

**Joint Legislative Committee on Performance
Evaluation and Expenditure Review (PEER)**

Report to
the Mississippi Legislature



An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi's Institutions of Higher Learning

In FY 2004, the Board of Trustees of State Institutions of Higher Learning (IHL) adopted a new funding formula for allocating state support funds to the state's eight public universities. The formula, primarily based on instructional costs by discipline and level of education, was implemented gradually from FY 2005 to FY 2008. In FY 2009, IHL began to apply the formula to the full amount of general fund support allocated to the universities (less legislative mandates and board initiatives). However, because full implementation of the formula would have resulted in significant immediate funding reductions for some universities, IHL decided to pro-rate the funding adjustments over six years to give universities more time to react to funding changes.

After deducting funds for separately budgeted units, legislative mandates, and board initiatives, IHL allocated \$385,873,404 in state support funds to the universities for FY 2009, representing approximately 13% of IHL's total operating budget for that fiscal year. Five of the eight universities received lower allocations from the funding formula for FY 2009 than for FY 2008 (with differences ranging from \$10,129 to \$175,886 less), two universities received the same amount, and one university received approximately \$1.8 million more for FY 2009.

IHL's use of the funding formula to allocate state support funds to the universities represents a potential improvement over the method that was in place prior to FY 2005. However, IHL's current implementation of the funding formula raises concerns regarding fairness, including:

- using weights (for weighted student credit hours) and allowances (for Predicted Space components) that have not been validated for Mississippi;
- using two different dollar values for weighted student credit hours for the state's universities;
- a method for predicting library space that regularly overestimates space;
- a method for predicting research space that allows two options with significantly different results; and,
- retaining a per full-time equivalent basis for determining eligibility for the Small School Supplement.

Also, IHL's lack of uniformity in defining an "underfunded" university for the rebalancing process creates confusion and results in the potentially contradictory requirement of having "underfunded" universities yield resources to other universities.

November 11, 2008

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November 11, 2008

Honorable Haley Barbour, Governor
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Members of the Mississippi State Legislature

On November 11, 2008, the PEER Committee authorized release of the report entitled **An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi's Institutions of Higher Learning.**

A handwritten signature in black ink, appearing to read "Sidney Albritton", written over a horizontal line.

Senator Sidney Albritton, Chair

This report does not recommend increased funding or additional staff.

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An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi's Institutions of Higher Learning

Executive Summary

Introduction

In FY 2004, IHL adopted a new formula for allocating state support funds to the state's eight public universities. PEER conducted this review to determine the changes in the allocation process that resulted in decreases in funding to five universities for FY 2009 and whether the method of calculating allocations to the universities was fair.

To assess the fairness of IHL's funding formula and to identify areas of needed improvement, PEER determined:

- the amount of IHL's total operating budgets for FY 2009 that was allocated through the funding formula;
- the amount of funds that each university received for FY 2008 and FY 2009;
- how the formula works, including a review of the four cost components driving the formula; and,
- how IHL has implemented the formula, including the calculations that determine the formulated needs of the universities and the calculations that determine the allocations to the universities.

Background

Mississippi's System of Higher Education and Its Funding

The Board of Trustees of State Institutions of Higher Learning (IHL) is a constitutionally created agency of Mississippi state government charged with the responsibility of managing and controlling the state's public institutions of higher learning.

Section 213-A, MISSISSIPPI CONSTITUTION OF 1890, empowers the IHL Board of Trustees to manage the eight four-year institutions of higher learning:

- Alcorn State University;
- Delta State University;
- Jackson State University;
- Mississippi State University;
- Mississippi University for Women;
- Mississippi Valley State University;
- University of Mississippi, including its Medical Center¹; and,
- University of Southern Mississippi.

The state's institutions of higher learning receive revenues from a variety of sources, including state funds (primarily state general funds), special funds (primarily revenues from tuition and hospital revenues/patient fees collected by the University of Mississippi Medical Center), restricted and auxiliary/enterprise funds, and funds from university foundations, including athletic foundations. Approximately two-thirds of IHL funding, excluding funding from foundations, is appropriated by the Legislature, while the remaining third flows directly to the universities outside of the appropriation process.

The general disbursement authority of IHL found at MISS. CODE ANN. Section 37-101-15 (a) (1972) is sufficiently broad to empower it to devise methods for the disbursement of state funds that are not specifically appropriated to a particular institution or purpose. Pursuant to this authority, IHL has historically adopted formulas for allocating such funds to the state's institutions of higher learning.

Changes in IHL's Funding Formula

Effective for FY 2005, IHL adopted a new funding formula primarily based on instructional costs by discipline and level of instruction (e. g., undergraduate, master's, and doctoral). IHL based this funding formula on a formula being utilized by Texas to fund its public universities.

In an attempt to avoid the immediate impact of significant changes to university funding levels as a result of

¹ The University of Mississippi Medical Center is a separately budgeted unit. For FY 2009, state support for the medical center was included in SB 3117, 2008 Regular Session.

adoption of the funding formula, IHL chose to implement its FY 2005 formula gradually. From FY 2005 to FY 2008, IHL applied the FY 2005 funding formula only to the amount of state support funds for IHL (less legislative mandates and board initiatives) that exceeded the amount of state support funds from the appropriation for IHL that was received the previous fiscal year. Because IHL only applied the funding formula to a relatively small amount of the universities' general fund support during these years, the equity problems continued.

In FY 2009, IHL began to apply the funding formula to the full amount of the general fund support allocated to the universities (less any legislative mandates and board initiatives). However, because full implementation of the funding formula would have resulted in significant immediate funding reductions to five of the state's eight universities, IHL made the decision to phase in the funding adjustments over a six-year period in order to give the universities more time to react to the changes in funding. The following section addresses the impact of IHL's implementation of the funding formula for FY 2009.

The Impact of Implementation of IHL's Funding Formula on Individual Universities from FY 2008 to FY 2009

How much of IHL's total operating budgets for FY 2009 was allocated through the funding formula?

IHL's operating budgets for FY 2009 total \$3,018,798,316. Of the total operating budgets, \$788,720,129 is from state support.

Of that amount, state support for separately budgeted units (\$367,500,272 for FY 2009) was not allocated through the funding formula. In addition, state support for legislative mandates (\$32,719,279 for FY 2009) and for board initiatives (\$2,627,174 for FY 2009) was not allocated through the funding formula.²

The remaining \$385,873,404 in state support funds was allocated to institutions through the funding formula for FY 2009, representing approximately 13% of IHL's FY 2009 total operating budget.

² Pages 8 and 9 of the report and Appendices C, D, and E of the report, pages 52 through 54, provide additional information on separately budgeted units, legislative mandates, and board initiatives as they relate to the IHL funding formula.

How much did each university receive for FY 2009?

The amount each university received for FY 2009 ranged from \$15,624,113 at Mississippi University for Women to \$99,031,766 at Mississippi State University. (See Exhibit A, below.)

Exhibit A: University Allocations for FY 2009

University	Allocation
Alcorn State University (ASU)	\$20,199,142
Delta State University (DSU)	22,984,671
Jackson State University (JSU)	40,580,608
Mississippi State University (MSU)	99,031,766
Mississippi University for Women (MUW)	15,624,113
Mississippi Valley State University (MVSU)	15,770,305
University of Mississippi (UM)	81,928,876
University of Southern Mississippi (USM)	89,753,923
Amount allocated through formula and rebalancing process	\$385,873,404

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

How did the amount that each university received for FY 2009 differ from the amount that each university received for FY 2008?

Five of the state's eight public universities received lower allocations for FY 2009 than for FY 2008:

- Alcorn State University;
- Delta State University;
- Mississippi University for Women;
- Mississippi Valley State University; and,
- University of Southern Mississippi.

The differences ranged from \$10,129 less at Mississippi Valley State University to \$175,886 less at Delta State University. Two universities received the same amount for FY 2009 as for FY 2008 and one university, University of Mississippi, received \$1,881,140 more for FY 2009. Exhibit B, page xi, shows a comparison of institutions' FY 2008 and FY 2009 allocations.

Exhibit B: FY 2008/FY 2009 Comparisons of Institutions' Allocations

	A	B	C
University	FY 2008 Allocation	FY 2009 Approved Allocation	Difference
ASU	\$20,274,580	\$20,199,142	(\$75,438)
DSU	23,160,557	22,984,671	(175,886)
JSU	40,580,608	40,580,608	0
MSU	99,031,766	99,031,766	0
MUW	15,760,396	15,624,113	(136,283)
MVSU	15,780,434	15,770,305	(10,129)
UM	80,047,736	81,928,876	1,881,140
USM	89,870,168	89,753,923	(116,245)
Total	\$384,506,245	\$385,873,404	\$1,367,159

Column C = Column A - Column B

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

How the IHL Funding Formula Works

The funding formula is comprised of four components:

- Instruction and Administration;
- Predicted Space;
- Capital Renewal; and,
- Small School Supplement.

IHL determines the amount of each component for a university. The sum of these components is that university's formulated need. Because the appropriated amount is often less than the eight universities' formulated need, the formula distributes the appropriated amount on a pro-rata basis reflecting each university's percentage of the universities' formulated need.

As previously noted, the allocations required by the formula for FY 2009 would have been dramatically less than the allocations received for FY 2008 for some universities; therefore, IHL decided to rebalance funds over a six-year period to reduce the initial impact to these universities.

Exhibit C, page xiii, summarizes how IHL determined the components of each university's formulated need for FY 2009 and each university's actual allocation and refers to relevant sections and exhibits in the report.

Pages 12 through 40 of the report provide a detailed explanation of the funding formula, using as an illustration the calculation of Mississippi State University's FY 2009 allocation from the formula.

Effects of IHL's Implementation of the Funding Formula for FY 2009

Beginning in FY 2005, IHL moved from a method that established funding percentages based on the relative sizes of the universities' enrollments at one point in time to a method that captures changes in enrollments over time and that reflects the differing missions and associated costs of the universities. The funding formula now takes such cost differences into consideration. Because of this, the funding formula has the potential to be a fairer method for funding the state's eight public universities than the method used prior to FY 2005.

Generally, the universities are also treated fairly in that the same formula with the same variables applies to all eight universities. The only differences are the dollar values and values of the variables, such as the number of students, the number of student credit hours, the number of faculty, or the number of majors. Each of these variables is specific to each university and each will change over time. But the formula uses the same variables for all eight universities.

However, concerns of fairness regarding IHL's current implementation of the formula include the use of:

- weights (for weighted student credit hours) and allowances (for Predicted Space components) that have not been validated for Mississippi;
- a higher dollar value for weighted student credit hours at the Research universities than at the Regional universities;
- a method for predicting needed library space that regularly overestimates space; and,
- a method for predicting needed research space that allows two options with significantly different results, which suggests the need for more reliable criteria.

Exhibit C: Components of IHL’s FY 2009 Formulated Need and Allocation Process for the State’s Eight Public Universities

Instruction and Administration	+	Predicted Space	+	Capital Renewal	+	Small School Supplement	=	University’s Formulated Need for Inclusion in Budget Request
(see pages 14-22)		(see pages 22-32)		(see pages 32-33)		<i>(if applicable)</i> (see pages 33-34)		(see Exhibit 24, page 35)

Components of Each University’s Formulated Need

Because the amount of state support to be allocated through the formula is less than the eight universities’ formulated need, IHL must work with the amount of state support received.

Amount of State Support Received	x	University’s Percent of Universities’ Formulated Need	±	Rebalanced Amount	=	University’s Allocation
(\$385,873,404)		(see Column G, Exhibit 24, page 35)		<i>(for that university)</i> (see pages 36-40)		(see Column B, Exhibit 30, page 40)

Components of Each University’s Allocation

(Page references and exhibit numbers refer to the text of PEER’s full report *An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi’s Institutions of Higher Learning*.)

SOURCE: PEER analysis of IHL spreadsheet regarding funding formula.

Also, while IHL's current funding formula is based on the principle of funding per weighted student credit hour rather than funding per full-time equivalent student, which was the basis of IHL's pre-2005 funding formula, IHL's method of determining the Small School Supplement component retains the per full-time equivalent basis. For FY 2009, the result of this was that the state's public university with the lowest number of full-time equivalent students (Mississippi University for Women) did not receive the Small School Supplement.

Finally, IHL's lack of uniformity in defining an "underfunded" university for the rebalancing process creates confusion and results in the potentially contradictory requirement of having "underfunded" universities yield resources to other universities.

Recommendations

1. Using existing resources, IHL should perform a cost study by January 1, 2010, to validate the weights it uses to determine the weighted student credit hours for the Instruction and Administration component of the funding formula and to validate the space allowances used. In the future, IHL should perform additional cost studies at periodic intervals to capture increasing or decreasing costs associated with different disciplines and levels of instruction.

Until this cost study has been performed, the Legislature should not consider any future IHL budget requests based on formulated need as implemented in FY 2009. Until the formula is based on weights and allowances that have been validated for Mississippi and until IHL has developed a definition of an underfunded university that takes into consideration the full range of funding available to a university (e. g., tuition, restricted funds), IHL should, at a minimum, return each university that received a reduction for FY 2009 to its funding level for FY 2008.

2. IHL should determine a uniform dollar value for weighted student credit hours. This dollar value should be used for the weighted student credit hours for all of the universities in the system and not just for some subset, such as Regional universities or Research universities.
3. IHL should utilize the actual number of library users (as determined by library administrators) during peak times of use when predicting the amount of needed library space for universities for the Predicted Space component of the funding formula. Also, in predicting the amount of needed research

space for universities, IHL should first determine the amounts of space used for different types of research that would more closely approximate actual need.

4. IHL should discontinue making comparisons between appropriations per full-time equivalent student when determining eligibility for the Small School Supplement. Instead, IHL should consider using some sort of phase-out when a university's enrollment increases above 5,000 students.

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An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi's Institutions of Higher Learning

Introduction

Authority

In accordance with MISS. CODE ANN. Section 5-3-51 et seq. (1972), PEER analyzed the funding formula used by the Board of Trustees of State Institutions of Higher Learning (IHL) to allocate state support funds to the state's eight public universities.

Problem Statement

In FY 2004, IHL adopted a new formula for allocating state support funds to the state's eight public universities. PEER conducted this review to determine the changes in the allocation process that resulted in decreases in funding to five universities for FY 2009 and whether the method of calculating allocations to the universities was fair.

Scope and Purpose

To assess the fairness of IHL's funding formula and to identify areas of needed improvement, PEER determined:

- the amount of IHL's total operating budgets for FY 2009 that was allocated through the funding formula;
- the amount of funds that each university received for FY 2008 and FY 2009;
- how the formula works, including a review of the four cost components driving the formula; and,
- how IHL has implemented the formula, including the calculations that determine the

formulated needs of the universities and the calculations that determine the allocations to the universities.

Method

In conducting this review, the PEER Committee reviewed:

- IHL's total operating budgets for FY 2009;
- the total operating budgets of the state's eight public universities for FY 2008 and FY 2009;
- presentations by IHL staff concerning previous and current allocation methodologies;
- recommendations of IHL staff concerning adjustments to allocations; and,
- IHL spreadsheets used to make funding formula calculations.

Background

Mississippi's System of Higher Education

The Board of Trustees of State Institutions of Higher Learning is a constitutionally created agency of Mississippi state government charged with the responsibility of managing and controlling the state's public institutions of higher learning.

Section 213-A, MISSISSIPPI CONSTITUTION OF 1890, empowers the IHL Board of Trustees to manage the eight four-year institutions of higher learning:

- Alcorn State University;
- Delta State University;
- Jackson State University;
- Mississippi State University;
- Mississippi University for Women;
- Mississippi Valley State University;
- University of Mississippi, including University of Mississippi Medical Center¹; and,
- University of Southern Mississippi.

Funding of IHL

As shown in Appendix A on page 49, the state's institutions of higher learning receive revenues from a variety of sources, including state funds (primarily state general funds), special funds (primarily revenues from tuition and hospital revenues/patient fees collected by University of Mississippi Medical Center), restricted and auxiliary/enterprise funds, and funds from university foundations, including athletic foundations.

As shown in Appendix A, approximately two-thirds of IHL funding, excluding funding from foundations, is appropriated by the Legislature, while the remaining third (comprised of restricted and auxiliary/enterprise funds) flows directly to the universities outside of the appropriation process.

¹ University of Mississippi Medical Center is a separately budgeted unit. For FY 2009, state support for the medical center was included in SB 3117, 2008 Regular Session. (See Appendix C, page 52.)

The general disbursement authority of IHL found at MISS. CODE ANN. Section 37-101-15 (a) (1972) is sufficiently broad to empower it to devise methods for the disbursement of state funds that are not specifically appropriated to a particular institution or purpose. Pursuant to this authority, IHL has historically adopted formulas for allocating such funds to the state's institutions of higher learning. As noted on page 9, a relatively small percentage of total IHL funding flows through the funding formula.

Changes to IHL's Funding Formula

From the early 1990s through FY 2004, IHL allocated funds to the universities using a constant percentage for each university. IHL established these percentages based on each university's percentage of total IHL system enrollment. While this method yielded an equitable distribution of funds to the universities on a per-student basis in the early years of its implementation, as enrollments changed at the universities with no corresponding adjustments to the allocation percentages, problems in equity of funding among the universities emerged.

