Illinois has a deadline problem

Every investment loss has to be repaid by the same fixed date.

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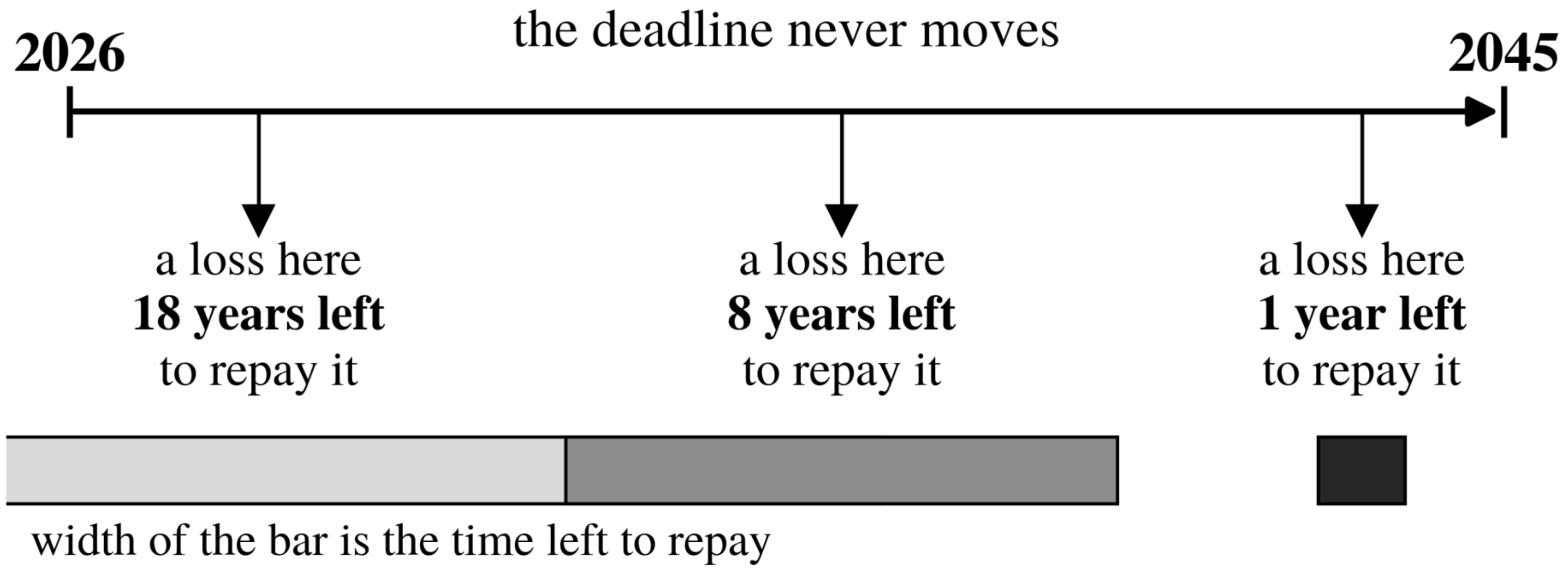
Public Pension Funding Forum, University of Chicago, August 18, 2026

The deadline never moves. The time left does.

The law fixes the repayment date at 2045, so every year there is less time to repay a loss.



A pension plan has three moving parts

Benefits are promised, assets earn what they earn, and the State pays whatever is left.

Benefits promised
paid out for decades

minus

Plan assets
and what they earn

equals

State contribution
the annual bill

When assets fall short, the bill is what moves.

Nothing in the law caps how far it moves.

