

## Memorandum

**Date:** February 15, 2011  
**To:** CCCERA Board of Retirement  
**From:** Cary Hally, Retirement CIO  
**Subject:** CCCERA Rolling Returns

We have performed a return analysis of CCCERA's total return, which focuses on long-term returns. Volatile capital markets can have a major impact on short-term return calculations. Major moves (up or down) in the capital markets in a given quarter or year can significantly impact trailing return measurements over the past three to five year periods. Recent markets have demonstrated how substantial this impact can be. The sharp decline experienced in 2008 impacts the five year return until that time period falls out of the calculation.

CCCERA's investment allocation is designed to provide diversified returns over a long period of time. Often too much emphasis is placed on returns over shorter periods such as the past quarter or year. Even periods as long as the past three or five years are considered relatively short when evaluating the success of an investment program for a pension plan. Time diversification is a major advantage of a defined benefit plan such as CCCERA. The duration of the liabilities is fairly long, approximately 15 years. This long-term focus offers the ability to recover from poor market environments, and produce less volatile long-term results.

In this analysis we looked at rolling 15-year returns (annualized) for CCCERA's total fund on a quarterly basis. For our analysis we have quarterly returns dating back to the 4<sup>th</sup> quarter of 1982. For each quarter we provide the total return of the fund for the trailing 15 years. For example, the 15-year return for the most recent ending quarter provides an annualized return from the 1<sup>st</sup> quarter of 1996 through the 4<sup>th</sup> quarter of 2010. The first observation we have in this analysis is the 15-year return ending in the 3<sup>rd</sup> quarter of 1997 which includes all the returns since the 4<sup>th</sup> quarter of 1982. We also show the same analysis for rolling 20-year periods.

In our analysis there are only two 15-year periods which fall below 8%, the periods ending the 4<sup>th</sup> quarter of 2008 and the 1<sup>st</sup> quarter of 2009. This is not surprising given the significant downturn in the capital markets during 2008 and early 2009. At no point does the 20-year rolling return fall below the 8% level. This analysis is provided in the chart on the following page.

# CCCERA Annualized Rolling Returns (% , Gross)

