New York's Foundation Aid Formula: Adrift and Sinking

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Executive Summary

In this brief, I draw the following conclusions regarding New York's Foundation Aid formula:

- **Conclusion 1:** The current iteration of the Foundation Aid formula does not rationally determine what districts need to spend, or what they actually spend, in order to achieve adequate outcomes;
- **Conclusion 2:** The foundation formula has continued to drift further, over time, from funding even its own (inadequate) hypothetical sound basic funding level;
- **Conclusion 3:** Standards, goals and context of the education system have changed, with both broader and higher expectations and greater needs and cost pressures across the state.

These conclusions are supported by a series of calculations using publicly available data, showing that the foundation aid formula was built on measures and calculations that could never fully fund districts' spending needs to meet desired outcome standards, even at the time of adoption. Failure to update the Foundation Aid base with respect to changes in instructional spending for successful, efficient school districts has led to increasing gaps between formula calculations and actual instructional spending needs.

The Foundation Aid formula requires both short term fixes and a longer term overhaul, driven by cost analyses to determine the spending levels needed to achieve today's outcome standards, for all children across all districts and settings.

Short term fixes derived from the analyses herein include:

1. Increasing base aid to better reflect general instructional expenditures of successful, efficient districts. The minimum increase justified herein would be 10.75% above next year's inflation adjusted base. Were that to have been implemented for fy2026, the base would be $9,162 (10.75% above the adopted base of $8,273).
2. Noting that adjustments for student needs were never based on any empirical analyses, and drawing on related work,[1] I would suggest adding and increasing adjustments for student needs, including adjustments for children from homeless, foster care and migrant families, and increasing weighting for English learners, with each weight being adopted or moved toward 1.0 additional funding.

In the longer term, over the next year and a half, with intent to reform Foundation Aid for fy2028, the state should conduct a rigorous analysis of the spending required to achieve current desired outcome goals for all children. That analysis must identify a comprehensive spending measure – not merely general instructional spending - with appropriate adjustments for student needs and regional cost variations. Both the base and each adjustment should be grounded in rigorous empirical analysis, which was never done previously. Only by conducting such analysis to inform the calibration of a modern school aid formula can the state be confident that the formula meets the needs of all students, here and now.

New York State's Foundation Aid: Adrift and Sinking

New York's Foundation Aid formula was adopted in 2007 to remedy constitutional inadequacies in public school funding. Here, I break down the components of that formula and their relation to providing all children with a sound basic education. Like each state's school finance formula, the New York Foundation Aid formula includes many cryptic acronyms and obtuse terms and names for its various elements which are then folded into a series of complex calculations. The goal though is straightforward: to ensure that every school and district statewide has sufficient funding to provide the children under their watch with adequate educational programs and services to meet children's needs for future economic participation and civic engagement in a modern, global society.

Like many state school finance formulas, Foundation Aid recognizes that children from different backgrounds including economic disadvantages, language barriers, cognitive and physical disabilities face different challenges for which the costs of providing equal opportunity toward achieving common outcomes varies from one child and one location to the next. That is part 1 of what complicates the calculations. The second part is that every local public school district has different ability to raise revenue toward the goal of providing a sound basic education, requiring that the state determine how much each local community should raise and how much the state should kick in toward full funding.

The amount of funding that is presumptively the Sound Basic Funding amount is referred to as the **Adjusted Foundation Amount** (to be reached with both state and local funds). The be clear, the formula is only as good as the determination of that amount – whether that amount actually provides what is needed – which depends on whether the various underlying elements of the formula, leading to that amount, are rationally calibrated for today's children, educational contexts and goals. So let's break it down. As noted, the adjusted foundation amount is presumptive the Sound Basic Funding amount.

<div align="center">

Adj. Foundation Amount = Sound Basic Funding

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That amount is arrived at by taking a Base Cost per Pupil figure, and multiplying it times a) an index of pupil need differences across districts (PNI), b) and index of differences in regional costs (Regional Cost Index) of labor from one location to another in the state, and c) additional adjustments for children in summer school and children with disabilities to construct a Total Aidable Foundation Pupil Units (TAFPU) count of actual kids plus the additional weights (seemingly an afterthought which could have otherwise been included in the PNI). Summed up (or more accurately, multiplied across):

<div align="center">

Base x PNI x RCI x TAFPU ≈ Sound Basic Funding

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Whether this calculation actually leads to sound basic funding depends on the rationality – here and now – of each of the parts of this equation. Because these parts are multiplied times each other, rather than built to be added, any shortcomings in any one feature has a ripple effect throughout. Let's start with the Base figure (but as it relates to the other parts and formula as a whole). What's that Base figure intended to represent? How did they come to determine the base? And how does that work here and now to generate current levels of funding?

The Base figure is presumably the spending level needed, per child, to provide a sound basic education, assuming that child to have no additional needs as represented in either the PNI or TAFPU (not from low income family, fluent English speaking, not in sparsely populated district, without disabilities and not attending summer school) and that child's school to be in the state's lowest cost labor market. To determine that amount for the original foundation aid formula, the state identified a set of school districts that met performance benchmarks (successful districts) of the time (mid 2000s).

The state decided that this "base" figure should be based on the General Education Instructional Expense (GEIE) per child, specifically, for "successful" school districts that were also deemed "efficient" (in the lower half of spending among "successful" districts). Notably, even back then, this method had been repeatedly discredited for determining education costs and had been identified as easily politically manipulated.[2] Nonetheless, the New York Assembly and Governor were given a pass by the courts at that time. So let's walk it through. General Education Instructional Expense (GEIE) [3] was determined by first taking Instructional Expenditures and subtracting out Special Education Instructional spending:

$$GEIE = IE - SEIE$$

In the next step, for each district, student need related costs and regional cost differences are removed from GEIE by dividing by RCI and PNI:

$$Deflated\ GEIE = GEIE/PNI/RCI$$

And finally, to determine the Base cost, we look at the average Deflated GEIE for the "successful" (meeting standards of the day) "efficient" (lower half spending) school districts. This presumably yields the average general instructional expense to achieve success efficiently, for children with no additional needs in the baseline labor market. And thus, when multiplied times PNI, RCI and TAFPU, for each district, yields a sound basic education funding target. However, that only works if:

1. Instructional spending is all a district needs to operate its programs and services;
2. If the PNI and RCI are based on thorough analyses of costs and cost differences to achieve the desired outcomes (since they've been peeled off to be added back in);
3. If the special education spending subtracted to get GEIE is subsequently made whole when we go back and multiply by TAFPU.

