ILLINOIS PENSIONS IN A FISCAL CONTEXT: A (BASKET) CASE STUDY

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Abstract: Public pensions for Illinois state workers are among the worst funded in the nation. Benefit generosity is not the primary culprit: Illinois is around the middle of the distribution of state plans based on initial retirement benefits. Although the annually compounded three percent post-retirement benefit increase makes Illinois' pensions one of the more expensive systems on a lifetime basis, this only partially offsets the fact that most Illinois workers do not participate in Social Security. We present evidence that the main reason for Illinois' underfunding is a history of making inadequate contributions, dating back to the very origins of the state's public pensions. We discuss the recent history and current uncertain legal status of pension reform efforts in the state. Using a fiscal model of the state's finances, we project how Illinois' fiscal situation may evolve in the future, both with and without pension reform being upheld by the courts. A key finding is that with or without pension reform, Illinois will continue to face significant structural deficits that will require revenue increases or additional spending cuts to address.

Key Words: public pension reform, Illinois, retirement plans

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1. INTRODUCTION

The State of Illinois is recognized for many positive attributes, as diverse as being the "Land of Lincoln" and the first state to ratify the 13th Amendment abolishing slavery (McClelland 2012) to being home of Chicago's "Magnificent Mile." However, the state is also known for its poor fiscal management, currently having the worst bond rating of any state[1] as well as several of the most poorly funded public pensions in the nation (Sielman 2013). Indeed, the poor funding status of the major state pension plans is often blamed for being the root of the state's fiscal problems. Many commentators have suggested that it is the "lavish" level of pension benefits that have created the current fiscal situation (Ridell 2014).

This paper presents a case study of Illinois pensions with an objective of understanding pension funding in a broader fiscal context. In particular, we seek to shed light on the extent to which the current fiscal stress is the result of relatively generous public pensions versus the state's history of making insufficient contributions. Naturally, these two issues are closely connected, as benefit levels drive required contributions, thus making it impossible to precisely disentangle the two factors. Nonetheless, we provide suggestive evidence by comparing Illinois benefits for public employees to those in other states and by examining the history of pension funding in the state. In general, our findings mirror those of Munnell (2012) who characterizes Illinois as a state "with moderately expensive plans that [has] assiduously avoided funding."

More specifically, we find that public pensions in Illinois are not significant outliers in terms of expense or generosity. A comparison of initial retirement benefits of a public worker in

[1] According to the Illinois Office of the Comptroller (IOC 2015a), the state's general obligation bond rating was A- with a negative outlook from Fitch, A3 with a negative outlook from Moody's, and A- with a negative outlook from Standard & Poor's.

Illinois to similar workers in other states places Illinois somewhere in the middle of the pack. On a lifetime basis, however, Illinois benefits are more generous, and thus more expensive, due to the fixed nominal "automatic annual increase" (AAI) of three percent (commonly, though inaccurately, referred to as a COLA). However, the relative generosity of the AAI must be weighed against the reality that the most Illinois public workers are not part of the U.S. Social Security system, and thus Illinois pensions need to be more generous than those in the majority of states where workers have a public pension on top of Social Security in order for total retirement contributions and benefits to be similar.

If the generosity of pensions is not the root cause of the state's funding situation, then what is? We discuss that the state has an incredibly long history of making insufficient contributions, effectively engaging in borrowing by underfunding the pensions. This has created an enormous unfunded pension obligation, the servicing of which now places significant strain on Illinois' public finances.

To understand the strain that public pension funding places on the state budget prospectively, we project state spending and revenues 30 years into the future, using a projection model from the University of Illinois' "Fiscal Futures Project." We find that even if recent pension reforms are held constitutional, the state's long-term fiscal outlook features large gaps between projected revenues and projected expenditures. In short, many decades of borrowing against future generations has placed Illinois in a difficult fiscal situation that will be hard to resolve without significant increases in taxes or cuts in a wide range of spending programs.

This paper proceeds as follows: In section 2, we present an overview of the public pensions in Illinois and discuss the relative importance of benefit generosity and contribution levels in leading to current low funding ratios. In section 3 we provide a history of the policy responses, or lack thereof, to pension funding shortfalls, with a special emphasis on reforms that have occurred in the past few years. In section 4, we discuss the shortcomings of the Illinois budget process. We also discuss the University of Illinois' "Fiscal Futures Project," a set of tools that help to overcome some of the problems associated with publicly available state budget documents. In section 5, we apply the tools from the Fiscal Futures Project to project Illinois' budget gap over the next 30 years. We conclude in section 6.

2. PUBLIC PENSIONS FOR STATE WORKERS IN ILLINOIS

2.1. Overview of Statewide Pensions

There are six major statewide public pension plans in Illinois: The State Employees' Retirement System (SERS), the Teachers' Retirement System (TRS), the State Universities Retirement system (SURS), the Judges' Retirement System (JRS), the General Assembly Retirement system (GARS) and the Illinois Municipal Retirement Fund (IMRF). The first five of these plans all represent financial obligations of the State of Illinois and must be funded out of the state's revenue. Table 1 represents the official funding status as of June 30, 2014. These funding ratios, which are calculated using the actuarial value of liabilities and the market value of assets, show that the overall funding level of the combined Illinois pensions is only 43 percent. Of course, the actual funding situation is much worse than this because the actuarial value of the liability is computed using expected asset returns rather than a risk-free rate, a

point made forcefully in numerous papers (e.g., Novy-Marx and Rauh 2011; Brown and Wilcox 2008; Brown and Pennacchi, this volume).

Table 1: Funding of Illinois Public Pensions, FY 2014
($ millions)

	Accrued Liability	Market Value of Assets	Unfunded Liability	Funded Ratio
TRS	**$103,740**	**$45,824**	**$57,916**	**44.2%**
SERS	**39,527**	**14,582**	**24,945**	**36.9%**
SURS	**37,430**	**17,391**	**20,038**	**46.5%**
JRS	**2,229**	**776**	**1,453**	**34.8%**
GARS	**323**	**57**	**267**	**17.6%**
TOTAL	**$183,249**	**$78,630**	**$104,619**	**42.9%**

Source: CoGFA 2015, p. 27.

Unlike the five state financed plans, the IMRF is funded by contributions from local governments for their own employees (including non-teaching employees of school districts) and the State of Illinois is an agent-administrator, not a contributor. Because the IMRF annually bills each local government for the actuarially required amount and the state uses its powers to enforce those contributions, IMRF is the only one of the six systems that is reasonably well funded. According to IMRF (2014), it was 96.7 percent funded as of December 31, 2013.

2.2. Sources of the Funding Shortfall

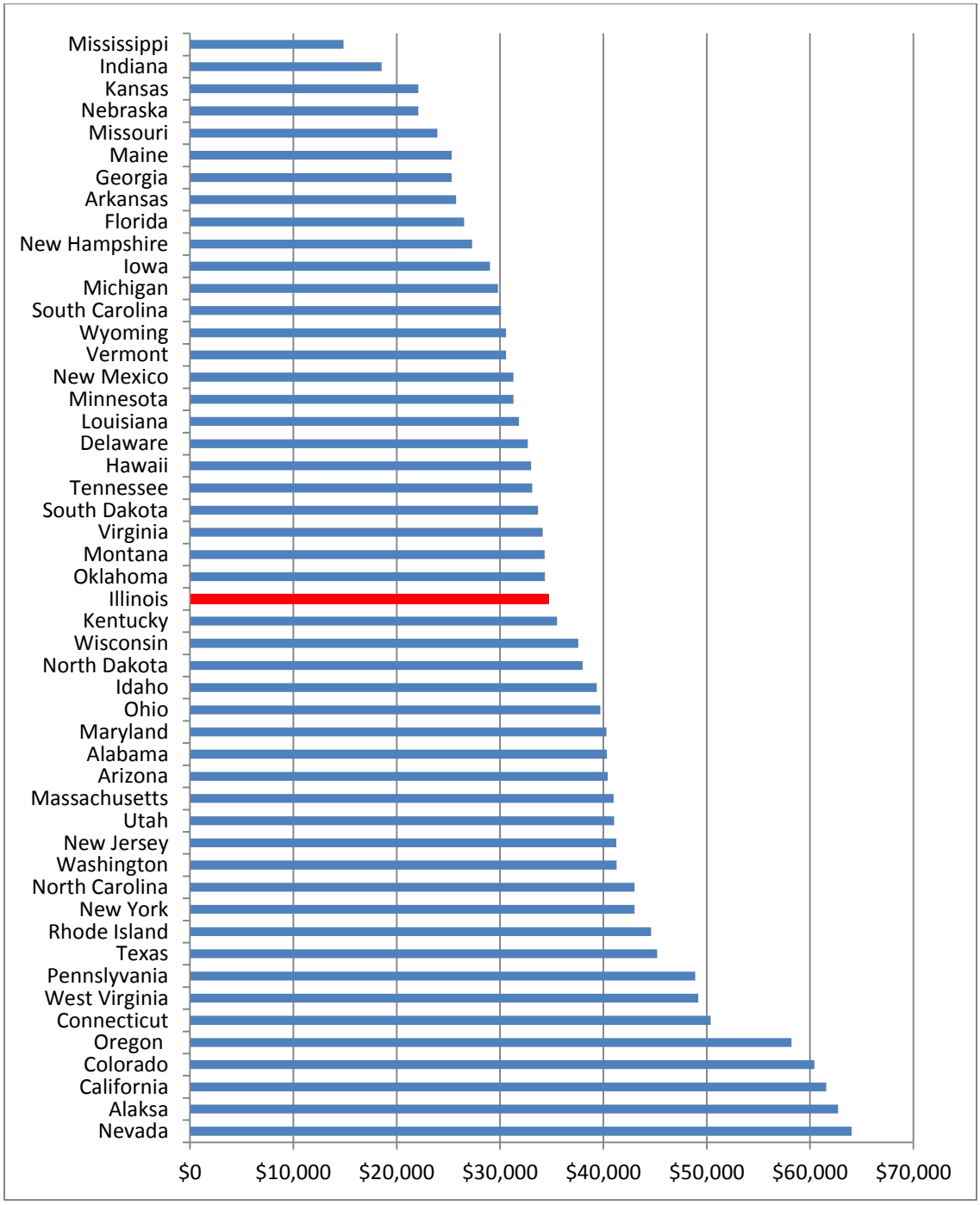
2.2.1 How Generous Are Illinois Public Pensions?

