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CASE STUDY

Keeping Pace with Pension Debt: North Dakota's Management of 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.

North Dakota's Teachers' Fund for Retirement (TFFR) rang in the new Millennium with a fully funded pension plan and prospects for a stable financial future. In 2000, ND TFFR was 102% funded, and financial losses in 2001 only slightly reduced this to 96.4% funded with roughly $53 million in unfunded liabilities. Unfortunately, this point in time would be a high water mark for the teacher retirement plan in North Dakota. In the coming years unfunded liabilities would steadily begin to push costs upward.

Fortunately, though, North Dakota has generally matched these increases in teacher pension costs on a dollar for dollar basis. The rate of growth in K-12 funding in the energy producing state has roughly matched the growth rate in pension costs.

The result is that even though the ND TFFR is struggling today, with $1.4 billion in unfunded liabilities as of 2022, and a 69.9% funded ratio, this has not translated into massive fiscal pressure on school districts. North Dakota has been one of the few states nationally to avoid a growing hidden education funding cut.

Each year we can measure retirement costs for teachers and public school employees as a share of K-12 resources. Figure ND1 shows the percentage change 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.
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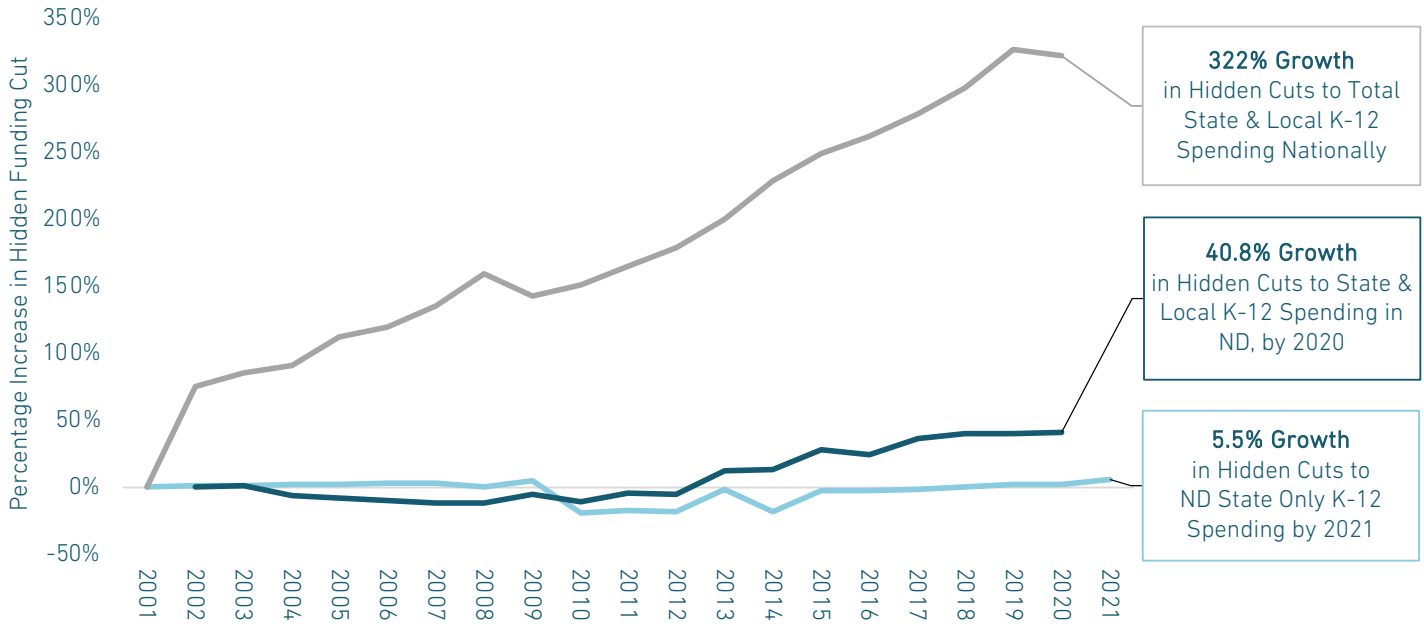
Figure ND1: The Percentage Change in North Dakota's Hidden Education Funding Cut Over the Past Two Decades Effectively Flat

Percentage increase in retirement costs as a share of education funding



Source: NASBO, Census Bureau, actuarial valuations and ACFRs for the North Dakota Teachers' Fund for Retirement (ND TFFR).

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.

Nationally, the costs of teacher retirement benefits are growing between 2x and 3x faster than K-12 education spending, depending on how you count expenditures for primary education. Most states, even those below the average, have experienced retirement costs for school districts grow at a faster rate than spending on K-12 education.

North Dakota is notable as one of the few states with a mostly flat trendline for hidden education funding cuts. This case study will look at both sides of those cuts — retirement costs and resources available for K-12 education — to understand how North Dakota has avoided a problem that plagues the rest of the country.

