



# Memorandum

**TO:** Federated City Employees' Retirement System  
Investment Committee  
Police and Fire Department Retirement Plan  
Investment Committee

**FROM:** Arn Andrews

**SUBJECT:** Prefunding Risk Mitigation Process  
Recommendation

**DATE:** September 15, 2014

## INTRODUCTION:

The following recommendation creates a framework for the Pension Plans to incentivize the City to prefund contributions when market valuations are low and the economic cycle is in the early stages of expansion and create a disincentive for the City to prefund contributions when market valuations and/or economic expansions are beyond historic norms.

## BACKGROUND:

Prior to fiscal year 2008-2009, the City made biweekly contributions to the Retirement Plans (the "Plans") in conjunction with each payroll distribution. For the past six fiscal years the City has elected to pre-fund employer retirement contributions at the beginning of the fiscal year, and has indicated the City's intent to make future lump-sum contributions as resources permit. However, the City's primary intent for prefunding contributions is to achieve budgetary savings while being agnostic to market valuations and economic cycles. Prior to instituting prefunding, the City's biweekly contributions were essentially a cash flow business decision as contributions approximated monthly expenses. Once prefunding was initiated by the City, it transitioned the prefunding process from a mere cash flow exercise to an asset allocation decision process. When evaluating asset allocation deployment decisions, the Investment Committees view it in the context of asset class valuations and economic cycles.

As such, during the past year the Investment Committees have reviewed the statutory framework of the prefunding and any areas of discretion that might exist under that framework. As noted by the Plans' legal counsel in a memorandum (attached) entitled "Board Discretion Regarding The Discount Rate Used For Determining Actuarial Equivalence Of The City's Pre-Funding Option" The memorandum states that the Municipal Code reserves the exclusive right for the City to elect to prefund its contributions. However, the memorandum goes on to state that the Boards do have the discretion to determine "actuarial equivalence" when calculating the prefunding amount. Below are excerpts from the memorandum highlighting counsel's opinion:

*Municipal Code section 3.36.1590(C) provides:*

*“Commencing with fiscal year 2009-10, the city shall have an annual option to select the advance periodic basis on which city contributions to the medical benefits account and to the retirement fund for that fiscal year will be paid; provided that such payment schedule shall be no less frequent than quarterly. Except as may otherwise be agreed to by the board, the notice of intent to exercise the option, including the advance periodic basis selected and the payment date(s) (the ‘notice of intent’), shall be provided by the city manager to the board on or before April 30th of the fiscal year prior to the fiscal year in which city may wish to exercise the option. The amount of the advance periodic payment(s) contained in city’s notice of intent shall be as determined by the board to be actuarially equivalent to the monthly or biweekly payment that would otherwise have been required.”<sup>1</sup>*

*Thus, the City has a right to elect the lump sum option, but the Board has the right to decide how to determine what is “actuarially equivalent.” The Board has very broad discretion over actuarial matters. Article XVI, section 17(e) of the California Constitution provides: “The retirement board of a public pension or retirement system, consistent with the exclusive fiduciary responsibilities vested in it, shall have the sole and exclusive power to provide for actuarial services in order to assure the competency of the assets of the public pension or retirement system.” The Municipal Code is consistent with the California Constitution. See generally Muni Code §§ 3.36.300 et seq. Further, there are references to “actuarial equivalent” throughout the Municipal Code that require the use of a specific definition of that term. See e.g., §§ 3.36.1466 and 3.36.730(E). This shows that the City Council knows how to use a specific definition when it wants to do so. For the City’s lump sum payment option, however, the City Council used the phrase “as determined by the board,” which further supports a conclusion that this is a matter of Board discretion.*

*Although the Board has adopted an assumed rate of investment return for funding purposes, which is the Board’s best estimate of the likely long-term returns it will obtain on its investments, we believe the Board has authority to apply a different discount rate to determine “actuarial equivalence” over a short period of time, such as the year in which (a) contributions will be made either in lump sum at the beginning of the year or (b) periodically throughout the year on a monthly or biweekly basis. This is because it is reasonable to take account of the fact that short term investment returns are more volatile than long term investment returns.*

