

# California County And Local Government Investment Pool Managers Walk The Line To Provide Liquidity And Higher Yields

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# California County And Local Government Investment Pool Managers Walk The Line To Provide Liquidity And Higher Yields

California's ongoing budget and general fund cash deficits have underscored the importance of cash management at the local agency level throughout the state, in the view of Standard & Poor's Ratings Services. School districts in particular, which depend on considerable amounts of state aid, have seen a growing portion of their state-aid revenues deferred from one fiscal year to the next. These deferrals add to the challenge of cash management.

Even when the state's budget is not distressed, it is common for a local government's cash outflows to exceed its inflows during certain periods of the year. To bridge these cash deficits, similar to the state, local agencies can use 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 Standard & Poor's Ratings Services 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.

## Overview

- In a sustained low interest-rate environment, California county investment pools have allowed weighted durations of their portfolios to drift somewhat longer in search of higher yield.
- The investment pool managers we surveyed generally anticipate incrementally higher interest rates during a six-to-12 month horizon.
- California investment managers are monitoring their pools closely and can generally quantify exposures to certain identifiable risks.

Local agencies in California frequently invest idle capital and operating funds and proceeds from TRAN issues in their respective local county investment pools (LCIPs). Some local agencies and numerous LCIPs themselves invest in several statewide local government investment pools (LGIPs). In either case, the statutory goal for the investing agencies or LCIPs is maintaining the safety and liquidity of their investments. In addition, with limited revenue raising flexibility in California, investments are an important source of income, albeit usually smaller (frequently 5% or less of general fund revenue) in relation to primary revenues (such as property tax). According to the state controller's office, aggregate income for California cities and counties, respectively, from investments fell 29% and 34% in fiscal 2009 (the most recent data available) compared to 2008. This decline is consistent with what we observed as the Federal Reserve changed monetary policy in early fiscal 2008 pursuant to which it lowered the Federal Funds rate, which in-turn reduced the yields on short-term Treasury holdings.

Standard & Poor's surveys these pool managers on their methods of managing their funds' risks. This year's annual survey of California county investment pool managers focused on how managers were balancing the risk of longer-term investments in the low interest rate environment.

Exposure to LCIPs and LGIPs are credit factors that we consider in our ratings analysis for TRANs and long-term

debt issued by many of the counties and local agencies. We factor this exposure into the ratings because LCIPs hold and invest 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.

Macroeconomic risks to California investment pools could include, among others:

- A sudden increase in interest rates related to politicians' inability to resolve the approaching federal debt limit, which would cause longer-maturity bonds to lose market value;
- A reversal of the slow economic recovery into another outright slowdown that could keep yields on short-term investment options low for the foreseeable future, making it difficult for investment managers to generate income;
- A default by any of the distressed European sovereigns, such as Greece or Italy, that could result in large write-downs by European banks and could trigger credit default swap payments that translate into losses among investors, including California investment pools, with exposure to these entities.

Results from our 2011 survey suggest that the ongoing low-interest rate environment is likely to translate into limited amounts of interest income from invested operating cash. In response, the mean weighted average maturity (WAM) across the counties remains approximately 450 days, similar to the mean WAM in 2010, which is longer than in previous years. In addition, we see California investment managers as generally remaining cognizant of potential risks to their invested funds. In particular, most county pool managers have limited indirect or no exposure to European banks that could incur losses in the event of a European sovereign default, by Greece, for example.

## **Market Conditions: Low Interest Rates Can Only Go Up, But When?**

California state code stipulates that public-sector investment managers prioritize capital safety and liquidity above yield. However, with flat or declining tax revenues and limited ability to raise tax rates, even modest investment returns can represent an important source of income for strained local budgets. A very low federal funds rate (0.00% to 0.25% since December 2008) has made it difficult for investment managers of public funds to generate meaningful income streams while adhering to the safety and liquidity mandates. Since California county investment pools are not managed as true money market funds, however, they can -- and typically do -- allocate a portion of their assets to longer-maturity and higher-yield holdings. In our view, successful management of the public funds can, therefore, require the tricky balancing act of maintaining enough liquidity to satisfy participant needs while tactically allocating a certain amount of capital to longer-dated and higher-yield assets.

