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### Local Government Long-term Liabilities: Pensions, OPEBs and Infrastructure

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**Abstract:** Local governments can create short-term savings by underfunding long-term liabilities, such as pensions, post-retirement health care, and repair and maintenance of fixed assets and infrastructure. How pervasive is it across the municipal landscape nationally and what lessons can be learned? What are the causes and consequences of such fiscal behavior? How can officials today be held accountable for decisions that affect the future fiscal position of their city?

#### Introduction

In a previous era, discussion of local government long-term liabilities would likely induce sleepiness for most except maybe some accountants, public finance academics, fiscal watchdogs and a very small slice of the citizenry.<sup>1</sup> This is most certainly no longer the case as the proverbial chickens have come home to roost. The chronic underfunding of pensions, other post-retirement benefits and infrastructure maintenance/investment over the last several decades created serious fiscal challenges for local governments that have been a topic of considerable interest in recent years. Many local

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<sup>1</sup> Since this paper is being presented at an urban forum, it focuses primarily on local governments. The same causes, consequences and options related to long-term liability underfunding can easily be applied to state governments and, in fact, much of the previous research has focused either solely on the state level or has combined state and local governments.

governments continue to be challenged by ballooning pension and post retirement benefits which causes these governments to reduce spending in everyday services and programs as well as to defer funding of infrastructure maintenance or scrapping investments in new capital projects altogether (Nation, 2017).

This paper aims to provide a general primer on this topic. First, we report on the size of the underfunding problem for US local governments in terms of three areas: 1) pensions, 2) other post-employment benefits (OPEB) and 3) deferred infrastructure maintenance/investment. Second, we explore the various hypotheses that seek to explain why local governments underfunded these areas. Third, we detail the fiscal and policy consequences from such underfunding of long-term liabilities. The paper concludes with a discussion of the various options available to make local public officials more accountable so that such underfunding of long-term liabilities is less likely to occur in the future.

### **Size of the Problem**

This section will report estimates of the size of the underfunding problem for each long-term liability type separately starting with local government pensions. The underfunding of pensions has received the most attention of all the various types of local government long-term liabilities. For most local governments, pensions are structured as a defined benefit pension plan whereby local government workers defer compensation which is deposited into pension funds with contributions made by the sponsoring government. These contributions along with interest earnings from the fund are used to make pension payments to these government employees and sometimes their spouses in retirement for as long as they live. The local government has flexibility in terms of the timing and amount of its contributions. This (mis)use of this flexibility has been one of the driving factors in the underfunding of local government pensions.

Local governments must account for their long-term pension obligations on an accrual basis. Thus, they must report the actuarial accrued liability, the actuarial value of assets, the unfunded liability, the funded ratio and the annual required contribution (ARC) payment. All of these statistics have received considerable attention in the last decade or so given the size of the underfunding problem for this

type of long-term liability. However, the calculation of these statistics is not without controversy. More specifically, there has been considerable debate on the actual mechanics of estimating pension underfunding at the state and local government level. This debate is generally beyond the scope of this paper but revolves around three areas: 1) the proper discount rate, 2) differentiating pension payments related to past and future service and 3) the calculation of asset values based on multi-year averages (Elliott, 2010).

Table 1 below summarizes the various studies that have estimated long-term liabilities at the local government level in the United States.

<b>TABLE 1</b>				
<b>Estimates of Pension and OPEB Unfunded Dollar Amounts at the US Local Government Level</b>				
	<i>Pension Amount</i>	<i>OPEB Amount</i>	<i>Data Year</i>	<i>Sample</i>
Rauh	\$558 billion	No estimate	2015	40 largest cities, 25 largest counties
Munnell et al.	\$2.94 trillion	\$328 billion	2014	46% of counties, 43% of cities and 26% of school districts
Pew	\$99 billion	\$118 billion	2009	61 key cities
GAO	No estimate	\$129 billion	2008	39 large local governments

Joshua Rauh of Stanford has often been cited in his estimations of local government pension liabilities. Rauh (2017) estimates the pension funding deficits for the largest 40 cities and 25 counties based on 2015 data. In terms of dollar underfunding, the 40 largest cities reported total unfunded pension liabilities of \$163.61 billion, while the 25 largest counties reported \$51.9 billion in total unfunded pension liabilities, for a combined total of \$215.51 billion. Rauh argues, however, that local governments use overly optimistic assumed investment returns when calculating their ARC payments and further exacerbate the problem by using a discount rate for future obligations that mirrors the potentially inflated assumed investment returns. In 2015 the liability-weighted average expected return was 7.6 percent. Rauh discounts future liabilities with a more conservative 2.77 percent, based on a risk-free Treasury bond based return. Rauh calls the Treasury based discounted estimate the Market Value Liability (MVL). This difference in methodology leads to far higher pension funding deficit estimates and paints a much grimmer picture. If the MVL is considered the dollar underfunding for the 40 largest cities jumps to

\$407.38 billion, while the 25 largest counties dollar underfunding jumps to \$151.08 billion, for a combined total of \$558.46 billion.

The funding ratio of total accrued assets vs total accrued liabilities tells a similar story, with wide variability between stated and MVL funding ratios. The city of Chicago has the lowest funding ratio with a stated funding ratio of 36 percent, and an abysmal 19.9 percent MVL funding ratio, while Fresno has the highest funding ratio with a 112 percent stated funding ratio and an MVL funding ratio of 64 percent. These obligations translate into heavy burdens as a share of local government revenue. In 2015 Chicago had the highest percentage of its own revenues going to cover pension obligations at a whopping 23.1 percent, while 11 of the other 40 biggest cities had over 10 percent of their own revenues consumed by pension obligations.

