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CASE STUDY

Taking Money from the Future: Pennsylvania's Hidden Education Funding Cuts

This case study is based on research published in "Hidden Education Funding Cuts: How Growing Teacher Pension Debt Stresses America's K–12 Education Budgets." See the full paper for complete definition of terms and methodology.

For the last nine years, school districts in Pennsylvania have been arguing in court that the state is inadequately funding K-12 education. In February 2023, a state appellate court judge agreed with them, finding "evidence demonstrates there are wide achievement gaps and other significant differences in student outcomes, such as graduation and attainment rates, between low and high wealth districts... statewide."[1] Judge Jubelirer found that the state's right to education had been "clearly, palpably, and plainly violated because of a failure to provide all students with access to a comprehensive, effective, and contemporary system of public education that will give them a meaningful opportunity to succeed academically, socially, and civically."

The school funding court case is a landmark ruling for the state, but now Pennsylvania must turn to the challenging work of "what comes next" and how to find a meaningful solution to the underfunding of primary education.[2] Unfortunately, the state's $44 billion shortfall in teacher pension funding exacerbates the significant challenges discussed in this court case.

Over the last two decades, retirement costs for public schools have grown more than 1,300% as a share of K-12 resources. This is effectively a hidden education funding cut.

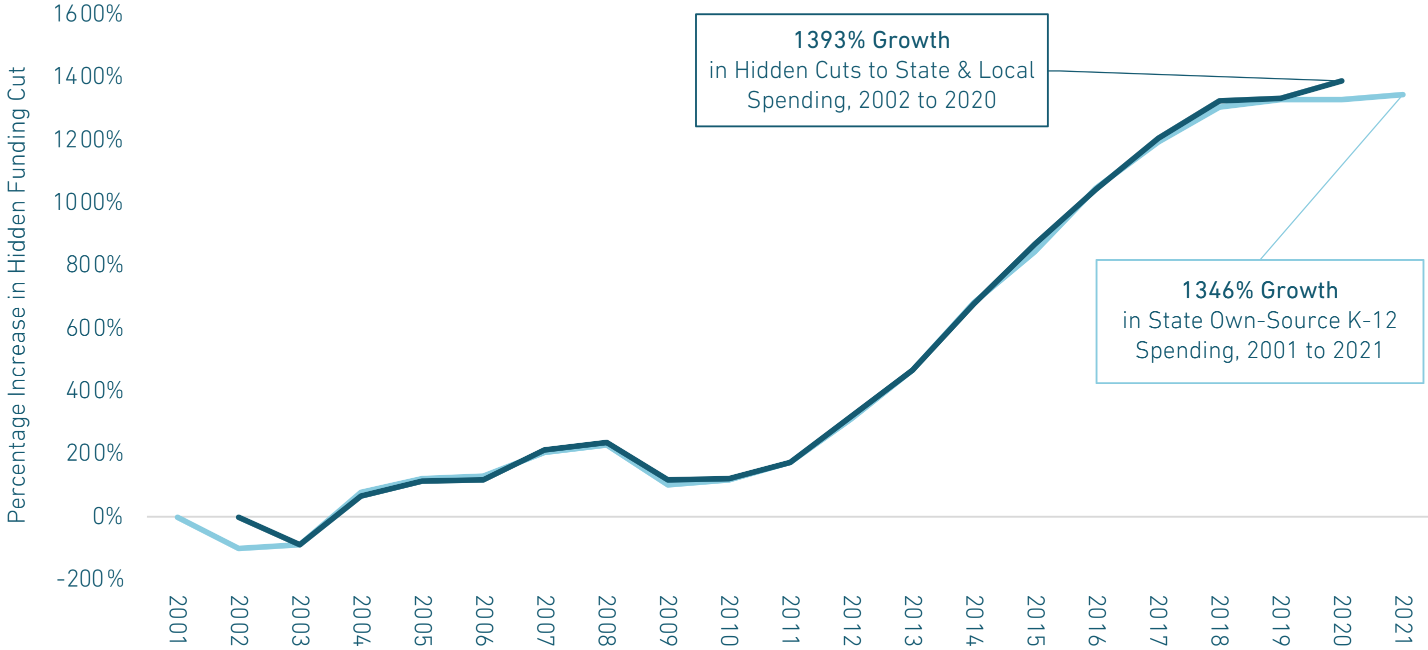
In fact, on many levels Pennsylvania has among the highest hidden cut to K-12 funding in the country. Whether by the percentage increase in retirement costs as a share of education funding or the absolute increase in the annual amount of K-12 resources going to retirement costs, Pennsylvania is consistently outpacing its peers — and not in a good way.

Each year we can measure retirement costs for teachers and public school employees as a share of K-12 resources. Figure PA1 shows the percentage increase in that share over the past two decades, comparing retirement costs to state own-source K-12 spending and to combined state and local K-12 expenditures.

[1] William Penn School District, et al. v Pennsylvania Department of Education, et al, Memorandum Opinion by President Judge Cohn Jubelierer, February 7, 2023. (Hereinafter, William Penn SD v. Penn DOE Memorandum Opinion).
[2] Mark Lieberman, "Pennsylvania School Funding Is Unconstitutional, Judge Says. Here's What Could Happen Next," EdWeek, February 2023.

Figure PA1: The Percentage Change in Pennsylvania's Hidden Education Funding Cut Over the Past Two Decades is More Than 1,300% , One of the Largest Growth Rates in the Country

Percentage increase in retirement costs as a share of education funding



Source: NASBO, Census Bureau, actuarial valuations and ACFRs for the Pennsylvania Public School Employees' Retirement System (PSERS).

There isn't an inherent problem with school districts spending on retirement benefits — in fact, it is a valuable part of compensation for teachers and non-instructional employees. The problem arises when the spending on those benefits grows at a much faster rate than K-12 budgets, causing retirement expenditures to start cannibalizing basic resources for students or dollars for adequate teacher pay.

During the Pennsylvania school funding case School District of Lancaster's Matthew Przywara pointed out that just looking at state dollars sent to his school district was "misleading because a lot of that reimbursement is for pension expense that we're mandated to pay for our employees that we have."[3]

Put another way, there are hidden cuts to Pennsylvania's education funding from growing retirement costs — specifically, growing pension debt costs.

There are two sides to any hidden education funding cut: the retirement costs and resources available for K-12 education. This case study will look at both sides of cuts in Pennsylvania.

