HOW MANY ILLINOIS PUBLIC SAFETY PENSION FUNDS RISK RUNNING OUT OF ASSETS?

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This article focuses on the finances of Illinois' police and firefighter pension funds. While most pension funds are underfunded, the aim was to better differentiate the funds and identify ones in the best and worst fiscal shape prior to the COVID-19 related economic downturn. Data from several sources was used to examine trends in pension funds' funding levels and to examine liquidity risk. Findings indicate that prior to COVID-19, a small number of public safety pension funds were in danger of running out of assets. While the risk of asset depletion is not widespread, this is nonetheless an important policy issue as a pension fund running out of assets risks benefit payments being halted.

INTRODUCTION

The COVID-19 pandemic and related economic downturn are having important consequences for state and local governments throughout the United States. Pension funds' funding levels are likely to be negatively impacted as they rely heavily on investment returns as a source of funding. Decreased pension funding levels can exacerbate existing fiscal challenges for state and local governments, but another important issue is the liquidity of the pension funds. Most public pension funds are designed to be pre-funded, meaning that a sufficient pool of money is generated — from a combination of investment returns and employee and employer contributions during the course of an individual's employment — to pay for their benefits once they retire. Pre-funding contrasts with pay-as-you-go (PAYGO), in which benefits are simply paid as they come due. A pension system facing a liquidity crisis is a worst-case scenario in which, due to the depletion of assets, benefit payments may be halted and/or governments may have to pay benefits as they come due.

This brief focuses on the financial condition of Illinois' police and firefighter pension funds (referred to as "public safety pension funds")[1] with special attention paid to their liquidity risk. Data from the Illinois Commission on Government Forecasting and Accountability (COGFA) and the Illinois

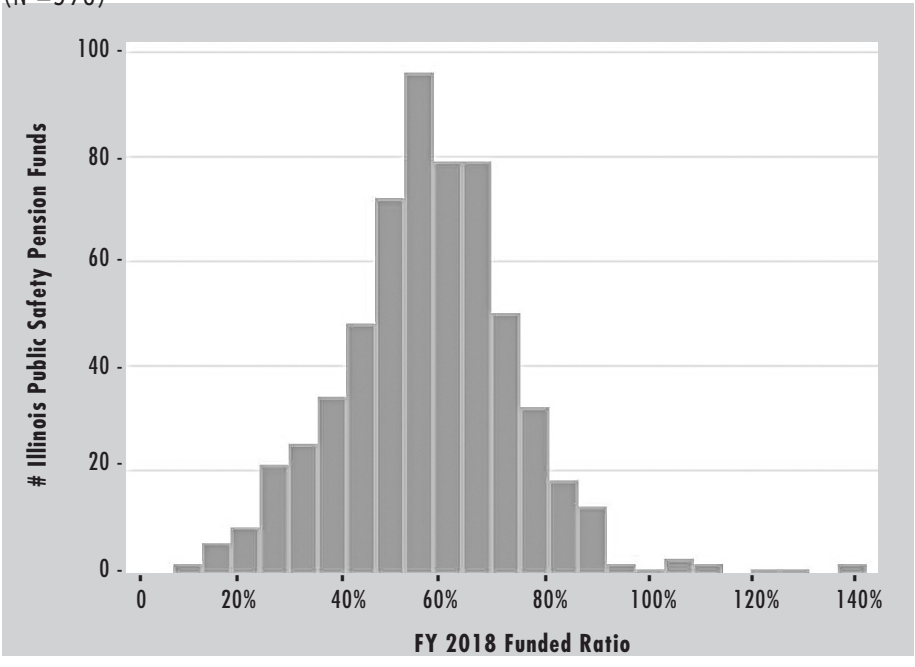
Department of Insurance (IDOI)[2] were used to look at the public safety pension funds' funding levels over time and to calculate liquidity measures. Analysis reveals that funding and liquidity levels vary widely and that a small number of funds are at risk of depleting their assets.