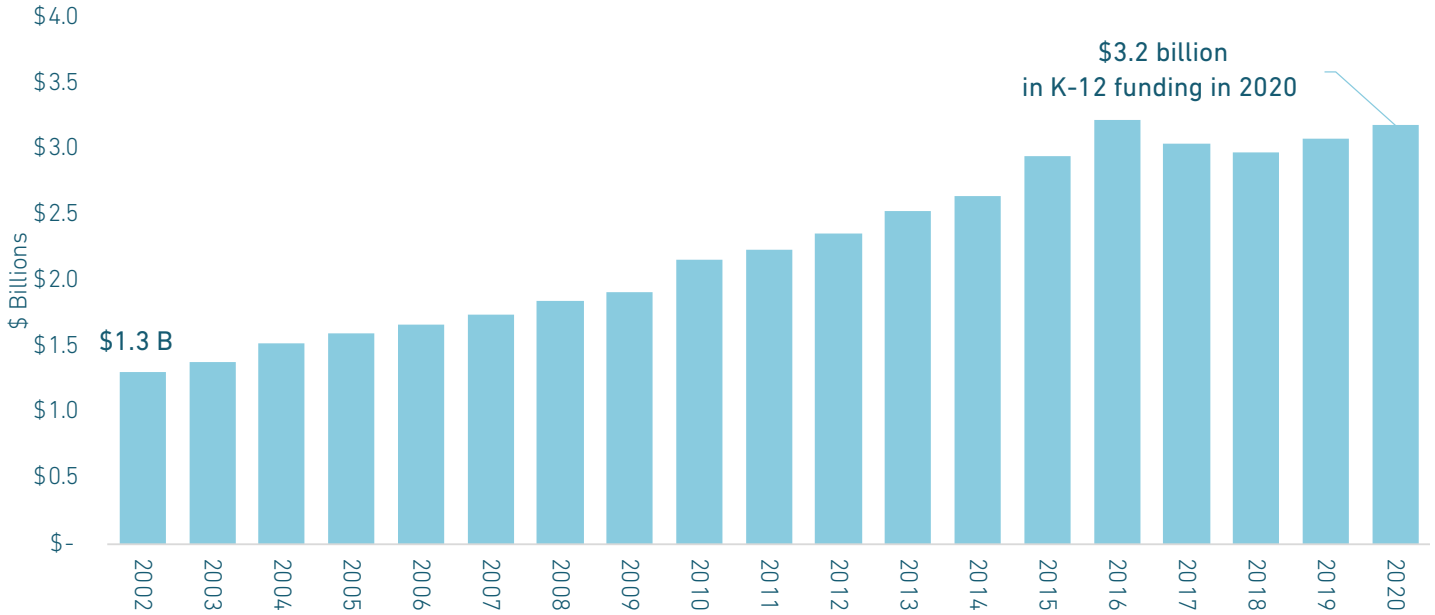
1. Education Funding History

Spending on K-12 education in North Dakota has increased from $1.31 billion in 2002 to $3.18 billion in 2020, shown in Figure ND 2. This constitutes a 142% increase over two decades and is based on Census Bureau data for combined state and local funding. This is a broad definition of K-12 spending that includes salaries, operations, and capital expenditures, but excludes any federal dollars prescribed for specific programs that wouldn't be related to state retirement costs.[1]

[1] This broad way to look at education spending is a conservative way of thinking about the share of K-12 spending that goes toward retirement costs. To reflect a range of perspectives, we've also analyzed hidden education funding cuts based on state-own source K-12 expenditures. This information is reported in our main paper, linked elsewhere in this case study.

Figure ND2: North Dakota State and Local K-12 Funding History, Nominal

Census total state and local education spending, 2002-2020

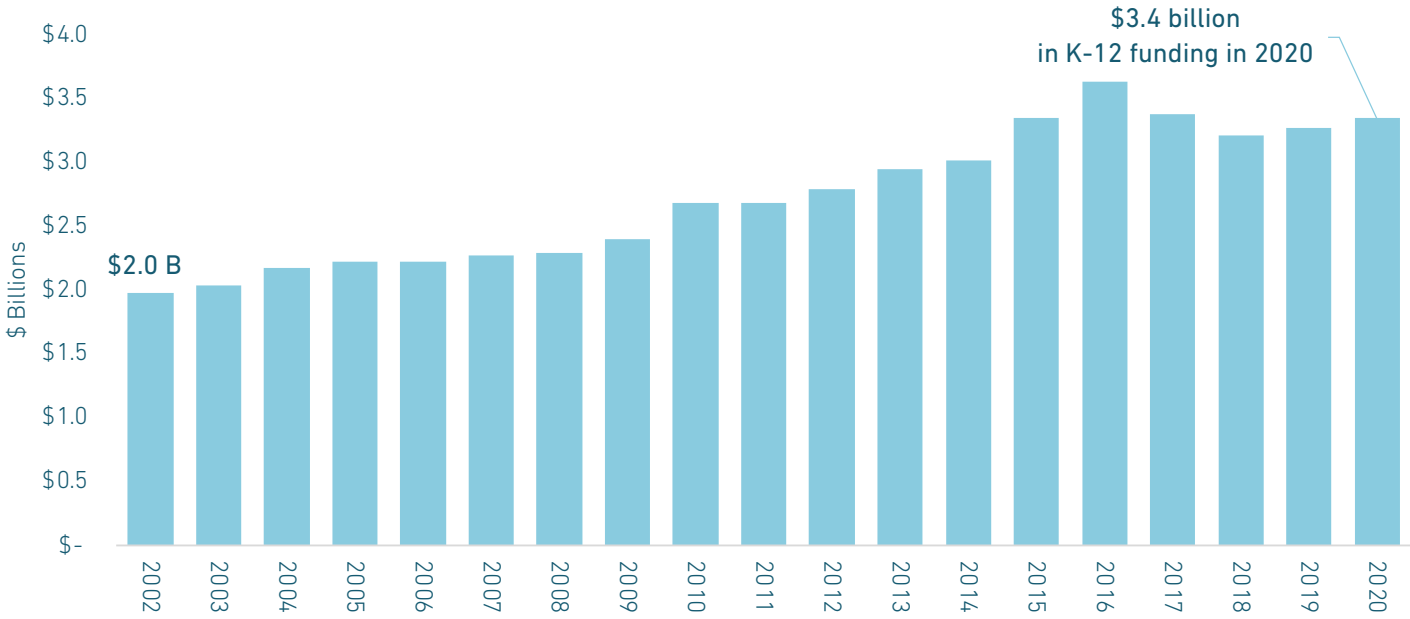


Source: Census Bureau Annual Survey of State and Local Government Finance.