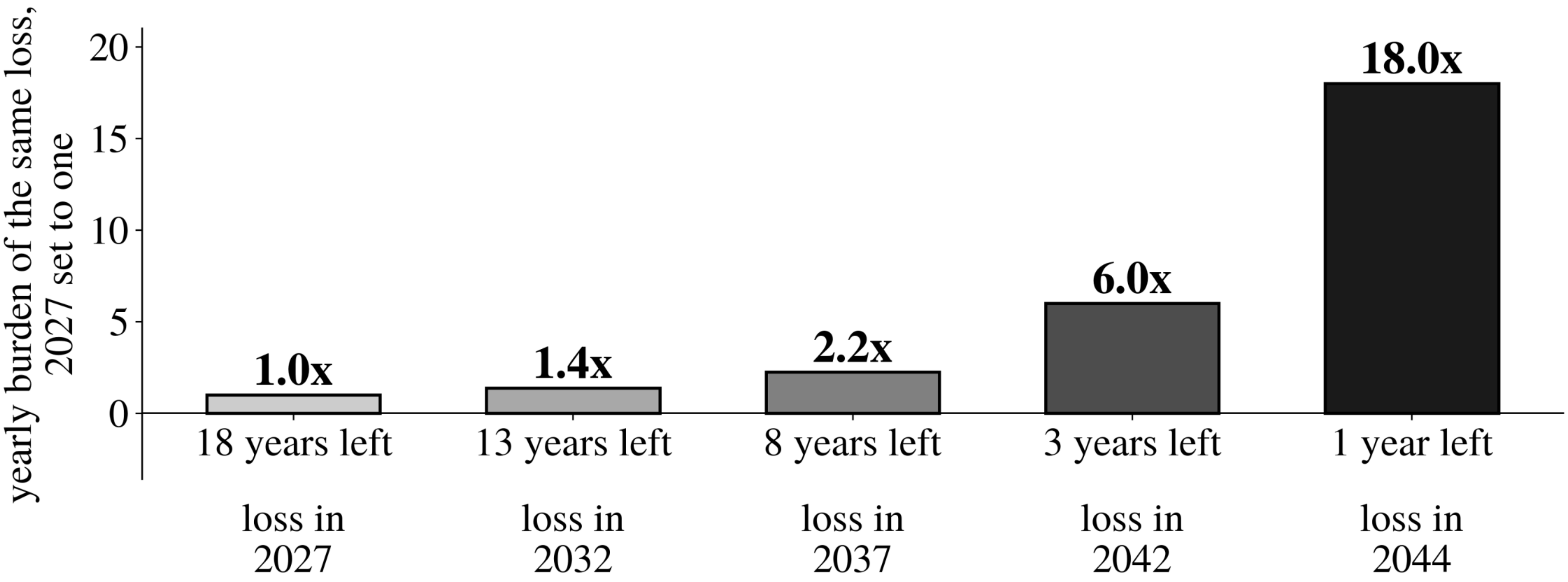
A loss does not disappear. It becomes a bill.

The money must still be there in 2045, so a loss today is a bigger State payment later.

1. The plan holds 100 dollars
2. The market takes 10 dollars
3. The 2045 target does not change
4. So the State must put back the 10 dollars
   and everything it would have earned