PENSION SIZE AND FUNDING LEVELS

Illinois' public safety pension funds vary in size and funding levels. This analysis focuses on the public safety pension funds that had at least one active member who paid employee contributions and at least one beneficiary (retiree). From a pool of 654 downstate public safety pension funds, there were 596 that met these criteria as of Fiscal Year (FY) 2018.[3] Nearly 60% of the funds are for police officers while the remainder are for firefighters. Most (87%) are connected to a municipal government while 13% are tied to a fire protection district. As of FY 2018, seven public safety pension funds had only one active member while the largest fund (the Rockford Police Pension Fund) had nearly 300 active members. Including all members (active employees, retirees, and

FIGURE 1

ILLINOIS' PUBLIC SAFETY PENSION FUNDS FUNDING LEVELS AS OF FY 2018 (N =596)



beneficiaries), the average public safety fund had 72 members. Most of the funds are underfunded, and only nine funds were fully funded as of FY 2018. The average funded ratio (the ratio of assets to liabilities) in FY 2018 was 56%; the lowest was 7%, and the highest was 141%. Figure 1 shows the distribution of the public safety pension funds' FY 2018 funded ratios. Importantly, most public safety pension funds are less funded today than they were prior to the last major economic downturn (the 2007-2009 Great Recession), and in FY 2007, the average funded ratio was 67%.

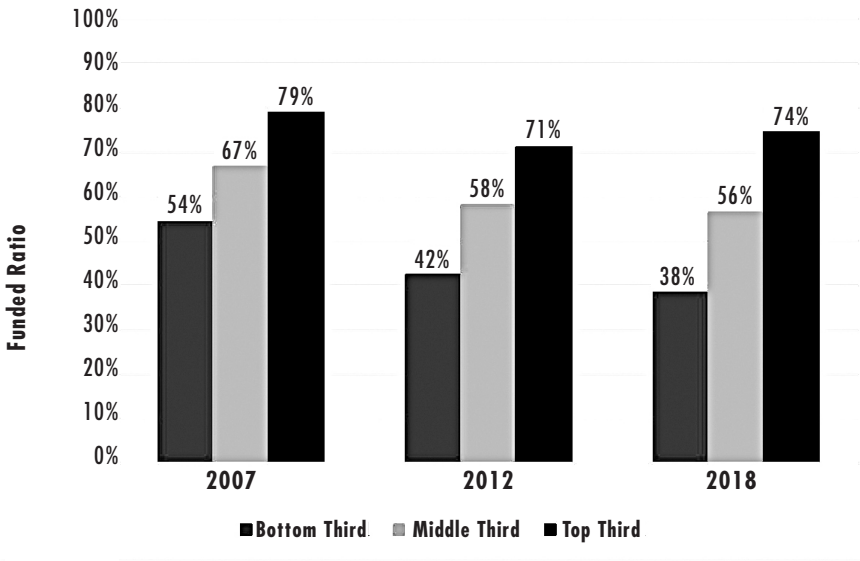
While the average public safety pension fund was 56% funded as of FY 2018, as Figure 1 shows, there is a large range in funding levels. Some funds are fully funded while others are less than 10% funded. While anything less than 100% means a pension system is underfunded, Standard and Poor's considers funds that are less than 80% to be of concern, with those that are less than 40% funded deemed severely underfunded (Kanaster *et al.*, 2019; Tauzer *et al.*, 2017). Of the 596 public safety pension funds examined, only 37 were at least 80% funded as of FY 2018, and 95 had funded ratios below 40%.

To understand trends in funding levels over time and between well-funded and underfunded funds, the public safety pension funds were divided into three groups based on their FY 2018 funding levels. The groups are as follows: the bottom third have a funded ratio less than 50%; the middle third have funded ratios between 50% and less than 63%; and the top third have funded ratios that are at least 63%. Figure 2 shows the average funded ratio for each group before and after the Great Recession (specifically, years 2007, 2012, and 2018). In response to the Great Recession and with the aim of improving the pension funds' finances, state lawmakers in Illinois passed several major pieces of pension legislation in 2010, and Public Act 96-1495 specifically affected the public safety pension funds. Important changes from that legislation included reducing benefits for new hires and changing the funding target from 100% by 2033 to 90% by 2040.

Looking at the average funded ratio for each group over time shows that there is a growing divergence between public safety pension funds in terms of funding levels. While the average funded ratio declined for all three groups in the wake of the Great Recession (between 2007 and 2012), the average funded ratio for the bottom third group has continued to deteriorate over time. Funding levels for the other groups have stabilized or slightly improved. In sum, the worst-funded public safety pension funds are continuing to see an erosion in their funding levels, and there is a growing gap between the groups.

FIGURE 2

AVERAGE FUNDED RATIOS FOR SELECTED YEARS BY GROUP



This is consistent with studies from the Center for Retirement Research at Boston College and Pew Charitable Trusts that have looked nationally at pension funding levels and found similar trends (Aubry *et al.*, 2018; Pew, 2019). Under Illinois law, a local government's annual pension payment must be sufficient so that its public safety pension funds are each 90% funded by the end of FY 2040. The erosion in funding levels tied to the economic downturn will drive up required contributions. For many funds, required contributions will also increase over time because state law requires that the project unit credit (PUC) method be used for calculating liabilities and determining municipalities' required contributions, and under this method, costs increase over time as current employees' benefits accrue. Prior to COVID-19, many municipalities were struggling to make their annual pension payments and had looked for alternative revenue sources (Bunch *et al.*, 2019; Jones and Rutecki, 2019). Increases in required pension payments will further strain municipalities' finances.