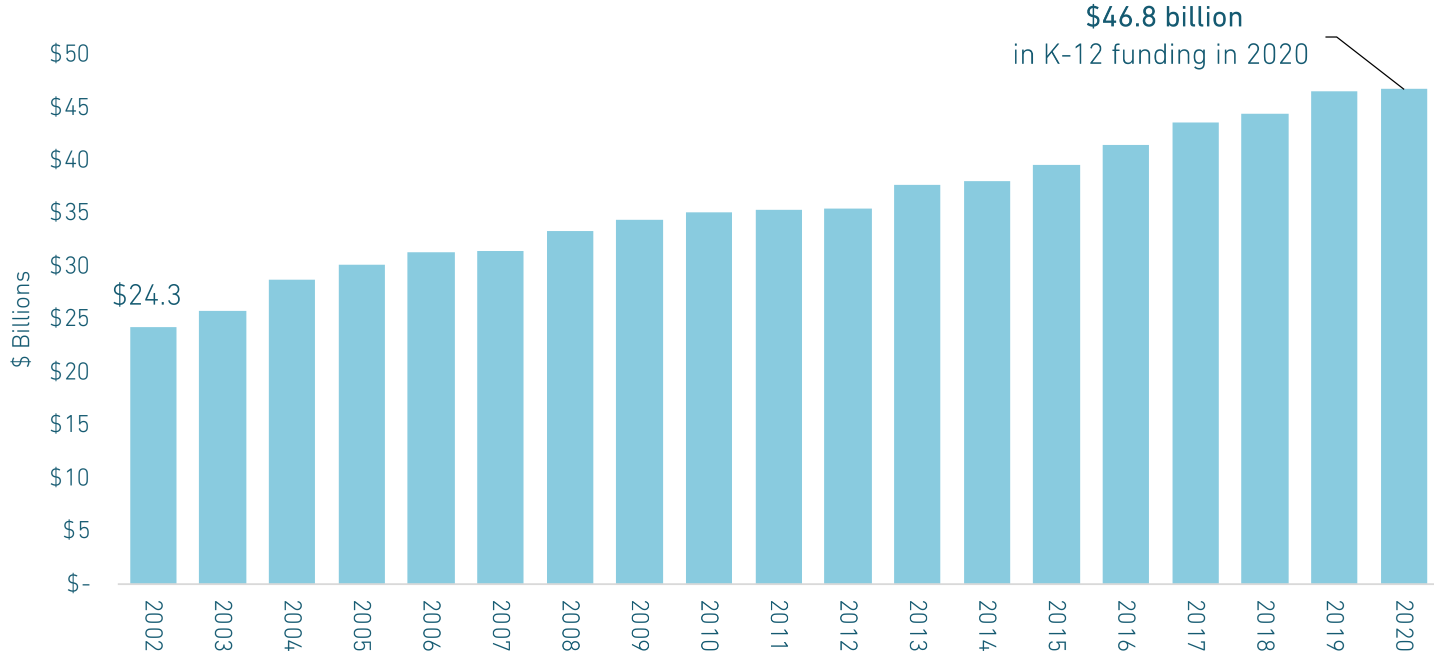
1. Education Funding History

Between 2002 and 2020, the total amount of money spent on K-12 education in Pennsylvania using state and local resources increased from $24.3 billion to $46.8 billion in 2020, shown in Figure PA2. This includes spending on salaries, operations, and capital expenditures, but excludes any federal dollars prescribed for specific programs that wouldn't be related to state retirement costs.[4]

[3] William Penn SD v. Penn DOE Memorandum Opinion, page PDF 245.
[4] This is a very broad way to look at education spending and it will result in a conservative way of thinking about the share of K-12 spending that goes toward retirement costs. For example, Census Bureau data for primary and secondary education that exclude spending on buildings or related capital expenditures show that $33.6 billion was spent in 2020 by state and local sources.

Figure PA2: Pennsylvania State and Local K-12 Funding History, Nominal

Census total state and local education spending, 2002-2020

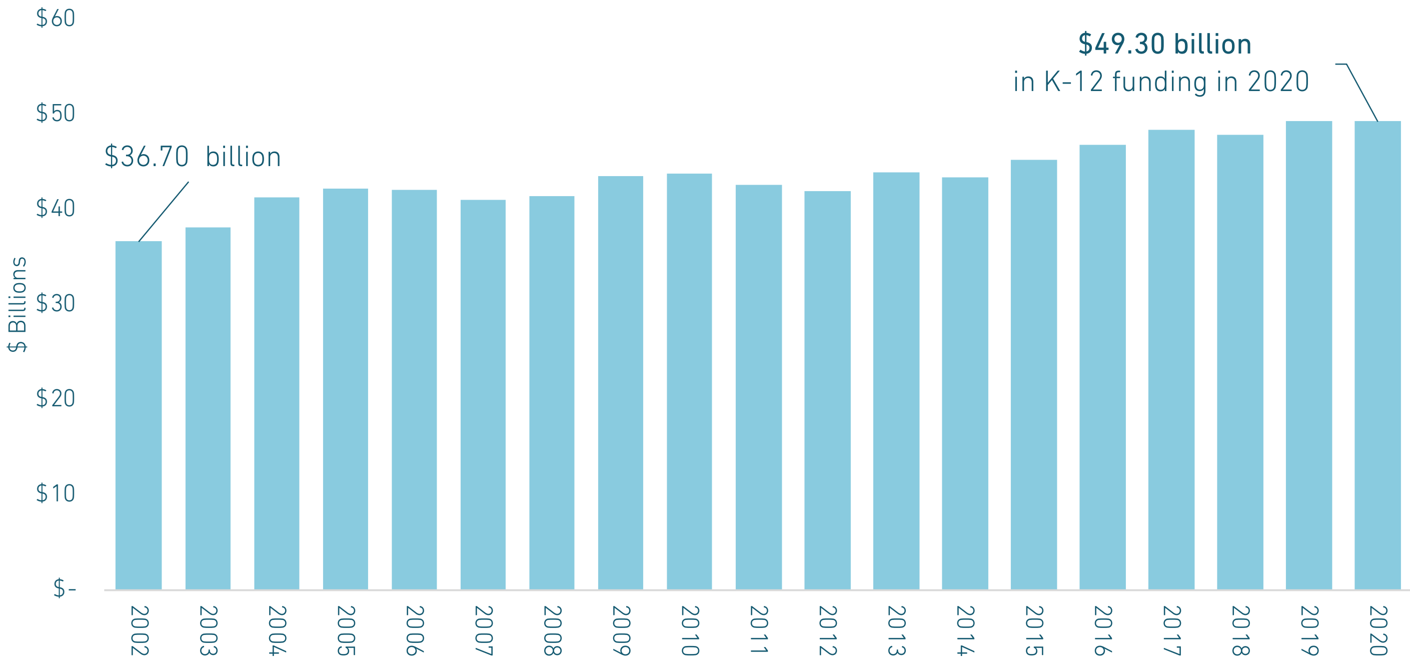


Source: Census Bureau Annual Survey of State and Local Government Finance.