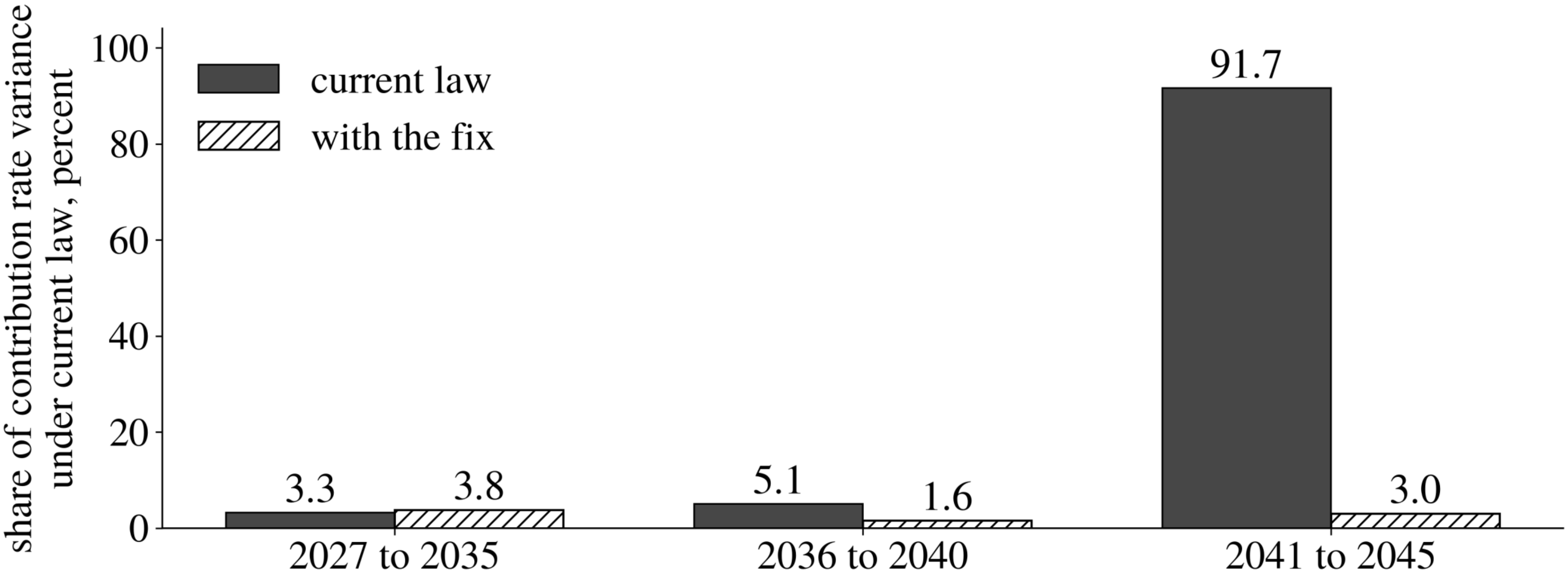
The same loss gets harder to repay every year

One year to repay costs eighteen times as much each year as eighteen years to repay.