There is no single metric for comparing the generosity of benefits across all public pension plans. In comparing any two states, one state might offer a higher benefit to teachers but a lower benefit to general state workers. Or one state might be more generous for a full-

career worker, but be less generous to part-career workers. Numerous other parameters, such as retirement age or the definition of compensation, also vary from plan to plan and thus can lead to states being ranked differently for different employee characteristics. Nonetheless, it is instructive to examine a few examples in to assess whether Illinois benefits are an outlier.

In Figure 1, we report benefit comparisons from Biggs (2014), who calculates the benefits received by an average full-career state government employee who retired from each state's system in 2011 or 2012. He uses data from the Comprehensive Annual Financial Reports (CAFRs) published by public plans, and calculates benefits for general state employees. Note that when measured on the basis of initial annual benefits, Illinois SERS ranks 25 out of 50 states. In other words, Illinois not an outlier, but rather hovers right around the median.

Figure 1: Annual Benefit Level of Full-Career General State Worker



Source: Biggs (2014)

Within Illinois, the workers under SERS differ from teachers and university employees in an important way: many SERS workers are covered by Social Security, whereas most other public employees are not. Thus, it is also instructive to compare benefits across states for a set of workers that are not covered by Social Security in Illinois. We focus on teachers, using a public pension benefit calculator created by the Manhattan Institute (Public Sector Inc. 2015). To provide an illustration, we use a teacher, born in 1955, who started working at age 30 and who intends to retire on July 1, 2015 at age 60 after 30 years of service. We assume a final average salary of $75,000. For this stylized individual, the calculator was able to estimate benefits for 46 states.[2] The annual pension benefit available to our stylized retiree ranges from a low of $17,297 in Maryland to a high of $56,250 in five states. The estimated Illinois benefit of $44,850 placed in 27th out of 46 states. Note this is very similar to the ranking found by Biggs as reported in Figure 1 above. Again, this measure suggests that the Illinois TRS system is not an outlier in terms of generosity, especially considering the differences in Social Security coverage.

The story changes when one accounts for the 3 percent automatic annual adjustment (AAI). Using the Manhattan Institute calculator, when ranked on the value of the equivalent price of a lifetime annuity that would replicate the pension benefit, Illinois climbs to 7th out of 46 in generosity. It is no wonder, then, that most recent pension reform proposals have targeted this AAI for reduction (see below for more discussion).

Overall, a key take-away from this analysis is that the initial level of benefits offered from Illinois public plans are not an outlier relative to other public plans. However, Illinois' post-

[2] The calculator did not provide values for Nebraska, Ohio or Pennsylvania. We also dropped Wisconsin because the benefit levels were such an outlier on the low side that we were concerned that our parameter combination was not reflective of a Wisconsin worker.

retirement benefit increase of 3 percent compounded annually is significantly more generous (and thus more expensive to the state) than those in most other states, at least given recent rates of inflation. When one considers the combined generosity and expense of public pensions and Social Security, there is simply no evidence that Illinois is more generous than other states with better funding ratios.

2.2.2. A History of Insufficient Contributions

Although Illinois' public pension problems have received much attention in the media in recent years, the problem is long-standing. Eric Madiar, until recently the chief legal counsel for the Office of the Illinois Senate President, recently released a paper documenting the history of Illinois' fiscal problems dating back as far as the U.S. Civil War (Madiar 2014). As part of this history, he unearthed a report of the Illinois Pension Laws Commission from 1917 which reported on the financial status of several of the public pensions that existed in Illinois at the time. In discussing the pension for Chicago Firemen, for example, the report stated (quoted in Madiar 2014):

> *…the present value, with a 4 percent interest rate, of the liabilities for pensions is $14,103,917. The present value of contributions of 1 per cent of salaries amounts to $328,805. The cash on hand is $3,101. This means that the present value to the city of the liability for carrying out the pension system for present participants under the firemen's fund amounts to $13,772,011.*

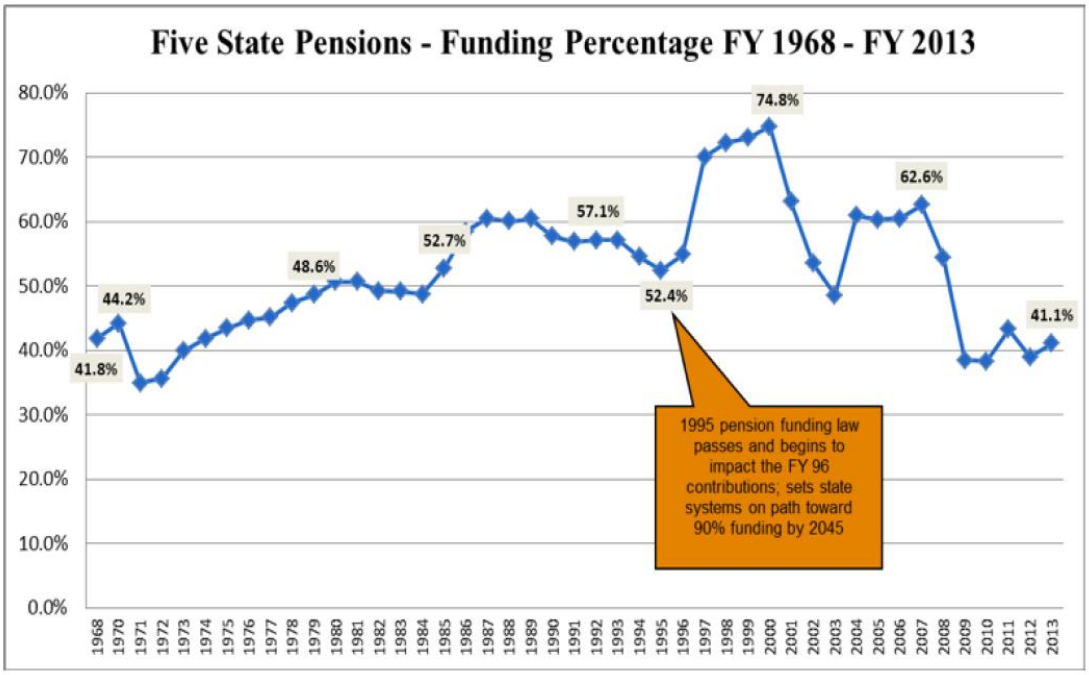
Discussions of other plans are similar in their descriptions of poor funding status. Thus, it appears that public pensions in Illinois have suffered funding problems virtually from the start.

Over four decades later, in 1959, the Public Employees' Pension Laws Commission issued a report to then-Governor William Stratton, which (as reported in Finke 2013) stated:

Of principle concern to the Commission is the accumulation of large unfunded accrued liabilities resulting for the most part from the inadequacy of government contributions in prior years to meet increases in costs due to the upward trend in salary rates and large additions to the membership of the funds.

This "inadequacy of government contributions" has continued for more than a half century after this report was issued. As shown in Figure 2, recreated from Madiar (2014), funding levels of the five statewide public pension plans has never exceeded 75 percent during the 1968-2013 period. In short, low funding levels are the norm, not the exception.

