	N/A
Orange	3,601.5	3,599.6	0.999	0.15	277	50.0	99.0
Placer	1,185.2	1,191.1	1.005	0.98	1336	25.8	93.2

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2010 California Investment Pool Survey Results (cont.)							
Plumas	18.5	18.7	1.009	N/A	630	10.9	
Riverside	5,493.7	5,499.9	1.001	1.04	391	26.7	84.0
Sacramento	2,470.8	2,482.2	1.005	0.50	186	72.5	100.0
San Benito *	126.0	127.0	1.008		280		
San Bernardino	4,788.5	4,807.3	1.004	0.73	288	31.6	95.5
San Diego	5,554.0	5,578.2	1.004	0.60	177	44.0	96.0
San Francisco	3,573.8	3,577.1	1.001	1.09	680	37.4	99.8
San Joaquin	1,462.6	1,463.1	1.000	N/A	134	57.0	100.0
San Luis Obispo	544.3	545.8	1.003	0.61	241	32.0	100.0
San Mateo	2,641.5	2,647.3	1.002	1.10	402	44.5	N/A
Santa Barbara	961.3	965.8	1.005	0.52	485	32.8	99.0
Santa Clara	3,686.7	3,699.9	1.004	0.60	300	41.1	90.0
Santa Cruz	614.7	615.7	1.002	0.67	248	32.0	100.0
Shasta	348.7	348.8	1.000	1.09	392	21.1	N/A
Sierra	12.1	12.2	1.009	1.13	612	67.0	N/A
Siskiyou	88.5	89.3	1.009	N/A	385	63.8	N/A
Solano	607.3	609.2	1.003	0.57	275	38.4	85.0
Sonoma	1,399.9	1,402.8	1.002	N/A	479	29.1	100.0
Stanislaus	1,010.8	1,016.7	1.006	N/A	348	36.0	100.0
Sutter	171.2	173.8	1.016	N/A	861	22.6	100.0
Tehama	108.9	109.6	1.007	N/A	N/A	36.0	N/A
Trinity	30.5	30.7	1.007	N/A	N/A	100.0	100.0
Tulare	921.1	933.4	1.013	N/A	612	36.0	95.7
Tuolumne	84.4	84.8	1.005	N/A	N/A	65.0	100.0
Ventura	1,988.4	1,993.5	1.003	N/A	324	24.0	95.0
Yolo	270.7	271.5	1.003	0.52	209	62.0	95.0
Yuba	282.7	284.1	1.005	N/A	N/A	49.5	N/A
CAMP (statewide)	2,771.3	2,771.8	1.000	0.16	57	62.9	0.0
CalTrust (statewide)	404.1	402.2	0.995	0.67	248	25.1	0.0
PMIA(LAIF)	69,151.8	69,233.6	1.001	N/A	213	48.0	0.0

Data reflects information reported as of March 31, 2010. \*As of Feb. 28, 2010.

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