


4-1990

Social Irresponsibility, Actuarial Assumptions, and Wealth Redistribution: Lessons about Public Policy from a Prepaid Tuition Program

Jeffrey S. Lehman
Cornell University

Follow this and additional works at: <http://scholarship.law.cornell.edu/facpub>

 Part of the [Education Law Commons](#), [Insurance Law Commons](#), and the [Legal Education Commons](#)

Recommended Citation

Lehman, Jeffrey S., "Social Irresponsibility, Actuarial Assumptions, and Wealth Redistribution: Lessons about Public Policy from a Prepaid Tuition Program" (1990). *Cornell Law Faculty Publications*. Paper 1321.
<http://scholarship.law.cornell.edu/facpub/1321>

This Article is brought to you for free and open access by the Faculty Scholarship at Scholarship@Cornell Law: A Digital Repository. It has been accepted for inclusion in Cornell Law Faculty Publications by an authorized administrator of Scholarship@Cornell Law: A Digital Repository. For more information, please contact jmp8@cornell.edu.

**SOCIAL IRRESPONSIBILITY,
ACTUARIAL ASSUMPTIONS, AND
WEALTH REDISTRIBUTION:
LESSONS ABOUT PUBLIC POLICY
FROM A PREPAID TUITION PROGRAM†**

*Jeffrey S. Lehman**

TABLE OF CONTENTS

PROLOGUE	1036
I. JUSTIFYING THE MICHIGAN EDUCATION TRUST (MET): TUITION INFLATION, INVESTMENT RETURNS, STUDENT LOANS, AND SOCIAL IRRESPONSIBILITY	1040
A. <i>Introduction: The Essential Structure of the Michigan Education Trust</i>	1041
B. <i>Why Parents Might Want a Prepaid Tuition Program: The Relationship Among Tuition Inflation, Income, and Investments</i>	1044
C. <i>Distributional Effects of Public Responses to Private Needs</i>	1053
D. <i>A Public Justification: Correcting Market Failures</i> ..	1055
E. <i>An Alternative Public Justification: Fighting Incipient Social Irresponsibility</i>	1057
F. <i>Summary</i>	1061
II. IMPLEMENTING MET: SELLING CONTRACTS TOO CHEAPLY	1062
A. <i>Actuarial Soundness — Some General Issues</i>	1062
B. <i>Actuarial Soundness — A Close Look at MET</i>	1065

† © Jeffrey S. Lehman 1990.

* Assistant Professor of Law, University of Michigan. A.B. 1977, Cornell University; M.P.P. 1981, J.D. 1981, University of Michigan. — Ed.

This article owes its existence to many people. Kent Syverud prompted my initial interest in the Michigan Education Trust and co-authored an op-ed piece with me that raised many of the questions that this article sets about answering. I received many thoughtful written comments on prior drafts from Alex Aleinikoff, David Chambers, Paul Courant, Sheldon Danziger, Doug Kahn, Diane Lehman, Rick Pildes, Fred Schauer, Peter Steiner, and Trish White. Marcea Metzler, John Furman, Cindy Brach, and Fred Ward each furnished valuable research assistance. Jan Lyddon and Marilyn Knepp were each willing to discuss issues raised in this paper and to share historical and quantitative data. Sabrina Keeley and her assistants at the Michigan Education Trust showed unstinting kindness and cooperation in the face of my frequent requests for information. The William Cook Research Trust and the Honorable Avern Cohn Research Grant each provided generous financial support.

1. <i>Costs: How Much MET Will Need To Pay Out</i> .	1065
2. <i>Revenues: How Much MET Will Be Able To Pay Out</i>	1077
3. <i>The Grand Total: Matching Costs and Revenues</i>	1106
C. <i>Actuarial Soundness Revisited — Year-to-Year Approaches Reconsidered</i>	1108
III. EVALUATING MET: IDENTIFYING ITS EFFECTS	1110
A. <i>The Effects of MET on the Income Distribution</i>	1110
B. <i>The Effects of MET on Higher Education Policy</i>	1113
C. <i>Why and How MET Made Its Assumptions</i>	1118
1. <i>The Common Heritage — Minimal Oversight of the Board</i>	1119
2. <i>The Common Heritage — Politicization of the Price</i>	1121
3. <i>How MET Made Tuition Inflation Assumptions</i> .	1123
4. <i>How MET Made Tax Assumptions</i>	1127
CONCLUSION	1131
APPENDIX	1134

PROLOGUE

What is past is more than prologue. Our actions one day influence our options for the next. Sometimes they influence our neighbors' options as well.

These causal links between present circumstances and past acts often shape our intuitions about justice. We more readily accept another's misfortune if we can say, "He did it to himself." We more readily accept another's success if we can say, "She earned it."

Unfortunately, as all first-year law students learn, causation is a tricky notion. Causes in fact tend to be multiple and partial, and cultures vary in their views about how much or how little volitional involvement makes one *the* cause, the one "responsible" for a subsequent situation.¹ In particular, cultures vary in their willingness to assert that individuals have brought about their own misfortunes. One culture might deny food stamps to striking workers on the theory that the workers caused their own predicament.² A different culture

1. See generally L. KATZ, *BAD ACTS AND GUILTY MINDS* 210-51 (1987); Austin, *The Insurance Classification Controversy*, 131 U. PA. L. REV. 517, 559 (1983).

2. See *Lyng v. UAW*, 485 U.S. 360, 377-80 (1988) (Marshall, J., dissenting) (describing argument of the Secretary of Labor); 117 CONG. REC. 21673 (1971) (we should "say to strikers what we have said to students, to hippies, and others — '... if you are one of the voluntarily poor, you must look to your own resources for help'") (remarks of Rep. Michel).

might excuse them from responsibility, concluding that an individual worker's action should not be considered in isolation, but should be situated within the broader context of labor-management negotiations.³

Those different approaches to assigning causal responsibility reflect more than different conceptions of the scope of individual free will. They also reflect different reactions to the possibility of "moral hazard." The theory of moral hazard claims that people who are insured against the unfortunate consequences of their behavior are more likely to take risks than people who are not insured.⁴ It claims, for example, that people with homeowners' insurance are less likely to lock their doors. A society that worries about the possibility of moral hazard worries that people who are excused from responsibility for their acts will take foolish risks that will ultimately harm the larger community.