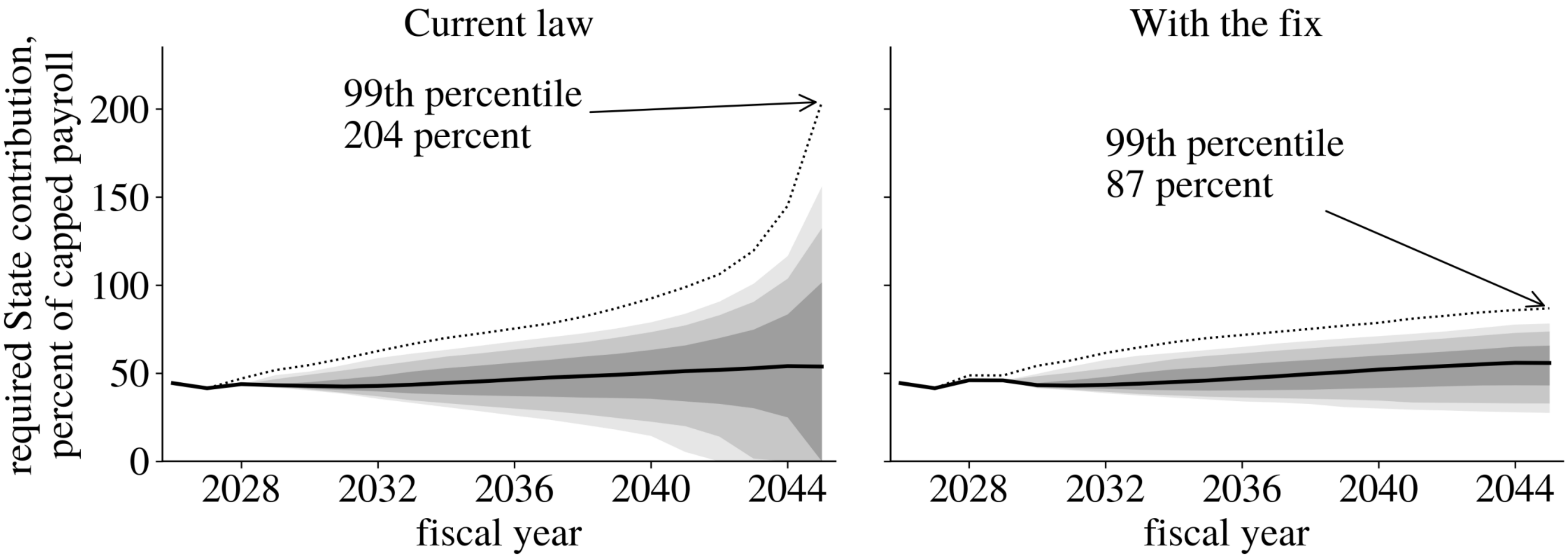
So the risk piles up at the end

91.7 percent of the swing in the annual bill lands in the last five years.



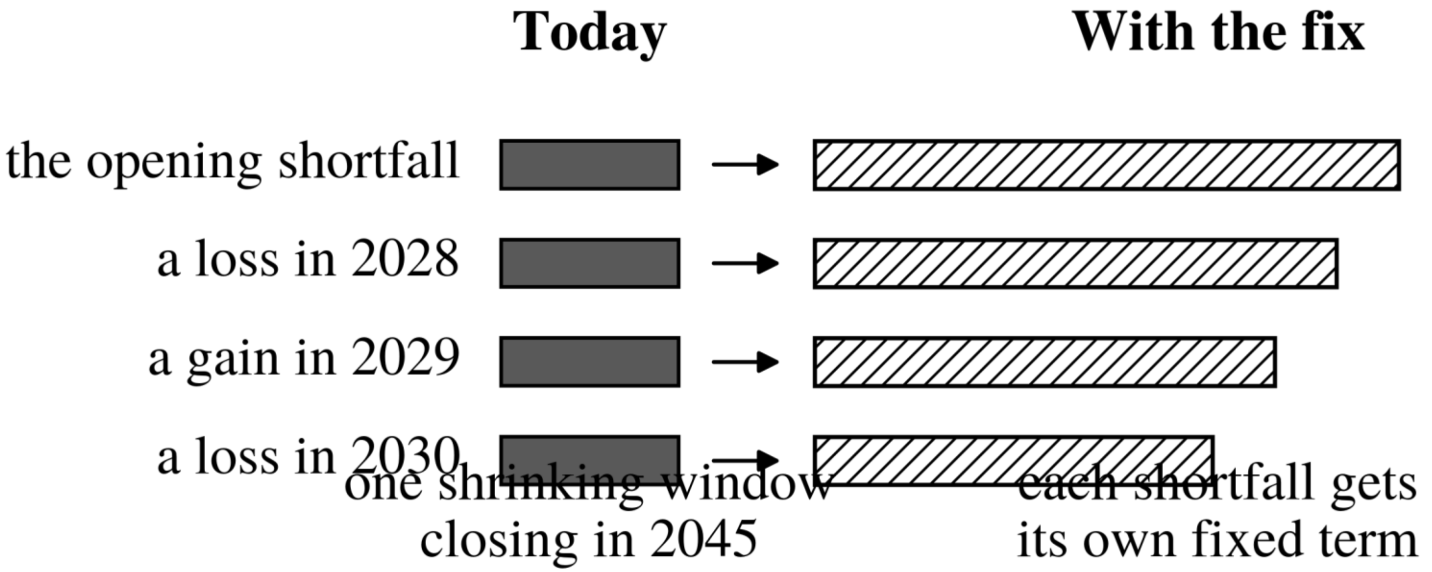
In a bad decade the bill becomes impossible

Dotted line is one of the worst hundred outcomes. It reaches 204 percent of payroll.