## **ANALYSIS:**

As the investment program enters FY 2015–2016, it’s within the context of multiple economic and market related statistics having surpassed historic norms. According to the National Bureau of Economic Research the last economic expansion began in June of 2009. The table below illustrates the average duration of economic cycles dating back to 1854. Since 1945 there have been 11 economic cycles with the average duration of the expansion phase lasting 58.4 months. As of this writing the current economic expansion is in its 76 month.

	<i>Peak to Trough</i>	<i>Previous trough to this peak</i>	<i>Trough from Previous Trough</i>	<i>Peak from Previous Peak</i>
<u>Average, all cycles:</u>				
1854-2009 (33 cycles)	17.5	38.7	56.2	56.4*
1854-1919 (16 cycles)	21.6	26.6	48.2	48.9**
1919-1945 (6 cycles)	18.2	35.0	53.2	53.0
1945-2009 (11 cycles)	11.1	58.4	69.5	68.5

Source: NBER

In addition to economic data suggesting the later stages of an economic expansion, absolute returns of broad market indices have also surpassed historic averages. The CFA Institute presented research on market returns of the S&P 500 index dating back to 1932. The research identified 12 bull markets between 1932 and today, with a bull market defined as one which gains at least 20% off its bear market bottom over a period of 6 months or more. The table below illustrates the average and median gains for the 12 identified periods. The current bull market has gained approximately 170% since March of 2009.

	<b>Gain</b>	<b>Months</b>	<b>Gain/Month</b>
<b>Average</b>	185.20%	61.20	3.8%
<b>Median</b>	131.60%	60.00	3.10

Source: CFA Institute

Staff recommends implementing an incremental reduction approach to determining “actuarial equivalence” predicated on the aforementioned average duration of business expansions and/or the absolute returns of broad market indices. This approach will ensure that as business expansions and/or market valuations mature and exceed historic norms the Plans reduce the incentive for the City to prefund its contributions. Following is the recommended incremental reductions:

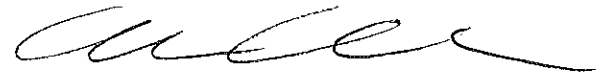
First Year Methodology	If on September 1 <sup>st</sup> of a given year an economic expansion has exceeded 58 months (as defined by the NBER) in duration and/or the S&P 500 has returns in excess of 130 percent, the Office of Retirement Services will inform the City’s Budget Office of its intent to reduce the discount rate for prefunding by 15% in the coming year.
Second Year Methodology	If on September 1 <sup>st</sup> of the subsequent year an economic expansion continues to exceed 58 months (as defined by the NBER) in duration and/or the S&P 500 has returns still in excess of 130 percent, the Office of Retirement Services will inform the City’s Budget Office of its intent to reduce the discount rate for prefunding by an additional 15% in the coming year.

Third (and subsequent) Year Methodology	If on September 1 <sup>st</sup> of the third year of an economic expansion which continues to exceed 58 months (as defined by the NBER) in duration and/or the S&P 500 returns are still in excess of 130 percent, the Office of Retirement Services will inform the City's Budget Office of its intent to reduce the discount rate for prefunding by an additional 15% in the coming year and maintain that level for all subsequent years or until market valuations and/or economic expansion reverts to historic norms
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Based on the aforementioned methodology the current expansion is in its 76 month and the S&P 500 has returned approximately 170% which would result in the second year methodology being employed.

**RECOMMENDATION:**

Staff recommends adopting the incremental reduction approach to actuarial equivalence as outlined in this memorandum and instructing the Office of Retirement Services to inform the City's Budget Office of its intent to reduce the discount rate using the second year methodology or 30%.



Arn Andrews  
Chief Investment Officer