PROTECTING ACCESS AND AFFORDABILITY:
NEW OPPORTUNITIES FOR MASSACHUSETTS PUBLIC HIGHER EDUCATION IN TIMES OF RISING STUDENT CHARGES

a report from the
Institute for Higher Education Policy
to the
Massachusetts Board of Higher Education

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Ronald A. Phipps and Jamie P. Merisotis

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Introduction

Like many states across the nation, Massachusetts is facing a state budget crisis. At various points in 2003, estimates of the state’s budget crunch grew to upwards of $3.2 billion. In fiscal year (FY) 2001, the Commonwealth’s appropriation for public higher education was $1.2 billion. Over the past two years, higher education appropriations decreased by $108 million. The FY 2004 budget projects a further reduction for public higher education of at least $150 million.

The statewide funding squeeze has led state policymakers and institutional leaders to address several intersecting issues. Certainly one has been discussion and ultimately action to increase student charges\(^1\) via tuition, fees, or some combination of the two. In addition to increasing student charges, the Governor also proposed sweeping changes to the public higher education system designed to enable the colleges and universities to operate more efficiently and to cut costs. The Board of Higher Education (BHE) also has responded with efforts to improve institutional performance through an enhanced performance accountability system.

The BHE has stated that it is acutely aware that if increases in student charges are a necessity to deal with the fiscal crisis, assuring access and affordability for the Commonwealth’s needy students must be a priority. As a result, the Board approached the Institute for Higher Education Policy in the spring of 2003 to provide analysis of possible options to protect low income and minority students. These policy options examine different approaches in terms of both tuition/fee policy and financial aid policy. Of particular interest to the Board was the development of simulations to determine the amount of new financial aid needed and how it might be allocated among the three public higher education sectors.

\(^1\) We use the phrase “student charges” in this paper interchangeably with the phrase “tuition and fees.” Since students typically do not distinguish between tuition or fees in terms of what they pay, this formulation seems to be the most straightforward from the student perspective.
More broadly, the Board also has asked how this specific change in financial aid policy might fit into a more comprehensive examination of the state’s overall strategy of supporting student access and affordability. This report therefore includes a discussion of possible options that the Commonwealth might consider in the near-term. It also makes clear that a more comprehensive review of overall state policy to support access to higher education is needed.

The report is organized into four sections. First, the current policy situation is discussed, which includes both the funding crisis and a review of the financial aid opportunities open to students in Massachusetts. Next is an overview of national trends with respect to exploding tuition and fee increases and the response of some states. The third section provides the simulation results to determine the amount of new financial aid needed to protect needy students. The final section discusses some possible next steps for Massachusetts, which includes policy considerations to promote access and affordability for the Commonwealth’s students.

As a backdrop to the budget crisis and the specter of dramatic tuition and fee increases, it is illuminating to consider the national report card by the National Center for Public Policy and Higher Education. The report examines all 50 states and their higher education policies and outcomes concerning a variety of issues, including preparation of students for college, opportunities for state residents to enroll in higher education, completion of certificates and degrees in a timely manner, and student learning. One of the key issues is affordability. The affordability of higher education for students and their families depends primarily on tuition and fee levels at the various kinds of institutions and on the level of financial aid provided to students and their families. Even taking into account some concerns about the data used to calculate this indicator for Massachusetts, it is nevertheless still true that the Commonwealth was among more than a dozen states that received low grades for affordability in the 2002 report.
Current Policy Context in Massachusetts

A review of public higher education in the Commonwealth has revealed several key issues ranging from fiscal control to student fees to response to state needs. For example, fiscal control of public higher education is limited at the state level because the current structure includes a direct line item appropriation to the public institutions, thereby limiting the BHE’s authority over institutional budgets. There is neither oversight nor campus accountability for increases in fees and the Board has no leverage to improve efficiency and performance. Tuition is set by the Board and remitted to the general fund, while student fees are set and retained by the campus. As a consequence, institutions have few incentives to keep fees low—most cuts in appropriations are passed on to students as student fees. Moreover, state appropriations are not based on enrollment or performance and, therefore, not accountable for costs.

Trend data over the last several years reveals a growing concern regarding student charges. From FY 1989 through 1995, tuition increased by 52 percent, but has steadily decreased in recent years as a result of Board policy to reduce or freeze tuition increases. In FY 2003, tuition was only 3 percent greater than in FY 1989. By contrast, fees, which are set by campuses, have dramatically increased. In FY 2003, fees were 453 percent more than they were in FY 1989. While fees represented approximately one-third of the total charges in all segments of higher education in FY 1989, by FY 2003 fees had grown to represent over two-thirds of total student charges.

Looking at needs of its citizens, several issues have been identified. Access is limited. Two recent national studies have shown that low-income students pay more to attend public colleges in Massachusetts than low-income students pay to go to college in many other states. The Commonwealth also appears to be challenged in terms of responsive to workforce needs. There is a shortage of graduates in high need fields, including allied health, and math and science teachers. The institutions have lower degree completion rates than national peers. Four of six state colleges are below their national peers, while three of four University of Massachusetts campuses are below their national peers.
Expenditure levels also are comparatively high. The expenditures per full-time equivalent student of ten community colleges exceeds their national peers as do all of the University of Massachusetts campuses.