The fix is to give every new shortfall its own repayment period

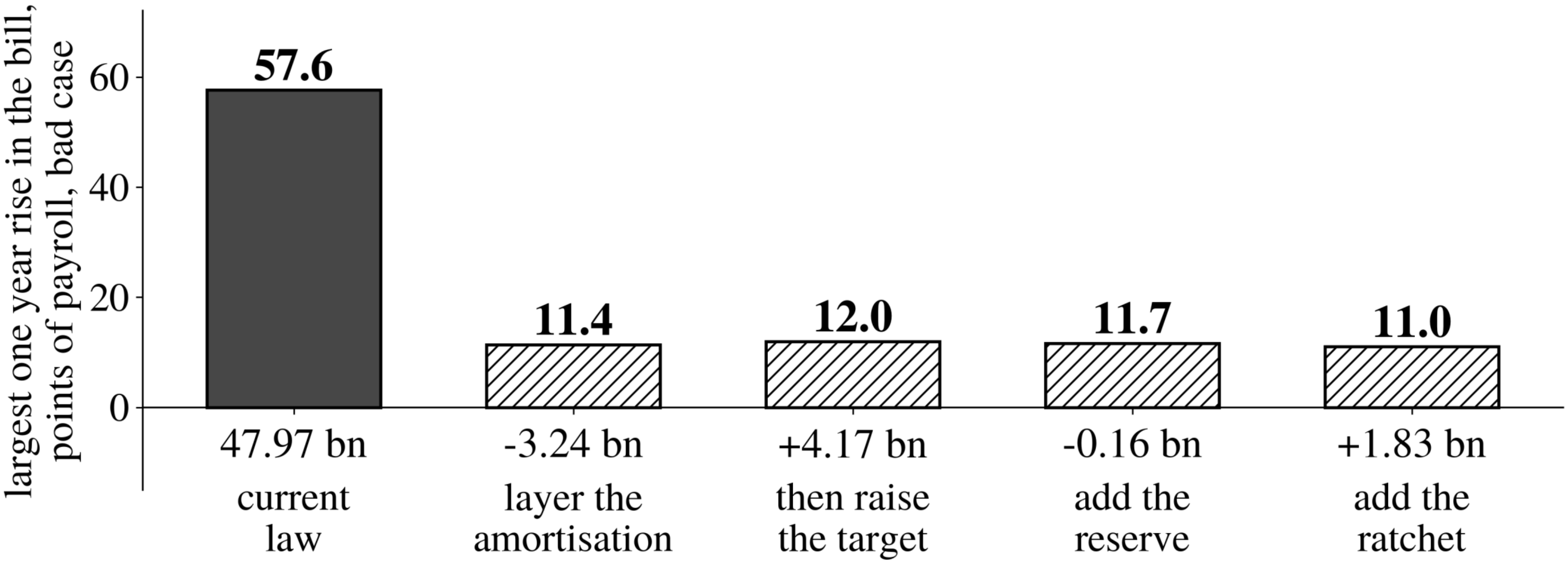
Stop forcing each future loss into the shrinking window before 2045.



Actuaries call this layered fixed length amortisation.

