

- Report of the New York State Commission on Education Reform, (the Zarb Commission),dated March 29, 2004, and various references cited therein;
- Memorandum in support of Defendants' Sound Basic Education Plan, September 1, 2004;
- Affidavit of Kathy Ahearn in support of the Regents' application to appear as *amicus curiae* and in support of the Regents' proposal, August 10, 2004;
- various materials on the Regents' website, including New York's NCLB compliance plan;
- American Institutes for Research/ Management Analysis and Planning, Inc., Final Reports dated March 2004,Volume 1 ("Final Report") and Volume 2 ("Technical Appendices");
- Campaign for Fiscal Equity, Inc., Sound Basic Education Task Force: Ensuring Educational Opportunity for All, Final Report, May 2004;
- Plaintiffs' memorandum dated September 1, 2004;
- Amicus Curiae* Brief of John Yinger and William Duncombe, September 17, 2004;
- Making Money Matter and Equity and Adequacy in Education Finance, National Research Council, 1999;
- Helping Children Left Behind, ed. John Yinger, MIT Press, 2004;
- Order of the Referees, September 21, 2004;

-State Poverty-based Education Funding: a Survey of Current Programs and Options for Improvement, Center on Budget and Policy Priorities, Kevin Carey, November 2002;

-The Funding Gap, The Education Trust, Fall 2003, and accompanying technical appendix, see edtrust.org;

- Bills passed by the New York Assembly and the New York Senate;

A number of other references I reviewed are cited within the text below. I have also discussed with my colleagues at APA our firm's work in various states.

Credentials

1. Augenblick, Palaich and Associates, Inc.

Augenblick, Palaich & Associates, Inc. (APA) is a Denver-based consulting firm that specializes in providing technical assistance primarily to state-level policy makers, particularly legislatures and state education agencies, around education finance, governance, and school improvement issues. APA has developed expertise in analyzing the equity and adequacy of school finance systems, linking finance to accountability, as well as issues related to charter schools and teacher salary levels. APA was incorporated in Colorado in 1983. The organization was originally known as Augenblick, Van de Water and Associates and more recently as Augenblick and Myers. Currently, senior partners include John Augenblick (founding partner, Ed.D. University of Rochester) and Robert Palaich (formerly a vice-president of the Education Commission of the States [ECS], Ph.D. Columbia University).

Over the past 20 years, APA has worked with policymakers in well over half the states to evaluate state school finance systems and to find ways to link school finance with education accountability and improvement. During that time, the firm has helped to create the school finance systems being used in Colorado, Kansas, Kentucky, Louisiana, Mississippi, New Hampshire, Ohio, and South Dakota. The company has also been involved in evaluating aspects of school funding systems in Alaska, Arkansas, Arizona, Delaware, Idaho, Illinois, Indiana, Maine, Maryland, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, Oklahoma, Pennsylvania, South Carolina, Texas, Utah, Vermont, and Wyoming.

APA has also worked on a range of finance-related issues under contract with numerous states and a variety of organizations, including the BellSouth Foundation, the Council of State Governments, ECS, the Federal Reserve Bank (Atlanta), the Ford Foundation, the Lilly Endowment, the Mid-Continent Regional Education Laboratory, the National Association of Charter School Authorizers, the National Association of State Boards of Education, the National Board for Professional Teaching Standards, the National Center for Education Statistics, the National Community Education Association, the National Conference of State Legislatures (NCSL), the National Education Association, the National School Board Association, and the World Bank.

In the area of education adequacy, APA has undertaken studies of the adequacy of education funding for state policymakers, for education interest groups and for groups of school districts. These studies have used elements of

two of the four approaches to estimating the cost of an adequate education in a particular state. Which approach is used depends upon the state context, the availability of data and purpose of the study. When the study of adequate funding is completed, APA also estimates the impact of the new base cost and adjustments on the state overall and on individual school districts. We have also helped many states review their school finance formulas in light of the adequacy study results.

2. Robert M. Palaich

EDUCATION

Ph.D.	Columbia University (Political Science)	1981
M.A.	Teachers College, Columbia University (Ed. Admin.)	1974
B.S.	University of Notre Dame (Chemistry)	1973

EMPLOYMENT HISTORY

Senior Partner, Augenblick, Palaich & Associates, Inc., Denver, CO (2003-present)

Vice-President: Education Commission of the States, Denver, CO (1998-2003)

Staff Member: Education Commission of the States; Denver, CO (1978-1998)

SCHOOL FINANCE PROJECT EXPERIENCE

team leader or analyst for the following finance-related policy studies			
State	Contracting Agency	Description	Date
Multi-State	Council of Chief State School Officers	Developed cost templates for states to use to estimate the cost of the federal No Child Left Behind legislation	2004
Hawaii	Hawaii Educational Policy Center	Developed cost estimates for Hawaii's compliance with federal No Child Left Behind legislation	2003-2004
Mississippi	Department of Education	Update the state's MAEP program using the successful school district approach with new accountability data	2004
New Mexico	Legislative Education Study Committee	Developed and simulated alternatives to the Training and Experience adjustment in New Mexico's school aid formula that aligned with the state's new licensure system	2003
Tennessee	Coalition of education interest groups	Evaluation of adequate funding	2003
North Dakota	North Dakota Department of Education	Evaluation of adequate funding	2003

New York	Rubin Commission (Staff work contracted to ECS)	Evaluated alternative responses to the lower court's ruling in <i>Levittown</i> case	1984-1986
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BROADER EDUCATION POLICY EXPERIENCE

Prior to joining APA, Palaich was the Vice President of the Policy Studies and Programs division at the Education Commission of the States (ECS). The Policy Studies and Programs unit developed and executed projects on state education policy issues of significant interest to ECS constituents –governors, legislators, state higher education and K-12 education agencies and other interested education and business leaders.

During the past decade, Dr. Palaich has worked with state leaders in Hawaii, Kentucky, Connecticut, Indiana, South Carolina, New Mexico and California to undertake comprehensive reviews of their education systems. He has also worked with state policymakers on questions of comprehensive school at-risk youth, teacher policy and school restructuring issues in California, Connecticut, Florida, Hawaii, Idaho, Illinois, Maine, New Jersey, Ohio, Oklahoma, Tennessee, Texas, South Carolina, Utah, Washington, West Virginia and Wisconsin, and on school finance issues in New York, Connecticut, Wyoming, New Jersey, Oklahoma and Alaska. He has written articles on education reform, at-risk youth, teacher policy, school finance, local district spending patterns, tax and expenditure limitations, state legislatures and state teacher policy.

3. Education Finance Systems - General Background

Most states today use a variation of the “foundation program” approach as the mathematical procedure to allocate state aid to school districts. This approach, developed decades ago, has proven to be a useful way to “equalize” the distribution of funding based on the relative wealth of school districts when the program includes a significant portion of all school district spending.

Generally, under a foundation program, the state sets a target revenue level for every school district and shares in funding that amount of revenue inversely in relation to the wealth of each district; all other factors being the same, wealthier districts receive less state aid than low wealth districts using this approach. States calculate the target revenue on the basis of two components: (1) a base cost level, or foundation amount, that is constant for all students, and (2) a series of adjustments designed to assure the availability of additional revenue based on the characteristics of students (such as being from a low income family), programs (such as special education), or district size (using enrollment level) that put cost pressures on school districts that they cannot control (these adjustments are often displayed as “weights” that reflect the cost relative to the base cost level – for example, programs for at-risk students may cost 35 percent more than the base cost level so an added weight of .35 [above 1.00] would be used in counting students at-risk of failing in school).