In FY 1995, the appropriations per full-time equivalent student at the state's eight public universities ranged from \$4,724 at Jackson State University to \$5,579 at Delta State University, a difference of \$855. By FY 2004, the appropriations per full-time equivalent student ranged from \$3,361 at Mississippi Valley State University to \$6,965 at Mississippi University for Women, a difference of \$3,604.

In an attempt to address the equity problems, effective for FY 2005, IHL adopted a new funding formula primarily based on instructional costs by discipline and level of instruction (e. g., undergraduate, master's, and doctoral). IHL based this funding formula on a formula being utilized by Texas to fund its public universities. (See Appendix B, page 51.)

IHL's Implementation of the FY 2005 Funding Formula

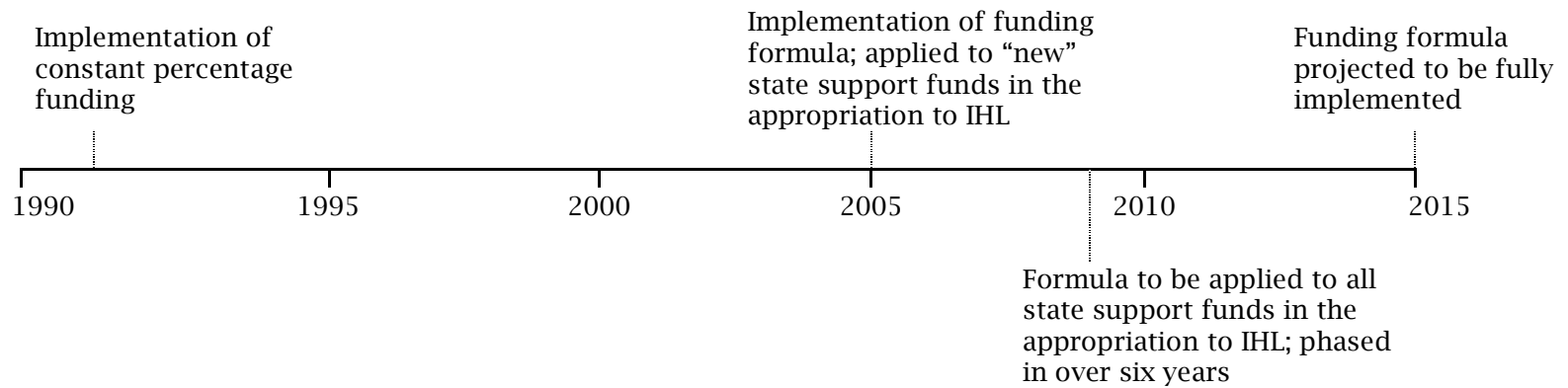
In an attempt to avoid the immediate impact of significant changes to university funding levels as a result of adoption of the funding formula, IHL chose to implement its FY 2005 formula gradually. As a result, five years after its adoption, that funding formula has still not been fully implemented. From FY 2005 to FY 2008, IHL applied the FY 2005 funding formula only to the amount of state support funds for IHL (less legislative mandates and board

initiatives) that exceeded the amount of state support funds from the appropriation for IHL that was received the previous fiscal year. Because IHL only applied the funding formula to a relatively small amount of the universities' general fund support during these years, the equity problems continued.

Because of the ongoing equity problems in funding the state's universities, in FY 2009 IHL began to apply the funding formula to the full amount of the general fund support allocated to the universities (less any legislative mandates and board initiatives). However, as will be discussed on page 10, because full implementation of the funding formula would have resulted in significant immediate funding reductions to five of the state's eight universities, IHL made the decision to phase in the funding adjustments over a six-year period in order to give the universities more time to react to the changes in funding.

See Exhibit 1, page 6, for a timeline of events related to the IHL funding formula.

Exhibit 1: Timeline of IHL Board Changes to the Formula for Funding Mississippi’s Public Universities



SOURCE: PEER analysis and interviews with IHL staff.

The Impact of Implementation of IHL's Funding Formula on Individual Universities from FY 2008 to FY 2009

The purpose of this chapter is to show the impact of IHL's FY 2009 funding formula implementation on the state's eight public universities. In conducting this analysis, PEER answered the following questions:

- How much of IHL's total operating budgets for FY 2009 was allocated through the funding formula?
- How much did each university receive for FY 2009?
- How did the amount that each university received for FY 2009 differ from the amount that each university received for FY 2008?

Five of the state's eight public universities received lower allocations for FY 2009 than they received for FY 2008:

- Alcorn State University;
- Delta State University;
- Mississippi University for Women;
- Mississippi Valley State University; and,
- University of Southern Mississippi.

How much of IHL's total operating budgets for FY 2009 was allocated through the funding formula?

IHL's total operating budgets for FY 2009 are \$3,018,798,316.² Of the total operating budgets, \$788,720,129 is from state support. Of the state support, \$385,873,404 was allocated through the funding formula, representing approximately 13% of IHL's total operating budget for FY 2009.

IHL's total operating budgets for FY 2009 are \$3,018,798,316. The budgets are comprised of two components:

² IHL's FY 2009 operating budgets included the following two budget units that the IHL staff refers to as "non-IHL budget units:" University Press of Mississippi (\$2,656,000) and Commission for Volunteer Services (\$7,025,237).

- state support (derived from general, education enhancement, budget contingency, and health care expendable funds); and,
- special, restricted, and auxiliary/enterprise funds.

For FY 2009, the amount of the total operating budgets that comes from state support is \$788,720,129 and the amount of the total operating budgets that comes from special, restricted, and auxiliary/enterprise funds is \$2,230,078,187. See Exhibit 2, below.

Exhibit 2: Components of IHL's Total Operating Budgets for FY 2009

Component	Amount
State support	\$788,720,129
Special, restricted, and auxiliary/enterprise funds	2,230,078,187
Total operating budgets	\$3,018,798,316

SOURCE: PEER analysis of IHL's total operating budgets for FY 2009.

State support for separately budgeted units (\$367,500,272 for FY 2009) is not allocated through the funding formula. In addition, state support for legislative mandates (\$32,719,279 for FY 2009) and for board initiatives (\$2,627,174 for FY 2009) is not allocated through the funding formula. This left \$385,873,404 in state support funds allocated through the funding formula for FY 2009. (See Exhibit 3, below.)

Exhibit 3: Components of State Support for FY 2009

Component	Amount
Separately budgeted units	\$367,500,272
Legislative mandates	32,719,279
Board initiatives	2,627,174
Allocated through the funding formula	385,873,404
State support	\$788,720,129

SOURCE: PEER analysis of IHL's total operating budgets for FY 2009.

Separately Budgeted Units

Senate bills 3110 through 3117, 2008 Regular Session, provided \$367,500,272 in state support funds for FY 2009 for separately budgeted units such as the Cooperative Extension Service at Mississippi State University and the Gulf Coast Research Laboratory at University of Southern

Mississippi. Appendix C, page 52, contains a list of these separately budgeted units.

By definition, the state appropriations for separately budgeted units were not eligible for allocation through the funding formula because they were already specified for a particular university or central office function.

Legislative Mandates and Certain Other Items

While SB 3118, 2008 Regular Session, provided \$421,219,857 in state support funds for the state's eight public universities for FY 2009, the amount of these funds available for distribution through the formula was reduced by legislative mandates contained in the bill and by certain other items, such as board initiatives, that are not specified in the bill. For FY 2009, the appropriations for legislative mandates contained in SB 3118 totaled \$32,719,279. Appendix D, page 53, contains a list of these legislative mandates, which include an annual appropriation toward fulfilling terms of the Ayers³ settlement.

Appendix E, page 54, contains a list of board initiatives and other items that reduced the amount of FY 2009 state support funds available for distribution to the individual universities by \$2,627,174.

Thus, the amount of state support funds available for distribution through the formula totaled \$385,873,404, representing approximately 13% of IHL's total operating budget for FY 2009.

How much did each university receive for FY 2009?

The amount each university received for FY 2009 ranged from \$15,624,113 at Mississippi University for Women to \$99,031,766 at Mississippi State University.

Once IHL determined the amount of the state support to be allocated, these funds were distributed to the state's eight public universities using the funding formula and a rebalancing process. A detailed explanation of the funding formula and the rebalancing process is given in the following chapter. Exhibit 4, below, lists the amount each university received from the funding formula for FY 2009.

³ In 1975, Jake Ayers filed a federal lawsuit on behalf of his son, a student at Jackson State University, claiming that the state had historically neglected its historically black universities in favor of its historically white universities. The terms of the February 2002 settlement of the Ayers case required the Mississippi Legislature to provide \$503 million over seventeen years to Mississippi's three historically black public universities: Alcorn State, Jackson State, and Mississippi Valley State. The settlement called for \$246 million to be spent on academics at the three universities in order to attract more white students, \$75 million for capital improvements, \$70 million for public endowments, \$35 million on private endowments, and the remainder on other programs.

Exhibit 4: University Allocations for FY 2009

University	Allocation
Alcorn State University (ASU)	\$20,199,142
Delta State University (DSU)	22,984,671
Jackson State University (JSU)	40,580,608
Mississippi State University (MSU)	99,031,766
Mississippi University for Women (MUW)	15,624,113
Mississippi Valley State University (MVSU)	15,770,305
University of Mississippi (UM)	81,928,876
University of Southern Mississippi (USM)	89,753,923
Amount allocated through formula and rebalancing process	\$385,873,404

SOURCE: IHL staff presentation “Rebalancing State Appropriations” to Board of Trustees, April 16, 2008.

How did the amount that each university received for FY 2009 differ from the amount that each university received for FY 2008?

Five of the state’s eight public universities received lower allocations for FY 2009 than for FY 2008. The differences ranged from \$10,129 less at Mississippi Valley State University to \$175,886 less at Delta State University. Two universities received the same amount for FY 2009 as for FY 2008 and one university, University of Mississippi, received \$1,881,140 more for FY 2009.

Because FY 2009 was the first year that the funding formula was applied to the full amount of IHL’s appropriation less legislative mandates and board initiatives, there would have been dramatic shifts from the previous fiscal year in the allocations to the various universities. In an effort to reduce the impact to those universities for which the formula required lower allocations for FY 2009, IHL decided to phase in the lower allocations over a six-year period. Funds from the phase-in, as well as any new funds, were to be distributed to those universities that IHL determined to be the most “underfunded” in terms of the formula. (See page 38 for a detailed explanation of this process.)

The result was that Alcorn State University, Delta State University, Mississippi University for Women, Mississippi Valley State University, and University of Southern Mississippi saw their allocations reduced for FY 2009, while University of Mississippi saw its allocation increased for FY 2009. See Exhibit 5, page 11.

Exhibit 5: FY 2008/FY 2009 Comparisons Between Shifts in Allocations Required by the Funding Formula and Shifts in the First Year of Phase-In as Adopted by IHL

University	Difference in Allocations from FY 2008 to FY 2009 Resulting from Funding Formula	Difference in Allocations from FY 2008 to FY 2009 in First Year of Phase-In
ASU	(\$2,263,142)	(\$75,438)
DSU	(5,276,587)	(175,886)
JSU	1,247,876	0
MSU	4,550,558	0
MUW	(4,088,486)	(136,283)
MVSU	(303,856)	(10,129)
UM	10,988,155	1,881,140
USM	(3,487,359)	(116,245)

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

An Illustration of How IHL Implements the Funding Formula

This chapter presents a detailed explanation of the funding formula used by IHL to allocate funds to the state's eight public universities. Also, this chapter includes a discussion of IHL's decision to rebalance funds among the universities.

The funding formula is comprised of four components:

- Instruction and Administration;
- Predicted Space;
- Capital Renewal; and,
- Small School Supplement.

This chapter contains a discussion of each of these four components and how IHL calculates them.

IHL determines the amount of each component for a university. The sum of these components is that university's formulated need. Because the appropriated amount is often less than the eight universities' formulated need, the formula distributes the appropriated amount on a pro-rata basis reflecting each university's percentage of the universities' formulated need.

The following sections contain discussions of each component of the funding formula. In order to explain fully the calculations required by the formula, PEER will use the information to determine the components for Mississippi State University as an example. Once the section shows how IHL calculated each component for Mississippi State University for FY 2009, that section concludes with a summary of information regarding that component for the other seven universities. As explained on page 36, because the allocations required by the formula for FY 2009 would have been dramatically less than the allocations received for FY 2008 for some universities, IHL decided to rebalance funds over a six-year period to reduce the initial impact to these universities. Exhibit 6, page 13, summarizes how IHL determined the components of each university's formulated need for FY 2009 and each university's actual allocation.

Exhibit 6: Components of IHL’s FY 2009 Formulated Need and Allocation Process for the State’s Eight Public Universities

$$\begin{array}{cccccc}
 \text{Instruction and Administration} & + & \text{Predicted Space} & + & \text{Capital Renewal} & + & \text{Small School Supplement} & = & \text{University's} \\
 & & & & & & & & \text{Formulated Need for} \\
 & & & & & & & & \text{Inclusion in Budget} \\
 & & & & & & & & \text{Request} \\
 & & & & & & \text{(if applicable)} & & \\
 \text{(see pages 14-22)} & & \text{(see pages 22-32)} & & \text{(see pages 32-33)} & & \text{(see pages 33-34)} & & \text{(see Exhibit 24, page 35)}
 \end{array}$$

Components of Each University’s Formulated Need

Because the amount of state support to be allocated through the formula is less than the eight universities’ formulated need, IHL must work with the amount of state support received.

$$\begin{array}{cccccc}
 \text{Amount of State Support} & & \text{University's Percent of Universities'} & & \text{Rebalanced Amount} & = & \text{University's Allocation} \\
 \text{Received} & \times & \text{Formulated Need} & \pm & & & \\
 & & & & \text{(for that university)} & & \\
 \text{(\$385,873,404)} & & \text{(see Column G, Exhibit 24, page 35)} & & \text{(see pages 36-40)} & & \text{(see Column B,} \\
 & & & & & & \text{Exhibit 30, page 40)}
 \end{array}$$

Components of Each University’s Allocation

SOURCE: PEER analysis of IHL spreadsheet regarding funding formula.

Instruction and Administration Component

IHL bases its calculation of the Instruction and Administration component of the funding formula on weighted student credit hours. IHL sums the number of weighted student credit hours by institution and multiplies this amount by one of two designated dollar values based on a Southern Regional Education Board (SREB) average appropriation per full-time equivalent student. IHL considers the sum of these products to be the system's need for the Instruction and Administration component.

IHL bases the Instruction and Administration component of the funding formula on weighted student credit hours.⁴ IHL determines the number of these hours for each university. IHL separates the universities into Regional universities and Research universities and multiplies the number of weighted student credit hours for each university by a dollar value in order to determine the formulated need for the Instruction and Administration component for that university. (See page 20 for a discussion of the use of this value.) The sum of these products is the system's formulated need for the Instruction and Administration component.

Determining the Number of Weighted Student Credit Hours

To determine the number of weighted student credit hours for a university, IHL must first determine the number of un-weighted student credit hours for that university. In calculating this component, IHL uses the Classification of Instructional Program (CIP) codes and the Funding codes assigned to each discipline by the National Center for Education Statistics. (NCES uses Funding codes to group disciplines that require similar levels of funding.) Appendix F, page 55, contains a list of these codes for the different disciplines.

For each CIP code, IHL averages the number of un-weighted student credit hours for the university for the three most recent calendar years. (For FY 2009, this was CY 2005 through CY 2007.) IHL then separates this information into the levels of the courses of those hours. The levels of the courses are lower (freshman/sophomore), upper (junior/senior), professional, graduate, and doctoral. IHL counts un-weighted student credit hours by the level of the course and not by the level of the students that are taught. Thus, IHL counts the un-weighted student credit hours for a junior taking a sophomore-level course as lower-level hours. Also, IHL counts the hours regardless of whether they lead to a degree for the student and regardless of the method of delivery (e. g., regular classroom, distance learning).

⁴ *Student credit hours* equal the number of classes taken multiplied by the number of hours. For example, if one student takes five classes of three hours each, then this results in $1 \times 5 \times 3 = 15$ student credit hours.

Exhibit 7, below, shows the un-weighted student credit hours for Mississippi State University for FY 2009.