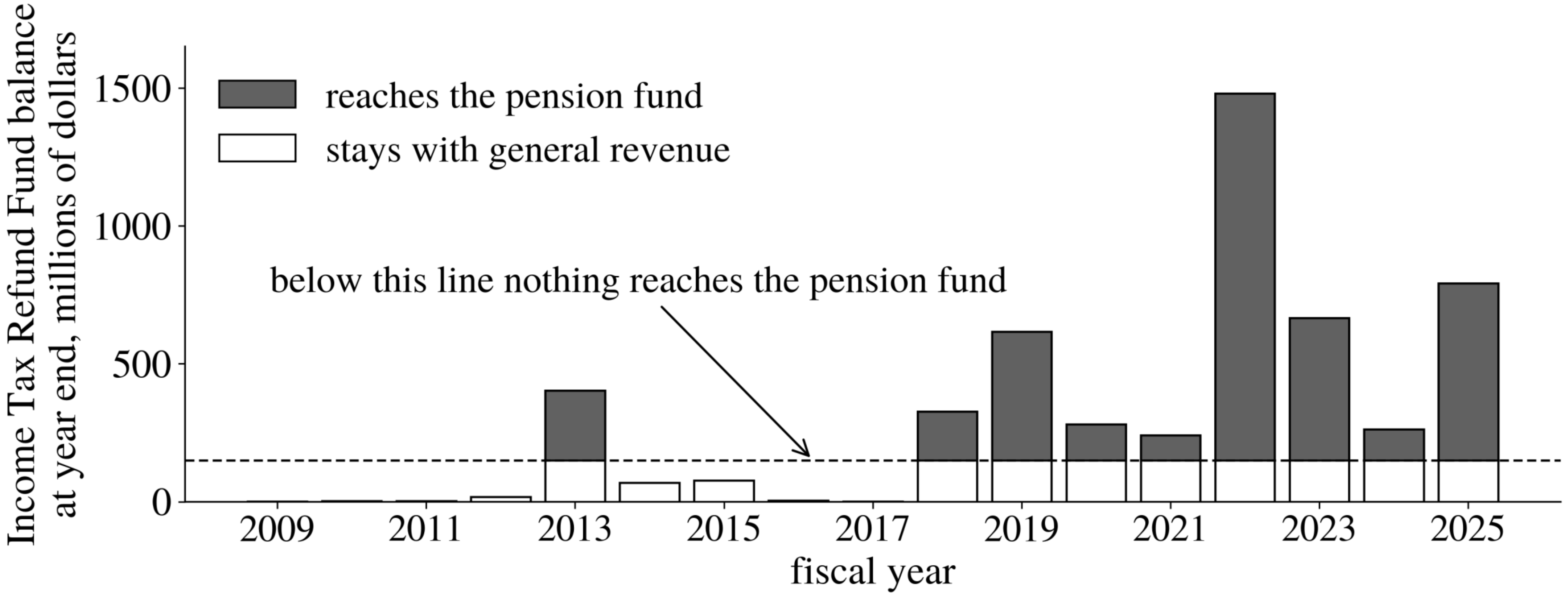
Almost all of the improvement comes from that one change

Bars are the risk measure. Figures below are the present value cost of each step, in billions.



Illinois has also created a lumpy funding channel

In 8 of 17 years it would have sent nothing. Three years carry 66.9 percent.



A reserve is insurance against politics, not against markets

It absorbs about 21 percent of a repeat of the 2005 contribution holiday.

A reserve can	A reserve cannot
hold money that arrives in lumps	remove the 2045 deadline
absorb part of a payment holiday	reduce ordinary contribution swings
cost less than spending it at once	create new revenue

The model does not show that holding the money
beats passing it straight through on ordinary volatility.

Two decisions, in the right order

Neither raises a tax. Neither cuts a benefit.

First. Replace the shrinking window to 2045 with a fixed repayment term for each shortfall.

Cuts the worst one year rise in the bill by 80 percent and lowers the present value of State cash by 3.24 billion dollars.

Second. Authorise a limited, reviewable reserve for political underpayment risk.

Costs almost nothing, absorbs part of a repeat holiday, and sunsets in five years if it cannot prove itself.

Fix the rule that creates the cliff. Then insure the risk that remains.

Appendix

Model, attribution, parameters, robustness, legal items, and the mechanism we rejected.

Appendix A1. The model reproduces the statutory endpoint

Run deterministically at 6.75 percent. One omission is disclosed rather than buried.

Check	Model	Actuary	Status
Funded ratio at June 30, 2045	90.0000 pct	90.00 pct	exact
Unfunded liability at 2045	7095.5 m	7,094 m	plus 0.02 pct
Contributions FY2026 to FY2045	66,116 m	66,751 m	-0.95 pct
FY2027 certified contribution	2,664,468,000	2,664,468,000	exact
Bond contribution maximum, P.A. 93-0002	not implemented	binds to FY2033	omission

Appendix A2. The rule and the target are separate decisions

Each row changes one thing. The rule is free. The target is a separately priced choice.

