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Municipal Securities Research

Municipal Commentary

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State Revenues and Public Pensions

Last week, the Federal Reserve broadcast a dovish approach to raising interest rates. In this context, we reflect on how the states have become much more dependent on financial markets performance since 2000:

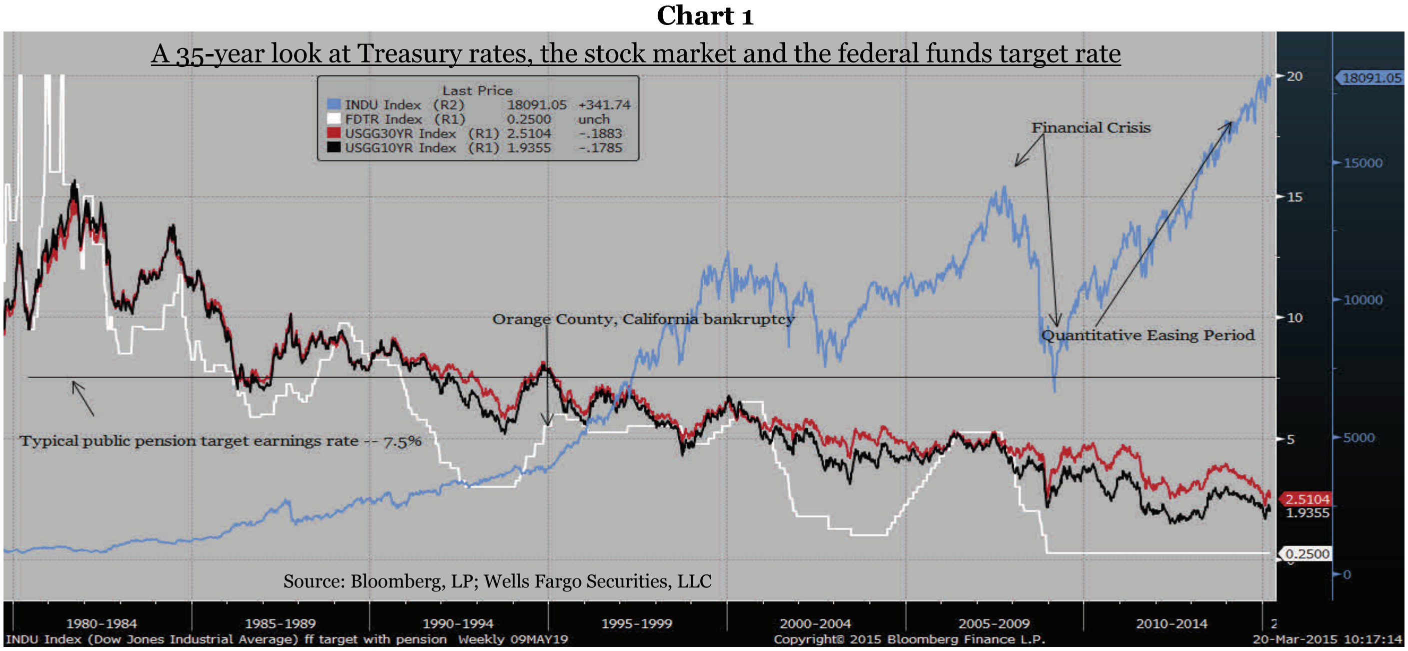
1) State revenue has become more volatile, turning budget-making into something of an aerobic activity. As we discuss below, much of this is due to fluctuation in capital gains taxes (and taxes on other investment income). Tax policy changes (at the federal as well as state level) also influence the timing when investors choose to take gains.
2) Public pension plans, operating in a tough earnings environment since 2000, have increased the riskiness of their investments in an effort to achieve earnings targets. The reach for yield is an understandable effort to limit the damage to state and local budgets but nevertheless intensifies exposure to financial markets volatility.
3) Large pension obligation bond issues are under consideration by Kansas, Kentucky and Pennsylvania to put cash in sorely underfunded pension plans. Unlike other forms of municipal borrowing these are sold with the expectation that the assets bought with bond proceeds will outperform the cost of borrowing for the life of the debt.