Just like with dollar underfunding and funding ratios, the fiscal obstacle becomes even more daunting if MVL is used instead of expected investment returns. If MVL is used, 11 of the 40 biggest cities would need to spend over 20 percent of their own revenues in order to avoid a rise in future pension obligations, with Chicago needing to spend a staggering 44.5 percent of its own revenue. With the exceptions of Detroit, Miami, Philadelphia, New Orleans, Nashville, Indianapolis, Sacramento, and Long Beach, all 32 of the other biggest cities contributed far less than was needed to prevent a future rise in unfunded pension liabilities, which indicates that the problem will continue to grow over time. The 25 largest counties displayed correspondingly low funding ratios, with Wayne County, Michigan showing the lowest funding ratio at 31.6 percent, and Macomb County, Michigan showing the highest funding ratio at 76.7 percent. Fresno County, California had the highest percentage of their own revenue consumed by pension obligations at 37.6 percent, but that number jumps to a disabling 61.3 percent if MVL is used. Similarly, if MVL is used, Cook County, Illinois and Orange County, San Diego County and Kern Counties in California would need to contribute over 40 percent of their own revenues to avoid increasing liabilities.

Another oft-cited researcher on post retirement underfunding is Alicia Munnell. Munnell and Aubry (2016) analyzed data from 2014 for pension plans administered by 178 counties, 173 cities, and

415 school districts in an attempt to determine how much of the burden from state cost-sharing plans was the responsibility of local governments. Their analysis determined that a full 60 percent of the pension liabilities in state-administered pension plans falls squarely on local governments, which translated to a combined \$2.94 trillion in total pension obligations. Munnell and Aubry did not address any of the MVL/discounting issues that Rauh argues, but their data showed that 11 of the 50 biggest cities had pension contributions that accounted for over 20 percent of their own revenues. Although Munnell and Aubry's sample was quite robust, their data only covers 46 percent of counties, 43 percent of cities, and only 26 percent of school districts. The Pew Charitable Trusts (2013) analyzed 2010 data for a sample of 61 key cities across the country, including the largest city in each state, and all other cities with a population greater than 500,000 and showed similar results. In fiscal year 2009, the cities in their sample displayed \$99 billion in unfunded liabilities. They also ran a follow-up analysis of 40 cities in their sample for 2010 and found that their unfunded pension liabilities had grown by 15 percent from 2009. Although these studies captured a wide sample of local governments, they were far from exhaustive, so the estimates of total pension obligations are conservative in terms of covering the entire landscape of local governments.

Other post-employment benefits (OPEB) represent additional deferred compensation that most local governments also provide their employees. The largest OPEB is retiree health insurance which these governments subsidize for their workers in retirement. Historically, most governments have not pre-funded their OPEB liabilities like they have for pensions. Rather these governments paid for these costs on a pay-as-you go basis as an annual expense. Due to the sharp rise in health care costs and health insurance premiums, the Government Accounting Standards Board (GASB) promulgated new guidelines in 2007 (GASB 45) that required governments to account for their OPEB liabilities on an accrual basis rather cash basis. GASB 45 incentivized some researchers to estimate state and local OPEB liabilities on individual government and national aggregate bases as has been performed for pensions.

Munnell and Aubry's sample of 2014 data for 46 percent of counties, 43 percent of cities, and 26 percent of school districts estimates a combined total of \$369.3 billion in local OPEB liabilities, with only

\$41.3 billion in current assets, leaving \$328.1 billion in liabilities unfunded. The Pew Charitable Trusts (2013) also performed an analysis of their sample of 61 key cities on their OPEB liabilities. The 61 key cities had an estimated \$118.2 billion in OPEB liabilities that translated to an anemic 6 percent funded ratio. The Government Accountability Office (GAO) ran a more limited study of 39 large local governments based on 2008 data and found that their unfunded OPEB liabilities exceeded \$129 billion. There was significant variability between these local governments ranging from only \$15 million for a county in Arizona to a staggering \$59 billion for New York City. The GAO found similar funding ratios as the aforementioned Munnell study, reporting that of the 39 local governments only 13 had set aside any assets to pre-fund their OPEB liabilities, with the remaining 26 local governments holding zero assets, which led to an estimated funding ratio of only 5 percent.

OPEB plans typically use much lower discount rates than pension plans due to their unfunded nature, with counties and school districts using an average discount rate of 4.9 percent, and cities use a slightly higher average discount rate of 5.6 percent. This lower discount rate may lead to less controversy surrounding their methodology, but some analysts may argue that the rate is still too high. OPEB benefits are somewhat more flexible than pension obligations in that municipalities have more freedom to adjust benefits by increasing deductibles and co-pays or increasing the percentage of the premium paid by the employee. This flexibility could provide some relief to local government budgets, but that relief could be politically difficult to enact as reducing health benefits often leads to widespread public outcry. As with the pension estimates, the OPEB estimates only cover an incomplete cross-section of local government obligations, so these estimates must be considered conservative in terms of covering the entire landscape of local governments.

Infrastructure, the third category of underfunding, is not technically a long-term liability but rather refers to the condition state of a government's physical capital assets. However, disinvestment in the nation's infrastructure essentially represents a liability, as such investment will have to be made at some point in the future, at which point it will require more resources than if such investment was made today.

Before providing formal estimates of such infrastructure deficits, we must understand what this concept of infrastructure really entails. The American Society of Civil Engineers (ASCE) classify infrastructure into 16 categories including aviation, bridges, dams, drinking water, energy, hazardous waste, inland waterways, levees, parks and recreation, ports, rail, roads, schools, solid waste, transit and wastewater (American Society of Civil Engineers, 2017). Hume (2018) compresses these categories creating a five-prong taxonomy of infrastructure: 1) horizontal (streets, bridges, sewers, water systems, etc.), 2) technology (broadband, cellular service, electricity grid), 3) creative (parks, libraries, nature spaces, etc.), 4) mush sector (investments in schools, hospitals, higher education facilities) and 5) federal/state (investments in other infrastructure run by the federal and state governments that impact local government infrastructure such as harbors and interstate highways).