Societies that worry about moral hazard have found a variety of mechanisms for mitigating its effects; most involve some version of splitting the difference. Thus, a society may agree to insure against part of its members' suffering, hoping that the residual pain will suffice to discourage imprudent behavior. In so doing, the society acts like a health insurer that makes people pay deductibles or like an automobile insurer that protects negligent drivers against financial loss but cannot protect them against pain.⁵

Moral hazard can be viewed as a particularly interesting variant of a more general problem, a problem that goes by the name of "negative externalities" in the economics literature. Negative externalities arise whenever an actor does something that imposes costs on someone else. In moral hazard situations, that someone else is an insurer and the cost is imposed derivatively; the cost *would* fall on the actor were it not for an agreement shifting that cost to the insurer. In both the special case of moral hazard and the more general case of negative externalities, individuals may act contrary to the interests of the larger society. In each case, to the extent individuals are psychologically estranged from those who must ultimately bear the costs of their actions,

3. *Lyng*, 485 U.S. at 380-83 (Marshall, J., dissenting).

4. See generally K. ARROW, *ESSAYS IN THE THEORY OF RISK-BEARING* 142-43 (1971); C. HEIMER, *REACTIVE RISK AND RATIONAL ACTION* (1985). I use the term "moral hazard" in the arguably nonpejorative sense that it is used by economists. This use contrasts with that of insurers, who often refer to this phenomenon as "morale hazard" and use "moral hazard" to describe unsavory personal characteristics (such as a tendency to lie on insurance applications) that pre-date the issuance of insurance but may raise the risk of claim. See *id.* at 29-30, 35-37.

5. In a comprehensive and thoughtful analysis, Carol Heimer refers to these strategies as efforts to transform "reactive risks" (risks that change as a result of the establishment of insurance) into "fixed risks" (which do not change because other forces predominate over the effects of moral hazard). See C. HEIMER, *supra* note 4, at 28-48.

they may do things they would not do if they had to bear the costs themselves.

Perhaps the central function of civil society is to create institutions — of law, of custom, of manners — that will lead people to think about others. Institutions that will make them *feel* the consequences of their acts, even when those consequences might seem to afflict only others. Institutions that will make them internalize externalities and that will make them act with a sense of responsibility for themselves and others.⁶ When such societal institutions fail, citizens take imprudent risks.

I shall describe the failures of such societal institutions — situations in which individual self-interest is allowed to diverge from communal self-interest — as instances of “social irresponsibility.” By that term I mean traditional cases of moral hazard: cases in which people (whether by act or omission) take risks they would not otherwise take because they have shifted the costs of injury to an insurer. I also mean those cases in which people do things that impose costs on others but would act differently if they had to bear the costs themselves.

This definition of social irresponsibility does not include all situations that involve negative externalities. Specifically, it excludes situations where people who escape some of the costs of their actions would not behave any differently if they had to bear all those costs. Moreover, it includes many cases in which (notwithstanding the somewhat confusing term “moral hazard”) people’s behavior would ultimately be characterized as perfectly moral, even desirable.⁷ The definition is structured to embrace a class of actions that we ought to find *suspicious*: actions that occur only because people do unto others what they would not do unto themselves.

Conceptions of familial obligation, especially the obligation of parent to child, are central to the enterprise of containing social irresponsibility. Enlightened modern welfare states try to take care of children whose needs are not met by their parents. Of course, there is always a risk that such state generosity might ultimately *harm* its beneficiaries by stimulating irresponsible parental conduct. To minimize that risk,

6. Cf. T. SCHELLING, MICROMOTIVES AND MACROBEHAVIOR 127-28 (1978) (describing institutional arrangements to overcome “divergences between perceived individual interest and some larger collective bargain”). One need not, of course, justify social responsibility in purely instrumental terms — as a mechanism promoting efficiency or enforcing a collective bargain among autonomous individuals. Responsible behavior can also be deemed an intrinsically good element of human social existence.

7. For example, the fact that a poor person might not see a doctor if she had to pay the bill herself tells us nothing about whether it is *wrong* for her to see the doctor if she knows that Medicaid will pay. Indeed, it is the goal of many in-kind social welfare programs to allow people to incur certain costs that they would not otherwise incur.

states rely on a mixture of legal sanction, social stigma, and noneconomic reward. Love is linked to duty. Parents who sacrifice for their children are extolled; those who gobble up their children's seed corn are roundly criticized.

In recent years, increasing attention has been paid to questions of intergenerational obligation, even intergenerational obligation outside the family context. Alarm is growing over whether our country is consuming too much, saving too little, and collectively selling out our children. Much of the popular and academic literature about the budget deficit is in substantial part an effort to shore up our sense of responsibility for those who will come after.⁸

In this article, I shall try to illuminate the question of how governments, as opposed to private insurers, grapple with the problem of intergenerational social irresponsibility. I shall do so by analyzing and criticizing a single public program. That program, the Michigan Education Trust (MET), was the most widely publicized government action in the field of higher education finance during the 1980s. MET allows parents of young children to purchase contracts promising to cover the children's tuition at Michigan public colleges when they enroll up to eighteen years later.

Part I considers MET's justification in the abstract. It reviews the historical relationship among college tuitions, family incomes, and investment returns. It contends that, although one can think of several plausible and legitimate reasons why a state might create a prepaid college tuition program such as MET, the most interesting is as a response to a risk of incipient social irresponsibility. For the availability of financial aid to college students has created a risk of social irresponsibility in certain parents of college-bound children.

Part II considers the behavior of MET's Board of Directors in a specific context. By far the most important issue that the MET Board has confronted was how much to charge participants during the program's first year of operations. That question required the Board to act in the face of some subtle but not unusual uncertainties. The Board responded to those uncertainties by charging an extremely low price for MET contracts. Such a price can be justified only by making some assumptions about how MET will be taxed by the federal government — assumptions that I conclude are rather daring. Perhaps even more significantly, the low price can be justified only by assuming that college tuition inflation in the future will stop outpacing invest-

8. *E.g.*, P. COURANT & E. GRAMLICH, *FEDERAL BUDGET DEFICITS* 27 (1986); B. FRIEDMAN, *DAY OF RECKONING* (1988); P. LONGMAN, *BORN TO PAY* (1987); Rauch, *Kids as Capital*, 264 *THE ATLANTIC MONTHLY*, Aug. 1989, at 56.

ment returns, an assumption that reverses the historical pattern and clashes with the most commonly articulated public justification for having a program such as MET.