Prior to 1990, policymakers in most states set the base cost level on the basis of how much revenue was available or how much might become available through different levels of taxation. Determining the base cost in this manner

assures both that the state does not exceed some pre-determined spending level and that property tax rates can be set at a particular level. Determining education funding based on the amount of money available, however, is not driven by either student performance or student need.

4. State Finance Systems - Shift of focus from equity to adequacy.

Between the early 1980's and early 1990's, the focus of school finance changed dramatically. School finance litigation moved from a focus on equity to a focus on adequacy (combined with equity). This shift has changed the way states determine the amount of money needed to educate public school students.

a. West Virginia – 1979

In 1979, West Virginia's school finance system was declared unconstitutional based on information that indicated not only that some districts had more revenues and resources than other districts but that no district met the set of absolute standards the judge in the case used to determine whether the school funding system was "thorough and efficient" as required by the state constitution; in effect, the standards identified a set of adequate "input" requirements. *Pauley vs. Kelly*, 255 S.E. 2d 859, W.Va. 1979.

b. Kentucky – 1989

A decade later, a decision in a Kentucky case essentially identified a set of adequate "outcomes" that schools would be expected to meet in order to pass constitutional muster. This case is sometimes viewed as refocusing the attention of policy makers from equity to adequacy--but another way of looking at the case is that it turned attention from adequate inputs to adequate outcomes. The

Kentucky decision is in several ways related to the New York State Court of Appeals' decision in the *Levittown* case, 57 N.Y.2d 27 (1982), by moving beyond equity of inputs argument to one focused on adequate funding to assure students have the opportunity to meet a particular outcome standard.

c. Ohio – 1992

During the 1980s numerous studies analyzing various school finance issues were conducted by the State Board of Education, the legislature, and private groups. In every case, Ohio's school funding system was found to be inadequate. The Ohio Coalition for Equity & Adequacy of School Funding was created in 1991. The coalition, comprised of more than 500 school districts from across the state, filed the *DeRolph* case in December 1991. After years of litigation, the Ohio Supreme Court eventually found that Ohio's funding system for K-12 schools was unconstitutional in March 1997. According to the Court, the system did not meet the constitutional language of providing a "thorough and efficient system of common schools throughout the state." As a result of this finding, the Ohio General Assembly was required to design and implement a new system that would meet the Court's requirements.

The General Assembly's obligation led to the first use of the successful school districts approach in order to define the spending level necessary to provide an adequate education. That approach focused on the spending of school districts that met a set of state student performance standards, which were based exclusively on student performance (or "outcome") data. The Ohio school finance system today continues to be based primarily on the successful

school district approach although the court has criticized the legislature for disregarding certain aspects of the costing-out analysis by the legislature's own expert, APA partner John Augenblick. 728 N.E.2d 993 (2000).

5. How to determine the dollar amount necessary to make available an adequate education, a process commonly referred to as "costing out".

In response to litigation, since 1990, states have begun to develop approaches to calculate a base cost figure targeted to either a particular set of educational services or a particular level of student performance, or both, so that the base cost has a meaning beyond simply reflecting available revenue. The effort to develop these approaches is necessitated by the fact that no research exists that demonstrates a straightforward relationship between how much is spent to provide education services and student performance. If such a relationship existed, then state policymakers could simply determine the level of performance they wanted and provide the appropriate amount of revenue or, conversely, determine how much revenue was available and understand how much performance could be attained.

In the absence of such a simple relationship, four rational approaches have emerged as ways to determine a base cost level: (1) the successful school district approach; (2) the professional judgment approach; (3) the evidence based approach; and (4) the statistical or econometric approach. It should be noted that many states use more than one of these approaches to evaluate education adequacy. These approaches do differ in terms of underlying philosophy, the assumptions that need to be made to use them, the data required

to implement them, and the ease with which they are understood by policy makers, educators, and the general public.

These approaches, while viewed as competing with one another at one level, can also be appropriately viewed as a logical extension of a basic set of common and differing assumptions. It is, however, necessary to select an approach or a combination of approaches to estimate the dollar figure needed for adequate school funding.

Each approach to some extent relies on the following foundations:

- A clear and measurable standard for desired student results;
- A clear definition of on-going input requirements; and
- A measurement and accountability system that allows progress against the standards to be measured and consequences to be enforced.

The unique assumptions for each approach are detailed in the descriptions below. The bottom line is that each of these approaches represents a rational approach to the problem, each has its strengths and weaknesses, and each has its advocates and detractors. On the other hand, some have been used more than others in state finance deliberations, some are more understandable and transparent than others, and some are typically used by state policymakers, while others are typically used by advocates.

In the end, the typical process is such that interest groups and their consultants make recommendations, often mediated by the courts, and the political process adjusts and adopts a final plan for the state.

6. The approaches

a. Successful School District Approach

The successful school district approach is based on the simple premise that any district should be able to be as successful at meeting a set of objectives as those districts currently meeting those objectives provided that every district has the same base level of funding that has been available to the successful districts and additional funding is provided in recognition of the costs of serving students with different needs. This approach examines the “basic” spending figures (excluding spending for capital purposes and transportation, expenditures funded by federal revenues, and expenditures for which adjustment factors would be calculated or are actually used in the distribution of state aid) for districts that currently meet the state’s measurable student performance objectives. In New Hampshire, the approach was modified to include only those districts that were among the lower spending of those that were within a narrow range of meeting the state’s objectives (excluding those that far exceeded the state’s objectives). In Mississippi, the funding levels of separate groups of districts were identified to calculate base cost figures for instruction, administration, and plant maintenance and operation; these separate cost levels were then combined to produce a single base cost level. In Maryland, spending levels were calculated at the school level because the state has so few school districts.

The successful school district approach is most useful when the state has specified its student outcome and input objectives and districts can be identified that meet them. The characteristics of the approach are the following:

- it is based on what people do today to meet the standards;
- it is empirical and tangible, based on the spending of districts meeting the standard;
- it assumes that resources can be used in very different ways in successful districts;
- it first establishes the base cost of providing services to students with no special needs in districts with average costs (i.e., no special circumstances); and
- adjustments to the base cost must then be made for special student needs and variations in regional costs.

b. Professional Judgment Approach

The professional judgment approach relies on the views of experienced service providers to specify the kinds of resources, and the quantities of those resources, that would be expected to be available in order to achieve a set of objectives specified for the service providers. This “input-based” approach was developed in Wyoming to calculate a base cost amount in response to the state Supreme Court’s requirement that the school finance system reflect the cost of the “basket of goods and services” needed to assure that a high school graduate would be sufficiently qualified to be admitted to an institution of higher education

in Wyoming. The approach uses panels of experts to specify the way education services should be delivered in order to meet state standards.

Once the services have been specified (for example, the type and configuration of regular school programs, extended-day and extended-year programs, numbers of different types of personnel, professional development, and technology), costs are attached and a per-pupil cost is determined.

This approach reflects the experiences of people who are actually responsible for delivering education services, which may be combined with research results, as a rational way to specify the resources required to produce a specific level of student performance.

The actual procedures of implementing the professional judgment approach vary in the states that have used it. For example, in some states, panel members come from the state in which the work is being done, while in other states, panel members come from outside of the state. In some states, multiple panels are used, with one panel reviewing the work of another panel, while in other states a single panel is used.

Regardless of how the approach has been implemented, it has been designed to distribute funds through a “block grant” – that is, without specifying exactly how money should be spent – despite the fact that the prototype schools designate what the experts believe is the best combination of resources.

The advantages of the approach are that it reflects the views of actual service providers and is usually easy to understand; the disadvantages are that it tends to be based on current practice and there may not be evidence, beyond

individual experience, that the provision of money at the designated level, or even the deployment of resources as specified by the prototype models, will produce the desired outcomes.

c. Evidence-based Approach

The evidence-based approach assumes that information gleaned from research exists to define the resource needs of a hypothetical school district in order to assure that it can meet state standards. This approach was used in New Jersey to determine the resource needs of a subset of school districts, commonly referred to as “Abbott” districts, that the court had identified as requiring special attention; this approach not only determined resource levels, but the also specified the programmatic ways in which such resources should be used.