With the federal funds rate effectively at its zero lower bound, there is only one direction for it to go: up. When, and by how much, interest rates will increase remains uncertain. In fulfillment of one of its mandates (price stability), when the Federal Reserve perceives the risk of inflation, it will generally sell Treasury bills through its open market operations to reduce the banking reserves and, therefore, the money supply in the economy, thereby increasing short-term interest rates. However, its opposite mandate (full employment), suggests to us that when the economy and employment are weak, a permissive monetary policy (and lower interest-rate target) is warranted. Aside from Federal Reserve policy actions, interest rates could increase from the current level if economic performance accelerates and demand for loanable funds throughout the economy pushes rates higher.

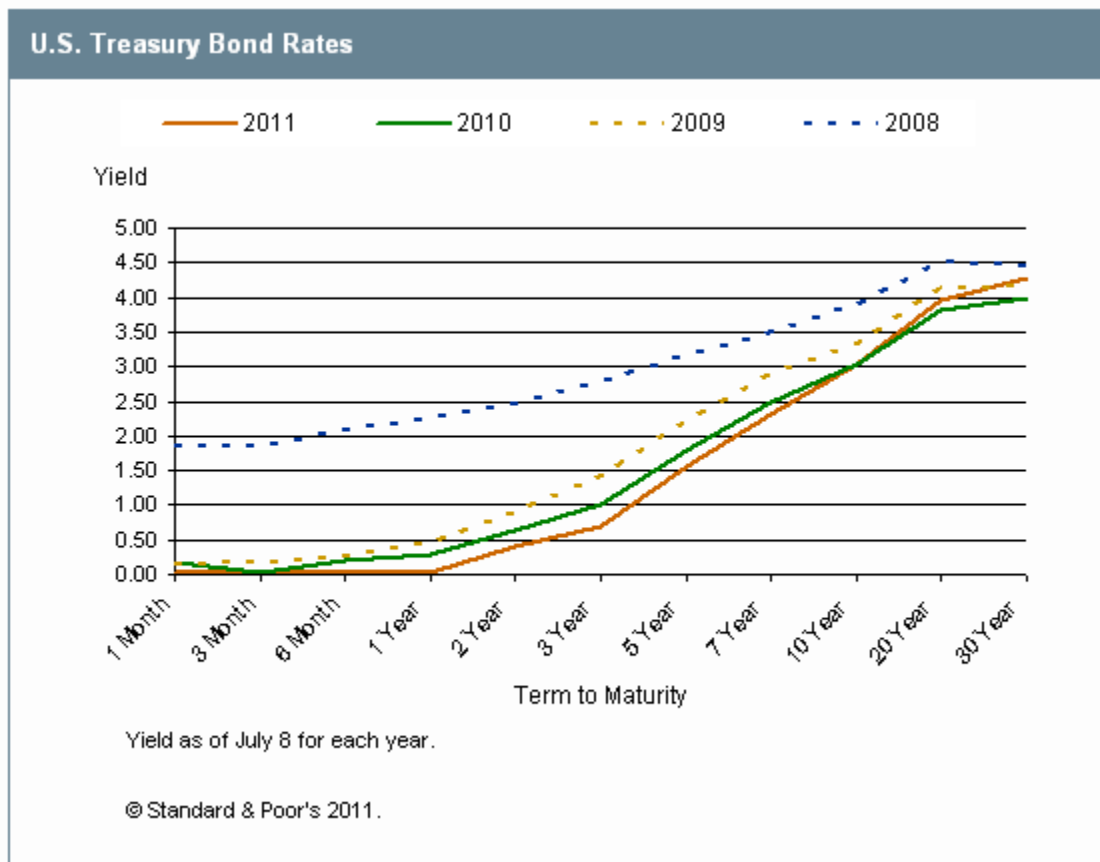
In contrast to some market participants who have raised concerns about inflation stemming from higher commodity prices observed during the first half of 2011, the Federal Reserve has referred to any corresponding inflation as "transitory." It does not view inflation as a near-term risk, which in our view suggests that the federal funds rate

could remain low for the foreseeable future. Moreover, we believe that renewed pessimism about the outlook for the U.S. economy, as reflected in recent jobs reports and home price data, suggest that recovery from the Great Recession could remain gradual and sluggish. As a result, in our view, economic optimism is not presently likely to induce materially higher interest rates.

We believe that a brief analysis of the market for U.S. Treasury bonds indicates the Fed's view is well-embedded in market expectations. As of July 8, 2011, interest rates on five-year U.S. Treasuries were 1.57%. When we subtract the negative 0.44% yield on inflation-protected five-year Treasuries (TIPS), we can interpret a market-implied annual inflation rate of just 2.01% during the five-year horizon. This is slightly higher than the 1.43% implied inflation expectation we found at this time in 2010, but we still consider inflation well contained.