When comparing education spending to retirement costs, it is more reasonable to look at inflation adjusted changes over time. Figure PA3 shows Pennsylvania's state and local K-12 spending, adjusted to 2021 dollars. A fundamental issue in the recent school funding court case was whether this growth rate was sufficient provide comprehensive and equitable K-12 education opportunities to all Pennsylvania students.

Figure PA3: Pennsylvania State and Local K-12 Funding History, Inflation Adjusted Inflation Adjusted to 2021 Dollars

Census total state and local education spending, inflation adjusted, 2002-2020



Source: Census Bureau Annual Survey of State and Local Government Finance.

2. Retirement Cost History

Pennsylvania has three large, statewide retirement systems:

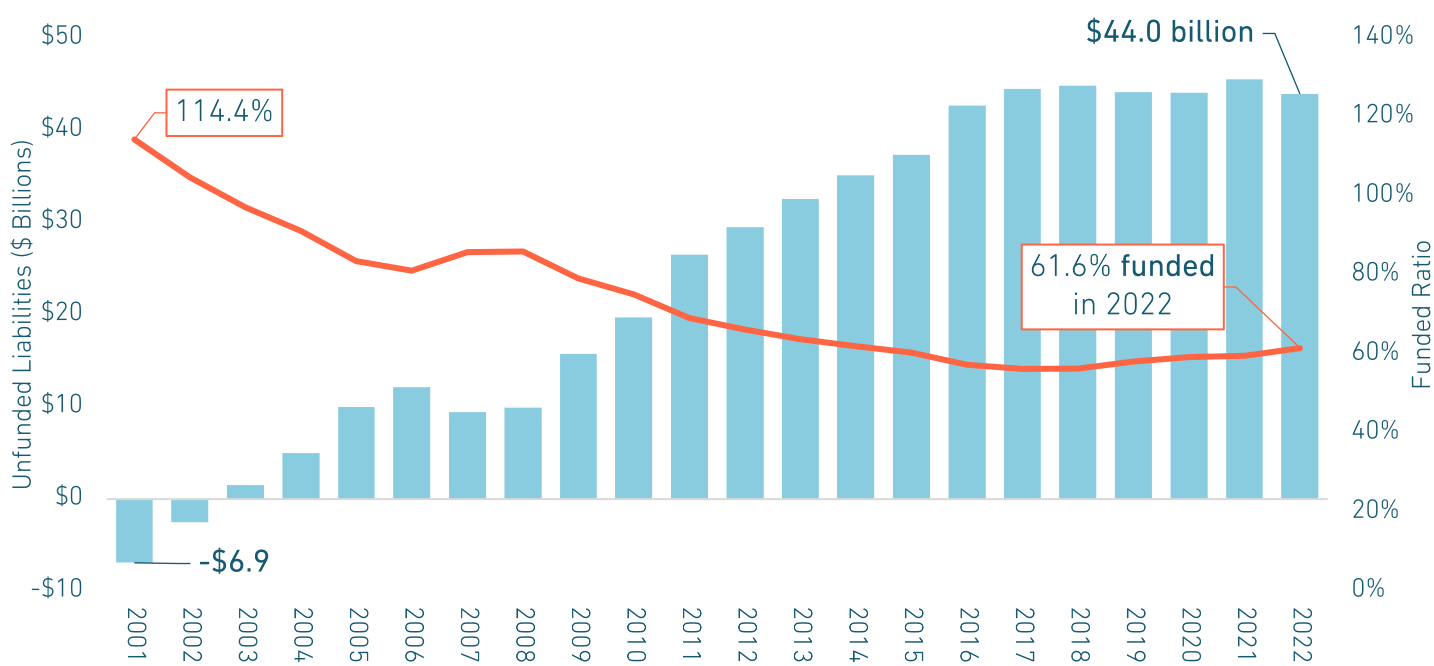
- Pennsylvania Public School Employees' Retirement System (PA PSERS) — covers teachers and non-instructional employees who work for school districts and charter schools, in addition to employees at a select set of vocational schools, community colleges, and regional universities.
- Pennsylvania State Employees' Retirement System (PA SERS) — covers employees at roughly 100 state agencies or other state employers, such as the state department of transportation, the Liquor Control Board, state police, and large higher education employers like Penn State University.[5]
- Pennsylvania Municipal Retirement System (PMRS) — is an umbrella system that manages assets on behalf of over 1,000 pension plans and cash balance plans offered by cities, counties, and other municipal agencies.

While there are some employees who serve public schools scattered across all three of these systems, this case study is specifically focused on PA PSERS and focuses on the costs that school districts and charter schools pay for retirement benefits. This includes all costs at PSERS for plans intended to provide primary retirement income — including both pension and defined contribution plans — but does not include any supplemental plan contributions or costs to schools for covering member contributions (if a school chose to do that as a part of compensation).

Back in 2001, PSERS was a fully funded pension plan. In fact, it was "overfunded" by roughly $9.5 billion — meaning it had more money on hand than expected future benefits would cost. However, in the years that followed, PSERS built up nearly $44 billion in unfunded liabilities (as reported by PSERS in December 2022). Figure PA4 shows the history of PSERS' funded ratio and unfunded liabilities, and when this pension funding shortfall emerged.