WHAT IS THE RISK OF RUNNING OUT OF MONEY?

Another concern is the risk of pension funds themselves running out of money and being unable to payout benefits. Pension funds' total assets are likely to

be negatively impacted by poor investment returns and/or losses tied to the COVID-19-related economic downturn. Other factors, like governments not making required contributions and/or decreased employee contributions due to layoffs, will compound deterioration in funding levels tied to poor investment performance. Given the severity of the economic downturn and many funds' low funding levels, there is a risk that some pension funds may run out of assets. To get a sense of each funds' liquidity risk, an operating cash ratio and liquidity-to-assets ratio were calculated for each fund. Operating cash flow indicates how reliant a pension system is on investment returns while the liquidity-to-assets ratio provides insight into the pension system's ability to pay for its obligations (like benefit payments) in the short term. These are the equations for the ratios:

- Operating Cash Flow = (Income from Members + Income from Municipality – Total Expenses) / Net Present Assets Market Value
- Liquidity-to-Assets Ratio = (Cash and Cash Equivalents + Income from Members + Income from Municipality + Other Income – Total Expenses) / Net Present Assets Market Value

These measures were chosen because credit rating agencies and researchers at Pew have used them to examine pension fund insolvency risk (Kanaster, 2019; Mennis *et al*., 2018). Ratios below zero indicate weak liquidity, and the further below zero a ratio is, the greater the liquidity risk. In looking at liquidity risk among eight severely underfunded pension funds, S&P found that liquidity-to-assets ratios ranged widely from a high of 0.06 for Pittsburgh to a low of -0.07 for the New Jersey teachers' pension fund (Kanaster, 2019). Moody's Investors Service examined the operating cash flow of Illinois' state pension funds and the City of Chicago's pension funds and found that all were negative, with Chicago's pension funds for police officers and municipal employees having the lowest at -0.1 each (Aaron and Blake, 2020).

Among the 596 public safety pension funds, the operating cash flow values ranged from -0.26 to 0.67, with an average of 0.01. The liquidity-to-assets values ranged from -0.17 to 1.21, with an average of 0.06. The distributions of the ratios are skewed, and except for the liquidity-to-assets value for the top third group, the averages are higher than the median values, as shown in Table 1.