Of the 53 counties and three other statewide investment pool options that responded to our survey question about their views on interest rates, a preponderance (26) indicated they anticipate higher interest rates at some point in the next six-to-12 months. Of the 12 counties that say they do not expect an increase in interest rates, several added that they do not engage in active interest rate forecasting. Six respondents expect higher interest rates, but not within the next 12 months. Twelve respondents anticipate higher interest rates, but did not offer their views on when they expect them to materialize.

**Chart 1**



However, we do recognize that interest rates could increase sharply if, for example, the market became concerned about the U.S. Congress' resolve to increase the federal debt ceiling before the August deadline arrives. In addition,

as the Greek sovereign debt situation evolves, exposure to European banks could represent a potential source of risk to a few California investment pools. Of the 19 counties that have responded to our survey on this matter, only four indicate they have such exposure. All four indicate their European bank holdings are minimal, short-term, or over-collateralized.

## **Conservatism Prevails Among California LGIPs And LCIPs**

Many California LCIPs' and LGIPs' asset allocations emphasize liquidity and a buy-and-hold approach, so they avoid actively trading securities prior to their maturity in an attempt to turn a profit. California state code encourages maintaining liquidity by requiring investment pools to obtain the approval from the local agency governing board before investing in securities with maturities of more than five years, even if the pool's current holdings already include such securities. 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, have greater market (interest rate) risk in our view. Relative to short-term holdings, the pools with some longer-term exposure may experience dilution or greater losses if interest rates rise or if a fund participant requires cash that necessitates the unexpected liquidation of an asset prior to its maturity.

## **LGIPs And LCIPs As Investment Vehicles**

The pools for California's 58 counties are the legal repository of investable funds for school districts (mandatory participants). In addition, numerous counties agree to accept and invest funds on behalf of other local agencies within their boundaries (voluntary participants). The local government agencies and LCIPs may invest in the following four investment options:

- Pooled Money Investment Account (PMIA),
- Local Agency Investment Fund (LAIF),
- Capital Asset Management Program (CAMP), and
- CalTRUST options (three) for California local agencies.

### **Pooled Money Investment Account (PMIA)**

The PMIA is an investment vehicle used by the state to manage its cash flow as well as the cash flows of other government entities. Its investment objectives, as dictated by policy, are safety, liquidity, and yield. It is governed by a board comprising the state treasurer, director of finance, and controller. The PMIA has three primary sources of funds:

- The state general fund;
- Special funds held by state agencies; and
- Funds deposited by cities, counties, and other entities into the LAIF, which is a subfund of the PMIA.

As of May 31, 2011, the PMIA had \$69.7 billion in pooled funds.

### **Local Agency Investment Fund (LAIF)**

The LAIF is a \$24.1 billion voluntary pooled money fund that is a part of the state's PMIA. With 2,779 participating local agencies as of the end of May 2011, 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. 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 more immediate access depending upon the circumstance. (Invested bond proceeds are subject to a slightly less liquid withdrawal schedule.) Local governments have access to the treasurer's dedicated investment staff expertise by investing in the LAIF.

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, 2011, the LAIF's WAM of 193 days was 9.4% lower than it was at March 31, 2010 (213 days), and 2.0% lower than it was in 2009 (197 days). The lower WAMs suggest somewhat greater liquidity in the LAIF.

### **Capital Asset Management Program (CAMP)**

The CAMP cash reserve portfolio is a \$1.997 billion (book value at March 31, 2011) 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 program's 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 had a WAM of just 57 days as of March 31, 2011. The market value of CAMP's assets is relatively insensitive to changes in market interest rates and has an effective duration of just 0.17 years.

### **CalTRUST**

The Investment Trust of California (CalTRUST) is organized as a joint powers authority by public agencies in California for the purpose of pooling and investing local agency funds such as operating reserves and bond proceeds. CalTRUST invests in fixed-income securities eligible for investment pursuant to California government code. CalTRUST offers the option of four accounts to provide participating agencies with a convenient method of pooling funds -- a money market, a short-term, a medium-term, and an authorized, but not yet opened long-term account.

- For the money market account, participants may invest through CalTRUST in the Select class shares of the 'AAAm' rated Wells Fargo Advantage Funds Heritage Money Market Fund. As of June 30, 2011 the Heritage Money Market Fund had a weighted average maturity (WAM) of 20 days and a weighted average final maturity of 38 days.
- The CalTRUST Short-Term Fund is rated 'AAf/S1+' by Standard & Poor's Fund Ratings group. As of March 31, 2011 CalTRUST's Short-Term fund had a book value of \$391.7 million, an effective duration of 0.724 years, and a WAM of 270 days.
- The CalTRUST Medium-Term Fund (unrated) had a book value of \$235 million as of March 31, 2011. The Medium-Term Fund had an effective duration of 1.69 years and a WAM of 636 days, as of March 31, 2011.