Figure PA4: Funded Status History of Pennsylvania PSERS

Market valued unfunded liability and funded ratio



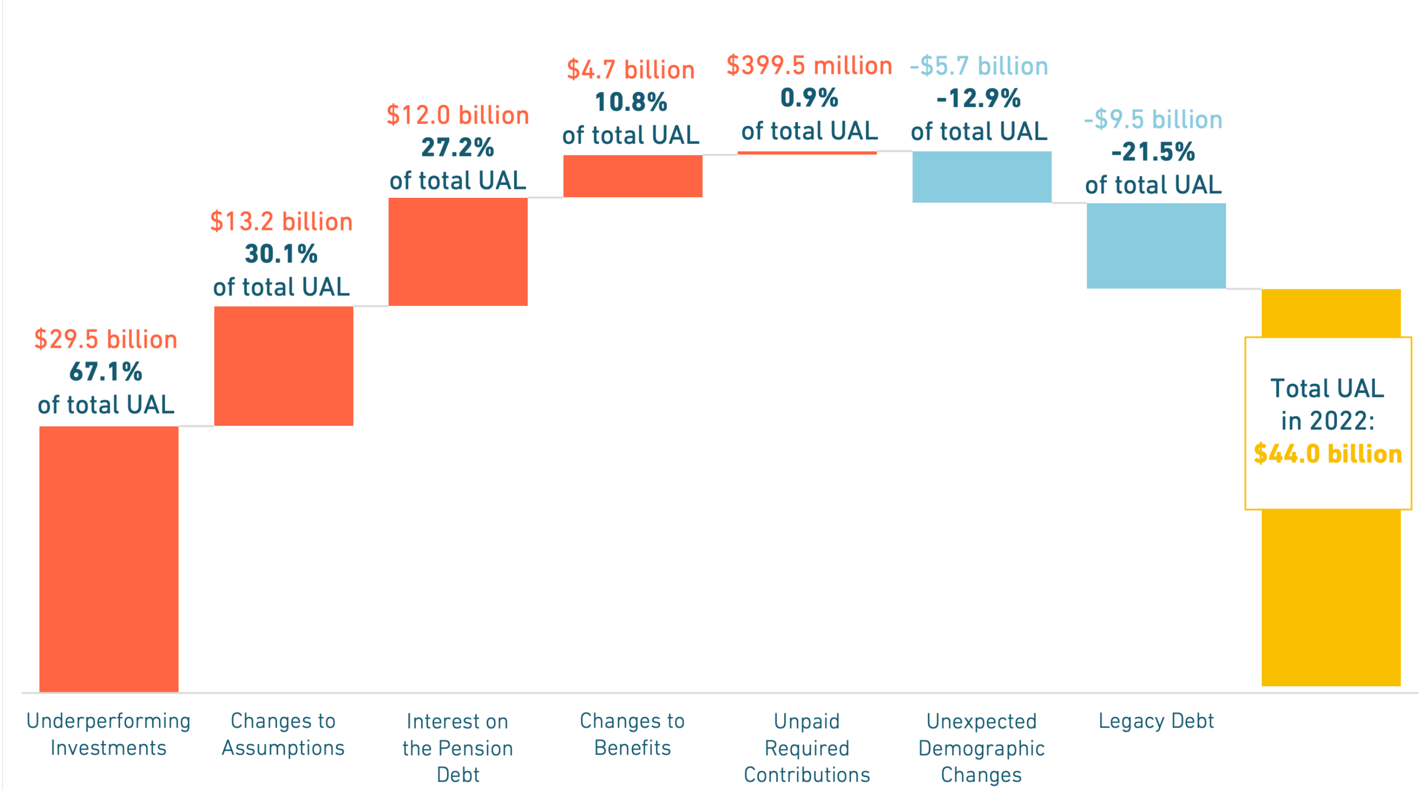
Source: PA PSERS actuarial valuations.

[5] Unlike in other states, employees of the Department of Education and the State Public School Building Authority are members of the state retirement system (SERS) and not the public school retirement system (PSERS).

The primary cause of these unfunded liabilities was that investments underperforming expectations between 2001 and 2022, as shown in Figure PA5. More than half of the PSERS unfunded liabilities are because the trustees assumed they could get 8.5% to 7% investment returns over the past two decades — but instead averaged lower actual investment performance during that period.[6] In fact, it was so much lower that PSERS underperformed on its assumptions by around $29.5 billion between 2001 and 2022.

Figure PA5: The Specific Causes of PSERS Unfunded Liability Growth

Gains and losses to actuarially valued assets and liabilities



Source: PA PSERS actuarial valuations.

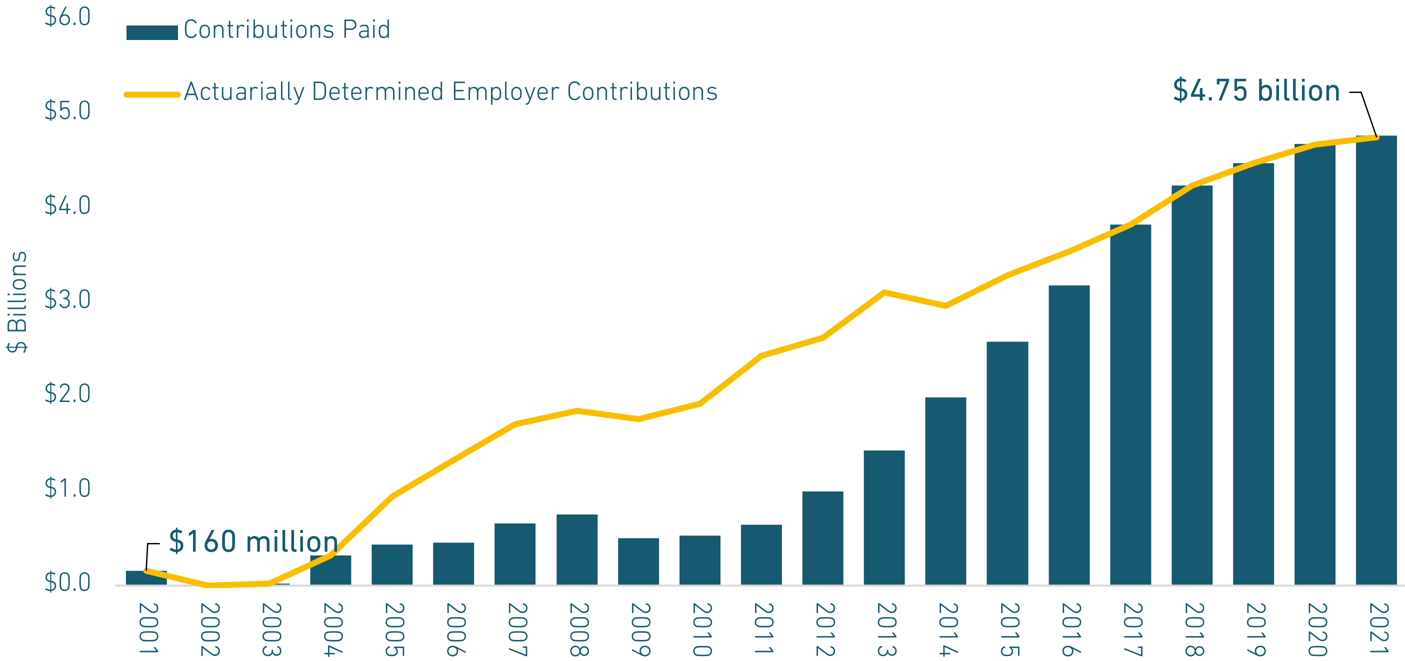
The second largest contributor to PSERS unfunded liabilities has been a need to update assumptions related to investments, mortality, and workforce turnover. These changes aren't made every year, but when the decisions since 2001 are combined, they add up to $13.2 billion added to unfunded liabilities from effectively realizing after the fact that previous assumptions weren't matching real life experience. One way to think about these additional unfunded liabilities is as pension debt that was always there, but just hadn't been recognized on the accounting books.

