The price of higher education for the vast majority of students is significantly overstated: at the average private college and university, more than 80 percent of students receive financial aid. In recent years, institutional student financial aid has shifted from largely need-based formulas to those that include merit and other criteria. Today, financial aid is commonly referred to as tuition discounting, and price competition is widespread—even among selective institutions—as aid is used as an incentive to attract students to enroll. David Breneman, Lucie Lapovsky, and Daniel Meyers describe this phenomenon and the often confusing interaction of tuition, financial aid, and enrollment. They raise several questions for the higher education community regarding current pricing policies and their potential long-run ramifications.
Tuition Discounting

The theory of tuition discounting is rather straightforward, as illustrated in Figure 1. Because prospective students do not see colleges and universities as fully interchangeable, each institution faces a downward sloping demand curve, as shown by line D in the figure. Each college is assumed to seek enrollment of \( X_n \) students at price \( T \); it finds that only \( X_{fp} \) (full pay) students will enroll at price \( T \), leaving a gap of size \( X_n - X_{fp} \). Rather than limit enrollment to \( X_{fp} \), the college begins selectively discounting its price, working down the demand curve until enrollment of \( X_n \) is reached, with the last student paying price \( c \). Discounts total the area abc, net tuition revenue totals the area \( OTacX_n \), and the ratio of abc to \( OTbX_n \) equals the institution's discount rate.

In reality, a number of variations of this simplified model exist. For example, a highly selective institution's demand curve would be shifted far to the right, such that it could enroll all full-pay students if it chose to do so. In this case, student aid can be viewed as an educational investment in quality and diversity rather than as a price discount. For these institutions, student aid reduces revenue, whereas for less-selective institutions, student aid increases revenue. Another possibility is that an institution could raise its price to the point where just one student pays full tuition and the rest are discounted down the demand curve. In fact, some colleges are reaching that point.

The logic of tuition discounting provides a rationale for steadily rising sticker prices, which breed bad publicity and hostility on the part of the general public. The relationship between the published tuition price and what students pay, the net price, has been declining, and the American public understandably perceives tuition as significantly higher than actually it is.

Why are institutions pursuing pricing strategies that bring on the wrath of Congress and the press, while netting significantly less than published increases? The answer lies in the fact that many private higher education institutions face an excess supply of places in their entering classes relative to the ability or willingness of families to pay the posted price. Discounting is one way to fill those places.

Tuition Discounting Data

The data summarized herein are derived from the NACUBO financial aid database for 1990 through 1997, which contains information on 213 private institutions. Those institutions are segmented based on U.S. News and World Report rankings into three groups: 1) 24 top liberal arts institutions; 2) 12 top universities; and 3) the remaining 177 institutions.

Net tuition revenue as a percent of the tuition sticker price for the top liberal arts institutions and universities has
declined since 1990, bottoming out in 1996, and recovering a bit in 1997 to 70 percent and 73 percent, respectively. The remaining 177 institutions are still experiencing a decline in net revenues, nearing 60 percent of tuition sticker prices.

Figure 2 shows percentage increases in tuition and net freshmen tuition revenues from 1990 to 1997 in the aggregate for all 213 colleges and universities.

While tuition increases steadily declined, changes in net tuition revenue were erratic, although overall there were positive increases each year. In 1996-97, the increase in net tuition exceeded the increase in tuition. For that to occur, the amount of institutional financial aid needs to decline, which happens when an institution is decreasing its discount rate. The data don’t tell us whether access for low income students was reduced, or if perhaps merit aid was cut back between 1995 and 1996.

Data for individual institutions reveal that in some instances both tuition and enrollment increased, yet net tuition from the entire class declined. Such examples reveal the difficulty of using merit aid effectively.

Can Institutions Control Their Discounting?

It is difficult to draw conclusions about the price a student will pay when the published price increases smoothly while the net price moves erratically. Further, the relationship between the number of freshmen receiving financial aid and changes in enrollment is unclear. It is not uncommon for institutions to experience increases or decreases in a freshmen class of more than 8 percent from year to year; the majority tend to experience freshmen enrollment swings between plus and minus 4 percent.

Figure 3 on the next page shows the percent of freshmen receiving institutional grants from 1990 to 1997. At the remaining 177 institutions, that figure has been steadily rising, such that in 1997 over 80 percent of the freshmen class received institutional grants, whereas at the top liberal arts institutions, fewer than 50 percent did so.

The unpredictable relationships
among freshmen class size, tuition, and net tuition revenue make it difficult for institutions to maintain financial equilibrium. Swings in these critical variables from year to year can be enormous, even at selective colleges and universities. For most institutions, deviations from year to year in net tuition revenues lead to significant fluctuations in available revenues.

**Conclusion**

Tuition discounting policies can produce effects that are simultaneously good, bad and ugly. Questions raised by the data include, among many others:

- To what extent is merit aid reducing available aid for students with need? Is access being reduced?
- What is the impact of merit aid on resources available for programmatic expenditures at an institution?
- Is it appropriate that published tuition is a price without much meaning at many institutions?

Tuition discounting is the current method of choice for filling spaces in freshmen classes. Active review and discussion is crucial to determine whether such policies are in the best interests of students and higher education in the long run, and whether there are economically viable alternatives to tuition discounting.

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Lucie Lapovsky is vice president for finance and a member of the faculty at Goucher College. She serves on many professional committees, including chair of the Tuition Discounting Committee of NACUBO. She is the author of numerous articles and presentations on tuition discounting and budgeting and resource management in higher education.

Daniel Meyers is chairman and CEO of First Marblehead Corporation. He has been involved in education financing projects since 1986, and has lectured extensively on finance and ethics.