Exhibit 7: Un-weighted Student Credit Hours for Mississippi State University for FY 2009 [Average of CY 2005 through CY 2007]

CIP Code	Funding Code	Un-weighted Student Credit Hours for Lower Level Courses (Freshman/Sophomore)	Un-weighted Student Credit Hours for Upper Level Courses (Junior/Senior)	Un-weighted Student Credit Hours for Professional Level Courses	Un-weighted Student Credit Hours for Graduate Level Courses	Un-weighted Student Credit Hours for Doctoral Level Courses	Total
1	1	579.0000	2,460.6667	2.0000	405.6667	3.0000	3,450.3334
2	1	1,562.3333	4,752.3333	3.0000	1,032.6667	474.6667	7,825.0000
3	1	611.3333	2,588.0000	1.0000	1,553.0000	429.6667	5,183.0000
4	1	4,010.3333	5,528.6667	0.0000	445.0000	0.0000	9,984.0000
5	9	236.0000	0.0000	0.0000	0.0000	0.0000	236.0000
6	9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	2	9.6667	424.0000	0.0000	102.3333	0.0000	536.0000
9	9	3,472.0000	5,308.3333	0.0000	107.0000	0.0000	8,887.3333
10	9	42.0000	0.0000	0.0000	0.0000	0.0000	42.0000
11	14	4,501.3333	2,483.0000	0.0000	2,024.0000	460.6667	9,469.0000
12	7	0.0000	250.0000	0.0000	0.0000	0.0000	250.0000
13	3	6,053.0000	21,342.3333	0.0000	9,476.6667	2,976.0000	39,848.0000
14	4	3,840.6667	18,618.0000	0.0000	4,763.3333	1,871.3333	29,093.3333
15	16	1,188.0000	1,933.0000	0.0000	249.0000	4.0000	3,374.0000
16	9	7,114.3333	2,207.0000	0.0000	439.3333	15.0000	9,775.6666
19	7	2,495.6667	3,061.6667	0.0000	676.6667	2.0000	6,236.0001
20	7	260.0000	753.0000	0.0000	7.0000	0.0000	1,020.0000
21	16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	8	2,324.0000	579.0000	0.0000	334.3333	0.0000	3,237.3333
23	9	19,779.0000	3,319.0000	0.0000	887.0000	2.0000	23,987.0000
24	9	140.3333	43.6667	0.0000	0.0000	0.0000	184.0000
25	10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	14	10,609.0000	9,569.3333	3.6667	1,606.0000	1,026.3333	22,814.3333
27	14	21,183.0000	3,465.3333	0.0000	1,699.0000	149.0000	26,496.3333
28	11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
29	11	309.6667	385.6667	0.0000	0.0000	0.0000	695.3334
31	6	2,723.3333	5,723.3333	0.0000	750.0000	0.0000	9,196.6666
32	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
36	9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
37	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
38	9	3,740.0000	1,736.0000	0.0000	16.0000	1.0000	5,493.0000
40	14	19,558.0000	3,118.6667	0.0000	3,142.0000	986.3333	26,805.0000
41	16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
42	9	5,089.0000	9,724.3333	0.0000	3,054.6667	704.0000	18,572.0000

43	15	0.0000	535.0000	0.0000	0.0000	0.0000	535.0000
44	15	829.0000	2,135.0000	0.0000	969.6667	388.0000	4,321.6667
45	9	34,858.6667	13,936.0000	0.0000	5,747.3333	464.6667	55,006.6667
48	16	765.6667	25.0000	0.0000	0.0000	0.0000	790.6667
49	11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	5	12,955.3333	3,633.0000	0.0000	52.3333	0.0000	16,640.6666
51	6	1,466.0000	2,616.0000	0.0000	274.0000	0.0000	4,356.0000
5116	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5120	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
52	2	10,287.0000	37,542.6667	0.0000	6,427.0000	473.0000	54,729.6667
54	9	142.6667	28.0000	0.0000	16.0000	0.0000	186.6667
Total		182,735.3333	169,825.0000	9.6667	46,257.0000	10,430.6667	409,257.6667

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Once IHL determines the number of un-weighted student credit hours for each CIP code for the university, it groups this information by Funding code. To do this, IHL adds together the un-weighted student credit hours for the CIP codes with a Funding code of 1, the un-weighted student credit hours for the CIP codes with a Funding code of 2, and so forth. Exhibit 8, below, shows an example of the calculations for the CIP codes with a Funding code of 1 from Exhibit 7.

Exhibit 8: Example of Grouping by Funding Code for Mississippi State University

CIP Code	Funding Code	Un-weighted Student Credit Hours for Lower Level Courses (Freshman/Sophomore)	Un-weighted Student Credit Hours for Upper Level Courses (Junior/Senior)	Un-weighted Student Credit Hours for Professional Level Courses	Un-weighted Student Credit Hours for Graduate Level Courses	Un-weighted Student Credit Hours for Doctoral Level Courses	Total
1	1	579.0000	2,460.6667	2.0000	405.6667	3.0000	3,450.3334
2	1	1,562.3333	4,752.3333	3.0000	1,032.6667	474.6667	7,825.0000
3	1	611.3333	2,588.0000	1.0000	1,553.0000	429.6667	5,183.0000
4	1	4,010.3333	5,528.6667	0.0000	445.0000	0.0000	9,984.0000
Total		6,762.9999	15,329.6667	6.0000	3,436.3334	907.3334	26,442.3334

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Exhibit 9, page 17, shows this information for Mississippi State University for each of the funding codes.

Exhibit 9: Un-weighted Student Credit Hours Grouped by Funding Code for Mississippi State University for FY 2009

Funding Code	Academic Discipline Area	Un-weighted Student Credit Hours for Lower Level Courses (Freshman/Sophomore)	Un-weighted Student Credit Hours for Upper Level Courses (Junior/Senior)	Un-weighted Student Credit Hours for Professional Level Courses	Un-weighted Student Credit Hours for Graduate Level Courses	Un-weighted Student Credit Hours for Doctoral Level Courses	Total
1	Agriculture, Forestry, Architecture, Urban Planning	6,762.9999	15,329.6667	6.0000	3,436.3334	907.3334	26,442.3334
2	Business Administration	10,296.6667	37,966.6667	0.0000	6,529.3333	473.0000	55,265.6667
3	Education, Teacher Education Practice	6,053.0000	21,342.3333	0.0000	9,476.6667	2,976.0000	39,848.0000
4	Engineering	3,840.6667	18,618.0000	0.0000	4,763.3333	1,871.3333	29,093.3333
5	Fine Arts	12,955.3333	3,633.0000	0.0000	52.3333	0.0000	16,640.6666
6	Health Services (excluding Nursing and Pharmacy)	4,189.3333	8,339.3333	0.0000	1,024.0000	0.0000	13,552.6666
7	Home Economics	2,755.6667	4,064.6667	0.0000	683.6667	2.0000	7,506.0001
8	Law/Paralegal Studies	2,324.0000	579.0000	0.0000	334.3333	0.0000	3,237.3333
9	Liberal Arts and Social Studies	74,614.0000	36,302.3333	0.0000	10,267.3333	1,186.6667	122,370.3333
10	Library Science	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	Military Technologies, Aerospace Studies, ROTC	309.6667	385.6667	0.0000	0.0000	0.0000	695.3334
12	Nursing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	Pharmacy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	Science and Math	55,851.3333	18,636.3333	3.6667	8,471.0000	2,622.3333	85,584.6666
15	Social Services	829.0000	2,670.0000	0.0000	969.6667	388.0000	4,856.6667
16	Technology	1,953.6667	1,958.0000	0.0000	249.0000	4.0000	4,164.6667
Total		182,735.3333	169,825.0000	9.6667	46,257.0000	10,430.6667	409,257.6667

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Once IHL has compiled the number of un-weighted student credit hours in this form, it weights the hours using information from a cost study by the Texas Higher Education Coordinating Board entitled *Texas Public University Cost Study, FY 2002-2004*. (See Appendix G, page 57, for more information on this study.) Appendix H,

page 58, presents these weights. The weight for a course depends on the funding level of the course and the instructional level of the course. The weights are supposed to reflect the differing educational costs associated with differing courses, including faculty costs, academic support, institutional support, student services, department operating expenses, and research. For example, IHL uses a weight of 2.05 for a lower-level agriculture course and a weight of 2.54 for an upper-level agriculture course.

To obtain the number of weighted student credit hours for the lower-level Agricultural, Forestry, Architecture, and Urban Planning courses at Mississippi State University for FY 2009, IHL multiplied the 6,762.9999 un-weighted student credit hours (see Exhibit 9, page 17) by a weight of 2.05 from Appendix H, page 58, to yield 13,864.1498. To obtain the number of weighted student credit hours for the upper-level Agricultural, Forestry, Architecture, and Urban Planning courses at Mississippi State University for FY 2009, IHL multiplied the 15,329.6667 un-weighted student credit hours (see Exhibit 9, page 17) by a weight of 2.54 from Appendix H, page 58, to yield 38,937.3534. The total number of weighted student credit hours for Mississippi State University for FY 2009 was 1,077,587.4281. Exhibit 10, below, shows this information for Mississippi State University.

Exhibit 10: Weighted Student Credit Hours Grouped by Funding Code for Mississippi State University for FY 2009

Funding	Academic Discipline Area	Weighted Student Credit Hours for Lower Level Courses (Freshman/Sophomore)	Weighted Student Credit Hours for Upper Level Courses (Junior/Senior)	Weighted Student Credit Hours for Professional Level Courses	Weighted Student Credit Hours for Graduate Level Courses	Weighted Student Credit Hours for Doctoral Level Courses	Total
1	Agriculture, Forestry, Architecture, Urban Planning	13,864.1498	38,937.3534	0.0000	22,817.2538	14,853.0478	90,471.8048
2	Business Administration	14,518.3000	60,367.0000	0.0000	29,969.6400	6,579.4300	111,434.3700
3	Education, Teacher Education Practice	14,708.7900	54,849.7967	0.0000	30,609.6333	29,611.2000	129,779.4200
4	Engineering	11,560.4067	64,418.2800	0.0000	39,059.3333	40,046.5333	155,084.5533
5	Fine Arts	23,967.3667	11,298.6300	0.0000	340.6900	0.0000	35,606.6867
6	Health Services (excluding Nursing and Pharmacy)	12,023.3867	28,854.0933	0.0000	6,625.2800	0.0000	47,502.7600
7	Home Economics	4,353.9533	8,617.0933	0.0000	2,967.1133	21.5800	15,959.7399
8	Law/Paralegal Studies	7,483.2800	1,864.3800	0.0000	1,076.5533	0.0000	10,424.2133

9	Liberal Arts and Social Studies	74,614.0000	71,152.5733	0.0000	40,453.2933	14,287.4667	200,507.3333
10	Library Science	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	Military Technologies, Aerospace Studies, ROTC	309.6667	755.9067	0.0000	0.0000	0.0000	1,065.5734
12	Nursing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	Pharmacy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	Science and Math	85,452.5400	55,909.0000	0.0000	60,737.0700	50,584.8100	252,683.4200
15	Social Services	1,359.5600	4,912.8000	0.0000	5,624.0667	4,624.9600	16,521.3867
16	Technology	3,887.7967	5,012.4800	0.0000	1,645.8900	0.0000	10,546.1667
Total		268,103.1966	406,949.3867	0.0000	241,925.8170	160,609.0278	1,077,587.4281

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

IHL performs similar calculations in determining the number of weighted student credit hours at each university. Exhibit 11, below, shows the number of weighted student credit hours for each of the state's eight public universities for FY 2009.

Exhibit 11: IHL's Calculation of FY 2009 Weighted Student Credit Hours for Each University

University	Number of Weighted Student Credit Hours
ASU	217,281.4333
DSU	226,330.7267
JSU	451,192.2850
MSU	1,077,587.4281
MUW	148,451.5367
MVSU	187,699.2333
UM	1,000,229.1267
USM	971,476.5483

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Determining the Dollar Value of the Weighted Student Credit Hours

In order to determine the formulated need of the Instruction and Administration component of the funding

formula, IHL must calculate a dollar value for the weighted student credit hours.

According to information provided by IHL staff, IHL calculates the dollar value of a university's weighted student credit hours using the SREB's average appropriation per full-time equivalent student based on the level of the university per one of two IHL designations: Regional universities and Research universities. (For FY 2009, IHL designated ASU, DSU, MUW, and MVSU as Regional universities and JSU, MSU, UM, and USM as Research universities.) IHL staff chose to assign different dollar values to weighted student credit hours at Regional and Research universities based on its conclusions regarding SREB average appropriations per full-time equivalent student. IHL staff had concluded from analysis of SREB data for academic years 2001-2002 through 2006-2007 that Mississippi's Research universities received state appropriations per full-time equivalent student that were less than the SREB average appropriation per full-time equivalent student for universities that IHL classifies as their peer universities. In addition, IHL staff had concluded that during the same period, Mississippi's Regional universities received state appropriation per full-time equivalent student that were greater than the SREB average appropriation per full-time equivalent student for their peer universities. As discussed on page 43, PEER disagrees with this rationale as a basis of assigning dollar values to weighted student credit hours.

Because information from SREB is always two years behind the year for which the formulated need is being determined, IHL inflates the SREB average appropriation per full-time equivalent student for two years using the Higher Education Cost Adjustment index, an index developed by the State Higher Education Executive Officers that is used for estimating inflation in the costs paid by colleges and universities. Thus, for Regional universities, IHL adjusted the FY 2007 average appropriation per full-time equivalent student of \$5,566 to a FY 2009 average appropriation per full-time equivalent student of \$5,884.3487. For Research universities, IHL adjusted the FY 2007 average appropriation per full-time equivalent student of \$6,959 to a FY 2009 average appropriation per full-time equivalent student of \$7,357.0217. IHL then multiplied the adjusted appropriation per full-time equivalent student for each level by the number of full-time equivalent students for each level to determine an appropriation amount for each level.

Because the appropriation information from SREB includes funding for space, IHL deducts this funding from the appropriation amount prior to the calculation of a dollar value of the weighted student credit hours. The amount that is deducted is the Predicted Space component that is described beginning on page 22. IHL then divides the

balance remaining after the space deduction by the number of weighted student credit hours to obtain a dollar per weighted student credit hour for that level. Exhibit 12, below, illustrates how IHL determines the dollar values of weighted student credit hours for Regional and Research universities.

Exhibit 12: Determining the Dollar Values of Weighted Student Credit Hours for Regional and Research Universities

	A	B	C	D	E	F	G
	University's FTE Students	SREB Average Appropriation per FTE Student	Product of SREB Average Appropriation per FTE Student and University's FTE Students	Predicted Space Square Footage Allowance Per Formula*	Column C less Column D	Weighted Student Credit Hours**	Dollar Value of Weighted Student Credit Hours
Regional	ASU	3,235.0000				217,281.4333	
	DSU	3,379.0000				226,330.7267	
	MUW	2,041.0000				148,451.5367	
	MVSU	2,860.0000				187,699.2333	
Total	11,515.0000	\$5,884.3487	\$67,758,275.2805	\$12,262,240.9790	\$55,496,034.3015	779,762.9300	\$71.1704
Research	JSU	6,799.0000				451,192.2850	
	MSU	14,438.0000				1,077,587.4281	
	UM	14,637.0000				1,000,229.1267	
	USM	12,974.0000				971,476.5483	
Total	48,848.0000	\$7,357.0217	\$359,375,796.0016	\$61,753,952.7751	\$297,621,843.2265	3,500,485.3881	\$85.0230

Column C = Column A x Column B
 Column E = Column C - Column D
 Column G = Column E ÷ Column F

*See Column C, Exhibit 21, page 31.

**See Exhibit 11, page 19.

SREB=Southern Regional Education Board

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Once IHL has determined the dollar values of the weighted student credit hours, it multiplies the appropriate dollar value (\$71.1704 for Regional universities or \$85.0230 for Research Universities) by the weighted student credit hours of the university to determine the formulated need for the Instruction and Administration component for the university. For Mississippi State University for FY 2009, the 1,077,587.4281 weighted student credit hours were multiplied by \$85.0230 to yield a request of \$91,619,715.8993. Exhibit 13, below, presents the

formulated need for the Instruction and Administration component for each university for FY 2009.

Exhibit 13: Total Instruction and Administration Components of Universities, FY 2009

		A	B	C	D
	University	Number of Weighted Student Credit Hours	Dollar Value (Regional or Research Institution)	Instruction and Administration Component*	Instruction and Administration Component**
Regional	ASU	217,281.4333	\$71.1704	\$15,464,006.5205	\$15,464,005
	DSU	226,330.7267	\$71.1704	16,108,048.3515	16,108,047
	MUW	148,451.5367	\$71.1704	10,565,355.2476	10,565,354
	MVSU	187,699.2333	\$71.1704	13,358,629.5137	13,358,628
Research	JSU	451,192.2850	\$85.0230	38,361,721.6476	38,361,731
	MSU	1,077,587.4281	\$85.0230	91,619,715.8993	91,619,738
	UM	1,000,229.1267	\$85.0230	85,042,481.0394	85,042,502
	USM	971,476.5483	\$85.0230	82,597,850.5661	82,597,871
Total				\$353,117,808.7857	\$353,117,875

Column C = Column A x Column B

*The numbers in Column C are based on rounded numbers and are used for illustrative purposes only.

**The numbers in Column D are the numbers calculated by IHL staff. The system total for Column D varies slightly from the sum of the universities' totals in Column D because the total for each university was rounded to the nearest dollar.

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Predicted Space Component

IHL bases the Predicted Space Component of the funding formula on the amount of space a university should need rather than on the amount of space actually maintained. The formula predicts five types of space: teaching space, library space, office space, research space, and support space. IHL bases its projections on the number, program, and level of students; the number of faculty, staff, and library holdings; and research and educational and general expenditures.