When comparing education spending to retirement costs, it is more reasonable to look at inflation adjusted changes over time. Figure ND3 shows North Dakota's state and local K-12 spending, adjusted to 2021 dollars.

Figure ND3: North Dakota State and Local K-12 Funding History, 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

North Dakota provides the majority of its retirement benefits through two, large statewide retirement systems:

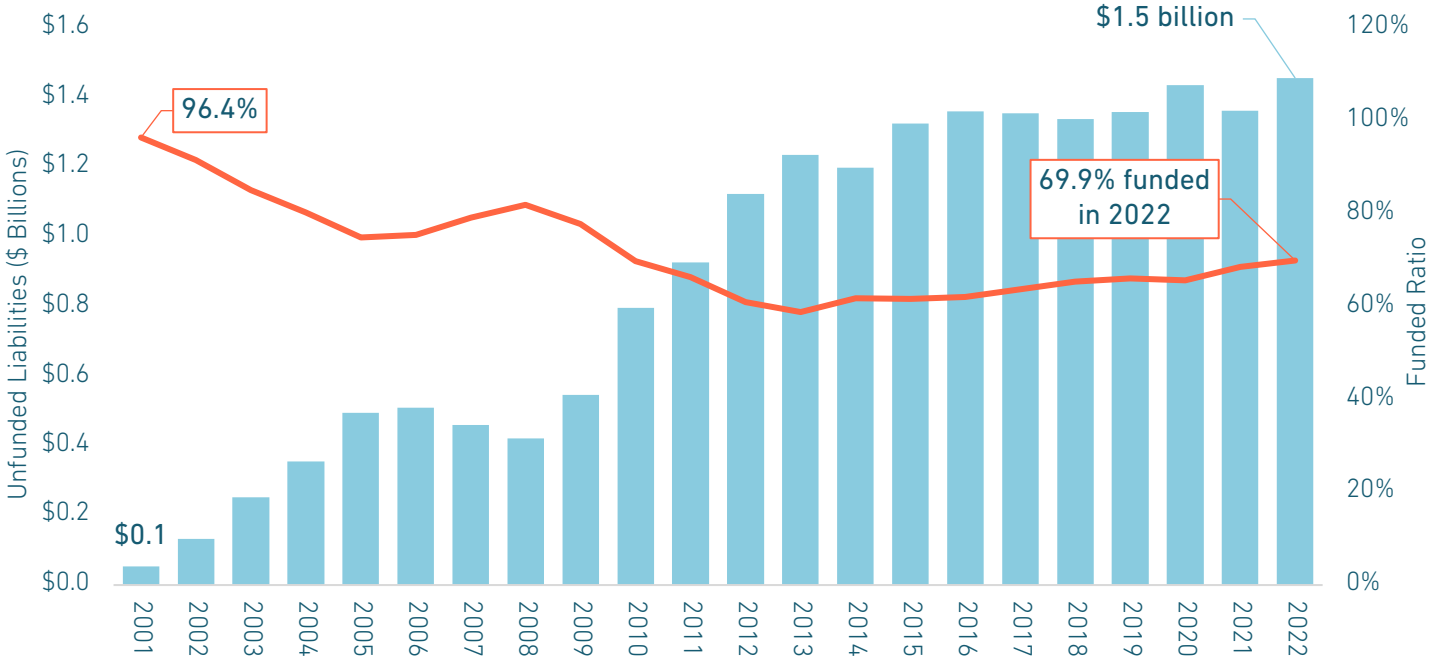
- North Dakota Teachers' Fund for Retirement (TFFR) — covers primarily public school teachers and superintendents, along with a small number of vocational school employees and state agency employees related to K-12 education.
- North Dakota Public Employees Retirement System (PERS) — covers non-instructional school district employees, along the employees of state agencies, cities, counties, universities, libraries, water districts, and various other political subdivisions.

While there are public school employees spread across both of these systems that do influence costs, this case study is specifically focused on teachers who are members of TFFR.[2]

Back in the 1990s, ND TFFR wasn't always 100% funded, but it was often funded in the 80% to 90% range. Funded status peaked in 2000 and then gradually changed in the years leading into the financial crisis of 2008-09 and that followed it. Figure ND4 shows the ND TFFR funded status history, including the funded ratio and dollar valued unfunded liabilities.

Figure ND4: Funded Status History of North Dakota TFFR

Market valued unfunded liability and funded ratio



Source: ND TFFR actuarial valuations.

