



POLICY BRIEF

Hard Choices Still Ahead: The Financial Future of Pennsylvania School Districts

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Temple University's Center on Regional Politics (CORP), Penn State's College of Education, the University of Pittsburgh's Center for Metropolitan Studies, and the Pennsylvania Policy Forum (a group of faculty and researchers at 18 public and private colleges and universities) formed a consortium to support state legislators, local officials, and education policymakers in a review of options for improving public school finance. CORP has been periodically publishing policy briefs, papers, and studies to support the consortium's mission. The authors wish to thank the William Penn Foundation and Temple University's CORP for their generous support of this research project. The opinions expressed in this report are those of the authors, and do not necessarily reflect the views of CORP or the William Penn Foundation.

EXECUTIVE SUMMARY

The focus of this study is the fiscal condition for all 500 Pennsylvania school districts for the period 2015-16 through 2019-20. The fiscal elements included in the study are: revenues by major category, expenditures by major category, and the resultant shortfalls/surpluses for each district. The report consists of five sections:

1. Introduction, Purpose, and Approach to Study
2. Annual projections for 2015-16 through 2019-20
3. Actual results for prior 6 years, 2009-10 through 2014-15
4. Comparisons of the two time periods
5. Sensitivity analysis of projections to determine the impacts of each of the fiscal elements
6. Appendix with:
 - a. Definitions of terms
 - b. Assumptions for projections used in projections
 - c. Detailed description of analytical approach
 - d. Worst case scenario
 - e. Fund balance analysis for 2009-10 through 2014-15

The overall results are illustrated in Figure ES1.

Overall Results

- Total revenues are projected to increase at \$700-\$750 million per year, at an increasing rate.
- Total expenditures are projected to increase at \$750-\$800 million per year, at a decreasing rate.
- The result is continuing shortfalls for most school districts, although net statewide shortfall would be substantially eliminated.
- Over 350-425 districts projected to be in shortfall conditions annually, but decreasing over time.
- Still 70% of districts projected to be facing shortfalls in 2019-20 at an average of approximately \$450 thousand each.

Interpretation of Projected Shortfalls

The projected shortfalls for districts indicate the level of fiscal stress the district is estimated to encounter in future years, not an actual deficit that will occur. By law, districts are not permitted to have deficit budgets. For each year, expenditures must equal revenues: $E = R$. If expenditures are projected to be greater than revenues in any year (projected shortfall), that indicates the extent of expenditures that must be cut from the budget (or revenues increased,

a much less likely possibility). Districts with large shortfalls relative to their total budget face a more difficult task involving more programs and staffing cuts to bring the budget back into balance. In short, the vast majority of Pennsylvania school districts will face hard choices in the years ahead, and for many, the choices are likely to be extremely painful. After more than five years of post-recession fiscal stress, hard choices seem to be “the new normal” for most of the Commonwealth’s school districts.

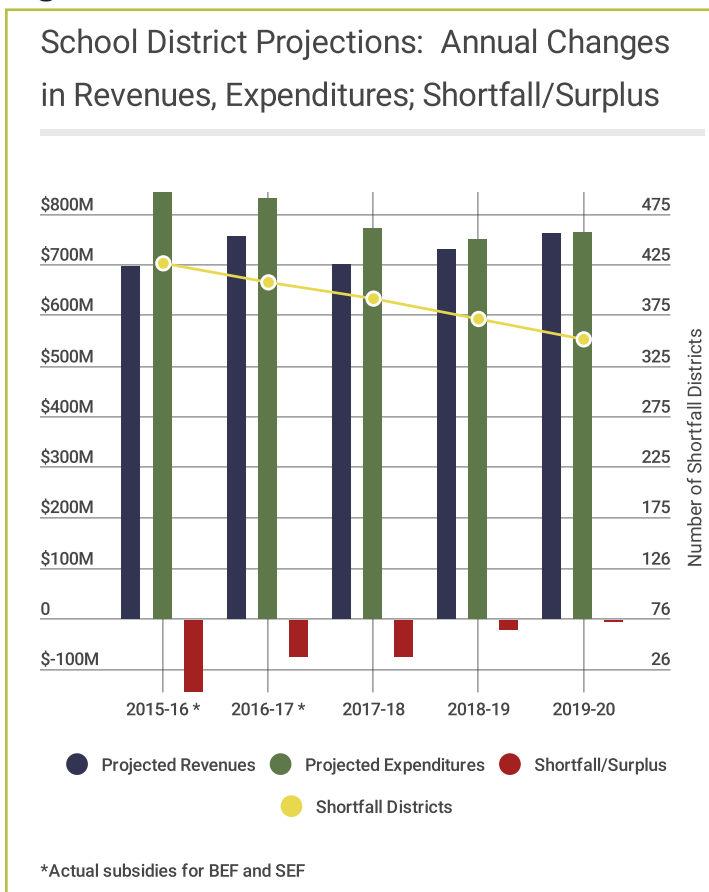
Projected Revenues

- Local revenues continue to be the main support of education, increases of \$600 million annually, \$2.8 billion for 5 years, mostly from Property Tax.
- State BEF subsidies continue as a much lower contributor, \$120 million annually at 2% annual increase, reaching \$700 million in 5 years. The new formula has little impact on fiscal equity with relatively small amounts involved.
- State SEF subsidy continues as a minor contributor, at \$20 million annually and less than \$100 million over 5 years. Again, the new formula has little impact due to low amounts involved.
- No increases in Federal aid are anticipated.

Projected Expenditures

- Increases are projected to be more evenly distributed across major expenditure categories.
- Pension increases projected to drop from \$270 million annually to \$100 million due to lower increase in the Employer Contribution Rate (ECR). Total five-year increase estimated at \$860 million.
- Salary increases projected to gain \$175 million annually, at a conservative 1.5% yearly increase. Total five-year salary expenditure increases estimated at \$850 million. Projections are the net amounts including both salary increases and changes in number of personnel.
- Health care projected to grow in importance to almost \$200 million annually, reaching a total increase of \$850 million over five years.
- Charter school tuition payments projected at relatively low growth compared to history. Projected at a 5% annual increase, down from 10% to 19% annual increases in prior time period. The total five-year increase is \$400 million in addition to existing tuition payments from districts of \$1.5 billion in 2014-15.
- Other Expenditures (Non-Capital) projected at estimated inflation rate (3%) and constitute a substantial expenditure component, \$200 million annually, reaching \$1.0 billion in five years.

Figure ESI



Review of Past Six Years – 2009-10 through 2014-15

- Local revenues were the main and only stable source of increases in funding for education from 2009-10 through 2014-15; they grew a total of \$2.5 billion over six years. Local revenues provided 90% of the increases in total district revenues.
- State and federal revenues were highly volatile, unreliable, and were much smaller sources of new funding. They exhibited wide variation from year to year and were not dependable sources for supporting district expenditures. Non-district sources accounted for 10% of total district revenue increases over the period.
- Overall, net annual revenue changes ranged from over a \$900 million increase, to an almost \$200 million decrease.
- Expenditure increases were driven by mandated PSERS increases and mandated charter school tuition payments growth with approximately \$800 million increases for each.
- Reductions and slower growth in Salaries and Health Care were the result of loss of personnel starting 2011-12.
- Fiscal uncertainty for both revenues and expenditures made it very difficult for districts to budget and operate effectively.

Sensitivity Analysis of Major Revenues and Expenditures: A Guide for Policy Makers

INTRODUCTION

A separate fiscal analysis was conducted to estimate the impact of a 1% change in each major revenue and expenditure component, along with the number of districts affected. The results below show the effect of each component separately. For example, a reduction of 1% in the growth assumption for Total Local Revenue would yield a reduction of \$190 million in revenue and cause an additional 78 districts to move into a shortfall condition.

Since 2008-09, the condition of school funding for school districts in Pennsylvania has been highly changeable, uncertain from year-to-year with unpredictable shifts and serious delays in state and federal revenues. Rapidly rising expenditures, most of which were out of the districts' control, consumed increasing amounts of available funds. These fiscal trends and circumstances combined to place greater reliance on local funding sources, particularly property taxes.¹ This has left districts especially vulnerable to decisions made by the governor and legislature, who have found it difficult to agree on key aspects of both the timing and amounts of school funding.

	% Change	\$ Change in 2019-20	Districts Affected
Total Local	-1%	\$190 million less revenue	78 more districts into shortfall condition
BEF	-1%	\$60 million less revenue	50 more districts into shortfall condition
Salaries & PSERS	+1%	\$150 million higher expenditures	69 more districts into shortfall condition
Health Care	+1%	\$44 million higher expenditures	53 more districts into shortfall condition
Charter Tuition	+1%	\$25 million higher expenditures	25 more districts into shortfall condition
Other (Non-Capital Expenditures)	-1%	\$75 million lower expenditures	41 fewer districts into shortfall condition

However, while the volatility of the recent past has subsided in some key areas, there is no overall weakening of growing fiscal stress for the vast majority of districts. The spiking of a few very large annual expenditure categories and the reductions in a few other large categories are projected to be replaced by steady, significant, and unrelenting annual increases for a wider set of expenditure categories. State funding for school districts is expected to be under severe pressure from the multi-billion dollar annual deficits in state revenues forecast by the Independent Fiscal Office (IFO),² leaving local sources, primarily property taxes, to continue to bear the main burden for the support of education in Pennsylvania.

District by District Results

Supplementing this report are interactive maps showing actual and projected shortfalls or surpluses for all 500 school districts organized by district and Pennsylvania House and Senate districts. Shortfall and surplus budget results are shown in nominal dollars and as a percentage of total expenditures.

Go to cla.temple.edu/corp/hard-choices-ahead/.

Purpose of Study

This study projects the fiscal conditions for the next five years for all 500 Pennsylvania school districts for the period 2015-16 through 2019-20. These future projections are based on recent trends for major revenue sources and expenditure items. Specifically, the project included three related components:

I. Projected major revenues, expenditures, and district shortfalls from 2015-16 through 2019-20 for all Pennsylvania school districts using the latest trends and related assumptions.

- a. Compare estimated future revenues with projected expenditures.
- b. Will future revenues be adequate to support future expenditures?
- c. Which revenues and expenditures will have the greatest impacts on districts' fiscal conditions over the next five

1. In 2014-15, property taxes provided over 77% of total local revenue. Pennsylvania Department of Education. Available at <http://www.education.pa.gov/Teachers%20-%20Administrators/School%20Finances/Finances/AFR%20Data%20Summary/Pages/AFR-Data-Summary-Level.aspx#>. VZvrX2XD-Uk. Accessed March 1, 2017.