**Performance Accountability System**

In response to a strong desire by the legislature to develop a robust accountability system, the Chancellor and Board of Higher Education made a commitment to the legislative leadership that the implementation of a comprehensive accountability system would be a Board priority in the coming year and that a “Condition of Higher Education” report would be presented to the Governor and the legislature as part of the Board of Higher Education’s budget request for FY 2005. Beginning in 2005, the Board will annually evaluate campus performance and identify those institutions found to be underperforming, as mandated by statute. This process will be incrementally implemented beginning with a 2003 trend analysis report that will highlight performance trends and issues on individual campuses. In 2004, institutions at risk of being designated underperforming will be identified and an improvement/remediation process will be encouraged.

Some of the performance indicators of the accountability process have a direct impact upon the Board’s desire to assure access and affordability for the Commonwealth’s neediest students. Of particular interest are the following indicators.

- Are tuition and fees reasonable in terms of what the market can bear?
- Are rates of increases in student fees reasonable and justifiable?
- Are students in need of financial assistance having their need met?

**Financial Aid in Massachusetts**

The budget crisis, of course, is also directly related to the state’s financial aid programs, and could have profound implications for their long-term success. In-state student charges have increased by double digit percentages at all three higher education sectors. How can the financial aid programs in the state respond to these increases in student charges?
The Commonwealth manages a broad range of financial aid programs and policies. In addition to two scholarship programs, there are eight grant programs, 17 tuition waiver programs, and a no interest loan program. The programs respond to a variety of needs. For instance, the Paraprofessional Teacher Preparation Grant Program assists currently employed paraprofessionals who wish to become full-time teachers. The Performance Bonus Grant Program provides a financial incentive for very needy students to perform well in college and persist towards a degree. The DSS Adopted Children Tuition Waiver extends eligibility to children, age twenty-four or under, adopted through the Department of Social Services by waiving 100 percent of tuition. The No Interest Loan Program offers zero interest loans to assist students in meeting educational costs. Students have ten years to repay their loans.

The following summarizes the three major programs offered by the Commonwealth.

**MassGrant Program**

The MassGrant Program is the foundation for all of the other state financial aid programs. It provides need-based financial assistance to full-time undergraduate students who reside in Massachusetts. Eligible institutions include public and private institutions in the Commonwealth. Additional institutions include state approved institutions in several neighboring states that have reciprocity agreements with Massachusetts. MassGrant awards range between $300 and $2,000 per academic year. In FY 2002, almost $9 million was used for the MassGrant awards.

**Need Based Tuition Waiver Program**

Need Based Tuition Waivers exist to offset increases in tuition and to maintain access to the Commonwealth’s public colleges and universities. An underlying goal of this program is that as future public sector tuitions increase, they are matched with a concomitant increase in the maximum award for the financially neediest students. Over the years, tuition waivers have been used as supplemental scholarships in campus-based
financial aid packaging. This program is open to both full-time and part-time students. In FY 2002, almost $13 million was used for tuition waivers.

Massachusetts Cash Grant Program

The Cash Grant Program is designed to assist needy students in meeting institutionally held charges such as mandatory fees. Limited to the public sector, it is a complement program to the Need Based Tuition Waiver Program. Under this program, open to both full-time and part-time students, funds have been used as supplemental grants in campus-based financial aid packaging strategies. In FY 2002, over $34 million was used for the Cash Grant Program.

Augmenting these state financial aid programs, needy students in the Commonwealth are eligible for the federal Pell Grant. In FY 2002, students were awarded over $80 million in Pell Grants. The federal Supplemental Education Opportunity Grants also provided campus-based need-based awards of over $9 million. Finally, individual institutions utilize their own funds to provide assistance to their students. In FY 2002, almost $30 million was used for institutional aid.

In all, in FY 2002, the federal government contributed grant aid of approximately $89 million, while the Commonwealth provided about $85 million. In addition, the federal work-study program dispensed over $10 million and over $195 million was provided in the subsidized Stafford Loan Program.

Given this array of state and financial aid programs, how should the Commonwealth respond to future tuition or fee increases to ensure access for all students, especially the most needy students? Before addressing this question, it would be informative to observe what is happening in other states.
National Trends and Policy Responses

Massachusetts is not alone as it faces imposing higher student charges in response to a budget crisis. The following trends from across the country demonstrate the seriousness of the situation in several states, and how the Commonwealth fits into the national scene.

Higher Education Funding and Tuition & Fee Increases
According to *The Chronicle of Higher Education*, in the 2002-03 fiscal year, 33 states raised their public-college tuition and fees by greater than 5 percent, or more than twice the rate of inflation. The College Board’s annual survey of college prices and financial aid reinforces these data. The report revealed that tuition and fees at public four-year colleges grew by 9.6 percent over the previous year, the highest jump in a decade. At private four-year colleges, tuition and fees rose 5.8 percent and at public two-year colleges, it rose 7.9 percent. The tuition and fee increases were far greater than the rate of inflation, as measured by the Consumer Price Index, which was 1.5 percent. One poignant example of extraordinary tuition increases is the Miami University of Ohio, a public institution, which approved a plan that will charge all in-state undergraduate students at the same rate as their out-of-state peers—about $18,000 a year beginning in Fall, 2004. This is an astonishing jump from the $7,600 resident students paid this year. Another example is the City University of New York (CUNY), which has approved a one-year tuition increase of 25 percent at its senior colleges. This comes after eight consecutive years of no tuition increases. In other states, such as Maryland, there is serious discussion of doubling tuition rates in just a few years.