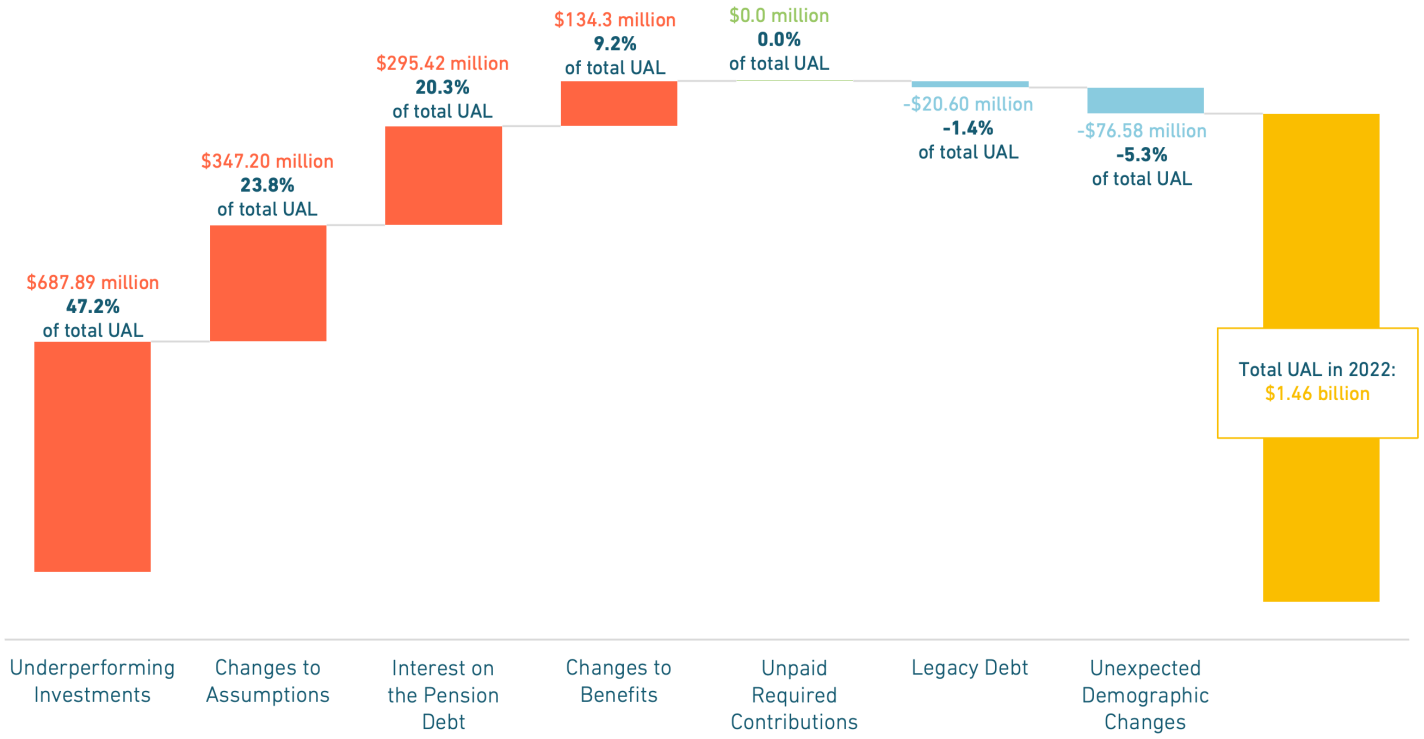
Note that while unfunded liabilities have certainly grown considerably in the years since the financial crisis, that North Dakota TFFR was starting to struggle with solvency before suffering a massive investment loss in 2009.

[2] A future version of this research may attempt to disentangle the share of PERS costs associated with school districts, but these rates were not immediately divisible from the total reported figures for PERS.

The primary reason for the growth in unfunded teacher pension liabilities in North Dakota has been underperforming investments between 2001 and 2022, as shown in Figure ND5. Roughly half of the growth in TFFR pension debt has come from a failure to consistently achieve an average assumed investment return of between 8% (assumed up to 2014) and 7.25% (the current assumption, adopted in 2021). This underperformance has meant the addition of nearly $688 million to unfunded liabilities.

Figure ND5: The Specific Causes of ND TFFR Unfunded Liability Growth

Gains and losses to actuarially valued assets and liabilities



Source: ND TFFR actuarial valuations.

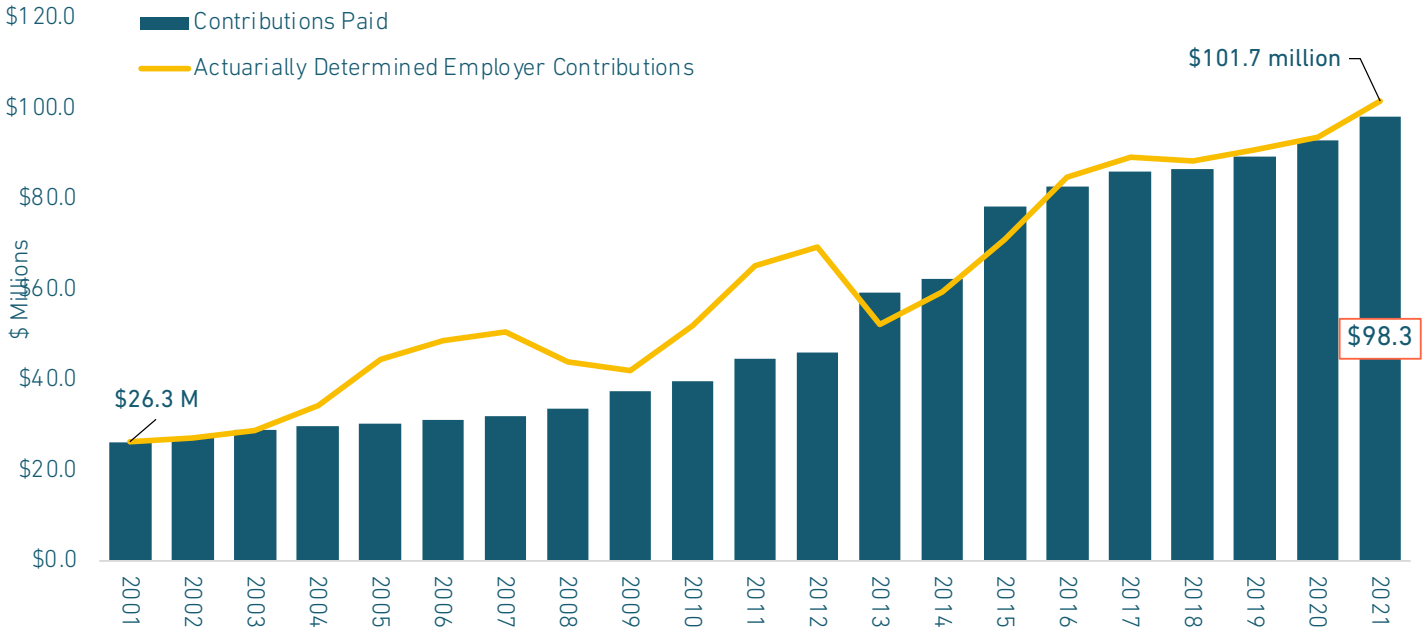
Two other driving causes of unfunded liabilities for North Dakota's teacher retirement system have been the need to make changes to assumptions and interest growing on existing pension debt. Specifically, ND TFFR has had to adjust their assumptions about factors like investments, mortality, and workforce trends, all of which has added $347.2 million to the current unfunded liability, or about 24% of the total pension debt.