2. Independent Fiscal Office. 2016. Economic & Budget Outlook: Fiscal Years 2016-17 to 2021-22. Harrisburg, PA.

years? How are these projected to change in the next five years?

d. How sensitive are the projection results to changes in the key assumptions?

e. What are the differences in projected fiscal conditions among school districts? Are the conditions expected to improve over time? Is this the case for all districts?

2. Recent history of actual major revenue and expenditure items from 2009-10 through 2014-15 for school districts.

a. What were the changes in major revenue sources and the larger expenditure items?

b. Which of the revenue and expenditure items had the greatest impact on school districts? How did the two fiscal areas interact?

c. How did school districts cope with these significant fiscal impacts? Were there sufficient new revenues to support rising major expenditures, many of which were mandated or imposed on districts?

3. Key assumptions for revenues and for expenditures in projecting future fiscal conditions.

a. What past trends are appropriate to continue into the future?

b. What items need to be modified based on specific known changes in the future or recent and expected trends?

Approach to the Study

All 500 school districts in Pennsylvania were included in the study. Calculations were done at the individual school district-level and aggregated to the state-level for summary results. The study examined the school districts' reported revenues and expenditures for 2009-10 through 2014-15, the latest year for which data were available.³ The only exceptions were for the state Basic Education Funding subsidy and Special Education Funding subsidy where actual data existed for 2015-16 and 2016-17. Almost all fiscal data were obtained from the Pennsylvania Department of Education website. Data for the Health Care analysis was provided by Forecast5 Analytics.⁴

Major revenues and expenditure items were first organized by school district and then compared for the historical period 2009-10 through 2014-15. Trends of the changes within each fiscal category were examined to provide baseline data to establish assumptions for projections in the upcoming five years. With some fiscal categories, such as

charter school tuition payments, salaries, and Basic Education Funding, the patterns of increases and decreases were irregular and episodic, and trends were not an appropriate basis for future projections; for these items assumptions for future projections were based on conservative expectations of likely changes. For each fiscal category a most likely assumption was established for how it would change over time (i.e., varying rates for change for grow or decline, or remain stable). Along with the most likely assumption, a range of possible assumptions was established to test the results' sensitivity to changes.

Revenues included in the study were the major sources that school districts receive to support their programs. They were: Total Local Revenue; Basic Education Funding (BEF); Special Education Funding (SEF); and Total Federal. For a fuller definition of these categories see the Appendix. Taken together, the revenues included in the study represented 88% of the total revenues that districts received in 2014-15. Excluded from the revenue analyses were the state subsidies for the state shares of Social Security and Medicare Taxes and the Public School Employees' Retirement System (PSERS), because only net amounts paid of these expenditures by the districts were included on the expenditure side of the analysis.

Expenditures included in the study were the major current categories. They were:

Public School Employees' Retirement System, more specifically the Net PSERS amount—district cost only; Salaries; Health Care; Charter School Tuition Payments; and all other Non-Capital expenditures. Taken together the expenditures included in the study made up approximately 86% of all district expenditures in 2014-15. This grouping of expenditures represents the current expenditures of school districts. Omitted from the analysis were the financing and debt related expenditure categories because they include long-term expenditures that can distort individual year results. The definitions of the expenditures are provided in the Appendix.

The five-year projections were based on a series of assumptions about the future changes of each of the key revenue and expenditure variables in the model. The bases for the assumptions were analysis of trends for these variables over the past six years and incorporating known or likely changes over the projection period. The assumptions are indicated on the projections' data tables and are explained in more detail in the Appendix. However, it should

3. A separate analysis of district fund balances was conducted and is presented in the Appendix.

4. Forecast5 Analytics, a company specializing in data collection and analysis in the public sector, supplied detailed district data that allowed identification of group insurance expenditures by district for contract providers and self-insurance.

be noted that the projected outcomes are very sensitive to these assumptions, particularly the growth in Total Local Revenues, future PSERS rates, Salaries, Health Care, Other Expenditures, and to a lesser extent on Basic Education Funding and Charter School Tuition Payment increases. Consequently, a Sensitivity Analysis was conducted to examine the impact of changes in the assumptions.

**PROJECTED FISCAL CONDITIONS
2015-16 THROUGH 2019-20**

The five-year projections for Pennsylvania school districts are shown in Table I; both the annual changes and the five-year totals, along with the projection assumptions, are shown by major revenue and expenditure category.

Table I - Annual \$ Changes, Five-Year Projections 2015-16 through 2019-20

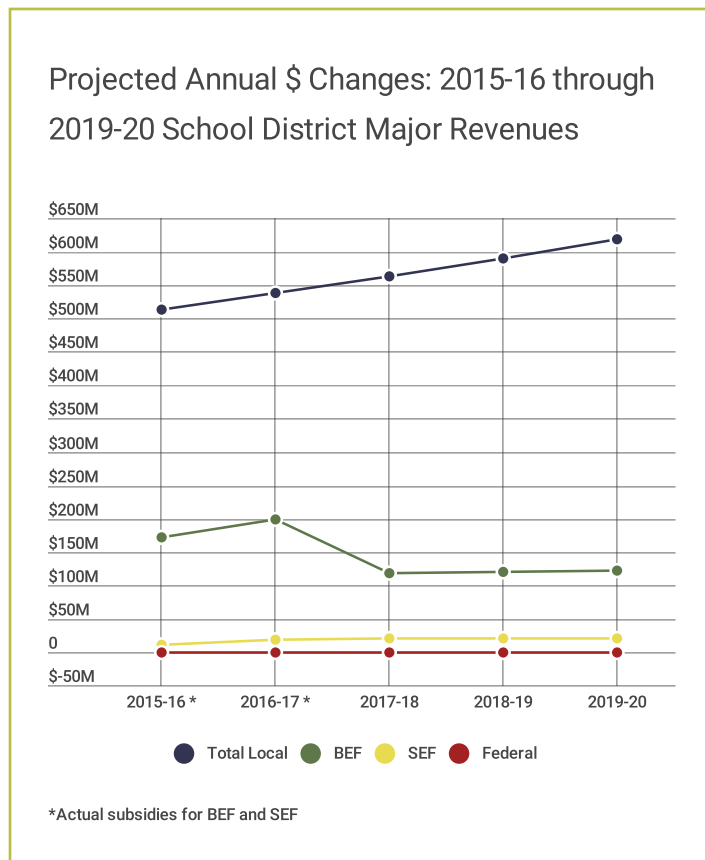
Changes in Revenues	Projection Rates	PROJECTIONS					
		2015-16*	2016-17*	2017-18	2018-2019	2019-20	5-Year Totals
Total Local (0 if Negative)	3-Year Average	\$514,438,234	\$538,191,271	\$563,191,271	\$590,053,791	\$618,373,036	\$2,824,419,152
BEF (Using New Formula)	2.0%	\$171,661,445	\$199,999,989	\$117,901,581	\$120,259,611	\$122,664,804	\$732,487,430
SEF	2.0%	\$11,271,572	\$18,700,000	\$20,259,716	\$20,664,911	\$21,078,209	\$91,974,408
Total Federal	0.0%	\$0	\$0	\$0	\$0	\$0	\$0
Major Revenues		\$697,371,251	\$756,891,260	\$701,524,117	\$730,978,314	\$762,116,049	\$3,648,880,990
Changes in Expenditures							
Net PSERS		\$267,122,456	\$234,316,652	\$155,218,630	\$110,424,073	\$99,421,422	\$866,503,234
Salaries	1.5%	\$165,673,062	\$168,158,158	\$170,680,530	\$173,240,738	\$175,839,349	\$853,591,836
Health Care	6.0%	\$150,634,381	\$159,672,444	\$169,252,791	\$179,407,958	\$190,172,435	\$849,140,009
Charter Tuition	5.0%	\$74,321,739	\$78,037,825	\$81,939,717	\$86,036,703	\$90,338,538	\$410,674,521
Other	3.0%	\$185,309,899	\$190,869,196	\$196,595,272	\$202,493,130	\$208,567,924	\$983,835,420
Major Expenditures		\$843,061,537	\$831,054,275	\$773,686,939	\$751,602,601	\$764,339,668	\$3,963,745,020
Surplus or (Shortfall)		(\$145,690,286)	(\$74,163,015)	(\$72,162,822)	(\$20,624,287)	(\$2,223,619)	(\$314,864,030)
\$ Negative		(\$254,694,669)	(\$203,006,775)	(\$193,680,690)	(\$170,494,663)	(\$160,890,776)	(\$982,767,574)
\$ Positive		\$109,004,384	\$128,843,760	\$121,517,868	\$149,870,376	\$158,667,157	\$667,903,544
# Negative		427	408	392	371	351	
# Positive		73	92	108	129	149	
Average per Shortfall District		(\$596,475)	(\$497,566)	(\$494,083)	(\$459,554)	(\$458,378)	
Average per Surplus District		\$1,493,211	\$1,400,476	\$1,125,165	\$1,161,786	\$1,064,880	

* Actual subsidies for BEF and SEF

Projected Revenues

Revenues for school districts are projected to grow by approximately \$700 million to \$760 million per year, reaching a five-year total increase of \$3.65 billion. The growth trends are illustrated in Figure 1, while Table 2 presents the five-year total gain by each major revenue source and its share of the total growth. This growth is fueled primarily by new local revenues increasing by \$500 to \$600 million annually, reaching a total increase of \$2.82 billion over the next five years. Local revenues are primarily generated from property taxes, so, absent substantial increases in state subsidies or extensive reductions in expenditure growth, local taxes would underwrite the growth at a projected 2.63% per year, the median three year average total local revenue increase across all 500 school districts.

Figure 1



According to projections, Total Local Revenues will support approximately 77% of the increases in funding for education in the next five years. The Commonwealth’s long-standing reliance on local taxes for school funding is continued in the projections and would maintain the significant imbalance, compared to national averages, of local and state funding mix across the state. The two primary instructional subsidies from the state, Basic Education Funding (BEF) and Special Education Funding (SEF), are both projected to increase at 2% annually, or \$120 million and

\$20 million per year respectively, and will continue to play a minor role in funding education in Pennsylvania. Since the actual subsidy amounts have been established in the latest state budgets, the state subsidies are projected for the remaining three years, 2017-18 through 2019-20. No increase in Federal revenues is expected throughout the years covered by study projections. The projected five-year totals for additional support from local and state sources and their relative shares are shown in Table 2.