Part III returns to the more general level. It explores the variety of consequences — distributional and educational — that may flow from the MET Board's action. It then speculates about why the MET Board took such a risk. It considers what insights may be gleaned by describing the behavior of MET's Board of Directors as an ironic *example* of the social irresponsibility that a program such as MET might have been designed to address. And it identifies certain features of MET's administrative and bureaucratic history — features that recur in a variety of public programs — that may have facilitated socially irresponsible behavior.

In setting forth this case study, I also attempt to develop a secondary theme. I shall argue that efforts to justify or criticize public programs should always incorporate assessments of who the programs' beneficiaries are likely to be, specifically of where in the income distribution they are likely to lie. Thus, while Part I argues that a program such as MET might plausibly be defended as a check on social irresponsibility, it concludes that plausible justifications are not enough. Programs should be justified by comparison with alternative programs addressed to the same goals, and an essential element of the comparison should be the programs' relative effects on political or economic inequalities. Part III carries the same theme from the world of *ex ante* justification into the world of *ex post* evaluation. Programs must be implemented, and policy analysts must be sensitive to the ways in which the process of implementation can exacerbate a program's distributional costs.

I. JUSTIFYING MET: TUITION INFLATION, INVESTMENT RETURNS, STUDENT LOANS, AND SOCIAL IRRESPONSIBILITY

In this Part, I offer a critical review of several possible justifications for creating a prepaid college tuition program. My aim is not to describe the personal motives of the individual legislators who happen to have supported the creation of such a program in Michigan. Nor is it to give a historical report of the justifications that were given to the public. Rather, it is to survey the range of public purposes that might plausibly have been invoked in support of such a program, and to raise questions about how one ought to evaluate the sufficiency of those justifications.

I begin by presenting a brief review of the history and structure of

the Michigan Education Trust. I then evaluate the most widely publicized justification for MET: the assertion that tuition inflation was racing out of control, and that MET offered a way to keep college affordable for children who would otherwise be left behind. I argue that, while the fear that college is becoming less affordable is in some ways understandable, it is less well justified than is often assumed.

I next argue that, even assuming the legitimacy of individuals' *private* fears about tuition inflation, they cannot establish an adequate *public* justification for a particular programmatic response in the absence of information about the likely position of program participants within the income distribution. In MET's case, those private concerns would seem to call for a more broad-based public response than MET provides, a response whose benefits are more equally distributed throughout society.

I then consider three justifications that appeal to more public concerns, justifications drawn from the literature of market failure. The possibility that MET might be defended as a remedy for the absence of tuition insurance in the private marketplace seems more hypothetical than real. It seems equally hypothetical to characterize MET as a corrective to monopoly pricing. The most plausible of the three "market failure" justifications is that imperfect information about investment opportunities is leading parents to invest less efficiently than they might. Yet, even in combination, these justifications do not seem to add much to the case for a program having MET's particular structure. The central problem in each case is that MET is only a *partial* response to each concern, a response whose benefits are channeled to the most financially secure segment of the pool of potentially eligible participants.

Finally, I outline a less conventional justification for prepaid tuition programs such as MET. I raise the possibility that MET might be defended as a response to incipient social irresponsibility, as an effort to ensure that the widespread *perception* that tuition was out of control would not lead parents to abandon responsibility for paying for their children's educations. I conclude that, while such a justification is in many ways more defensible than the more traditional ones, it depends upon some empirical assumptions that are sufficiently debatable that one would want to be careful to guarantee that the possible public benefits were not dwarfed by other social costs.

A. *Introduction: The Essential Structure of the Michigan Education Trust*

The Michigan Education Trust is the nation's first government-

sponsored prepaid college tuition program. MET sells contracts to parents (and grandparents) of children, promising to pay the tuition (including all mandatory fees but not room and board) of any beneficiary child who ends up attending one of Michigan's fifteen public colleges.⁹

Governor James Blanchard first proposed a state-run prepaid tuition program in his State of the State Address on January 30, 1986. He introduced the proposal by noting widespread parental fears that college was becoming less and less affordable:

I share the deep concern of parents of young children who fear that they cannot honestly promise their children the hope of a higher education at a Michigan public university.

Their anxiety comes from reports that by the year 2000 . . . inflation and other factors could drive the cost of tuition at a public university to \$20,000 or more.¹⁰

Governor Blanchard continued by calling for a public response to that anxiety:

By using the combined investment power of Michigan, a higher interest rate can be earned and compounded without taxation. This can be made to work . . . in much the same way as widely used IRA's are being used for retirement.

This will not be a giveaway program or require additional state expenditures.

Instead, it will be an investment program designed to help parents guarantee to their children the opportunity of a Michigan college education.¹¹

Thus, as originally conceived, MET was to be a self-financing investment and tuition insurance program.¹² MET would take advantage of the fact that the federal government does not tax states' incomes to provide "higher interest rates . . . compounded without taxation." By borrowing federal tax shelter from the state in that manner, MET would offer better-than-market returns to parents saving for college. In that broad outline, MET was solidly in the tradition of the most prominent private-sector tuition initiatives of the 1980s,¹³ and set the

9. Some four-year degree-granting postsecondary institutions are called "universities," others are called "colleges." In this article, I shall use the term "colleges" to encompass all such four-year institutions. Note that, as I use the term, I am *not* including two-year community colleges and junior colleges.

10. 1986 MICHIGAN JOURNAL OF THE HOUSE 152.

11. *Id.*

12. As initially proposed, MET was known as "BEST" — the Baccalaureate Education Savings Trust. It changed acronyms in the state legislature.