In the past two decades, state legislators across the country have given a smaller share of taxpayer dollars to public colleges. In 1980, the percentage was 9.8 percent. By the year 2000, the percentage had dropped to 6.9 percent. At the same time, and fees as a share of colleges’ annual budgets rose from 12.9 percent to 18.5 percent.
Many analysts have suggested that, even when the recession ends, state budgets could be pinched well into the future by an onerous combination of weak revenues and rising health care costs.

A Threat to Access and Affordability
These accelerating increases in student charges affect all students, but have a particularly deleterious effect upon low and middle income students—those who depend on financial aid to attend college. One alarming statistic is that of the 33 states who raised public college tuition and fees by more than 5 percent in 2002-03, the state-based financial-aid programs of 13 states were either reduced or held flat. This disconnect between rising student charges and flat or reduced financial aid does not bode well for access—especially for needy students.

Despite financial aid, many students have unmet need. Unmet need is the difference between the net price of going to college (total price of attendance minus all financial aid received) and the expected family contribution (EFC) of the student’s family. EFC is an estimate of a family’s ability to financially contribute to a student’s education. For students from low-income family, the total unmet need represents a substantial portion of family income. According to the 2000 National Postsecondary Student Aid Study (NPSAS), while lower-income students have higher unmet need than higher-income students, lower-income students have also been found to be more sensitive to a given level of unmet need than higher-income students. That is, once the level of unmet needs exceeds a certain amount, low-income students are more likely to be deterred from attending higher education than higher-income students are. A study by McPherson and Schapiro in the 1990s found that for each $150 increase in the net price of college attendance, the enrollments of students in the lowest income group decrease by about 1.8 percent.

A public opinion poll conducted for the Educational Testing Service by Peter Hart and Robert Teeter (major Democratic and Republican pollsters, respectively) shows that the American public is generally pleased with the performance of colleges and universities,
but concerned with access, affordability, and ensuring high school seniors are prepared to further their education. The following are some key findings of the survey:

• Satisfaction with higher education remains high, with 56 percent of the respondents giving higher education an A or a B, compared to only 31 percent giving those marks to K-12 programs.

• Affordability of college is viewed as the largest problem facing higher education (52 percent), followed by decreased government funding (20 percent) and quality of faculty and academic programs (15 percent). Also, almost three out of four of the respondents (74 percent) said they favor federal limits on tuition and 66 percent say they would pay more taxes to increase financial support for higher education.

**Tuition Discounting**

Many colleges and universities dedicate their own funds to provide grant aid to undergraduates to help them pay for all or part of the tuition and fees charged by the institution. Two recent reports addressed this practice, popularly called “tuition discounting.” A report issued by the U.S. Department of Education, entitled *What Colleges Contribute*, finds that institutional aid to undergraduates has increased at both public and private institutions. For example, in the 1992-93 academic year, 17 percent of all students at public colleges received such aid, averaging $2,200 per student. In 1999-2000, 23 percent received aid and the average award grew to $2,700, after adjusting for inflation.

Most of these increases appear to have gone to students with the highest incomes. At public colleges and universities, the proportion of students in the highest income group receiving aid rose from 13 percent in 1995-96 to 18 percent in 1999-2000, while no noticeable gains occurred in the lowest-income group. The average amount of aid also increased far more for high-income students than for those in the lower income bracket. According to the report, most of the increases in financial aid awards have been given out based on merit rather than need. While college prices rose during the decade of the
1990s, enrollment remained essentially stable. This combination puts pressure on colleges to offer merit aid regardless of need in order to attract and enroll meritorious students who otherwise might not attend.

A new report by the Lumina Foundation for Education agrees with this proposition. The report, called *Unintended Consequences of Tuition Discounting*, concludes that “One of the unintended consequences of tuition discounting is that financial access to four-year colleges for lower-income, financially needy students may generally be diminished. If many colleges use their limited financial aid resources to attract students whose families can afford higher tuitions, then there may be less aid to award to students who cannot afford the tuitions. Thus, the opportunities for lower-income students can be diminished.”

It is interesting to note that over two years ago, twenty prominent student-aid experts placed an advertisement in *The New York Times* that urged federal and state lawmakers, as well as higher education institutions, to focus their aid policies on helping low- and moderate-income families instead of those who can afford to pay for higher education. The ad suggested that colleges and universities should direct their own aid on academically qualified but needy students and urged federal officials to restore grant programs as a priority instead of expanding loans for undergraduates or increasing tuition tax benefits for families. Some of the experts criticized the growth of merit-based scholarship programs in states which, they said, only exacerbate the inequities in higher education by diverting resources that could go to need-based aid to many families who can afford college on their own.