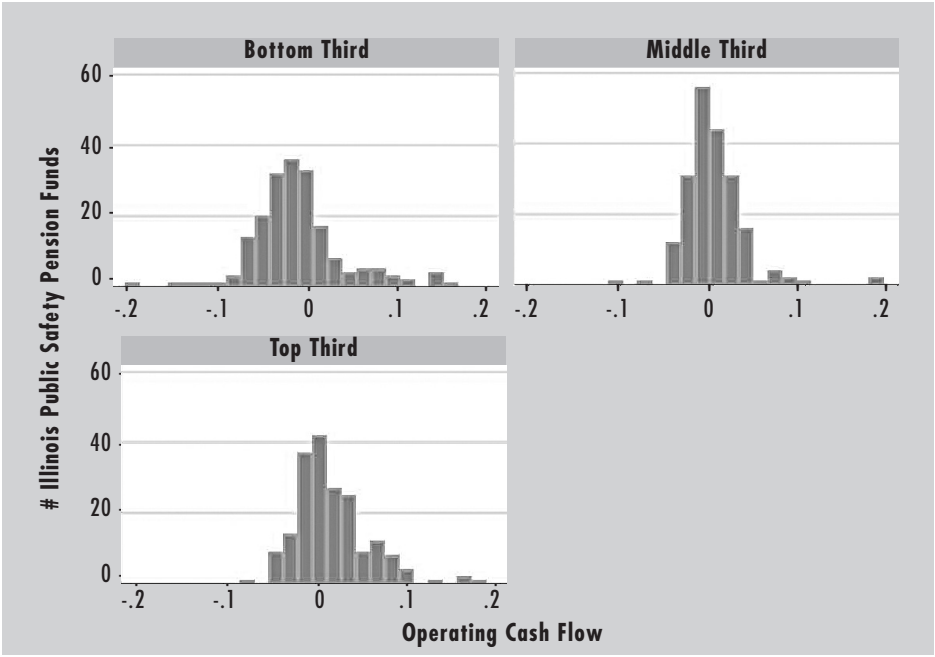
TABLE 1

AVERAGE LIQUIDITY RISK VALUES, BY GROUP

GROUP (BASED ON FY 2018 FUNDED RATIO)	# PENSION FUNDS	OPERATING CASH FLOW (MEAN)	OPERATING CASH FLOW (MEDIAN)	LIQUIDITY-TO-ASSETS RATIO (MEAN)	LIQUIDITY-TO-ASSETS RATIO (MEDIAN)
Bottom Third	197	0.001	-0.010	0.071	0.039
Middle Third	202	0.001	-0.003	0.043	0.032
Top Third	197	0.026	0.010	0.041	0.061
Total	596	0.009	0.000	0.058	0.036

FIGURE 3

OPERATING CASH FLOW RATIOS BY GROUP[4]



The distribution of the ratios are somewhat similar across the three funding level groups (defined above) but are more positively skewed for the funds in the top third group (those that were at least 63% funded in FY 2018), as shown in Figures 3 and 4.

FIGURE 4

LIQUIDITY-TO-ASSETS RATIOS BY GROUP[5]

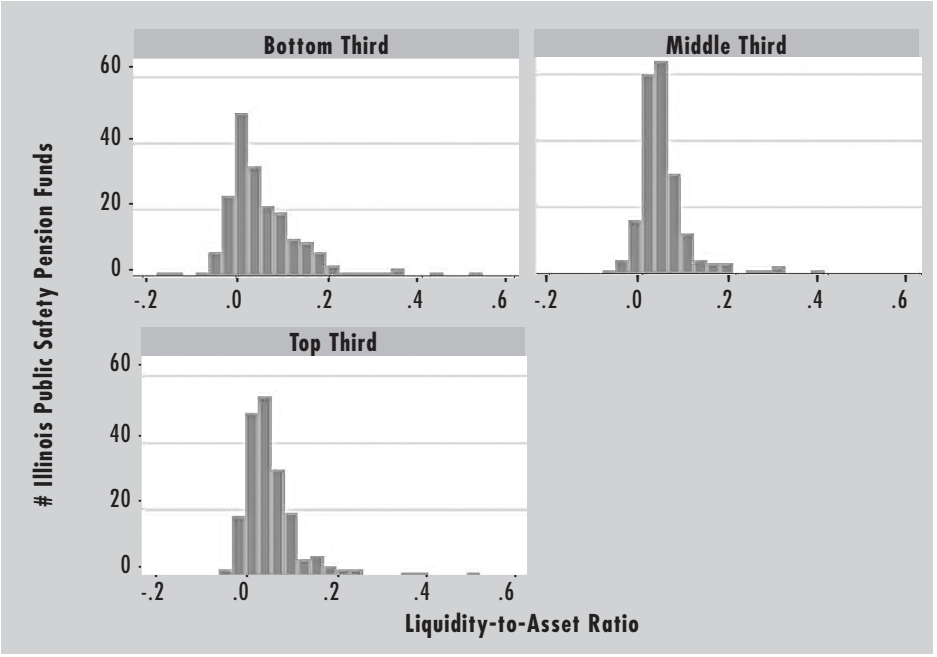


TABLE 2

NUMBER OF PUBLIC SAFETY PENSION FUNDS WITH NEGATIVE LIQUIDITY RATIOS, BY GROUP

GROUP (BASED ON FY 2018 FUNDED RATIO)	# PENSION FUNDS	FUNDS WITH AT LEAST ONE NEGATIVE LIQUIDITY RATIO	
		#	%
Bottom Third	197	118	60%
Middle Third	202	109	54%
Top Third	197	71	36%
Total	596	298	50%

With both ratios, negative numbers indicate that annual expenses exceed income and/or available cash. While there is not a strict threshold for identifying when there is a serious issue, the further below zero, the greater the liquidity risk. A pension fund's total assets include more than just annual income and available cash, and other assets (like long-term investments) can be converted