13. During the summer of 1985, Duquesne University began selling tuition futures to alumni parents. The contracts provided that beneficiary children could attend Duquesne at no extra charge, but that if a child did not begin college at Duquesne, the parent would receive his or her principal back with no interest. *Risk-Pool Financing and Future Enrollments*, ADMINISTRATOR,

standard for the public-sector efforts that would follow.¹⁴

The Michigan legislature responded briskly to Governor Blanchard's proposal, and he signed the Michigan Education Trust Act before the end of 1986.¹⁵ The Act created MET as an autonomous subunit within the Michigan Department of Treasury.¹⁶ MET is managed by a nine-member Board of Directors.¹⁷ Its assets are *not* considered state money and may not be loaned or transferred to the state (although they may be pooled with state pension funds for investment purposes).¹⁸ If MET becomes insolvent, the state has no statutory obligation to bail it out; rather, whatever assets of MET remain are to be immediately prorated among the investors.¹⁹

The Act prohibited MET from selling any contracts until it had obtained a ruling from the Internal Revenue Service that *parents* who purchased them would not owe any additional income tax as a re-

Feb. 10, 1986, at 1. In March 1988, after selling 622 contracts, Duquesne suspended sales amid concerns about whether the school was losing too much money in the program. Evangelaut, *Duquesne U. Suspends Pioneering Prepaid-Tuition Plan; Nationwide, the Concept Meets Growing Resistance*, Chronicle of Higher Educ., Mar. 16, 1988, at A35. Approximately 12 other colleges adopted similar plans, but few found many takers. *Id.* The most recent school to announce such a program is Indiana University. *Indiana U. Offers Parents a Chance to Buy Credit Hours in Advance, for Use After 1990*, Chronicle of Higher Educ., Dec. 14, 1988, at A26.

In July 1989, a closely held Minnesota corporation announced a plan to organize a consortium of prepaid tuition plans that would allow for freer transfer of tuition prepayment credits across schools than the earlier plans. Putka, *Group of Educators Backs Tuition-Prepayment Plan*, Wall St. J., July 18, 1989, at B1, col. 3.

A slightly different approach was taken by a New Jersey bank in September 1987, when it began selling the "CollegeSure CD," a variable-rate certificate of deposit that bears interest at a rate equal to 1.5% below the rate of inflation in the IC 500 Index. The IC 500 Index is calculated by the College Board and is designed to reflect the cost of tuition, fees, room, and board at 500 private four-year colleges. COLLEGE SAVINGS BANK, ANSWERS TO QUESTIONS FREQUENTLY ASKED ABOUT THE COLLEGSURE CD (1987). The certificates are insured by the Federal Deposit Insurance Corporation but do not guarantee that any particular college's tuition will track the index. Moreover, annual earnings are subject to federal income taxation.

14. Alabama, Florida, Indiana, Maine, Missouri, Ohio, Oklahoma, West Virginia, and Wyoming all enacted prepaid tuition programs along the general lines of MET. Of these, Florida, Wyoming, Ohio, and West Virginia have actually implemented the program by selling contracts. The California legislature enacted a prepaid tuition bill, but it was vetoed by the Governor.

In addition, 17 states have enacted or authorized special college-oriented savings bond programs. The programs do not guarantee that their interest payments will keep up with tuition inflation, but some of them offer bonus interest payments if the bonds are used to pay for higher education expenses and all are exempt from state and federal income taxes. *See generally* Michigan Education Trust, *Status of Other States*, (revised June 16, 1989).

In 1988, Congress amended the Internal Revenue Code to provide that interest on EE Savings Bonds purchased by adults on or after January 1, 1990, will be exempt from federal income taxation if the proceeds are used for certain higher education expenses and the taxpayer's modified adjusted gross income is below an inflation-adjusted ceiling. I.R.C. § 135 (West Supp. 1989).

15. MICH. COMP. LAWS ANN. §§ 390.1421-.1444 (West 1988).

16. MICH. COMP. LAWS ANN. § 390.1425 (West 1988).

17. MICH. COMP. LAWS ANN. § 390.1430 (West 1988).

18. MICH. COMP. LAWS ANN. § 390.1429 (2), (4) (West 1988).

19. MICH. COMP. LAWS ANN. § 390.1433 (West 1988).

sult.²⁰ On March 29, 1988, the IRS issued the requisite ruling.²¹ Unfortunately for MET, however, the IRS also ruled that *the Trust* would have to pay federal income taxes on *its* annual net earnings. (The ruling thus undermined a central financial premise of Governor Blanchard's initial proposal — the assumption that MET, unlike individual parents but like the state of Michigan, would be immunized from federal income taxation.)²²

During the summer of 1988, MET announced a price schedule for the first year's contracts. The cost of a MET contract covering four years of tuition ranged from about \$6800 for a newborn baby to about \$9200 for a child entering tenth grade in the fall of 1988. During August, nominal registration fees were paid to reserve places in the program for more than 82,000 children.²³ Out of that pool, just under 39,000 contracts were purchased before the deadline of November 30, 1988, at a total purchase cost of more than one-quarter of a billion dollars.²⁴

The contracts provide that MET will cover the state-resident tuition for any MET beneficiary who attends a Michigan public college. If the child does not attend a Michigan public college, he or she can obtain a cash refund in an amount that depends upon what the child does instead.²⁵

B. *Why Parents Might Want a Prepaid Tuition Program: The Relationship Among Tuition Inflation, Income, and Investments*

Tuition inflation had been attracting widespread national media attention when Governor Blanchard spoke.²⁶ People were worrying

20. MICH. COMP. LAWS ANN. § 390.1433 (3) (West 1988).

21. The ruling has been released to the public, in "sanitized" form, as Priv. Ltr. Rul. 88-25-027 (March 29, 1988).

22. See statement quoted *supra* text accompanying note 11. The ruling also indicates that when the child ultimately enters college, he or she will be taxed each year on the difference between one year of the then-prevailing tuition at that school and the amount that was originally paid for one year of the MET contract.

23. See *Pay-Now, Learn-Later Plan Proves Popular in Michigan*, N.Y. Times, Aug. 12, 1988, at A8, col. 5.

24. COOPERS & LYBRAND, MICHIGAN EDUCATION TRUST ACTUARY'S REPORT ON 1988 ENROLLMENTS 1, 5-11 (1989) [hereinafter 1989 ACTUARY'S REPORT]. Roughly an additional 1500 contracts (having a purchase cost of about \$4 million) were sold that provide for more restricted benefits than the standard contract described in the text.