It has been well documented in the popular press about the lack of investment made by all US levels of government in infrastructure over the last few decades. In fact, President Trump recognized the acuteness of such policy challenge by including infrastructure funding as a prominent plank in his presidential campaign. Probably the most comprehensive estimate of the state of the United States' infrastructure is made by the American Society of Civil Engineers (ASCE) every four years. Considering all three levels of government, the ASCE gave the United States a grade of D+ (which represents a grade of "poor") in its most recent estimate in 2017. These engineers estimate that it would require \$4.6 trillion in infrastructure investment to bring the nation's infrastructure to a state of "good" repair by 2025. As of 2017, only 55% had been committed to this infrastructure need, which represents a \$2 trillion funding gap. While this report does not break out funding responsibility by level of government, other analysts have claimed that state and local governments own 90% of non-defense government physical assets and estimate that 75% of the funding for these assets have historically been the responsibility of state and local governments (McNichol, 2017; Congressional Budget Office, 2017). According to the US Census Bureau's 2015 Annual Surveys of State and Local Government Finances, state and local governments made \$334 billion in direct expenditure capital outlays in 2015. Local governments made \$210 billion in

capital outlays, while state governments made \$124 billion in capital outlays.<sup>2</sup> This represents a 63%/37% split between local and state governments in capital spending.

Based on a \$2 trillion funding gap in which state and local governments own 90% of the physical assets and bear 75% of the costs of the assets they own, subnational governments in the United States would be responsible for \$1.35 trillion of the \$2 trillion infrastructure deficit (i.e., \$2 trillion x 90% x 75%). Assuming a 63%/37% split between local and state governments, local governments in the United States would bear \$850 billion of the infrastructure deficit. Of course, there is likely much diversity in the infrastructure deficit among local governments. The 2017 American Society Civil Engineers evinces this diversity by assigning states different ratings as well as ratings across different types of assets that may be more or less the responsibility of local governments.

### **Why Underfund?**

With the underfunding size of local government long-term liabilities detailed, we now explore the possible causes of such underfunding. Not surprisingly, the underfunding problem does not seem to have just one or two causes but is due to a multitude of factors. The extent of influence of these factors is dependent on the local government. For some local governments, many of these factors are “in play” in terms of contributing to the underfunding problem whereas maybe only one or two of these factors drive the problem in other governments (Coggburn and Kearney, 2010). We describe these factors in terms of four broad categories: 1) political, 2) institutional, 3) fiscal and 4) financial.

#### Political Factors

The political causes of underfunding long-term liabilities are commonly cited in the popular press (Burnham, 2018). The short-sighted nature of decision-making is often attributed as an inherent problem of elected officials who often make decisions mainly to maximize the likelihood of their success at the

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<sup>2</sup> The 2015 Annual Surveys of State and Local Government Finances relies on a sample of local governments and thus are susceptible to sampling error <https://www.census.gov/govs/local/>



next election (Elder & Wagner, 2014). Elder and Wagner (2014) use data from 91 state/local pension plans from 2001 to 2010 to show that greater electoral competition, legislative term limits, and higher rates of legislative turnover lead to pension underfunding. Further, they find that term limits reduce average pension funding ratios by about 10 percentage points. Theoretically, public choice theory related to the concept of “fiscal illusion” provides support to the notion that government officials often make financial decisions in the short-term fiscal interests of the taxpayers which also provide electoral benefits to current politicians (Buchanan, 1967). For example, at the state and local level, there are many tangible examples of the way in which governments use debt to mask deficits and defer hard taxing and spending choices (Bifulco et al. 2012). The underfunding of pensions and the lack of pre-funding OPEB liabilities clearly fits into this category. To the extent elected officials defer spending in these areas, they can spend more money in other policy areas that curry favor with the citizenry. One of these policy areas is often infrastructure in which the benefits of prominent capital projects are instantly visible to the public through a traditional ribbon-cutting ceremony.<sup>3</sup> Alternatively, skirting their pre-funding responsibility of pensions and OPEBs provide additional revenues that local governments can use to justify cutting taxes or providing rebates (e.g., increasing the homestead exemption for property owners) to its taxpayers.

Of course, it “takes two to tango” in terms of the political nature of the underfunding decisions described above. It has been widely documented how many Americans have an aversion to both higher taxes and a reduction in the level of government services they are used to receiving (Gramlich, 2017; Gallup, 2018). For example, Pew Research Center surveys since 2009 have found that majorities in both political parties favor maintaining or increasing government spending in all budget areas except unemployment benefits (Gramlich, 2017), while Gallup has reported during the same period that more than half Americans think their federal income taxes are too high in most years (Gallup, 2018). In the

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<sup>3</sup> While governments have certainly underfunded their infrastructure needs as previously described, such underfunding would likely be even more significant if not for the political nature of capital spending. In this sense, government spending can be thought of as zero sum. That is, for every dollar spent on capital projects that seek to enhance an elected officials electoral prospects, a dollar may be lost in funding pension and other long-term liabilities.

1970s and 1980s, the “starve the beast” experiment was attempted in which the federal government reduced taxes as a mechanism to force government spending cuts. This experiment has been widely viewed as a failure. Niskanen (2006) shows that the reduction in federal revenues between 1981 and 2005 saw an increase in federal spending, the exact opposite effect of what “starve the beast” intended. What seems obvious now is that citizens “want their cake and eat it too” – they want lower tax burdens but do not want a concomitant reduction in government services to accompany such lower tax revenues (Niskanen, 2006). Thus, local government elected officials in being short-sighted in underfunding pensions and OPEBs to free up money to spend elsewhere or return such funds to their taxpayers are acting quite rationally, in a political sense, by responding to the incentives provided to them by the ones who placed them in office.

#### Institutional Factors

The institutional causes of underfunding long-term liabilities mainly relate to restrictions on the fiscal autonomy of local governments. The increase in tax and expenditure limitations (TELs) at the state and local levels have in many cases reduced local governments’ ability to meet its fiscal needs (Kioko, 2014). Currently, most states have placed binding property tax limitations on cities, while eight states have established expenditure limitations (Pagano and Hoene, 2018). Kioko (2014), using data on county governments between 1970 and 2004, found that TELs negatively impacted counties’ unrestricted cash reserves. With fewer cash reserves, local governments will find it difficult to navigate through economic recessions. Moreover, property tax limitations can reduce the amount of revenue local governments realize from their most important revenue source. State restrictions on the types and structure of other local government taxes have the same effect. At the same time, in the context of statutory or constitutional spending limitations, demands for increased local government spending have not abated both because of increased citizenry demands and as result of increased devolution of government responsibilities from the federal and state levels to the local level (Swenson and Deller, 2001; Zhao and Coyne, 2017). In this context of smaller than possible fiscal resources and increased spending needs

alongside expenditure caps, local governments are incentivized to defer pre-funding pensions and OPEBs to address such mismatch on the two sides of the government ledger.