The strength of the approach is that it incorporates the latest information about the way services should be delivered to improve their likelihood of success. But there are several disadvantages including: whether research has been done on all relevant interventions; whether the existing research about what works applies to all demographic situations; and the fact that the approach is not state specific.

d. Statistical (or Econometric) Approach

The statistical approach is based on understanding those factors that statistically explain differences in spending across school districts while controlling for student performance. The approach has proven difficult to explain in situations other than academic forums. The approach requires the availability of lots of data, much of which needs to be at the school or student level in order

to be most useful. No state has used the statistical approach alone to determine the parameters of a school finance formula. (A version of the statistical approach was coupled with a resource cost model to determine an estimate in Massachusetts.)¹ However, the statistical approach has been used to establish some of the adjustments states use to allocate support sensitive to uncontrollable cost pressures, such as setting the weights for students enrolled in special education programs or creating the formulas to reflect the costs associated with different enrollment levels.

7. Which states have studied the adequacy of education funding, used the results of the study to form education finance policy and to spend money accordingly?

- a. Arkansas. A gubernatorial-appointed commission relied on the evidence-based approach and a modification of the professional judgment approach to reach its estimate of an adequate education funding.
- b. Maryland. The Thornton Commission, a gubernatorial commission, used a combination of the successful school district approach and the professional judgment approach to arrive at its adequacy recommendations for legislative action. The legislature subsequently made minor modifications to the Commission recommendations and adopted a new school financing plan.
- c. Massachusetts. Massachusetts relied on a model developed by the business community which used a version of the professional judgment

¹The resource cost model (or approach) preceded the four methods described above; it pegged costs to the resources districts and schools “needed,” but did not tie the resources to a student outcome standard.

approach which relied heavily on the perspective of a single school finance expert, familiar with the inner workings of the state to determine its adequacy estimate.

- d. Mississippi. Mississippi adopted its adequacy education plan (MAEP) based on a version of the successful school district approach. The legislature recently asked for an update of the MAEP plan in light of the new data available from the state's education accountability system.
- e. New Hampshire. The New Hampshire legislature used the successful school district approach to determine its base cost figure.
- f. New Jersey. After years of litigation, the courts in New Jersey finally forced the state to fund the Abbott districts separately and to a given definition of adequacy. The court in New Jersey relied on the evidence-based approach associated with “comprehensive school reform designs.” In recent years, the state has annually paid what the court has deemed necessary.
- g. Ohio. The legislative response to earlier court decisions was based on the successful school district approach coupled with categorical adjustments developed using other analysis. The legislature has distributed some resources according to these estimates, but has not fully funded the recommendations.
- h. Wyoming. Wyoming, in response to a court decision, the state used the professional judgment approach to generate its estimate of adequate education funding. The adjustments adopted by the legislature in

Wyoming focused on issues of sparsity due to the rural nature of the state.

8. Which state policymakers have studied the adequacy of education funding and have not yet used the results to modify their state's school finance policy?

- a. Illinois. The state legislature commissioned an evaluation of adequate education funding using the successful school district approach.
- b. Kansas. The state legislature commissioned an evaluation of adequate education funding using the successful school district approach and the professional judgment approach. No legislative action has been taken using the results of that study.
- c. Kentucky. The state board of education commissioned an evaluation of adequate education funding using the evidence-based approach.
- d. North Dakota. The state department of education commissioned an evaluation of adequate education funding using the professional judgment approach. The results of that study are likely to become the basis for the school finance proposal the department will forward to the legislature next legislative session.
- e. Oklahoma. The state legislature commissioned an evaluation of adequate education funding in two stages. It completed a study based on the successful school district approach in early 2004. It plans to undertake a study using the professional judgment approach in the coming six months.

- f. Oregon. The Oregon legislature initiated a study that led to the Oregon Quality Education Model. The model is a costing out using a version of the professional judgment approach.
 - g. South Carolina. The legislature commissioned an evaluation of adequate education funding using a hybrid of the successful school district approach and the professional judgment approach.
 - h. Texas. The legislature has commissioned an evaluation of adequate education funding using the statistical approach. The study is underway.
 - i. West Virginia. The legislature, in response to the court case, commissioned an evaluation of adequate education funding using a resource cost model. (See footnote number 1.)
- 9. Which states have studies of the adequacy of education funding *not* sponsored or endorsed by the state?**
- a. Colorado. The Colorado School Finance Project commissioned an evaluation of adequate education funding using the successful school district approach and the professional judgment approach.
 - b. Indiana. The Indiana State Teachers' Association commissioned an evaluation of adequate education funding using the professional judgment approach.
 - c. Kentucky. A coalition of school districts commissioned an evaluation of adequate education funding using the professional judgment approach.

- d. Missouri. A coalition of “good government” and education interest groups commissioned an evaluation of adequate education funding using the successful school district approach and the professional judgment approach.
- e. Montana. The state school boards association commissioned an evaluation of adequate education funding using the successful school district approach and the professional judgment approach.
- f. Nebraska. A coalition education interest groups commissioned an evaluation of adequate education funding using the professional judgment approach.
- g. South Carolina. The South Carolina School Board Association commissioned an evaluation of adequate education funding using the professional judgment approach.
- h. Tennessee. A coalition of education interest groups commissioned an evaluation of adequate education funding using the successful school district approach and the professional judgment approach.

10. Conclusion

There is great interest and activity in states across the country around the idea of adequate education funding. States are using variations of four basic approaches to create their estimates of adequate education funding. Each of these approaches has a solid, logical rationale as its foundation. The successful school district approach is one of the two most frequently used approaches, and

is a professionally-acceptable methodology for determining adequate funding levels.

11. The Proposed New York State Plan (based on the Governor's proposal, S&P work completed for the Zarb Commission, the Zarb Commission Final Report and elements of the Regents' proposal)

a. Opening Caveat

As the situation currently stands, the "state's proposed plan" has not been enacted. The comments that follow are based on my interpretation of how the described proposals will likely be implemented. The opinions set forth herein are based on my assumption that the defendants' plan, which consists of a collection of well-thought out proposals, will be implemented as described.

b. The Proposed New York State Plan

i. Student Performance Standards.

There are three key elements in the Governor's proposal critical to standards and accountability – the adoption of the Regents' operational definition of an adequate education; the acceptance of the state's current assessment structure and the commitment to upgrading the student data management system to allow "value-added" student recordkeeping²; and finally, the establishment of an Office of Educational Accountability to keep the state informed of the details associated with student progress and to fulfill the state's federal NCLB reporting requirements. The student performance standards are critical because they determine the level against which the education system will be calibrated.

²"Value-added" research seeks to identify those teachers, curricula, or educational programs which are effective through measuring the improvement of individual students over the course of time. See the work of William Sanders, cited in the S&P Report at endnote 6.

By adopting the standard referred to in the S&P report as the “Regents' criteria”, the target student performance standard in defendants’ proposal is also consistent with the state’s NCLB compliance plan, which has been submitted to, and approved by, the U.S. Department of Education.

The Regents' criteria on which defendants’ proposal relies are contained in the Regents’ Proposal on State Aid for 2004-2005 in the section entitled an "operational definition of an adequate education". Under the Regents’ criteria, a school district is making available an adequate education if 80% or more of the district’s test takers score at or above the proficient level on the grade 4 English Language Arts and Math tests, and 80% or more of high school test takers score 65 or higher on the five regents exams required for graduation.

ii. Accountability.