For each university, IHL calculates the Predicted Space component (for facilities' maintenance and operating costs) based on the number of square feet needed by universities rather than on the number of square feet maintained. Five types of space are predicted by the formula: teaching space; library space; office space; research space; and support space. The predicted space component for a university is the sum of the number of square feet predicted for the five types of space for that university. IHL then multiplies this component by \$8.22 per square foot, which is the Department of Finance and Administration's estimate of the cost of maintaining and

operating a square foot of space (including utilities, maintenance, and janitorial services) for IHL for that year.

Calculating Predicted Teaching Space

The formula estimates teaching space based on the level of course (e. g., undergraduate, graduate) and the program area as defined in the 2004 Texas cost study. Exhibit 14, page 24, gives a description of the four program areas. Generally, lower program area numbers correspond to disciplines that need more teaching space (e. g., agriculture) and higher program area numbers correspond to disciplines that need less teaching space (e. g., education).

To determine the amount of predicted teaching space for a university, the formula separates disciplines into four program areas according to the space codes given in Appendix F, page 55. In calculating this component, IHL uses the Space codes assigned to each discipline by the National Center for Education Statistics. (NCES uses the Space codes to group disciplines that require similar amounts of space.)

IHL then bases the amount of teaching space needed on the needs of the grouped disciplines, reducing the space allowance for graduate level courses since fewer students are generally enrolled in these courses. The square footage of the space requirements increases by fifteen square feet from each undergraduate program area as it moves from Program Area 4 to Program Area 1. Master's and doctoral square footage requirements for each program are 70 percent and 40 percent of the undergraduate square footage, respectively. Program Area 4 is the base for the other program areas, representing the minimum required space.

Exhibit 14: IHL’s Square Footage Allowances by Program Area and by Level of Course, for Use in Predicting Teaching Space

Program Area 4
Includes 20 disciplines including Education, Foreign Languages, English Language and Literature, Social Sciences, and Business
45.0 square feet per undergraduate student
31.5 square feet per master’s student
18.0 square feet per doctoral student
Program Area 3
Includes 12 disciplines including Communication, Biological and Biomedical Sciences, Psychology, and Health Professions and Related Clinical Sciences
60.0 square feet per undergraduate student
42.0 square feet per master’s student
24.0 square feet per doctoral student
Program Area 2
Includes 7 disciplines including Architecture and Engineering
75.0 square feet per undergraduate student
52.5 square feet per master’s student
30.0 square feet per doctoral student
Program Area 1
Includes 2 disciplines including Agriculture and Visual and Performing Arts
90.0 square feet per undergraduate student
63.0 square feet per master’s student
36.0 square feet per doctoral student

SOURCE: Mississippi Institutions of Higher Learning FY 2008 Funding Model - DRAFT.

IHL multiplies the square footage allowances by the three-year average of the full-time equivalent students, which it calculates by course level and program area. IHL calculates the number of undergraduate full-time equivalent students by dividing the number of undergraduate un-weighted student credit hours by fifteen hours; the number of master’s full-time equivalent students by dividing the number of master’s un-weighted student credit hours by twelve hours; and the number of doctoral full-time equivalent students by dividing the

number of doctoral un-weighted student credit hours by nine hours.

Once a university's enrollment reaches 15,000 undergraduate full-time equivalent students, IHL takes a reduction of two percent due to economies of scale for each 1,000 students over 15,000 undergraduate full-time equivalent students. For example, IHL uses a factor of .98 for the first 1,000 full-time equivalent students above 15,000 and the factor decreases by .02 for each subsequent increase of 1,000 undergraduate full-time equivalent students.

Exhibit 15, below, shows these calculations for Mississippi State University with regard to teaching space. The formula predicted that Mississippi State University needs approximately 736,021 square feet for teaching space for FY 2009.

Exhibit 15: Predicted Teaching Space for Mississippi State University for FY 2009 [Average of CY 2005 through CY 2007]

	A	B	C
Program Area	FTE Students	Undergraduate Allowance (Square Footage)	Predicted Space (Square Footage)
1	864.7556	90.0000	77,828.0040
2	1,303.6222	75.0000	97,771.6650
3	2,804.2444	60.0000	168,254.6640
4	6,779.3889	45.0000	305,072.5005
Total			648,926.8335

	A	B	C
Program Area	FTE Students	Master's Allowance (Square Footage)	Predicted Space (Square Footage)
1	62.3194	63.0000	3,926.1222
2	292.1389	52.5000	15,337.2923
3	453.9583	42.0000	19,066.2486
4	1,119.3611	31.5000	35,259.8747
Total			73,589.5378

	A	B	C
Program Area	FTE Students	Doctoral Allowance (Square Footage)	Predicted Space (Square Footage)
1	26.5370	36.0000	955.3320
2	128.0556	30.0000	3,841.6680
3	176.6296	24.0000	4,239.1104
4	248.2593	18.0000	4,468.6674
Total			13,504.7778

Column C = Column A x Column B

Total Predicted Teaching Space	$648,926.8335 + 73,589.5378 + 13,504.7778 = 736,021.1491$
Economy of Scale Adjustment	n/a
Adjusted Predicted Teaching Space for MSU for FY 2009	736,021.1491

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Calculating Predicted Library Space

The amount of predicted library space for a university's libraries depends on the number of volumes and the number of users. IHL predicts the number of volumes a university may have in its libraries based on the number of full-time equivalent faculty in the most recent year, the number of full-time equivalent undergraduate, master's, and doctoral students (i. e., a three-year average of FTE students), and the number of undergraduate and graduate major fields offered by the university in the most recent year. The volume and space allowances that the IHL formula uses to predict library space are based on the Texas funding formula.

Library space begins with a basic volume allowance. Additional volumes are predicted based on full-time equivalent faculty, full-time equivalent students, and the number of undergraduate, master's, and doctoral major fields. These allowances are given in Exhibit 16, below.

Exhibit 16: Volume Allowances IHL Uses to Predict Universities' Library Space Needs

Volume Predictor	Number of Volumes
Basic Collection	85,000
Allowance per full-time equivalent faculty	100
Allowance per full-time equivalent student	15
Allowance per undergraduate major field	350
Allowance per master's if highest degree offered	6,000
Allowance per master's if not highest degree offered	3,000
Allowance per 6 th year specialist degree field	6,000
Allowance per doctoral field	25,000

SOURCE: Mississippi Institutions of Higher Learning FY 2008 Funding Model - DRAFT.

Once IHL predicts the number of volumes, it allots a square footage allowance for each volume. Exhibit 17, page 27, shows the formula's square footage allowances.

Exhibit 17: Square Footage Allowances (Based on Number of Volumes) IHL Uses to Predict Universities' Library Space Needs

Number of Volumes	Square Feet per Volume
First 150,000 volumes	0.10
150,001 to 300,000 volumes	0.09
300,001 to 600,000 volumes	0.08
Over 600,000 volumes	0.07
Law Library Holdings	0.25

SOURCE: Mississippi Institutions of Higher Learning FY 2008 Funding Model – DRAFT.

After determining square footage based on the number of volumes, IHL adds square footage based on the estimated number of users of the library. For each faculty user, IHL adds 3.00 square feet. For each student user, IHL adds 6.25 square feet. Also, the formula provides for the addition of an amount for staff (12.5 percent) and for unforeseen needs (17.0 percent). Once IHL has calculated the value for predicted library space, it applies a 5 percent reduction adjustment to yield the final amount of predicted library space for the university. Again, the IHL formula bases these amounts on the Texas formula.

Exhibit 18, below, shows these calculations for Mississippi State University. The formula predicted that Mississippi State University needs 250,390 square feet for library space for FY 2009.

Exhibit 18: Predicted Library Space for Mississippi State University for FY 2009

	A	B	C
Library Volumes	Number of Volumes	Allowance (Square Footage)	Space (Square Footage)
Base Allowance			85,000.0000
Per Faculty FTE	824.0000	100.0000	82,400.0000
Per Student FTE	14,259.2704	15.0000	213,889.0560
Per Undergraduate Major Field	71.0000	350.0000	24,850.0000
Master's If Highest Offered		6,000.0000	
Master's If Not Highest Offered	55.0000	3,000.0000	165,000.0000
6th Year Specialist Field	1.0000	6,000.0000	6,000.0000
Professional/Doctoral Field	33.0000	25,000.0000	825,000.0000
Total			1,402,139.0560

Column C = Column A x Column B

	A	B	C
Calculation of Square Footage Based on Volume	Number of Volumes	Allowance (Square Footage)	Space (Square Footage)
0-150,000 volumes	150,000.0000	0.1000	15,000.0000
150,001-300,000 volumes	150,000.0000	0.0900	13,500.0000
300,001-600,000 volumes	300,000.0000	0.0800	24,000.0000
600,001 volumes and over	802,139.0560	0.0700	56,149.7339
Law Library Holdings		0.2500	
Total	1,402,139.0560		108,649.7339

Column C = Column A x Column B

	A	B	C
Calculation of Square Footage Based on Users	FTE Students	Allowance (Square Footage)	Space (Square Footage)
Faculty Space	824.0000	3.0000	2,472.0000
Student Space	14,259.2704	6.2500	89,120.4400
Total			91,592.4400

Column C = Column A x Column B

Total Space Based on Volume and Users	108,649.7339 + 91,592.4400 = 200,242.1739
--	--

	A	B	C
Additional Space		Allowance (Square Footage)	Space (Square Footage)
Additional Space Needed for Staff	200,242.1739	.125	25,030.2717
Additional Space for Unforeseen Needs	200,242.1739+25,030.2717	.170	38,296.3158
Total			63,326.5875

Column C = Column A x Column B

Total Predicted Library Space (Square Footage)	200,242.1739 + 63,326.5875 = 263,568.7614
---	--

Total Needed Library Space (95% allowed; Square Footage)	0.95 x 263,568.7614 = 250,390.3233
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SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Calculating Predicted Office Space

The formula estimates office space for a university based on one of two methods (whichever yields the most favorable amount for the university).

For Method 1, IHL first makes a calculation for the university by multiplying the number of its full-time

equivalent faculty by 1.8 to determine the number of full-time equivalent staff. Then IHL multiplies the number of FTE faculty by an allowance of 190 square feet for each FTE faculty member and multiplies the number of FTE staff by an allowance of 170 square feet for each FTE staff member.

For Method 2, IHL deflates the university's Education and General expenditures⁵ to 1991 dollars and divides this amount by \$1,000,000. The resulting number is then multiplied by 3,500 square feet. (This is an allowance of 3,500 square feet of office space per \$1 million of Education and General expenditures.) (IHL deflates to 1991 dollars because the IHL model is based on the Texas formula and 1991 was the year that formula was instituted.)

Then IHL determines which of the two methods favors the university and uses that amount as the amount of predicted office space.

Exhibit 19, below, presents the calculations for predicted office space for Mississippi State University for FY 2009. The formula predicted that Mississippi State University needs 621,419 square feet for office space for FY 2009.

Exhibit 19: Predicted Office Space for Mississippi State University for FY 2009 (Greater of Method 1 or Method 2)

	A	B	C
Method 1	FTE	Allowance (Square Footage)	Space (Square Footage)
Faculty Space	824.0000	190.0000	156,560.0000
Staff Space	1,483.2000	170.0000	252,144.0000
Total Method 1			408,704.0000

Column C = Column A x Column B

Method 2		Expenditures
E&G* Expenditures		\$269,803,607.0000
E&G Expenditures in Millions of 1991 Dollars		177,548,347.0689
Space Allowance Per \$1 Million 1991 Dollars		3,500.0000
Total Method 2	\$177,548,347.0689 ÷ \$1,000,000 x 3,500 = 621,419.2147	

⁵ According to the National Center for Education Statistics, *Education and General* (E&G) revenues and expenditures are those that are "intended for operating the educational, research and public service missions of the institution. Education and general revenues include tuition and fees; federal, state and local appropriations; federal, state and local grants and contracts; private gifts; grants and contracts; endowment income; and sales and services of educational activities. Education and general expenditures include expenditures for instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, scholarships and fellowships, and mandatory transfers from current funds."

Total Predicted Office Space (Square Footage)			621,419.2147
(Greater of Result from Method 1 or Method 2)			

*E&G=Education & General expenditures (see page 29 for definition).

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Calculating Predicted Research Space

IHL calculates predicted research space for a university based on the larger of two numbers:

- the number of full-time equivalent students multiplied by a square footage allowance; or,
- an allowance based on the three-year average Research Expenditures reported by the university in its Fund Basis Financial Statement.⁶

In determining the first number noted above, IHL allows 3 square feet for each full-time equivalent student (based on a three-year average of FTE students.) In determining the second number noted above, IHL deflates the university's three-year average Research Expenditures to 1991 dollars and divides that amount by \$1,000,000. The resulting number is then multiplied by 9,000 square feet.

Exhibit 20, below, presents the calculations for Mississippi State University for predicted research space for FY 2009. The formula predicted that Mississippi State University needs 841,042 square feet for research space for FY 2009.

Exhibit 20: Predicted Research Space for Mississippi State University for FY 2009 (Greater of Method 1 or Method 2)

Method 1	Research Expenditures	
	Current	1991 Dollars
FY 2004	\$122,976,431.0000	\$84,871,058.0141
FY 2005	133,269,490.0000	90,116,185.4510
FY 2006	160,105,869.0000	105,360,090.3007
Three-Year Average	\$138,783,930.0000	\$93,449,111.2553

Average Research Expenditures		\$93,449,111.2553
Average Research Expenditures in Millions of 1991 Dollars		93.4491
Space Allowance Per \$1 Million 1991 Dollars		9,000.0000
Total Method 1	93.4491 x 9,000.0000 =	841,041.9000

⁶ IHL requires each university to submit an annual Fund Basis Financial Statement showing how that university spent its money.

Method 2		
Total Student FTE		14,259.2704
FTE Allowance		3.0000
Total Method 2	14,259.2704 x 3.0000 = 42,777.8112	
Total Predicted Research Space for MSU for FY 2009 (Square Footage)		841,041.9000
(Greater of Result from Method 1 or Method 2)		

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Calculating Predicted Support Space

IHL calculates predicted support space (e. g., data processing/computer room areas, shops, storage space, and general service areas) to be 9 percent of the sum of the predicted space of the university's teaching, library space, office space, and research space. For FY 2009, the sum of these four categories of predicted space for Mississippi State University was 2,448,872.5871 square feet; thus, IHL calculated the predicted support space for Mississippi State University for FY 2009 to be 220,398.5328 square feet.

Calculating the Total Predicted Space Component

To calculate the total predicted space component for a university, IHL takes the sum of the predicted spaces for the five predicted space components (i. e., teaching space, library space, office space, research space, and support space) and multiplies that number by \$8.22 per square foot. As noted on page 23, this is the cost that DFA provided to IHL as an estimate for maintaining a square foot of IHL space for that year. For Mississippi State University for FY 2009, this calculation yielded a formulated need of \$21,941,408.6056. Exhibit 21, below, shows the Predicted Space components for the state's eight public universities.

Exhibit 21: Total Predicted Space for the Universities for FY 2009

	A	B	C	D
University	Predicted Space (Square Footage)	Allowance per Square Foot	Predicted Space Component*	Predicted Space Component**
ASU	445,437.7199	\$8.22	\$3,661,498.0576	\$3,661,498
DSU	390,929.9963	8.22	3,213,444.5696	3,213,445
JSU	986,859.2659	8.22	8,111,983.1657	8,111,983
MSU	2,669,271.1199	8.22	21,941,408.6056	21,941,410
MUW	284,432.1143	8.22	2,338,031.9795	2,338,032

MVSU	370,956.9796	8.22	3,049,266.3723	3,049,266
UM	2,043,881.4415	8.22	16,800,705.4491	16,800,705
USM	1,812,634.4957	8.22	14,899,855.5547	14,899,856
Total			\$74,016,193.7541	\$74,016,195

Column C = Column A x Column B

*The numbers in Column C are based on rounded numbers and are used for illustrative purposes only.

**The numbers in Column D are the numbers calculated by IHL staff. The system total for Column D varies slightly from the sum of the universities' totals in Column D because the total for each university was rounded to the nearest dollar.

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Capital Renewal Component

IHL bases its calculation of the Capital Renewal component for a university on the Predicted Space component of that university. The sum of the Capital Renewal components for the eight universities is considered the system's need for Capital Renewal. The intent of the Capital Renewal component is to address deferred maintenance issues on the campuses.

For each university, IHL calculates the Capital Renewal component using the Predicted Space component for that university. According to IHL staff, because the state funds minor repair and renovation needs through a bonding process rather than with recurring dollars, the intent of the Capital Renewal component is to address deferred maintenance issues on the campuses through the annual appropriation process.

The formula for the Capital Renewal component is:

Total square footage (Predicted Space component)
x
Current construction cost per square foot per DFA
x
% that should be spent annually on maintenance according to Association of Higher Education Facilities Officers
=
Capital Renewal component

For FY 2009, IHL used \$225 per square foot as the current construction cost and 3% as the percent of construction cost that should be spent annually on maintenance.

In calculating the Capital Renewal component for Mississippi State University for FY 2009, IHL multiplied the university's total square footage of the Predicted Space component, which was 2,669,271.1199 (see Exhibit 21, page 31) by \$225 per square foot, then multiplied this product by 0.03. This resulted in a Capital Renewal

component of \$18,017,580.0593 for Mississippi State University for FY 2009. Exhibit 22, below, shows the Capital Renewal components for each the state's eight public universities for FY 2009.