PSERS also has failed to ensure contributions into the pension fund were adequately provided. Specifically, each year the actuaries who work for PSERS develop a "recommended contribution" that considers what they think future benefits will cost and assumed investment returns. But those contribution amounts weren't always paid, as shown in Figure PA6. And even when they were, sometimes the contributions were less than interest growing on pension debt, which itself is the cause of $12 billion of PSERS unfunded liabilities today.

[6] Between 1990 and 2009, PSERS assumed an 8.5% average annual investment return (what list as their "interest rate" in valuation reports). This was reduced to 8% in 2009 and again to 7.5% in 2011. The PSERS board held that assumption until 2016 when they reduced it to 7.25%, and again to 7% in 2022.

Figure PA6: Pennsylvania Has Not Always Paid its Pension Bills

Actuarially determined employer contributions and actual employer contributions paid

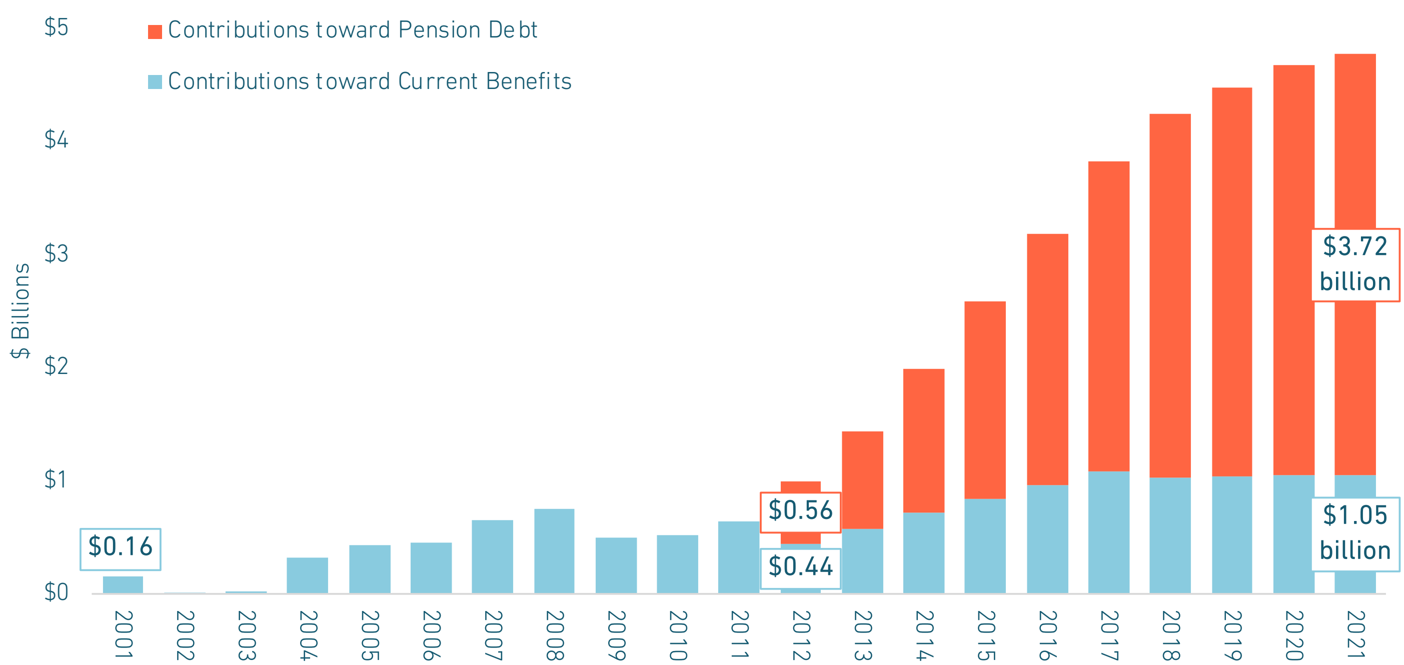


Source: PA PSERS actuarial valuations and ACFRs.

Figure PA6 also demonstrates that contributions overall — both the required rates and actual amounts paid — have been steadily climbing. This is almost entirely because of the growth in unfunded liabilities, as the majority of these contributions are unfunded liability amortization payments. Figure PA7 shows the dollars actually contributed to PSERS from public school employers, and how they were divided up between "normal costs" to pay for benefits earned in a given year and "amortization payments" to pay for unfunded liabilities.

Figure PA7: Pension Debt Payments are Driving Up PSERS Contribution Requirements

Actual contributions paid, inflation adjusted to 2021 dollars

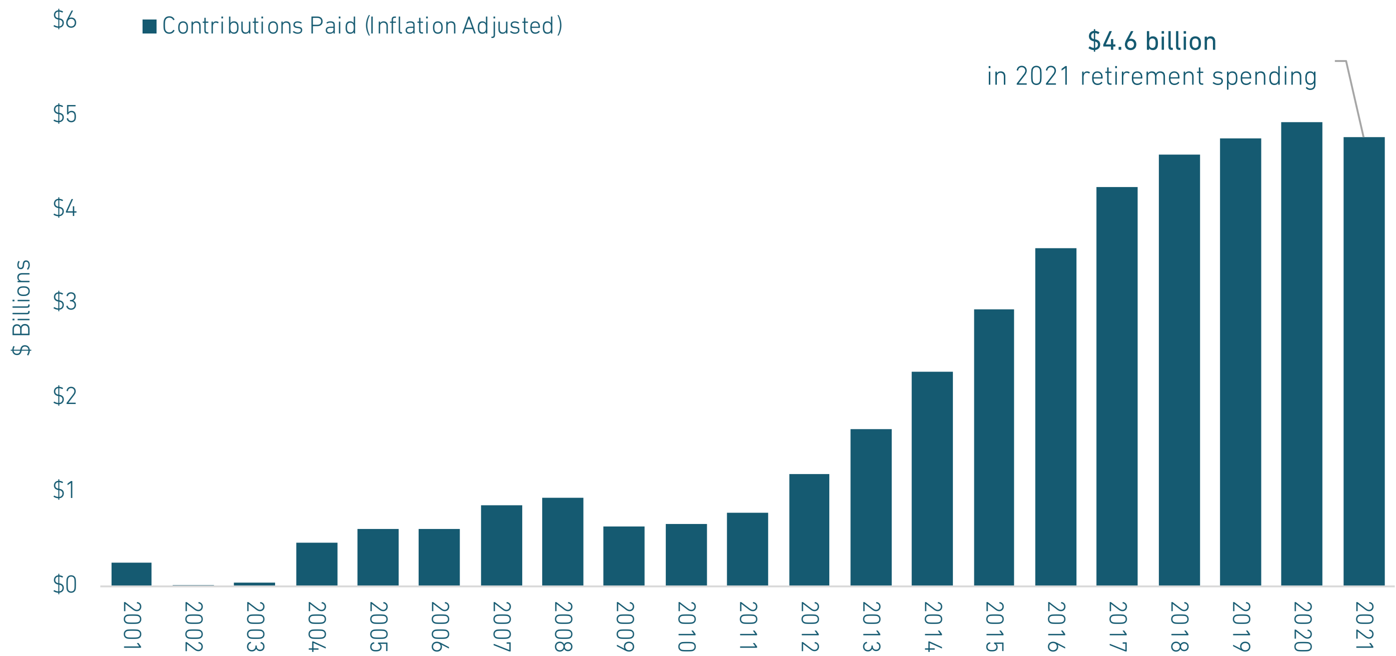


Source: PA PSERS actuarial valuations and ACFRs.