Increased restrictions on the amount and type of debt local governments can issue for infrastructure purposes has a similar effect. Many local governments are restricted by voter approval on the amount of debt it can sell to fund capital projects. In many parts of the country, securing voter approval for such bond financing has been difficult to achieve even as interest rates have been historically low for almost two decades (Covington, 2017). Absent such approval, governments rely on funds on hand or pay-as-you financing to fund such projects. Given the scarcity of resources on hand at all levels of governments over the last few decades, restrictions on debt financing have had a de facto result of significantly slowing investment in infrastructure. Of course, local governments have tried to get around these debt restrictions by creating other financial instruments, like revenue bonds, that many not be subject to voter referendum. These attempts were successful years ago but as the citizenry has become more aware of such financial gamesmanship, it seems such efforts by local governments have diminished (Legislative Analyst’s Office - State of California, 2016). For instance, in 2016, a group of California residents created Proposition 53, a referendum on requiring voter approval of revenue bonds exceeding \$2 billion. California voters narrowly defeated the proposition. However, the creation of the proposition shows that voters are becoming more aware of state and local government usage of revenue bonds.

The creation of fiscal institutions like TELs and debt limitations were intended, at least partly, to help local governments keep their long-term fiscal house in order. However, such limitations are blunt instruments that have many perverse effects including the underfunding of long-term liabilities (Maher et al, 2016). Moreover, they are a sort of “drive by” policy response in that they are restrictions put in place by a higher level of government to achieve a particular result without ongoing monitoring. On the contrary, a different type of institutional response in lieu of (or in addition to) TELs and debt restrictions would be active fiscal oversight of local governments by the state government. Many analysts argue that greater oversight by the state would result in fiscal decision-making that would have been in the better long-term fiscal interests of the local government (Coe, 2008). Unfortunately, many states have no

institutional oversight of local governments while many others are obligated to make relatively minimal effort (Pew Charitable Trusts, 2016). For instance, a 2016 Pew Charitable Trusts study found that only eight states had systems in place that detected when local governments became “fiscally distressed” (Pew Charitable Trusts, 2016). Thus, it seems likely that such lax institutional oversight contributed to the short-sighted decisions of local governments to underfund their pensions, OPEBs and infrastructure investment.

### Fiscal Factors

In addition to political and institutional causes, fiscal issues have contributed in a number of ways to the underfunding of local government long-term liabilities. First, the declining base of the sales tax has resulted in slower growth of sales tax revenues compared to the growth of the economy as a whole (Legislative Analyst’s Office – State of California, 2013). The base has declined as a result of two changing consumption patterns. First, the US economy has increasingly become a more service based and less goods-based economy with many services not taxed at the state and local level (Legislative Analyst’s Office – State of California, 2013). Second, US consumers over the last three decades have increasingly bought their goods online with such purchases often untaxed or taxed at lower rates (Semuels, 2017). Both of these buying patterns have reduced the base of the sales tax which has reduced the available resources for local governments to fund long-term liabilities. The declining sales tax base has also reduced capital spending since many local governments sell bonds backed by their sales tax revenues. To the extent that the sales tax base has been narrowed, there are fewer sales tax revenues available to support such bonds which results in smaller bond sales to fund capital spending.

On the spending side of the fiscal equation, local governments, like the federal government, state governments, individuals and private sector firms, have been budgetarily challenged by escalating health care costs over the last couple decades (Manchester and Schwabish, 2010). At the local level, these budgetary expenses have increased as a result of increased health premiums for current employees and greater health care costs associated with more expensive medical care provided by local governments as

well as an increase in the population served by local government health care providers as a result of people not purchasing insurance due to rising insurance premiums<sup>4</sup>. Like any other spending pressure, increased expenditures on health care costs in the current budget leaves less resources available for other spending including on pensions, OPEB and infrastructure.

### Financial Factors

There are a number of possible financial causes to the underfunding of local government long-term liabilities. While the concepts of “financial” and “fiscal” are related, we use the term “fiscal” to identify government revenue and spending causes whereas the term “financial” mainly relates to financial decision-making, often related to capital market decisions, or changes in the financial markets associated with such underfunding. The obvious first financial cause of underfunding relates to the deep recession experienced by local governments in 2007-2008. The value of pension investments declined considerably as a result of the financial crisis as equity and other asset values prices dropped dramatically (Reinke, 2011). In some parts of the country, the decline in property values as a result of the subprime mortgage crisis put downward pressure on property tax revenues which also resulted in a reduction in government resources to fund pensions, OPEB and infrastructure investments (Chernick et al., 2011). However, many of these pension funds have witnessed significant growth in recent years while property values have recovered in most parts of the country since the Great Recession. Given such recovery, we need to be careful relying on some of the pension funding estimates described previously which were estimated only at the onset of such asset price rebound.

Some local governments employed financial instruments that were greatly affected by the financial crisis. For example, the use of interest rate swaps and auction rate securities resulted in much higher debt service costs than expected for many of these governments during this time. The Wall Street Journal reported a \$1.25 billion estimate from the Service Employees Union International of the cost of

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<sup>4</sup> Increases in OPEB costs related to rising health insurance premiums have also been the result of the escalating cost of health care. However, this portion of the paper focuses on the causes of underfunding long-term liabilities like OPEBs which, thus, results in our focus on current employee health insurance premiums.

interest rate swaps for a sampling of US cities that were dealing with significant budget challenges in 2010 (Wall Street Journal, 2010). To the extent greater than expected resources were allocated to pay debt service and termination payments on these instruments, less monies were available for pensions, OPEBs and infrastructure spending. This was not lost on various stakeholders of local government finances. For example, the Chicago Teachers Union demanded that the Chicago Public Schools (CPS) renegotiate with the investment banks that marketed these financial instruments given the stress they put on school finances (Roeder, 2011).