The state accountability system is one of the tools that is critical to ensuring that the money provided to districts is wisely spent and produces the desired results. If the Office of Education Accountability proposal were to be adopted, the office would have the responsibility for integrating the new student data systems, the value-added accountability system, the review of districts’ “sound basic education” and resource allocation plans, identification of poorly performing schools, the provision of technical assistance and the monitoring of district responses to those poorly performing schools. The assignment of these significant responsibilities to this office is an important step. A growing number of states have an office of this type. In some states, the office is located within the state's department of education; in others, the office is independent. In my

professional opinion, if enacted and properly implemented, the defendants' proposal would enable the state to ensure that every school in New York City: 1) was receiving sufficient resources to provide a "sound basic education"; and 2) was, in fact, making available the opportunity for a "sound basic education."

12. Defendants' approach to estimating adequacy.

a. The successful school district approach

The work that Standard and Poor's produced for the Zarb Commission used the successful school district approach to estimate an adequate amount of education funding for school districts in the state of New York. To use this approach in a state requires three things: a clear definition of an agreed upon set of student achievement standards and a way to measure them; available expenditure and enrollment data for each of the school districts included in the analysis; and a reasonable number of school districts that actually meet the student achievement standard. Defendants' plan relies on the spending levels of school districts that meet the Regents' criteria as being cost-effective, successful districts.

A criticism of the successful school district approach is that the successful districts are not demographically representative of the state. In my view, it is not required that the districts selected for the analysis be entirely representative of the demographics of the state. The purpose of the successful school district approach is to determine a base cost level – a spending level needed to educate students with no special needs – to the targeted student performance levels. Districts like New York City, which have large numbers of special needs students

(low-income, special education, and limited English proficient students), will receive recognition for the additional cost of educating those students when the additional weights for these students are applied to the base cost figure derived from the successful districts.

It is important to note a few key policy choices in the defendants' plan. First, the Standard and Poor's study uses enrollment data to determine the base student count. Thus, the projected funding for the New York City school district is directly linked to the needs of the New York City student population. Second, defendants' plan allowed for a student to receive more than one weight for special needs. By making these policy choices, the costs generated by defendants' plan are higher than they would have been if different choices had been made.

As set forth in more detail below, in my professional judgment, the successful school district approach recommended by the Zarb Commission and conducted by Standard and Poor's, and the policy choices on which defendants' plan is based, are appropriate and consistent with standards and practices in the field of education finance today.

b. Calculation of the base per-pupil expenditure figure

The Standard and Poor's study established a base cost figure using the identified successful school districts. This cost excluded transportation, debt service and capital expenditures, typical in this type of analysis. In the successful school district approach, one of the most difficult steps is to remove from the base of the districts selected, all costs associated with special needs

students. Standard and Poor's accomplished this by subtracting from the expenditures in each district, the district's special education, economically disadvantaged, and limited English proficient student enrollment times their respective weights. While this approach may be the best available at the time, it only reflects what the districts were imputed to be spending, not what they actually spent on these students. In other words, the most accurate base would be calculated by subtracting what the successful school districts were actually spending on special needs students. Since New York public school districts do not currently collect such data, subtracting the average spending is reasonable in my judgment.

c. The Efficiency Factor

State policymakers are often concerned that the spending efficiency of school districts be taken into consideration when developing estimates of adequate education funding. There is no standard procedure that is typically used across the states as an efficiency factor. Further, there is not agreement among experts concerning the various approaches. In their State Aid proposal, the Regents relied upon the spending levels of the "bottom half" of the identified successful school districts as being cost-effective. The state of New Hampshire has also adopted this approach. The Zarb Commission and Standard and Poor's included this approach to efficiency in their study, and relied on the spending levels of the cost-effective successful school districts. Using this type of efficiency adjustment is within the bounds of standard practice in the field of education finance.

d. Adjustment for Cost of Living

The fact is that most states do not use either a cost of living or cost of education adjustment in their state education aid formula. States that use such an adjustment (approximately 10) all use different types of adjustments and different ways of applying it. Dr. Jay Chambers, who did the work on the Geographic Cost of Education Index (“GCEI”) for plaintiffs, is a nationally-recognized expert in this field and has computed similar indices for all states in the mid-1990s for the National Center for Education Statistics, a subdivision of the U.S. Department of Education. It is reasonable for the defendant’s proposal to include a GCEI cost adjustment to take into account regional cost differences.

e. Adjustments for special student needs

It is presently difficult for the successful school district approach to identify the weights for special needs students due to the fact that it is very unlikely that school districts track expenditures on special education, economically disadvantaged, and English Language Learners in their accounting systems.

When my firm undertakes an evaluation of the adequacy of education funding, we often couple the successful school district approach with the professional judgment approach in order to develop student weights that are tailored to the specific state. If you do not undertake such an analysis, you are left with the approach that Standard and Poor's used to identify special needs student weights – namely, reviewing the literature and examining the weights that other states use and applying them to New York. Given that method of identifying the weights, it appears that Standard and Poor's appropriately

identified and applied the weights in their cost estimate. Significantly, S&P's methodology allows a student with multiple special needs to receive the weight of each the special needs categories for which he/she qualifies.

As to the weights identified by S&P, our experience working in states and our review of what states are using as their weights for these categories found the following:

For special education students, a weight of 2.1 is a good weight, not a minimum. The Center for Special Education Finance has recommended a weight of between 1.9 and 2.1 over the past several years for special-education students who are not the most severely handicapped. See Parrish, Thomas, et al., *State Special Education Finance Systems, 1999-2000: Part II: Special Education Revenues and Expenditures*, Center for Special Education Finance, March 2004; see also the Technical Appendix to *The Education Trust's Fall 2003 Funding Gap Report* at edtrust.org, which recommends a weight of 1.9.

Further, the 2.1 weight for special-education students is in line with what other states use for these students.

For economically-disadvantaged students, the weight of 1.35 is in line with the best thinking and practice in the field of education finance. See, for example, *The Funding Gap*, The Education Trust, Fall 2003. The weight of 1.35 is just below the average weights we have calculated for large school districts in the states in which we have worked. (See more detailed discussion in response to specific questions posed by the panel of special referees.)

Many states do not include a weight for English language learners, and those that do vary widely. For this reason, The Education Trust does not currently recommend a particular weight for this category. *Id.* The English language learner weight of 1.2 is on the low end of the range of weights identified in the states in which we have worked on this student-need category (see discussion below), but defendants' plan compensates for this because many English language learners are also economically-disadvantaged, and therefore will receive multiple weights.

f. Accountability

I have just a couple of additional comments on the mission of the Office of Educational Accountability that bears on the adequacy of education funding. Defendants' proposed plan for district and school recordkeeping associated with the Comprehensive Sound Basic Education and Resource Allocation plans could be quite helpful in the future for answering questions about updating the base spending figure and recalibrating the weights for special needs students. With that data available in a flexible format, it should be possible to readily update the base cost figure and to recalibrate the weights for special needs students. This makes for a powerful "three-year look back" that was recommended by the Zarb Commission and has been adopted by the defendants' plan. Again, the big caveat for the Office of Educational Accountability is that while the accountability scheme looks good on paper, its effectiveness will be determined by how it is implemented.

g. Additional Comments

Finally, it is important to note two key elements of the defendants' plan. First, that money is allocated to each school district, including New York City Public Schools, and the district decides how the money is to be allocated to individual schools. If the schools are identified as under-performing, the state then has additional roles to play.

Second, it is very typical for states to make their commitment to fund an adequate education using a phase-in of the resources. The phase-in helps the state marshal the needed resources, helps the local districts adjust to any additional contribution they might be asked to make, and allows educators to have a planned buildup of resources so they can implement needed changes in an orderly fashion.