Figure 2



Source: Madiar (2014)

Nor have things improved since 2013. In his February 2015 budget address, the newly-elected Illinois Governor, Bruce Rauner (2015a), stated "our pension systems are not fully funded. They are $111 billion in the hole – the worst pension crisis in America." As already

noted, even this $111 billion shortfall is too rosy, given that it uses an artificially high discount rate to calculate the present value of the promised benefits.

The Illinois Commission on Government Forecasting and Accountability (CoGFA 2015) reports that the unfunded liability of the state's pensions grew by over $87 billion from 1984 to 2012. They also note that the single largest cause – comprising just under 50 percent of the total growth in underfunding – was that the state's contributions fell below the actuarially required level. No other single factor – investment returns, changes in actuarial assumptions, benefit increases, etc. – comprised more than 20 percent of the deterioration of funding status.

3. POLICY RESPONSES TO PENSION FUNDING CONCERNS IN ILLINOIS

3.1. Pre-2010: Decades of Inaction

Despite the long-standing funding concerns, and numerous calls over the years to do something about them, there have been very few serious attempts to improve the funding of the system. Ironically, the single most consequential response to these funding shortfalls was not to find a mechanism for improving funding, but rather to make the commitment to pay the promised benefits even more binding on the state. In 1970, delegates to the Sixth Illinois Constitutional Convention added a clause to the state constitution that provides substantial legal protections to pension benefits. Specifically, Article XIII, Section 5 of the *State of Illinois Constitution* now states:

> *Membership in any pension or retirement system of the state, any unit of local government or school district, or any agency or instrumentality thereof, shall be an enforceable contractual relationship, the benefits of which shall not be diminished or impaired.*

Although we will discuss possible legal interpretations in more detail below, it is notable that this constitutional clause increases the legal security of benefits for participants. Nothing in the clause, however, requires that the state actually prefund the benefits. Indeed, the Illinois Supreme Court ruled in 1998 that a failure to fund the pensions did not constitute an impairment of benefits. In Sklodowski v. State of Illinois (1998), beneficiaries of several state public pension systems filed a lawsuit seeking the state to appropriate the funds necessary to meet funding obligations contained in the Illinois pension code. The Court noted that:

> *The pension protection clause contained in the 1970 Constitution served to eliminate any uncertainty as to whether state and local governments were obligated to pay pension benefits to their employees.*

But that:

> *These allegations of underfunding are insufficient as a matter law to constitute an impairment of benefits. Plaintiffs … have alleged only an opinion that present funding levels are insufficient, from a prudential standpoint, to meet the accrued future obligations of the funds. The claims contain no factual allegations that would support a finding that the funds at issue are "on the verge of default or imminent bankruptcy" such that benefits are in immediate danger of being diminished.*

In short, the Illinois Supreme Court ruled that the constitution requires benefits be paid, but not that they be funded. Thus, the constitution increases the security of pension benefits, but at the cost of substantially reducing the state's flexibility to address fiscal shortfalls through changes to public pension benefits.

Just a few years after the adoption of the 1970 constitution, the Illinois General Assembly adopted a funding rule linking state pension contributions to pension payouts. Madiar (2014) explains that the legislature, beginning in fiscal year 1973, enacted a policy of making state contributions equal to 100 percent of what the systems were expected to pay out

in benefits that year. It was recognized even at the time that this approach would lead to a deterioration of funding status. Madiar (2014) quotes the 1975-1977 Pension Commission as noting that this funding scheme was "unacceptable since it result[ed] in a deferment of the burden of financing currently incurred benefit obligations to future generations of taxpayers." Nonetheless, this approach to funding was followed through 1981. Things worsened in 1981, when then-Governor Thompson announced that the state would contribute only 60 percent of the estimated payouts, and portrayed this as a way to reduce pressure on the state budget. From 1982 to 1995, Madiar (2014) notes that "pegging state pension contributions to at or below 60 percent of payout became the state's *de facto* funding policy."

In 1994, the Illinois legislature passed and then-Governor Edgar signed Public Act 88-593, which created a new funding path for public pensions. There are at least three notable features of this plan. First, the funding goal was set at only 90 percent of liabilities (calculated using standard actuarial calculations, including inappropriately high discount rates). Second, the path to this funding level was stretched over 50 years, reaching this 90 percent funding level in 2045. Third, the funding plan was back-loaded, with a 15-year "funding ramp" that kept contributions well below standard actuarial levels in the early years. By 2010, the state's required contributions under this law were to be set at a level where they would remain a constant fraction of payroll, set at a level sufficient to reach 90 percent funding by 2045.

Since 1995, the state has not consistently met even these inadequate funding requirements. Even when the state did make substantial contributions, it was often done in a manner that partly reduced the impact of the funding. For example, then-Governor Blagojevich issued $10 billion of Pension Obligation Bonds (POBs) in 2003. Although this helped boost the

funding status of the plans, the legislation authorizing these bonds also provided that state contributions be reduced by the amount of principal and interest paid on the bonds (CoGFA 2014). Effectively, the state was borrowing money, investing it in the pension funds, and hoping that the returns on the pension portfolio would exceed interest paid on the bonds. Then in Fiscal Years 2006 and 2007, the state enacted "Pension Holidays" to reduce its contributions for those years below that specified in the already back-loaded 1994 law.

The issuance of POBs appeared again in FY 2010 and FY 2011, in each case with the proceeds being treated as part of that year's pension contributions. It is important to note that this approach to using POBs does virtually nothing to boost the pension plan's funding status over the long-term. Conceptually, a state could convert implicit pension debt – in the form of benefit obligations – to explicit debt, thereby providing a mechanism for reducing unfunded liabilities. But rather than using POBs to reduce unfunded pension obligations in this way, Illinois has instead used them as a source of funds for making statutorily scheduled annual pension contributions. This, in turn, allows the legislature to avoid higher taxes or spending cuts in other programs in the short-run. Effectively, the POBs end up having little to do with pensions, and instead serve as a form of general borrowing by the state.

All in all, the State of Illinois' record at dealing with pension funding over the past century can best be described as one of consistently contributing at a rate below that required to bring the systems to full funding. With the pension funding "ramp-up" of contributions as a share of payroll from the 1995 law being fully phased-in by FY 2010, the statutorily required annual pension contributions accounted for $4.0 billion, or 17.7 percent of total state-source

General Fund revenues (CoGFA 2011). These facts, among other factors, finally put Illinois pension reform on the political and legislative agenda.

3.2. The Creation of a Two Tier System in 2010

In 2010, the Illinois legislature passed Public Act 96-0889, which created a "two tier" pension system. Tier I included all public employees that had been hired on or before December 31, 2010. Tier II created a new and substantially less generous system for state workers hired on or after January 1, 2011.[3] The key difference between the tiers is summarized in Table 2, and includes changes to vesting, normal retirement age, the definition of final rate of earnings, a reduction in the post-retirement benefit increases, and a cap on pensionable earnings.[4]

Table 2
Comparison of Tier I and Tier II Benefits Prior to 2013 Reform

	Tier 1	Tier 2
Minimum vesting	5 years of service	10 years of service
Normal retirement age	Age 62 + 5 years of service Age 60 + 8 years of service Any age + 30 years of service	Age 67 + 10 years of service
Final rate of earnings	4 highest years	8 highest years of last 10
Automatic annual increases	3% Compounded annually	Min(3%, 0.5 ´ CPI) Not compounded
Cap on pensionable earnings	IRS limit of $260,000 in 2014	$110,631 for FY 2015

Source: SURS (2015)

[3] The lack of generosity is dramatically illustrated by a quote from the TRS *CAFR FY14* (2015, p. 29), "Tier I's liability is partially funded by Tier II members, as the Tier II member contribution is higher than the cost of Tier II benefits."
[4] The 2010 two-tier reform law interacts with the 1994 contribution-ramp law in a way that results in further back-loading of payments to reduce unfunded liability. While GASB standards allow amortization of unfunded liabilities over multiple years at a fixed percent of payroll, the Illinois ramp-law calculates the state's *combined* annual contribution for amortization *and* normal costs as a share of payroll. The lack of generosity of Tier II benefits and the gradual replacement of Tier I by Tier II workers results in a significant decline in normal cost as share of payroll over time – from 19.0 percent in 2015 to a projected 9.9 percent in 2045 (CoGFA 2015, p. 34). Consequently, the share of the state's contribution going to amortization of unfunded liability will increase in later years.