The decision by local governments to use another financial instrument, pension obligation bonds (POBs), has had a mixed impact on pension finances. POBs are municipal bonds in which the sale proceeds are used to fund a portion of the unfunded pension liability. Under a POB, the government is hoping the return on the pension bond proceeds is greater than the cost of the debt. To the extent such return is greater, the unfunded liability is reduced by the difference. However, if the return is less, the unfunded liability actually becomes greater than if the government did not sell the POB. Munnell et. al. (2014) found that POBS had a negative average real return between 1992 and 2009 but a small gain when you extend the period to 2014. However, the success of POBs is heavily reliant on timing so POBs sold in the late 1990s often continue to have a negative return while POBs sold in the early 2000s a positive return. Moreover, Munnell et. al. (2014) found that POBs tend to be used by governments under the most financial pressure which are precisely the sorts of entities that should be reducing their financial risk not increasing it through the use of a financial risky instrument like a POB. In any event, for some governments, POBs have helped their pension underfunding while for others they have hurt their position.

Illustrating the zero-sum nature of the underfunding of liabilities situation for local governments is the decision by some governments to use new revenues for pensions. Given the gravity of the pension funding situation is compounded by the political difficulty in raising taxes/fees, some governments have turned to user fees that are more acceptable by the public to help fund pensions (Calabrese, 2018). For example, the City of Chicago implemented a four-year phase-in between 2017 and 2021 of a new water and sewer utility tax to make newly mandated pension payments (Civic Federation, 2016). In the past,

water and sewer fees were used primarily to fund capital improvements to the city’s water and wastewater system. City residents received a separate water and sewer bill but were generally supportive of it because they understood what such bill was funding. As such, the city has been able to embark on a consistently sizeable capital program related to its water and sewer infrastructure. The tax-benefit linkage has been eroded by adding pension funding to the use of water and sewer taxes so it is unclear how citizens will view future increases in this tax necessary for capital spending. More urgently, the implementation of the new water and sewer tax to fund pensions reduces the future opportunity for the city to use these specific revenues for the traditional capital improvements it has made in the past.

Another financial cause could also be classified as a political one. For some local governments, elected officials made the financial decision to provide enhanced pension benefits or offer early retirement programs (Kerrigan, 2013)<sup>5</sup>. These financial decisions were made to provide short-term operating budgetary relief as they either removed salaries all together from the payrolls (via the early retirement program) or reduced the size of demand for annual increases in current employee salaries (by promising larger pension benefits in the future). In both cases, these financial decisions enhanced the size of pension underfunding either by creating more generous pension benefit formulas or by pushing people onto the pension rolls earlier. No doubt these promises were political in nature but there was also a degree of poor financial decision-making in play as well. For example, in 2002 the State of Illinois implemented an early retirement initiative which was estimated to cost \$622 million in additional unfunded pension liability but which ended up costing \$2.5 billion, which represents misestimation of \$1.8 billion. The error in estimation was mainly due to underestimating how many and what types of employees would avail themselves to the early retirement initiative (Moser, 2012). That size of estimation error is indicative of a substantial degree of financial policy mismanagement.

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<sup>5</sup> There is considerable debate about the generosity of pension benefits to government workers especially compared to private sector workers. This portion of the paper only focuses on financial policy decisions over the last few decades to enhance this generosity level rather than explore the debate on the general generosity of local government pension benefits. We feel such focus is appropriate since this section details the possible causes of underfunding that have come into focus over the last decade.

Two financial factors have had a mitigating impact on the underfunding of long-term liabilities. The first financial factor relates to the provision in the federal American Recovery and Reinvestment Act that created the Build America Bond (BAB) program. The BAB program was a direct subsidy bond program that provided local governments a 35% subsidy of their interest payments on the sale of taxable BABs. This represented a generous financial subsidy that led state and local governments to issue over \$181 billion in BABs in 2009 and 2010 (the BAB program expired on December 31, 2010). With the help of the BAB program, municipal bond issuance for 2009 and 2010 was \$532 and \$547 billion, respectively (Bergstresser and Luby, 2017). Municipal bond issuance in 2011, the year after the BAB program's sunset, was \$394 billion. Since 2011, municipal bond issuance has not exceeded \$470 billion with several years in the high \$300 million range (Bergstresser and Luby, 2017). Thus, it appears that this federal policy increased spending on infrastructure beyond what it would have been without implementation of the BAB program.

The second mitigating financial factor has been the historical low level of interest rates over the last 15 years. As interest rates have declined and stayed low in this time period, local governments have been afforded the ability to sell lower cost debt either to 1) refinance existing debt to create budgetary savings or 2) fund new capital investment. It is impossible to determine how much additional debt was sold for new capital projects that otherwise would not have been sold absent the favorable interest rates. However, we can draw some tentative conclusions from the trend in bonds sold to refinance old debt. Specifically, over 40 percent of municipal bonds on average per year by par value since 2000 have been sold to refinance existing debt (Bergstresser and Luby, 2017). This composition has only accelerated in recent years with 2016 seeing 58% of par value municipal bonds sold for refunding purposes (Bergstresser and Luby, 2017). These interest cost savings provide additional resources for local governments to either increase their pre-funding of pensions or OPEB liabilities, pay for other programmatic spending or to issue more debt to fund infrastructure. Thus, it is likely that the advantageous interest rate environment has improved the underfunding of long-term liabilities over what



it otherwise would be for many local governments<sup>6</sup>.

### **Consequences of Underfunding**

With the size of the problem detailed and its potential causes identified, we now turn to an exploration of the various consequences of local government underfunding of long-term liabilities. We group these consequences into three categories: 1) budgetary, 2) economic and 3) intergovernmental relations.

#### Budgetary Consequences

The first budgetary implication from underfunding is straightforward. Underfunding pension and OPEB liabilities in past and current budgets mean that future budgets will entail greater resources to satisfy these commitments. Such greater budgetary allocations to OPEB and pensions means spending in other areas such as public safety, education and health care is crowded out. Related to this paper, it also may mean funding for investment in infrastructure is reduced as well. Of course, the deeper and the more prolonged a local government underfunds its long-term liabilities, the more difficult and painful it is to address at some point in the future. The state of Illinois offers an illustrative example of this. Illinois has underfunded its pension liabilities for decades which has resulted in an annual structural budget gap that has persisted for over a decade. This budgetary deficiency has been a significant factor in the state holding the lowest credit rating of all 50 US states which speaks to the severity of the problem and the budgetary pain that will likely need to occur to rectify it (Moody's Investors Service, 2018). For example, according to the Fiscal Futures Project at the University of Illinois, it could take almost two decades for the state of Illinois to eliminate this structural budget gap even if it restrains spending to the lowest growth rate observed by state governments over the last twenty years (Merriman et. al, 2018).