Exhibit 22: Capital Renewal Components of the State's Eight Public Universities for FY 2009

	A	B	C	D	E
University	Predicted Space Component (Square Footage)	Construction Cost	Capital Renewal Percentage	Capital Renewal Component*	Capital Renewal Component**
ASU	445,437.7199	\$225	3%	\$3,006,704.6093	\$3,006,705
DSU	390,929.9963	\$225	3%	2,638,777.4750	2,638,777
JSU	986,859.2659	\$225	3%	6,661,300.0448	6,661,300
MSU	2,669,271.1199	\$225	3%	18,017,580.0593	18,017,581
MUW	284,432.1143	\$225	3%	1,919,916.7715	1,919,917
MVSU	370,956.9796	\$225	3%	2,503,959.6123	2,503,960
UM	2,043,881.4415	\$225	3%	13,796,199.7301	13,796,200
USM	1,812,634.4957	\$225	3%	12,235,282.8460	12,235,283
Total				\$60,779,721.1483	\$60,779,722

Column D = Column A x Column B x Column C

*The numbers in Column D are based on rounded numbers and are used for illustrative purposes only.

**The numbers in Column E are the numbers calculated by IHL staff. The system total for Column E varies slightly from the sum of the universities' totals in Column E because the total for each university was rounded to the nearest dollar.

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Small School Supplement Component

IHL uses the Small School Supplement component of the formula to account for the lack of economies of scale at smaller universities. In order to receive the supplement of \$750,000, a university's three-year average of full-time equivalent students must be 5,000 or less and its most current appropriation per full-time equivalent student must be less than 110% of the SREB average.

To account for the lack of economies of scale at smaller universities, the IHL funding formula provides a supplement of \$750,000 to universities that meet two criteria:

1. its three-year average of full-time equivalent students is 5,000 or less; and,
2. its most recent appropriation per full-time equivalent student is less than 110% of the SREB average appropriation per full-time equivalent student by type of institution.

In reviewing IHL's calculations, PEER determined that for FY 2009, IHL did not make the comparison to 110% of the SREB average appropriation per full-time equivalent student but to 110% of the system's appropriation per full-time equivalent student. (See page 45 for a discussion of the validity of this comparison for determining eligibility for the Small School Supplement.)

Once a university no longer meets either of the two criteria, it loses the Small School Supplement component. There is no phase-out of the funding.

For FY 2009, three institutions received the Small School Supplement: Alcorn State University, Delta State University, and Mississippi Valley State University. Exhibit 23, below, shows the comparisons IHL used to determine eligibility for the Small School Supplement for FY 2009. Although MUW, the state's public university with the smallest enrollment, qualified for the supplement based on its number of full-time equivalent students, it did not receive the supplement because its appropriation per full-time equivalent exceeded the average.

Exhibit 23: Comparison of Universities to Qualifying Criteria for Small School Supplement, FY 2009 (Must Meet Both Criteria to Receive Supplement)

University	Criterion 1			Criterion 2			Small School Supplement
	Number of FTE Students		Criterion	Appropriation per FTE		Criterion	
ASU	3,244.8361	less than	5,000.0000	\$6,252.1407	less than	7,067.3537	\$750,000
DSU	3,421.0333	less than	5,000.0000	7,003.8946	less than	7,067.3537	750,000
JSU	6,749.9111		5,000.0000	6,212.7645	less than	7,067.3537	
MSU	14,259.2704		5,000.0000	7,062.1533	less than	7,067.3537	
MUW	2,080.2750	less than	5,000.0000	7,658.7398		7,067.3537	
MVSU	3,053.4056	less than	5,000.0000	5,168.1422	less than	7,067.3537	750,000
UM	14,606.2889		5,000.0000	5,554.2352	less than	7,067.3537	
USM	13,359.6444		5,000.0000	6,792.4838	less than	7,067.3537	
Total							\$2,250,000

Shading indicates that the university satisfied the qualifying criteria for the Small School Supplement for FY 2009.

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Determining the Amount of the Universities' Formulated Need and Making Allocations

Once IHL has determined the components for a university, it adds these components to arrive at the formulated need for that university. Because the amount received for allocation was less than the eight universities' formulated need, the amount received for allocation was distributed to the universities on a pro-rata basis according to the university's percentage of the universities' formulated need.

Once IHL has determined all of the components for a university, it sums the components to determine the formulated need for that university. This amount will include any board initiatives that the university has received as part of the appropriation. (See Appendix E, page 54.) As shown in Exhibit 24, below, for FY 2009 the amount of formulated need was \$490,223,792.

Exhibit 24: Summary of Formulated Need for Universities, FY 2009

	A	B	C	D	E	F	G
University	Instruction and Administration	Predicted Space	Capital Renewal	Small School Supplement	Board Initiatives	Amount of Formulated Need	Percent*
ASU	\$15,464,005	\$3,661,498	\$3,006,705	\$750,000		\$22,882,208	4.7%
DSU	16,108,047	3,213,445	2,638,777	750,000	\$10,000	22,720,269	4.6%
JSU	38,361,731	8,111,983	6,661,300		5,000	53,140,014	10.8%
MSU	91,619,738	21,941,410	18,017,581		15,000	131,593,728	26.8%
MUW	10,565,354	2,338,032	1,919,917		5,000	14,828,303	3.0%
MVSU	13,358,628	3,049,266	2,503,960	750,000		19,661,854	4.0%
UM	85,042,502	16,800,705	13,796,200		15,000	115,654,407	23.6%
USM	82,597,871	14,899,856	12,235,283		10,000	109,743,009	22.4%
Total						\$490,223,792	100.0%

*The percentages in Column G are those calculated by IHL staff. These percentages were rounded to the nearest tenth and thus do not add exactly to 100%.

NOTE: See the corresponding exhibits in previous sections of the report to follow how IHL calculated individual university amounts for each component and initiative:

Column A: Exhibit 13, page 22

Column B: Exhibit 21, page 31

Column C: Exhibit 22, page 33

Column D: Exhibit 23, page 34

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

The amount IHL received for allocation for FY 2009 was \$385,873,404. Since the amount for allocation for FY 2009 was less than the formulated need amount of

\$490,223,792, the allocated amount was distributed on a pro-rata basis according to each university's percent of the formulated need amount from above. Thus, for FY 2009, Mississippi State University received approximately 26.8% of \$385,873,404. Exhibit 25, below, lists the university allocations that would result from implementing the funding formula for FY 2009.

Exhibit 25: Summary of Universities' Allocations that would Result from Implementing the Funding Formula for FY 2009

University	Amount of Formulated Need	Percent*	FY 2009 Pro Rata Allocation
ASU	\$22,882,208	4.7%	\$18,011,438
DSU	22,720,269	4.6%	17,883,970
JSU	53,140,014	10.8%	41,828,484
MSU	131,593,728	26.8%	103,582,324
MUW	14,828,303	3.0%	11,671,910
MVSU	19,661,854	4.0%	15,476,578
UM	115,654,407	23.6%	91,035,891
USM	109,743,009	22.4%	86,382,809
Total	\$490,223,792	100.0%	\$385,873,404

*The percentages in this column are those calculated by IHL staff. These percentages were rounded to the nearest tenth and thus do not add exactly to 100%.

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Rebalancing

Because the allocations that would result from implementing the funding formula for FY 2009 would be dramatically less than the allocations received for FY 2008 for certain universities, IHL decided to phase in ("rebalance") funds over a six-year period to reduce the initial impact to these universities.

When one compares the allocations that would result from implementing the funding formula for FY 2009 to the allocations that the universities received for FY 2008, one sees dramatic shifts. (See Exhibit 26, page 37.) Because of the reductions in funding that would result from implementing the funding formula for five universities (ASU, DSU, MUW, MVSU, and USM), IHL decided to phase in these reductions over a six-year period. This was an attempt to reduce the initial impacts to these universities.

Exhibit 26: Comparison of the FY 2008 Allocation to the Allocation that would Result from Implementing the Funding Formula for FY 2009

	A	B	C
University	FY 2008 Allocation	FY 2009 Pro-Rata Allocation	Difference
ASU	\$20,274,580	\$18,011,438	(\$2,263,142)
DSU	23,160,557	17,883,970	(5,276,587)
JSU	40,580,608	41,828,484	1,247,876
MSU	99,031,766	103,582,324	4,550,558
MUW	15,760,396	11,671,910	(4,088,486)
MVSU	15,780,434	15,476,578	(303,856)
UM	80,047,736	91,035,891	10,988,155
USM	89,870,168	86,382,809	(3,487,359)
Total	\$384,506,245	\$385,873,404	\$1,367,159

Column C = Column A - Column B

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

Originally, IHL staff proposed that the reductions for the five universities that received more funding for FY 2008 than would result from implementing the formula be phased in over five years. Rather than an equal reduction each year for a university, the reduction would be less in the earlier years than in the later years. The first year would rebalance 1/15 of the overage. Over the next four years, the fraction of the overage would be reduced by 2/15, 3/15, 4/15, and 5/15.

The reduction for each of the five universities in the first year of the phase-in would be that university's FY 2008 allocation minus that university's FY 2009 pro-rata allocation that would result from implementing the funding formula multiplied by 1/15. Thus, for Alcorn State University, the reduction in the first year would be:

$$\$20,274,580 - \$18,011,438 = \$2,263,142$$

$$\$2,263,142 \times [1/15] = \$150,876$$

(See Exhibit 27, page 38.)

Exhibit 27: Proposed Reductions for the Five Universities that Received more Funding for FY 2008 than they Would Receive from Implementing the Formula for FY 2009 [Year 1]

	A	B	C	D	E
University	FY 2008 Allocation	FY 2009 Pro Rata Allocation	Difference		Proposed Reduction
ASU	\$20,274,580	\$18,011,438	(\$2,263,142)	1/15	(\$150,876)
DSU	23,160,557	17,883,970	(5,276,587)	1/15	(351,772)
JSU					
MSU					
MUW	15,760,396	11,671,910	(4,088,486)	1/15	(272,566)
MVSU	15,780,434	15,476,578	(303,856)	1/15	(20,257)
UM					
USM	89,870,168	86,382,809	(3,487,359)	1/15	(232,491)
Total					(\$1,027,962)

Column C = Column B - Column A Column E = Column C x Column D

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

The amount of state support funds allocated through the formula for FY 2009 (\$385,873,404) that exceeded the amount allocated for FY 2008 (\$384,506,245) is \$1,367,159. This amount plus the funds from the universities receiving reductions (\$1,027,962) would then be distributed to the universities that were most underfunded. To determine if a university was underfunded, IHL staff determined the percent of each university's FY 2009 formulated need request that was funded in FY 2008. After making this calculation, IHL considered the universities with the lowest percentages to be "underfunded." (See Exhibit 28, below.)

Exhibit 28: Universities IHL Determined to Be "Underfunded" for FY 2009

	A	B	C
University	FY 2008 Allocation	FY 2009 Formulated Need	Percent of FY 2009 Formulated Need that was Funded in FY 2008
ASU	\$20,274,580	\$22,882,208	88.6%
DSU	\$23,160,557	22,720,269	101.9%
JSU	\$40,580,608	53,140,014	76.4%
MSU	\$99,031,766	131,593,728	75.3%
MUW	\$15,760,396	14,828,303	106.3%
MVSU	\$15,780,434	19,661,854	80.3%

UM	\$80,047,736	115,654,407	69.2%
USM	\$89,870,168	109,743,009	81.9%

Column C = Column A ÷ Column B

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

Because IHL determined the University of Mississippi (the lowest percentage) to be the most "underfunded" university, additional funding would be allocated there first. Once the percent funding of University of Mississippi reached the percent funding of Mississippi State University (the second lowest percent), both universities would be brought up to Jackson State University (the third lowest percent). This process would continue until funds were depleted.

For FY 2009, \$6,988,784 was needed to bring the percent funding of University of Mississippi up to the percent funding of Mississippi State University. Since only \$2,395,121 (\$1,367,159 + \$1,027,962) in additional funding was available for rebalancing, this entire amount, under the proposal, would go to University of Mississippi. The original proposal of the IHL staff to the IHL Board is given in Exhibit 29, below.

Exhibit 29: Original Proposal of IHL Staff to the IHL Board for the First Year of a Five-Year Phase-In

	A	B	C
University	FY 2008 Allocation	FY 2009 Proposed Allocation	Difference
ASU	\$20,274,580	\$20,123,704	(\$150,876)
DSU	23,160,557	22,808,785	(351,772)
JSU	40,580,608	40,580,608	0
MSU	99,031,766	99,031,766	0
MUW	15,760,396	15,487,830	(272,566)
MVSU	15,780,434	15,760,177	(20,257)
UM	80,047,736	82,442,857	2,395,121
USM	89,870,168	89,637,677	(232,491)
Total	\$384,506,245	\$385,873,404	\$1,367,159

Column C = Column A - Column B

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

After the IHL staff presented this proposal to the IHL Board, the board decided to phase in the reductions for the five universities over a six-year period rather than over a five-year period. In addition, the reductions for the five

universities were cut in half for the first year of the phase-in. Thus, Alcorn State University's reduction went from \$150,876 to \$75,438. Overall, the reductions for the five universities went from \$1,027,962 to \$513,981. Thus, the amount available to go to University of Mississippi went from \$2,395,121 (\$1,367,159 + \$1,027,962) to \$1,881,140 (\$1,367,159 + \$513,981). The reductions for the first year of the six-year phase-in are presented in Exhibit 30, below.

Year 2 of the phase-in would include the second half of the Year 1 reductions and the first half of the Year 2 reductions. Year 3 of the phase-in would include the second half of the Year 2 reductions and the first half of the Year 3 reductions. This process would continue until Year 6, which would include only the second half of the Year 5 reductions. IHL staff has limited reduction projections to one year because of the dynamic nature of the formula (i. e., the formula contains numerous variables that affect the outcomes).

Exhibit 30: Proposal Adopted by the IHL Board for the First Year of a Six-Year Phase-In

	A	B	C
University	FY 2008 Allocation	FY 2009 Approved Allocation	Difference
ASU	\$20,274,580	\$20,199,142	(\$75,438)
DSU	23,160,557	22,984,671	(175,886)
JSU	40,580,608	40,580,608	0
MSU	99,031,766	99,031,766	0
MUW	15,760,396	15,624,113	(136,283)
MVSU	15,780,434	15,770,305	(10,129)
UM	80,047,736	81,928,876	1,881,140
USM	89,870,168	89,753,923	(116,245)
Total	\$384,506,245	\$385,873,404	\$1,367,159

Column C = Column B - Column A

SOURCE: IHL staff presentation "Rebalancing State Appropriations" to Board of Trustees, April 16, 2008.

Effects of IHL's Implementation of the Funding Formula for FY 2009

Use of the funding formula to allocate state support funds to the state's eight public universities represents a potential improvement over the method of using constant percentages that was in place prior to FY 2005. However, IHL's current implementation of the funding formula raises concerns regarding fairness.

Beginning in FY 2005, IHL moved from a method that established funding percentages based on the relative sizes of the universities' enrollments at one point in time to a method that captures changes in enrollments over time and that reflects the differing missions and associated costs of the universities. For example, it costs more to educate a student majoring in Polymer Science because of the need for specialized laboratory space than it does to educate a student majoring in English. Also, it costs more to educate a graduate student than it does to educate an undergraduate student in any given field of study. The funding formula takes these cost differences into consideration. Because of this, the funding formula has the potential to be a fairer method for funding the state's eight public universities than the method used prior to FY 2005.

Generally, the universities are treated fairly in that the same formula with the same variables applies to all eight universities. The only differences are dollar values and the values of the variables, such as the number of students, the number of student credit hours, the number of faculty, and the number of majors. Each of these variables is specific to each university and each will change over time. But the formula uses the same variables for all eight universities.

Concerns of fairness regarding IHL's current implementation of the formula include using weights (for weighted student credit hours) and allowances (for Predicted Space components) that have not been validated for Mississippi, using two different dollar values for weighted student credit hours for the universities, a method for predicting needed library space that regularly overestimates space, a method for predicting needed research space that allows two options with significantly different results, and retaining a per full-time equivalent basis for determining eligibility for the Small School Supplement. Also, IHL's lack of uniformity in defining an "underfunded" university for the rebalancing process creates confusion and results in the potentially contradictory requirement of having "underfunded" universities yield resources to other universities. The following sections describe these concerns.

Weighted Student Credit Hours and Allowances for Predicted Space

The weights IHL uses to determine the weighted student credit hours for the Instruction and Administration component and the allowances IHL uses to determine the Predicted Space component were adopted from a formula used by the state of Texas. Neither the weights nor the allowances have been validated for Mississippi.

Although the formula potentially represents a fairer approach for allocating state support funds to the state's eight public universities, PEER has some concerns with the current implementation of the formula that compromise its validity for the state of Mississippi.

One concern is the weights used to determine the weighted student credit hours for the Instruction and Administration component. According to interviews with IHL staff, these weights were adopted from a funding formula used by the state of Texas. The weights were validated for that state by a 2005 cost study using actual costs for FY 2002, FY 2003, and FY 2004. The weights were validated again by a 2008 cost study using actual costs for FY 2004, FY 2005, and FY 2006. After the second cost study, the weights for some disciplines increased and the weights for other disciplines decreased.