Because this new Tier II benefit structure applied only to individuals who were not yet employees of the state as of the time the law took effect, this reform did not diminish or impair benefits of any existing employees, and thus did not cause constitutional concerns. The other side of the coin, however, is that this reform had very little effect on the existing unfunded obligations of the system, or any meaningful effect on the near-term cash outflows from the system. Thus, political pressure to enact more far-reaching reform continued to build.

3.3. The 2013 Illinois Pension Reform

Efforts to reform Illinois pensions reached a fever pitch in 2013. During the spring legislative session, two major reform bills were being pushed, one by the powerful House Speaker Madigan, and the other by Senate President Cullerton. Both sought to reduce the Automatic Annual Increase (AAI), which provides a 3 percent annually compounded benefit increase to retirees. Although commonly referred to as a COLA, it is important to note that the AAI is set at 3 percent annually regardless of the rate of inflation. As noted earlier, this makes the AAI a rather expensive provision – both in absolute dollar terms and relative to other states – at least given current inflation expectations. The two bills differed substantially in their approach. The Madigan-sponsored bill imposed a reduction in the AAI, capping it the lesser of 3 percent or ½ of the CPI. The Cullerton bill, which garnered some support from labor unions, offered a lower AAI in return for state funding guarantees and access to retiree health care, among other provisions. Importantly, the access to retiree health care would be implemented by removing already existing retiree health care from employees that chose not to accept the AAI reduction, rather than adding it as a benefit to those that did.

Neither bill was able to pass both houses of the Illinois General Assembly, and thus negotiations continued in the summer (including a report of a ten-member, bipartisan, bicameral committee) and into the fall. Finally, the legislature passed Senate Bill 1 (SB1) on December 3, 2013 and was signed by the Governor as Public Act 98-599 two days later. The law applied to four of the five public plans outlined above: the judges' plan was omitted, presumably to avoid conflicts of interest in the inevitable court challenges that were to follow. The reform included numerous provisions which were intended to take effect on July 1, 2014, although the implementation is on hold pending legal challenges.

Under this new law, the AAI is reduced from 3 percent of the total pension amount, compounded annually, to 3 percent of a much smaller amount, calculated as the lesser of the total annuity or $1,000 times the number of years of service (with the $1,000 multiplier increased each year by CPI inflation). For example, if an individual works under SURS for 30 years, then she would receive a 3 percent adjustment on a maximum of $30,000 of annuity benefits. This represents a substantial cut in the present value of future benefits for higher earners. The legislation also required that individuals "skip" the automatic annual increase for a number of years based on their age at the time of reform, with older workers losing one year of AAI and younger workers losing up to five years of AAI.

A second provision reduces earnings included in the pension formula from the current IRS maximum ($255,000 in 2013) to $110,631 in fiscal year 2015. Individuals already in the system who are earning over this cap are grandfathered so that their annualized June 2014 salary operates as their cap, but such individuals would not see any growth in their pensionable salary unless $110,631 cap grows with inflation to the point where it reaches the individual's

grandfathered cap. As noted by Brown (2014), for individuals subject to the cap, an additional year of work will increase the nominal value of their future pension by only 2.2 percent of the cap, meaning that if inflation were to be above 2.2 percent, additional years of work would result in negative real pension accruals.

A third provision is to increase the normal retirement age up to five years. This would be phased in at approximately 4 months per year, starting with those age 45 in 2014.

A fourth provision reduces a key interest rate used to calculate benefits under a money purchase option. This feature, which was suggested in a proposal by Brown et al. (2013), would reduce the assumed Effective Rate of Interest from its 2013 level of 7.75 percent to 75 basis points over the 30-year Treasury bond rate. This would have the effect of reducing the likelihood that the money purchase method of calculating benefits would exceed that of the standard benefit formula.

A fifth provision is to *reduce* employee contributions from 8 percent of pay to 7 percent of pay. All else equal, a reduction in contributions obviously harms the funding status of the system. This was, however, an attempt by the legislature to convince the courts that participants were being given something of value in return for the changes to benefits, and thus should be held constitutional (more on this below).

A sixth provision of the law is to create an optional defined contribution (DC) plan that individuals can voluntarily choose to enter in exchange for stopping future benefit accruals under the DB system. As designed, however, the optional DC plan does not appear to be financially attractive (Brown 2014).

Brown (2014) illustrates the net effect of these provisions on benefits of hypothetical employees and finds the reductions to be quite substantial, especially for higher income employees. Under his stylized calculations, a worker earning $40,000 per year would see no immediate impact on her initial pension, although the reduction in the automatic annual increase would lead to a 5 percent reduction in the present value of all future benefits. In contrast, an individual earning $120,000 will experience a cut of 50 percent at retirement, and a 56 percent cut in the present value of all benefits. Brown (2014) notes that one can construct examples of high income individuals for whom the present value of benefit reductions is over 70 percent.

3.4. Legal Challenges to the 2013 Reform

Given the magnitude of the benefit cuts and the protective language of the Illinois constitution, it is not surprising that this law was challenged in the courts. In fact, at least five lawsuits were filed by various parties in separate courts, but the Illinois Supreme Court ordered that the suits be consolidated. Their case appeared to receive a significant boost when the Illinois Supreme Court – considering the separate issue of reductions in retiree health care benefits in the Kanerva (2014) decision – ruled that "the state's provision of health insurance premium subsidies for retirees is a benefit of membership in a pension or retirement system within the meaning of article XIII, section 5, of the Illinois Constitution" and, as a result, these subsidies are constitutionally protected. Not only were the justices reinforcing the strength of the non-impairment clause, but in a development that was a surprise to many analysts, they extended the non-impairment clause to cover retiree health benefits on the grounds that these were a benefit of membership in state retirement system.

In the Kanerva case (2014), the justices also made the following statement, which could be very insightful in understanding how they may ultimately rule on pension reform:

> *Finally, we point out again a fundamental principle noted at the outset of our discussion. Under settled Illinois law, where there is any question as to legislative intent and the clarity of the language of a pension statute, it must be liberally construed in favor of the rights of the pensioner. This rule of construction applies with equal force to our interpretation of the pension protection provisions set forth in article XIII, section 5. Accordingly, to the extent that there may be any remaining doubt regarding the meaning or effect of those provisions, we are obliged to resolve that doubt in favor of the members of the state's public retirement systems.*

It is perhaps thus unsurprising that, in November 2014, Judge John Beltz of the 7th Judicial Circuit Court in Sangamon County Illinois struck down the pension reform law, stating that the non-impairment clause is "plain" and "unambiguous" that the pension reform "without question diminishes and impairs the benefits of membership in state retirement systems." If this decision stands, the pension reform law passed in December 2013 will be null and void, and the state will be back to square one on pension reform. Just as important, however, such a broad ruling would effectively rule out nearly every benefit change that could result in meaningful cost reductions to the state.

Naturally, the state appealed Judge Beltz' (2014) decision to the Illinois Supreme Court. Oral arguments began on March 11, 2015.[5] The state's argument in the case is that the state is in a fiscal crisis, and that in such a crisis, the state has the "police power" to alter contracts. Illinois Solicitor General Shapiro argued on the opening day of the trial:

[5] The following quotes are excerpted from the "Chicago Tonight," WTTW-TV website (2015).

> *Like all contracts, they can be altered. They are not absolute. Everyone in our case apparently agrees that … contractual relationships are subject to the limitations on the basis of a state's police power.*

The plaintiff's attorney responded with:

> *This is a case about a constitutional provision, one that is explicit, clear and unambiguous and that is subject to no stated exception. The state has not cited a single case where the reserve sovereign powers and police powers have been held to override a constitutional provision, and that's because there is no such case.*

Thus, the legal argument in this case appears to rest on whether or not the State of Illinois has the power to abrogate a contract in the case of a fiscal emergency. If the state is deemed to have such power, then presumably the court will also need to be convinced that the state is, indeed, in a fiscal crisis that warrants such action.

As the two authors of this paper are economists rather than legal scholars, we dare not speculate on the legal dispensation of the case. In any event, we won't need to wait long, as the Illinois Supreme Court is expected to issue a ruling prior to May 31, 2015 (IFT 2015).

As economists, however, we believe it is useful to make two observations about the economic issues pertaining to this case. First, although there is no doubt whatsoever that Illinois faces large structural deficits, it is not at all clear what constitutes a fiscal crisis or emergency. On the one hand, Illinois not only faces enormous unfunded pension obligations, but it also has a substantial backlog of unpaid bills. According to the Illinois Office of the Comptroller (IOC 2015b), as of December 31, 2015 the state had a backlog of nearly $6.5 billion in unpaid bills, including those of various state agencies. And, as previously noted, Illinois has the lowest debt rating of any state in the nation. On the other hand, Illinois debt is still considered "investment grade" and the state is currently still able to borrow. Additionally, it

would seem difficult to argue that the state faces a fiscal emergency given that the state allowed personal income rates to decline from 5 percent to 3.75 percent, effective January 1, 2015.