Another budgetary consequence of underfunding pensions and OPEBs, as previously described,

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<sup>6</sup> It is unclear the effect higher interest rates would have had on pension returns. Thus, while lower interest rates provided refinancing opportunities and the ability to issue less costly debt for capital, it may have reduced pension fund returns thus reducing the overall long-term liability underfunding benefit to local governments.

is that revenues normally earmarked for other purposes (including infrastructure) are now used to make up payments to the pension funds and OPEB liabilities. The City of Chicago's use of a water and sewer tax that would normally be earmarked to maintain the city's capital infrastructure related to its water and wastewater systems is an example of this consequence. Thus, in this case, the increase in funding to pension and OPEB liabilities with capital dollars reduces capital spending on a dollar for dollar basis.

The third budgetary consequence relates to a local government's financial condition as expressed by its credit ratings. In recent years, the credit rating agencies (and investors) have paid much more attention to a local government's funding of its long-term liabilities (Moody's Investors Service, 2013). Of course, these stakeholders have focused on the size of the government's unfunded pension liabilities and its OPEB requirements as the size of these liabilities have the potential to severely hamper a government's ability to satisfy its creditors. However, the rating agencies have also begun to pay greater attention to the condition of a local government's infrastructure as disinvestment in physical assets can have serious long-term economic consequences as discussed below (Hume, 2018). For instance, in 2018, S&P Global Ratings commended Washington D.C. on its plan to determine funding for deferred maintenance on infrastructure. In the report, S&P warned state and local governments that if they did not create funding plans, they would risk hurting their credit ratings (Hume, 2018). From a budgetary perspective, decreases in a local government's credit rating results in the government having to pay additional interest costs to investors in their debt obligations to compensate these investors for the additional risk of such financial instruments. For example, a general obligation bond sale sold by the Chicago Public Schools in July 2017 priced at 490 basis points higher than a top rated municipal bond on the same day (Shields, 2017). Depending on the repayment source of the financial instrument, such additional borrowing costs will apply upward spending pressure on the local government's operating or capital budget and crowd out other spending in current operations or reduce the size of future infrastructure investment.

#### Economic Consequences

In addition to the more direct budgetary impact, the underfunding of long-term liabilities has significant economic consequences that arrive over both the short and long-term. First, as mentioned above, delays in funding a local government's long-term commitments will necessitate more dramatic revenue activities in the future. Depending on how acute the underfunding, this may involve significant tax and fee increases. Based on traditional economic theory, taxation creates deadweight loss which is a loss in economic efficiency in the overall economy. Mathematically, the size of deadweight loss is a function of the square of the tax rate (in addition to the elasticity of supply and demand) (Ramsey, 1927). As such, deadweight loss increases quadratically with an increase in the tax rate. A local government that needs to increase taxes significantly can expect such policy action to result in significant deadweight loss and thus a reduction in economic efficiency.

Sizeable unfunded liabilities also impact the economic decisions of firms and individuals (Aubry and Crawford, 2016). For example, vendors to local governments may not provide their services or may price them higher than normal to local governments in which there is a risk of non-payment due to the budgetary pressure of unfunded pensions and OPEB liabilities. More dramatically, individuals or business may not locate or may exit jurisdictions where they believe that their tax liabilities will sharply increase in the future to deal with these unfunded liabilities. A study by the Center for Retirement Research at Boston College found that a state's unfunded pension liability informs and motivates decisions to move. They note that negative media attention on a state's pension problems can affect the attractiveness of the state (Aubry and Crawford, 2016). Further, these same firms may also not locate in these local governments if its physical infrastructure is deteriorating compared to other municipalities both out of fear of future higher taxes to remedy the infrastructure problems and because they will not be able to avail themselves to adequate physical infrastructure. These locational decisions, while essentially indirect economic effects, will translate into direct future budgetary impacts when they result in a narrower tax base in which budget resources can be extracted from.

In addition to distorting locational choices, it has long been understood that a government's crumbling physical infrastructure also imposes immediate economic costs beyond financial ones.

Because infrastructure is so expansive ranging from physical assets like roads and bridges to telecommunication systems to health care facilities to educational buildings, disinvestment has severe economic consequences. These impacts are varied and include reduced educational experiences/opportunities, less effective health care services, additional travel time, and missed business investment opportunities (American Society of Civil Engineers, 2016). These impacts result in slower growth and/or declines in economic growth (GDP), wages, productivity, employment levels and income levels. The various stakeholders in local government experience these consequences in the short-term but they only become more pronounced over the long-term as infrastructure neglect continues.

One could also view underfunding of long-term liabilities as a type of fiscal illusion that has implications for the size and scope of government. Fiscal illusion is an economic theory traditionally focusing on the revenue side of public budgets. Specifically, fiscal illusion describes how a government's use of non-transparent revenues make taxpayers think government costs less than it actually does, which eventually leads to an increase in the size of government as these taxpayers come to enjoy the government services that these revenues fund (Ross and Mughan, 2016). A similar phenomenon is in place when a government underfunds pensions and OPEB liabilities or does not make the requisite investment in its infrastructure and instead provides other services with the revenues that should have been used to satisfy these previous unfunded commitments. If the taxpayers are ignorant of how this underfunding has effectively underwritten these additional services that they have now come to expect, appetite for government programs may grow and these taxpayers may demand the government expand its offerings.