Finally, the defendants' plan includes the proposal for a new costing-out study in four years. This makes sense because the costing-out methods will be more refined, additional data on levels of spending on special needs students in New York will have been collected, and the student performance standards required under NCLB will rise above the 80 percent proficient level.

13. Review of the CFE AIR-MAP Report

a. Overview

Our firm frequently conducts professional judgment studies of education adequacy and I am familiar with similar studies conducted around the country. I am not aware of any professional judgment study or of any state which has adopted changes to its school financing formula based on the combined

professional judgment and statistical methodologies used in the AIR / MAP plan. I found the AIR/MAP plan academically interesting, but difficult to decipher. The report is long on data and short on reasons why this approach to estimating adequate education funding is a preferred and practical approach.

Given the desired educational outcome standard that was placed before the professional judgment panels, it appears that the results are calibrated to the 2013-2014 goals of NCLB for the state of New York – namely, that nearly 100 percent of students would have the "full opportunity" to meet the Regents' learning standards and earn a Regents' diploma. References to 2005 and to 2013-2014 are confusing. The standard also appears to be higher than the standard described in the Court of Appeals' decision.

Further, there seemed to be a policy judgment imbedded in the methodology supporting small schools. This sort of policy judgment is typically a local school district responsibility. When specifying the basic equation about cost factors, saying which factors are controllable and which are uncontrollable for a school district, the AIR/MAP methodology treats school size as a factor beyond the school district's control. This creates an incentive (i.e., a weight) for school districts to lower school size and to receive significant additional state aid. Typically, state aid formulas do not provide this type of incentive – one that can be used by a school district to generate more resources. Instead, school districts only receive additional dollars for students who cost more to educate and for higher regional costs, both factors which are beyond the district's control.

b. The AIR / MAP Approach

i. Standard used

The professional judgment panels were asked to design instructional programs for elementary and middle and high schools that allowed students to achieve the following standard.

"The Federal No Child Left Behind Act and state law requires all students in every school district to meet the regents' learning standards within the next 11 years and makes a progress toward that goal each year. As of 2005, all high school students, except for certain special education students, will be required to achieve a passing score of 65 on the regents' exams in English, social studies, mathematics, and science to receive a high school diploma. As of the 2005-06 school year, students in grades 3 through 8 will be tested in English and mathematics (and shortly thereafter in science) to determine whether they are making satisfactory progress toward meeting the learning standards. Rates of yearly progress toward these goals will be disaggregated by racial, economic, disability and limited English proficiency categories."

"Your job is to design an instructional program that will provide all students in the school a full opportunity to meet the regents' learning standards, and to attain a regents' diploma. For students in the early grades and preschool, this means designing an instructional program that will seek to address any learning problems with which students enter school. For students further along in their educational career, it means addressing any deep-rooted educational deficiencies that may have developed as thoroughly as possible and minimizing dropout rates."

In my judgment, this standard has several problems. First, there is no definition of a "full learning opportunity"; this phrase lends itself to subjective interpretation. Second, the different dates referenced (2005, 2013-14) are confusing. The question, often portrayed in standards-based reform discussions, is whether you are *requiring* a percentage of students to meet the standards as

opposed to merely providing them with a "full *opportunity*" to meet the standard. While I firmly believe that policymakers in New York State are going to have to agree on an operational definition of "sound basic education," I am not sure that the CFE / AIR / MAP "desired educational outcomes" statement reflects either the constitutional standard or a consensus among policymakers on the standard in 2004-2005. In my opinion, the statement of desired educational outcomes offered to the professional judgment panels was more closely aligned with the New York State NCLB standard for 2013-14, rather than the NCLB compliance standard in place as of 2004-05 or the Regents' criteria. Using the right target standard is critical to the success of the panels in their task of identifying the resources needed to achieve the defined standard.

In summary, in my professional judgment, the AIR / MAP standard was not as precise as it needed to be and appears to be too high.

ii. The AIR / MAP process as I understand it.

My review of the AIR-MAP study methodology identified the following major steps.

A. For the purpose of selecting professional judgment and members, the study chose educators from successful school districts and schools.

B. The study then conducted two sets of professional judgment panels on four model prototypes of school and districts to identify the education program required to help all students meet the standards.

C. Two additional panels looked at the resources needed for special education students.

D. The panels were then asked to identify the resources needed for "prototypical" elementary, middle and high schools in each of the district types with multiple levels of student need concentrations.

Once the study obtained the results from the professional judgment panels it undertook a first set of regression equations (creating separate equations for elementary, middle and high schools) and estimating the need for specific resources such as teachers and aides at any level of size, percent special-education, percent economically disadvantaged and percent English language learners. Based on these results, the study costed out the 48 different scenarios.

It is not clear why regression equations were used at this point since many of the analyses did not explain the variation in individual resources assigned by the panels. The purpose of conducting the regression analysis was presumably to explain the variation in the amount of a given resource (e.g., elementary teachers) by each panel for each of the 48 scenarios or judgments. The fact that these equations (the R squared) ranged from 20 to 90% undermines one's confidence in the importance of these variables (school size and student need categories - ELL, special education or economically-disadvantaged) in explaining the variation in resources allocated by the panels. See Vol. 2, Appendix G, p. 393.

The study researchers then undertook a second set of regression equations for elementary, middle and high schools to create an overall need index for that type of school that could then be used to adjust the base cost

figure. The resulting coefficients are reported on page 116 of Volume 2- Technical Appendices, and represent how school size, percent special education, percent economically disadvantaged and percent English language learners can be combined to compute the school need index. This “need” index combined with the GCEI cost index were applied to the base cost figure for each type of school and combined with the administrative adjustments to create the total district need estimate.

iii. Reactions to the Approach

In general, properly conducted, the professional judgment approach is a sound way of estimating an adequate amount of educational funding.

I have a number of concerns about the AIR / MAP professional judgment/ statistical approach hybrid, however. Though the AIR / MAP reports are long on calculations, it is not clear why this hybrid methodology is compelling and does not clearly set forth the key assumptions underlying it. As a result of influences on panel judgments and methodological constraints (particularly for school size), one cannot be confident that the ultimate costing out figures reflect the judgments of the panels. For example,

A. the panels may have been unduly influenced by the research summary presented to them (Vol. 2, pp. 86-89);

B. the panels may have been unduly influenced by being told that the public engagement meetings held by CFE and AIR/MAP had revealed a “consensus” that class sizes should be of particular sizes for each school level,

and that the majority of special education students should be mainstreamed (AIR/MAP final report Vol. 1, pp. 12, 16);

C. the design of the study was such that panels had no ability to design programs (for which costs would be imputed) for schools other than in sizes dictated by the AIR/MAP researchers. (see Vol. 2, Appendix G) These school sizes were limited to the average size of current New York City schools despite that even AIR/MAP's report states that "school size is more of a [district] choice" and that there is currently no definitive research on "what optimal school sizes are at each level" (Vol. 1, p. 87);

D. school sizes did not represent typical school sizes or demographic composition of schools attended by most New York City public school students and the largest prototype school was dropped from the analysis (Vol. 2, p. 115). I was concerned that New York City educators did not have the opportunity to work on schools that look like the spectrum of New York City Schools either in terms of existing school size or existing levels of student need.