**State Initiatives**

In an attempt to reconcile the relationship between large tuition or fee increases and financial aid policy, several states are proposing or implementing initiatives designed to enhance the ability of low-income students to attend college. The following are a few examples.
Colorado

One of the more interesting proposals is the so-called “voucher” plan, which was proposed by a blue ribbon panel in Colorado, endorsed by the coordinating board, and drafted into legislation. The plan would direct state subsidies, which would normally go to institutions, directly to students. It is envisioned that this new funding mechanism would have a dual effect—enticing more low-income students to attend college while allowing four-year institutions to raise tuition. Under the plan, student grants in the amount of $3,200 a year for undergraduates would be awarded. Students could use these grants, called “college opportunity savings accounts,” at any public college or university in the state.

The logic behind the proposal is that the savings accounts will entice more students to attend college, particularly low-income and minority students. Some researchers, however, are skeptical by observing that low-income students tend to be more influenced by changes in price than by changes in financial aid. Others are worried that if institutions are allowed to raise tuition without a corresponding increase in financial aid, the proposal will fail. Even though the state’s universities have expressed their commitment to using a significant portion of any tuition increases into financial aid, some experts note that institutional aid is less effective than statewide programs, partly because it is not visible or predictable. Moreover, at the institutional level, the more typical practice is for merit and need-based aid to get blended.

It remains to be seen if the proposal is placed into law and it will be a while before the benefits of such a program can be judged. Many agree that the success of the program will be contingent on how well the program is marketed. In April 2003, the legislation that would have created a voucher system was shelved after the lawmaker who sponsored the proposal conceded that he didn’t have enough votes to move it through the General Assembly this year.
**California**

California’s tuition assistance program has undergone some proposed changes. The Governor’s budget provides an $82 million increase for the Cal Grant programs. Of this amount, $54 million is associated with recent and anticipated student fee increases at the University of California and California State University. This augmentation is designed to ensure that all Cal Grant recipients attending these institutions would continue to receive full fee coverage in both the current year and the budget year. However, the budget also proposes to reduce the value of Cal Grant awards by 9 percent for students attending private colleges (for a general fund savings of $10.2 million).

**Other States**

In Fall 2003, *Michigan* is cutting loan interest rates to zero percent for students with a good repayment record. All students qualify for the interest-free program as long as they make monthly payments on time at the standard rate of 3.46 percent for the first three years of the 10-year loan. In *Texas*, the Legislature passed a bill that gives the public colleges and universities free rein to raise tuition. It is expected that a 50 percent increase could occur over the next two years. The bill gives the institutions the opportunity to set their own tuition rates in Fall 2005 if they meet certain requirements, including enrollment growth, student diversity, graduation and retention rates and affordability. Should an institution choose to raise tuition beyond the level recommended by legislators, 20 percent of the money earned from doing so must be used to fund scholarship, financial aid and work study programs at the institution. The Legislature created an oversight committee to evaluate how the institutions perform under the new system.

In *Alabama*, Governor Riley unveiled a new scholarship program that fully covers tuition for qualified students attending any public university or two-year college. To qualify, students must graduate from an Alabama high school and have at least a 3.0 grade point average and a 20 on the ACT exam. Students must complete 18.5 units of English, math, science, and social studies as well as a foreign language and computer science, if offered at their school. Those who miss the GPA or class requirements by 10 percent or less may
still qualify for the scholarship. If legislators pass the bill, voters will decide in September whether to accept all of the governor’s proposed taxes and reforms, which include the scholarship. In New Jersey, in exchange for moderate budget cuts, the state’s public colleges and universities agreed to hold tuition increases to 9 percent or below. The state budget includes a provision stating that colleges and universities that increase tuition by more than 9 percent would lose millions of dollars in state funding. Most of the public colleges say they will comply with the limit.

Federal Concerns
During the 108th Congress, which expires at the end of 2004, the Higher Education Act is scheduled to be reauthorized. The subcommittee of the House of Representatives that will shepherd the Act through Congress is considering ways to curb increases in tuition. Specifically, the chairman of the committee, Congressman Buck McKeon of California, recently unveiled a bill called the Affordability in Higher Education Act of 2003. This legislation is designed to hold higher education institutions accountable for their costs with the goal of ensuring that all qualified students can attend. A major thrust of the bill will be the development of a “college affordability index,” which will serve as a measure to determine if colleges are raising their tuition and fees beyond reasonable rates. The proposed affordability index will be based on the Consumer Price Index (CPI). If a higher education institution’s price exceeds the index by more than a certain level, that institution would have to explain why and present a plan to hold down future price increases. If the institution does not reduce the rate of tuition and fee increases, various sanctions would be triggered. As a last resort, the institution’s students could be declared ineligible for specific types federal financial assistance, such as campus-based aid available through the Supplemental Educational Opportunity Grant (SEOG) or work-study programs.

Earlier this year, what is usually a routine update of the formula the federal government uses to calculate a student’s need for aid turned into a major concern of many financial aid analysts. The annual revisions by the U.S. Department of Education of the information used in the formula uses tax data that is always a few years old—but
typically this does not pose a problem. However, an unprecedented problem arose this year because of recent drops and increases in tax rates. As a result, the data used this year, from 2000, do not accurately reflect families’ current tax burdens. It is predicted that families of 16 million undergraduates will be expected to contribute as much as $12 billion more to their child’s college education in 2004 than in 2003. The Education Department refutes these numbers by stating that the adjustment would not have a negative impact on students, partly because any financial burdens caused by the tax data would be offset by changes to other data used in the formula, such as family income. As of the writing of this paper, the controversy has not been resolved.
Simulation Results

In this broader context of both state and national concerns about access and affordability, the Massachusetts Board of Higher Education asked the Institute for Higher Education Policy to find ways to protect the neediest students in the Commonwealth. Specifically, the Institute was asked to develop simulations to determine the amount of new financial aid needed, based upon the increases in student charges, and how it might be allocated among the three public higher education sectors.