None of these conditions are met. As will be discussed in this brief:

1. Instructional spending typically constitutes about 65% by national accounting standards and metrics, and 75% by New York standards and metrics, of current operating expense for local public school districts;
2. No empirical analyses were ever provided to validate the weights on the components of the PNI, per the most rigorous methods of the day;[4]
3. No empirical analyses were ever provided to validate the weights on children with disabilities included withing TAFPU.

Further, year over year changes to the Base figure have typically been done by gubernatorial and legislative selection of consumer price inflation indices and not by updating the costs, or spending, associated with achieving the ever-changing outcome goals and conditions of schooling in New York. Often, the selected inflation index to close out budget deliberations is whatever inflation index meets the political and budgetary needs of the moment. By contrast, changes to actual costs associated with achieving a sound basic education are driven by three major factors:

1. Higher outcomes, more rigorous assessments and a wider array of outcome goals cost more to achieve;[5]
2. Even to achieve comparable outcomes over time requires maintenance of a quality teacher workforce, where competitive wages for teachers typically grow at a faster pace than consumer price inflation;[6]
3. Changes to the population of students served may also change the costs of achieving even the same outcome goals.[7]

The analyses that follow support the following three conclusions:

Conclusion 1: The calculation method and measures in the formula do not rationally determine what districts need to spend, or what they actually spend, in order to achieve adequate outcomes;

Conclusion 2: The foundation formula has continued to drift further, over time, from funding even its own (inadequate) hypothetical sound basic funding level;

Conclusion 3: Standards, goals and context of the education system have changed, with both broader and higher expectations and greater needs and cost pressures across the state.

Illustration 1: Foundation Aid is Irrational & Inadequate

Table 1 presents a series of alternative measures of spending and funding for New York school districts. Throughout these tables I use data from two primary sources: 1) the New York State Education Department (NYSED), Fiscal Analysis and Research Unit (FARU), fiscal profiles, and 2) State Aid (DBSA) files, where most of the detail on foundation aid calculations and parameters is on sheet D (DBSAD). Table 1 shows a variety of per pupil spending measures, starting with the state average total spending per child, where total spending includes spending on not only instruction, but on debt service and more.[8] In the next column is what the state reports as Instructional Spending, including benefits (IE3). Instructional spending is approximately 75% of total spending. But, if the state were to only fund "instructional spending" in a foundation aid formula, it would have to be sure to make up that difference equitably through other sources and formulas. That is, if the state were even to fully fund instructional spending.

These figures are presented per "Duplicated Combined Adjusted Average Daily Membership" (DCAADM), which is the state's most accurate measure of the actual children served by programs in a district.[9] This "actual children" count is notably different from the "weighted children" count in TAFPU and that affects "per pupil" calculation of spending and funding amounts.

The last column in Table 1 presents the Base figure for the foundation aid formula for each year from 2015 to present. Interestingly, the DBSA worksheets don't show the base figure itself. It must be backed out of the other data provided. Nonetheless, here it is. When multiplied by the pupil needs and regional costs indices, it yields the "Adjusted Foundation per TAFPU." Not per actual child, but per weighted child including special ed and summer school weights. If we look at 2023, that Adjusted Foundation per TAFPU (the Sound Basic Education cost per TAFPU) is $14,998. If I take that figure and multiply it times TAFPU to get the total sound basic education cost, and then divide it by actual pupils (DCAADM), we get $18,334 as the sound basic education funding level per child, for 2022-23. The per child amount is about $3,300 more than the per TAFPU amount, indicating that on average, the weights in TAFPU add about that much funding per child. But still, we can see that the average "sound basic" funding per child is more than $5,500 per pupil less than the average actual instructional spending per pupil, which itself is not a complete measure of district spending.

Table 2 provides the same information, but for the 8 selected small city school districts. Notably, the selected small city districts actually spend a larger share on instruction than districts statewide. Applying the foundation aid formula calculations, they are estimated to actually have lower than average adequacy costs ($17,681 adjusted foundation per pupil compared to $18,334 for all districts).[10]

The conclusion to be drawn here is that Foundation Aid seems not to fully fund even the average instructional expense of existing school districts, which itself is an incomplete measure of school spending. This would not be problematic if it could also be assumed that a) the average district is already performing at the desired measures of "success" and/or b) the average district could still hit current "success" targets with $5,500 lower instructional spending per pupil. In my view, neither of these assumptions is reasonable or supported by evidence. This seems unlikely.

Table 1. All Districts

year	Total Expenditure per Pupil [1]	Instructional Expenditure per Pupil (IE3)[1]	Instruction % of Total	Adj. Foundation per DCAADM[3]	Adj. Foundation per TAFPU[2]	Base[4]
2015	$22,553	$17,235	76%	$15,108	$13,081	$6,451
2016	$23,371	$17,997	77%	$15,120	$13,020	$6,395
2017	$24,741	$18,524	75%	$15,176	$12,955	$6,340
2018	$25,897	$19,578	76%	$15,560	$13,155	$6,422
2019	$27,293	$20,617	76%	$16,064	$13,482	$6,557
2020	$27,703	$21,050	76%	$16,471	$13,861	$6,714
2021	$28,919	$19,278	67%	$17,526	$14,160	$6,835
2022	$32,081	$24,043	75%	$17,930	$14,371	$6,917
2023	$33,255	$23,898	72%	$18,334	$14,998	$7,242
2024					$16,145	$7,821
2025					$16,674	$8,040
2026					$17,221	$8,273

[1] Data source: Fiscal Profiles https://www.nysed.gov/sites/default/files/programs/fiscal-analysis-research/masterfiles-93-94-to-22-23.xlsx, Variable: EXPENDITURE/PUPIL [AQ], and IE3:INSTRUCTIONAL EXPENDITURES INCLUDING FRINGE BENEFITS (LESS TUITION 1) / DUPLICATED COMBINED ADJUSTED AVERAGE DAILY MEMBERSHIP (DCAADM) [AO]. Fiscal profiles definitions: https://www.nysed.gov/fiscal-analysis-research/guide-headings-fiscal-profile

[2] Data Source: State Aid Reports (DBSAD), variable: P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL

[3] Data Sources: Fiscal Profiles & State Aid Reports (DBSAD), variables: [P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL x M(OP0088) 00 SELECTED TAFPU] / DUPLICATED COMBINED ADJUSTED AVERAGE DAILY MEMBERSHIP (DCAADM)

[4] Data Source: State Aid Reports (DBSAD), variables: P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL / O(PC0409) 05 PNI = 1 + EN%, MIN 1; MAX 2 / N(MI0125) 03 REGIONAL COST INDEX (RCI)