Step	Worst one year rise	Funded ratio 2045	Present value
Current law	57.6 points	94.9 pct	47.97 bn
Raise the target only	61.9 points	103.2 pct	plus 2.19 bn
Layer the rule, keep 90 pct	11.4 points	80.6 pct	minus 3.24 bn
Then raise the target to 100 pct	12.0 points	97.0 pct	plus 4.17 bn
Add the reserve, recommended	11.7 points	96.1 pct	minus 0.16 bn
Add the ratchet, optional	11.0 points	103.1 pct	plus 1.83 bn

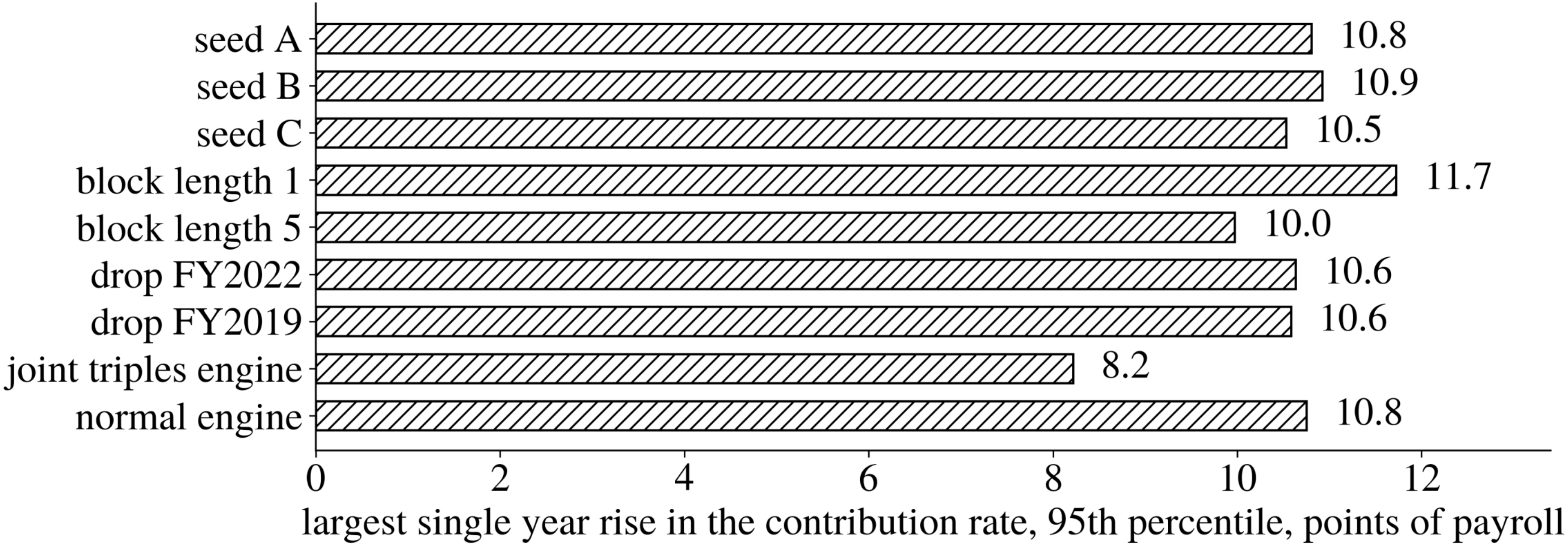
Appendix A3. Amortisation parameters a bill could carry

A principle is not a statute. These are the settings used in the model.

Parameter	Setting
Opening shortfall	one closed layer of 20 years, the SERS Board policy
Experience loss	its own closed layer of 15 years
Experience gain	its own closed layer of 30 years, slower than a loss
Basis	level percentage of capped payroll at 2.90 percent
Reconciliation	new layer equals the shortfall less outstanding balances
Asset value	the existing five year smoothing is retained
No extension	no layer may be re lengthened once struck
Target	100 percent, phased after the rule change