A second observation is that Illinois seems to be implicitly admitting that the pension reform impaired benefits, albeit an impairment that is permitted under police powers. An alternative approach would have been to argue that the reform elements were not impairments at all, under an interpretation that the constitution protects accrued benefits, but not prospective benefits. If this approach were taken, at least some of the pension reform elements might be deemed constitutional. For example, the change to the Effective Rate of Interest would only apply prospectively, not retroactively, and thus would not affect accrued benefits. Of course, other provisions – such as an increase in the retirement age – would have been more difficult to defend in this way.

3.5. Governor Rauner's 2015 Proposal

Republican Bruce Rauner took office as the new Illinois Governor in January 2015. A month later, on February 18, 2015, he issued his first budget address. In it, he called for a new round of reforms for Illinois pensions, noting that action would be needed regardless of what the Supreme Court decided regarding the 2013 reform.

The core of his proposal is to freeze benefits of Tier I employees as of July 1, 2015 and permit no further accruals. For work after this date, additional pension accruals would operate according to the Tier II benefit structure explained above. Alternatively, workers would be permitted to opt for a defined contribution (DC) plan on a going forward basis. However, the proposal also appears to require that those taking this "buyout" would accept a reduction in

the value of their automatic annual increase on benefits earned prior to July 1, 2015, and in return receive a lump-sum contribution to their new DC plan. The new DC plan would include an employer match, although the details of that match have not yet been specified.

There are, of course, two major obstacles to the Governor's proposal. First, it appears to be dead on arrival in the Democratic-controlled House and Senate. Second, the constitutionality of this proposal remains unclear. The Governor clearly argues in his budget documents (Rauner 2015b, pp. 2-16) that this would be constitutional because the changes "do not reduce earned benefits." It is far from clear, however, that the Illinois Supreme Court will view the constitutional protections as only applying to accrued benefits. Indeed, the 7th Circuit Court decision discussed above makes no such distinction, effectively treating the non-impairment clause as also protecting prospective benefits of current employees.

4. THE BROADER FISCAL CONTEXT IN ILLINOIS

4.1. Fiscal Sustainability Problems and Opaque Budgeting Practices in Illinois

Illinois has had fiscal sustainability problems for decades. The underlying problem has been identified as a "structural deficit," a lower projected growth rate for sustainable revenue than for spending (Giertz, McGuire and Nowlan, 1996; Giertz 2007; CTBA 2008). Fiscal crises reoccur as actions taken to restore balance in one year are eventually eroded by slow revenue growth.

Illinois' structural deficit problem has been compounded by short-sighted policy actions and opaque budget practices. The State Budget Crisis Task Force chaired by Paul Volker and Richard Ravitch, attributes the decline of Illinois' fiscal condition, first to underfunding pension liabilities and (2012, p. 16),

> *Second, during the good economic times of the late 1990s to mid-2000s, Illinois expanded government services, but did not raise taxes and did not put away cash reserves. The state paid for its excess spending by making even smaller payments to the pension systems, borrowing heavily, sweeping special funds, and putting off paying Medicaid and employee healthcare bills until the following budget year. This chronic shortsightedness and avoidance of tough choices has accumulated to a significant structural deficit for Illinois. When the revenue recession hit in 2009, Illinois had no cushion. Time-shifting budgeting tricks used persistently in the good years were of much less value for temporary use in a downturn.*

Continuing this pattern, Illinois relied on two additional unsustainable revenue sources – federal stimulus funds in 2009-2011 and an explicitly temporary income tax rate increase from 2011-2014 – without planning ahead and facing up to the underlying mismatch between spending and sustainable revenue (Dye et al. 2015).

Illinois also engages in a number of opaque budgeting practices that can make it quite difficult to come up with reliable and consistent measures of the state's fiscal status over time. In addition to counting debt proceeds and asset sales as revenue, the spending side is equally complex. According to the Illinois Office of the Comptroller (IOC 2015c), there are 602 active state funds in Illinois, while only four of them constitute the "General Funds" of the state. However, most reporting and public discourse on fiscal matters concentrates on just the general funds. It is not uncommon for there to be within-year transfers across funds or cross-year reassignments of spending responsibility across funds. As a result, the general funds budget reported by the state is not consistently defined over time, making it difficult to obtain an accurate time series of state revenues and expenditures. To conduct meaningful analysis in light of these difficulties, it becomes necessary to essentially reconstruct the entire set of Illinois revenue and expenditure categories in a consistent manner over time.

4.2. Measuring and Projecting Illinois' Fiscal Imbalances: The Fiscal Futures Project

To overcome the difficulties created by Illinois' inconsistent budget reporting and to make projections about future fiscal balances in Illinois, we make use of the model created by a team at the University of Illinois' Institute of Government and Public Affairs (IGPA). Known as the Fiscal Futures Project (FFP), the construction of this model started in 2008 to help build analytical capacity to inform long-term fiscal policy discussions, a capability that was largely missing in Illinois.

The FFP team has been analyzing and reporting on Illinois' fiscal problems for a number of years (Dye and McMillen 2009; Dye et al., 2010, 2011, 2012, 2013, 2014, and 2015). The interaction between problems funding pensions and problems funding the overall budget is a recurring focus of their analysis and serves as the basis for ours.

There are three essential elements in the FFP's analytical framework: (a) a broad-based measure of the state budget, to which we refer as the "all-funds budget," that categorizes revenues and expenditures in a manner that can be consistently tracked over time; (b) a long-term budget projection model for Illinois; and (c) a measure of sustainable revenue sources that distinguishes recurring revenue from non-revenue changes in the state's balance sheet. A more detailed description of these elements follows.

(a) All-Funds Budget: FFP has created and annually updates an "all-funds budget" for the State of Illinois, which groups budget items into a meaningful set of revenue and spending categories that are consistently measured over time. This conceptually simple (but time consuming and tedious) accounting exercise is a necessary first step for meaningful economic analysis.

(b) The Fiscal Futures Projection Model: For each spending and revenue category, the projection model estimates the past relation to selected economic and demographic "driver" variables. These relations are then applied to projected values of the driver variables to make projections for budget components. The components can then be aggregated to project total revenue and total spending. The model develops baseline projections from current spending levels and existing revenue sources, which can then be compared to alternative tax or spending policies. The projection model is discussed in more detail in the Appendix.

(c) Sustainable Revenue: The Illinois Constitution states that "Appropriations for a fiscal year shall not exceed funds estimated by the General Assembly to be available during that year." However, Illinois law allows "funds … available" to include a range of options, including the issuance of debt, the use of one-time revenue sources, and asset sales. For example, if the state sells off its toll booth operations to a private party, it can claim the sale as a source of revenue in that year. In order to better distinguish revenue flows from asset sales, the FFP model focuses on "sustainable revenue" by excluding new borrowing and other one-time revenue sources.