A market correction is not likely in the immediate near term, in our opinion, since the Federal Reserve has punted the long-awaited rate rise for some months or perhaps longer. But it is worth revisiting how market dependence affected state budgets and pension funding over the past two market downturns to understand how they (as well as your own portfolios) may be positioned for the future.

First, a Chart

Consider our rather busy Chart 1 below. We set out movements in the stock market against those of 10-year

Chart 1



Source: Bloomberg, LP; Wells Fargo Securities, LLC and 30-year Treasuries (different scales) for the past 35 years. We compare the Federal Funds target rate and observe stock market gains and losses, tracking these rate changes since the dot-com bubble burst in the late 1990s, and we entered the new millennium. We also show the typical public pension target earnings rate to illustrate the yield spread above risk-free Treasuries that became necessary in order to achieve targets, particularly since the mid-1900s.

State Revenue Volatility

Numerous studies highlight increased reliance on capital gains/losses (and other investment income) as a factor in the volatility of state revenue (Sjoquist, Wallace; Sjoquist Wallace and Stephenson; Mattoon, McGranahan). Sjoquist and Wallace found that “Capital income was five times more volatile than wages and salaries or consumption” over a 30-year period. States that are most reliant on capital gains tax revenues include New York, California, Vermont, Connecticut, Oregon, Hawaii, Massachusetts, New Jersey, Idaho, and Colorado.

Chart 2 illustrates the ratio of investment income (capital gains, interest and dividends) to adjusted gross income (AGI) for California and for the United States as a whole, figures derived from IRS SOI Tax Stats. (Note this is not tax *revenue*; rather it is individual income from capital gains and taxable AGI.) As you can see, investment income peaked at 18% of AGI at the end of the dot-com boom in California, and again at the end of the 2004-2007 bubble at nearly 17%. The lesson of the down side, in our view, is a message to states not to over-promise, over-spend or engage in revenue reductions when nearing what seems to be a peak, such as we may be today.

The Rockefeller/Pew study found that Tennessee lost 40% of its tax revenue on dividend income in 2009 from hitting its budget with an unexpected $220 million gap. Likewise, Massachusetts had counted on $2.1 billion in capital gains tax realizations in 2008 only to achieve $500 million, leaving a large hole in its budget. The state had experienced a similar drop in revenue following the dot-com boom and bust.

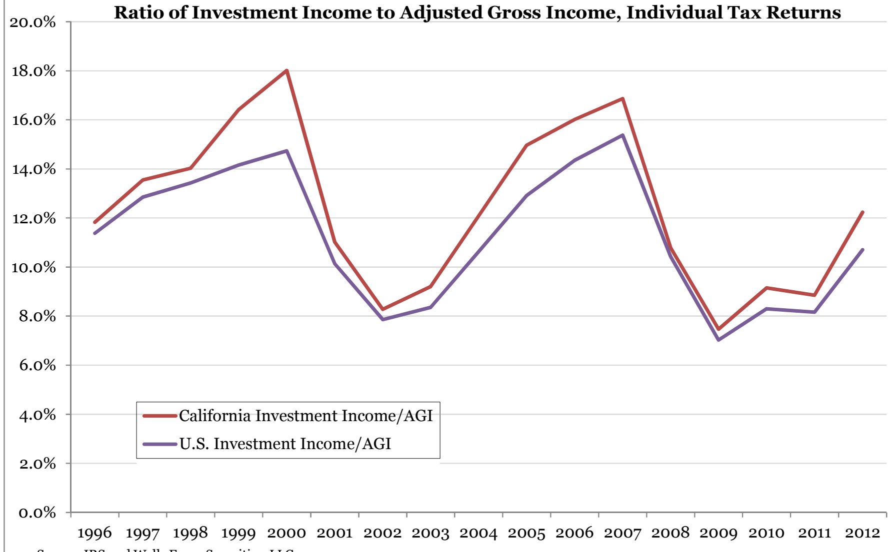
Tax policy affects the timing of revenue