North Dakota has not always paid its required contributions to TFFR, but has been much better about paying their pension bills since 2013, shown in Figure ND6.

But even when North Dakota has ensured TFF is getting its actuarially required contributions, interest on existing TFFR pension debt was often growing faster than those inflows of dollars. Actuaries determined a "required" contribution rate based on a set of funding policy preferences provided by TFFR, but that funding policy didn't prioritize ensuring their contributions were greater than interest growth on the pension debt, which added another $295.4 million to today's unfunded liability, roughly 20% of the total.

Figure ND6: North Dakota Hasn't Always Paid its Pension Bills, But They've Improved Recently

Actuarially determined employer contributions and actual employer contributions paid

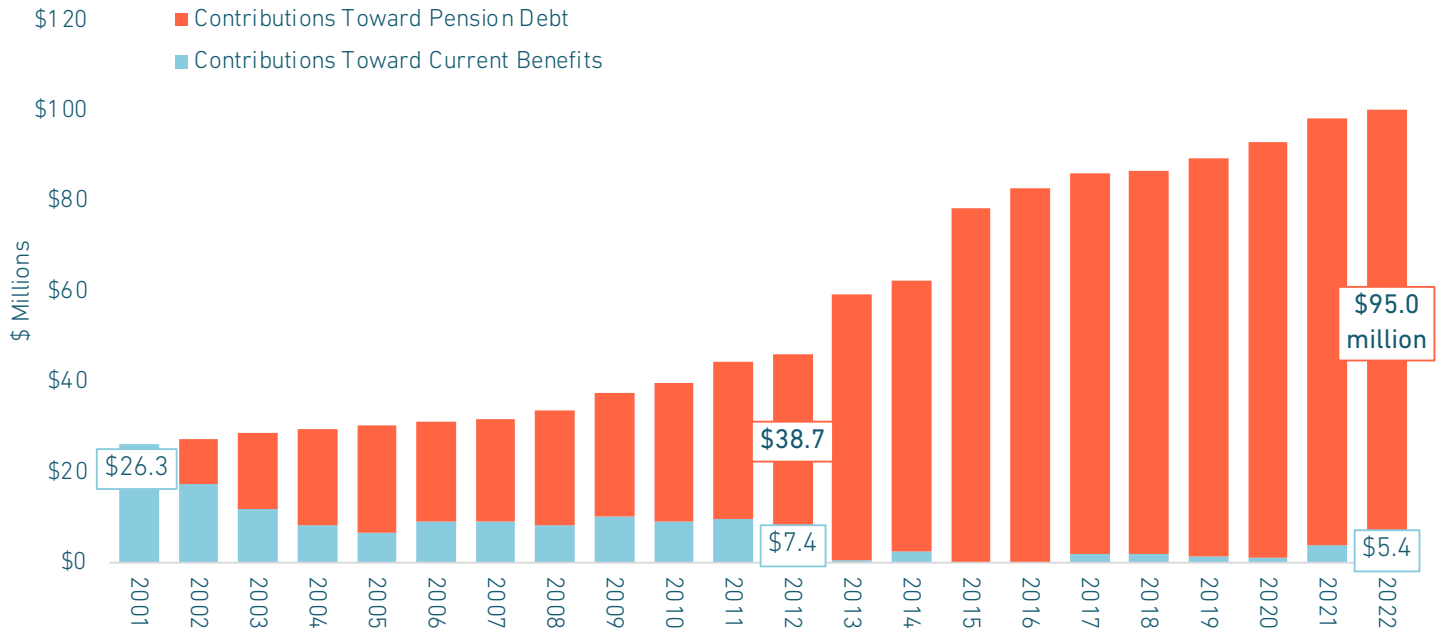


Source: ND TFFR actuarial valuations and ACFRs.

The figure above also demonstrates that contributions overall have grown steadily. Between 2001 and 2021, total employer contributions to TFFR nearly quadrupled from $26.3 million to $101.7 million. Figure ND7 shows how those dollars that were actually contributed have been divided up between "normal costs" to pay for benefits earned in a given year and "amortization payments" to pay for unfunded liabilities. And the key driver of the growth in retirement costs is clearly pension debt costs. In fact, as members have been required to pay more toward their benefits the share of employer contributions going to pay for normal benefits earned each year has fallen to almost nothing. Virtually the entire amount contributed by employers to TFFR is for teacher pension debt.