Table 2 - 5-Year Projected Total \$ Changes 2015-16 through 2019-20

	5-Year Totals	% of \$ Change
Changes in Revenues		
Total Local	\$2,824,419,152	77%
BEF	\$732,487,430	20%
SEF	\$91,974,408	3%
Total Federal	\$0	0%
Major Revenues	\$3,648,880,990	100%
Changes in Expenditures		
Net PSERS	\$866,503,234	22%
Salaries	\$853,591,836	22%
Health Care	\$849,140,009	21%
Charter Tuition	\$410,674,521	10%
Other	\$983,835,420	25%
Major Expenditures	\$3,963,745,020	100%
Surplus or (Shortfall)	(\$138,007,473)	

Projected Expenditures

Total expenditures are projected to increase by \$3.96 billion over the five-year period. Within the mix of expenditures, some substantial changes are projected, the largest of which involves PSERS, the basis for district retirement costs. The Employer Contribution Rate (ECR) is the PSERS established percentage that is applied against district salary expenditures to calculate the district’s annual retirement costs, approximately half of which are borne by the district and half are paid through a state subsidy. As shown in Table 3, in 2015-16 the ECR climbed to 25.84%, a 21% rise over the prior year and yielding an increase in district costs of \$267 million that year. By 2019-20 the ECR is scheduled to reach 35.53%, which is a 4% increase over the prior year; this yields a PSERS expenditure increase for districts of \$99 million that year. The difference in annual district

PSERS expenditures from 2015-16 to 2019-20 is projected at \$170 million per year, which represents a substantial reduction in the annual increase for that component of district budgets. To be clear, PSERS expenditures will continue to be a very large burden for districts, but they will not be increasing as rapidly as in the past. They also cannot be easily cut or reduced when fiscal stress is present, especially since the district's contribution rates are mandated to rise.

are expected, coming from a national trend toward higher costs and a growing number of district staff. District efforts to improve employee health care choices and a trend to shift some of the costs to employees are likely to keep these costs from even greater growth. Other Expenditures, which include Other Benefits, Purchased Services, Supplies, and Property, projected at 3% annual growth, have the large-

Table 3 - Total Employer Contribution Rate %

Year	ECR	Change in ECR Rate	Annual % Increase	Annual District NET \$ Increase
2009-10	4.78%			\$4,869,227
2010-11	5.64%	0.86%	18%	\$256,922,762
2011-12	8.65%	3.01%	53%	(\$63,453,936)
2012-13	12.36%	3.71%	43%	\$172,952,243
2013-14	16.93%	4.57%	37%	\$218,404,073
2014-15	21.40%	4.47%	26%	\$216,449,606
6-Year Gain		16.62%	348%	\$806,143,975
2015-16	25.84%	4.44%	21%	\$267,122,456
2016-17	30.03%	4.19%	16%	\$234,316,652
2017-18	32.57%	2.54%	8%	\$155,218,630
2018-19	34.18%	1.61%	5%	\$110,424,073
2019-20	35.53%	1.35%	4%	\$99,421,422
5-Year Gain		14.13%	66%	\$866,503,234
Total 10-Year Gain		30.75%	543%	\$1,672,647,209

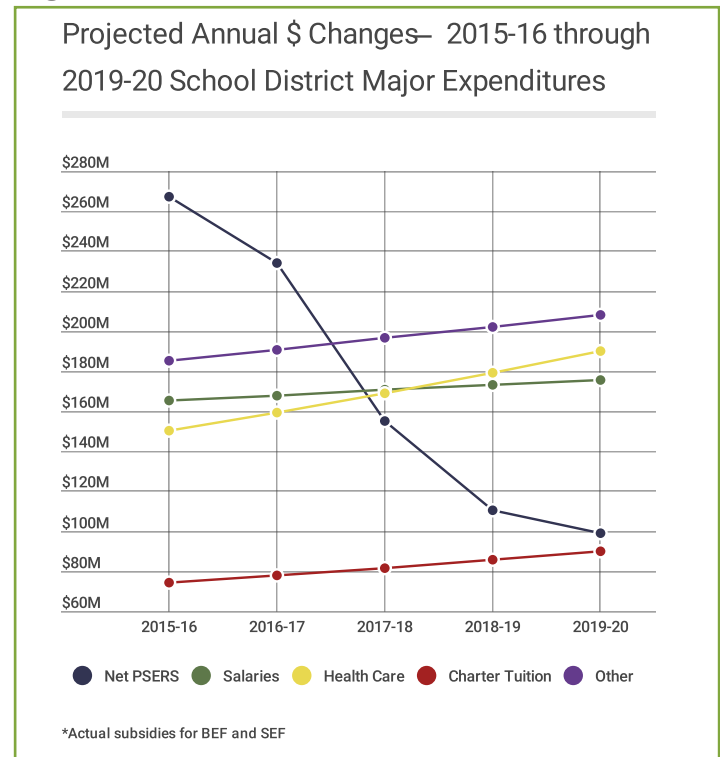
Source: PSERS. Fiscal Year 2017-18 Employer Contribution Rate. December 7, 2016.

Note: By 2021-22, the ECR is projected to rise to 36.4%.

Changes in the other expenditure categories are projected to remain reasonably consistent across the five years with projected annual increases growing steadily. In rounded numbers the annual growth amounts are shown in Table 4 and the five-year projected trends shown in Figure 2.

For the five-year projected period, the big three expenditure areas in which the greatest increases are anticipated are Salaries, Health Care, and Other Expenditures. Salary increases are projected to grow at 1.5% annually, which may be a conservative estimate if the economy continues a modest improvement coupled with pent-up demand for higher wages due to several years of low salary gains or freezes in districts and new hiring to replace some of the staff lost to prior budget cuts. Health Care (trended at 6%) is another area in which larger and steady increases

Figure 2



est combined annual expenditure increases. Charter Tuition is projected at a 5% annual growth, the median 2014-15 increase across all districts, but a growth rate of half or less than prior years. However, while Charter Tuition increases are projected to slow, the total tuition paid by school districts to charter schools has now exceeded \$1.5 billion

Table 4 - Annual Expenditure Increases 2015-16 to 2019-20

PSERS (beginning 2017-18)	\$100,000,000-\$150,000,000
Salaries	\$170,000,000
Health Care	\$160,000,000-\$190,000,000
Charter Tuition	\$80,000,000-\$90,000,000
Other	\$200,000,000
Major Expenditures	\$760,000,000

annually and remains one of the largest mandated expenditures imposed on districts by the state. With a few exceptions of several districts with a high charter student presence, there are essentially no marginal cost savings to

the district when a student leaves the district to attend a brick and mortar or cyber charter school. In total, the Major Expenditures are projected to grow in excess of \$760 million annually.

Projected Surplus/Shortfall

If projected revenues are greater than projected expenditures, the net result will be a surplus; conversely, if projected expenditures exceed projected revenues, a shortfall will occur. Comparing the projected revenues with the projected expenditures indicates that Major Expenditures are anticipated to exceed Major Revenues in all five years, yielding decreasing net annual statewide projected shortfalls of approximately \$145 million in 2015-16 to \$2 million by 2019-20. Even more concerning is that there are still projected to be 351 to 392 districts with shortfalls in their budgets during the final three years; these numbers comprise three-quarters of all districts in the state. Their total annual projected shortfalls are estimated from \$160 million to \$190 million for these districts. The 11-year history and projections of the number of districts with surpluses and shortfalls are pictured in Figure 3. In the projections, from 72% to 78% of all school districts show shortfalls in the last three years. Because Pennsylvania law does not permit districts to have a fiscal deficit, the shortfalls indicate the level of fiscal stress facing these districts; they project the amounts that shortfall (negative) districts will have to cut their budgets, raise local taxes beyond what is projected, or adopt a combination of cuts and higher taxes to bring their budgets into balance, unless additional state revenue is forthcoming.

The phenomenon of shortfalls for a substantial majority of districts in the state is not a one-year or even a short-term condition. It is a persistent, ongoing, and systemic crisis that will continue and worsen unless structural changes are made in the Pennsylvania school funding system. Figure 4 illustrates the problem. It shows the number of districts by the years of shortfalls, ranging from Shortfalls in All 5 Years to Shortfalls in 0 Years for both 5-year time periods. Continuing the current system as projected, 337 or 67% of Pennsylvania school districts will face upcoming shortfalls every year and will likely have to reduce their budgets each year to meet the balanced budget requirement. This represents a more than doubling of districts in deepest fiscal stress in the next five years. There are projected to be over 370 districts with shortfalls in four or five of the next five years compared with 115 over the 2010-11 through 2014-15 period. Overall, the projections indicate that there will be many more districts with extended shortfalls, many fewer districts with mixed outcomes, and a few districts with no projected shortfalls in the next five years.