During the early 1990s recession, governments were more likely to increase taxes to compensate for lost revenue than in the first decade of the new century, according to Matoon and McGranahan. But we are now in an anti-tax environment, perhaps partly inspired by the revenue gains the states have achieved over the past few years and, perhaps partly due to continued economic softness. We would argue that states that have recently lowered their income taxes without making corresponding spending reductions may be positioning themselves for budget deficits particularly if there is a market correction of substance. Kansas, for example, lowered income taxes in 2012 and has been trying to close budget deficits ever since, and this, during a period of positive economic growth and significant market gains.

In contrast, in 2012, California voters passed Proposition 30, which increased income taxes on high earners for seven years. Part of the proposal was an additional one percent tax on filers with more than $1 million, bringing the top state tax rate to 13.3%. Needless to say, this increase, coupled with strong financial markets over the past three years, have benefited the state’s budget.

Tax policy also affects the timing when individuals realize capital gains realizations. When income taxes are set to go up, as they did at the federal level in 2013, investors pull forward their gains. This activity took some states by surprise (such as New Jersey). Given when taxes are paid,

Chart 2
Ratio of Investment Income to Adjusted Gross Income, Individual Tax Returns



Source: IRS and Wells Fargo Securities, LLC there was a one-time windfall toward the end of states FY 2013, followed by a year-over-year decline in FY 2014. New Jersey declared a fiscal emergency in order to gain court permission to suspend legislated pension contributions. (The court recently ruled that the state must make the promised FY 2015 contributions.) Conversely, when tax rates are lowered, investors may postpone capital gains realization to benefit from lower rates — also complicating budget estimation.

Forecasting Aerobics

At least since the mid-1990s, achieving accuracy in budget forecasting has become something of an aerobic exercise. Needless to say, anticipating how market changes might affect revenue is more difficult to analyze than underlying economic factors where statistics such as employment, wages, retail sales, etc. are available. The Rockefeller Institute and Pew Trusts have each issued reports examining the accuracy of state revenue forecasting. The Pew report comments: "Revenue forecasts are prone to more and larger errors than was the case in an earlier era ...Further, states that have had relatively large forecasting errors, including Kentucky, Maine, Mississippi, North Carolina and Oregon, do not have equally large amounts of money set aside in reserves to help counter the effects of volatile revenue."

In an earlier Rockefeller/Pew study of this issue, they found that: "...following the 2001 recession, revenue from the sales tax was unwavering, but many states had a difficult time forecasting the revenue from the personal income tax — particularly states with capital gains taxes."

Have financial markets and the economy uncoupled?

We consider this question through the prism of state revenue. Beginning in the second half of the 1990s Sjoquist, Wallace and Stephenson found that growth rates of real personal income tax revenue were significantly greater than growth rates of real personal income and "between 2001 and 2003, real personal income tax revenue fell dramatically, while real personal income increased slightly. The growth rate in personal income tax revenue between 2004 and 2007 exceeded the growth rate of personal income." Summing up their findings: "...the state of the economy does not explain the rapid increase in personal income tax revenue in the late 1990's and the large decrease between 2001 and 2003."

Mattoon and McGranahan found that "overall income cyclicality nearly doubled and that while wage and salary income grew modestly more cyclical, investment income grew massively more cyclical. While prior to 2000, a one percentage point increase in economic growth was related to a 0.5% point increase in investment income growth, after 2000 it was related to a 5.6 percentage point increase." The Chicago Fed authors found that this phenomenon took place in many of the 50 states, and that "in 2001, a relatively shallow national recession led to a severe downturn in state revenue that took three years to unwind."

Further illustrating the change in revenue fluctuations after 2000, Mattoon and McGranahan parsed the influence of tax *rate* changes versus changes in the tax *base*. They found, "When we divide the growth in cyclicality into that due to rates and that due to the base, we find that for wage income, the majority (82%) of the increase was due to rates while for investment income, the majority (95%) of the increase was due to the base."