25. See *infra* text accompanying notes 68-85.

26. See, e.g., *Ahead: Another Big Jump in College Tuition*, U.S. NEWS & WORLD REP., Apr. 8, 1985, at 60; *"Tuition Shock" Awaits College Students in Fall*, U.S. NEWS & WORLD REP., Apr. 16, 1984, at 69; Noah, *Highbrow Robbery: The Colleges Call It Tuition, We Call It Plunder*, WASH. MONTHLY, July/Aug. 1983, at 16; *College Costs: The Good News and the Bad*, U.S. NEWS & WORLD REP., Apr. 11, 1983, at 56.

about whether they would be able to give their children the same opportunities for higher education that their parents had given them. Some were speculating that the task was futile. Before considering whether MET is a justifiable public response to such speculation, it is appropriate to consider the extent to which it is grounded in economic reality.

FIGURE 1

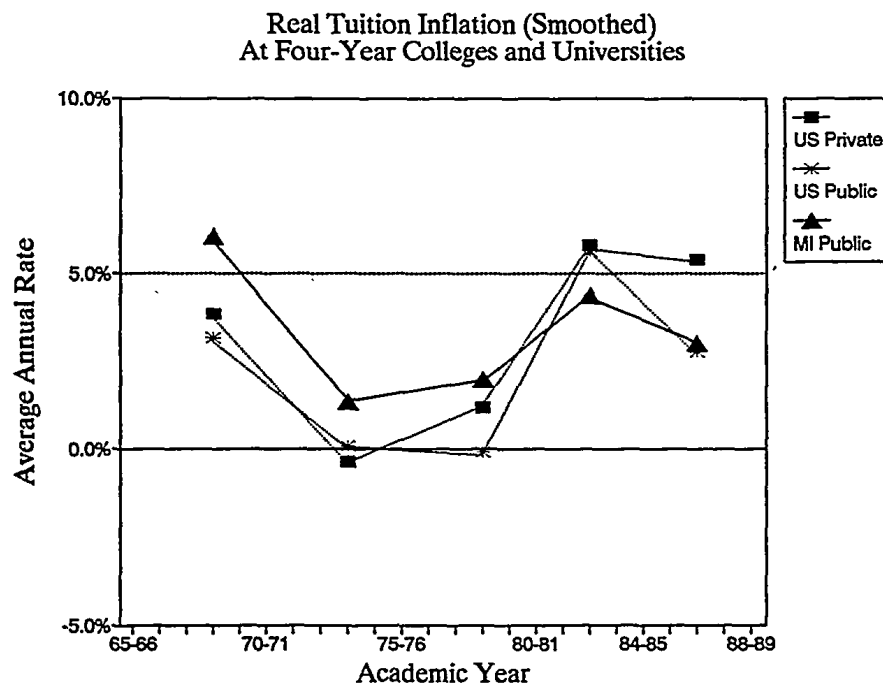


Figure 1 shows “real” tuition inflation over the past quarter-century. It shows the extent to which average annual tuition inflation has outrun general price inflation²⁷ (a) at private four-year colleges

27. To transform nominal tuition inflation into real tuition inflation, one takes the *geometric difference* between the rate of nominal tuition inflation and the rate of general price inflation from year to year. The geometric difference between PCT_1 and PCT_2 is $(1 + PCT_1)/(1 + PCT_2) - 1$. The geometric difference is a more accurate reflection of relative changes in costs than the *arithmetic difference* ($PCT_1 - PCT_2$). For example, if prices generally double and tuition triples, tuition relatively speaking has become half again as expensive as it used to be. The geometric difference (50%) reflects that; the arithmetic difference (100%) does not.

As a measure of general price inflation, I used the *linear average* of the 12 CPI-U-X1 figures for the July 1 through June 30 period that includes each academic year (that is, I added up the 12 numbers and divided the total by 12). The CPI-U-X1 is a more accurate reflection of consumer price inflation than the CPI-U (indeed, since January 1983 the CPI-U has been calculated using the CPI-U-X1 methodology). See generally Gillingham & Lane, *Changing the Treatment of Shelter Costs for Homeowners in the CPI*, MONTHLY LAB. REV., June 1982, at 9 (explaining the change from CPI-U to a modified CPI-U-X1).

The CPI-U-X1 is the most appropriate price inflation measure for an analysis of the costs

and universities nationwide,²⁸ (b) at public four-year colleges and universities nationwide, and (c) at Michigan public colleges.²⁹ The first three sets of points on the graph reflect tuition inflation "smoothed" over five-year intervals; the last two sets reflect tuition inflation smoothed over four-year intervals.

This graph reveals several items of interest. Nationally, public colleges became relatively more expensive (compared to other consumer goods and services) during the late 1960s, stayed roughly level (in real terms) during the 1970s, and then became relatively more expensive again during the 1980s. Private colleges followed a similar pattern, but consistently outpaced the public colleges. And, except during the early 1980s, Michigan's public colleges were getting more expensive at a faster rate than even the typical private college nationwide.³⁰ For all categories, real tuition inflation during the 1980s was a return to the higher levels of the late 1960s after a brief reprieve during the 1970s.³¹

faced by *consumers* of higher education. A more specialized Higher Education Price Index ("HEPI") follows the price of goods and services purchased by colleges, the *producers* of higher education. The HEPI is less volatile than the CPI, largely because colleges spend about three quarters of their budget on personnel compensation, which is less volatile than consumer prices generally. See generally NATL. INST. OF EDUC., INFLATION MEASURES FOR SCHOOLS AND COLLEGES 37-54 (1983) (describing HEPI and comparing changes in HEPI and other measures of prices); RESEARCH ASSOCS. OF WASH., HIGHER EDUCATION PRICES AND PRICE INDEXES: 1988 UPDATE (1988).

28. Nationwide private and public tuition figures for the period from 1976-1977 through 1987-1988 were supplied to me by Tom Snyder of the U.S. Department of Education. U.S. DEPT. OF EDUC., DIGEST OF EDUCATION STATISTICS Table 218 (forthcoming 1990).

For the period from 1964-1965 through 1975-1976, Table 218 does not provide a composite for four-year institutions but rather gives separate tuition figures for "universities" on the one hand and "other 4-year institutions" on the other. I extrapolated composite figures for that period by taking a weighted average of the two sets given, with the weight reflecting the average implicit in the aforementioned 1976-1977 to 1987-1988 figures.

For the 1988-1989 academic year, I rescaled tuition figures published by the College Entrance Examination Board in a press release dated August 5, 1988, so that they would mesh with the Department of Education figures.