The fundamental assumption of both studies was that all universities are providing an adequate education to their students and that the cost of that education is roughly the same across all institutions for any given discipline and level of instruction.

IHL does not use the updated weights from the second cost study nor has it performed its own cost study to determine the actual costs incurred by our state's eight public universities. Also, IHL uses the weights in the precise manner that violates the fundamental assumption of the cost study from which the weights were taken (i. e., by using two different dollar values; see page 43). For the weights to be valid for Mississippi, IHL should perform a cost study with clearly stated assumptions to validate the weights for this state. In addition, IHL should perform a cost study at regular intervals to capture the increasing or decreasing costs associated with the different disciplines and levels of instruction.

According to IHL staff, the primary reasons that a cost study has not been performed are the time and the costs involved. According to documentation provided by IHL staff, there was also concern (at least during the first years of implementation) about "unintended consequences" if changes to the cost components were made. Therefore, no changes were made either to the cost components or to

the weights. The focus during these first years was on method and not on exactness.

It is essential that IHL make the formula valid for the state of Mississippi by conducting a cost study. If cost is an issue, then the Board of Trustees should propose to the Legislature a board initiative as it did for the course redesign.

Also, the allowances IHL uses to determine the Predicted Space component have not been validated for the state of Mississippi. Because of the numerous calculations involved in determining the Predicted Space component, it is imperative that these allowances be accurate for this state. If these allowances are not accurate, it would be possible, if not probable, to introduce error into the formula that has the effect of suggesting the need for greater Predicted Space than is required.

IHL's use of differing dollar values when determining the Instruction and Administration component for the universities (i. e., using \$85.02 per weighted student credit hour at the Research universities and using \$71.17 per weighted student credit hour at the Regional universities) has resulted in two separate and distinct classes of universities that are unequal. PEER believes that a weighted student credit hour should have the same dollar value at each public university in Mississippi.

PEER's next concern has to do with the dollar values that IHL assigns to the weighted student credit hours. Pages 20 through 22 contain an explanation of IHL's rationale for dividing universities into Regional and Research classifications for purposes of assigning dollar values to weighted student credit hours. However, PEER does not find IHL's argument compelling as to why each university in the system should not receive the same amount of state funding per weighted student credit hour for a given discipline and level of instruction.

The result of using two different dollar values is two separate and distinct classifications of universities that are unequal. For purposes of illustration, suppose that a student at Mississippi State University and a student at Mississippi University for Women take the same three-hour upper-level English course. At each university, the three hours are weighted by 1.96, yielding weighted student credit hours of 5.88 for the course. Under the current system, the 5.88 weighted student credit hours have a dollar value of \$85.02 at Mississippi State University but a dollar value of \$71.17 at Mississippi University for Women. Both students are taking the same course taught by comparably credentialed faculty at universities less than fifty miles apart. But the dollar value at Mississippi State University is higher simply because IHL has categorized that university as a Research university as opposed to a Regional university.

If IHL's intent is that the higher dollar value of the weighted student credit hours at Research universities funds the higher costs associated with the specialized instruction, the specialized research, and the specialized faculty at those universities, Research universities already receive more from the funding formula because of the weights. In addition, they receive funding for courses in disciplines that are not taught at all universities in the system and they receive more because research expenditures are taken into account when determining predicted space. Therefore, these universities are already funded at a higher level because they are Research universities. But if a course in a given discipline and level of instruction taught at a Research university is also taught at the same level of instruction at another university anywhere in the system, then PEER believes that good public policy dictates that the weighted student credit hours for those courses be funded at the same level (e. g., engineering courses at Alcorn State University and engineering courses at Mississippi State University).

It is PEER's position that, although the missions of the universities may differ, IHL governs a single system of higher education consisting of eight universities and that a weighted student credit hour should have the same dollar value at each public university in Mississippi.

Predicted Space Component

Instead of using the actual number of library users during peak times of use in its prediction of needed library space, IHL utilizes the number of full-time equivalent faculty and students. This results in a formulated need for the Predicted Space component that is higher than necessary.

When predicting the needed library space for the Predicted Space component of a university, the funding formula includes an additional square footage allowance based on the number of library users. Each full-time equivalent faculty user is allowed an additional 3.00 square feet and each full-time equivalent student user is allowed an additional 6.25 square feet.

When making this calculation, IHL uses the number of full-time equivalent faculty and the three-year average of the full-time equivalent students. It seems highly unlikely that the entire faculty and the entire student body would ever need to use the library at the same time. It would seem more reasonable to use the actual number of users (as determined by library administrators) during peak times of use when making this calculation.

IHL's two methods for determining needed research space yield significantly different results, which suggests the need for more reliable criteria.

With regard to predicting the amount of needed research space for the Predicted Space component of a university, IHL uses one of two methods (whichever yields the larger number), as described on page 30.

In analyzing the amount of needed research space actually predicted by these two methods, PEER determined that the method based on the amount of research expenditures yields much larger square footage needs than the method based on the number of full-time equivalent students. (See Exhibit 31, below.) If both methods are supposed to approximate the same need, then the differing results suggest the need for more reliable criteria. PEER suggests that IHL determine more reliable criteria for measuring needed research space requirements.

Exhibit 31: Comparison of Needed Research Space Based on Research Expenditures to Needed Research Space Based on Full-Time Equivalent Students, FY 2009

University	Needed Research Space (Based on Amount of Research Expenditures) in Square Feet	Needed Research Space (Based on Number of Full-time Equivalent Students) in Square Feet	Difference in the Results Yielded by the Methods
ASU	91,191.1223	9,734.5083	81,456.6140
DSU	39,391.6189	10,263.1000	29,128.5189
JSU	240,483.8282	20,249.7333	220,234.0949
MSU	841,041.9000	42,777.8112	798,264.0888
MUW	43,945.7516	6,240.8250	37,704.9266
MVSU	59,972.4782	9,160.2167	50,812.2615
UM	459,120.2342	43,818.8667	415,301.3675
USM	403,514.7981	40,078.9333	363,435.8648

SOURCE: The Mississippi Institutions of Higher Learning's 2009 Funding Formula Model.

Small School Supplement

While IHL's current funding formula is based on the principle of funding per weighted student credit hour rather than funding per full-time equivalent student, which was the basis of IHL's pre-2005 funding formula, IHL's method of determining the Small School Supplement component uses a per full-time equivalent comparison. For FY 2009, the result of this was that the state's public university with the lowest number of full-time equivalent students did not receive the Small School Supplement.

As noted on page 34, in determining which universities qualify for the Small School Supplement component, IHL does not make the comparison to 110% of the SREB

average appropriation per full-time equivalent student by type of institution (as explained in IHL's written description of the current formula), but to 110% of the appropriation per full-time equivalent student for the eight universities as a whole.

Also, because IHL appropriately changed its funding formula from a full-time equivalent student basis to a weighted student credit hour basis, comparisons between appropriations per full-time equivalent student are no longer valid.

IHL staff stated that this comparison was put in place to ensure that a university that had just slightly more than 5,000 students would not automatically lose the Small School Supplement. However, in FY 2009, MUW, the state's public university with the smallest enrollment, qualified for the supplement based on its number of FTE students, but did not receive the supplement because its appropriation per full-time equivalent student exceeded the average.

Rebalancing

IHL's lack of uniformity in defining an "underfunded" university for the rebalancing process creates confusion and results in the potentially contradictory requirement of having "underfunded" universities yield resources to other universities.

As has been shown earlier in this report, using the funding formula as the basis for allocation places five of the state's universities (ASU, DSU, MUW, MVSU, and USM) in an "overfunded" position. Since each of those universities received more money in FY 2008 than in FY 2009, each would have to make budget reductions to bring their allocation down to the formulated amount. Such a prospect was untenable to IHL and it decided to phase in the needed reductions in allocations over a six-year period.

One effect of the decision to mitigate the immediate budget impacts by making partial cuts to allocations was that it yielded a "pool" of money from the "overfunded" universities to be distributed to the remaining "underfunded" universities (UM, MSU, and JSU). The most immediate problem was to decide how to distribute its money to the other universities. IHL's decision was to give this "pool" of money—as well as any new state support less any legislative mandates and board initiatives—to "underfunded" universities, beginning with the most "underfunded" university. PEER's concern is with the definition of "underfunded" that IHL chose to use for this process. Rather than use the definition inherent in the funding formula (i. e., those universities whose FY 2008 allocations were less than their FY 2009 pro-rata allocations), IHL used a second definition and determined the percent of each university's FY 2009 formulated need

that was funded in FY 2008. Those universities receiving percentages below one hundred percent were now deemed “underfunded.” Under this definition, six universities could now be classified as “underfunded” (ASU, JSU, MSU, MVSU, UM, and USM), with the University of Mississippi being the most “underfunded” on a percentage basis.

Thus three universities (ASU, MVSU, and USM) that were “overfunded” according to the funding formula (i. e., the funding formula required reductions for these universities) were “underfunded” according to this new definition, yet they were still required to contribute money to the redistribution “pool.” IHL’s use of two different criteria as the basis for identifying “underfunded” universities results in the contradictory result of having three now “underfunded” universities giving up a part of their allocations. Logically, only two universities (DSU and MUW) were “overfunded” under the new definition and would have reason, under the definition, to yield resources.

Such changes in method are frustrating to all parties involved. IHL should develop and use a definition of an underfunded university that is consistent with the requirements of the formula and that takes into consideration the full range of funding available to a university (e. g., tuition, restricted funds).

Recommendations

1. Using existing resources, IHL should perform a cost study by January 1, 2010, to validate the weights it uses to determine the weighted student credit hours for the Instruction and Administration component of the funding formula and to validate the space allowances used. In the future, IHL should perform additional cost studies at periodic intervals to capture increasing or decreasing costs associated with different disciplines and levels of instruction.

Until this cost study has been performed, the Legislature should not consider any future IHL budget requests based on formulated need as implemented in FY 2009. Until the formula is based on weights and allowances that have been validated for Mississippi and until IHL has developed a definition of an underfunded university that takes into consideration the full range of funding available to a university (e. g., tuition, restricted funds), IHL should, at a minimum, return each university that received a reduction for FY 2009 to its funding level for FY 2008.

2. IHL should determine a uniform dollar value for weighted student credit hours. This dollar value should be used for the weighted student credit hours for all of the universities in the system and not just for some subset, such as Regional universities or Research universities.
3. IHL should utilize the actual number of library users (as determined by library administrators) during peak times of use when predicting the amount of needed library space for universities for the Predicted Space component of the funding formula. Also, in predicting the amount of needed research space for universities, IHL should first determine the amounts of space used for different types of research that would more closely approximate actual need.
4. IHL should discontinue making comparisons between appropriations per full-time equivalent student when determining eligibility for the Small School Supplement. Instead, IHL should consider using some sort of phase-out when a university's enrollment increases above 5,000 students.

Appendix A: FY 2008 Actual IHL Revenues*, by Source

Source of Revenues	FY 2008 Actual Revenues
Appropriated Revenues:	
<u>State Support</u>	
General Fund (includes Ayers settlement)	\$715,789,815
Education Enhancement Funds	58,363,021
Budget Contingency Funds	2,100,000
Health Care Expendable Funds	<u>2,380,431</u>
Total State Support	\$778,633,267
<u>Support from Special Funds</u>	
Federal Funds for all of IHL	\$147,024,376
<u>General Support:</u>	
Tuition	\$368,302,339
Grants & Contracts	9,913,604
Sales & Services	6,334,573
Other	<u>44,895,769</u>
Total General Support	\$429,446,285
<u>UMC:</u>	
Hospital Revenue/Patient Fees	\$521,723,376
Cafeteria, Retail Pharmacies, etc.	20,186,001
Other	50,112,339
Tobacco Control Funds	5,650,000
Tuition	<u>9,595,012</u>
Total UMC	\$607,266,728
<u>Agricultural Units:</u>	
Sales & Services	\$10,578,267
Tuition	<u>6,361,027</u>
Total Agricultural Units	\$16,939,294
<u>Miscellaneous:</u>	
Tort, Unemployment & Workers' Compensation Funds	\$10,350,000
Master Lease Reimbursements	12,946,053
Student Financial Aid-Loan Repayments	2,068,687
UM-State Court Education fees	1,416,305
MSU-Alcohol Safety Fines & Assessments	1,408,101
Subsidiary Programs**, Consolidated-Sales & services	684,677
Subsidiary Programs**, Consolidated-Other	<u>3,761,399</u>
Total Miscellaneous	\$ 32,635,222
Total Support from Special Funds	1,233,311,905
Total Appropriated Revenues	\$2,011,945,172
<u>Non-Appropriated Revenues:</u>	
Restricted Funds (e.g., corporate scholarships, sponsored research)	\$747,448,548
Auxiliary (Enterprise) funds***	<u>186,619,302</u>
Total Non-Appropriated Revenues	934,067,850
Grand Total FY 2008 Actual Revenues	\$2,946,013,022

SOURCE: Legislative Budget Office, verified by IHL

*Does not include revenues from university foundations, including university athletic foundations.

**Examples of subsidiary programs are the IHL Board Office and MSU's State Chemical Lab.

***Includes revenues from university athletic departments.

Appendix B: Comparison of Mississippi and Texas Formulas for Allocating Funds to Public Universities

Formula Component	Mississippi Formula	Texas Formula
Instruction & Administration	<ul style="list-style-type: none"> Based on <u>completed</u> student credit hours, weighted by field and level of study; Different set of weights applied to "Research" universities versus "Regional" (i.e., non-research) universities 	<ul style="list-style-type: none"> Based on <u>attempted</u> student credit hours, weighted by field and level of study Same set of weights applied to all universities
Teaching Experience Supplement	No provision	Additional weight of 10% added to each undergraduate semester credit hour taught by tenured or tenure-track faculty
Predicted Space (i. e., Facilities Operations):		
<ul style="list-style-type: none"> General Operations and Maintenance 	Based on projected needed space	same
<ul style="list-style-type: none"> Utilities 	Rate of \$8.22 per square foot of projected needed space	Rate of 55.26% of the general operations and maintenance rate, applied to projected needed space
Capital Renewal (i. e., deferred maintenance)	Rate of 3% of expected replacement cost of projected needed space	No provision
Small School Supplement	\$750,000 to institutions with 5,000 or fewer FTE students <u>and</u> less than 110% of the SREB peer <u>appropriation per FTE student</u>	\$750,000 to institutions with 5,000 or fewer FTE students
Source of Allocation Funds	All legislatively appropriated funds are allocated as one "pot" except for small school supplement and board initiatives	All legislatively appropriated funds are allocated as one "pot" except for small school supplement

SOURCE: Based on information provided to PEER by IHL and Texas's Legislative Budget Board.

Appendix C: Separately Budgeted Units Contained in Senate Bills 3110 through 3117, 2008 Regular Session

Senate Bill	Separately Budgeted Unit	Appropriation
SB 3110	ASU - Agricultural Programs	\$4,779,607
SB 3111	MSU - Agricultural and Forestry Experiment Station	23,716,974
SB 3112	MSU - Cooperative Extension Service	29,410,885
SB 3113	MSU - Forest and Wildlife Research Center	6,128,754
SB 3114	MSU - College of Veterinary Medicine	17,173,262
SB 3115	Executive Office - Office of Student Financial Aid	30,377,373
SB 3116	Commission for Volunteer Services	515,673
SB 3116	Executive Office	7,299,523
SB 3116	JSU - Urban Research Center	535,659
SB 3116	MSU - Center for Advanced Vehicular Systems	3,805,428
SB 3116	MSU - Chemical Laboratory	1,920,988
SB 3116	MSU - Stennis Institute of Government	1,086,612
SB 3116	MSU - Water Resources Institute	128,331
SB 3116	UM - Law Research Institute	883,119
SB 3116	UM - Mineral Resources Research Institute	497,537
SB 3116	UM - Research Institute of Pharmaceutical Sciences	3,681,852
SB 3116	UM - Small Business Development Center	277,531
SB 3116	UM - Supercomputer	845,947
SB 3116	USM - Gulf Coast Research Laboratory	3,282,558
SB 3116	USM - Polymer Institute	669,486
SB 3116	USM - Stennis Center for Higher Learning	546,601
SB 3117	UMMC	229,936,572
Total		\$367,500,272

SOURCE: IHL staff documentation.

Appendix D: Legislative Mandates Contained in Senate Bill 3118, 2008 Regular Session

	Legislative Mandate	Appropriation
	Ayers Settlement*	\$25,700,000
	DSU - Commercial Aviation	500,000
	MSU - Meridian Branch	900,000
	MUW - Governor's School	157,500
	UM - Center for Manufacturing Excellence	1,000,000
	UM - Teacher Corps	265,000
	DSU-JSU - E-Learning Center	800,000
	ASU-DSU-MUW-USM-Additional Nursing Instructors	316,383
	ASU-MSU-MUW-UM - Land Script Interest	80,396
	JSU-MSU-UM-USM - Economic Development	3,000,000
Total		\$32,719,279

* In 1975, Jake Ayers filed a federal suit on behalf of his son, a student at Jackson State University, claiming that the state had historically neglected its historically black universities in favor of its historically white universities. The terms of the February 2002 settlement of the Ayers case required the Mississippi Legislature to provide \$503 million over seventeen years to Mississippi's three historically black public universities: Alcorn State, Jackson State, and Mississippi Valley State. The settlement called for \$246 million to be spent on academics at the three universities in order to attract more white students, \$75 million for capital improvements, \$70 million for public endowments, \$55 million on private endowments, and the remainder on other programs.