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

- Contra Costa County Investment Pool (AAAf/S1+);
- Orange County Educational Money Market Fund (AAAm);
- Orange County Money Market Fund (AAAm);

- San Bernardino County Investment Pool (AAAf/S1+);
- San Diego County Treasurer's Pooled Money Fund (AAAf/S1);
- San Mateo County Investment Portfolio (AAAf/S1 );
- Santa Barbara County Treasurer's Investment Pool (AAAf/S1);
- Solano County Treasurer's Investment Pool (AAAf/S1); and
- Ventura County Treasury Portfolio (AAAf/S1+)

To meet the cash-flow needs of 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, typically do invest a portion of the assets under their management with a longer-term perspective. This is done 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 market value volatility 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 while the other portion is invested in securities with longer maturities providing higher yields. This approach more formally segregates assets by strategy type than those that involve laddered or "barbelled" fixed-income portfolio compositions. Laddered portfolios hold a portion of assets in short maturity investments intended to satisfy the pool's liquidity needs while the remaining assets are invested across a relatively evenly weighted selection of asset maturities. In barbelled portfolios, there are few intermediate maturity holdings, as most asset maturities are either short or long.

## **Funding Shortfalls And Exhausted Reserves Can Prompt Riskier Investments**

Results from our annual and event-driven periodic surveys suggest, in our view, that most California LCIPs manage their assets conservatively and that legislative reforms put in place following the 1994 Orange County bankruptcy continue to mitigate significant risk taking. These 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 provide consensus investment practice guidelines from CDIAC's working group. 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 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. In our view, relentlessly low rates at

the short end of the yield curve could make investing in longer-term and potentially higher-yield maturities more attractive at a time when some governments are looking for any uptick in revenue.

## **Survey Responses Reflect Constrained State Budget**

In addition to asking respondents to report investment pool statistics such as market and book value, we surveyed aspects of investment management practices and the extent to which counties emphasize maintenance of liquidity in their investment approach.

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 agencies' operations and TRAN borrowings by serving as a manager of those invested funds. 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 assets that were issued by subsequently distressed, bankrupt, or insolvent institutions.

We also surveyed key investment policies and practices to assess the pools' tendency toward loss exposure and their ability to withstand stress in the market. This would allow us to understand investment managers' attitudes about market risk in the long and short term.

Among the practices surveyed were:

- What portion of the pool, if any, is made up 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 pools from entering into reverse repurchase agreements that exceed 92 days or that represent more than 20% of a portfolio's 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 (the 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, although unexpected, could initiate this portfolio-damaging spiral. In practice, we have seen many counties use reverse repos as a cash-generating technique rather than a leveraging technique: It allows them to use assets as collateral in exchange for cash to meet an unexpected cash disbursement.