Figure 3

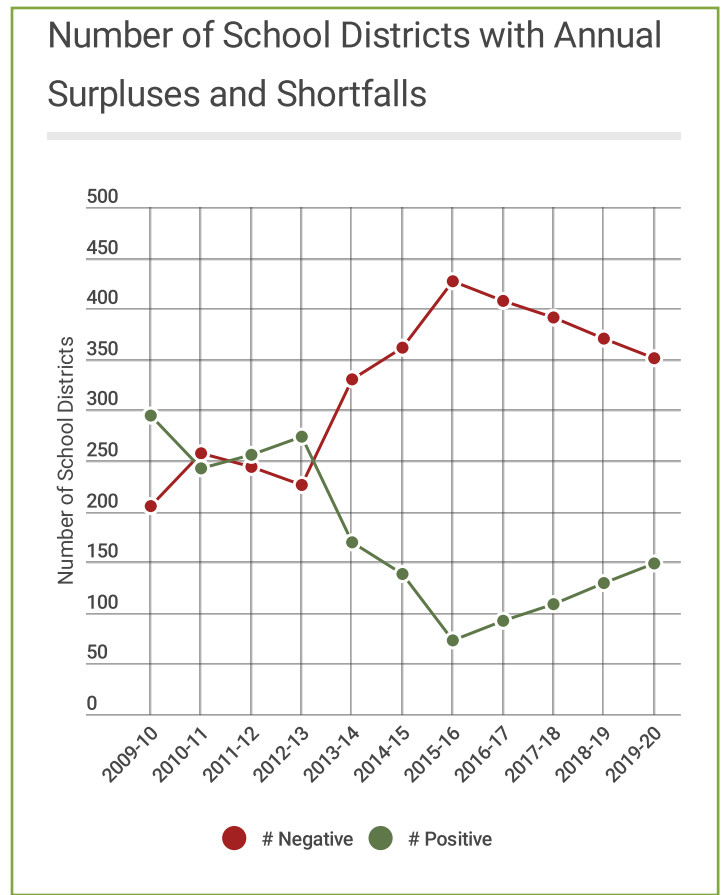
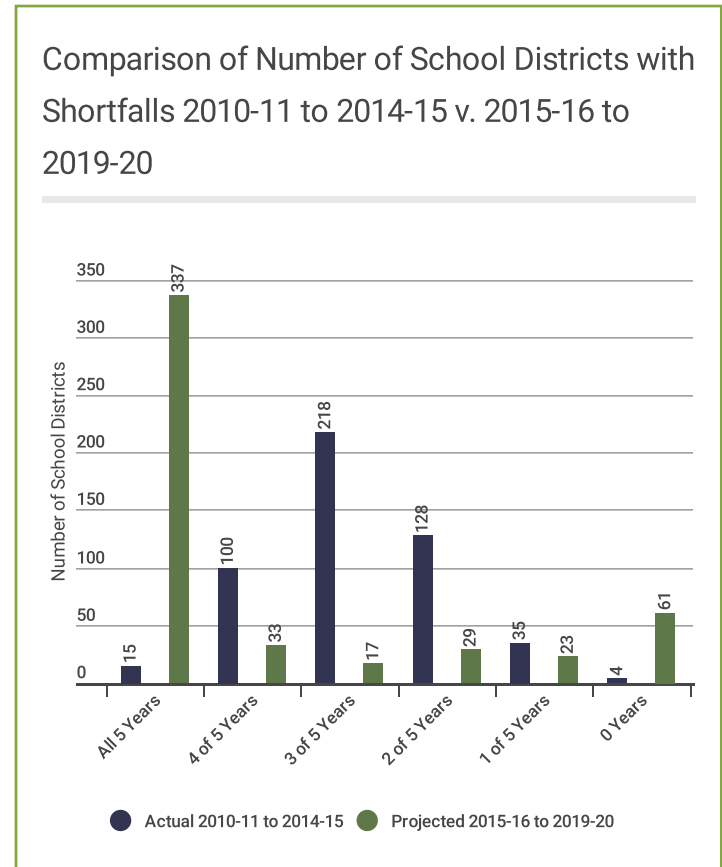


Figure 4



Cautions on Interpretation of District Surpluses

While the overall state results show that there will be a net shortfall with 351 (70%) of the districts with projected shortfalls through 2019-20, the remaining 150 districts (30%) are projected to have surpluses by that time.

In accordance with the Pennsylvania school accounting regulations, the projected revenues and expenditures are for the current operations of districts. Expenditures that have been delayed or not made over the past six years of fiscal turmoil and budget cuts will likely be demanding attention in upcoming budgets. Even those districts with projected surpluses will likely have greater expenditure needs in the near future than have been projected under the conservative assumptions in this analysis. A variety of important budget items will require greater attention and funding than was the case in the prior six years and could well consume some or all of the projected surpluses for many districts.

These include:

- Deferred maintenance for buildings and equipment
- New capital construction in growing districts
- New technology requiring equipment modernization and electrical, plumbing and building infrastructure upgrades
- Personnel contracts in districts with salary increases beyond the annual 1.5% growth assumed in the projections. There have been several years of actual payroll cost reductions across the state, including years in which teachers have had no salary increases,⁵ and there will be significant pressures in some areas where the 1.5% average growth will not hold true.
- Health care cost growth in the districts has been tempered by thousands of lost positions, the economy itself, cost shifting and buy-downs within district health care plan design, and in some cases even positive ACA impact. However, like salaries, that period anomaly is not going to hold in place forever,

As a result, it should not be assumed that districts with surpluses have extra funds that are not needed and do not require modest local tax increases and state funding as projected in the analysis.

5. As an extreme example, teachers in the School District of Philadelphia have been working under the terms of an expired contract and have not had a salary increase in five years.

PRIOR ACTUAL FISCAL CONDITIONS 2009-10 THROUGH 2014-15

School districts experienced turbulent fiscal times during the 2009-10 through 2014-15 years. There were substantial changes from year-to-year in many of the major accounts, both in revenues and expenditures as shown in Table 5. However, the changes were neither consistent within nor across the major categories.

Actual Changes in Revenues

The composition of revenues for school districts during the 2009-10 through 2014-15 period changed considerably as illustrated in Figure 5. The most consistent funding stream was Total Local Revenues, which showed a generally steady rising trend of \$350 million to \$525 million annual increases and were the main and only stable source of funding for school districts. Revenues received from state and federal sources were very volatile, the least consistently reliable, and made several large scale reversals during this period. BEF funding was reduced in the early years as the federal ARRA funds were received by the state and used to supplant state sources. In 2011-12 as federal ARRA funds ended, state BEF monies increased to provide some

Figure 5

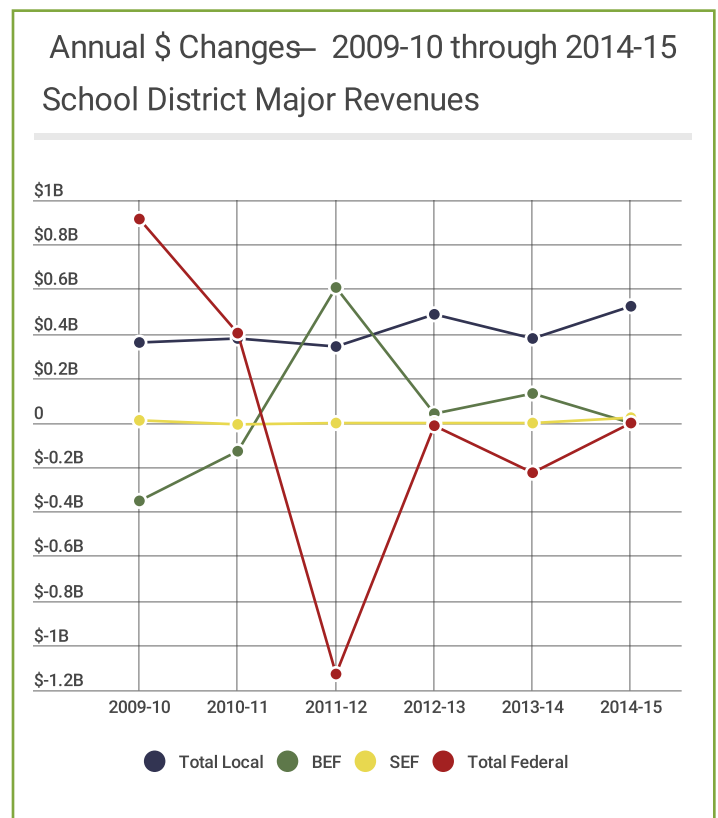


Table 5 - Actual Annual \$ Changes, 2009-10 through 2014-15

	ACTUAL						
Changes in Revenues	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	6-Year Totals
Total Local	\$360,417,181	\$380,071,272	\$341,745,239	\$484,721,963	\$380,095,453	\$525,152,672	\$2,472,203,780
BEF	(\$352,407,046)	(\$126,717,782)	\$606,809,914	\$38,891,303	\$129,938,660	\$0	\$296,515,049
SEF	\$11,540,324	(\$7,814,766)	(\$494,752)	\$747,886	(\$1,389,769)	\$21,618,726	\$24,207,649
Total Federal	\$917,579,247	\$403,981,966	(\$1,125,323,532)	(\$11,126,828)	(\$224,789,670)	\$2,050,950	(\$37,627,866)
Major Revenues	\$937,129,705	\$649,520,690	(\$177,263,131)	\$513,234,325	\$283,854,674	\$548,822,348	\$2,755,298,611
Changes in Expenditures							
Net PSERS	\$4,869,227	\$256,922,762	(\$63,453,936)	\$172,952,243	\$218,404,073	\$216,449,606	\$806,143,975
Salaries	\$405,596,523	\$235,492,904	(\$483,726,082)	(\$91,227,247)	(\$55,175,670)	\$132,094,364	\$143,054,793
Health Care	(\$167,034,969)	\$99,175,463	\$11,715,466	(\$5,122,432)	\$11,457,233	\$142,107,907	\$92,298,668
Charter Tuition	\$88,078,183	\$154,081,973	\$185,545,242	\$123,081,922	\$167,383,172	\$50,720,723	\$768,893,468
Other	\$187,940,088	\$173,078,930	(\$75,796,753)	\$181,071,195	\$127,213,099	\$283,813,188	\$877,319,748
Major Expenditures	\$519,449,053	\$918,752,032	(\$425,716,063)	\$380,755,682	\$469,281,907	\$825,185,788	\$2,687,710,651
Surplus or (Shortfall)	\$417,680,652	(\$269,231,341)	\$248,452,932	\$132,478,643	(\$185,427,233)	(\$276,363,439)	\$67,587,960
\$ Negative	(\$664,311,698)	(\$511,907,563)	(\$317,916,421)	(\$301,820,651)	(\$446,607,280)	(\$561,167,566)	(\$2,803,731,179)
\$ Positive	\$1,081,992,349	\$566,369,353	\$566,369,353	\$434,299,294	\$261,180,047	\$284,804,126	\$2,871,321,391
# Negative	206	258	244	226	330	362	
# Positive	294	242	256	274	170	138	
Average per Shortfall District	(\$3,224,814)	(\$1,984,138)	(\$1,302,936)	(\$1,335,490)	(\$1,353,355)	(\$1,550,187)	
Average per Surplus District	\$3,680,246	\$1,002,794	\$2,212,380	\$1,585,034	\$1,536,353	\$2,063,798	

offset, but only covered about half of the federal reduction. In the last three years, state BEF funding varied between smaller increases and zero in different years. State SEF funding had both small positive and negative changes during most of the period, but was essentially flat until an increase of \$21 million occurred in 2014-15 as a new SEF subsidy formula was implemented. Federal revenues had substantial increases in 2009-10 and 2010-11, but plummeted in 2011-12 when federal ARRA funding came to an end. In the three following years, federal revenues showed minor changes except for 2013-14 when they were reduced substantially again by \$225 million. Overall annual increases in Total Revenues ranged from over \$900 million to approxi-

mately \$300 million with one negative year; the average annual increase was \$450 million.