E. researchers overrode panel members' judgments on two topics - the conclusions of all 8 general education panels that no additional costs were necessary to educate English language learners (see Vol. 2, p. 103; Vol. 1, p. 68-69, 78-79) and the New York City panels' judgments that per-pupil costs remained constant even when the numbers of economically-disadvantaged students increased (Vol. 1, pp. 21-22, 67-68);

F. the costs resulting from panel-members' judgments may have been affected by the smoothing of each resource (e.g. number of core teachers needed) with regression equations;

G. the advantage of estimating individual resources is unclear given that the percent of variation explained is modest at best and several of the individual resources are likely to be highly correlated;

H. school size should not be treated as an uncontrollable factor, earning a potential separate weight;

I. I question the stability of the coefficients in the needs index factor - particularly whether they are stable enough to support a state education aid formula over time; and

J. finally, when the panel judgments were adjusted by the econometric analysis, the close connection between what the panels recommended (their judgments) and the level of each resource that was ultimately costed out was broken.

A significant disadvantage of AIR/MAP's approach is that it is not immediately clear what the base cost is for school districts and what the weights are for the various categories of student and school need. (Figures that Guthrie and Rothstein agree are essential to translating any adequacy study into public policy. See the Guthrie and Rothstein article, "Enabling "Adequacy to Achieve Reality," in Equity and Adequacy in Education Finance, in NRC, 1998.) The courts, legislature and taxpayers would need to know and understand much

more about what these figures are and how they work together before they could be considered for adoption as the basis of the state's education finance system.

Finally, I do not know how easily or cost-effectively this method can be updated and/or reproduced.

In the attempt to incorporate the professional judgment and statistical approaches to estimating adequacy into a single effort, the resulting AIR / MAP study clearly is not consistent with professional practice in the education finance field.

14. Referee Questions Addressed

Establishing the targeted Student Performance Standard

Questions: In addressing subjects 1 and 2 above, what criteria should be used to determine whether the opportunity for a sound basic education is being provided? If student achievement levels are to be used, should the student achievement level used be:

- the State's proposed standard (80% of the test takers of the 4th grade English and Math tests score at a "proficient" level and 80% of the high school students score 65 or more on the five Regents tests for graduation);
- the Regents' proposed standard (an unweighted average of 80% of a district's students achieve a basic proficiency score on seven Regents exams over a three-year period);
- the Regents Learning Standards;

-the “student performance index” described at footnote 8 of the amicus brief submitted by professors William Duncombe and John Yinger of Syracuse University (and, if that index is used, what threshold score should be utilized to define success – 180, 160, 130, or some other threshold); or

-some other student achievement level.

Response:

This may be the single most important decision made in this proceeding because it becomes the target student performance standard for any and all cost estimating procedures. Clarity is important because this standard needs to be reliable and valid to the greatest extent possible. It also must, to the greatest extent possible, have both facial validity and technical validity. This means that a technically correct standard must also be understood by the various groups that interact with the standard including teachers, students, parents, administrators and taxpayers.

The state has several competing considerations in establishing a standard for a sound basic education – the Regents Learning Standards, the Court of Appeals’ constitutional standard and the state’s agreement with the federal government regarding NCLB compliance. The extent to which these definitions are comparable, compatible and can operate in unison, will not only create an easier opportunity for estimating the cost but will also be easier for educators, students and the public to understand and act upon.

It is my understanding that the “regents’ criteria” used in the S&P study, the Regents’ operational definition of a sound basic education, and New York State’s

standard for NCLB compliance are all the same standard. Settling the questions of selecting a student performance standard and defining a sound basic education are critical to the costing-out and the legal process.

The prime advantage of the “Regents’ criteria” student performance standard is that it is objective, based on measurable student results.

The disadvantage of the desired achievement standard used with the AIR-MAP professional judgment panels is that the standard is less specific and geared more closely to the NCLB standard of 2013-14 (having virtually all students reach the state’s definition of proficiency), and appears higher than the Court of Appeals’ standard.

What costing out methodology should be used to establish the base cost or foundation amount? What adjustments for regional cost differences and economies of scale should be added?

Questions: In addressing subjects 1 and 2 above, what costing-out methodology should be used – the “successful schools” method, the “professional judgment” method, or another method?

If either the “successful schools” costing-out method or the “professional judgment” costing-out method is used:

- what specific index should be used to account for regional cost differences;
- what adjustments, if any, need to be made to reflect any economies or diseconomies of scale faced by the New York City School District?

Response:

- My firm has used both methods, successful school district (SSD) and the professional judgment (PJ), individually and combined.

- Though we estimate economies of scale for district size we do not use the statistical or econometric approach as an overall methodology.

- Establishing the student results standard is critical before applying any methodology.

- SSD can be used to establish the base cost but typically is not used to establish the weights for special needs students.

- the SSD approach has been used to establish the foundation level in four states in which my firm has worked;

- New Hampshire
- Maryland
- Mississippi
- Ohio

The SSD approach to establishing the cost of providing an adequate education is a professionally-accepted approach. It is often preferred in the political arena for three reasons – it is easier to understand, it is objective - based on real districts with real students reaching an agreed-upon standard, and it tends to project somewhat lower costs than the other two approaches.

Only a small number of states use a regional cost adjustment in their education aid formula. The methodology based on what attracts teachers to work in a particular school district used to estimate the GCEI index considered here is widely accepted. Since its “final” report in March 2004, AIR-MAP has

recalibrated the index and it is now not possible to determine the ramifications of the change. The S&P study, the cost calculator and the Zarb Commission recommendations are based on inflation and enrollment figures as of January - March, 2004.

In response to the panel's question about taking into account economies or diseconomies of scale, state aid systems do not typically take this into account and the research and policy bases for doing so are unclear. Also, it is unclear whether New York City is advantaged or is disadvantaged by its size. Are the advantages of purchasing in large quantities offset by problems of distribution? Is the ability to make decisions centrally offset by the difficulties of supervision and professional development when trying to implement those decisions? Do the contracts with the various unions help with student achievement or hinder it? Does NYC's configuration of schools and their associated sizes save the district money or is it more expensive? None of these questions is easily answered. No district in the country is of comparable size. It is my professional judgment, therefore, that no adjustments can or should be made for "economies of scale issues" at this time.

In my opinion, the proposed state plan relies upon an approach to costing out that meets professional standards within the education finance field.

Direct Questions about the Successful School District Costing Out Approach

Questions: If the "successful schools" costing-out method is used, what criteria should be used to identify and select the "successful schools"? In that connection, the parties should provide evidence and argument in support of, or in

opposition to, the exclusion from the average cost computation, on grounds of inefficiency or otherwise, of the highest-spending 50% of the “successful” school districts or some other segments of the “successful” school districts.

Response:

First, it is the “successful school district” approach, not the successful school approach. The criteria used to select districts are the student performance measures associated with the standards selected in the first step of this process. Once the standards and associated performance levels have been selected, there should be no disagreement concerning which districts are successful school districts and are therefore are eligible for selection. This is how the 281 school districts were identified based on the criteria developed under the *Regents Proposal on State Aid for 2004-05*.

Regarding the establishment of an efficiency factor, several important points should be made. First, to my knowledge, there is no literature that addresses this topic in the context of the successful school district approach. Second, most policymakers are aware of the fact that each additional dollar does not yield an increment in student achievement and of their responsibility regarding the public purse. These policymakers always ask questions concerning efficiency before they commit to a school funding formula.

Finally, efficiency is recognized in our profession as a valid consideration. The central question put to the Committee on Education Finance of the National Research Council (NRC) by Congress in 1997-1998 was, “How can education finance systems be designed to assure that all students achieve high levels of

learning and that education funds are raised and used in the most efficient and effective manner possible?” (page 2, Equity and Adequacy in Education Finance, NRC, 1999) This question is as pertinent today as it was when it was articulated in the mid-1990's.

An experience base **does** exist on which to base judgments about whether and how to implement an efficiency factor.

