New York City Independent Budget Office Fiscal Brief

March 2020

Another Covid-19 Cost?
As the Stock Market Tumbles the City's Pension Costs May Climb

The global spread of Covid-19 has had a rippling effect on worldwide equity and commodities markets. The uncertainty brought about by this unprecedented public health crisis has led to steep declines in market values. The cratering of the financial markets has undoubtedly affected the value of assets under the management of the New York City Retirement System (NYCRS)—the city's five pension plans. This, in turn, will likely affect the amount the city must contribute to the five plans.

At the end of 2019, the five plans that compose the retirement system held $153 billion in assets on behalf of city workers. (All years are city fiscal years.) In determining whether those assets are sufficient to cover the pensions earned by current employees and retirees, NYCRS assumes an average of 7 percent returns on assets invested over the course of a city fiscal year.

Investment Mix. Traditionally, institutional investors like pension plans have relied on a mixture of bonds and stocks to achieve these returns. However, extraordinarily low interest rates for government bonds in recent years have compelled pension plans to rely more heavily on equities as well as alternative assets—like hedge funds, "high yield" debt, and real estate—to increase returns. Assuming the system met its 7 percent return on assets benchmark in the current fiscal year, the pensions' assets would add approximately $10.7 billion in value.

The market gyrations over the past two weeks have rendered index values for both domestic and international equities deeply negative for the year. The NYCRS pension portfolios' diversified investments, a mix of higher-risk equities with more stable assets like U.S. treasuries and highly rated corporate bonds, shelter it from volatility within specific sectors. Although given the unprecedented global economic impact of the current pandemic, losses seem inevitable.

If the equity markets do not recover by the end of the fiscal year, what would a year with no or negative returns mean for the city's pension systems and the city's finances? In the visualization on page 2, IBO illustrates how poor returns on pension assets in one year are paid for over many years.

Determining the City's Pension Liability. The assumption of a 7 percent average annual return on total assets of the city's pension funds—the rate set by the city actuary—is based on an analysis of long-term trends and is not an assumption that the funds will achieve this rate of return each year. Rather, the actuary's assumption is that the funds will average a 7 percent annual return over an extended period of time. In practical terms, the employers that sponsor the funds are responsible for paying the difference when annual returns on investment fall short of the actuarially assumed 7 percent rate. The City of New York provides the largest share of the employer contribution to NYCRS and therefore would feel the greatest impact of the shortfall in pension returns, but other public and semi-public entities including the New York City Housing Authority, NYC Health + Hospitals, and some charter school networks would also be affected.

The amount owed to the pension system resulting from investment returns that fall short of 7 percent is phased-in over the next seven years. Because the start of payments is lagged by one year, the first budgetary impact of losses experienced by the funds' investments in 2020 would not be felt until 2022. Accounting for losses over a number of years enables the plans' sponsors to smooth out the effects of market volatility over a longer period of time, so

Assuming a Zero Percent Return on Investments

Returns

If the NYCRS pension systems' combined $153 billion in assets return 0 percent, instead of the expected 7 percent, the city will be responsible for covering $10.7 billion in losses, called Unexpected Investment Returns (UIR).

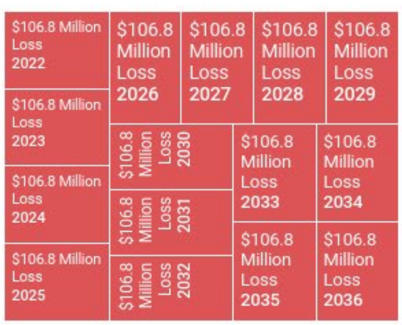
Returns: Phase In

The $10.7 billion UIR is phased in over the course of six years, starting with the 2022 pension payment–15 percent of the losses in each of the first four years, and 20 percent in the last two years.

Gains & Losses

The city's 2022 pension contribution is the product of the $1.6 billion in losses from the current year as well as the performance of pension investments from prior years that are already included in the financial plan. In this example, actual gains and losses from the preceding five fiscal years are combined with our estimate for the current year, resulting in a net loss of $1.2 billion attributable to 2022.

Losses Amortized



The $1.6 billion of 2020 losses attributable to 2022 are amortized over 15 years for an additional cost of $106.8 million per year. In the succeeding five years the remaining losses from 2020 will begin to be accounted for in the contribution. Eventually the entire $10.7 billion of current year pension investment losses will be paid for either by increased employer contributions or offsets from future years in which pension investments exceed the 7 percent annual benchmark.