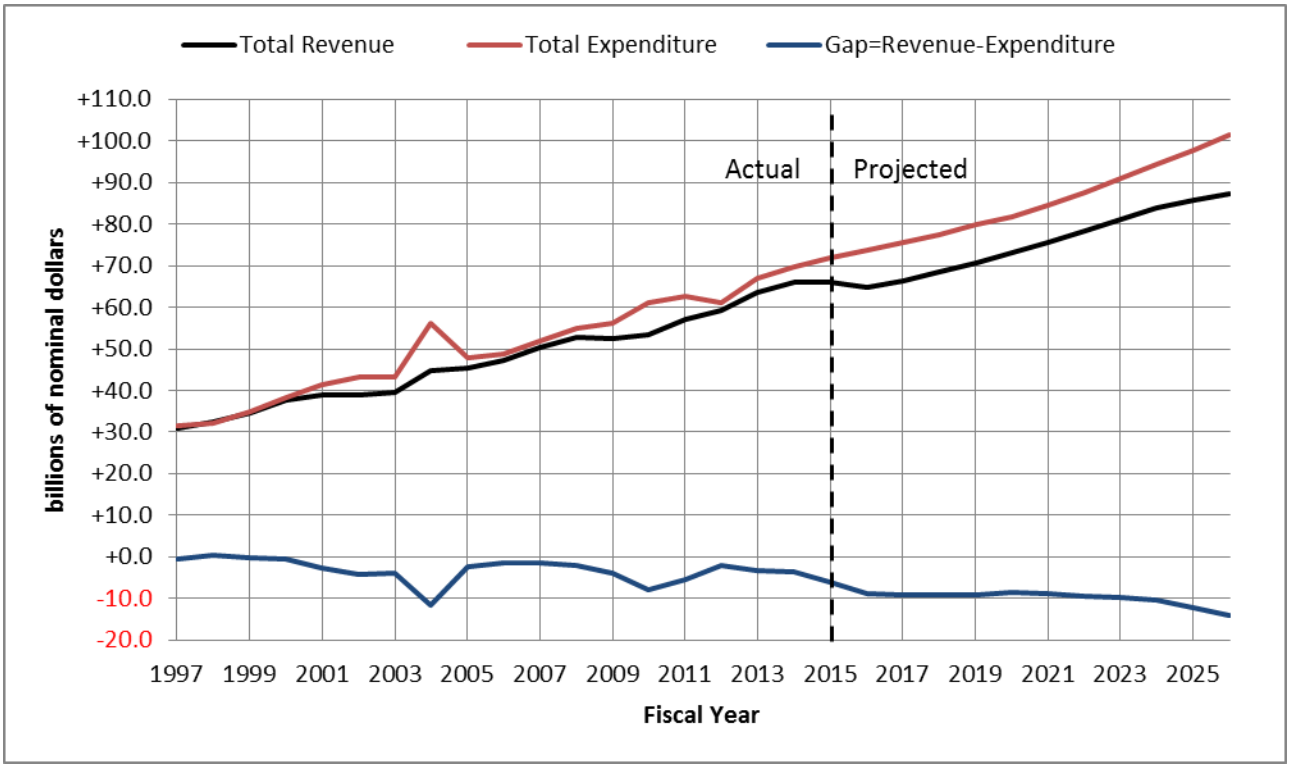
5. PROJECTIONS OF THE ILLINOIS' FISCAL GAP AND THE ROLE OF PENSIONS

5.1. Most Recent Projections under Current Law

Each year, as data from a new fiscal year becomes available, the all-funds database is updated and the budget projections are re-estimated. Figure 3 present the most recent update from January 2015 (Dye, Hudspeth and Crosby, 2015). The top two lines in Figure 3 show total spending and total sustainable revenue for Illinois' all-funds budget for the historical and projection years. The budget gap shown at the bottom of the figure indicates that the model

projects a $6 billion gap in FY 2015 growing to $14 billion in FY 2026. This grim budget outlook for Illinois also represents the current-policy baseline projections to which alternative policy scenarios can be compared.

Figure 3: Historical and Projected Totals for Illinois All-Funds Budget



Source: Dye, Hudspeth and Crosby (2015)
Notes: 1. Historcal values for FY 1997 to 2014; estimates for FY 2015; projections for FY 2016 to 2026.
2. Total Revenue includes sustainable sources and excludes borrowing or other one-time sources.
3. Budget Gap is defined as: Total Sustainable Revenue minus Total Expenditure.

5.2. The Effect of Pension Reform on Projected Fiscal Outlook

5.2.1 Alternative Budget Gap Measures

The summary measure of fiscal balance used by the Fiscal Futures Model is the budget gap, which is defined as the difference between total sustainable revenue and total expenditures. These items are measured on a cash basis, with appropriate adjustments to

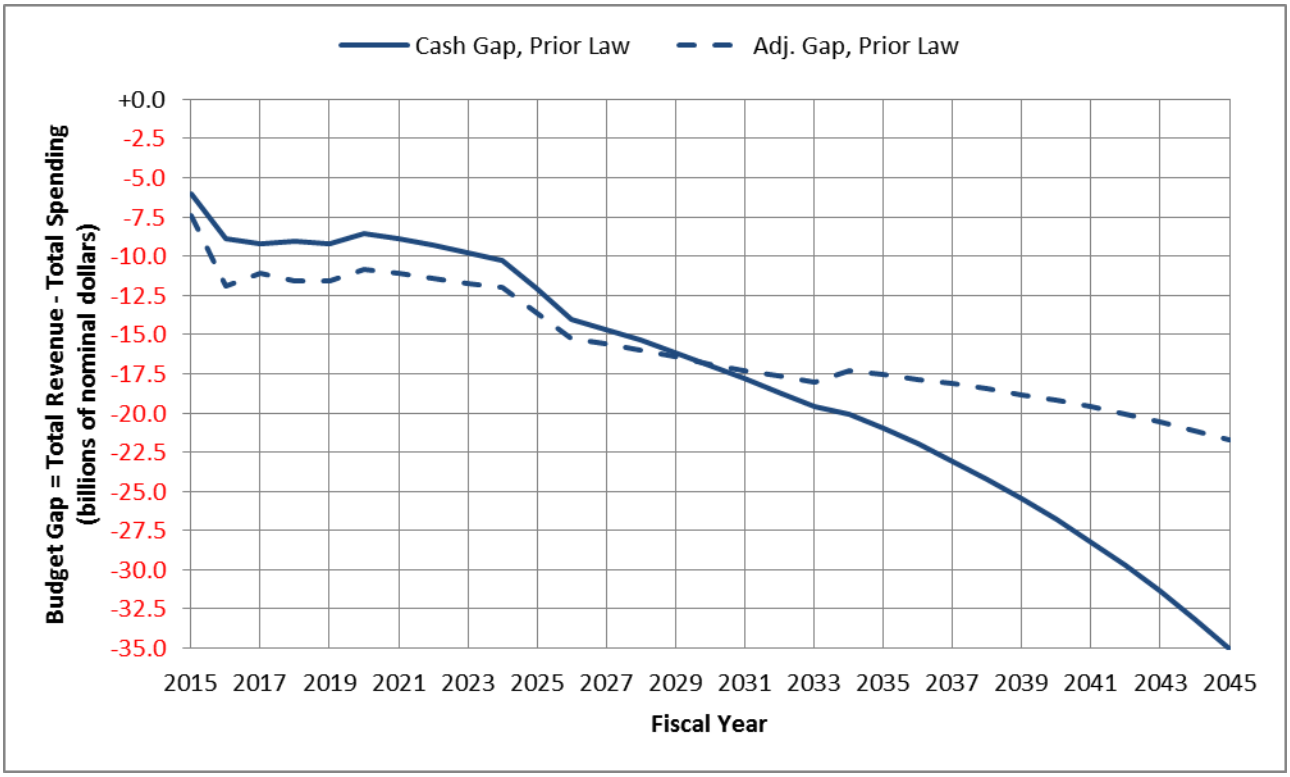
exclude from revenue the proceeds of new debt issuance or other balance sheet changes. However, projecting the cash gap alone is does not capture changes in the state's pension funding status. To remedy this, the model produces an "Adjusted Budget Gap," which is just the Cash Gap from above, minus the change in unfunded pension liabilities, i.e.:

$$\text{Adjusted Budget Gap} = \text{Cash Gap} - \Delta \text{ Unfunded Pension Liabilities}$$

This is a cash-accrual hybrid, not a full accrual measure for the state. Although it captures changes in the unfunded liability of the pension plans, it does not include changes in non-pension assets or changes in non-pension liabilities. More specifically, the cash gap is adjusted by subtracting the change in the "Unfunded Actuarially Accrued Liabilities." Thus, this ΔUAAL is a residual that captures the effect of (inadequate) contributions, changes in the value of pension assets, and changes in actuarial assumptions used to calculate liabilities such as the discount rate. Because it is based upon actuarial methods and assumptions, it is an admittedly weak proxy for the economic value of annual underfunding. Nonetheless, it is what we have available from public sources, and thus we forge ahead.

Figure 4 presents cash gap and adjusted gap projections from the Fiscal Futures Model for FY 2015 to FY 2045. The cash gap projections (shown by the solid line) are the same baseline projections as in Figure 3, except that the projection period is longer. When model projections are run 30 years out, the cash deficit reaches $35 billion in 2045. Recall that under pre-December 2013 law, Illinois pension contributions are targeted to achieve only 90 percent funding by 2045 and scheduled annual contributions are back-loaded or ramped-up as the target year gets closer.