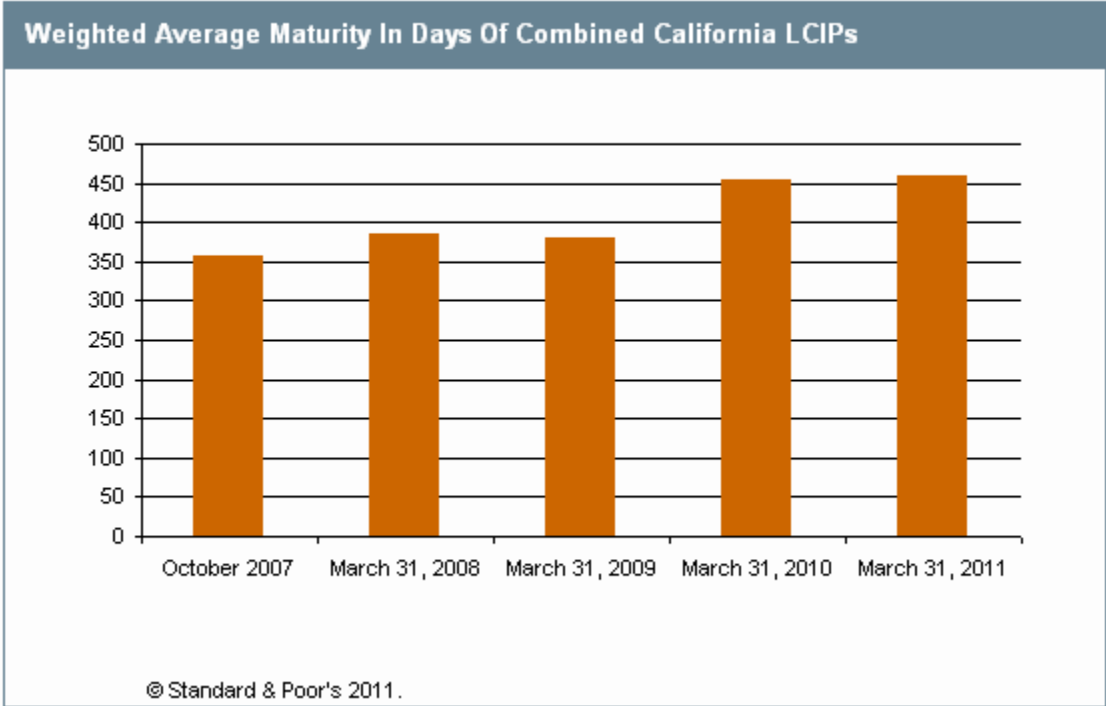
We believe that some LCIPs are better positioned than others to weather periods of restricted market liquidity. Episodes of upheaval may be unpleasant, though endurable, if they occur at a time of limited cash-outflow needs. However, when diminished market liquidity or losses are coupled with the need for large cash outflows from a pool, the results can cause much more strain than if these market events occur when cash outflows are limited. Although large cash outflows from LCIPs are usually somewhat predictable, they are often also inflexible in their timing, in our view. Thus, aside from closely monitoring the participants' expected cash needs, if investment officials are to meet expected and unexpected withdrawals, they need to maintain sufficient pool liquidity or be prepared, if necessary, to sell assets at unfavorable market prices.

## **Managers Work With Longer Maturities Requiring More Vigilance In A Sustained Low-Yield Environment**

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. Of the 57 counties that responded to our survey, some participated by providing partial or full data and only partial or ambiguous responses to our questionnaire regarding portfolio management activities. Numerous respondents indicated that they expect interest rates to increase at some point in the next year. In response, most are retaining what we consider to be a generally conservative stance with several increasing their floating rate note holdings.

WAMs have moved slightly longer, perhaps as a response to the ongoing low-interest rate environment (see chart 2). This continues what we have seen as a trend that began around when the Federal Reserve began easing its monetary policy in August of 2007. The Federal Reserve has since stated its intent to sustain the very low federal funds rate, and managers appear to have responded by lengthening the WAMs of their pools. The WAM range, as of March 31, 2011, spanned 72 days to 4.23 years. Investment pool liquidity is subject to intra-year fluctuations 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 of March 31, 2011, fewer counties (three, as opposed to eight) had market values below their respective book values than in 2009.

Chart 2



Twenty LCIPs regularly monitor asset values by marking values to market on a monthly basis while seven track market versus book values on a daily basis (compared to 19 and six, respectively, in 2010). In cases where respondents indicated they track values for informational purposes at a more frequent interval and book gains or losses less frequently, we counted the more frequent tracking interval. Several LCIPs report that they strive to follow a conservative buy-and-hold approach necessitating less frequent monitoring of valuation. Six LCIPs mark-to-market quarterly, and two do so annually (compared to four for both in 2010). Sixteen LCIPs either did not respond to the question or reported that they do not formally track market values, down from 22 in 2010. Several LCIPs receive valuations from custodians of holdings that provide market-based price estimates. Limited marking-to-market could be problematic, in our view, because an unexpected liquidation could lead to realized losses of an unknown magnitude if they occur when asset prices are depressed or market liquidity is diminished.

Although the LCIPs are not stable net asset value pools, they typically demonstrate low market value fluctuations on a month-to-month basis. Many of the LCIPs do not actively track net asset value. Of the 20 that do or that regularly compare book-to-market value, seven did not experience value fluctuations wider than 1% during the past year. Several reported a surge of market value in the pool related to periods coinciding with collection of property taxes, but this is unrelated to investment performance.