SOURCE: IHL staff documentation.

Appendix E: Board Initiatives and Other Items that Reduced the Amount of FY 2009 State Support Funds Available for Distribution to Individual Universities

	Board Initiatives	Amount
	Best Practices	\$60,000
	Course Redesign (Year Two)	1,000,000
	Other Items	
	Health Insurance Increase ⁷	567,174
	System Audit Costs ⁸	1,000,000
Total		\$2,627,174

SOURCE: Senate Bill 3118, 2008 Regular Session; IHL staff documentation.

⁷ The State Health Insurance Management Board imposed a health insurance premium increase of 1.5% for all participants in the State and School Employees' Life and Health Plan for FY 2009. The Legislature provided funds for this increase in Senate Bill 3118, 2008 Regular Session. IHL distributed this amount to individual universities to cover the increase for all active participants.

⁸Costs associated with contract audits for individual universities and other IHL budget units.

Appendix F: Codes Used for Academic Disciplines in the IHL Funding Formula

Academic Discipline Area	CIP* Code	Funding Code	Space Code
Agriculture, Agriculture Operations, and Related Sciences	1	1	1
[No Description]	2	1	1
Natural Resources and Conservation	3	1	2
Architecture and Related Sciences	4	1	2
Area, Ethnic, Cultural, and Gender Studies	5	9	4
[No Description]	6	9	4
[No Description]	8	2	4
Communication, Journalism, and Related Sciences	9	9	3
Communications Technology/Technicians and Support Services	10	9	3
Computer and Information Sciences and Support Services	11	14	3
Personal and Culinary Services	12	7	4
Education	13	3	4
Engineering	14	4	2
Engineering Technologies/Technicians	15	16	2
Foreign Languages, Literatures, and Linguistics	16	9	4
Family and Consumer Sciences/Human Sciences	19	7	3
[No Description]	20	7	3
Technology Education/Industrial Arts	21	16	2
Legal Professions and Studies	22	8	4
English Language and Literature/Letters	23	9	4
Liberal Arts and Sciences, General Studies, and Humanities	24	9	4
Library Science	25	10	4
Biological and Biomedical Sciences	26	14	3
Mathematics and Statistics	27	14	4
Reserve Officer Training Corps	28	11	4
Military Technologies	29	11	4
Parks, Recreation, Leisure, and Fitness Studies	31	6	4
Basic Skills	32	3	3
Leisure and Recreational Activities	36	9	4
Personal Awareness and Self-Improvement	37	3	4
Philosophy and Religious Studies	38	9	4
Physical Sciences	40	14	3
Science Technologies/Technicians	41	16	3
Psychology	42	9	3
Security and Protective Services	43	15	4
Public Administration and Social Service Professions	44	15	4
Social Sciences	45	9	4
Precision Production	48	16	2
Transportation and Materials Moving	49	11	2
Visual and Performing Arts	50	5	1
Health Professions and Related Clinical Sciences	51	6	3
Nursing	5116	12	3

Pharmacy, Pharmaceutical Sciences and Administration	5120	13	3
Business, Management, Marketing, and Related Support Services	52	2	4
History	54	9	4

*CIP=Classification of Instructional Program

SOURCE: IHL staff documentation.

Appendix G: The Texas Public University Cost Study, FY 2002 – FY 2004

The Texas Higher Education Coordinating Board directed its University Formula Advisory Committee to develop a method to verify the relative weights used in the funding formula for higher education in Texas. The weights were intended to represent the ratio of total educational costs to total semester credit hours by level (i. e., lower-level undergraduate, upper-level undergraduate, master's, doctoral, and professional) and discipline (e. g., liberal arts, science). The formula distributed funding by multiplying a dollar value by the number of semester credit hours for a given level and discipline and by the relative weight assigned to that level and discipline. For example, the relative weight for science or engineering at a given level should be greater than the relative weight for liberal arts because faculty salaries and research expenses are higher in science and engineering than in liberal arts.

The committee agreed that the costs used to calculate the weights must equal the costs in the universities' annual financial reports that this portion of the formula was to fund. The six elements of cost were: faculty costs; academic support; institutional support; student services; department operating expenses; and research.

Texas collected data on the six elements of cost for FY 2002, FY 2003, and FY 2004. These costs were separated into the various levels and disciplines. The cost for each level and discipline was then divided by the semester credit hours for that level and discipline to determine calculated weights. To determine the relative weights, each calculated weight was divided by the calculated weight of the lower-level undergraduate liberal arts discipline. This formed the matrix of relative weights given in Appendix H, page 58.

SOURCE: PEER analysis of *Texas Public University Cost Study, FY 2002-2004*.

Appendix H: Student Credit Hour Weights from the 2005 Texas Cost Study

Funding Code	Academic Discipline Area	Weight for Lower Level Course (Freshman/Sophomore)	Weight for Upper Level Course (Junior/Senior)	Weight for Professional Level Course	Weight for Graduate Level Course	Weight for Doctoral Level Course
1	Agriculture, Forestry, Architecture, Urban Planning	2.05	2.54		6.64	16.37
2	Business Administration	1.41	1.59		4.59	13.91
3	Education, Teacher Education Practice	2.43	2.57		3.23	9.95
4	Engineering	3.01	3.46		8.20	21.40
5	Fine Arts	1.85	3.11		6.51	17.47
6	Health Services (excluding Nursing and Pharmacy)	2.87	3.46		6.47	15.98
7	Home Economics	1.58	2.12		4.34	10.79
8	Law/Paralegal Studies	3.22	3.22	3.84	3.22	3.22
9	Liberal Arts and Social Studies	1.00	1.96		3.94	12.04
10	Library Science	1.45	1.52		4.22	12.26
11	Military Technologies, Aerospace Studies, ROTC	1.00	1.96		3.94	
12	Nursing	4.91	5.32		6.49	16.32
13	Pharmacy	4.00	4.64	9.00	9.00	19.11
14	Science and Math	1.53	3.00		7.17	19.29
15	Social Services	1.64	1.84		5.80	11.92
16	Technology	1.99	2.56		6.61	

SOURCE: IHL staff documentation.



INSTITUTIONS OF HIGHER LEARNING

Office of Commissioner

November 4, 2008



Max K. Arinder, Ph.D.
Director, Performance Evaluation and Expenditure Review
P.O. Box 1204
Jackson, MS 39215-1204

Dear Dr. Arinder:

Enclosed is the response provided by Mississippi Institutions of Higher Learning regarding the PEER evaluation: "An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi's Institutions of Higher Learning."

Thank you for the opportunity to review and respond to the report.

Sincerely,

A handwritten signature in cursive script that reads "Aubrey K. Lucas".

Aubrey K. Lucas, Ph.D.
Interim Commissioner

enclosure

**Mississippi Board of Trustees of State Institutions of Higher Learning response to PEER Report
Entitled:**

“An Analysis of the Allocation of FY 2009 State Support Funds to Mississippi’s Institutions of Higher Learning”

EXECUTIVE SUMMARY

- The Board of Trustees adopted the policy decision to work with the state of Mississippi to fund Mississippi’s institutions of higher learning at the SREB peer average.
- The Board of Trustees articulated in advance and relied on industry standards as guiding principles to develop the new funding allocation formula.
- The Board of Trustees developed the new funding allocation formula with the documented consensus of all eight institutions of higher learning in the System.
- The new funding allocation formula rewards increasing enrollment, improving retention, distinct institutional missions, and improved educational outcomes.
- Simultaneous to the adoption of the six year plan to fully implement the new allocation formula, the Board of Trustees developed and began discussions with the leadership of the state of Mississippi on a five-year funding framework.
- The prior funding formula’s “constant percentage method” has been demonstrated over time to be unfair.
- The Board of Trustees is not opposed to doing a cost study for Mississippi or to updating it at regular intervals. However, due to the added work load to maintain this study, additional analytical staff will be required.
- The Board of Trustees will take the recommendation to continue to improve the methodology used to predict research space.

RESPONSE TO PEER REPORT

PEER was asked to evaluate the fairness of the current methodology used by IHL to allocate state appropriated funds to the state’s eight universities. As a preface to the response to that evaluation, it is necessary to provide a brief overview of the inequities which led the Board of Trustees to develop and adopt the development of the current model.

Overview

State funding for Mississippi’s Institutions of Higher Learning (IHL) has been erratic over the years. Rather than stable or gradually increasing appropriations, state appropriations have often been static or

even decreased on a full-time equivalent (FTE) student basis. The prior state appropriation allocation model used by IHL was one that held institutional funding at a constant percentage of annual appropriations without regard to whether the universities gained or lost enrollment. It also failed to recognize the distinct institutional missions or to reward productivity. As a result of limited appropriation increases, universities that had increasing enrollment lost funding per FTE and lost relative funding position within the Southern Regional Education Board (SREB) states. [NOTE: SREB is a group of 16 states located in the southern United States from Texas to Delaware and classifies higher education institutions based on size, role, breadth of program offerings, and comprehensiveness.] Institutions losing enrollment had increased funding per FTE. This provided no incentive to improve production. The Board decided that the funding methodology had to change. The allocation methodology was rewarding lack of enrollment growth and was unfair to universities that had increased enrollment. To illustrate, an example of the decrease in funding per FTE student for Mississippi Valley State University is shown below. Using the constant percentage method meant that funding for Mississippi Valley State University stayed approximately the same; however, because Mississippi Valley State University increased its enrollment over the period from 2,542 FTE students in 1998 to 3,463 in 2004, Mississippi Valley State University was forced to accommodate more students with fewer resources on an FTE basis:

Table 1: Appropriations per FTE Student for Mississippi Valley State University from FY 1999 to FY 2004

Mississippi Valley State University							
Fiscal Year	FY/1998	FY/1999	FY/2000	FY/2001	FY/2002	FY/2003	FY/2004
Total Appropriations (Excluding Ayers)	\$ 10,942,938	\$ 11,863,391	\$ 13,063,476	\$ 12,189,382	\$ 11,457,387	\$ 11,490,360	\$ 11,639,042
FTE Students	2,542	2,603	2,522	2,664	2,908	3,195	3,463
Appropriation Per FTE Student	\$ 4,305	\$ 4,558	\$ 5,180	\$ 4,576	\$ 3,940	\$ 3,596	\$ 3,361
Annual Change in Appropriation Per FTE Student		5.9%	13.7%	-11.7%	-13.9%	-8.7%	-6.5%

Table 2 shows the funding per FTE for the four research (grouped as SREB Level II) and four regional (grouped as SREB Level IV) universities compared to SREB funding. During the period of time shown in Table, some Mississippi regional universities received twice as much as other Mississippi regional institutions on a FTE basis, received more funding per student than comparable peer institutions in other Southern states, and received more than funding per FTE than Mississippi's more expensive research institutions.

Table 2: Level II and IV Grouped Appropriations per Full-Time Equivalent Student by Institutions

Mississippi Institutions of Higher Learning Comparison of Appropriations per Full-Time Equivalent Students FY 2000 to FY 2007								
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
SREB IV	\$4,658	\$5,429	\$5,355	\$5,033	\$4,755	\$4,932	\$5,150	\$5,566
ASU	\$4,658	\$5,656	\$5,123	\$5,096	\$5,115	\$5,201	\$4,942	\$5,566
DSU	\$6,619	\$6,187	\$6,028	\$5,958	\$6,125	\$6,174	\$6,045	\$6,503
MUW	\$7,306	\$6,868	\$6,790	\$6,922	\$6,965	\$6,782	\$6,301	\$6,991
MVSU	\$5,180	\$4,576	\$3,940	\$3,596	\$3,361	\$3,440	\$3,599	\$4,779
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
SREB II	\$6,280	\$6,568	\$6,547	\$6,231	\$5,973	\$6,076	\$6,371	\$6,959
JSU	\$6,138	\$5,387	\$4,862	\$4,754	\$5,013	\$4,905	\$4,841	\$5,588
MSU	\$6,281	\$5,650	\$5,225	\$5,332	\$5,610	\$5,834	\$5,840	\$6,450
UM	\$6,066	\$5,437	\$4,945	\$4,737	\$4,567	\$4,502	\$4,290	\$4,816
USM	\$5,929	\$5,429	\$5,109	\$5,045	\$5,249	\$5,278	\$5,399	\$6,238

Funding Allocation Model

In 2003, the Board requested the Board staff, along with the chief financial officers (CFO) of each institution to develop a new model to replace the constant percentage model which had proven to be unfair. A new model was adopted that distributes funds to the universities based on whether they were research or regional universities, the number of student credit hours produced by level and discipline, and the costs for operation and maintenance. The new model addressed all the problems of the previous model. Despite the many variables that the formula takes into account, the primary factor in the funding allocation model is FTE students. The Board of Trustees has adopted a policy to increase the number of college graduates in Mississippi; by linking student credit hour generation to allocation of funds, the Board of Trustees has provided the institutions an incentive whose ultimate intent is to benefit Mississippi and its citizens through education. The Board also required a fair and defensible methodology for its funding allocation, but also one that incorporated accountability and incentives based on established measures that are rational and sound.

Fairness was one of the main objectives of the Board of Trustees in adopting a new allocation model. At the beginning of the process, Board's staff used the 12 principles of fairness as defined by the Southern Regional Education Board (SREB) (1999) as industry guidance for best practices. In contrast, when questioned, PEER did not provide the definition of fairness used in their evaluation and assessment except to point to Texas; therefore, PEER apparently did not consider or acknowledge industry practice in evaluating the Board of Trustees' allocation model despite these guidelines being readily available on the SREB website. The recommended guidelines provided by SREB are available on their website at

www.sreb.org/main/Publications/Finance/PrimeronFundingHigherEd.pdf. The 12 principles used as guides by the Board of Trustees were:

1. **Be based on the state goals for postsecondary education (SREB).** The funding model should support the goals of the State and the Board of Trustees. The model encourages the Board's goal of aggressively recruiting, retaining, and graduating more students for Mississippi's workforce to drive the State's economic development goals.
2. **Be sensitive to college's different missions (SREB).** The funding model is sensitive to universities' different missions by providing pools of funding based on the missions of the institutions. Contrary to PEER's recommendation to eliminate separate, non-competing pools of funding for research and regional institutions, SREB's guidelines state "a funding method should recognize that different institutional missions require different per-student funding... the funding model should include different rates when these mission-related costs are significant and can be documented." SREB's data clearly shows that the cost of operating a research institution is higher than regional institutions. By placing research and regional institutions in separate, non-competing pools, IHL has followed this guideline.
3. **Provide adequate funding (SREB).** The funding model calculates adequate funding, not excessive funding since it is based on median appropriations per full-time equivalent students in the southern region. This methodology reflects the various institutional approved missions by the Board.
4. **Provide incentives for or reward performance (SREB).** The funding model provides incentives for institutions to retain and recruit students. The model is also conducive to providing additional incentives for particular programs in the state as based on particular needs such as teachers and nurses. As noted in the example of Mississippi Valley State University in Table 1 under the previous constant percentage methodology, Mississippi Valley State University was able to comply with an objective of the Board of Trustees by increasing enrollment; however, as shown, the constant-percentage method effectively punished Mississippi Valley State University for its success. The Board's new allocation model rewards the performance of Mississippi Valley State University in recruiting students.
5. **Appropriately recognize size-to-cost relationships (SREB).** The funding model recognizes size-to-cost relationships by being sensitive to the lack of economies of scale at the smaller institutions by providing a small school supplement on top of the formula calculations.
6. **Be responsive to changing demands (SREB).** The funding model is responsive to changing demands by being responsive to changes in cost, enrollments, and operation and maintenance needs.
7. **Provide reasonably stable funding (SREB).** The funding model calculates a reasonable stable funding source and provides stability by not permitting sudden increases or decreases in funding without giving university administrators time to respond to the changes. This is accomplished by using three year averages to prevent sudden jumps in funding.
8. **Be simple to understand (SREB).** The funding model is simple to understand.
9. **Fund colleges and universities equitably (SREB).** The funding model is equitably providing equal funding for equal institutions based on size, mission, and growth. The principles say the funding

model should treat dissimilar situations such as different missions, size and growth rates differently and fairly. The model does this by providing separate, non-competing pools for the request for funds which is based on missions of the universities. If IHL followed PEER's recommendation to eliminate pools of funding for regional and research institutions, the Board of Trustees would cause the institutions to ignore industry practice and cause the state's universities to compete on unequal footing with peer institutions throughout the Southeast.