Figure 4: Illinois All-Funds Budget Gap Projections for FY 2015-2024
For Cash Gap and Gap Adjusted for Change in Unfunded Pension Liabilities
(both assume pre-December 2013 pension law)



Source: IGPA Fiscal Futures Model, January 2015

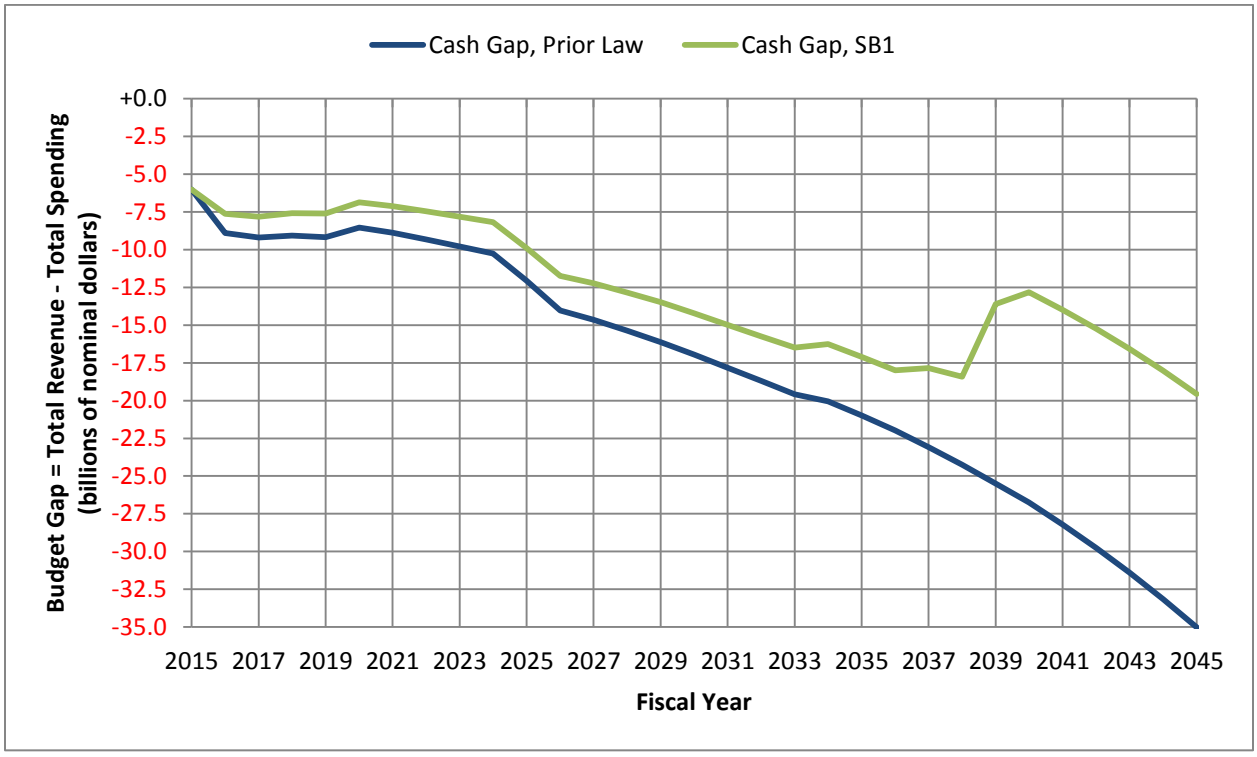
The dashed line in Figure 4 shows the adjusted budget gap projections. Because of both the 90 percent target and back-loading, Illinois is scheduled to pay less than actuarially required contributions, and UAAL will increase through FY 2029. Thus the adjusted budget gap is worse – more negative – than the cash gap for the next 15 years; and increasingly better – less negative – from FY 2030 to 2045.

5.2.2. Alternative Policy Projections

One can also use this model to estimate the fiscal effects of Senate Bill 1 (SB1), the pension reform that was passed in December 2013 and which is now being challenged in the

Illinois Supreme Court. Figure 5 shows projections of the cash gap for existing pension law (the pre-December 2013 law ramp-up of contributions to 90 percent funding by 2045) compared to SB1. The dark line in Figure 5 is identical to projections for existing pension law shown in Figure 4. The light colored lines in Figure 5 show cash-gap projections assuming that the court rules SB1 constitutional and that implementation begins in FY 2016.[6]

Figure 5: Illinois All-Funds Cash Budget Gap Projections for FY 2015-2024
For Prior Pension Law and SB1 (December 2013 law, under judicial review)



Source: IGPA Fiscal Futures Model, January 2015

[6] Not shown here are adjusted-gap projections for SB1. Not surprisingly, SB1 has a beneficial (less negative) impact on the adjusted gap compared to existing law. The magnitude of the annual savings from SB1 is around $2 billion in the first several years of implementation, increases to around $8.5 billion in in the mid-2030s, and narrows to $3 billion by 2045. The most notable single year impact of SB1 is in the year of adoption (or year ruled constitutional)—an immediate reduction of the present value of future benefit liabilities in excess of $20 billion.

Compared to existing law, SB1 reduces the cash-gap by about $2 billion per year for 10 years. The reduction in the cash gap grows thereafter, reaching $14 billion each year after the 100 percent funded ratio is reached in FY 2040, at which time state contributions would fall to normal cost only. A key qualitative feature that jumps out from Figure 5 is that even if SB1 is upheld as constitutional, it addresses only a small fraction of the overall budget gap over the next few decades. Thus, regardless of whether or not the Supreme Court of Illinois upholds SB1, the State of Illinois will require substantial increases in revenue or substantial reductions in spending to restore any semblance of fiscal balance.

6. CONCLUSION

Illinois is an unfortunate but useful case study of the fiscal strain placed on states that run large negative fiscal imbalances for many decades. Illinois' public pensions have essentially been used as a source of borrowing, allowing the state to keep taxes lower and other spending higher than would be permitted if the state followed a more balanced budget process.

Public pensions are part of the fiscal problem in Illinois, but not for the reasons often asserted in public discussions. Policy makers, reporters, and other commentators often point to "excessive" public pensions as the root of all of Illinois' budget woes. Although it is quite easy to find examples of abuses in the Illinois pension system, as well as examples of individuals receiving extremely generous annual pension benefits that substantially exceed those available to the average private sector pension participant, our illustrative calculations suggest that those situations are outliers rather than the norm. Indeed, the data suggests that Illinois public pensions are not outliers compared to the generosity of other state pensions around the country. Some commentators will argue that public pensions in *all* states are too generous, an

issue that we make no attempt to address in this paper. Rather, our point is that Illinois pensions are not outliers in terms of generosity, but they are outliers in terms of their funding status. This implies rather strongly that inadequate contributions to the pension funds are the primary cause of the low funding ratios of the state's pension plans.

Our examination of fiscal practices in Illinois reveals that accumulation of unfunded pension liabilities is just one – though overwhelmingly the largest – of many questionable time-shifting budget practices and part of an overall pattern of delaying payment and avoiding tough choices. The state has repeatedly shifted Medicaid payments to future years and allowed bills to other vendors to remain unpaid for months. Illinois has also routinely relied on one-time revenue sources, assets sales, balance transfers across funds and borrowing to pay for ongoing operations.

Looking forward, projections of future revenues and expenditures paint a bleak fiscal picture. The budget gap is projected to continue to widen, which will require additional revenue and / or spending reductions to rectify. Worse, the accumulation of liabilities from past years represent a large claim on future budgets. An increasing share of what sustainable revenues are available in future years will be devoted to payoff of these legacy costs, crowding out what is left to pay for other state services. Importantly, this is true even if the 2013 Illinois pension reform law is upheld.

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APPENDIX: Data, Assumptions and Methods for the Fiscal Futures Projection Model[7]

Figure 5 outlines the key steps in the fiscal projection model. Detailed data from completed fiscal years (FY 1997 to 2014) are compiled into 16 revenue and 17 expenditure categories that are consistently measured over time. Table 3 lists the categories and their magnitudes in FY 2014. The Illinois Office of the Comptroller's (IOC's) cash-based *Detailed Annual Report* is the key source of information from which the Fiscal Futures all-funds database is constructed.

The Regional Economics Application Laboratory (REAL) of the University of Illinois maintains a regional input-output model of the Illinois economy. Economic and demographic variables for both the historical and projections periods are obtained from REAL for use as "driver" variables in the Fiscal Futures Model. Israilevich *et al*. (1997) provides a detailed discussion of the REAL model and we refer interested readers there for more detail.

Tables 4 (revenue) and 5 (expenditures) show the driver variables used to project each category of revenue or spending. The model projects year-to-year growth rates (the change in the natural log) for each category in each year. The default specification is to regress the percentage change in the fiscal variable against the percentage change in the selected driver variable(s) plus a constant term using historical data. The estimated relationship is then applied to the REAL model's projections of the driver variables to generate projections of the fiscal variable. For example, it can be seen from Table 4 that growth in General Sales Tax collections is modeled as a function of projected growth in consumption net of services. Many smaller

[7] This Appendix draws from Dye and Hudspeth (2015), which includes additional information and sources.