Taking Action

A sensible approach put forward by the various authors we cite in this commentary (and which we agree with) is to establish a formal budget stabilization policy for saving surplus capital gains revenue when times are good and controlling the "rainy day" fund use when times are difficult. Massachusetts implemented a plan in 2011 to take capital gains revenue that exceeded $1 billion and put them into its "rainy day fund". Furthermore, to help fund mushrooming retiree costs, the state is dedicating 5% of these excess funds to unfunded OPEB.

In 2014, California passed a constitutional amendment (Proposition 2) that required transfer of 1.5% of general fund revenue and an amount of capital gains in excess of 8 percent of general funds (*Governing* magazine commented that the state exceeded this level seven times over the last 10 years) until the budget stabilization account reaches 10% of general fund revenue. In addition, funds cannot be removed unless the governor declares a budget emergency and the legislature approves an appropriation. Excess funds are to be used to reduce debt and unfunded pension obligations.

Many other states have established "rainy day" and budget stabilization funds. But it is not clear whether they are set up to be sufficient to sustain financial markets volatility — for both the state budget and pension funds.

The Public Pension Connection

Another crucial corner of state fiscal health — public pension funds — are also driven by market performance. The performance of public pension investments together with revenue volatility, intensify the good news for states when markets are up as well as the bad news when markets weaken. For example, California has seen substantial revenue growth of late; CalPERS, too, has been able to boast double-digit returns on its assets. This is a far cry from the significant budget deficits and pension underfunding the state experience following the financial crisis (we note that CalPERS is still underfunded, however). Some may recall when California was preparing its 2010-2011 budget and trying to close a nearly $20 billion gap, CalPERS came to the state with a $700 million additional pension bill. Unfortunately, an alternate approach that some states have taken during the down cycle is to reduce public pension contributions — exacerbating underfunding and putting pressure on future budgets (Illinois, New Jersey and Kansas, for example).

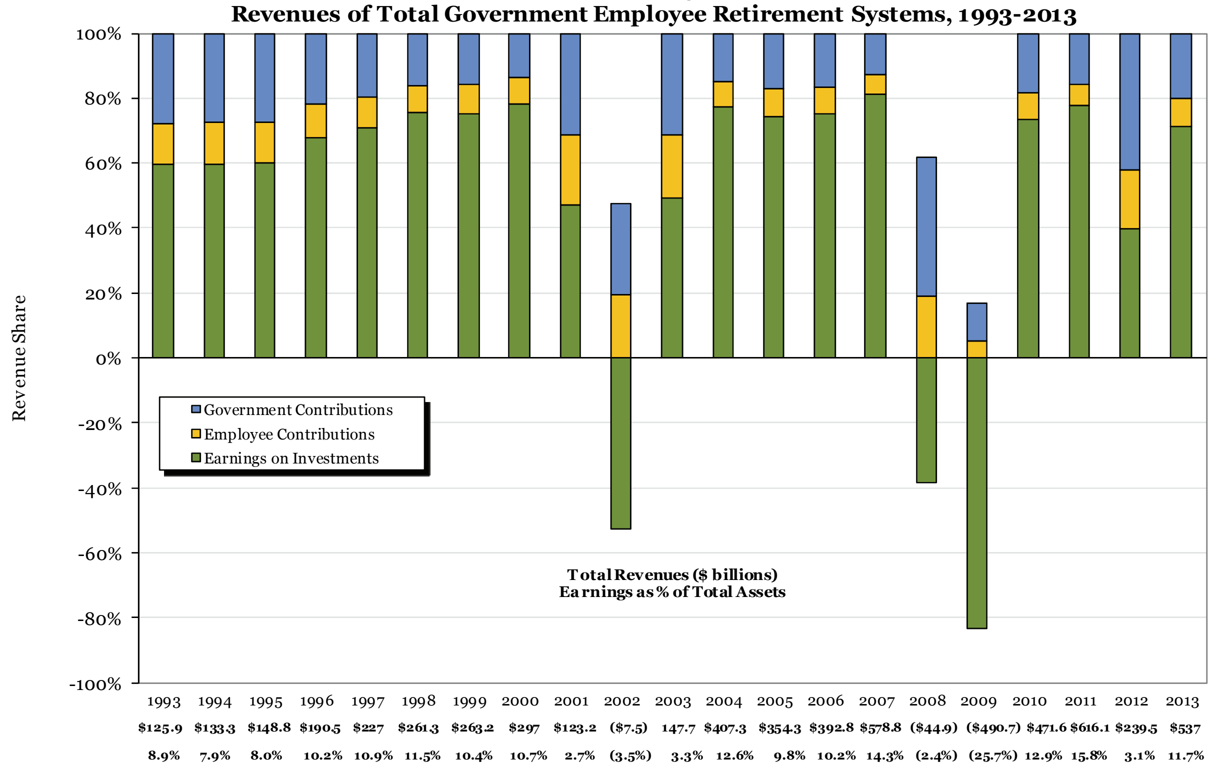
Munnell, Aubry and Cafarelli commented in a recent report: "While all plans were hurt by two financial crises, bad plans also significantly undermined their financial position by failing to make adequate contributions and having to correct for overly optimistic actuarial assumptions."