The six-year totals in Table 6 are more telling of the main trends over the period. The primary burden of maintaining adequate revenues was squarely on local revenues, most of which came from property taxes. Total local revenues increased steadily throughout the period, with six-year increases totaling almost \$2.5 billion. Of the additional funding from 2009-10 through 2014-15, 90% came from increased local taxes; the state provided only 12% of the increased funding through the BEF and SEF subsidies and the federal funds had a small negative change from the

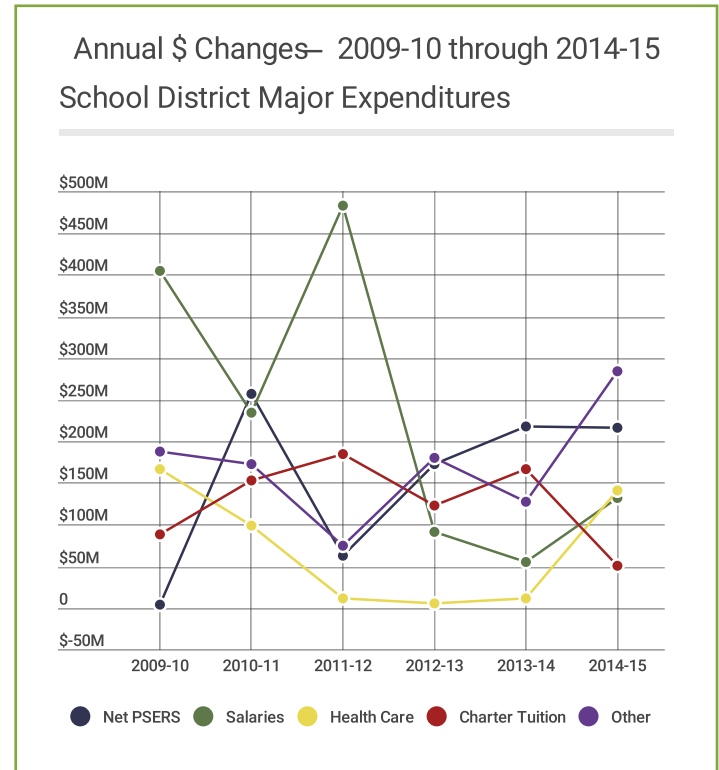
beginning to the end of the period in spite of its increases and withdrawal of large federal ARRA funding.

Table 6 - 6-Year Actual Total \$ Changes 2009-10 through 2014-15

	6-Year Totals	% of \$ Change
Changes in Revenues		
Total Local	\$2,472,203,780	90%
BEF	\$296,515,049	11%
SEF	\$24,207,649	1%
Total Federal	(\$37,627,866)	-1%
Major Revenues	\$2,755,298,611	100%*
* Does not add up to 100% due to rounding		
Changes in Expenditures		
Net PSERS	\$806,143,975	30%
Salaries	\$143,054,793	5%
Health Care	\$92,298,668	3%
Charter Tuition	\$768,891,215	29%
Other	\$877,319,748	33%
Major Expenditures	\$2,687,708,399	100%
Surplus or (Shortfall)	\$67,590,212	

ter School Tuition, which grew by \$185 million in 2011-12, while traditional public school district budgets had sharp reductions in staffing and programs.

Figure 6



Actual Changes in Expenditures

Expenditure patterns in the 2009-10 through 2014-15 period were a contrast between before and after 2011-12. The general pattern was generally increasing expenditures in the initial two years, followed by a precipitous drop of most expenditures in 2011-12, and then a period of increases in the final three years. Figure 6 illustrates the annual changes in expenditures. It looks something like a spaghetti diagram due to the changing patterns of expenditures through this period.

Following the loss of federal ARRA revenues, the increase in the state BEF funding made up only about 50% of the revenue decline. Without sufficient revenues districts were forced to cut their budgets to reach a balance. The largest reductions came through elimination of personnel by not replacing retirements or by layoffs where necessary. This had a direct impact on the almost \$500 million reduction in Salaries in 2011-12. Additionally, key salary related items also were affected: Net PSERS dropped over \$60 million; the growth in Health Care substantially slowed almost \$90 million that year. Further, in accordance with the budget reduction process, Other Expenditures declined \$75 million. The only major expenditure area that increased was Char-

ter School Tuition, which grew by \$185 million in 2011-12, while traditional public school district budgets had sharp reductions in staffing and programs. In the three years following 2011-12, Salaries continued to decline each year at a lessening rate up to the final year when there was an increase. PSERS, due to steadily rising ECR rates, once again increased rapidly, reaching over \$200 million per year. Expenditures for Health Care mostly continued to grow. Likewise, Other Expenditures increased from \$130 million to \$280 million per year. Charter School Tuition continued its very large annual increases from \$130 million to \$170 million per year, slowing to \$50 million in the last year.

Actual Surplus or Shortfall

As would be expected with the substantially changing revenues and expenditures during this period, there was considerable variation in the Surplus/Shortfall results. Three of the six years had total statewide net surpluses and three years had total statewide net shortfalls with the shortfalls predominantly in the latter years. The primary causes for the surplus/shortfall outcomes were the timing and interactions of several key categories. Steadily increasing Net PSERS expenditures overtime contributed significantly toward shortfalls. The combination of increases and decreases in federal revenues and state BEF played against one another, although changes in federal amounts tended

COMPARISON OF MAJOR REVENUES AND EXPENDITURES

Differences between Two Periods

to dominate changes in state BEF amounts in a given year. Declining Salaries in the middle years to reach balanced district budgets, and their connections with PSERS and Health Care contributed greatly to surpluses in these years. Steady increases in annual Charter School Tuition Payments provided ongoing pressure toward shortfalls up to the final year. And underlying all these annual variations, Total Local Revenue provided a regular and ongoing revenue stream for districts as a bulwark against shortfalls.

A comparison between the two time periods under study is instructive in examining what differences there are between actual revenues and expenditures in the past five years with those that are projected for the next five years. Table 7 shows the dollar amounts for the major budget categories for revenues and expenditures for the ending years of the two periods, along with the dollar and percentage change for each from 2014-15 to 2019-20. Total Local Revenues remain the single largest revenue source by far in both years and have the greatest projected dollar and percentage gains in the next five years. The projected increases in local funding reach \$2.8 billion, approaching an 18% growth. BEF funding is approximately one-third of local funding in both years; over the five years with an annual projected gain at 2% per year, BEF is projected to increase by \$730 million, or a 13% overall increase. SEF and Federal funding remain relatively minor contributors to the overall support of K-12 funding in Pennsylvania.

The statewide surplus/shortfall is a net amount combining the number of districts that had an annual surplus with the number of districts that experienced a shortfall for a net result. Of more interest is the number of districts that suffered a shortfall as they are the ones that are under fiscal stress and will have to reduce their budgets and programs or raise taxes to reach a balanced budget as required by law. At the beginning in 2009-10 there were 206 districts that reported a shortfall. The next years the shortfall (negative) districts rose to approximately 250 or half the total number of districts. The final two years showed a substantial increase in the number of shortfall districts reaching 362 (72%) by 2014-15. These results were previously shown in Figure 3. Overall, the fiscal conditions of a majority of Pennsylvania school districts worsened during the 2009-10 through 2014-15 period.

Table 7 - Total Budget Comparisons

	Actual	Projected	5-Year Changes	
Revenues	2014-15	2019-20	\$ Change	% Change
Total Local	\$15,886,605,775	\$18,711,024,927	\$2,824,419,152	17.8%
BEF	\$5,523,417,557	\$6,255,904,987	\$732,487,430	13.3%
SEF	\$983,014,252	\$1,074,988,660	\$91,974,408	9.4%
Total Federal	\$814,576,354	\$814,576,354	\$0	0.0%
Major Revenues	\$23,207,613,938	\$26,856,494,928	\$3,648,880,990	15.7%
Expenditures				
Net PSERS	\$1,037,652,360	\$1,904,155,594	\$866,503,234	83.5%
Salaries	\$11,044,870,775	\$11,898,462,611	\$853,591,836	7.7%
Health Care	\$2,510,573,018	\$3,359,713,027	\$849,140,009	33.8%
Charter Tuition	\$1,486,434,771	\$1,897,109,292	\$410,674,521	27.6%
Other	\$6,176,996,627	\$7,160,832,047	\$983,835,420	15.9%
Major Expenditures	\$22,256,527,550	\$26,220,272,570	\$3,963,745,020	17.8%

Salaries dominate the expenditure categories with \$12 billion projected by 2019-20 and an \$850 million increase over the five years. This is a major surge over a total increase of \$140 in the six previous years combined, which included several years of overall salary decreases due to reductions in staffing (Table 5). In the prior period, these personnel losses, estimated at 23,000 positions,⁶ had direct impacts not only on salaries, but on salary-related expenditure categories. With fewer district staff, there were lower than otherwise expenditures for PSERS and Health Care.

Other Expenditures, a grouping of non-personnel expenditures, make up the next largest category in magnitude and have the largest projected dollar growth. Health Care is the third largest expenditure category and also has a dollar growth comparable to Salaries and PSERS. Charter School Tuition Payments were approximately the same dollar magnitude with PSERS, but have a smaller projected dollar growth due to halving the projected annual growth as a result of a drop in the 2014-15 actual change.

Figure 7 illustrates the changes in percentage support from the major revenue sources over the total five-year amounts for each time period. The two largest projected changes in percentage share are in: 1) Total Local Revenues where the share of support is projected to decline from 90% to 77%; and 2) BEF where the state share is projected to increase from 11% to 20%. However, the projected reduction in percentage support share for Total Local Revenues and corresponding increase for BEF could be misleading. The very high Total Local Revenue share from 2009-10 through 2014-15 was due to the relatively low funding increases from BEF during this time period; as shown previously in Table 5, two of the years in the six-year period had reductions in the BEF subsidy and another had a zero dollar increase. Additionally, Table 7 shows the impact in dollars, not just percentage change, where the amount of funding from Total Local Revenues is projected to increase by approximately \$2.8 billion over the next five years, while over the same time, state BEF funding is projected to increase at \$730 million (assuming an annual growth of 2.0%). BEF thus raises its share of support, although it would continue to contribute a much lower amount than Total Local Revenues.