### "Hot Money" Requires Close Management

Broadly speaking, we see managing cash flows as 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, 20 of 35 that responded to the question indicated that they accept voluntary participants. Because voluntary investors can suddenly and unexpectedly withdraw their funds to invest in higher-yielding

alternatives (known as "hot money"), in our view pool managers may have an incentive to compete for their participation by boasting relatively impressive investment returns. We recognize that investing in less-liquid assets may be the best way to compete for voluntary participants, giving rise to contradictory objectives. However, we believe that 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 the 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 during the ensuing six months. In practice, treasurers responsible for LCIPs must be aware of the cash-flow needs of mandatory and voluntary participants to satisfy this reporting requirement. Language in the code leaves the specifics of withdrawal policy implementation up to individual LCIPs. 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 from 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). In our view, monitoring a portfolio's duration in addition to WAM gives a clearer picture of the pool's sensitivity to interest-rate fluctuation 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 and recognizes the effects of bonds with options (callable bonds, for example), making it a more precise and accurate measure of potential market-value volatility. The main drawback to the duration calculation cited by participants 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 the potential interest-rate sensitivity of portfolio values, a heightened risk when in an environment of tight credit and widening interest-rate spreads. The California Debt and Investment Advisory Commission 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 both 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 beginning in 2010, have also included WAL.

Our 2011 survey found that 37 LCIPs monitor and can report their current portfolio duration, up from 36 in 2010 and 33 in 2009. For the 37 LCIPs that track portfolio duration precisely, the mean duration is somewhat higher, at 1.03 years, in 2011 than it was in either 2010 (0.86) and similar to what it was in 2009 (1.06 years). In 2008, the

mean duration was 0.80 for the 32 counties that tracked the statistic at that time. In our 2011 survey, 32 LCIPs indicated that they track WAL, up from 31 in 2010.

## Repurchase And Reverse Repurchase Agreements

Many highly liquid investment pools take advantage of the 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. At least two counties are allowed to participate in the repo market by policy although management of both indicate that they are 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, government-sponsored enterprises, 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, although 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 on 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 mismatching, which we view as a particularly aggressive method to boost return rates. In mismatching, borrowed funds are used to make investments with maturities that extend beyond the term of the reverse repo agreement. 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.

Overall, results of our annual survey of California county and local government investment pools indicate to us that investment managers continue to maintain highly liquid portfolios. However, confronted with the sustained low interest rate environment, and challenged to produce even low rates of return, by historic standards, for their participating agencies, weighted average maturities have drifted somewhat longer. Should lawmakers fail to negotiate a timely resolution to the approaching federal debt limit, Treasury notes and federal agency holdings risk a

loss of market value if interest rates increase sharply and if investment managers need to liquidate their positions prior to the maturity dates of their investments. From what we learned in our survey, we believe pool managers are well positioned to respond to other risks we have identified. Where it is difficult to eliminate exposure entirely (i.e., European banks that could be affected by a European Union member sovereign default), we have found that the pools have largely minimized their vulnerabilities and are actively monitoring developments. This response is generally consistent with our overall interpretation that the pool managers are sophisticated participants in the fixed-income and money markets.