Table 2. Selected Small City Districts*

year	Total Expenditure per Pupil [1]	Instructional Expenditure per Pupil (IE3)[1]	Instruction %	Adj. Foundation per DCAADM[3]	Adj. Foundation per TAFPU[2]	Base[4]
2015	$20,866	$16,382	79%	$15,170	$13,053	$6,451
2016	$21,451	$16,746	78%	$15,115	$12,903	$6,395
2017	$22,522	$17,362	77%	$15,111	$12,868	$6,340
2018	$23,219	$17,810	77%	$15,372	$13,053	$6,422
2019	$24,279	$18,764	77%	$15,805	$13,379	$6,557
2020	$24,307	$18,580	76%	$15,899	$13,666	$6,714
2021	$24,629	$17,219	70%	$16,758	$13,931	$6,835
2022	$27,102	$20,490	76%	$16,988	$14,046	$6,917
2023	$29,690	$22,238	75%	$17,681	$14,653	$7,242
2024					$15,770	$7,821
2025					$16,173	$8,040
2026					$16,973	$8,273

[1] Data source: Fiscal Profiles https://www.nysed.gov/sites/default/files/programs/fiscal-analysis-research/masterfiles-93-94-to-22-23.xlsx, Variable: EXPENDITURE/PUPIL [AQ], and IE3:INSTRUCTIONAL EXPENDITURES INCLUDING FRINGE BENEFITS (LESS TUITION 1) / DUPLICATED COMBINED ADJUSTED AVERAGE DAILY MEMBERSHIP (DCAADM) [AO]

[2] Data Source: State Aid Reports (DBSAD), variable: P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL

[3] Data Sources: Fiscal Profiles & State Aid Reports (DBSAD), variables: [P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL x M(OP0088) 00 SELECTED TAFPU] / DUPLICATED COMBINED ADJUSTED AVERAGE DAILY MEMBERSHIP (DCAADM)

[4] Data Source: State Aid Reports (DBSAD), variables: P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL / O(PC0409) 05 PNI = 1 + EN%, MIN 1; MAX 2 / N(MI0125) 03 REGIONAL COST INDEX (RCI)

*Plaintiff students and parents in these eight small city school districts successfully sued the state for violating Article XI, §1 of the NYS Constitution in regard to at-risk students (*Maisto et al v. NYS*; https://decisions.courts.state.ny.us/ad3/Decisions/2021/528550.pdf).

Illustration 2: The Adequacy basis for Foundation Aid has become Less Adequate over Time

Recall that I previously explained that the costs of meeting desired educational outcomes over time changes as a result of a) setting higher or broader goals and standards, b) increased costs or recruiting and retaining teachers of at least comparable quality, and c) shifts in student demographics and context. On the first point, if we expect kids to achieve more – learn a wider array of content, achieving higher performance standards, they will likely need more direct contact with qualified instructional staff. More staff, more time, more contact costs more, even at constant wages for those staff. The basic instructional cost equation for school districts is

<p align="center">**Number of Teachers x Wages for Teachers = Staffing Cost (wages only)**</p>

If wages for surrounding opportunities rise, wages to get and keep teachers will rise, affecting that same equation, even if we don't change the number of teachers (and programs and services they deliver). Changing student demographics may require even more direct, qualified adult contact (smaller classes where more children come from economically disadvantaged backgrounds), or more multi-lingual teachers and teachers with additional qualifications, coming at higher wage costs. And then there are the increases to benefits, which may be even greater than the increases to wages. Most education costs do not shift as a function of the average change to the price of a consumer goods (though fuel costs can certainly affect transportation, heating and cooling and the price of eggs can affect food service costs, but these are a relatively small share of education spending).

In this section, I compare the base figure over time with recalculations of that base figure using the fiscal profiles instructional spending figure. The first column in Table 3 reports the Foundation Aid formula base as adopted. Next, I take reported instructional spending (as from Table 1&2) and deflate that spending figure to a General Education Instructional Expense figure by removing special education and summer school (TAFPU) for each district, and then student needs (PNI), regional costs (RCI).

<p align="center">**Simulated GEIE = (Instructional Spending/TAFPU) / PNI / RCI**</p>

The final step is to take the average of this simulated GEIE using the districts identified as a) meeting success targets and b) spending in the lower half. That is the simulated GEIE of "Successful" and "Efficient" districts. Notably, this is not the exact prior definition of GEIE as reported in the annual "Fiscal Supplements" through 2017-18. But as I explain in Appendix A and alluded to previously, there exists a critical disconnect between those figures and the subtraction of special education spending, and what more accurately represents the instructional spending demands of New York school districts. The second column shows the need and cost adjusted "Base" using this approach and that figure rises to $10,665 (per TAFPU) by 2023. If I start by removing all federal revenue (an overadjustment, because not all of which flows through to instruction) from instructional spending, deflate that spending for needs and costs and take the average for successful efficient districts, I get a base of $9,746 per TAFPU by 2023. Both are much higher than the base adopted in the foundation aid formula.

If I instead simply rely on the growth rate of my new, alternative base figures, but accept the 2015 adopted base as "adequate" for providing sound basic education, the base would have still been from $8,020 to $8,436 per TAFPU by 2023. That is, if we simply use as our "inflation" indicator, the growth in instructional spending among "successful" and "efficient" districts from 2015-2023 and apply that to the adopted 2015 base.

The funding implications of these re-estimates are substantial for selected small city districts by 2023. Note that as of the writing of this brief, the most recent available Fiscal Profiles data are for 2022-23. The current law and my estimated adjusted foundation amounts per pupil are reported in Table 4. Jamestown had an

actual adjusted foundation amount per TAFPU of $13,163 whereas my minimum estimate, using my recalculations for inflation alone, yields an adjusted foundation per TAFPU of $14,578 for Jamestown. Increases for other districts are similar. Again, the actual base has been only politically adjusted by annual choices of inflation indicators whereas even my lowest estimate here is calculated according to instructional spending growth of "successful" and "efficient" districts.

However, I would argue that the higher estimates are a more accurate representation of instructional spending needs, and even then, they are not fully representative of all current operating expense needs for New York school districts. The formula's original underpinnings are irrational and inadequate, but even if we give the state a pass on those underpinnings, the formula continues to drift to be less adequate over time. Additional figures are provided in Appendix B.