In conducting these simulations, our work was guided by the following principles:

- **Assuring Access for Needy Students.** This is the primary objective. In anticipation of substantial tuition and/or fee increases, it is clear that students in the lower and middle sections of the Expected Family Contribution (EFC) scale are in danger of not having sufficient funds to attend higher education institutions without systemic intervention.

- **Equity.** Good stewardship of public funds requires that resources be allocated fairly. The methodology should ensure that students with financial need be provided with sufficient funds and, conversely, students who do not have financial need be ineligible for financial assistance.

- **Operational Ease.** It is important that a plan to distribute new student aid be sensitive to the imposition of administrative burden at both the institutional and state level.

Simulations

Prior to conducting the simulations, staff from the Institute met with a group of enrollment management and financial aid professionals from the public colleges and universities in the Commonwealth. The purpose of the meeting was to benefit from their knowledge and experience with regard to the effects that increased tuition and fees will have upon the enrollment behavior of students.

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2 We are grateful for the expertise and analytic guidance provided by Human Capital Research Corporation of Chicago in conducting these simulations under the direction of Institute for Higher Education Policy staff.
The financial aid and cost model that was developed by the Board staff in early 2003 provided an excellent analytic framework from which to work. We built upon the existing assumptions to construct a plan that will mitigate the effects of the increase in student charges. The increase in student charges affects at least two groups of students: (1) students who are already receiving state financial aid but will now require more, and (2) newly eligible students; that is, students who did not qualify for state financial aid previously but will now require some assistance because of increased tuition or fees. Both groups of students need to be addressed to assure access to higher education.

**Research Methodology**

The methodology used for these simulations assumed that the student charges increased at the average rate of increase among each of the three public higher education sectors: Therefore, the following average student charge increases were used in the simulations: $1003 at the University of Massachusetts, or a 18.2 percent increase from last year; $894 at the state colleges, a 23.3 percent increase; and $425 at the community colleges, a 14.8 percent increase. The impact of these increases for FY 2004 is based on an integrated model that simulates aid packaging at the unit-record level for the universe of undergraduate aid applicants who were enrolled at a Massachusetts public institution during FY 2001 and/or FY 2002. This is similar to a model used by the Institute for Higher Education Policy in the mid-1990s that aided in the creation of the state’s ACCESS Grant programs. The simulation model provides a framework that allows estimates of program costs, remaining need after grants and family contribution, given any number of specified changes including: tuition and/or fees, attendance costs, composition of family resources, and student course load.

**Information Sources**

At the heart of the simulation model are a series of merged unit-record data files that bring together a family of information about how students pay for college, including centrally collected unit-record level data, as well as derived unit-record award estimates based on institutionally reported aggregate award recipient totals. Key among these data sources are the following:
• Award information for the MASS GRANT program by recipient.
• Key student financial aid characteristics including family contributions, dependency status, and institutional choice based on the FY 2001 Institutional Student Information Record (ISIR) data base.
• Unit record enrollment data containing information on student course load and demographic background characteristics for all undergraduate students as reported by the Massachusetts Office of Student Financial Assistance.
• Derived estimates of federal SEOG and Perkins loan awards, based on institutional reports, which provide summary statistics on the number of awards and award values by income band and dependency status.
• Derived estimates of Pell Grants based on standard Pell award criteria.
• Derived estimates of the ACCESS Grant, Tuition Remission, and Institutional Grant awards based on institutionally reported aggregate expenditures and number of recipients.

Model Assumptions
In order to construct estimates of need—before and after receipt of all known grant aid—the model necessarily relied on assumptions. The assumptions used in the previous analysis included the following:

• All students currently receiving state financial aid will have 100 percent of the increase in student charges covered by additional financial aid. The need population was identified as all students receiving state financial aid.

• A certain percentage of students not currently receiving need-based state financial aid will require aid because of the higher student charges. The number of these students was estimated by determining those students who were not already receiving state financial aid but, because of the increases in student charges, their remaining need became greater than $4,000, which is equal to an unsubsidized Stafford loan.
With respect to estimating need, the following assumptions were made:

- All cost of attendance figures are based on standardized comprehensive budgets for a full-time student as reported under IPEDS institutional characteristics for the appropriate fiscal year. To estimate awards for students taking less than a full-time load, attendance cost budgets were pro-rated using 12 or more credits as a full-time equivalent.

- Derived estimates of unit record grant awards were based on a standard of “equity packaging” that sought to meet a constant percent of need for all recipients—subject to institutionally reported totals.