#### Intergovernmental Relations Consequences

The extreme underfunding of local government long-term liabilities also may result in a shift in fiscal federalism. Local governments that need financial bailouts from its state government or changes in state law to help ameliorate their fiscal situation may find themselves in a weakened state going forward in terms of intergovernmental relations (The Pew Charitable Trusts, 2013). For example, the underfunding of pension and health care liabilities as well as sizeable long-term bonded indebtedness contributed

significantly to the decline in fiscal health of the city of Detroit (Zavattaro, 2014). This fiscal stress necessitated that city seek help from the state of Michigan in 2012. Ultimately, Michigan Governor Rick Snyder appoint Kevyn Orr emergency manager of the city to oversee all financial operations. Subsequently, Orr recommended Detroit enter bankruptcy which had to be approved by Governor Snyder. The case of Detroit offers an extreme example of how a local government can lose policy/fiscal autonomy as a result of underfunding its long-term liabilities.

Even if state intervention is not as extreme as in the case of Detroit, increased reliance on state assistance to help with underfunded pensions and health care or to provide additional funding for infrastructure introduces greater financial risk onto a local government's balance sheet. In terms of financial condition analysis generally, a local government's reliance on revenues from other levels of government reduce the local government's "stability of revenues." According to Granof et. al. (2016), "...failure to take advantage of appropriate intergovernmental grants can be rightfully interpreted as proof of poor management. But what a granting government gives, it can also take away. Therefore, a high or increasing ratio of intergovernmental revenues to total revenues is a sign of risk and hence is generally considered a negative fiscal characteristic." While Granof is cautioning about overreliance on intergovernmental revenues as a percent of a local government's entire revenue base, the logic and risk can easily be applied to relying heavily on intergovernmental revenues to fund pensions, OPEB and infrastructure costs.

### **What Can We Do to Hold City Officials Accountable?**

The previous sections of this paper detailed the size of the problem as well as its causes and consequences. We now evaluate some possible statutory/policy changes that have been advanced to better hold elected city officials accountable in ensuring that local governments adequately fund their long-term liabilities in the future. We have identified a menu of possible changes broken into three categories: 1) institutional, 2) political and 3) financial. We are not suggesting that all of these changes are advisable and/or feasible but they do consist of an array of choices policymakers and the public may

want to consider in better holding their elected officials more accountable in the future.

### Institutional Changes

One possible institutional change that may reduce the likelihood of local governments underfunding their long-term liabilities is to increase the stringency of balanced budget requirements and/or tax and expenditure limitations. Such increase in stringency would include a statutory or even constitutional requirements that unfunded liabilities are reduced or funded at certain levels year over year in the context of the local government’s annual budget process. Under such regime, local governments would be statutorily forced to deal with their long-term liability funding issues rather than providing these governments flexibility to address this fiscal area. Many local governments already have such statutory requirements so changes would really be related to enhancing existing requirements. The 2017 state legislation that increased the City of Chicago’s funding ramp of its municipal pension fund is an example of this approach (Shields, 2018a). Of course, all of the fiscal problems associated with TELs/balanced budget requirements previously discussed would be present under such a regime. In addition, such increase in budget stringency will necessitate a reduction in the flexibility for governments to allocate their resources to other spending priorities.

Some have argued that a “no-bailout” policy from state governments onto local governments may incentivize these local governments to ensure their long-term liabilities are adequately funded (Merrifield and Paulson, 2018). Knowing that they will not be “bailed out” by their state government may induce local governments to pursue long-term prudent fiscal policies including policies related to the funding of pension, OPEBs and infrastructure. Related to this “no-bailout strategy” is the strengthening and expansion of municipal bankruptcy laws that local governments can avail themselves to. The basic logic of this policy option is that it has taken decades for select local governments to significantly underfund their long-term liabilities to the extent that it will be impossible for these governments to meet their financial commitments. The bankruptcy option with no state bailout will incentivize these governments to put their fiscal houses in order going forward to avoid the stain of bankruptcy. However, there are

concerns that the fiscal/financial/economic damage to a municipality by declaring bankruptcy is so substantial that the availability of such a strategy should be an absolute last option, if an option at all.

Related, another paper in this urban forum authored by James Spiotto offers some very creative institutional paths for dealing with unfunded long-term liabilities, specifically state and local government pensions. Spiotto focuses on strategies when “traditional pension reform efforts have been explored including raising taxes and reducing expenditures to the extent possible and more needed plan adjustments and modifications appear to be impossible legally or not possible on a consensual basis” (Spiotto, 2018). He offers four alternatives that policymakers may want to consider in this context: 1) prepackaged Chapter 9 plan of debt adjustment, 2) creation of a special federal bankruptcy court for insolvent public pension funds, 3) creation of a Government Oversight, Refinance, and Debt Adjustment Commission “to assist when public pension reform is otherwise legally or practically impossible” and 4) model guidelines for a state constitutional amendment or legislative public pension funding policy for a greater government good (Spiotto, 2018). Spiotto’s policy suggestions are most appropriate for local governments that are currently distressed in terms of their funding of long-term liabilities. As such, his suggestions are mainly remedies reflective of a retrospective approach rather than representing a prospective approach in terms of holding elected officials accountable in the future for funding long-term liabilities. However, to the extent Spiotto’s policy suggestions lead to reduced pension liabilities owed by the local government, they can be viewed as an immediate strategy to “open-up” funding for other government spending priorities like infrastructure, both for new projects and deferred maintenance.

Another possible institutional change involves various state oversight efforts of local finances (Scorsone, 2014; Coe, 2008). In his 2008 article detailing best practices related to preventing local financial crises, Coe details three sequential categories of state oversight (Coe, 2008). First, states should actively monitor local government finances to predict fiscal stress. Second, in the event that local governments encounter financial problems, states should intervene quickly providing aid to local governments including the possibility of additional fiscal resources. Finally, in dire circumstances, states should take strong corrective actions such as requiring local governments to increase taxes or reduce

costs. The approach that Coe lays out runs somewhat counter to the no-bailout approach advocated by Merrifield and Paulson. As such, it allows state governments to encroach on the fiscal autonomy of local governments in exchange for aid and/or policy direction. However, depending how such interventions are structured, it may lead to more quickly addressing fiscal issues, such as underfunding long-term liabilities, before the problem becomes so large that only draconian measures (if any) are suitable.