Table 3: Recalculation of Base using Instructional Spending of "Successful" & "Efficient" Districts

year	Foundation Base[1]	Base from IE3 per TAFPU (S&E)[2]	Base from IE3 per TAFPU (S&E) Excl. All Federal[3]	Base from IE3 Growth projected on 2015 Base[4]	Base from IE3 Growth (Excl. Federal) projected on 2015 Base[4]
2015	$6,451	$8,156	$7,839	$6,451	$6,451
2016	$6,395	$8,294	$7,998	$6,560	$6,582
2017	$6,340	$8,524	$8,205	$6,742	$6,752
2018	$6,422	$8,733	$8,416	$6,907	$6,926
2019	$6,557	$8,983	$8,643	$7,105	$7,113
2020	$6,714				
2021	$6,835	$8,766	$8,356	$6,933	$6,876
2022	$6,917	$9,916	$9,129	$7,843	$7,513
2023	*$7,242*	*$10,665*	*$9,746*	*$8,436*	*$8,020*
2024	$7,821				
2025	$8,040				
2026	$8,273				

[1] Data Source: State Aid Reports (DBSAD), variables: P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL / O(PC0409) 05 PNI = 1 + EN%, MIN 1; MAX 2 / N(MI0125) 03 REGIONAL COST INDEX (RCI)

[2] District list for calculations from: cost_calcs (sheet: basedata), Passed=YES, Lowspend=YES. Recalculation of "base" uses enrollment (TAFPU) weighted average of need (PNI) and cost (RCI) deflated IE3 per TAFPU, based on:
IE3:INSTRUCTIONAL EXPENDITURES INCLUDING FRINGE BENEFITS (LESS TUITION 1) / M(OP0088) 00 SELECTED TAFPU / O(PC0409) 05 PNI = 1 + EN%, MIN 1; MAX 2 / N(MI0125) 03 REGIONAL COST INDEX (RCI)

[3] This calculation repeats the steps and sources of note 3, but first subtracts all federal revenue (fiscal profiles) from IE3: IE3: INSTRUCTIONAL EXPENDITURES INCLUDING FRINGE BENEFITS (LESS TUITION 1) - FEDERAL REVENUE

[4] These last two columns apply the growth rates from the previous two columns, respectively (% over base year=2015) to the actual 2015 foundation aid base to set an alternative foundation level (over 2015)

Table 4: Selected Small City Districts would have significantly higher adj. funding per pupil if based on more complete instructional spending 2022-23

District	Adj. Foundation per TAFPU (Current Law)[1]	Adj. Foundation per TAFPU using IE3 (deflated) S&E Base[2]	Adj. Foundation per TAFPU using IE3 (deflated) S&E Base (Excl. Federal)[2]	Adj. Foundation per TAFPU using IE3 S&E Growth Only[2]	Adj. Foundation per TAFPU using IE3 S&E Growth Only (Excl. Federal[2]
JAMESTOWN	$13,163	$19,385	$17,715	$15,332	$14,578
POUGHKEEPSIE	$16,758	$24,679	$22,552	$19,519	$18,559
NIAGARA FALLS	$13,519	$19,909	$18,193	$15,747	$14,972
UTICA	$13,622	$20,061	$18,333	$15,867	$15,086
NEWBURGH	$15,530	$22,871	$20,900	$18,089	$17,199
PORT JERVIS	$14,436	$21,259	$19,428	$16,815	$15,987
KINGSTON	$14,455	$21,287	$19,453	$16,837	$16,008
MOUNT VERNON	$15,777	$23,235	$21,233	$18,378	$17,473

[1] Data source: State Aid Reports (DBSAD), variable: P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL
[2] Calculation based on applying base figures from previous table (3) times RCI and PNI for 2023 for each selected small city district in the table

Table 5 and Table 6 take the final steps in determining the state aid implications for selected small city districts. Recall that the "sound basic" funding targets, or Adjusted Foundation Amounts in Table 4 are funded partly by a required local contribution of each district and then by State Aid. Of interest here is the amount of state aid each district should be receiving, such that when added to their local contribution, the combined amounts provide "sound basic" funding.

For Jamestown, calculated, current law, foundation aid per TAFPU in 2023 was $11,847, but my re-estimates range from a low of $13,120 (using instructional spending growth, excluding federal revenue) to a high of $17,583 (using instructional spending levels of successful, efficient districts). The higher estimates would more completely fund instructional spending (which again, isn't a complete measure of current operating spending) and is still based on the lower half spending "successful" districts (based on old benchmarks of success). It's also the case that the state did not fully fund the calculated foundation aid amounts until 2024.

Table 6 simply takes the next step of multiplying each of the state aid per TAFPU amounts by TAFPU to get the total state aid amounts that would have been calculated using either my growth only, or successful efficient instructional spending base figures. I also report the total foundation aid for 2023 to show that for most of these districts, even with reorganization aid and minimum aid, total aid was less than their calculated aid target. There was explicit underfunding of a target that itself was inadequate. The explicit underfunding gap was closed by 2024, but the inadequacy of the "fully funded" target remained, amounting to millions of dollars of underfunding for each of the selected small city districts even when considering only my lowest reasonable estimate.

Again, if we were to assume that the 2015 adopted base under current law met the "sound basic" education requirement, that base failed to keep pace with growth of instructional spending in successful, efficient districts such that by 2023, calculated aid levels for Jamestown were sort $6.6 million, Utica by $16.4 million, and Mount Vernon by $7.9 million. Again, these are my low-end estimates, based only on instructional spending (excluding federal revenue) growth over 2015. Even this is nearly an 11% funding shortfall.

Table 5: Selected Small City Districts would have significantly higher state aid per pupil if based on more complete instructional spending 2022-23

District	Selected Foundation Aid per TAFPU [1] (Current Law)	Foundation Aid per TAFPU using IE3 S&E Base[2]	Foundation Aid per TAFPU using IE3 S&E Base (Excl. Federal) [2]	Foundation Aid per TAFPU using IE3 S&E Growth Only[2]	Foundation Aid per TAFPU using IE3 S&E Growth Only (Excl. Federal[2]
JAMESTOWN	$11,847	$17,583	$15,943	$13,799	$13,120
POUGHKEEPSIE	$14,847	$21,865	$19,981	$17,294	$16,443
NIAGARA FALLS	$12,167	$17,918	$16,374	$14,172	$13,474
UTICA	$12,260	$18,330	$16,602	$14,280	$13,578
NEWBURGH	$12,284	$18,533	$16,563	$14,309	$13,605
PORT JERVIS	$12,992	$19,133	$17,485	$15,133	$14,389
KINGSTON	$8,167	$13,564	$11,730	$9,513	$9,045
MOUNT VERNON	$7,999	$14,350	$12,348	$9,492	$8,859