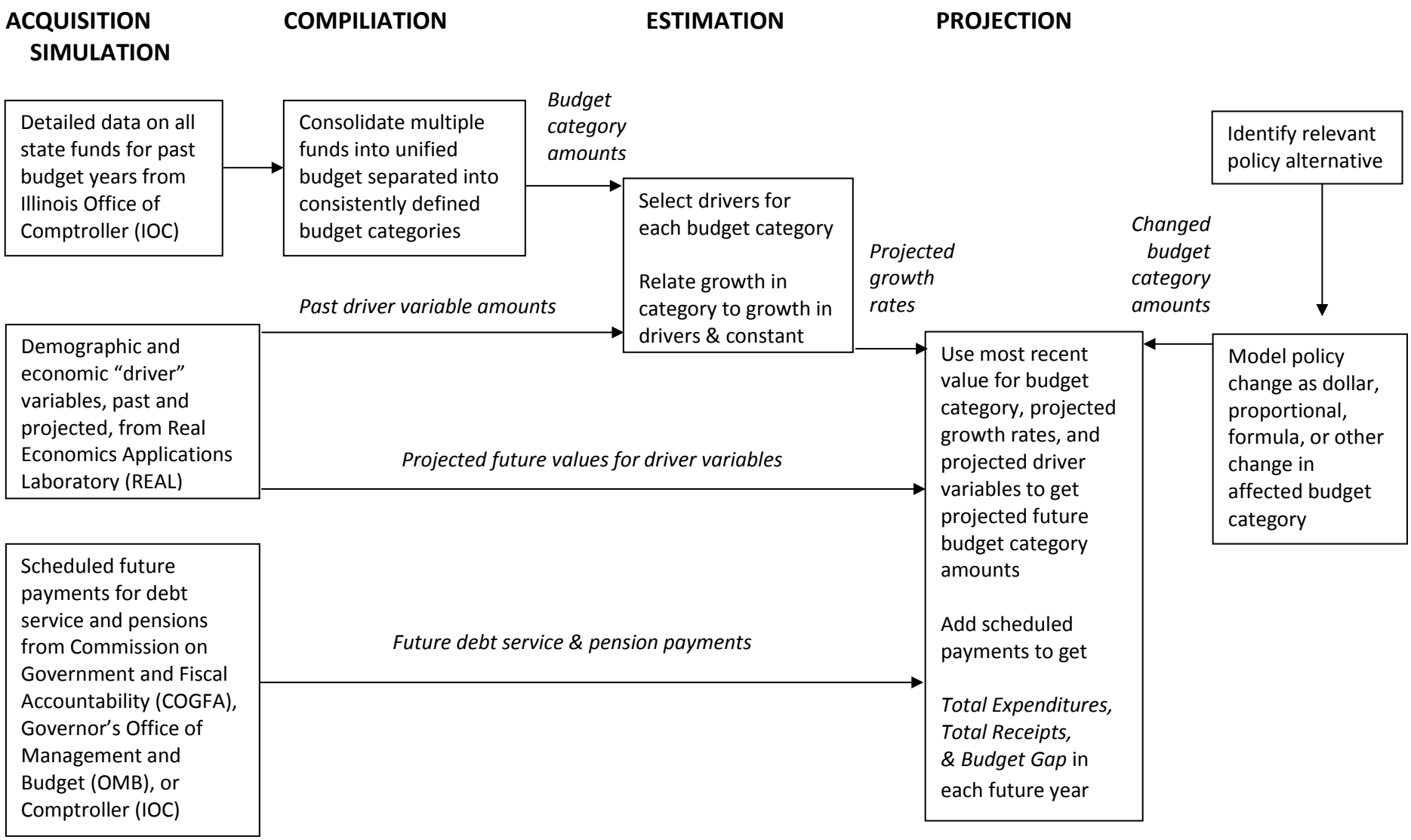
revenue categories are projected based on their historical relation with growth in personal income.

For some fiscal categories – especially those with large fluctuations over time where there is no good fit in the historical data – future growth is set to equal to inflation. For example, in Table 5 we see a number of smaller spending categories are set to grow at the projected rate of CPI inflation.

Although most of the categories are projected independently, the model does account for linkages that are explicit in various revenue-sharing or expenditure-matching programs. For example, state Medicaid spending is projected first and then used to project the amount of revenue from federal matching grants. Another example is that growth rates estimated for gross individual income tax collections are used to drive the amount of income tax revenue the state transfers to (shares with) municipal governments.

Debt service and pension spending in future years are taking from official state sources. Recall that the Fiscal Futures Model excludes *new* borrowing from projections of sustainable revenue. However, it is appropriate to account for future principal and interest expenditures on *pre-existing* general obligation and revenue bonds, and these figures are publicly available. The baseline projections of the Fiscal Futures Model include state pension contributions as scheduled under current law.

Figure 3: IGPA Fiscal Futures Model Flow Chart



Source: Figure 1 in Dye and Hudspeth (2015)

Table 3: Fiscal Futures Revenue and Expenditure Categories with Fiscal Year 2014 Amounts

Revenue category	FY14 Level ($ billions)	Expenditure category	FY14 Level ($ billions)
Federal Funds—Medicaid	$9.0	Medicaid	$17.1
Federal Funds—Transportation	$1.7	Elementary & Secondary Education	$9.0
Federal Funds—Other	$6.4	Human Services (expanded)	$6.9
Personal Income Tax	$16.6	Pensions	$6.7
General Sales Tax	$10.3	Transfer of Revenue to Local Governments	$6.1
Corporate Income Tax	$4.4	Transportation (including Tollway)	$5.7
Motor Fuel/Vehicle/Operator	$3.2	Debt Service	$3.8
Gambling	$1.9	Higher Education	$2.4
Excise Taxes (other)	$1.9	State Employee Health Care	$1.9
Healthcare Provider Taxes	$2.4	Management, Legislative & Judicial	$2.2
Public Utility Tax	$1.5	Corrections	$1.4
Licenses, Fees & Registrations	$0.9	Public Safety, Health & Regulation	$1.3
Corporate Franchise Tax	$0.2	Economic Development	$1.2
Fines, Penalties & Violations	$0.1	Environmental, Resource & Agriculture	$0.8
Investment Income	$0.01	Capital Improvements (other)	$0.7
Other Cash Revenue	$5.4	Labor & Employment Security	$0.3
		Other Expenditures	$2.2
Total Revenue	$66.1	Total Expenditures	$69.7

Source: Dye and Hudspeth (2015), Tables 3 and 4; IGPA Fiscal Futures Model, January 2015

Table 4: Fiscal Futures Model Revenue Projection Specifications –
Growth in revenue category is driven by growth in indicated variables

Revenue category	Driver(s)
Federal Funds—Medicaid	set to share of projected Medicaid spending, adjusted to reflect decline in match rate for ACA
Federal Funds—Transportation	set to fixed share of projected Transportation spending
Federal Funds—Other	set to grow at CPI inflation plus population growth (i.e., fixed in real-per-capita terms)
Personal Income Tax	Construct "implicit revenue," given the tax rate, after personal exemptions, and after tax credits. Regress on growth in personal income.
General Sales Tax	regress on growth in consumption net of services
Corporate Income Tax	set to grow at CPI inflation plus population growth (i.e., fixed in real-per-capita terms)
Motor Fuel/Vehicle/Operator	set to grow at CPI inflation plus population growth (i.e., fixed in real-per-capita terms)
Gambling	set to grow same rate as CPI inflation
Excise Taxes (other)	regress on growth in personal income
Healthcare Provider Taxes	set to fixed share of projected Medicaid spending
Public Utility Tax	regress on growth in personal income
Licenses, Fees & Registrations	regress on growth in personal income
Corporate Franchise Tax	regress on growth in personal income
Fines, Penalties & Violations	regress on growth in personal income
Investment Income	set to grow same rate as CPI inflation
Other Cash Revenue	set to grow same rate as personal income

Source: Dye and Hudspeth (2015), Table 1

Table 5: Fiscal Futures Model Spending Projection Specifications –
Growth in spending category is driven by growth in indicated variables

Spending category	Driver(s)
Medicaid	set to grow same rate as personal income plus "Medicaid excess cost growth" (from CBO)
Elementary & Secondary Education	set to grow same rate as personal income plus growth in population age 5-17
Human Services (expanded)	regress on growth in personal income and growth in number unemployed**
Pensions	as scheduled
Transfer of Revenue to Local Governments	same as source revenue categories
Transportation (including Tollway)	regress on growth in consumption**
Debt Service	as scheduled
Higher Education	regress on growth in population age 18-24**
State Employee Health Care	regress on growth in personal income & growth in health care output**
Management, Legislative & Judicial	regress on growth in personal income**
Corrections	set to grow same rate as CPI inflation
Public Safety, Health & Regulation	set to grow same rate as CPI inflation
Economic Development	set to grow same rate as CPI inflation
Environmental, Resource & Agriculture	regress on growth in personal income**
Capital Improvements (other)	set to grow same rate as CPI inflation
Labor & Employment Security	regress on growth in employment
Other Expenditures	set to grow same rate as CPI inflation

Source: Dye and Hudspeth (2015), Table 2