Finally, to appropriately compare these costs to K-12 resources, Figure PA8 shows an inflation adjusted history of all PSERS costs, including employer contributions into the defined contribution (DC) plans of members hired since 2019, who are either enrolled in a "hybrid" retirement plan that combines pension and DC plans, or who have selected the option of a standalone DC plan.

Figure PA8: Growth in Total PSERS Retirement Contributions, 2001 to 2021

Actual employer contributions paid, inflation adjusted to 2021 dollars



Source: PA PSERS actuarial valuations and ACFRs

3. The Effects of 2017 "Pension Reform" Changes

In 2017, the state legislature adopted a sweeping overhaul to how it provides benefits through PA PSERS and PA SERS, creating three options for future members to choose from. Public school workers hired starting in 2019 have the choice of three retirement plans: two of these are "hybrid" plans that combine a pension plan and small defined contribution plan, and one is the option of a defined contribution plan on its own that is intended to be a primary source of retirement income.

These changes have juggled some trade-offs in retirement benefits between providing guaranteed income and portability of retirement benefits. More teachers and public school employees have a path to retirement income security through these options than the previous one-size-fits-all pension plan. However, these changes didn't directly address the primary causes of unfunded liability growth for PA PSERS.

Pennsylvania still has to ensure it is providing adequate annual payments to reduce existing unfunded liabilities. The trustees for PA PSERS have to reduce investment return assumptions to reasonable rates and manage assets appropriately.

It is possible that the changes adopted will lower costs slightly in the long-term. PA PSERS will be promising fewer benefits through these hybrid plans than they would have by continuing to offer the legacy pension plan. And that means there will be less risk of additional unfunded liabilities, which would in turn require additional amortization payments. However, none of those cost changes are likely to be reflected for some time, as it takes years (if not decades) for the workforce to change, and the enrollment population of the new retirement plans to mature. For at least the next decade and possibly longer, the unfunded liability costs for retirees and teachers in the legacy pension plan will be a dominant cost driver (absent some policy that addresses them in a new way).

4. Hidden Education Funding Cuts

The share of K-12 expenditures that is consumed by retirement costs has been growing over time. And this represents a hidden education funding cut. But exactly how much depends on how education spending is defined.

The first way to think about hidden cuts to K-12 spending is to look at state own-source K-12 expenditures. The state has control over education funding formulas and determining how K-12 dollars are distributed. And the retirement system is ultimately controlled by the state legislature (which adopts laws related to benefits and funding) and a board of trustees organized at the state level. School districts carry responsibility for hiring and firing public school employees, but don't have much direct capacity to influence decisions that have led to unfunded liabilities and higher costs. So, the most appropriate way to measure Pennsylvania's hidden education funding cuts is retirement costs as a share of what the state put towards education.

The second way to think about hidden cuts is retirement costs as a share of state and local combined resources for K-12. Through this perspective, taxes are collected by both the state and municipalities, and local resources constituted nearly three-fourths of all Pennsylvania K-12 spending in 2020.[7] So it is also appropriate to measure hidden cuts in Pennsylvania by looking at retirement costs as a share of state and local education expenditures.

The figures below show Pennsylvania's hidden education funding cuts from both points of view.

- Charts looking at state only K-12 spending using own-source revenues are based on data reported to the National Association of State Budget Officers (NASBO). This data is available for 2001 to 2021.
- Charts looking at state and local combined K-12 expenditures are based on Census Bureau data reported in the Annual Survey of State and Local Government Finance. This data is only available for 2002 to 2020 due to methodological quirks in how Census reports data.

See our "Hidden Education Funding Cuts" primary paper for a complete methodology behind our research and this case study.[8]

The most important way to analyze a hidden education funding cut is its trendline. Reasonable minds can debate exactly how much of education funding should go toward compensation costs generally or retirement costs specifically. However, when retirement costs are growing at a faster rate than the growth in education budgets that signals there is currently a problem or likely to be a problem in the near future.

Figure PA1 at the start of this case study showed the rapid growth rate in hidden education funding cuts over the past two decades, measured using both ways of counting education funding. Hidden cuts were starting to grow before 2009, but the growth rate trend exploded years after the financial crisis and Great Recession too — something also shown in Figure PA9 below.