To soften the blow on their members' budgets and achieve target returns, public pension funds have increased their holdings of riskier assets: equities, both domestic and international, private equity, hedge funds and other alternative assets. The Center for Retirement Research (CRR) found that the top 100 plans had increased their holding of alternative investments from 11% in 2006 to 23% by 2012. This move helped public plans to earn more than they might have over the last 10 years according to Cliffwater Research — 7.2% median return for 2013 (ranging from 5% to 8.8%) — above an estimated 6.4% return from a passive 60/40 stock/bond portfolio. Alternatives (hedge funds, private equity, real estate) may provide a buffer from market volatility. However, some alternatives are illiquid, which may not make sense for the most poorly funded plans. In addition, we note that many plans have significant international assets, whose value and performance may fluctuate with recent U.S. dollar strengthening.

Some plans, notably CalPERS, have embarked on de-risking strategies. A number of authors have written about the asset/liabilities mismatch (liabilities rising faster than assets in this low rate environment) — and suggest that a limited supply of good quality long-dated bonds could put downward pressure on long-term rates when the Federal Reserve does take action. (Guzman and Olympio; IIF) Another factor in this dynamic is the updating of actuarial mortality tables to take into account greater longevity. Back to Chart 1, notice how 10-year and 30-year rates converged following the several periods of fed tightening since the late 1990s (only to widen again when the fed lowered targets). Since tax-exempt bonds often track Treasuries, demand for long-dated paper may attract cross-over buyers to the tax-exempt market.