-New Hampshire (176 town-based school districts total). In New Hampshire, an efficiency factor was incorporated in the state adequacy amount calculation. The manner in which this was applied eliminated the top half according to spending per pupil of the districts identified as meeting the student results standard adopted in New Hampshire. The efficiency factor is essentially the same as the one used by S&P in their report for the Zarb Commission. The Regents also used this cost efficiency factor in their 2004-05 proposals.

-Mississippi (149 school districts total). In Mississippi, an efficiency factor was incorporated into a proposal to update the calculation of their base cost. The base cost figure in Mississippi is broken down into four components: instruction; administration; maintenance and operations; and ancillary services. A ratio associated with the particular service component (teachers per 1,000 students in instruction component) is used to eliminate districts whose ratio is either very high or very low.

-Maryland (22 county-wide school districts total). In Maryland an efficiency factor was not included in the successful school districts calculation.

In my professional judgment, the proposal put forward by the state to include an efficiency factor is reasonable given current practice and the cost / achievement trade-off illustrated in Table 1 (page 8) of the S&P report for the Zarb Commission. The table shows that for the “top performers” performance standard considered in the report, the difference in spending per pupil between the top 50% in spending per pupil and the bottom 50% of spending was approximately \$4,500. However, the difference on the student performance measures index score between the two was just 3 percentage points. We do not have similar information for the “regents’ criteria” performance standard, so it is unclear whether the exact same pattern would appear. This example, however, illustrates the fact that the relationship between spending and student performance is not as linear as some would suggest or some analysts might like.

Direct Questions about the Student Need Weights used in the Successful School District Costing Out Put Forward by the State

Questions: If the “successful schools” costing-out method is used, the parties should provide evidence and argument in support of, or in opposition to:

- using the cost-weighting multiples proposed by the State (20% for ELL students, 35% for economically disadvantaged students, 110% for special education students, 55% for ELL and economically disadvantaged students, 130% for ELL and special education students, 145% for economically

disadvantaged and special education students, and 165% for economically disadvantaged, ELL and special education students);

- using the cost-weighting multiples proposed by the Regents (100% for students from a poverty background and 30% for special education students);
- using the cost-weighting multiples proposed by professors Duncombe and Yinger (120% for students in poverty, 100% for ELL students, and 200% for students with severe disabilities);
- using some other cost-weighting multiples;
- making adjustments for backlogs in the special education evaluations for New York City schoolchildren

Response:

Before responding directly to the questions, several general points must be reiterated.

-The successful school district approach establishes the base cost for a state.

-The successful school district approach currently does not generate weights for special student needs. This will only be possible when the accounting and time coding systems in schools allow personnel to code time and materials expended providing services to special needs students. The state plan proposes creating the ability to track student achievement in a value-added way and a three year look-back at the

weights associated with special need students. These two initiatives will allow the state to recalibrate special need student weights and to check student progress. NCLB agreements also require New York State to report on the progress of student sub-groups.

-Adjustments for special needs students are a critical part of an adequacy cost study. Using no weights penalizes districts with special needs students. Adjustments in a state school aid formula for special need students are commonplace across the fifty states.

-Making adjustments for special need students is widely accepted in the literature (see the Guthrie and Rothstein article, "Enabling Adequacy to Achieve Reality," in Equity and Adequacy in Education Finance, in NRC, 1999) and in practice (most states either explicitly or implicitly use weights for special student needs).

The options for setting weights include the following:

- Consult the research literature on the topic;
- Consult what other states are currently doing;
- Undertake either the statistical or professional judgment approaches to determine appropriate special need student weights or audit a select number of districts for the amount of time and materials needed to educate special needs students.

The S&P study used a combination of the first two methods to arrive at adjustments they identified.

There are two general approaches to implementing weights for special

student needs. The validity of the weights depends in part on the whether multiple weights can be allocated for a single student.

The first method, the one proposed by the state, is to take the base cost per pupil times the weight adjustment times the number of students in each need category, then add these costs associated with educating special needs students to the base cost per pupil times the district enrollment count. Under the state's proposal, students with multiple education challenges are allowed multiple weights.

The second method, the one adopted by the state of Maryland, also takes the base cost per pupil times the weight times the number of students in the category but a student can be identified in only one category. This approach is probably a slightly less accurate indicator of the cost of educating a special needs student but supporters of this approach argue that this method eliminates the incentive to multiply identify students. Predictably, the resulting individual student need category weights in this method tend to be higher.

The need index proposed in the AIR-MAP reports is highly unusual. First, the resulting "index" is a multiplier to the base cost and does not let policymakers, educators, taxpayers or the public see the actual numbers that drive the value for their school district. Second, it incorporates school size into the student need part of the equation. This is unique in my experience – adjustments are typically made for special need students, district size and regional costs which are beyond the control of the district, but not for school size. School size is considered to be within the control of the local district.

Many states, especially those with rural schools and districts have considered district size in a need calculation, since small districts and geographic sparsity can increase costs. School size has not received such consideration in state aid programs, since this is within a district's control. The "need index" calculation proposed by AIR-MAP, which includes school size as a "need" on par with disabled students, English language learners and economically-disadvantaged students, is not a standard practice in education finance today.

To address "the argument supporting the use of the cost-weighting multiples proposed by the State":

It is my professional judgment that allowing a student to be allocated a weight for multiple need categories is an efficient way to compensate districts for special needs students if you are confident in the validity of the special needs student counts.

It is my belief that policymakers, educators, taxpayers and the public should be able to see the actual numbers that drive the special need student value for their school district and a student weight system, like the one proposed by the state, allows for such transparency.

The special education student weight.

First, the state's proposal eliminates the most severe special education students from this adjustment and district reimbursement for meeting the needs of these students is reimbursed separately.

The proposed weight of 110% for non-severe special education students is consistent with the best thinking and practice in the field of education finance.

Chambers, Parrish and Harr report in their publication, *What are we spending on special education services in the United States?*, that for non-severe special education students the average weight in the most recent period is just below the 110% figure.

From the work that my firm has done in the past five years estimating special education costs in adequacy studies (9 states) using the professional judgment approach, the average additive weight for this group of special education students is between 90% and 120%. In our adequacy studies in certain states, leaders have requested that the special education student weights be developed for mild, moderate and severe categories of special education students. The mild category weight has dipped into the 30% to 50% range. (Recall that defendants' plan would continue the separate reimbursement for severely handicapped students.)

The economically disadvantaged student weight.

The state's proposed weight of 35% for economically disadvantaged students is in line with the best thinking and practice in the field. The Education Trust, a national advocacy group for low achieving students, in several of its publications talks about a 40% adjustment for low-income students. (See *The Funding Gap Report 2003* by Kevin Carey at www2.edtrust.org/edtrust.)

From the work that my firm has done in the past five years estimating at-risk" student costs in adequacy studies (9 states) using the professional judgment approach, the average additive weight for economically disadvantaged

students is between 20% and 45%. In Maryland, because the weights are not additive, the poverty weight was higher, at 139%.

The English Language Learner (ELL) student weight.

The proposed additive weight of 20% for English language learner students is at the low end of my firm's experience with weights in this category in the field.

This is a difficult category to compare because there is variation from state to state in the treatment and in the manner in which students are counted. As a result, the Education Trust does not recommend a weight at this time for this category.

From the work that my firm has done in the past five years estimating "at-risk" student costs in adequacy studies (7 states) using the professional judgment approach as well as other studies, the average additive weight for ELL students is between 50% and 90%, covering a very wide range of estimates. The fact that the state's proposal to use a 1.2 weight is on the low end of the range of our experience is compensated for by the fact that most ELL students will receive additional weight because they are also economically-disadvantaged.

Also, the state's proposal adopts the Zarb Commission's recommendation for a 3-year look back at the weights associated with the three categories of special need students used in the program to determine if they need to be recalibrated. Such an approach, examining the expenditure patterns of districts that are doing well by their special student populations, is entirely consistent with the successful school districts approach to estimating adequacy.