**Table 1**

| <b>2011 California Investment Pool Survey Results</b> |                             |                              |                                 |                           |   |                                     |   |                                       |  |
|---|-----------------------------|------------------------------|---------------------------------|---------------------------|---|-------------------------------------|---|---------------------------------------|--|
| <b>County</b>   | <b>Book value* (Mil \$)</b> | <b>Market value (Mil \$)</b> | <b>Market to book value (%)</b> | <b>Effective duration</b> | <b>Weighted average maturity (days)</b> | <b>Weighted average life (days)</b> | <b>Percent assets maturing in less than 90 days</b> | <b>Percent mandatory participants</b> |  |
| Alameda   | 3,144.9                     | 3,348.1                      | 1.065                           | 0.84                      | 405                                     | 408                                 | 48.5  | 100.0                                 |  |
| Alpine  | 6.2                         | 6.3                          | 1.020                           | 1.41                      | 533                                     | 533                                 | 6.6   | N/A                                   |  |
| Amador  | 65.5                        | 65.9                         | 1.005                           | N.C.                      | 356                                     | N.C.                                | 54.0  | 100.0                                 |  |
| Butte   | 439.2                       | 442.7                        | 1.008                           | 2.18                      | N/A                                     | 682                                 | 39.4  | 92.2                                  |  |
| Calaveras   | 119.6                       | 120.7                        | 1.010                           | 0.80                      | 296                                     | 296                                 | 49.3  | 100.0                                 |  |
| Colusa  | 30.4                        | 29.6                         | 0.972                           | N/A                       | 1,095                                   | 1,095                               | 40.0  | N/A                                   |  |
| Contra Costa  | 2,068.2                     | 2,068.4                      | 1.000                           | 0.48                      | 159                                     | N/A                                 | 73.0  | 93.2                                  |  |
| Del Norte   | 34.8                        | 34.7                         | 0.996                           | Updated monthly           | 625                                     | 641                                 | 71.0  | N/A                                   |  |
| El Dorado   | N/A                         | N/A                          | N/A                             | N/A                       | N/A                                     | N/A                                 | N/A   | N/A                                   |  |
| Fresno  | 2.1                         | 2.1                          | 0.998                           | 1.36                      | 939                                     | 939                                 | 17.2  | 100.0                                 |  |
| Glenn   | 56.2                        | 53.6                         | 0.954                           | 1.43                      | 339                                     | N/A                                 | 47.0  | N/A                                   |  |
| Humboldt  | 270.7                       | 271.1                        | 1.001                           | 2.39                      | 928                                     | 1,065                               | 39.0  | N/A                                   |  |
| Imperial  | 393.7                       | 394.8                        | 1.003                           | N.C.                      | 641                                     | N/A                                 | 23.9  | 100.0                                 |  |
| Inyo  | 57.5                        | 57.2                         | 0.996                           | N.C.                      | 683                                     | N/A                                 | 0.0   | 100.0                                 |  |
| Kern  | 2,319.6                     | 2,302.8                      | 0.993                           | 0.57                      | 592                                     | N/A                                 | 31.0  | N/A                                   |  |
| Kings   | 234.8                       | 235.0                        | 1.001                           | 0.49                      | 186                                     | 627                                 | 38.4  | 88.7                                  |  |
| Lake  | 137.6                       | 138.2                        | 1.004                           | N.C.                      | 170                                     | N/A                                 | 44.8  | N/A                                   |  |
| Lassen  | 62.3                        | 62.3                         | 1.000                           | N.C.                      | 163                                     | N/A                                 | 85.1  | 100.0                                 |  |
| Los Angeles   | 24,944.4                    | 24,844.3                     | 0.996                           | 1.52                      | 587                                     | N/A                                 | 46.0  | 89.4                                  |  |
| Madera  | 290.6                       | 290.2                        | 0.999                           | N.C.                      | 179                                     | 797                                 | 3.0   | 99.7                                  |  |
| Marin   | 817.9                       | 817.5                        | 0.999                           | 0.19                      | 72                                      | 298                                 | 61.3  | 87.8                                  |  |
| Mariposa  | 27.2                        | 27.3                         | 1.003                           | N.C.                      | N/A                                     | N/A                                 | 2.0   | N/A                                   |  |
| Mendocino   | 170.1                       | 170.7                        | 1.003                           | 0.05                      | 239                                     | N/A                                 | 50.0  | 0.0                                   |  |
| Merced  | 648.1                       | 650.3                        | 1.003                           | 0.729                     | 277                                     | N/A                                 | 50.0  | 78.0                                  |  |
| Modoc   | 15.0                        | 15.1                         | 1.002                           | 1.14                      | 432                                     | N/A                                 | 73.9  | 100.0                                 |  |
| Mono  | 72.2                        | 71.9                         | 0.997                           | 0.89                      | 735                                     | 735                                 | 39.9  | 0.0                                   |  |
| Monterey  | 1,008.1                     | 1,007.2                      | 0.999                           | 0.49                      | 291                                     | 291                                 | 47.3  | 100.0                                 |  |
| Napa  | 435.9                       | 436.0                        | 1.000                           | 1.42                      | 518                                     | 518                                 | 35.2  | 100.0                                 |  |
| Nevada  | 163.1                       | 162.9                        | 0.999                           | 0.86                      | 323                                     | N/A                                 | 53.0  | 0.0                                   |  |
| Orange  | 7,063.1                     | 7,071.3                      | 1.001                           | N.C.                      | 290                                     | 307                                 | 40.1  | 99.7                                  |  |
| Placer  | 1,049.8                     | 1,051.1                      | 1.001                           | 2.66                      | 1,543                                   | N/A                                 | 30.4  | 92.2                                  |  |

*California County And Local Government Investment Pool Managers Walk The Line To Provide Liquidity And Higher Yields*