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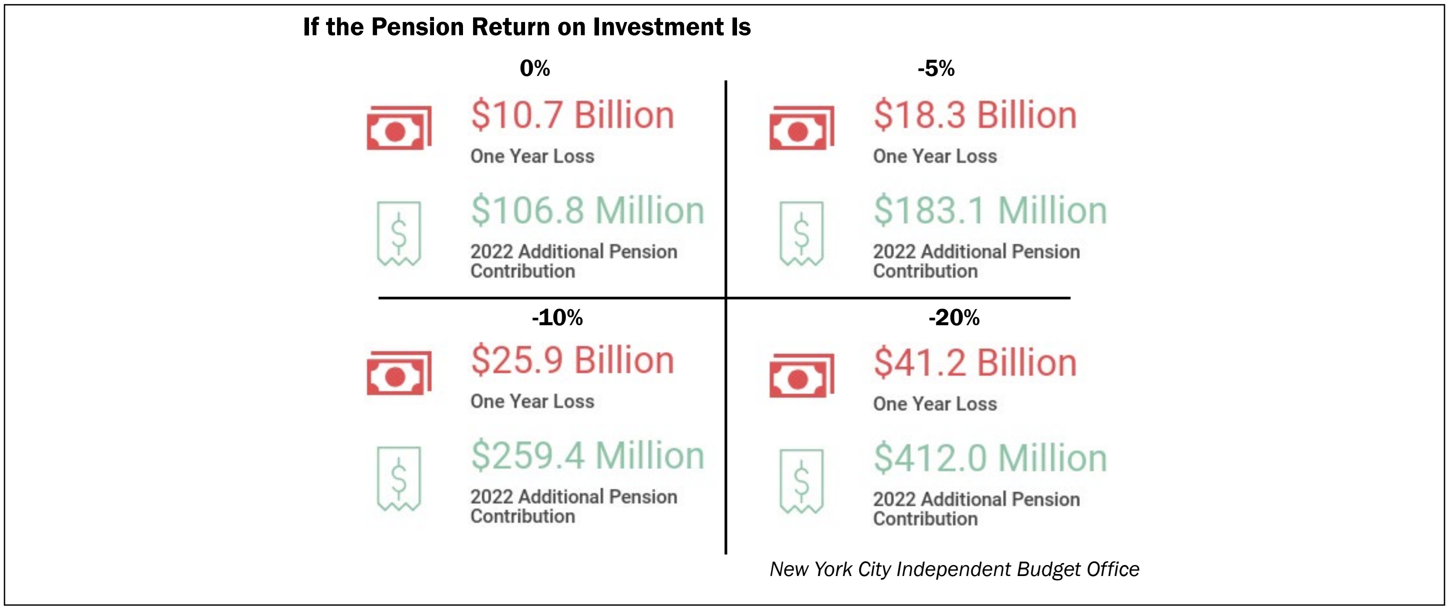

that costs related to one year of poor investment returns are not absorbed all at once. Similarly, investment returns that exceed 7 percent are also phased-in over seven years. These phase-ins allow investment returns from years in which the system out-performs its benchmark to counterbalance years in which the assets underperform, providing the city with more stable and sustainable pension contribution levels.

If the system's assets fall short of their target return of 7 percent this year, the resulting unexpected investment returns allocated to 2022 are likely to be a net loss after taking into account the actual mix of gains and losses that have occurred over the last five years. This loss is amortized over 15 years, meaning that from 2022 through 2036 the city's pension contribution related to asset losses recognized in 2022 will be higher than planned. Eventually, the city would have to pay the entire asset loss booked in 2022—assuming that it is not offset by years of much greater than expected returns. The graphic on page 2 presents a scenario where the pension funds' returns are zero percent for the year.

At this point we do not know what the impact of this month's sharp declines in equity markets will have on the funds' returns for the full fiscal year—recall that the stock market had been trending up for much of preceding eight months—and IBO has not projected what those returns might be. For illustrative purposes, though, we can look back at the last major bear market on Wall Street.

During the Great Recession of 2008, the pension system's investments saw asset values decline by over 20 percent in a single year. Scaling to today's assets, a 20 percent decline in value for the current year would mean the system would require an additional $41.2 billion to be made whole. The single-year losses realized by the pension system in 2022 would be $5.8 billion, resulting in an additional employer contribution of $412 million for each of the next 15 years. The city now contributes about $10 billion annually to the pension system. As each of the pension systems that make up NYCRS has its own specific blend of assets, it is likely that each of the five systems' portfolios will end the year with different investment results.

Prepared by Robert Callahan

REVISION: On April 1, 2020, with the provision of additional information, IBO modified its calculation for the estimated pension losses at each level of market returns.