10. **Make provisions for funding special-purpose units (SREB).** The funding model should make provisions for funding special-purpose units. IHL is sensitive to unique programs such as the aviation program and IHL has attempted to obtain actual costs for certain programs to fund this special-purpose unit.
11. **Use valid, reliable data (SREB).** The funding formula must use valid, reliable data. The data is provided by the universities. IHL tries to ensure the validity and reliability of the data by first editing by the data analysis staff and secondly by the internal auditors of the system. In addition, the Board of Trustees references data from other Southeastern universities through SREB. In this way, the Board incorporates data and funding practices that help the state's universities to compete with peer institutions throughout the Southeast. Contrarily, PEER's recommendation to eliminate separate, non-competing funding pools based on SREB data asks the Board of Trustees to ignore a valid and reliable data set.
12. **Allow administrative flexibility in spending funds (SREB).** The funding model allocates funds to the institutions without dictating how the funds are to be spent to allow the university administration flexibility in spending funds. This allows complete autonomy by the administration of each campus to allocate the funds.

Beginning in FY 2006, the IHL Board of Trustees attempted to fully implement the new allocation formula over time by redirecting new funding to the appropriate universities. Institutions were basically held harmless with only slight adjustments to the underfunded institutions. New state funding was not adequate to accomplish this, and the Board decided in FY 2009 that it could not continue to delay implementation of the formula. The Board decided it was time to begin the process of implementing the new allocation model.

Rebalancing

Because state appropriations had not been adequate for the Board of Trustees to fully implement the allocation model, the Board adopted a six-year plan to redistribute funds based on the policy goal of achieving relative parity with SREB peer institutions. In addition to its review of the fairness of the funding model, PEER included the implementation of the formula, known as rebalancing state appropriations. *Rebalancing was the Board of Trustees' method to slowly correct the unfairness of the prior model, not the current model.* The records show the Board began redistributing funds to begin correcting the existing unfairness beginning in FY 2006 [See the attached timeline for the Board's process for developing the allocation methodology from June 2003 through September 2008.]. The Board continued their principle of fairness in the correction through rebalancing by spreading the remaining correction over six years beginning in FY 2009 to prevent immediate negative impact to an

institution and to allow the institution to improve retention and recruitment strategies. The model described in PEER's review assumes that no variables change over the six year period. This is not the case. Changes in enrollments, appropriations, and peer comparisons are but a few of the variables that can change the impact as presented in FY 2009.

Even if an institution did nothing, two particular changes have the potential to affect the outcome in very positive ways – changes in peer appropriations per full-time equivalent students for the other states on which the calculations are based and increased funding by the state. PEER does not mention its report that rebalancing began in 2006 and chose to focus only on rebalancing for FY 2009. The Board's adopted plan will, in effect, allow *ten* years for the universities to adjust. The Board of Trustees would argue this is more than fair to the institutions that have been overfunded and less than fair to those institutions that have been underfunded.

Five-Year Framework

The Board identified the need for adequate, stable state appropriations to both fully fund the formula, as well as to allow the Board, institutions, and parents to financially plan ahead. The Board, as noted when the Board adopted the rebalancing plan, also adopted a five-year framework for raising appropriations per FTE at Mississippi institutions to the SREB average. Achieving this policy objective will result in increased appropriations and will reduce any required budget reductions as a result of rebalancing. This five-year framework was the first step in beginning discussions with the Legislature and was first presented to the Joint Legislative Budget Committee in September. At that time, Speaker Billy McCoy formed a joint subcommittee between Senate and House Committee members to better understand the framework and to find a way to partner with IHL in this endeavor. The basic goal of the five year framework was to allow the Legislature a way to meet the funding needs of the eight universities over a five year period rather than catch up in one year annual budget requests as proposed in prior years.

Fairness

PEER questioned the fairness of the IHL funding allocation model in the report. PEER concluded that "IHL's method of implementing the formula raises serious concerns regarding fairness." While reasonable people may disagree on the definition of fairness, IHL has proactively pursued the concept of fairness throughout the process of designing the formula and through the rebalancing effort but PEER's report acknowledges none of the good faith with which the Board of Trustees has exercised in its implementation of the allocation formula. (A timeline is attached with more detail.)

IHL staff provided PEER with minutes documenting meetings where the chief financial officers of each institution held open discussion on the formula and reached consensus. PEER did not consider the importance of these discussions in its report. As a result, a judgment was made that the formula is unfair when those affected by the formula, the chief financial officers of the institutions, have already spoken on the matter by reaching a consensus, implicitly affirming its fairness. IHL acknowledges PEER's role, we believe the institutions chief financial officers (CFO) have more expertise on the operation and cost of an

institution of higher learning, or further, more to offer in determining fairness of allocation of funds to an institution of higher learning than the chief financial officers of these same institutions.

Fairness is a public policy decision. Fairness is not necessarily defined on an institution by institution basis, but must be considered in the context of serving the higher education needs of the state of Mississippi. The Board's decision to implement the new allocation formula sent a clear signal it intended to reward improved productivity, increased enrollments, improved retention, increasing graduation rates, and to target investment in the distinct university missions.

RESPONSE TO SPECIFIC PEER RECOMMENDATIONS

The PEER report resulted in four recommendations. The responses to these recommendations are addressed below.

Specific Responses to PEER Recommendations

Recommendations:

1. PEER suggests the following:
 - a. A cost study should be performed for Mississippi.

Response: IHL began the process of implementing a cost study as a part of developing the new allocation model. Approximately a year was spent on this exercise before the chief financial officers of each institution voted unanimously to stop the process and use a cost study recently done in Texas. The Board of Trustees is not opposed to doing a cost study for Mississippi.

- b. The cost study should be updated at regular intervals.

Response: The Board of Trustees is not opposed to updating the cost study at regular intervals. However, due to added work load to maintain this study, additional analytical staff will be required.

- c. IHL should not be allowed to request additional funding from the Legislature until the cost study is performed.

Response: This recommendation appears punitive. The reality is the total request made to the Legislature for annual funding is based on the public policy objective for Mississippi's institutions to achieve SREB funding levels per full-time equivalent students of peer institutions and capital renewal as prescribed by APPA – Association of Physical Plant Administrators. A cost study would have no impact on appropriation requests. The only element not tied to SREB peer institution appropriation per FTE students in the request to the legislature is the small school supplement.

- d. IHL should define underfunded to include all funds received by the institution.

PEER recommends that IHL change its allocation methodology to take into account the “full range of funding available to a university (e. g., tuition, restricted funds).” Although PEER’s report was to determine what is “fair” for Mississippi’s public universities, based on this recommendation PEER apparently is less concerned about what is “fair” for Mississippi’s taxpayers. The Board of Trustees adopted its allocation formula because it provides incentives for the institutions to be entrepreneurial. The Board expects the institutions to be efficient with the money it generates, whether through tuition, fund raising, or research grants. For example, if one institution is successful in student recruiting efforts and thus increases tuition generated, PEER’s logic would suggest that in some cases IHL allocate less state appropriations to that institution. PEER is effectively recommending that the Board of Trustees punish success in recruiting, retaining, and educating students. The same is true of research grants; PEER’s recommendation would punish a university by allocating less state appropriations if it is successful in competing for research grants. External research is important to the economic development of the state of Mississippi. The Board of Trustees believes that the taxpayers of the state of Mississippi expect that successful operational efficiency and initiative be rewarded and reinvested where the success was created, i.e. on the successful campus. In addition, PEER mentions restricted funds which could include private donations. If the Board of Trustees truly bases its allocation of state appropriations and discounts private donations, then IHL would be disenfranchising good faith donors. For example, if a donor gave \$1 to a university and the Board of Trustees then realigned its allocation of state appropriations because of this, then the institution would effectively receive less than \$1 because the increase in restricted funds would trigger a decrease of state appropriations. Therefore, PEER’s logic would require not only that the Board of Trustees punish the success of its institutions, but punish the generosity of Mississippi citizens, university alumni, private sector benefactors, and other well-meaning people and organizations in addition to violating the intent of the donor. The Board of Trustees believes that the taxpayers of Mississippi expect its policy to reward success and generosity.

- e. IHL should return all institutions to their FY 2008 funding level.

Response: The purpose of the implementation of the formula and the rebalancing is to provide a fairer allocation of funding to our universities. To return to FY 2008 funding levels loses ground in this effort and rewards inefficiencies. If the objective is to fairly fund the state’s eight public institutions, there is no logic to this recommendation.

- 2. IHL should use one dollar value per weights without regard to Regional versus Research institutions.

Response: PEER takes issue with a difference in cost of operations among universities, notably between IHL's distinction between regional institutions and research institutions. PEER states that "IHL's use of a higher dollar value for the weighted student credit hours at the research universities unduly increases the value of these hours at these universities." However, this assertion by PEER denies that there are different costs of operations between these classifications of universities. This contradicts irrefutable regional and national evidence to the contrary. In addition, PEER seems to imply that this is an arbitrary classification. With few exceptions SREB reports that the cost of operations, the cost of salaries, and state appropriations are higher for research-oriented institutions (Level II) than for regional institutions (Level IV). To follow PEER's logic and allocate money without regard to the higher cost of operation produced by the mission of an institution would require the Board of Trustees to ignore the clear, consistent, and objective findings of higher education institutions throughout the Southeast and the higher education industry in general. Although PEER's report acknowledges that faculty at research institutions have "specialized training and specialized research," PEER apparently refuses to acknowledge objectively obtained data that clearly indicates that the market demands higher salaries for faculty who have such specialized training and specialized research orientation as identified in SREB data. The Board of Trustees believes that the state of Mississippi is best served by having both high quality research institutions that produce both high quality instruction and research and by having high quality regional institutions that focus primarily in producing high quality instruction.

The current allocation model reflects productivity. State appropriated dollars would be allocated based on productivity. This means dollars would flow to Level II and Level IV institutions, respectively, who produce the most completed student credit hours and who produce the most expensive hours which reflects the relative costs between disciplines. PEER agreed this was potentially a fairer model than just based on students without regard to costs of various programs.

PEER also suggests that the dollar value per weighted student credit hour should be the same for all institutions regardless of classification. This argues to fund the regional institutions at a higher rate than their peers and to fund the more costly research institutions at a lower rate than their peers. The goal of having different dollar values for Level II and Level IV weighted student credit hours is to fund each institution at the average of their peer institutions. Industry standards suggest funding research and regional institutions differently is the practice among states and institutions. This methodology has the holistic view of holding tuition down at the larger institutions where 80 percent of the students attend. By recommending that the Board not give funding consideration to institutions with research responsibilities as well as teaching responsibilities, PEER is asking the Board to issue an unfunded mandate to the research institutions.

3. PEER suggests the following for operation and maintenance:

- a. IHL should use the actual number of library users (as determined by library administrators) during peak times of use when predicting the amount of needed library space for universities.

Response: The purpose of this component is to identify the space required for library materials, and not the number of library users. The dollar value would fund operation and maintenance of the space. Using PEER's logic and interpretation of this part of the formula, PEER apparently believes each institution should only maintain enough library books and shelf space for the average daily volume of library patrons rather than providing library materials for all students.

- b. IHL should predict research space needed for universities by researching the different kinds of space for various types of research.

Response: As we continue to refine the funding model, the Board of Trustees will take this recommendation under consideration.

4. PEER suggests the following for small school supplement:

- a. IHL should discontinue making comparisons between appropriations per full-time equivalent students when determining eligibility for the small school supplement.

Response: IHL is opposed to eliminating the comparison of funding per student FTE in order to receive the small school supplement. Without this component, an institution could have double, triple, or any multiplier which is greater than the state appropriation per FTE of their peers and still receives additional funding from the formula. Should this be the case, the university would in effect already be funded for the lack of economy of scale. Using an extreme and hypothetical example and assuming all other variables are equal, if a university received \$100,000 per FTE when peer institutions receive \$5,000 per FTE, this suggests that the institution with \$100,000 per FTE is receiving funding at a level that would eliminate the need for an additional funding supplement of any kind. While this is an extreme and hypothetical example, it illustrates the need to make appropriation comparisons on a full-time equivalent basis to check the reasonableness of outcomes.

- b. IHL should consider using some sort of phase-out when a university's enrollment increases above 5,000.

Response: Effectively, the new formula provides a phase-out because a three-year average is used for the calculation. To be fair, the chief financial officers of the institutions were given the option of phasing out the enrollment requirement for receiving the small school supplement and unanimously agreed not to have a phase-out for this element of the formula.

TIMELINE-IHL FUNDING FORMULA DEVELOPMENT		
Date	Meeting/ Action	Summary
June, 2003	Research for Formula Proposal	Compilation of data for formula development: primer on funding higher education and use of formulas; operations and maintenance based on spending per square feet; summary of formula components used by SREB States; reports on benchmarking information for administrative and support programs for universities; review of the original formula funding process from 1991-1992; and feedback from CFOs related to allocation models-UM, DSU, MVSU, JSU,
October 2, 2003	Special CFO Meeting	Formula Meeting Agenda: 1) Open Discussion- What data elements <i>should</i> and <i>should not</i> be included in formula; 2) CFO Comments; 3) Distribution and Discussion related to surrounding States' Formulas; 4) Explanation of Texas Model
October 3, 2003	Memorandum to CFOs Re: Allocation Model	Distributed to CFOs a draft document summarizing the formula based on the Texas Model. Draft incorporated CFOs comments and concerns discussed at 10/2/03 meeting. Also distributed a spreadsheet showing the results of the formula.
October 15, 2003	CFO Meeting	Formula Update: Comments from CFOs on the Texas model were distributed. Reference to a planned teleconference with Texas officials was discussed.
November 11, 2003	Finance Committee Meeting	Presentation to Board on funding formula. Identified and communicated CFO comments/concerns addressed in the formula.
November 20, 2003	Board Meeting	Discussion of allocation model and consideration of conducting Cost Study.
April 5-6, 2005	Funding Formula Retreat	Agenda: Proposed cost study; consideration of institutional type; separation of credit hours by classification, economies of scale, grouping of disciplines, faculty salaries allocation, accounting for academic, student, and institutional support, and O&M
April 21, 2005	Board Meeting	Board approved allocating to the institutions the State appropriations by using base percentages and returning to use of a funding formula allocation model for FY 2007.
May 13, 2005	Drafted: Alternatives for Allocating FY 2006 State Appropriations	
May 19, 2005	Board Meeting	Board approved an equity adjustment of \$457,440 to be distributed to Mississippi Valley State University-FY 2006.
June 16, 2005	Board Meeting	In depth presentation on the funding model to the Board
July 21, 2005	Board Meeting	Communication to Board-Board staff will meet with Governor's staff for a briefing on the funding formula
October 19, 2005	CFO Meeting	Update on Formula: Discussion on rescheduling retreat to discuss funding formula. August retreat cancelled due to Katrina.
November 16, 2005	CFO Meeting	Update on Formula: Distributed to CFOs copies of a power point presentation related to Texas Model addressing space
December 1, 2005	IEO Meeting	Briefing to Institutional Executive Officers concerning the formula.
March 1, 2006	Funding Formula Retreat-In attendance: CFOs and Commissioner	Purpose of meeting was to determine major components of the formula. Also addressed and documented: use of predicted space, calculations related to teaching and library space, introduction of a capital renewal component (new to the Texas model), incentives, and application of the formula. It was agreed IHL Internal Audit will also audit data submitted by the institutions.
March 1, 2006	IEO Meeting led by Commissioner	Agenda included a status report and opportunity for discussion related to the funding allocation process.
April 5, 2006	IEO Meeting led by Commissioner	Agenda included a review of the funding formula/allocation process.
April 19, 2006	CFO Meeting	Update on funding allocation. Discussion of equity adjustments for MVSU and UM. Additional dollars of \$1.7M will be allocated to the universities using the funding model.
April 20, 2006	Board Meeting	Board approved equity adjustments of \$1 million to be distributed to Mississippi Valley State University and the University of Mississippi-FY 2007.
June 14, 2006	Email to CFOs	Funding formula was updated and distributed to CFOs.
May 3, 2007	IEO Meeting led by Commissioner	Agenda included discussion related to the appropriation allocation process.
May 17, 2007	Board Meeting	Board approved equity adjustment of \$1,000,000 to the University of Mississippi-FY 2008.

TIMELINE-IHL FUNDING FORMULA DEVELOPMENT (Continued)		
Date	Meeting/ Action	Summary
November 1, 2007	IEO Meeting led by Commissioner	Assistant Commissioner for Finance and Administration was on agenda to give an update on the rebalancing or equity model and respond to issues/concerns.
November 27, 2007	Presentation to IEOs on Funding Allocation Options	Purpose of meeting was to provide various funding allocation options for discussion. Reminded institutions that data has been provided documenting impact to each institution based on the various scenarios considered.
January 10, 2008	IEO Meeting led by Commissioner	Agenda included discussion related to the rebalancing/equity model under development.
April 3, 2008	IEO Meeting led by Commissioner	Agenda included discussion related to the rebalancing/equity model under development.
January 22, 2008	Email to IEOs from Commissioner	Request for IEOs to approach equitable funding from a system perspective. Requested a recommendation that would be the most fair and equitable.
April 16, 2008	Board Meeting-Rebalancing/Equity Presentation	Presentation to Board: background, past equity adjustments, formula review, review of five different funding scenarios for consideration.
June 5, 2008	IEO Meeting led by Commissioner	Agenda included discussion related to the funding formula and rebalancing/equity.
September 2, 2008	Presentation to Delta Council	Goal and explanation related to 5-Year Financial Plan

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