29. I am grateful to Marcea Metzler for her assistance in preparing the data on Michigan public colleges. She obtained raw figures on tuition and enrollments at each of the 15 Michigan public colleges for the period from 1968-1969 to 1988-1989 from Edna Letzau at the President's Council on State Universities of Michigan. The figures used in the text reflect calculated average tuitions at Michigan public colleges for resident students, weighted by Michigan-resident fiscal-year-equated enrollment at each tuition level (juniors and seniors pay more than freshmen and sophomores at some schools).

I expanded the time frame back an additional three years by obtaining raw figures on tuition and enrollments for the years 1965-1966 and 1966-1967 from the state archives in Lansing, Michigan. A Budgetary Analysis of the 4-Year State-Supported Colleges and Universities for fiscal years 1966-1967, 1965-1966 & 1964-1965, Subject Files, 1963-1969, State Appropriations, 1963-1967, RG 78-104, Box 3, Folder 7; Higher Education Selected Basic Data, Subject Files, 1963-1969, Colleges and Universities, 1966-1967, RG 78-104, Box 1, Folder 5; Fact Sheet No. 3, Subject Files, 1963-1969, Colleges and Universities, 1966-1967, RG 78-104, Box 1, Folder 5. I obtained a 1967-1968 figure by interpolating between the 1966-1967 and 1968-1969 figures.

30. For speculation about why that may be, see *infra* note 104.

31. I do not know why tuition inflation consistently outruns price inflation more generally. Two prominent economists have argued that, in some labor-intensive service industries, fewer

But such a summary graph tells only part of the story. For one thing, it shows only the *rate of change* in tuition levels. It says nothing about the *absolute level* of tuition. For another, it compares changes in tuition rates with changes in prices generally. That comparison fails to reflect the fact that during some periods family incomes have kept up with price inflation, but during others they have not.

We can get a different perspective by comparing average tuition levels with the median income of an American family:³²

technology-driven productivity gains are possible than in sectors of the economy that produce goods entering into the CPI. See W. BAUMOL & W. BOWEN, *PERFORMING ARTS: THE ECONOMIC DILEMMA* ch. VII (1966). My suspicion is that, as a descriptive matter, this argument accounts for part, but not all, of the disparity. See generally Bowen, *Economic Pressures on the Major Private Universities*, in JOINT ECONOMIC COMMITTEE, 91ST CONG., 1ST SESS., *THE ECONOMICS AND FINANCING OF HIGHER EDUCATION IN THE UNITED STATES* 399 (Joint Comm. Print 1969) [hereinafter *ECONOMICS AND FINANCING*]; S. HARRIS, *HIGHER EDUCATION: RESOURCES AND FINANCE* 557-67 (1962); Harris, *Financing of Higher Education: Broad Issues*, in *FINANCING HIGHER EDUCATION* 35, 43 (D. Keezer ed. 1959) [hereinafter Harris, *Broad Issues*]; see also Hauptman & Hartle, *Tuition Increases Since 1970: A Perspective*, *HIGHER EDUC. & NATL. AFF.*, Feb. 23, 1987, at 5, 6-7.

I do not have strong views about whether higher education *could* or *should* show more technology-driven productivity gains. For purposes of this article, the consequence (positive real tuition inflation) rather than the cause is what matters.

32. I calculated academic-year median family income by averaging consecutive calendar year figures as reported in BUREAU OF THE CENSUS, U.S. DEPT. OF COMMERCE, *MONEY INCOME OF HOUSEHOLDS, FAMILIES, AND PERSONS IN THE UNITED STATES: 1987*, at 34 (Current Population Reports, Series P-60, No. 162, February 1989) [hereinafter 1987 MONEY INCOME].

FIGURE 2
One Year's Tuition
As a Percentage of Median Family Income

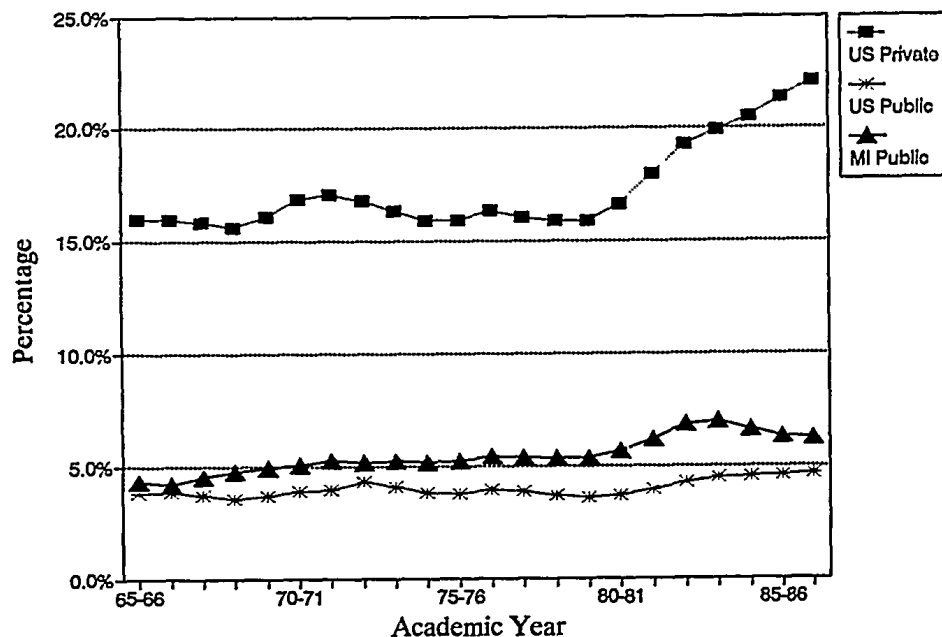


Figure 2 appears to lend credence to the view that a college education was rapidly becoming less affordable during the early 1980s in a way that it had not been during the 1960s. During the late 1960s, real family incomes were growing as fast as real tuitions.³³ During the 1980s they were not. This graph seems to validate the widespread perception that families in the 1980s are substantially worse off than their counterparts had been in the 1960s.³⁴

Of course, there are several plausible objections to the use of Figure 2 as a justification for public policy. To begin with, one might question whether the median family income is a reference point that ought to have any normative policy significance. One might contend that attention should be limited to the median family income of those families whose children will end up going to college. Since children from high-income families are more likely to go to college and since the median high-income family has been doing better than the median

33. The best available evidence suggests income growth has generally outpaced tuition increases since the turn of the century, except for an exceptional period of tuition growth during the 1950s. See S. HARRIS, *supra* note 31, at 67-71, 77, 85, 137-48; see also R. FREEMAN, *CRISIS IN COLLEGE FINANCE?* 97-99 (1965); Harris, *Broad Issues*, *supra* note 31, at 56.