Figure ND7: Pension Debt Payments are Driving Up PSERS Contribution Requirements

Actual contributions paid, inflation adjusted to 2021 dollars



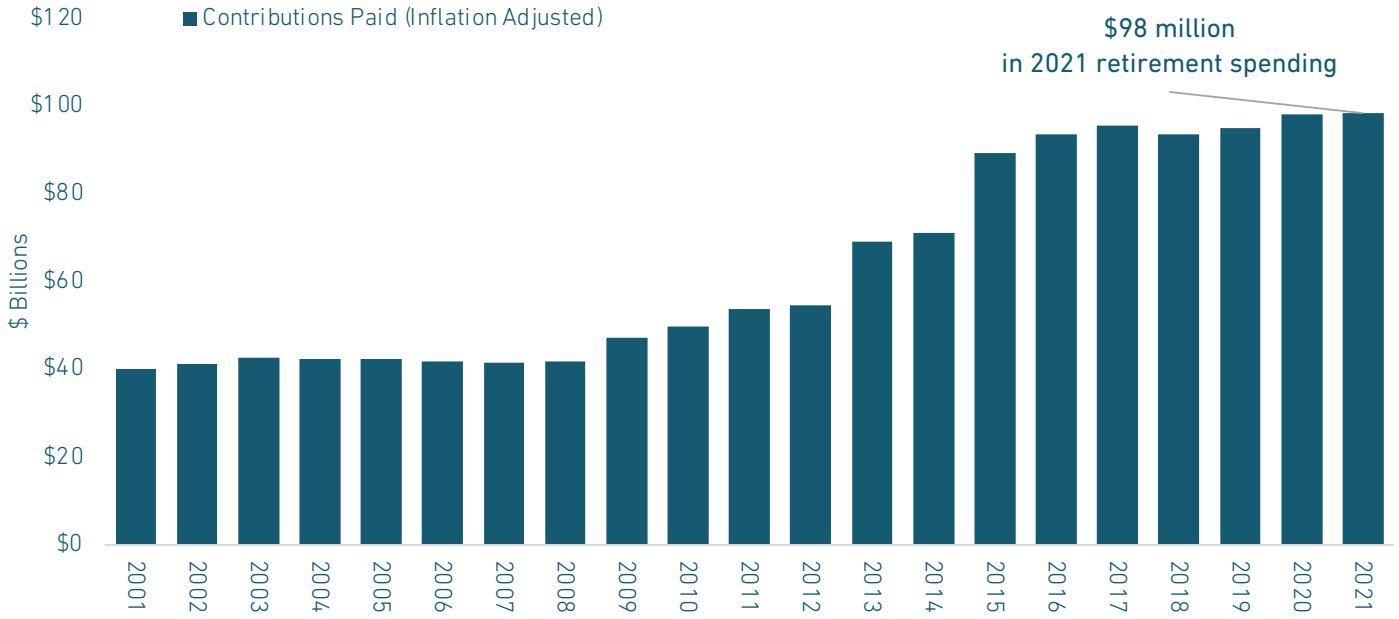
Source: ND TFFR actuarial valuations and ACFRs.

Finally, to appropriately compare these costs to K-12 resources, Figure ND8 shows an inflation adjusted history of all ND TFFR costs. Through this lens we see that total contributions to teacher pension benefits in North Dakota increased 145% between 2001 and 2021, from an inflation adjusted $40.1 million to $98 million. Similarly, total TFFR employer retirement costs increased $47.2 million in 2009 to $98 million in 2021, an 108% increase.

For comparison on an inflation adjusted basis, K-12 expenditures have increased from $1.98 billion in 2002 to $2.40 billion in 2009, and then up to $3.35 billion in 2020 — a 69.2% increase from 2001 to 2020, and a 39.6% increase from 2009 to 2020. This modest growth in K-12 spending, has generally been enough to keep pace with the change in retirement costs, even as student enrollment has similarly stayed flat at 107,000 students in 2001 up to 117,000 in 2021.

Figure ND8: Growth in Total ND TFFR Retirement Contributions, 2001 to 2021, Inflation Adjusted

Actual employer contributions paid, inflation adjusted to 2021 dollars



Source: ND TFFR actuarial valuations and ACFRs

3. Hidden Education Funding Cuts

The share of K-12 expenditures that is consumed by retirement costs has been effectively flat over the past two decades, no matter how K-12 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 North Dakota'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 around 60% of all North Dakota K-12 spending in 2020.[3] So it is also appropriate to measure hidden cuts in North Dakota by looking at retirement costs as a share of state and local education expenditures.