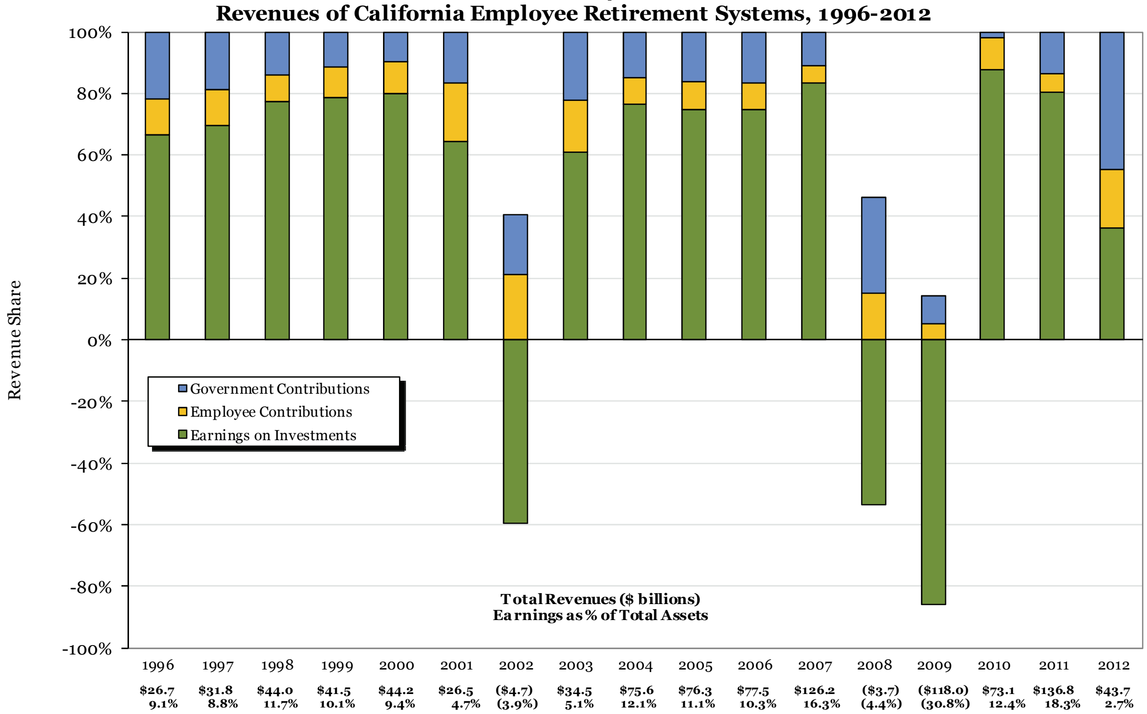
In a research piece entitled "How Sensitive is Public Pension Funding to Investment Returns?" authors

Chart 3
Revenues of Total Government Employee Retirement Systems, 1993-2013



Source: US Census and Wells Fargo Securities, LLC

Chart 4
Revenues of California Employee Retirement Systems, 1996-2012



Source: US Census and Wells Fargo Securities, LLC

Munnell, Aubry and Hurwitz commented: "In mature plans, investment returns matter immensely because: 1) assets are large relative to the funding base; 2) cash flows are negative; and 3) a significant portion of participants are retired and no longer contributing."

In Charts 3 and 4, we highlight public pension plan revenue for all states and for California. These figures come from the Census Bureau, and individual state figures are only current through 2012. We know that the 2013 and 2014 results were favorable in California — because of strong market performance. To put it simply, for all states, $100 in 2000 would yield $256 by 2013 at a target rate of 7.5%. Actual performance yielded $82 less. In California, returns versus a 7.5% target yielded $85 less by 2012.

Pension Obligation Bonds

As pressure mounts for states to bring up the level of pension funding, several states are considering selling multibillion-dollar bonds to close the gap: Pennsylvania, Kansas and Kentucky. In an update on this topic the CRR reviewed more than 270 issues in its database to calculate whether the IRR of the bond cost versus earnings on the proceeds was positive or negative. The conclusion has much to do with timing of the issuance. "If the assessment date is the end of 2007 — the peak of the stock market — the picture looks fairly positive...If assessed in the middle of 2009 — right after the market crash — most POBs appear to be a net drain on government revenue...and, as of February 2014, the majority of POBs have produced positive returns due to the large market gains that followed the crisis. Only those bonds issued at the end of the market run-up of the 1990s, and those issued right before the crash in 2007, have produced a negative return; all others are in the black." (Munnell, Aubry, Cafarelli)

This said, pension bond issues are often being done to relieve pressure on current year budgets by substituting bond proceeds for budget contributions. In this case, the proceeds are no longer available for investment and should be deducted from the cost/benefit analysis. POBs sold to relieve budget pressure should be accompanied by a robust plan to bring the pension system into long-term sustainability.

Most analysis highlights the strong likelihood of positive returns given the historically low rates currently in the market and this is logical as long as the corpus of assets is growing and not shrinking. (For example, Puerto Rico has used up the proceeds of its pension obligation bonds and Illinois has, over time, depleted assets.) As we learned from the 2007-2009 downturn, a major market correction can vaporize the value of assets while leaving the borrower with the costs.

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