Figure 7

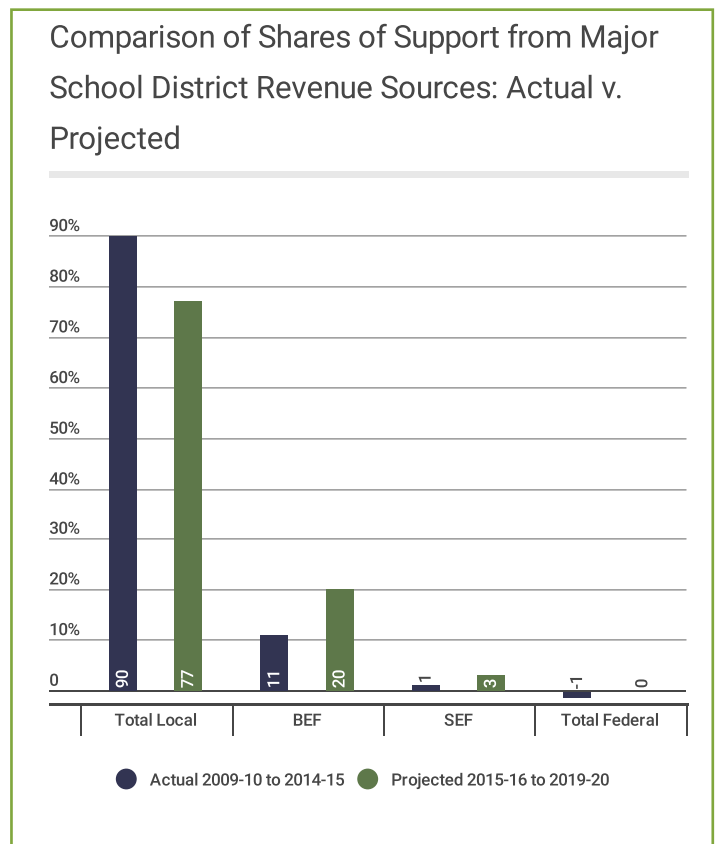
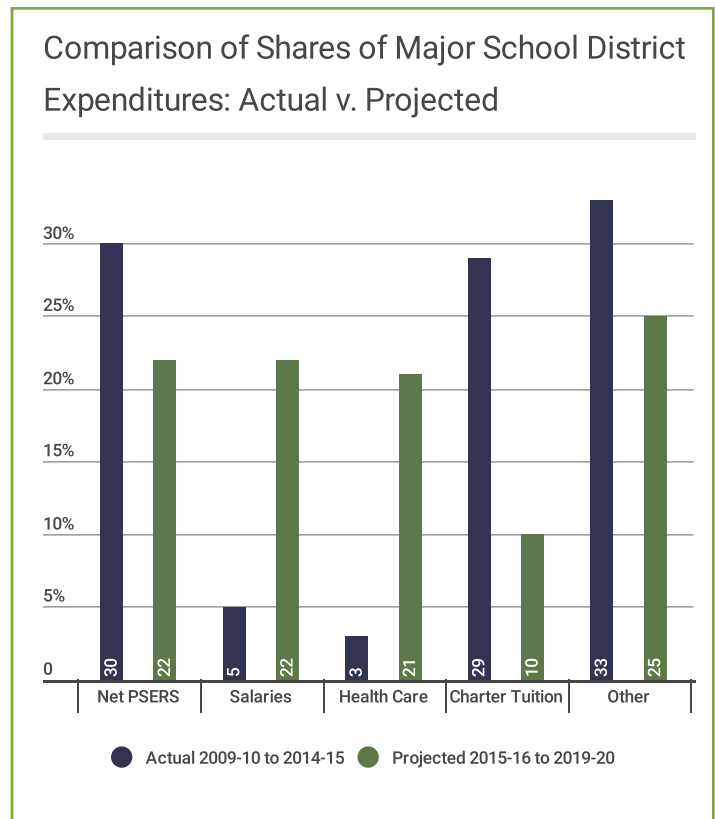


Figure 8



6. Pennsylvania Association of School Administrators & Pennsylvania Association of School Business Officials. January 2015. "Continued Cuts: The PASA-PASBO Report on School District Budgets."

Figure 8 shows the same comparisons for expenditures. It reflects the projected changing composition of district expenditures. The result would be a more equal distribution of expenditure categories, with four of the five categories in the 21% to 25% range of total expenditures. Previously, the distribution was more distorted with PSERS and Charter Tuition being the primary expenditure drivers. It should be noted that while SEF is itemized on the state revenue listing, special education expenditures for both instruction and support are incorporated into the growth of virtually all expenditures categories. Consequently, special education's mandated program costs contribute directly to—and are built into—the cost growth projections for Salaries, PSERS, Health Care, Other Expenditures, and Charter Tuition.

In sum, the upcoming five years in the projections are likely to continue to be difficult for school districts following on from the period just completed. It is clear that 'fiscal stress' has permeated statewide, any economic rebound has not materialized to date, and more districts will continue to face difficult budget challenges in the near future. If some of the assumptions about important revenue and expenditure projections prove to be overly optimistic, the districts' fiscal difficulties will become even greater.

SENSITIVITY ANALYSES OF MAJOR REVENUES AND EXPENDITURES

Several analyses were conducted to test the sensitivity of the projection results to changes or potential changes in the assumptions. These are important analyses since many of the assumptions are estimates based on past conditions, policy decisions yet to be made by the legislature and school districts, and future economic conditions. The results given in Table 8 provide a policymaker's guide to gauge the impacts of decisions that result in changes in revenues and expenditures. It shows the effects of a 1% change in the value of each of the variables in terms of the dollar impact, the additional number of districts put in a shortfall condition, and the total number of districts in shortfall after the change. Note that the dollar impact could be either positive or negative depending on the direction of the change, although most of them are illustrated as a negative fiscal impact on districts. Increased percent changes in revenue items would raise projected revenues and decreases would reduce them. For expenditures the reverse is true; an increase in the percentage change would increase the expenditures, but lower the overall surplus/shortfall results, while the opposite would be the case if the expenditure change were negative.

Table 8 - Sensitivity Analyses for Revenue and Expenditure Categories

	Baseline	Change Amount	Test Amount	\$ Impact	Change in 2019-20 Shortfall Districts	Total Number of Shortfall Districts
Revenues						
Total Local	2.63%	-1.00%	1.63%	(\$188,727,315)	78	429
BEF	2.00%	-1.00%	1.00%	(\$61,332,402)	50	401
Expenditures						
Salaries & PSERS	1.50%	1.00%	2.50%	\$128,947,420	69	420
Subtotal Salary + PSERS				\$23,486,837		
				\$152,434,257		
Health Care	6.00%	1.00%	7.00%	\$44,115,874	53	404
Charter Tuition	5.00%	1.00%	6.00%	\$25,458,075	25	376
Other	3.00%	-1.00%	2.00%	(\$74,844,328)	41	310

A 1% change in the projected annual Total Local Revenue increases would modify the revenue estimates about \$190 million per year. The rate used in the projections is the median of the three-year average rate for each district, approximately a 2.63% increase; a reduction of 1% in that rate would reduce the annual Total Local Revenue growth to approximately 1.63%. Concomitantly, an additional 78 districts would be projected to go into shortfall in 2019-20 reaching a total of 429 districts or 86% of all districts.

The baseline assumption for BEF in the model is a 2.0% annual increase. Each 1% increase or decrease in the BEF from this base would change the revenue estimates by approximately \$60,000,000. For example, a 1% decrease to a 1% annual increase in BEF would result in a loss of state revenue to districts of \$60,000,000 and an additional 50 districts having shortfalls by 2019-20. Conversely, a 1% increase in the BEF assumption to a 3% annual increase would result in 50 fewer districts having shortfalls by 2019-20.

Each 1% change in projected Salaries would result in a change of about \$130 million per year and a related change of \$25 million per year in PSERS (since PSERS expenditures are based on the level of Salaries). The base case in the model is a 1.5% annual increase. If average salaries increased by 1% to 2.5%, the additional cost to the districts would be just over \$150 million in 2019-20 and 69 additional districts would be in shortfall, reaching 420 districts, or 84% of districts in the state. However, if Salaries increases were held down to only 0.5% annually through a combination of personnel reductions and negotiations, then the district expenditures would be reduced by the same \$150 million in 2019-20 and 69 fewer districts would have shortfalls.

For Health Care, a 1% increase in the estimated annual growth would yield a \$44 million change in annual expenditures and 53 more districts having shortfalls. The model has a 6% increase as the base case. A 1% lower rate would reduce the projected expenditures by \$44 million and have 53 fewer districts in shortfall.

Each 1% change in the rate of Charter School Tuition Payments would cause a \$25 million change in annual expenditures and an additional 25 districts in shortfall conditions. The base case for the model is a 5.0% increase. If the tuition payments were reduced by 1%, then the additional costs to the districts would be lower by approximately \$25 million.

For Other Expenditures, the grouping of non-personnel, non-capital expenditures, a change of 1% in the projected change would mean an annual change of \$75 million. If the change were a reduction in the growth rate, then the effect would be to reduce expenditures by that amount and to reduce the number of districts in shortfall. The base case for the model is a 3% annual increase. The reverse effects would be projected if the districts were not able to reduce Other Expenditures and had a 1% higher growth rate.

APPENDIX

- Definitions
- Assumptions for Model
- Detailed Description of Analytical Approach
- Worst Case Scenario
- Fund Balance Analysis

Definitions Used in the Study⁷

Revenues used in the study are:

- Total Local revenue. Including property tax (77% of total), earned income tax (9%), all other local taxes collected, and all local non-tax revenue. (6000 revenue code)
- Basic Education Funding (BEF) from the state (7110 revenue code)
- Special Education Funding (SEF) from the state (7270 revenue code)
- Total Federal revenue (8000 revenue code)

Expenditures used in the study are:

- Public School Employees' Retirement System (PSERS). Net PSERS amount—district cost only. State subsidy for PSERS is deducted from total PSERS expenditures (230 expenditure code less State Subsidy 7820 revenue code)
- Salaries. Total salary amounts (1000 expenditure code)
- Health Care. District health care costs (210 and 270 expenditure codes)
- Charter School Tuition Payments (562 expenditure code). Includes both tuition payments for special and nonspecial students
- Other Expenditures (Non-Capital)
 - Benefits - All remaining accounts except PSERS and Health Care.
 - Social Security - district cost only (220 expenditure

7. Based on accounting codes from *Manual of Accounting and Financial Reporting for PA Public Schools*. Revised August 2016.

code less State Subsidy revenue code 7810)

- Tuition Reimbursement (240 expenditure code)
- Unemployment Compensation (250 expenditure code)
- Workers' Compensation (260 expenditure code)
- Other Postemployment Benefits (OPEB) (280 expenditure code)
- Other Current Employee Benefits (290 expenditure code)
 - o Purchased Professional and Technical Services (300 expenditure code)
 - o Purchased Property Services (400 expenditure code)
 - o Other Purchased Services except Charter Schools (500 expenditure code less 562 expenditure code)
 - o Supplies (600 expenditure code)
 - o Property (700 expenditure code)

Other Objects (800 expenditure code) which include interest payments and Other Uses of Funds (900 expenditure code), which include redemption of debt and fund transfers are excluded from the analysis.