In response to the panel's question about whether a weight should be provided to students awaiting special education classification, it is unlikely that any state financing mechanism can directly influence the speed in which a district completes the evaluation of its special needs students. This is not typically addressed in a costing-out procedure.

Direct Questions about the Professional Judgment Costing Out Approach

Questions: If the "professional judgment" costing-out method is used:

- are CFE's proposed class sizes (14 – 16.8 in elementary grades, 22.6 in middle grades, and 18.4 – 29 in high school) required to provide a sound basic education? If those assumptions were modified, what quantitative impact would that have on the costing-out analysis;
- what evidence is there that 95% of special education students should be educated in the same facility as mainstream students in order to provide them a sound basic education? If that assumption were modified, what quantitative impact would that have on the costing-out analysis;
- what evidence supports the assumptions made about the cost of educating poor and ELL students? If those assumptions were modified, what quantitative impact would that have on the costing-out analysis;
- what evidence supports CFE's proposed school size limits (774 students for elementary schools, 950 for middle schools, 1184

for high schools) built into this analysis, and are these limits required to provide a sound basic education? If these assumptions were modified, what quantitative impact would that have on the costing-out analysis;

- what evidence supports the apparent assumption that overhead expenditures (i.e. spending on district-level functions) must grow in proportion to changes in instructional spending? If that assumption were modified, what quantitative impact would that have on the costing-out analysis;
- how can that method be institutionalized over the long term, and who would be responsible for its composition, operation and mandate;

Response:

Answers to the referee questions in the first five bullets will have an important impact on the costing-out result, but the sensitivity analysis requested can only be answered by those who carried out the study. It should be noted, however, that a professional judgment study is a means of projecting costs to make available an adequate education. Professional judgment studies do not require that the districts actually implement the class sizes or educational programs that the panels specified.

As mentioned earlier, I do not understand why the AIR-MAP study incorporated school size limits into the need analysis in the first place. It is not a standard practice of the professional judgment approach. It is also not the state's

responsibility to support a particular school size configuration over any others. No state that I am aware of provides a direct adjustment of this type in its state aid formula. Finally, New York City, not the state, is in charge of the size of its schools. There is a growing research interest in small schools, supported by the funding interest of several national foundations; but it is not clear if completed research supports state or local policymaker action at this time.

The question about updating and institutionalizing the results of the professional judgment approach is a good one and for which I have no answer. My firm has used the professional judgment approach in many of our studies but we have not been asked to update the results. We assume the cost of the update would be similar to the cost of the professional judgment and data massaging portion of the study just completed. The updating also raises several other questions. If you had a different set of panelists would you get a different set of results? (No research is available on this topic.) Does the smoothing of each resource after the panels have completed their work using regression equations reduce or diminish the contributions of the panels? (Given my understanding of the AIR / MAP process, I believe smoothing of resources diminishes the contributions of the panel.)

Direct questions regarding the determination of the state and local share

Questions: Who should determine the respective State and City shares of the operations funding and capital expenditures necessary to provide New York City schoolchildren the opportunity for a sound basic education, and what methods or principles should be used in determining those respective shares;

Response:

My responses will only focus on the operations funding portion of the question. The state legislature has the responsibility for determining the local share of education funding in two ways: 1) to set the “required local effort” which a local district must contribute toward the amount necessary to provide an adequate education; and 2) to set the yield for any additional mill levied for school purposes that the state has agreed to subsidize. This is true generally across the country and in New York State. Unlike approaches to the costing-out process, the school finance field has few methods and /or principles that relate to this element of education financing; it is typically a policy judgment of state legislatures.

As I understand the Court of Appeals decision, ensuring that a “sound basic education” is available to all students is a shared responsibility of the state and the city. The state’s responsibility is as follows: to set student performance standards; make certain that the city has sufficient dollars; and establish an accountability system (with planning mechanisms like the school resource allocation plans and the SURR school support system) to ensure that the city directs adequate resources to each school.

Ultimately, however, the New York City Public School System is responsible for delivering to each student a “sound basic education.” This requires the district to distribute its critical resources – teachers and innovative programs – effectively and equitably across the district. Such efforts can and will run into tradition, fear of innovation, community expectations and union

agreements. It is a challenging task for the nation's largest district. While this responsibility falls on the district in the first instance, defendants seek to ensure that a sound basic education is available in every New York City school through a combination of adequate funding and the proposed accountability measures.

Direct questions regarding the size of the current funding gap and the phase-in period and process for new resources.

Questions: Each party's best estimate of the amount of the current resource "gap", measured in 2004-2005 dollars, between the total annual funding now expended by the New York City School District for operations and the funding level for operations necessary to assure that all New York City schoolchildren have the opportunity for a sound basic education.

In addressing subjects 1 and 2 above, whether any of the measures that should be implemented with respect to such operating funds or capital expenditures should be phased in over some period of time and, if so, what time period and in what increments;

Response:

My responses will only focus on the operations funding portion of the question.

- As of the March 2004 S&P Report, the calculated estimate of the gap based on the 2002-03 school year for New York City is \$1.93 billion.
- There has been much discussion of the application of the regional cost index, the appropriate way to apply student weights and the consideration of different efficiency factors. At

present, the S&P calculator can not simulate all of the requested alternatives. It is therefore impossible to render a different estimate than the one provided in the March S&P report.

- The state's proposal would make available an additional \$2.5 billion in State funds, \$1.5 billion in City funds, and \$1 billion in federal aid.
- The state also proposes a phase-in of five years and a new costing out study in four years.
- In my professional judgment, the methodology which resulted in the \$1.93 billion costing out figure is sound. So too is the proposed five-year phase-in period.

Conclusion

To briefly reiterate, the defendant's proposal has a number of strengths. They include the following:

- The proposal relies on a readily-identifiable student performance standard that has been adopted by the New York State Board of Regents.
- The successful school district method of estimating the adequacy of education funding has been used by policymakers in many states.
- The advantage of the successful school district method of estimating the adequacy of education funding is that it is understandable for policymakers and is based on spending levels in real schools and

districts meeting an agreed upon education standard. It is consistent with standard practice of school finance experts.

- The costing-out analysis is based on NYC enrollment figures and provides funding in relation to the special student needs of New York City. It generates significant additional dollars for New York City Schools based on the needs of New York City's students.
- The base cost figure can be easily updated. In addition, with data that is to be collected by the Office of Education Accountability, it should be possible to also adjust the special needs student weights on a periodic basis. It is my understanding that the data on spending for special needs students will be reviewed in the next three years and that a new costing-out study would be undertaken in four years.
- Finally, and perhaps most importantly, because of the transparency of the approach, it can be explained to the courts, to lawmakers, to educators, to taxpayers and to the public.

Regarding the costing-out proposal put forward by plaintiffs undertaken by AIR- MAP, the following points should be noted:

While the professional judgment approach to estimating the adequacy of education funding has been used by policymakers in many states, a costing-out based on a combination of the professional judgment and the statistical approaches has not been reviewed or adopted by any other state.

Despite several reports and a significant number of appendices:

- the rationale for this methodology and the underlying calculations are not readily transparent;
- the adjustments for special need students is not clearly identified; and finally,
- the study seems unduly influenced by policy judgments in several areas – class size, school size and the mainstreaming of special education students.

The AIR / MAP study set an achievement standard for its target that seems more appropriate for New York State in the 2013-2014 school year, given the federal NCLB targets. Moreover, the standard appears to be higher than the Court of Appeals standard. Finally, the use of school size in the implied state finance funding formula is troubling because it is a factor that can be changed by school districts to generate additional state aid.

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