[1] Data source: State Aid Reports (DBSAD), variable: V(OP0069) 02 SELECTED FOUNDATION AID/PUPIL
[2] Calculation based on selected state aid share (state sharing ratio) from current law, using each of the adj. foundation per TAFPU calculations from the previous table (4)

Table 6: Selected Small City Districts would have significantly higher state aid if based on more complete instructional spending

District	Total Foundation Aid (incl. Supplements)[1]	Calculated Foundation Aid (Current Law)[2]	Foundation Aid per TAFPU using IE3 SSLS Base[3]	Foundation Aid per TAFPU using IE3 SSLS Base (Excl. Federal) [3]	Foundation Aid per TAFPU using IE3 SSLS Growth Only[3]	Foundation Aid per TAFPU using IE3 SSLS Growth Only (Excl. Federal) [3]
JAMESTOWN	$57,340,681	$61,650,643	$91,501,516	$82,969,350	$71,810,881	$68,276,688
POUGHKEEPSIE	$69,178,471	$77,413,614	$114,005,049	$104,183,176	$90,171,646	$85,733,854
NIAGARA FALLS	$96,367,301	$104,682,889	$154,163,805	$140,882,068	$121,935,028	$115,933,910
UTICA	$134,500,000	$152,747,091	$228,376,709	$206,843,570	$177,920,127	$169,163,692
NEWBURGH	$146,800,000	$162,299,907	$244,863,545	$218,830,752	$189,047,601	$179,743,579
PORT JERVIS	$39,022,115	$43,354,838	$63,847,555	$58,346,911	$50,499,889	$48,014,491
KINGSTON	$57,411,742	$63,669,464	$105,743,853	$91,446,378	$74,162,451	$70,512,512
MOUNT VERNON	$81,529,562	$73,608,454	$132,047,320	$113,626,940	$87,349,304	$81,519,754

[1] Data source: State Aid Reports (DBSAD), Total Foundation Aid, which is inclusive of additional aid above calculated Foundation Aid (x TAFPU). Additional Aids include: Y(CL0011) 00 3% AID DUE MINIMUM GUARANTEE, AA(MI0023) 00 2006-07 OPER AID FOR REORG INCENTIVE AID, AC(MI0174) 00 2006-07 PUB EXCESS COST AID W/O HC AID(SA0708), AD(SE0003) 00 2022-23 PUBLIC EXCESS COST SETASIDE, AE(SE0004) 00 2021-22 PUBLIC EXCESS COST SETASIDE. In 2023 most districts still received reductions in aid compared to calculated aid, but these reductions were smaller than previous years and converged on $0 by 2024. That is, districts received full funding of their Calculated Foundation Aid in 2024 (and perhaps great, when supplements were added).
[2] Calculations based on multiplying state aid per TAFPU times TAFPU for each respective scenario in previous table (5).

Illustration 3: Updating Foundation Aid

Here, I provide an illustration of options and costs for revising Foundation Aid for 2026-27.

Simulation 1: Base Increase
In the first simulation, I increase base aid to 1.035 x $9,162 and keep all other formula features the same. Current year base aid, as noted previously is $8.273. This increase to base aid leads to a $3.75

billion dollar increase to state foundation aid, setting aside any minimum (2%) increases or other adjustments.

Table 7. Base increase only

Formula Parameter	Setting
Base	$9,483
EMLC Base Tax	0.0910
Updated State Sharing Ratio	OFF / NO
Cost Summary	**TOTAL**
2025-26 Total Calc Foundation	$25,886,621,815
2026-27 Total Calc Foundation	$29,626,256,635
Total Difference	$3,739,634,820
Summed District Difference	$3,761,038,519

The base increase leads to the following changes for selected small city school districts.

Table 8. Effects on selected small city districts

05/06/25	V(OP0069) 02 SELECTED FOUNDATION AID/PUPIL	New Selected Foundation Aid/Per pupil	W(FA0001) 00 TOTAL FOUNDATION AID	TOTAL FOUNDATION AID	INCREASE
JAMESTOWN	14,983.34	17,174.20	75,830,684	86,918,634	11,087,950
POUGHKEEPSIE	15,102.12	17,310.35	73,985,286	84,803,392	10,818,106
NEW YORK CITY	8,106.17	9,291.46	10,463,452,343	11,993,424,049	1,529,971,706
NIAGARA FALLS	14,530.05	16,654.65	122,401,142	140,298,737	17,897,595
UTICA	14,249.07	16,332.57	176,189,751	201,952,247	25,762,496
NEWBURGH	13,937.08	15,974.96	180,234,319	206,588,180	26,353,861
PORT JERVIS	15,146.25	17,360.94	48,407,415	55,485,551	7,078,136
KINGSTON	8,765.16	10,046.81	67,526,793	77,400,599	9,873,806
MOUNT VERNON	9,364.09	10,733.31	83,789,878	96,041,642	12,251,764

Simulation 2: Base Increase, EMLC Increase & SSR No Cap

The second simulation adds two adjustments required local contributions toward financing the higher base. First, I increase the underlying minimum tax rate for expected minimum local contribution from .0910 to .0120. Second, I replace the state sharing ratio with a smooth curve approximation of the current state sharing ratio, using the following equation (see Figure 5B):

$$SSR = -0.47\ln(CWR) + 0.4041$$

I remove the cap to permit the state sharing ratio to go to 100%, which it does for districts such as Jamestown and Utica. One might argue that these districts should be required to contribute something from local taxation. Recall that the Foundation Aid formula funds only an estimate of instructional expenditure needs, which are about 75% of total spending needs, and the foundation formula funds well less than that 75% (Table 2).

Increasing the EMLC minimum rate in particular helps bring down the total cost to the state of raising base aid to $9,843. The increased costs over current year summed foundation aid (again, excluding post hoc adjustments like minimum guarantees) is approximately +$2.4 billion.

Table 9. Base increase with local share adjustments

Formula Parameter	Setting
Base	$9,483
EMLC Base Tax	0.0120
Updated State Sharing Ratio	ON/YES
Cost Summary	**TOTAL**
2025-26 Total Calc Foundation	$25,886,621,815
2026-27 Total Calc Foundation	$28,204,165,331
Total Difference	$2,317,543,516
Summed District Difference	$2,464,714,213

Table 10 shows that taking the cap off the state sharing ratio in particular would drive substantial additional funds into Jamestown and Utica in particular. Some districts do gain less from this option.