Assumptions for Projections: Baseline Case

• Total Local Revenue

Used actual latest three-year average change for each district with any negative average set to 0. The median three-year average growth across all districts was 2.63%. The growth of Total Local Revenue (primarily property taxes) parallels the IFO projections of property tax growth through this time period,⁸ although there are some year to year variations.

• BEF

Used 2% annual increase as a most likely estimate. Only the last three years were projected since the 2015-16 and 2016-17 actual amounts were known. Distribution to districts was based on the new BEF formula allocations.

• SEF

Used 2% annual increase.

• Total Federal

Total federal funding was included. Used 0% annual increase. No repeat of ARRA funding is anticipated. Most Federal programs require LEAs to spend all funds provided within a narrow range of carry-over, so any significant Federal increases will have little impact on the surplus/shortfall positions in this study.

• PSERS

Used NET district costs after deducting state subsidy. Incorporated official PSERS Employer Contribution Rates that are increasing, but at a declining rate from 25.84% in 2015-16 to 35.53% in 2019-20.

• Salaries

Used 1.5% annual increases for all districts.

• Health Care

Used 6% annual increases for all districts.

• Charter School Tuition Payments

Used 5% annual increases for all districts (2014-15 median). This represents a halving of the lowest growth rate prior to 2014-15 and a two-thirds reduction of the average growth rate of 15% in those years.

• Other Expenditures (Non-Capital)

Estimated at 22.6% of total expenditures (latest three-year average). Projected at 3% annual increases for all districts this area captures major instructional and support expenses, including but not limited to contracted service areas for special education, Intermediate Unit services, tuitions other than charters, transportation, and facilities operations.

Detailed Description of Analytical Approach

A simulation model was created to project the results for each selected fiscal category. The model contained the six past years of actual data for each district for each of the fiscal categories. From the base data, the annual dollar and percentage changes were determined for each district. Since for some fiscal elements there were substantial differences among districts in the annual changes for a given year and within each district on a year to year basis, several statistics were calculated for each year to examine the summary results; these included the average for the total state change, the average of the individual district changes, and the median of the individual district changes. To provide more insight to the overall results, the number of districts that had positive and negative annual changes and the total dollar amounts involved across the state were also calculated each year.

Using the model, projections for the revenues by category and for the major expenditures for each district were calculated annually for the five years, 2015-16 through 2019-20. The projections were based on the most likely assumptions established previously. Looking at the results, if the projected revenues exceeded the expenditures, the

8. Independent Fiscal Office. 2017. Letter to Pennsylvania State Representative Jim Cox regarding forecasts for school property taxes. January 4. Harrisburg, PA.

district would have a surplus, but if projected expenditures were greater than revenues, the district would experience a shortfall. The shortfall indicates the magnitude of fiscal stress the district would be facing in the future and the additional revenues or size of the budget cuts necessary to reach a balanced budget as required by law. To examine the varying impacts on districts, the number of districts with shortfalls or with surpluses annually for the five years was determined.

The results were summarized to the state level to determine the projected fiscal conditions for Pennsylvania’s school districts over the next five years. Analyses were conducted to examine whether there were expected to be surpluses or shortfalls each year both for the state as a whole and for individual districts along with the number of districts that has surpluses and shortfalls each year and the dollar magnitudes involved. The trends over the five years were also examined along with the impacts of each of the fiscal categories on the outcomes.

Without a substantial intercession within any of the major costs included in the study or share changes in state or local revenue streams, the projected overall statewide results will remain reasonably accurate since multi-year trends were used to extend the projections to future years. The study methodology utilized net district pension expenditures, a 1.5% average increase in payroll, health care increases and modest increases in other non-capital expenditures and charter school tuition payments. Districts, which face cost trend change in one, two or more of these areas at levels greater than allowed, will undergo greater fiscal stress than this study depicted unless their revenues

grow at a correlational trend.

Further, as districts build their 2017-18 budgets (guessing at state funding once again), they have already reconciled fiscal stress (balancing revenue and expenditure variances) from 2015-16 and are factoring in estimated 2016-17 operations. While it is fully expected that there will be some variation for a given district, the projection methodology has in the past been quite accurate for overall state-wide results.

Worst Case Scenario

Changes in the key variables may not just occur singly. Rather, it is likely that many of them may change simultaneously, particularly in reaction to economic conditions in districts and the state and to significant fiscal policy decisions. To see a worst case that would reflect the combined impact of multiple changes from the original base cases, the projections were recalculated with all the variables changed in negative directions at the same time. The only exception was for Other Expenditures where a reduction in the percent increase was included with the thought districts may be able to reduce in these areas to compensate for other negative changes. While these changes may not happen, it illustrates a projected lower bound on district fiscal conditions in the next five years. Table 9 presents the “Worst Case” scenario with the changes in the base case assumptions along fiscal results in 2019-20, along with the 5-Year changes for each variable. It also provides an estimate of the combined overall surplus/shortfall and number of districts with shortfalls in the final year.

Table 9 - Worst Case Scenario

Revenues	Baseline Case	Worst Case Value	2019-20 \$ Change	5-Year Summary \$ Change	2019-20			
					Surplus/ Shortfall	# Negative		
Total Local	2.63%	1.63%	(\$188,727,315)	(\$843,749,321)				
BEF	2.00%	0.00%	(\$122,664,804)	(\$360,825,995)				
Expenditures								
Salaries & PSERS	1.50%	2.50%	\$128,947,420 \$23,486,837	\$597,794,894 \$95,667,359				
Subtotal Salary + PSERS			\$152,434,257	\$693,462,253				
Health Care	6.00%	8.00%	\$88,231,747	\$329,142,397				
Charter Tuition	5.00%	10.00%	\$127,290,377	\$496,808,771				
Other	3.00%	2.00%	(\$74,844,328)	(\$340,928,650)				
Totals			(\$604,504,173)	(\$2,383,060,087)			(\$601,572,159)	485

Under these modified assumptions, Total Local Revenue would not increase as fast, dropping to annual increases of one percent less than the prior three-year averages; this changes the median district increase to 1.63% from the base case value of 2.63%. This variable has the greatest impact on the total results since this category is the largest dollar variable; the impact would be a reduction in local funds in support of education of almost \$190 million per year and a total five-year reduction of almost \$850 million.

If BEF were not to receive any increases from the legislature beginning in 2017-18 for the next three years, state funding for education would fall by \$122 million per year and by a total of \$360 million by the end of the five years. Depending on the accuracy of the IFO's projected deficits in state revenues and the legislature's potential funding decisions, this would seem to be a real possibility on the downside in the Worst Case scenario.

On the expenditure side, combined increases in Salaries and the related PSERS expenditures at a 1% increase from an average of 1.5% to 2.5% throughout the five-year period would have a substantial impact, increasing expenditures by over \$150 million annually and by a total \$700 million by 2019-20.

A 2% increase in the estimate of growth in Health Care expenditures from 6% to 8% would raise district expenditures by \$90 million per year and a total of \$330 million in five years.

Charter School Tuition Payments represent a potentially significant and serious threat to district fiscal stability. If the annual increase in payments rose from the projected 5% per year to 10%, the impact would be as great as the 1% increase in salaries, \$127 million annually and a five-year expenditure for districts of \$500 million. This level of increase could be experienced since the 10% annual increase is lower than any of the annual increases in the 2009-10 through 2013-14 period, which averaged 15% annual growth and where annual increases reached 19% per year on two occasions and the lowest annual growth rate was 11%. The exception is 2014-15 with a sharp drop to a 5% annual increase, which is the increase used in the base case.

For Other Expenditures the base case estimate of 3% per year was reduced to 2% per year. This was the only change in assumptions that reduced the level of expenditures and had a positive effect on the budget. The basis of this estimate being that these are expenditures over which the district has significant control and offer an opportunity to

reduce the budget, in contrast to the other categories of expenditures in the projections. This decrease in the projected rate would yield a reduction in expenditures of \$75 million annually and \$340 million over the five years.

The total combined effects of the changes to the Worst Case assumptions would reach \$600 million in annual lost revenues and increased expenditures. Over five years this amount would reach a projected \$2.4 billion in negative impacts on school district budgets, which would result in massive reductions in the quantity and quality of educational programs in Pennsylvania. By 2019-20 the annual shortfall would reach \$600 million; this would affect 485 districts, 97% of districts in the state, with shortfalls that would necessitate them reducing their budgets, staff, and programs.

Fund Balance Analysis

Pennsylvania school districts can utilize five separate types of fund balances that serve different purposes as specified in the *Manual of Accounting and Financial Reporting for PA Local Education Agencies*.⁹

0810 Nonspendable Fund Balance

Amounts that cannot be spent because they are either in a non-spendable form, or legally or contractually required to be maintained intact such as inventory, or principal of a permanent fund.

0820 Restricted Fund Balance

Amounts constrained to be used for a specific purpose per external parties or legislation.

0830 Committed Fund Balance

Amounts constrained to be used for a specific purpose as per government's highest level of decision making authority such as the school board, board of directors, board of trustees, etc. Note: Board Resolution required. Constraint can also be removed or changed by an equal level action.

0840 Assigned Fund Balance

Amounts intended to be used for a specific purpose as per a committee or individual authorized by the governing body. These amounts are not restricted or committed.

0850 Unassigned Fund Balance

Amounts available for any purpose within the General Fund only. Other governmental funds, by their nature would automatically require that funds be classified as nonspendable, restricted, committed, or assigned. In the event that a fund, other than the general fund has expen-

9. PA Office of the Budget. 2016. Chart of Accounts for PA Local Educational Agencies. Revised September 1. Harrisburg, PA.