**How Massachusetts Families Finance Higher Education**

Before addressing the amount of new financial aid is needed to protect the neediest students, it is informative to understand how families in the Commonwealth are financing their higher education. The figures below illustrate, by sector, the mean dollars and percentage of financing source by selected family income bands in FY 2002. Analysis of the graphs suggest the following observations:

- The combination of all three financial aid sources—federal, state, and institutional—reveals a relatively high quality of aid packages for a majority of students. Grant aid equaled between 60 to 80 percent of need.

- Federal aid is the dominant source of grants for families with incomes under $30,000. State aid is the dominant source of grants for families with incomes between $30,000 and $60,000, and institutional aid predominates for those families with incomes over $60,000.

- There is little or no grant aid for families with incomes above the Commonwealth median, which is about $67,500.
• Consistent with the pattern observed for public universities nationally, the University of Massachusetts’ institutional aid assumes a far more prominent role in aid packages compared with the Commonwealth’s state colleges and community colleges.
Figure 2  Financing Higher Education at Massachusetts State Colleges: Mean Dollars by Source and Income Band

Tuition & Fees = $4,733

Figure 3  Financing Higher Education at Massachusetts Community Colleges: Mean Dollars by Source and Income Band

Tuition & Fees = $3,286
New Financial Aid

Given the increases in student charges, what amount of new state financial aid is needed to protect the neediest students in FY 2004? The simulations revealed that a total of $26,462,351 will be needed to ensure that access of the neediest students will not be harmed. The University of Massachusetts will require $12,983,835, while the state colleges will require $7,790,316, and the community colleges will require an additional $5,688,200, according to these simulations.

Table 1: New State Financial Aid Needed as a Result of Increases in Student Charges

<table>
<thead>
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<th>Sector</th>
<th>Additional Cost for Students Already Receiving Aid</th>
<th>Additional Cost for New Students</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>#</td>
<td>$</td>
<td>#</td>
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<tr>
<td>University of Massachusetts</td>
<td>9,141</td>
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<td>3,804</td>
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<td>State Colleges</td>
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<td>$5,888,778</td>
<td>2,127</td>
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<td>Community Colleges</td>
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<td>$5,349,475</td>
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<tr>
<td>Total</td>
<td>28,315</td>
<td>$20,406,676</td>
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</tbody>
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An immediate concern is to address the means by which the new financial aid of $26,462,351 should be distributed to the various public colleges and universities. Given the previously articulated principles, one possible method would be to distribute this new aid using the same metric as the Gilbert Grant program. Institutions are allocated a percentage of Gilbert Grant funds based on the percentage that their institutional aid awarded to meet need for Massachusetts residents is of the total of all institutional aid awarded to Massachusetts residents by all institutions that participate in the Gilbert Grant program. The allocation is capped so that no institution may receive more than 10 percent of the Gilbert Grant appropriation in any given fiscal year. A similar metric could be developed for public institutions, allocating funds directly to public institutions using this simple approach.
Next Steps for Massachusetts

Along with many other states, the Commonwealth is confronted by an array of policy choices related to how to link tuition and aid policy with the benefits of higher education: how to match financial aid increases with necessary tuition increases to ensure that student opportunity and access are not harmed. In short, the challenge to the Board is to protect needy students enrolled in public institutions, thereby ensuring that the higher student charges do not have a deleterious effect upon student access and success. This section provides, as background, additional analysis with respect to the degree to which students in Massachusetts public institutions need financial assistance and then proposes approaches to financial aid policy that are intended to mitigate the effects of dramatic growth in student charges.

To What Degree do Massachusetts Students Need Financial Assistance?
As the Commonwealth contemplates, and indeed implements, significant tuition or fee increases at its public colleges and universities, it is informative to understand the degree to which students in the public sector are in need of financial assistance. One way to determine this is to analyze the percentage of financial aid applicants whose remaining need after grant aid exceeds $6,625. Why $6,625? This is the dollar amount equal to the sum of a maximum freshman Subsidized Stafford Loan ($2,625) and a maximum Unsubsidized Stafford Loan ($4,000). That is, if an individual financial aid applicant’s remaining need exceeds $6,625 after expending his or her family contribution and receiving grant aid, it can be assumed that the student has exhausted the primary means of financial assistance—including loans—and could be considered extremely needy. Remaining need after grant aid in excess of $6,625 can be problematic, both with respect to being able to access additional resources to meet the remaining cost of attendance and in terms of the ability of the student to comfortably pay loan debt after college. In addition, if the student is able to attend by working excessive hours, his or her ability to stay in school is jeopardized. A desirable policy outcome, therefore, would be to reduce the percentage of these needy students as much as possible.
Figure 7 shows the percentage of aid applicants at the Commonwealth’s public colleges and universities during the academic year 2001-02 that had remaining financial need, after grant aid, that exceeded $6,625, by sector. Approximately one-quarter of the total financial aid applicants (26 percent) had remaining need exceeding $6,625. There were 36 percent of financial aid applicants whose remaining need after grant aid exceeded $6,625 at the University of Massachusetts, 8 percent at the state colleges, and 29 percent at the community colleges.