Table 10. Effects of base increase and local share changes on select small city districts

05/06/25	V(OP0069) 02 SELECTED FOUNDATION AID/PUPIL	New Selected Foundation Aid/Per pupil	W(FA0001) 00 TOTAL FOUNDATION AID	TOTAL FOUNDATION AID	INCREASE
JAMESTOWN	14,983.34	18,466.88	75,830,684	93,460,897	17,630,213
POUGHKEEPSIE	15,102.12	15,889.56	73,985,286	77,842,945	3,857,659
NEW YORK CITY	8,106.17	8,703.11	10,463,452,343	11,233,983,158	770,530,815
NIAGARA FALLS	14,530.05	16,619.34	122,401,142	140,001,332	17,600,190
UTICA	14,249.07	17,561.90	176,189,751	217,152,953	40,963,202
NEWBURGH	13,937.08	14,664.22	180,234,319	189,637,674	9,403,355
PORT JERVIS	15,146.25	15,458.08	48,407,415	49,404,027	996,612
KINGSTON	8,765.16	9,432.73	67,526,793	72,669,752	5,142,959
MOUNT VERNON	9,364.09	10,249.28	83,789,878	91,710,539	7,920,661

Simulation 4: High Need Students Weight (on Increased Base)

The final simulation estimates costs to an add on to the formula, wherein an additional 1.0 weight is applied to a) homeless, b) migrant, and c) foster care children using a 3 year average of those populations. I apply the weight to the increased base, but then apply the state sharing ratio to determine what share of these costs will be covered with state aid. Jamestown's high need supplement total is $372,985, where $346,876 would be picked up by the state.

Table 11. High Need Supplemental state aid

District	SUM HN Enroll	High Need Supplement TOTAL	High Need State Aid
JAMESTOWN	39	$372,985	$346,876
POUGHKEEPSIE	354	$3,353,704	$2,629,304
NEW YORK CITY	95,897	$909,356,444	$361,014,508
NIAGARA FALLS	226	$2,143,083	$1,993,068
UTICA	240	$2,275,841	$2,116,532
NEWBURGH	518	$4,915,184	$3,873,165
PORT JERVIS	131	$1,242,230	$1,084,467
KINGSTON	236	$2,237,910	$1,141,334
MOUNT VERNON	706	$6,691,604	$3,406,027

Appendix A: General Education Instructional Expense

The first panel here is a screenshot of the 2017-18 fiscal accountability summary, with data from Utica City School District. Under their old method of determining general instructional expense, which guided the base figure in the foundation formula, the state reported General Education Instructional Expenditures for Utica of $9,108 per pupil and special education $18,404 per pupil. In the following and final year for which these data are available at the same link location, the state reported GEIE of $9,265 and SEIE of $19,708 per pupil. These figures are extensions of the accounting method used for setting the Foundation Aid base figure. This approach, which the state used for years, yielded an inappropriate measure of general education instructional spending to drive the foundation aid formula (for determining its base).

Panel 1: Fiscal Accountability Summary (2017 - 18)

INFORMATION ABOUT EXPENDITURE RATIOS (2016 - 17)

(Data are lagged a year.)

Commissioner's Regulations require that certain expenditure ratios for general-education and special-education students be reported and compared with ratios for similar districts and all public schools. The required ratios for this district are reported below.

The numbers used to compute the statistics on this page were collected on the State Aid Form A, the State Aid Form F, the School District Annual Financial Report (ST-3), and from the Student Information Repository System (SIRS).

THIS SCHOOL DISTRICT

GENERAL EDUCATION	SPECIAL EDUCATION
INSTRUCTIONAL EXPENDITURES	**INSTRUCTIONAL EXPENDITURES**
$94,414,363	$29,427,810
PUPILS	**PUPILS**
10,366	1,599
EXPENDITURES PER PUPIL	**EXPENDITURES PER PUPIL**
$9,108	$18,404

Source link: https://data.nysed.gov/fiscal.php?year=2018&instid=800000041284

Indeed these are apples to oranges comparisons, but contrast the old determination of GEIE with the new determination of General Education Instructional Expense reported in panel 2. Here, in the new federally compliant ESSA Financial Transparency Reporting, Utica's GEIE, per se, is $22,141 and SEIE is $13,071. These figures are on a totally different scale than the earlier calculation method, and more accurately represent instructional spending. These figures are at least on, or closer to the scale of what districts spend annually on operations specifically for instruction.

Panel 2: 2023-24 School Year Financial Transparency Report

Detailed Spending: How Much is Spent Per Pupil for Special Education and General Education?

The Special Education Detail below is a subset of spending. To calculate per pupil expenditures, enrollment for special education is used. The expenditure value reflects school and central level expenditures. For charter schools, data represents per pupil expenditures in the selected school.

The General Education Detail below reflects Total District Expenditures less Special Education Expenditures. To calculate per pupil expenditures, district PK-12 enrollment is used. Excluded expenditures are not included in Total Expenditures.

School and District Level Expenditures	UTICA CITY SD
Special Education	$13,070.57
General Education	$22,140.73

https://data.nysed.gov/expenditures.php?year=2024&instid=800000041284

Appendix B: Supplemental Figures

Conclusion 1: The calculation method and measures in the formula do not represent what districts need to spend, or what they actually spend, in order to achieve adequate outcomes