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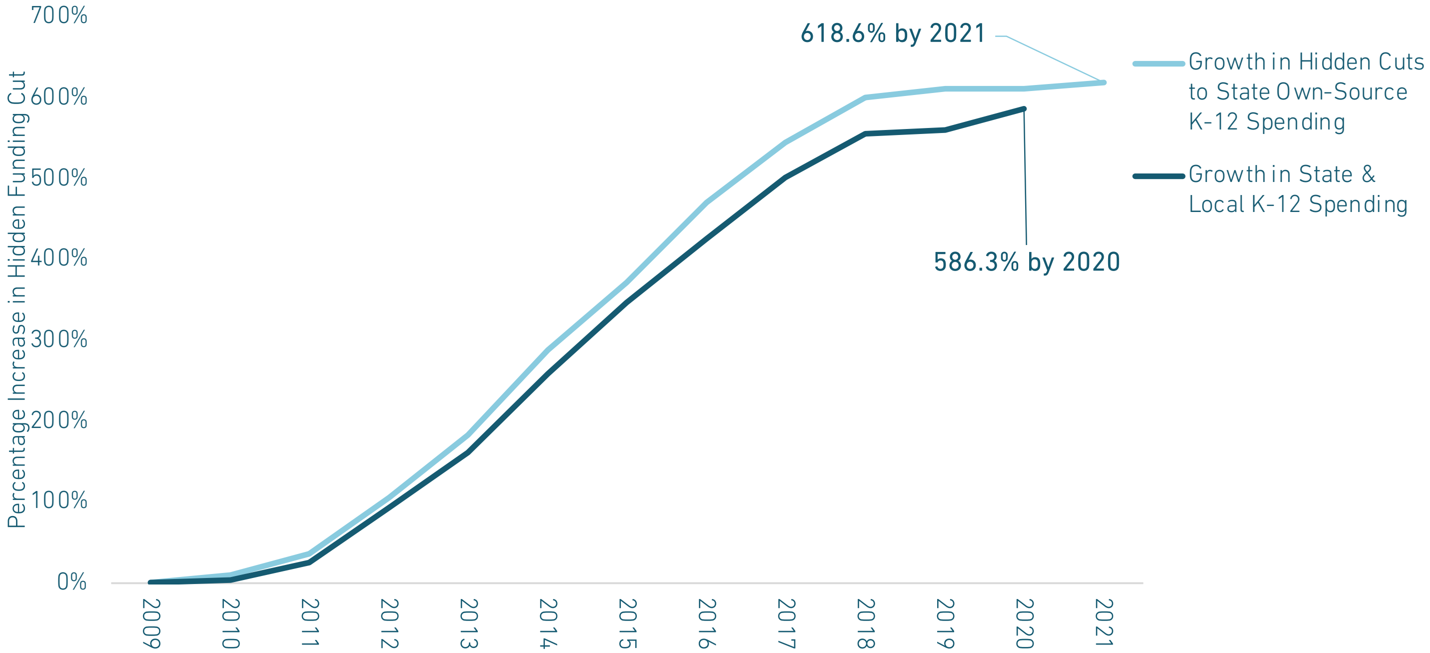
[7] According to data from the Census Bureau Annual Surveys of State and Local Government Finance.

[8] Pennsylvania's school districts or state legislature might have different preferences for how to define school spending. NASBO data is self-reported by state budget officers, and may differ from how education agency officials classify certain spending. Census data is gathered via specific methodologies that generalize across all states, and may also be classified differently than how a given state stakeholder might think about expenditure data. For example, an expert witness in the Pennsylvania school funding trial argued that "pension expenses increased from approximately 2% of districts' total expenses in 2008-09 to 14% in 2018-19" (see PDF page 434). These are slightly larger shares than we estimate for combined state and local K-12 spending, but we are using Census data and the expert witness may have been using a state specific source for education and/or retirement spending that slightly differs from ours. What is important, though is that the growth in hidden funding cut is directionally the same in the expert witness' data and Census data. The trendlines are the most important measurement point in this analysis, whereas absolute cut levels should be considered rough estimates.

Figure PA9: Pennsylvania Hidden Education Funding Cuts Have Also Surged in the Years After the Financial Crisis, With a Percentage Increase of Around 600%



Source: Equable Institute analysis of Pennsylvania hidden education funding cuts

The primary driver of these growth trends has been unfunded pension liabilities. We can see this in Figures PA10 and PA11 (next page), which show the absolute change in retirement costs as a share of education spending for K-12 funding methods, including a breakout of what portion of each year's hidden cut was due to "normal" pension costs or "pension debt" costs.[9]

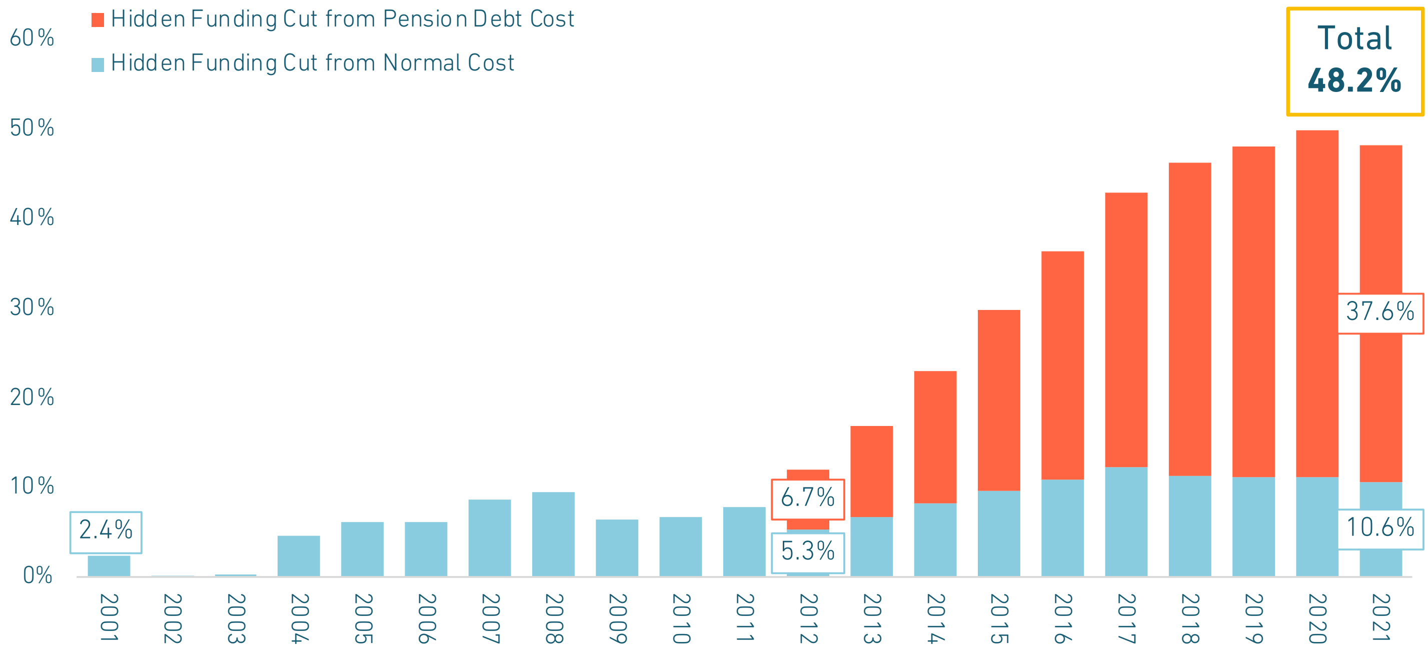
Together, these figures show that since there were virtually no retirement costs until 2004, that pension spending as a share of K-12 spending was basically zero in 2001 and 2002. And in 2009, retirement costs were about 1.5% of combined state and local K-12 expenditures. But by 2020 the hidden cut reached 10% of K-12 spending — a 586% increase since the financial crisis.

Similarly, the hidden cut to state own-source K-12 spending from retirement costs increased from 2.4% in 2001 to 4.9% in 2009 to 35.3% in 2021 — a 1,346% increase over two decades and 619% increase between 2009 and 2021.