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

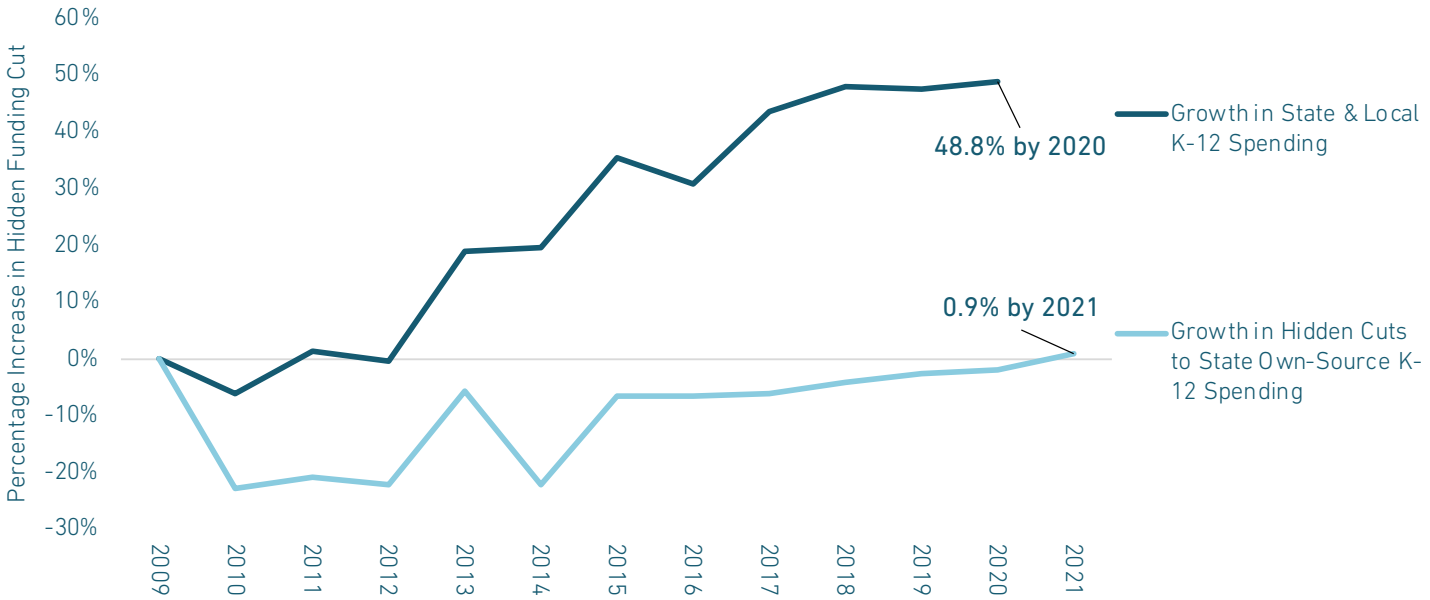
- Charts looking at state only K-12 spending using own-source revenues are based on data reported to the National Association of State Budget Officers (NASBO). This data is available for 2001 to 2021.
- Charts looking at state and local combined K-12 expenditures are based on Census Bureau data reported 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.[4]

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 ND1 at the start of this case study showed a stable pattern with almost no growth rate in hidden education funding cuts over the past two decades, measured using both ways of counting education funding. The same basic trendlines can be seen for hidden cuts to state own-source K-12 spending since 2009, shown in Figure ND9 below.

Figure ND9: North Dakota Hidden Education Funding Cuts to State Own-Source K-12 Spending Have Been Relatively Stable in the Years After the Financial Crisis



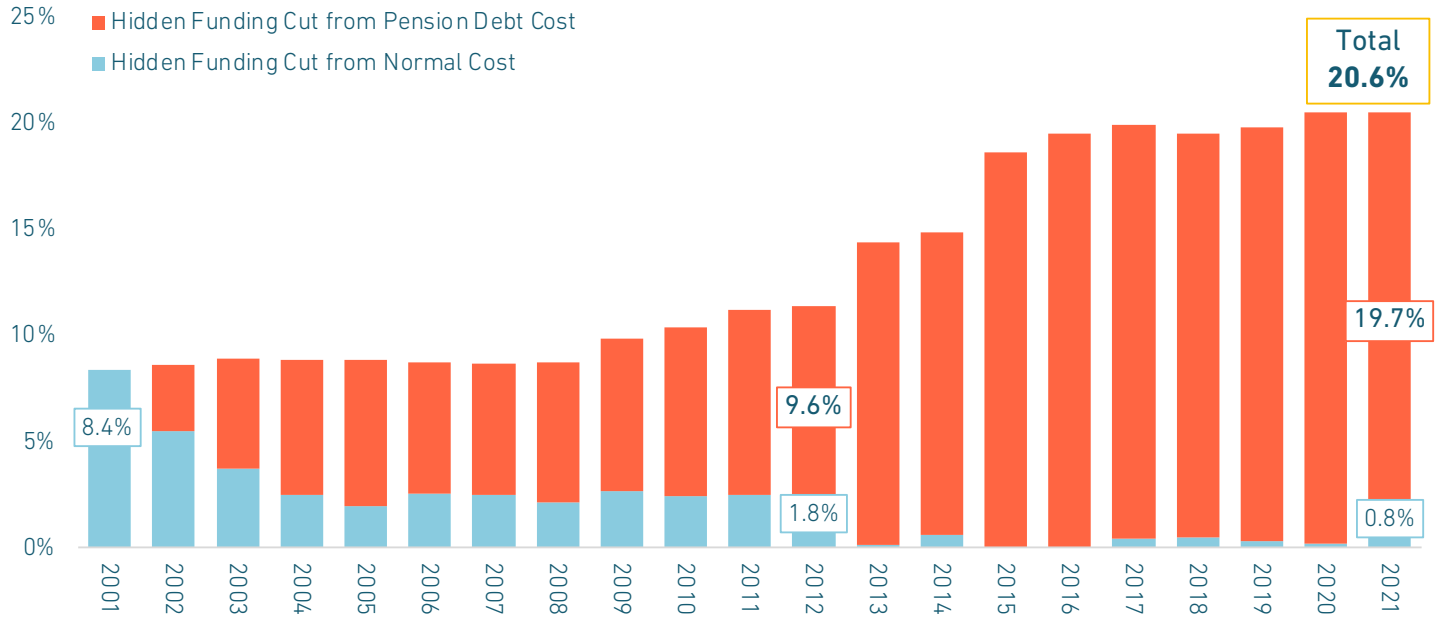
Source: Equable Institute analysis of North Dakota hidden funding cuts

[3] According to data from the Census Bureau Annual Surveys of State and Local Government Finance.
[4] North Dakota'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. The trendlines are the most important measurement point in this analysis, whereas absolute cut levels should be considered rough estimates.