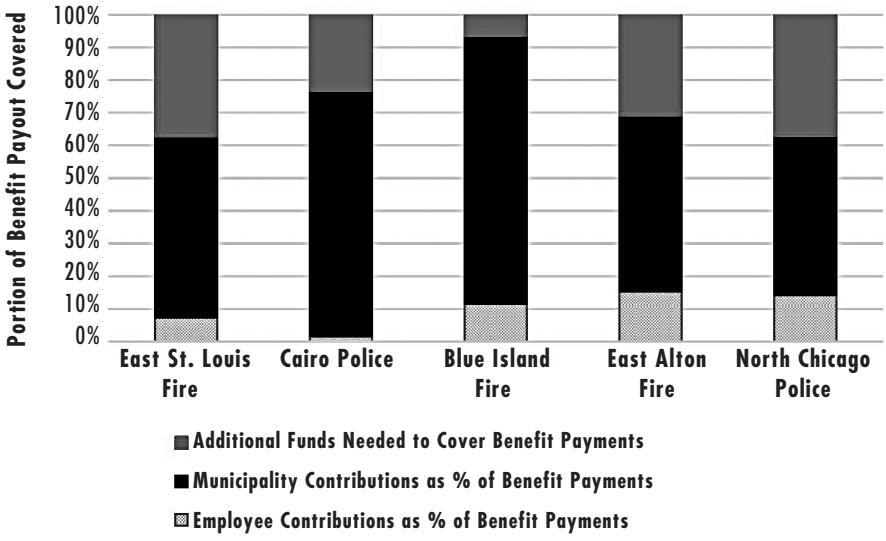
to cash if necessary. As Table 2 highlights, most public safety pension funds that are funded at 50% or less have at least one negative liquidity ratio whereas only 36% of the top funded funds do.

Consistently having to liquidate investments to pay expenses (like pension benefit payments), however, negatively impacts a pension fund's finances because it means that total assets are decreasing over time. Depending on market conditions and the investment type, funds could end up having to liquidate investments at a loss.

Negative liquidity measures and a low funded ratio is a worrisome combination that indicates that a pension fund may be at risk for depleting its assets, which could ultimately threaten benefit payments. Of the 596 public safety pension funds examined, 37 (or 6%) had a negative operating cash flow ratio, negative liquidity-to-assets ratio, and FY 2018 funded ratio below 50%. All but one of those funds were less funded in FY 2018 than they were in FY 2007, with funded ratios decreasing by an average of 22 percentage points in that time period. If these pension funds run out of assets, significant amounts of additional money would be needed to cover benefits. Figure 5 focuses on the five public safety pension funds with the lowest FY 2018 funded ratios and provides insight into how much municipalities' contributions would need to increase if the system ran out of assets.

FIGURE 5

CASH FLOW GAP BETWEEN CONTRIBUTIONS AND BENEFIT PAYOUTS (FY 2018)



For the Blue Island Firefighters' pension fund, for example, pension and benefit expenses totaled $1.35 million in 2018, and contributions from employees and the city were $1.26 million that year. That means that contributions covered 94% of the payout (as shown in Figure 5), and the remaining 6% came from existing assets. If the pension fund ran out of assets, the City of Blue Island would have needed to pay approximately $87,000 more than it did in 2018 to prevent benefits from suddenly being halted.

CONCLUSION

The COVID-19 recession is likely to have significant consequences for state and local governments and their public pension funds. Many public pension funds' funding levels did not rebound after the Great Recession, and the present economic downturn will further deteriorate funding levels. Decreases in pension fund funding levels will drive up local governments' required contributions, exacerbating deficits that those governments are already likely to face. The compounding circumstances could lead to a public safety pension fund completely running out of money. If a pension system depletes its assets, it is questionable whether the municipality or fire protection district would be able to make up the shortfall given that many were already struggling to make their annually required pension contributions prior to COVID-19. This could lead to a worst-case scenario of benefit payments being halted, and while rare, this has happened in the past (Cooper and Williams Walsh, 2010). Analysis of Illinois' public safety pension funds indicates that while most are underfunded, a smaller fraction risk depleting their assets.

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ENDNOTES

[1] The public safety pension funds are the pension funds governed by Articles 3 and 4 of the Illinois Pension Code. The City of Chicago's police and fire pension funds are excluded from this group because they are governed by different articles of the Pension Code.

[2] Specifically, the pension funds' funded ratios for years 2007, 2012, and 2016 were obtained from the Commission on Government Forecasting and Accountability's 2017 report on the public safety pension funds (Lazzara, 2017). Data for fiscal year 2018 were obtained from the Illinois Department of Insurance's Pension Data Portal.

[3] These criteria were used because a pension system that has no active members may be operating as a PAYGO system in which benefits are paid as they come due, and one with no beneficiaries is not paying out benefits.

[4] In Figure 3, the range was limited between -0.2 and 0.2 to better display the distribution of values. Of the 596 public safety pension funds, 98% had an operating cash flow value within the -0.2 to 0.2 range.

[5] In Figure 4, the range was limited between -0.2 and 0.6 to better display the distribution of values. Of the 596 public safety pension funds, 99% had liquidity-to-assets ratios within the -0.2 to 0.6 range.

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