[9] The absolute increase of 32.9 percentage points between 2001 and 2021 is easily the largest increase in state own-source hidden cuts nationwide during that time frame, with Illinois coming in second at 27.8 percentage point growth over the same period and Connecticut third with a 16.8 percentage point increase. Meanwhile, the absolute increase for cuts to state and local combined education spending was largest for Illinois between 2002 and 2020 at 10.5 percentage points, with Pennsylvania a close second growing just less than 10 percentage points over the same timeframe. However, Illinois was growing from a higher starting hidden cut in 2002, so their growth rate was "just" 313% during the 2002 to 2020 timeframe, while Pennsylvania's hidden cut growth rate to Census based K-12 spending during this period was nearly 1,400%.

Figure PA10: Retirement Costs are Consuming Nearly Half of State Own-Source K-12 Spending

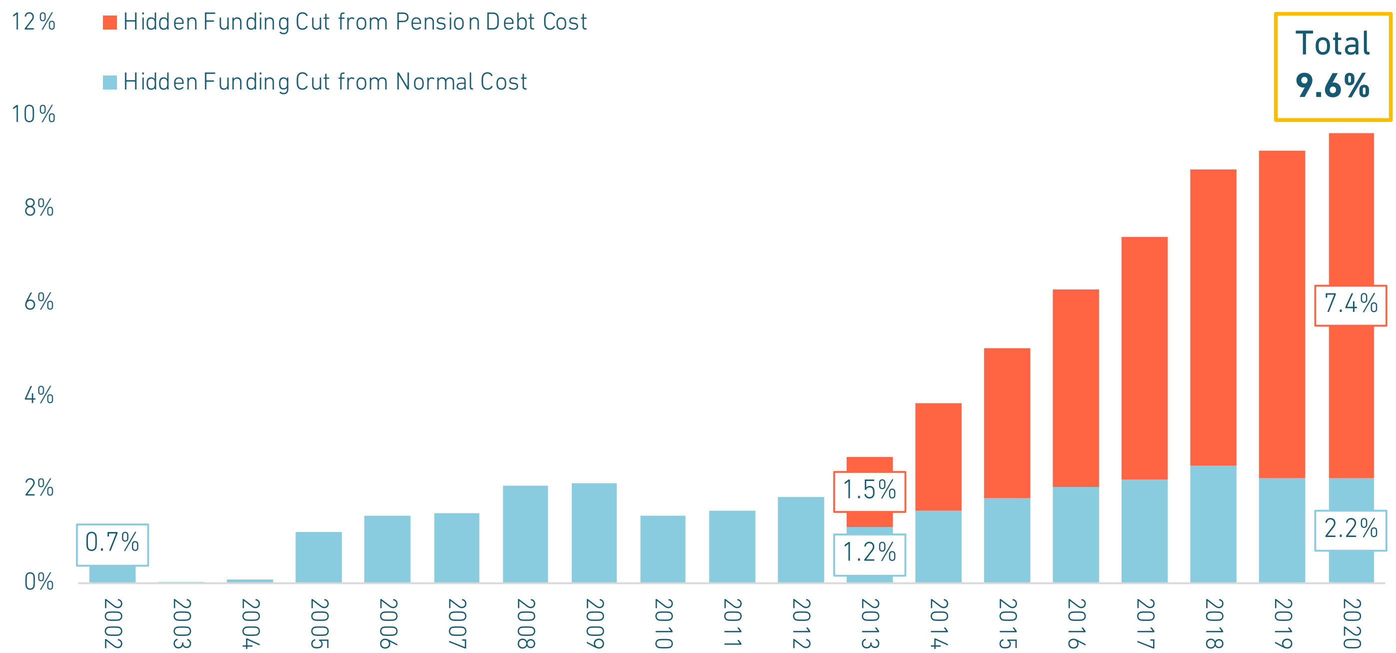
Hidden funding cut based on state own-source K-12 spending data reported to NASBO, 2001-2021



Source: Equable Institute analysis of PSERS valuation reports; state own-source K–12 education spending data are drawn from NASBO state expenditure reports. These figures are based on expenditures data adjusted for inflation to 2021 dollars.

Figure PA11: Retirement Costs are Roughly 10% of State and Local Combined K-12 Spending

Hidden funding cut based on Census Bureau state and local total education expenditures, 2002-2020



Source: Equable Institute analysis of PSERS public plan valuation reports; combined state and local funding data are drawn from Census Bureau Annual Survey of State and Local Government Finances. These figures are based on expenditures data adjusted for inflation to 2021 dollars.

5. What Caused the Growth in Hidden Cuts

Pennsylvania is one of the most extreme cases of growth in hidden cuts over the past decade or two. But it appears that both slow growing K-12 spending, and rapidly increasing retirement costs are to blame.

Inflation adjusted K-12 expenditures increased from $36.7 billion in 2002 to $49.3 billion in 2020, based on Census state and local data. Similarly, state own-source education expenditures only grew 36.5%, adjusted for inflation.

Meanwhile, public school retirement contributions jumped from $241 million in 2001 to $634 million in 2009 to $4.77 billion in 2021 — reflecting an absurd growth rate of nearly 19,000%.

As the recent school funding court case demonstrated, there are a broad set of challenges with inadequate education spending in Pennsylvania. But at a minimum, K-12 spending rates have simply not increased at the same pace as retirement costs.

The Pennsylvania Commonwealth Court judge's ruling even points to one witness who testified that "pension increases greatly outstripped any increases to [Basic Education Funding] and nearly equaled every inflation-adjusted dollar appropriated to the state's education line item (including things such as public libraries) over similar periods of time."[10]

Other findings from the judge's decision show various school districts that were getting less money in 2020 compared to 2015, after accounting for inflation and pension costs, such as Philadelphia City School District having a net $41 million decline in real Basic Education Funding.[11]

To be clear: Retirement costs needed to increase, both because the state needed to ensure that PA PSERS was getting its required contribution rates, and to ensure that unfunded liabilities were addressed. However, if pension liabilities had been better managed then retirement costs would not have increased at the same rate that they did.

Ultimately, there is abundant blame to go around, whether poorly established funding policies by the state legislature — for both education and retirement programs — or retirement system managers in how decisions around investment assumptions were established. Pennsylvania has gone from not paying pension costs to appropriately funding its teacher retirement plan, but at very high rates that have taken a massive bite out of K-12 resources, which have been deemed by the state courts to have been inadequate in the first place.

[10] William Penn SD v. Penn DOE Memorandum Opinion, page PDF 440.
[11] William Penn SD v. Penn DOE Memorandum Opinion, page PDF 610.

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This case study was written by Anthony Randazzo and Jonathan Moody.

Please review the primary paper that his study is based on for additional information and contact the authors with any questions.

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