Finally, another institutional change is modification of the state oversight option described in the previous paragraph. Recognizing that state oversight often entails relaxing local government's fiscal autonomy, it may not be attractive to many local governments except the ones that are current experiencing severe fiscal stress. To gain such local government support among a broader universe of local governments, perhaps a "trade" is possible between levels of government. For example, a local government may agree to greater state oversight if it is provided enhanced fiscal tools that will allow the local government to generally have more control over its finances. Such tools may take the form of greater flexibility on what it can tax, reduction in tax caps set at the state level, reduction in the provisional approach to revenue-sharing or the reduction in the possibility that such revenue sharing is able to be redirected by the state. Of course, some states may be averse to providing such additional flexibility out of concern that such flexibility is what enabled some local governments to underfund their long-term liabilities in the past.

### Political Changes

One political change (which is also an institutional change) often advocated by government reformers relates to the short-term thinking of elected officials. It has always been the counterfactual issue of what an elected official would have done if from the start he/she did not have to run for re-election or that there would only be one re-election to worry about. That is, would we observe a difference in fiscal policy decisions related to long-term liability funding if an elected official was term-limited? Would they be willing to make tough decisions that may not provide significant re-election benefits, such as properly funding a local government's long-term liabilities including pensions and



OPEBs as well as infrastructure maintenance, before such fiscal issues became serious problems. Would such term limits force elected officials to address fiscal issues quicker given that their time in office will definitively be shorter? The recent effort by former Illinois Governor Pat Quinn to get a binding referendum to limit mayoral terms in Chicago is evidence of this thinking (McQueary, 2018). However, the research on term limits in general has been murky in terms of resulting in better financial outcomes. In fact, some research on pension funding has shown that term limits are associated with greater rather than lower pension underfunding (Elder and Wagner, 2014).

Another political/institutional change relates to the form of government being associated with better fiscal choices related to long-term liabilities. That is, some argue that a city-manager form of government that professionalizes the management of city finances may lead to a more prudent fiscal decision-making in terms long-term liability funding. That is, the strong-mayor form of government (or mayor-council) is inherently more political which makes it susceptible to the short-term decision-making often attributed to politicians in the context of making tough fiscal decisions. Unfortunately, the academic literature on the relationship between municipal structure and spending levels, which would support this line of thinking, is mixed at best so it is difficult to claim that municipal structure is associated with fiscal decision-making in one direction or another (Carr and Karrupusamy, 2010).

### Financial Changes

The final category of possible changes to better hold elected official accountable involve mainly financial actions. The first option involves a recent development in the municipal bond market involving the State of Connecticut. In June 2018, the state of Connecticut structured its latest bond sale to include a “bond lock” provision on the bonds. The “bond lock” covenant includes a pledge (which includes specific financial metrics) that the state will address its fiscal issues including the funding of its long-term liabilities. The investor community responded favorably to the inclusion of this provision as Connecticut saw strong demand for its June 2018 bond sale (Burton, 2018). Local governments could offer a similar pledge which would force elected officials to deal with their fiscal issues otherwise risk breaking a bond

covenant which may result in a technical bond default. However, by providing such covenant, the state does reduce its flexibility in managing its finances of which such flexibility may be needed in times of deteriorating fiscal conditions.

Another financial policy change relates to accounting standards. GASB 67 which was enacted in 2017 provides guidance on how state and local governments select a discount rate in valuing pension liabilities. Prior to GASB 67, many observers believed that state and local governments were overly generous in the selection of the discount rate which resulted in an artificially lower value of unfunded liabilities. GASB 67 advocated a blended approach that includes using a tax-exempt municipal bond rate to value the unfunded portion of a governments pensions. Some economists believe this blended approach is still deficient and would like for governments to value the entire funded and unfunded portions of its pensions using a low-risk bond rate. This would likely result in pension plan liabilities increasing and funded ratios declining, which would put further pressure on local governments to increase their funding for these unfunded liabilities. However, such additional funding for pensions would result in less funding for other long-term liabilities such as pre-funding OPEBs and spending on infrastructure. In addition, while local governments would revise their calculations of their pension liability under such change, they are not required to fund their pensions based on this valuation, so it is unclear what net effect such change would have.

The final category of financial policy change relates to the credit rating agencies and, more generally, to better disclosure. As a result of the financial crisis of 2007/2008, the credit rating agencies made some changes in how they provide bond ratings for state and local governments as well as better disclosing their rating approaches. For some local governments, including many local governments in Illinois, this meant that the rating agencies payed increasing attention to unfunded pensions, which resulted in downgrades for many of these governments (Shields, 2018b). Further emphasis on long-term liabilities by the rating agencies may provide a disciplining action and lead to greater funding action by these deficient local governments.

Related, in terms of disclosure, GASB 68 enacted in 2014 required state and local governments to

include unfunded pension obligations as a liability on balance sheets similar to long-term debt. It also enhanced the disclosures in terms of the notes to the financial statements and required supplementary information related to pensions. Expanding disclosures of other “underfunded liabilities” such as infrastructure investment would be a logical step and one in which the credit rating agencies seem to be moving towards in their rating determinations (Hume, 2018). It may also incentivize local governments to address their lack of investment in their infrastructure portfolio but, again, it would not require them to do so. In terms of OPEB liabilities, new GASB statements go into effect in 2018 which will likely lead to greater transparency for these local government liabilities. The impact on funding from these recent long-term liability transparency measures is still unclear but they certainly represent attempts to better improve the fiscal practices of local governments.

## **Conclusion**

The underfunding of long-term liabilities including pensions and OPEBs as well as the deferral of infrastructure spending continues to plague many local governments. While local government finances have generally improved in the decade since the onset of the Great Recession, many local governments continue to struggle with adequately funding these areas (National Governors Association, 2018). The causes of underfunding are myriad and the consequences vary based on the previous fiscal policy choices made by local governments. While there is no shortage of changes that local governments can implement to mitigate such underfunding in the future, there are also no “silver bullets”, many of these changes may not be politically palatable and some options have been shown to offer mixed results in the past as used by other governments. Furthermore, some of these changes may come at a cost that local governments may not be willing to bear in terms of changing the balance of power between the state and local government. Nevertheless, many local governments need to consider changes in the way they makes decisions related to the funding of their long-term liabilities as such policy decisions in the past have resulted in serious fiscal pain that these governments continue to grapple with.

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