Figure B1 and B2 display the disconnect between the foundation formula determinations of funding adequacy and the realities of instructional and total spending per pupil of New York State school districts.
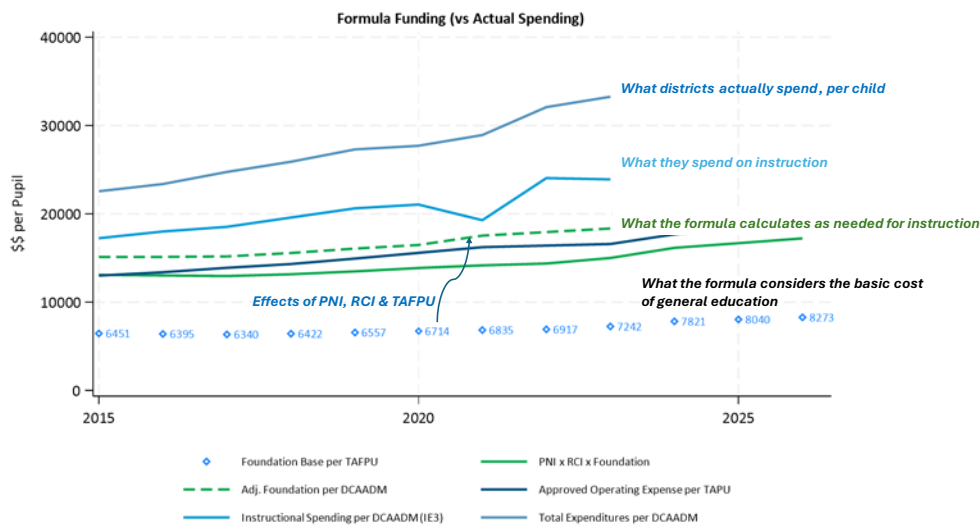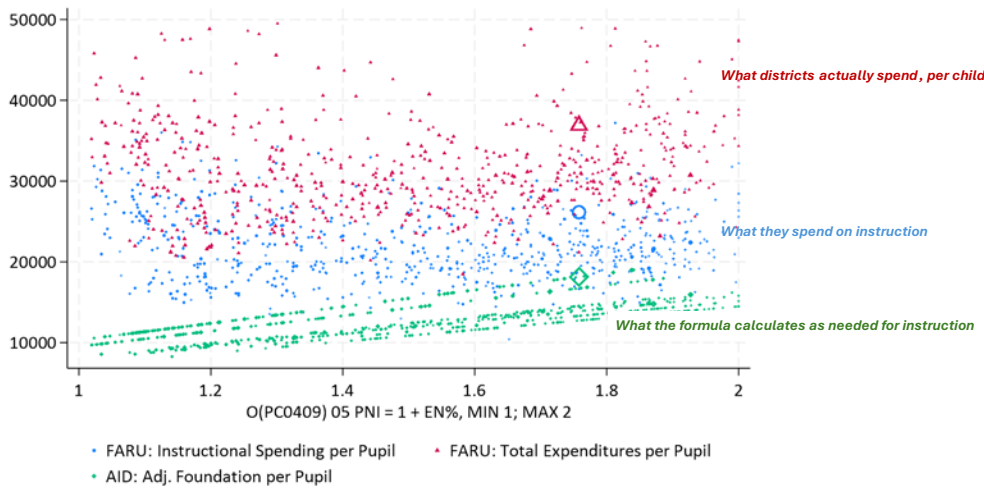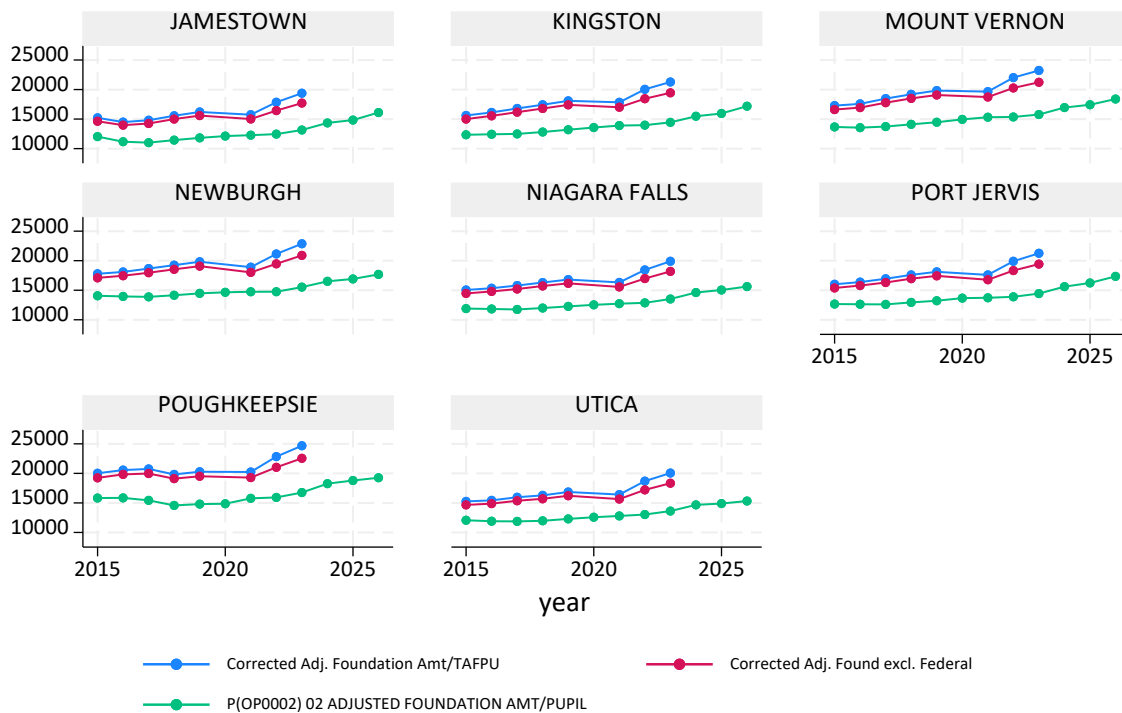
Figure B1

Figure B2

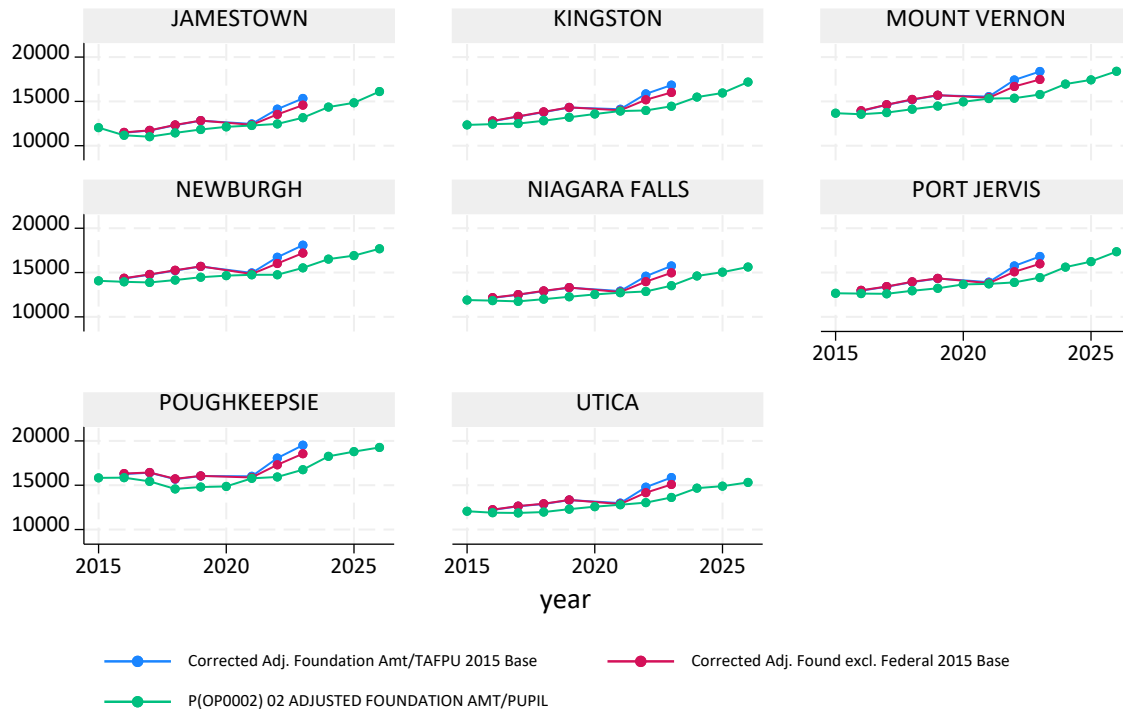Foundation Formula "Sound Basic" Funding vs. Actual Spending