Table 10 - Total and Relative Size of Fund Balance Amounts (\$ in thousands)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15*
Committed + Assigned	\$1,123,854	\$1,728,040	\$1,973,765	\$2,259,821	\$2,446,470	\$2,550,103
Unassigned	\$1,700,073	\$1,539,762	\$1,564,941	\$1,723,588	\$1,643,400	\$1,730,293
Total	\$2,823,927	\$3,267,802	\$3,538,706	\$3,983,408	\$4,089,870	\$4,280,396
Total Expenditures	\$24,330,129	\$25,097,499	\$24,761,443	\$25,564,248	\$26,128,265	\$27,386,591
Fund Balance % of Total Expenditures						
Committed + Assigned	4.6%	6.9%	8.0%	8.8%	9.4%	9.3%
Unassigned	7.0%	6.1%	6.3%	6.3%	6.3%	6.3%
Total	11.6%	13.0%	14.3%	14.3%	15.7%	15.6%

Source: PA Department of Education webpage. Detailed AFR Data, General Fund Balance: 1996-97 to 2014-15 (Excel). Accessed January 10, 2017. Available at <http://www.education.pa.gov/Teachers%20-%20Administrators/School%20Finances/Finances/AFR%20Data%20Summary/Pages/AFR-Data-Detailed-.aspx#.VZwC6mXD-Uk>.

* For a comparable report of Pennsylvania fund balances, see David Davare. 2016. "Explaining School Fund Balances: Are PA Schools, with \$4.7 Billion in Reserve Funds, Really Flush?" Policy Brief, Center on Regional Politics, Temple University. Available at <http://www.cla.temple.edu/corp/files/2012/12/Fund-Balance-Update-Policy-Brief-Web.pdf>.

ditures that exceed revenues, the unassigned fund balance category may be used to report a negative ending fund balance only.

Of these different types, the three main fund balance accounts used by school districts are the Committed, Assigned, and Unassigned. The committed and assigned fund balances are used to set aside funds to be used for specific purposes, while the unassigned fund balance serves more as a contingency fund and can be used for any purpose to support the district. However, by statute, unassigned fund balances for Pennsylvania school districts cannot exceed 8% of total expenditures.

A fund balance analysis examined the magnitude and variations of these three major accounts over the time period 2009-10 through 2014-15. The standard measure of fund balances is the percent of total expenditures and was used as the metric since dollars alone are insufficient to evaluate the appropriateness of fund balances, which are relative to individual district spending levels and economic conditions. Another comparable indicator is the number of equivalent days of budget coverage of the fund balance; this puts the dollars and percent measures in an operating perspective for a district. For example, the 8% maximum established for unassigned fund balances equates to approximately 29 days for a district to operate.

The fiscal history of total annual school district fund balances in Pennsylvania is shown in Table 10. Here, the

Committed and Assigned fund balances are combined into a single account since they are both used to set aside monies for specific planned future uses in the district. The actual dollar amounts are also shown as a percent of total expenditures to measure their relative magnitude.

The patterns of the two types of fund balances have been quite different over the past six years as illustrated in Figure 9. Unassigned fund balances have remained more or less steady, fluctuating up and down small amounts annually ranging from 6.1% of total expenditures to 7.0%. At these levels, they have consistently remained well below the maximum permissible levels allowed by the state. The general pattern is one of a stable budget fund that supports district current operations.

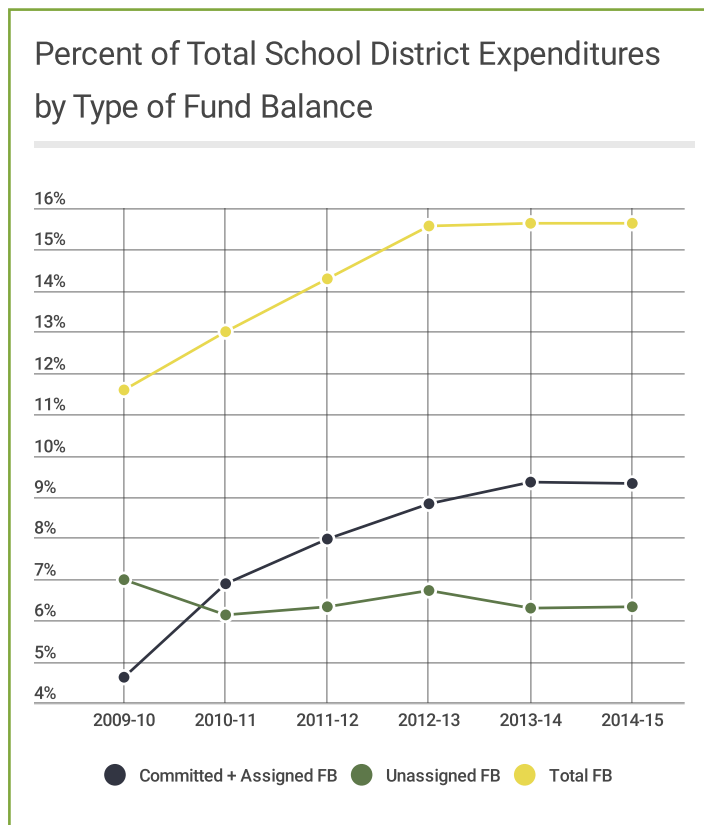
By contrast, Committed and Assigned fund balances have grown steadily and have more than doubled over the six-year period, going from 4.6% of total expenditures to 9.4%. Committed and Assigned fund balances, after starting at a lower level, have exceeded Unassigned fund balances in every year since 2010-11. The different purposes of these fund balances is reflected in their growth pattern in connection with economic and fiscal stress and uncertainty that districts faced over this time period.

The dollar growth in committed and assigned fund balances are intertwined with the past six years of state policy and actions and reflect districts acting to maintain and protect their fiscal ability to operate adequate educational

programs in accordance with educational standards established by the state. The fiscal policies and mandates that have impacted districts include:

- unreliable and substantially delayed state budgets;
- state funding uncertainty and volatility in levels of state subsidies;
- state withdrawal from capital formation policy and support (PlanCon);
- rapidly rising pension expenditures;
- substantial increases in charter school tuition payments and elimination of the state support;
- increases in reserves for rising health care costs;
- no state subsidy increases for special education for multiple years; and
- nearly a decade of some extreme deferred maintenance in some districts and other LEAs.

Figure 9

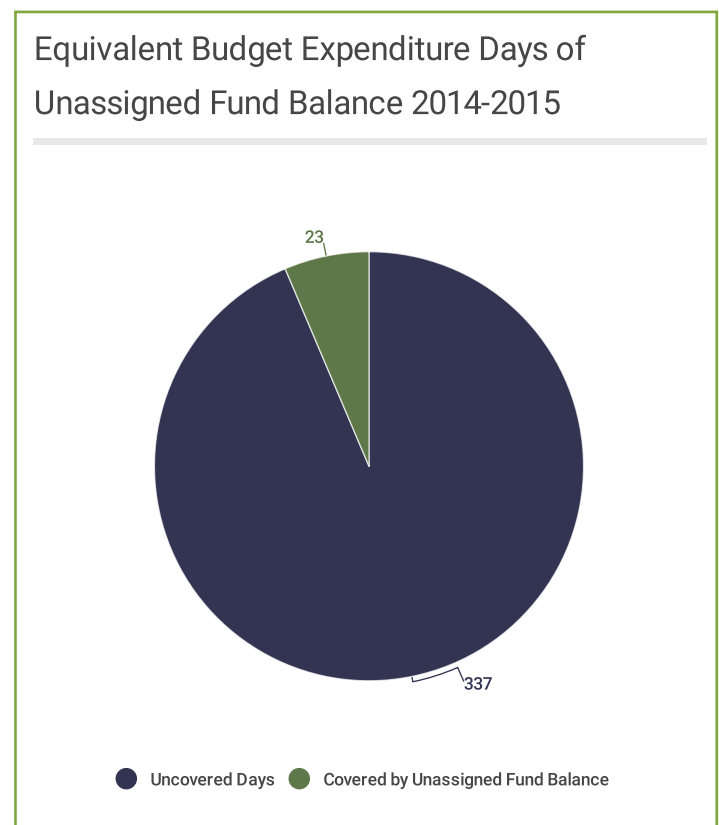


District responses to the fiscal stresses from these state policies and mandates were strongly influenced by the restrictions of Act 1 on the ability to increase annual millage rates. Without the ability to raise property taxes beyond the level of inflation, prudent fiscal budgeting and planning led districts to build reserves ahead of time to support anticipated future expenditures. To achieve a balanced budget without significant educational program reductions in the face of unfunded state mandates and uncertain, and, in

some cases, reduced state funding, meant establishing committed and assigned fund balances from which to support future needs.

To illustrate the relative magnitude of an unassigned fund balance, Figure 10 shows the proportion of the budget year that the actual 2014-15 state total unassigned fund balance represented in relation to districts' total expenditures for the operating year. The total unassigned fund balance for all districts in 2014-15 was 6.3% of their total expenditures. This was equivalent to 23 days of operation for a 360 day year. Using their unassigned fund balances alone, districts could only operate for approximately three weeks—less than a month's payroll and vendor payments.

Figure 10



About the authors:

Dr. William Hartman is a professor emeritus at the Pennsylvania State University's College of Education. His areas of research include public school finance, financial management of schools, technology applications in educational administration, and data analysis for student performance improvement and decision making. His recent research focuses on the fiscal impacts on school districts of the current economic crisis. Other areas of interest include school district budgeting practices, special education finance, charter school funding, resource allocation at school and district levels, and decision making models in educational finance. Hartman has served as a consultant or advisor to state school funding projects in California, Florida, Maryland, North Carolina, Ohio, Pennsylvania, Idaho, and Vermont. He obtained a bachelor's degree in mechanical engineering at University of Florida, master of business administration in management control and marketing at Harvard University, and a doctorate in educational finance and administration at Stanford University.

Dr. Timothy J. Shrom has served the past 35 years as the business manager/CFO at the Solanco School District in Quarryville, Pennsylvania. Prior to his work at Solanco, he served in the Lancaster County banking sector. He has served as president of the Pennsylvania Association of School Business Officials (PASBO), and represented the Association of School Business Officials International as a member of the National Center for Education Statistics' School Facilities Task Force. For PASBO, he serves as chair of Statewide Health Care Task Force, and as a trustee and operating committee chair for the PA School District Liquid Asset Fund (PSDLAF), a \$5 billion public entity investment fund. Most recently he served as one of nine school finance experts studying school level expenditures for the Policy and Program Studies Services (PPSS) at the U.S. Department of Education. This was a national study conducted by The American Institute for Research (AIR) and released January 2017. Shrom holds a B.S. degree in business from Elizabethtown College, and a master's and PhD in educational leadership from Pennsylvania State University, where he also has done graduate work in the MBA program. He is a board member of the Lancaster County (PA) Chamber of Commerce, and serves as immediate past-chair of the Central Penn Business Group on Health.



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POLICY BRIEF

Hard Choices Still Ahead: The Financial Future of Pennsylvania School Districts

WILLIAM HARTMAN & TIMOTHY J. SHROM

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