34. For a wide-ranging survey of various aspects of family well-being during that period, see F. LEVY, *DOLLARS AND DREAMS* 45-73 (1987).

family over the past fifteen years, such a limitation would make the information revealed by Figure 2 seem less disturbing.

That objection, however, is inappropriate. It depends upon an implicit assumption that the current distribution of children attending college is completely independent of the price of tuition. In the absence of such an (implausible, I would say) assumption, it remains a matter of public policy concern if college is becoming less affordable for the median family, even if it were not becoming less affordable for those who can presently afford it. I would offer a similar response to the argument that Figure 2 overstates the squeeze on parents by not reflecting the fact that family sizes were shrinking during this period, so that each family had fewer potential students to worry about.³⁵

A second objection to the use of Figure 2 is far more compelling, for reasons that call into question the use of such percentage-of-income graphs in *any* policy debate. The problem has to do with the way in which graphs can dull our skeptical faculties. When we see a graph, our eyes tend to focus on the slope. Things sloping upward or downward make us nervous or happy; things that look horizontal seem safe.³⁶ But we must always ask whether we really *want* a horizontal line.

Why should tuition remain a constant percentage of family income? If, after taking inflation into account, incomes still go *up*, why does one deserve sympathy for being unable to spend the new, *extra* dollars in the same way as the old? If, after taking into account changes in the prices of food, shelter, clothing, health care, and everything else that is factored into the consumer price index, I still have extra money, in what sense am I "cramped" if I have to spend more than my customary twenty percent on college?

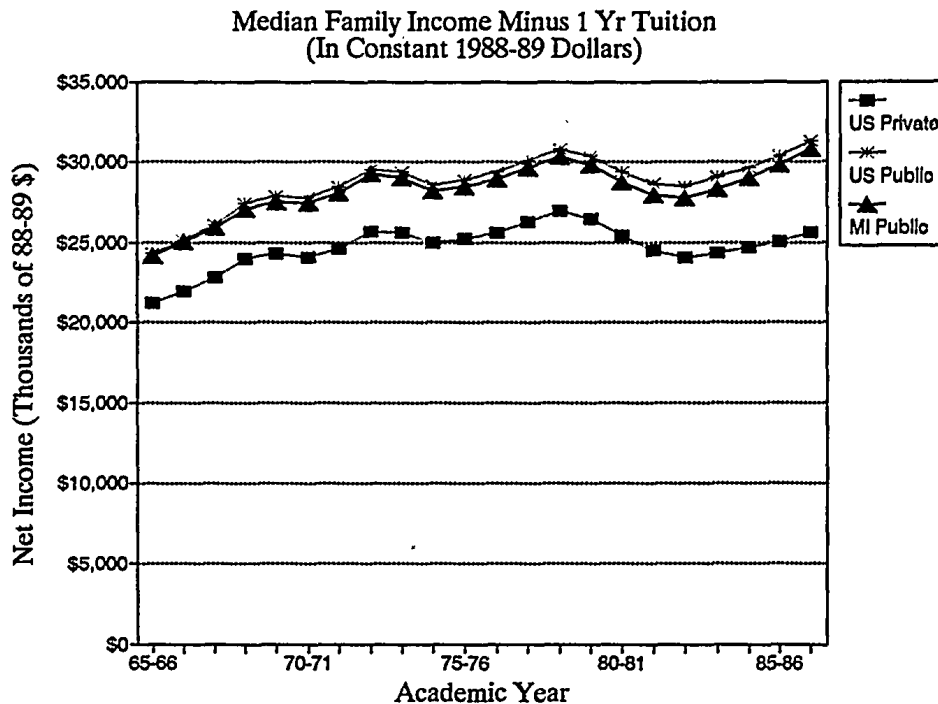
Figure 3 reflects the opposite normative assumption from the preceding graph. It answers the following question: If the median American family made higher education for children its number one priority, paying exactly one year's tuition "off the top" of every annual

35. See CONGRESSIONAL BUDGET OFFICE, TRENDS IN FAMILY INCOME: 1970-1986 (1988), for a study using equivalence scales to adjust median family income to reflect changes in family size. The study even offers a measure for median family income of families with children. *Id.* at 71. Unfortunately, the CBO figures span only part of the period for which I have tuition figures. Nevertheless, using the CBO figures, when they are available, causes the United States and Michigan public college lines to flatten out so that the 1986-1987 figures are little different from the 1965-1966 figures; it dampens but does not eliminate the sharp upsurge in private college tuitions.

36. Obviously, slope can be manipulated by simply rescaling the axes, a troublesome point in its own right. See generally D. HUFF, HOW TO LIE WITH STATISTICS 60-65 (1954). For a perceptive discussion of the more general problems of ethical integrity in graphing, see the magnificent work of Edward Tufte, E. TUFTE, THE VISUAL DISPLAY OF QUANTITATIVE INFORMATION 53-87 (1983).

paycheck, how much would it have left to spend on other things, after taking inflation into account? During the early 1980s, such a family would have slipped back from the high-water mark it had reached during the 1970s. But even during the worst part of the 1980s, such a family would have been unambiguously *better* off than its predecessor was back in the 1960s.

FIGURE 3



To be sure, one ought to consider whether it is in a sense cheating to take tuition "off the top."³⁷ Why not take housing or food or

37. The slope of the curve in Figure 3 is affected by one assumption that bears emphasis — the assumption that the family is paying exactly one year's tuition out of current income. If the family under consideration were paying tuition for two children at private colleges out of current income each year, its real after-tuition income in the 1980s would indeed be as low as that of a comparable family in the 1960s. Conversely, if one were comparing *younger* families in the 1960s and 1980s, trying to save *less* than one year's tuition each year while the children were young, the slope would be even more positive. See 1987 MONEY INCOME, *supra* note 32, at 62-63.