Conclusion 2: The foundation formula has continued to drift further, over time, from funding even its own (inadequate) hypothetical sound basic funding level

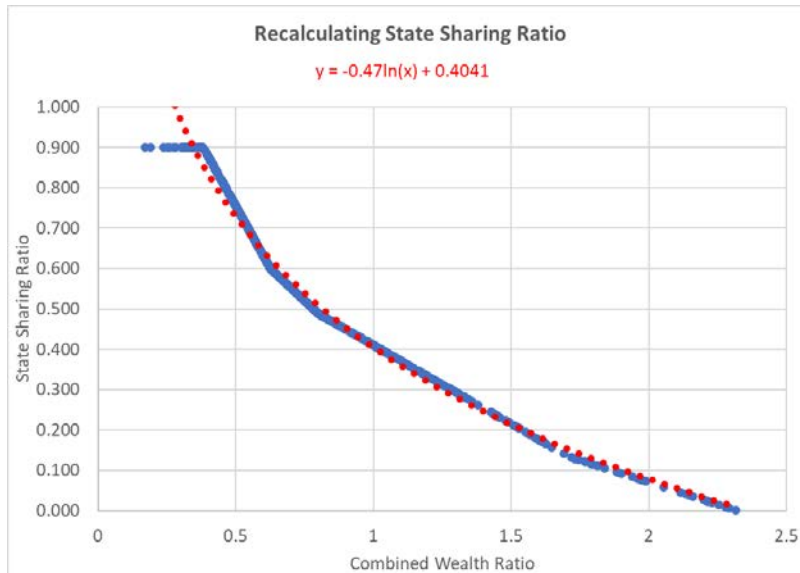**Figure B3. Graph of Adjusted Foundation Alternative Estimates**

Graphs by 05/06/25

Figure B4. Graph of Adjusted Foundation Alternative Estimates (used for inflation only)

- Corrected Adj. Foundation Amt/TAFPU 2015 Base
- Corrected Adj. Found excl. Federal 2015 Base
- P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL

Graphs by 05/06/25

Figure B5. State Sharing Ratio Re-estimation & Cap Removal

Recalculating State Sharing Ratio

$$y = -0.47\ln(x) + 0.4041$$

Notes

[1] https://cee.tc.columbia.edu/media/centers-amp-labs/cee/publication-pdfs/AIR-Report-2--Student-Outcomes-and-Student-Need---Final-10-29-24-1-1.pdf

[2] Taylor, L. L., Baker, B. D., & Vedlitz, A. (2005). Measuring educational adequacy in public schools. *The Bush School of Government & Public Service, Texas A&M University*.

[3] See Appendix A for a discussion of GEIE

[4] The best methods of the day are presented here: Duncombe, W., & Yinger, J. (2005). How much more does a disadvantaged student cost?. *Economics of Education Review*, *24*(5), 513-532.
And summarized here: Duncombe, W. D., & Yinger, J. (2012). Measurement of cost differentials. In *Handbook of research in education finance and policy* (pp. 260-278). Routledge.

[5] Baker, Bruce D.. (2025). Framework for Evaluating & Reforming Education Finance Systems. (EdWorkingPaper: 25 -1127). Retrieved from Annenberg Institute at Brown University: https://doi.org/10.26300/pa0r-n548

[6] Taylor, L. L. (2006). Comparable wages, inflation, and school finance equity. *Education Finance and Policy*, *1*(3), 349-371.

[7] https://schoolfinance101.com/2011/01/12/understanding-education-costs-versus-inflation/

[8] **Total Expenditures.** Beginning in 1998-99, F9901.9 is to be used for any interfund transfer from the General Fund. After consulting with others, it was decided that beginning with the 1998-99 school year F9901.9 would be an addition rather than a subtraction in the calculation of total expenditures. In addition, the Risk Retention Fund ceased to exist during this period.
This item represents the total expenditures charged by a district to the General, Debt Service, and Special Aid Funds. The calculation for 1998-99 and later was: grand total General Fund expenditures and interfund transfers (AT9999.0) plus the sum of: total Debt Service Fund expenditures (the sum of V1380.4, V9798.6 and V9798.7) total Special Aid Fund expenditures and interfund transfers (FT9999.0); and interfund transfer from the Special Aid Fund (F9901.9) minus the sum of: interfund transfer from the General Fund to the Special Aid Fund (A9901.95); and interfund transfer from the General Fund to the Debt Service Fund (A9901.96). Some districts reported negative expenditures for at least one of the transfers listed above. Totals may not add due to rounding. https://www.nysed.gov/fiscal-analysis-research/guide-headings-fiscal-profile

[9] The pupil count is based on data from State aid worksheets and Basic Educational Data System (SIRS) forms. This pupil count is the best count of the number of students receiving their educational program at district expense. DCAADM includes the average daily membership (ADM) of students enrolled in district programs (including half-day kindergarten pupils weighted at 0.5); plus equivalent secondary attendance of students under 21 years of age who are not on a regular day school register plus dual enrolled ADA plus pupils with disabilities attending Boards of Cooperative Educational Services (BOCES) full time plus pupils with disabilities in approved private school programs including State schools at Rome and Batavia plus resident students for whom the district pays tuition to another school district plus incarcerated youth. Beginning with the 1999-2000 school year, pupils resident to the district but attending a charter school are included. Beginning with the 2007-08 school year, students attending full-day Pre-K are weighted at 1.0, 1/2 day Pre-K weighted at 0.5

[10] Calculations are weighted for enrollment, thus, funding and spending calculations for "all" districts are heavily influenced by New York City.