It is important to note that remaining need is a function of many factors, including the budgeted price of attendance at a particular institution and the amount of state grants and institutional grants awarded to the students, which helps to explain the wide disparity between the three sectors. More to the point, why do the state colleges have less than 10 percent of their students with remaining need after grant aid exceeding $6,625 compared to about one-third of the students at the University of Massachusetts and about three out
of ten at the community colleges? Part of the answer rests with the amount of average state grants and institutional grants awarded by sector, as shown in Figure 8. Focusing on the students with the lowest income band ($0 to $15,000 family income), the average combined state grants (MassGrant, Cash Grant, and Tuition Waiver) awarded to students at the University of Massachusetts in 2001-02 was $1,973; the average state grants awarded to students at the state colleges was $2,171. At the community colleges, the average state grant was $1,394. Turning to institutional grants, the difference is even more dramatic. The average institutional grant at the University of Massachusetts in 2001-02 was $1,293, compared to $703 at the state colleges, and $137 at the community colleges. Similar relationships are evident at the other income bands.

It is important to note that the average price of attendance (sometime called the student budget, which includes tuition, fees, and living expenses such as room, board, and other costs) reported by the community colleges are almost at the same level as the average price of attendance at the state colleges. This is a major factor in determining the percentage of remaining need in the two-year sector.

Figure 8 Average state grants and institutional grants awarded by sector, Academic Year, 2001-2002
Income Band $0 - $15,000

Figure 9 illustrates the percentage of financial aid applicants with remaining need after grant aid exceeding $6,625 by institution. The University of Massachusetts-Amherst has the highest percentage of students at 54 percent, followed by several community colleges
with percentages ranging from 24 to 40 percent. As expected, several state colleges have percentages less than 10 percent and the institution with the smallest percentage at 1 percent is the Massachusetts Maritime Academy.

Turning to the race/ethnicity of students whose remaining aid exceeds $6,625, Figure 10 shows that Hispanic students have the highest percentage at 38 percent followed by Asian students at 33 percent and black students at 31 percent. White students have the lowest percentage at 23 percent.
What does this information tell us? That is, what is a “good” or “bad” percentage of financial aid applicants with remaining need after grant aid exceeding $6,625? Clearly, the lower the percentage, the better. Yet, in a policy context, there must be an optimum or acceptable percentage with the respect to the Commonwealth’s resources and the goals of access and affordability.

While there is comparatively little information available in the public domain to compare other states with the Massachusetts experience, the 2000 National Postsecondary Student Aid Study does allow for a comparison of this measure against all postsecondary institutions by broad sector. Figure 11 indicates 22 percent of financial aid applicants with remaining need after grant aid exceeding $6,625 at the nation’s public 4-year colleges, and 6 percent at the nation’s public 2-year colleges. These figures compare to about 24 percent for financial aid applicants attending a Massachusetts 4-year public institution, and a considerably higher 29 percent attending a public 2-year college.
Given the various factors that may account for observed differences in this measure across institutions, it is perhaps more meaningful to consider it as a benchmark to be monitored over time. This, in turn, could help guide either additional inquiry and/or policies concerning the allocation of institutional and state grant aid.

**New Financial Aid Approaches to Consider**

Any discussion of future options to enhance financial aid must begin with a seemingly unexciting but critically important recommendation: increased funding for the MassGrant program, the Commonwealth’s primary grant program for needy students. The MassGrant program provides need-based financial assistance to undergraduate Massachusetts residents. To ensure that funding is not eliminated to a huge number of students, the Massachusetts Office of Student Financial Assistance has been forced to reduce the value of the MassGrant award to an average of about $500—which does not pay for nearly as much as it did when the program was more generously funded in the late 1990s. Given the dramatic increases in tuition and fees for both public and private...
higher education institutions, we encourage the Commonwealth to fully fund its signature program to promote access.

The following are some possible approaches to complement the array of financial aid programs already established by the Commonwealth. Each is targeted to the neediest students and attempts to use limited resources in the most effective and efficient way possible.

**State Work Study Program**

Research findings regarding the relationship between financial aid and persistence to a bachelor’s degree are critical to understanding potential new approaches to state aid. Three important conclusions can be drawn from the research.

- In general, financial aid has a positive impact on persistence;
- Certain types of financial aid are more likely to have a positive impact than others; and
- The relationship between aid and persistence is not straightforward and is often indirect, especially with respect to low-income and minority students.

Many studies report that aid recipients persist at least as well as, if not better than, non-recipients. Though at first this may not seem to be an impressive conclusion, when one considers that need-based aid is intended to lower the financial barriers for economically disadvantaged students, even an equalizing effect on persistence between recipients and non-recipients suggests that aid is successfully fulfilling its overall objective. Not all types of financial aid have the same relationship with persistence, however. Studies show that grants have the largest effect, especially when given in significant amounts that are renewable through the years of study.

In an effort to make ends meet while paying for college, a large number of students also work while enrolled. Working while in school, however, is in fact positively associated with degree completion when the number of hours worked remain at approximately 20
hours a week or less. This is particularly apparent for work-study jobs. For example, a 2001 survey of low-income and minority college students in New England, conducted by the Institute for Higher Education Policy for the Nellie Mae Education Foundation, found that work-study was positively associated with higher GPAs and greater engagement in campus activities. The results are more mixed for non-work-study jobs. Many researchers have argued that while the positive impact of work-study employment is related to the increased integration to campus life that it provides, a job other than work-study (which is most likely off-campus) can have the opposite effect.