**Table 1**

| <b>2011 California Investment Pool Survey Results (cont.)</b> |          |          |       |                      |       |     |       |       |
|---|----------|----------|-------|----------------------|-------|-----|-------|-------|
| Plumas  | 79.6     | 79.6     | 1.001 | 0.4358               | 174   | 174 | 66.6  | 100.0 |
| Riverside   | 5,429.1  | 5,421.2  | 0.999 | 1.24                 | 460   | 460 | 31.0  | 73.0  |
| Sacramento  | 2,442.0  | 2,447.4  | 1.002 | 0.55                 | 203   | 203 | 68.8  | 100.0 |
| San Benito  | 124.0    | 125.8    | 1.014 | Between .04 and .082 | 266   | N/A | 8.0   | N/A   |
| San Bernardino  | 4,559.1  | 4,560.8  | 1.000 | 0.82                 | 358   | 377 | 46.5  | 95.5  |
| San Diego   | 6,142.1  | 6,151.2  | 1.001 | 0.71                 | 425   | 425 | 40.3  | 91.0  |
| San Francisco   | 4.4      | 4.4      | 0.997 | 2.08                 | 708   | 779 | 14.9  | N/A   |
| San Joaquin   | 1,442.3  | 1,442.0  | 1.000 | N.C.                 | 86    | 249 | 68.0  | 100.0 |
| San Luis Obispo   | 455.7    | 457.2    | 1.003 | 0.80                 | 291   | 291 | 44.0  | 100.0 |
| San Mateo   | 2,362.8  | 2,363.4  | 1.000 | 1.40                 | 548   | 548 | 30.7  | N/A   |
| Santa Barbara   | 993.5    | 992.6    | 0.999 | 0.73                 | 566   | N/A | 45.2  | N/A   |
| Santa Clara   | 3,712.3  | 3,717.4  | 1.001 | 0.80                 | 347   | 347 | 47.7  | 97.0  |
| Santa Cruz  | 610.7    | 611.1    | 1.001 | 0.91                 | 329   | 329 | 21.4  | 100.0 |
| Shasta  | 351.7    | 350.7    | 0.997 | 1.71                 | 615   | N/A | 22.0  | N/A   |
| Sierra  | 12.1     | 12.2     | 1.007 | 0.43                 | 156   | 156 | 67.0  | N/A   |
| Siskiyou  | 88.6     | 88.8     | 1.002 | 0.87                 | 540   | 540 | 58.0  | 95.0  |
| Solano  | 654.8    | 655.3    | 1.001 | 0.85                 | 333   | 333 | 49.0  | N/A   |
| Sonoma  | 1.5      | 1.5      | 1.000 | N.C.                 | 642   | N/A | 24.0  | N/A   |
| Stanislaus  | 1,062.2  | 1,067.2  | 1.005 | N.C.                 | 406   | 900 | 21.0  | 100.0 |
| Sutter  | 173.2    | 175.2    | 1.012 | N.C.                 | 1,094 | N/A | 27.9  | N/A   |
| Tehama  | 110.8    | 110.8    | 1.000 | N.C.                 | N/A   | N/A | 25.0  | N/A   |
| Trinity   | 35.0     | 34.8     | 0.994 | N.C.                 | N/A   | N/A | 100.0 | N/A   |
| Tulare  | 881.4    | 889.2    | 1.009 | N.C.                 | 665   | N/A | 25.0  | 95.3  |
| Tuolumne  | 90.3     | 90.3     | 1.000 | N.C.                 | N/A   | N/A | 15.0  | N/A   |
| Ventura   | 1,993.8  | 1,993.8  | 1.000 | N.C.                 | 363   | N/A | 16.3  | N/A   |
| Yolo  | 278.9    | 279.3    | 1.001 | 0.74                 | 278   | 299 | 49.0  | 100.0 |
| Yuba  | 391.5    | 394.6    | 1.008 | N.C.                 | 345   | 460 | 33.0  | 69.0  |
| Average   | 0.0      | 0.0      |       | 1.0271               | 458   | 503 | 0.0   | 0.0   |
| CAMP (statewide)  | 1,996.8  | 1,997.3  | 1.000 | 0.17                 | 57    | 108 | 63.1  | N/A   |
| CalTrust Short-Term (statewide)                               | 391.7    | 392.1    | 1.001 | 0.72                 | 270   | 356 | 25.5  | 0.0   |
| CalTrust Medium-Term (statewide)                              | 235.2    | 237.3    | 1.009 | 1.69                 | 636   | 636 | 0.9   | 0.0   |
| PMIA (LAIF)   | 68,378.1 | 68,557.4 | 1.003 | N/A                  | N/A   | 193 | 47.5  | 0.0   |

N/A--Not applicable. N.C.--Not calculated. \*All valuation dates are as of March 31, 2011. †El Dorado County chose not to participate in the survey.

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