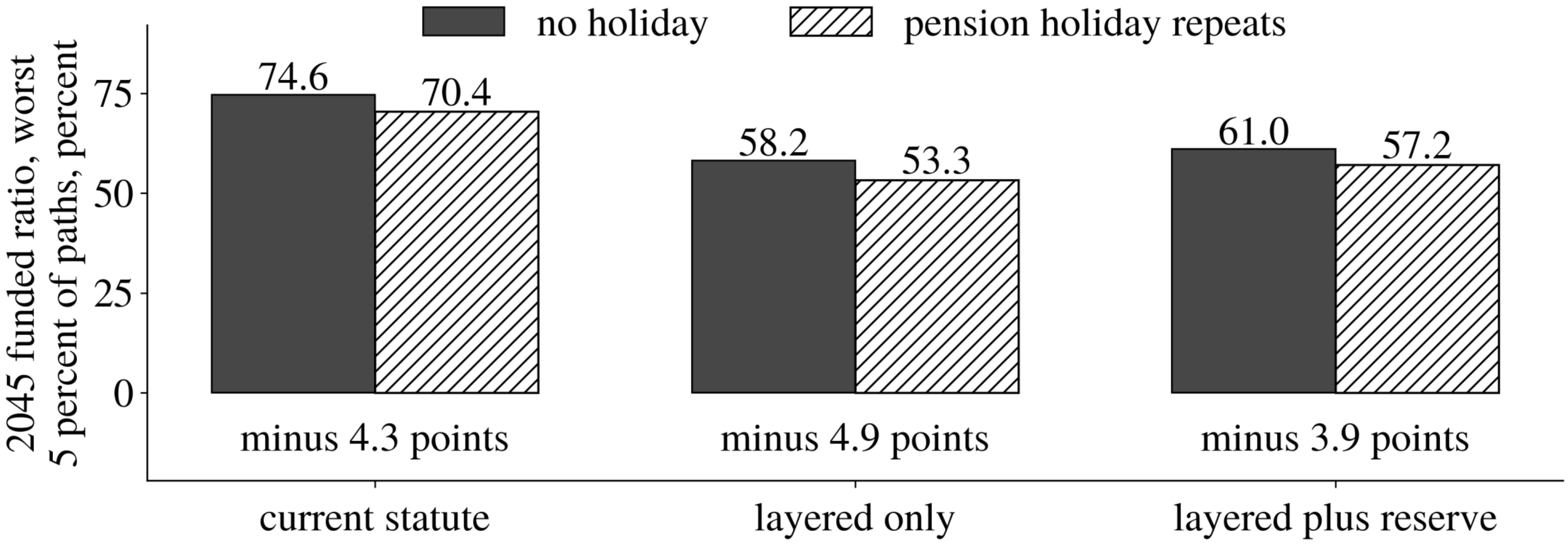
Appendix A4. The result survives the resampling design

Nine variants of the design. The package stays between 8.2 and 11.7 points.



Appendix A5. The political stress test

P.A. 94-0004 cut the FY2006 and FY2007 contributions by 974 million dollars.



Appendix A6. Account rules, and a sunset

Offered as a reviewable pilot, because the model does not prove retention beats pass through.

Rule	Design
Deposit	retain the Section 25 transfer instead of apportioning it on arrival
Release, budget	pay the excess when the bill rises more than 2.0 points of payroll
Release, solvency	pay in when funding falls 5 points below the policy path
Eligibility	budget releases need three prior years of full payment
Cap	6 percent of accrued liability, the remainder apportioned at once
Sunset	five years, annual disclosure, then automatic pass through

Appendix A7. What still has to be verified

Open questions, not solved ones. They belong to counsel, the Comptroller and the auditors.

Item	Status
Custody of the account and the fiduciary standard	open
Whether the continuing appropriation reaches the account	open
Classification under GASB Statement No. 67	open, turns on control, not the label
Administration across five systems	open
Transition from the 2003 bond contribution cap	open
Tier 2 federal safe harbour exposure	excluded from scope

Appendix A8. The mechanism we built and rejected

A funded ratio contingent annual increase, priced as an elective option.

Finding	Value
Net retained by the State at 25 percent take up	0.31 to 0.61 billion dollars
Against an unfunded liability of	30.97 billion dollars
Complementarity with the reserve	under one third of one percent
Legal basis if pursued	Jones, 2016 IL 119618, paragraph 53, election with consideration
Recommendation	do not pursue; extend the existing buyout instead