In order to help integrate working students into the institution, improve their persistence, and help them finance their education, the Commonwealth may want to consider complementing the federal work-study program with a state-funded program. Work-study positions for students should be aligned closely with individual academic interests and career goals, increasing the likelihood they will stay enrolled. Although federal regulations encourage institutions to do this, less than 40 percent of work-study students overall indicated that they worked in a job that complements their academic program or career interests. Moreover, it is recommended that the amount students are paid should be increased. According to a recent evaluation of the federal work-study program, one-third of the participants received minimum wage—hardly enough to encourage older students to participate.

**Performance Incentive No Interest Loan**

The Commonwealth has two complementary programs. The first, the Massachusetts No Interest Loan (NIL) program was established to provide eligible needy Massachusetts residents attending postsecondary educational institutions in the Commonwealth with a state-funded loan. The NIL program offers zero interest loans to assist students in meeting educational costs. Students have ten years to repay their NIL loans. The minimum initial NIL award a student can receive is $1,000, with a maximum award amount of $4,000 per academic year. NIL award amounts are determined according to financial need. A NIL eligible student has a lifetime borrowing limit of $20,000.
The Commonwealth also provides a program designed to acknowledge and reward the success of the neediest students towards graduation. The Performance Bonus Grant Program provides a financial incentive to perform well in college and persist toward the achievement of a postsecondary education degree or credential. Among other requirements, eligible students must have an Expected Family Contribution of zero, have completed at least 24 college credits beyond high school, and have a cumulative grade point average of 3.0 or higher. The award amount is $500 per academic year for students enrolled in a degree program at a 4-year school, and $350 per academic year for students enrolled in a 2-year school.

It is recommended that the attributes of each of these programs be combined to create a new Performance Incentive No Interest Loan (PINIL). Major eligibility requirements for a PINIL could include the following.

- Be enrolled full-time in an associate’s or bachelor’s degree program at a state-approved public postsecondary school in Massachusetts.
- Be a MassGrant recipient.
- Have an Expected Family Contribution (EFC) of less than $1,500.
- Have a grade point average of at least a 2.5.

The minimum and maximum awards could be similar to the NIL. Also, to reduce the cost of the program, a required self-help condition could be required; eligible students would be expected to contribute a portion through work-study or other work efforts.

**Shared Responsibility**

Given the size of the funding crisis facing the Commonwealth, it is reasonable to assume that there could be additional dramatic increases in the future. In an effort to protect the neediest students in light of the anticipated increases in tuition or fees, the Board made the policy goal that all students currently receiving state financial aid should have 100 percent of the increase covered by additional financial aid. As shown in the previous
section of this paper, the resulting cost of funding 100 percent of the increase in student charges is about $26.5 million.

Another approach would be to carry forward the same percentage of need with grant aid as was maintained in prior years. In other words, if a group of students, on average, had 60 percent of need met through grant aid in FY 2002, the Commonwealth would maintain the same standard of financial aid packaging. In part, the appeal of this approach lies with the fact that both students and the state will share in the relative burden of higher attendance costs.

This model, of course, would cost less than providing 100 percent of tuition and fee increases. For instance, if the Commonwealth used, say, 60 percent of need, an estimate of the cost would be $15.9 million. Table 2 illustrates the approximate cost by sector.

**Table 2: Costs by Sector under the Shared Responsibility Model**

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>Number of Recipients</th>
<th>Aggregate Award Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSITY OF MASSACHUSETTS SYSTEM</td>
<td>12,945</td>
<td>$7,790,301</td>
</tr>
<tr>
<td>STATE COLLEGES</td>
<td>8,714</td>
<td>$4,674,190</td>
</tr>
<tr>
<td>COMMUNITY COLLEGES</td>
<td>13,384</td>
<td>$3,412,920</td>
</tr>
<tr>
<td>TOTAL</td>
<td>35,043</td>
<td>$15,877,411</td>
</tr>
</tbody>
</table>
Summary

This report has been designed to respond to the Board’s growing and deep concern regarding the ability of Massachusetts residents to attend college. The budget crisis, the related decreases in the appropriation for higher education, and recent and impending tuition or fee increases severely threaten access and affordability. We have tried to provide a context to the dilemma facing the Commonwealth by showing that many other states are facing the same issues. Although knowledge of the issues in other states does not materially affect the situation in Massachusetts, we hope that the Board may learn from these experiences or at least find some solace in that others are struggling with the same problems.

A fundamental thrust of the report has been to provide an assessment of the amount of new financial aid that would be needed given the increases in student charges. We estimate that over $26 million would be needed to ensure that access of the neediest students will not be harmed. The University of Massachusetts would receive about $12.9 million, the state colleges almost $7.8 million and the community colleges about $5.7 million. At the same time, we believe that new alternatives are required to continuing meeting the needs of students, and have proposed several strategies for new financial aid approaches.

We hope that this information and analysis equips the Board with sufficient knowledge to grapple with a quandary that has severe implications for the future of the Commonwealth. We also hope that other states may learn from the experiences of Massachusetts. Few things are more important than ensuring that qualified students, regardless of their financial circumstances, can afford to attend a college or university of their choice. We believe that this report provides some new directions for protecting access and affordability even in times of rising college prices, and thereby might provide new hope for policymakers to help students and families navigate the increasingly troubled waters of college opportunity.