



CASH FLOW NEGATIVE ... Good or Bad for Pensions?

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It is traditionally considered that it is bad for a pension to be cash flow negative (CFN). But let's take a closer look. CFN means that benefits exceed contributions ($B > C$). Contributions are an extra cost caused by a funding deficiency where the present value of assets $<$ present value of benefits. If **the true objective of a pension is to fully fund and secure benefits in a cost-efficient manner**, then you would think that the pension objective is to *reduce or at least stabilize contribution costs*. This is exactly what cash flow matching (CFM) achieves. Let me explain...

Spiking contribution costs have been a most onerous burden for many pensions, especially public pensions, since 1999. As I wrote in my 2013 book "**The US Pension Crisis**" I deduced that the pension crisis was created through spiking contribution costs. I featured New York City Employees Retirement System (NYCERS) where contribution costs increased more than 43 times in 12 fiscal years from \$68,619,745 in FY ending 6/30/00 to \$3,017,004,318 in 6/30/12 equal to a 37.1% annual growth rate. I quoted the financial objective of NYCERS in my book as:

... to fund benefits and to establish employer normal contribution rates that would remain approximately level over the future...

This spiking contribution cost trend was evident throughout pension America and was created by a heavy allocation to equities. The critical period was 2000 to 2002 when the S&P 500 had three consecutive negative return years that resulted in a cumulative negative return of **-37.6%**. Compounding this issue was the fact that interest rates were in a secular decline. On a market value basis, using ASC 715 discount rates, we calculated that most pensions had a cumulative liability growth rate of about 55.1% for those three years (2000-2002). This would have reduced the funded ratio for the average DB pension plan by about 60% sending most pensions from a surplus funded ratio to a deep deficit. As a result, contribution costs spiked throughout pension America damaging budgets, income statements, balance sheets, and credit ratings. Notably, several large cities were forced to file bankruptcy (e.g. Detroit, Jefferson County, Stockton, etc.) and corporate pensions decided to exit pensions through a pension risk transfer (PRT) thereby selling their pension liabilities to insurance companies.



Solution: Cash Flow Matching (CFM) Pensions are better funded today than at any time since 1999. To avoid another repeat of the spiking contributions dilemma (this time it may come from a private equity or alternatives bubble and another secular decline in rates), pensions should install a CFM strategy as the *core portfolio*.

CFM was the dominant asset strategy in the 1970s and 1980s when pensions were fully funded and was called Dedication. CFM is a best fit for the true pension objective since it is designed to fully fund net liability cash flows in a cost-efficient manner. Bonds are the only asset class with certainty of its future cash flows (interest income and principal payments at maturity). When CFM is done correctly, it skews the assets to the longer maturities within the maturity range it is funding. The Ryan ALM model (we call the **Liability Beta Portfolio™ or LBP**) is an investment grade portfolio emphasizing A/BBB+ securities. Bond math tells us that the longer the maturity and the higher the yield... the lower the cost. For example, if CFM is funding liabilities out to 10-years, it will have overweighted exposure to the 5-10-year area. This means that the 0-5 years liabilities are being partially funded, if not fully funded, by the cash flows (and higher interest rates) of the longer maturities.

The benefits of CFM as the **liquidity assets** are numerous:

1. **Reduces contribution volatility**
2. **Provides timely liquidity** to fully fund monthly liabilities (B+E)
3. **Eliminates need for a cash sweep** which erodes the ROA of growth assets
4. **Buys time** for the growth assets to grow unencumbered (enhances their ROA)
5. **Reduces the cost** of funding liabilities by about 2% per year (1-10 years = 20%)
6. **Neutralizes interest rate risk** since it is funding liability cash flows (FV numbers)

CONCLUSION:

If the **true pension objective is to fully fund and secure benefits in a cost-efficient manner with prudent risk**, then pensions want to allow negative cash flows by letting the asset cash flows fully fund liability cash flows rather than increase contribution costs. This is best accomplished through a CFM strategy as the pension fund's core portfolio.