While the hidden cut to state and local K-12 spending has increased 49% since 2009, this reflects an absolute hidden cut change of less than 1 percentage point. In fact, between 2002 and 2009 the state and local education hidden cut changed from just 2.08% to 1.97%, and then gradually increased to 2.93%. This is shown in Figure ND11, which also breaks out what portion of the share of K-12 spending on retirement costs is due to "normal" pension costs versus of "pension debt" costs. Figure ND10 also shows the absolute change in retirement costs as a share of education spending for K-12 funding methods, focused on state own-source expenditures.

Figure ND10: Retirement Costs are Consuming 21% of State Own-Source K-12 Spending

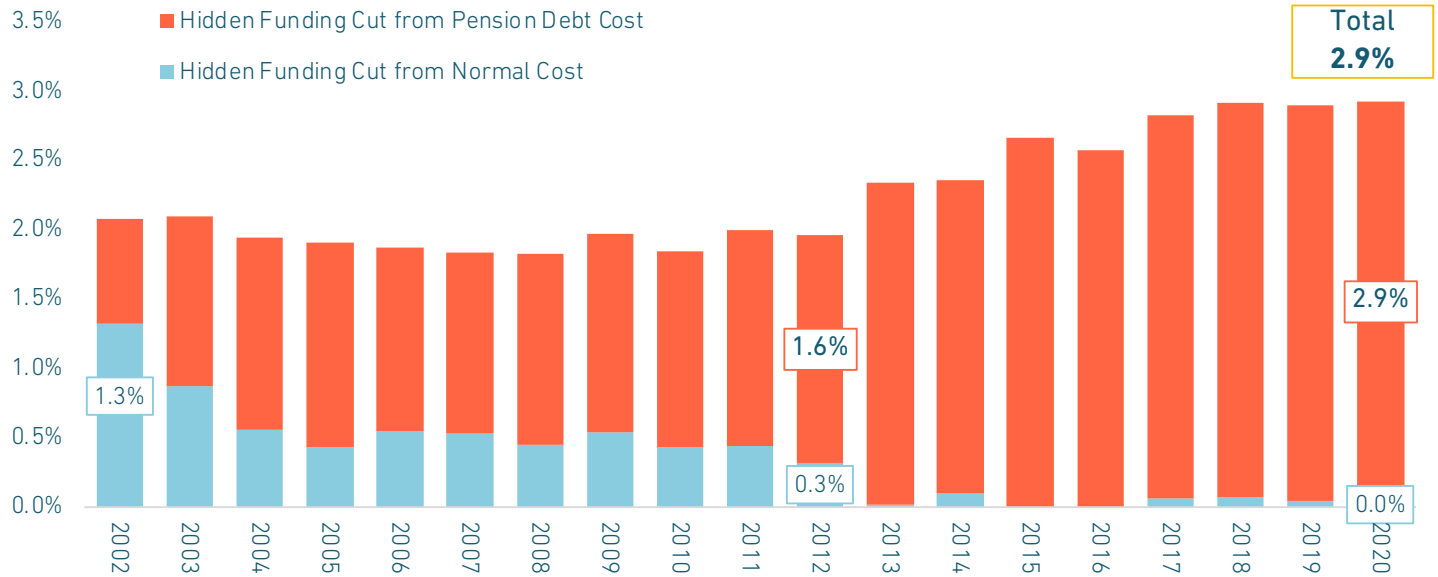
Hidden funding cut based on state own-source K-12 spending data reported to NASBO, 2001-2021



Source: Equable Institute analysis of TFFR 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 ND11: The Absolute Change in Retirement Cost Shares of State and Local Combined K-12 Spending Has Been Very Small

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



Source: Equable Institute analysis of TFFR 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.

There are a few other states that show similar patterns. Minnesota's hidden cuts to state own-source K-12 funding increased from 4.65% in 2001 to 5.12% in 2021 — a 10% growth rate increase. And Nebraska's hidden state and local education funding cut had only nominal movement from 2.45% in 2002 to 2.64% in 2020.

However, North Dakota stands out among its peer states in having a flat trendline for both types of K-12 funding measurements, and over virtually any time period.

4. What Caused Hidden Cuts to Remain Stable?

North Dakota has not managed its teacher retirement system well, allowing it to fall from a fully funded pension plan into a distressed category of funding today. This has meant the accumulation of $1.4 billion in unfunded liabilities, which in turn has translated into growing retirement costs. However, we know that hidden education funding cuts have remained stable because K-12 funding has grown as effectively the same rate as pension costs.

Between 2002 and 2020, retirement costs increased 138.3%, while state and local spending on K-12 increased 69.2% during the same period.

However, the retirement costs should have grown at a faster rate to avoid unfunded liabilities. So, in effect, North Dakota has also kept its hidden education funding cut flat by keeping ND TFFR from receiving more robust and adequate contributions.

While the trendline for hidden cuts in North Dakota is currently flat, that does not mean the state is fiscally stable. There are significant improvements needed for the ND TFFR pension plan in order to improve its financial resilience. This will involve larger contributions flowing into the retirement plan — and it will be important that North Dakota not allow those increases to cut into the current levels of K-12 funding.

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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