Finally, if one is interested purely in the question of whether parents of college-aged children are being squeezed, one also ought to take room-and-board expenses into account. In fact, combined room-and-board charges did not change significantly in real terms between the 1965-1966 academic year and the 1982-1983 academic year. Since that time, however, they have risen sharply in real terms at both private and public institutions. See U.S. DEPT. OF EDUC., *supra* note 28, Table 218 (forthcoming 1990). That rise is only partially accounted for by the real increase in food and rental costs more generally. See 1989 BUREAU OF THE CENSUS, U.S. DEPT. OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 469 (Tables 758, 759).

automobiles or movies off the top? That question is precisely my point. People will indeed differ over what the first extra dollar of new income should be spent on. Some would prefer to spend more money on housing or food or automobiles and less on higher education. But a horizontal line in Figure 3 suggests that the median family can *maintain* precisely its level of consumption of *all* those other items and still keep up with tuition.³⁸

I do not deny that a family receiving the median income can in some senses be said to be experiencing a tuition squeeze. But such a squeeze is not simply a function of the relationship between tuition and income. It must also reflect a preference (or need) to consume more of some other good or service than the median family used to consume.³⁹

For purposes of analysis, however, let us assume that this historical relationship between tuition and income justifies some public response. Does that assumption also justify a response in the form of a prepaid tuition program? No. A prepaid tuition program assists only those families who have or can borrow the money needed to participate. It does not respond to the needs of families who are implicitly portrayed in Figure 3, families who are attempting to pay tuition out of current labor income.⁴⁰ Rather, it responds to the needs of families who are willing and able to set aside money for their children's higher education up to eighteen years in advance. In the words of Governor Blanchard, a prepaid tuition program is "*an investment program designed to help parents guarantee to give their children the opportu-*

Whether such a rise should be as troublesome as a tuition rise turns on whether one believes that living on campus rather than at home is part of a college education or a matter of discretionary consumption.

38. One item clearly *should* come "off the top" before tuition: income taxes. (The Census Bureau's definition of income is pre-tax.) Between 1977 and 1988, the median family enjoyed a slight reduction in the effective rate of individual income taxes, but that reduction was slightly more than offset by increases in social insurance taxes. See CONGRESSIONAL BUDGET OFFICE, THE CHANGING DISTRIBUTION OF FEDERAL TAXES: 1975-1990, at 47-48 (1987) [hereinafter CHANGING DISTRIBUTION].

Moreover, as a technical matter, the adjustment to after-tuition income should be made using a Consumer Price Index that does not itself take tuition into account. In fact, college tuition accounts for only 1.17% of the CPI market basket, so omitting it would have no noticeable effect on the graph. See BUREAU OF LABOR STATISTICS, U.S. DEPT. OF LABOR, BULLETIN No. 2329, RELATIVE IMPORTANCE OF COMPONENTS IN THE CONSUMER PRICE INDEXES, 1988, at 7 (1989).

39. It might also reflect disagreement with the weighting system used by the Bureau of Labor Statistics in creating the Consumer Price Index market basket. If one thinks that shelter costs, for example, should be 40% rather than 27.8% of the so-called market basket, then one's own personalized CPI would show more inflation in recent years than the official figures. See, e.g., BUREAU OF LABOR STATISTICS, U.S. DEPT. OF LABOR, CPI DETAILED REPORT: APRIL 1989, at 7.

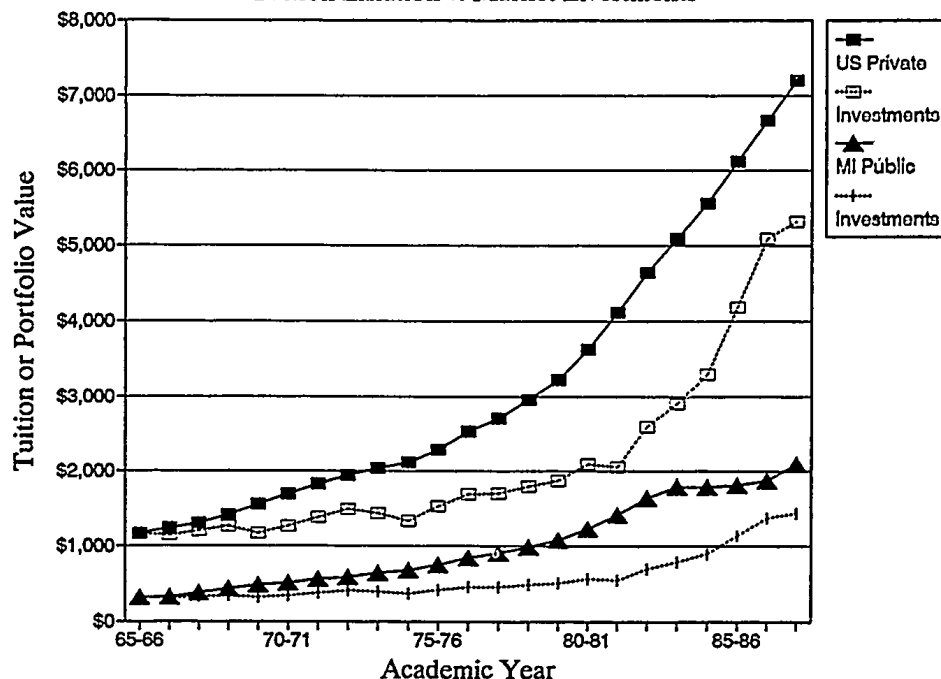
40. A median family's income is about 75% labor earnings and 9% investment earnings. CHANGING DISTRIBUTION, *supra* note 38, at 68-69.

nity of a . . . college education."⁴¹

Since a prepaid tuition program is a program for people with money to invest, it is sensible to ask whether *investment earnings* (rather than family income generally) have kept up with tuition inflation historically. Figure 4 shows what would have happened to two

FIGURE 4

Tuition Inflation v. Market Investments



pools of money invested during the 1965-1966 academic year. The first pool of \$1158 was equal to the national average of one year's tuition at a private college that year; the second pool of \$314 was equal to the average tuition at a Michigan public college. Half of each pool was invested in common stocks, half in long-term corporate bonds.⁴² The graphs compare the value of each portfolio with subsequent tuition rates, assuming each portfolio paid federal and state income taxes at the annual rate of thirty-three percent.⁴³

41. 1986 MICHIGAN JOURNAL OF THE HOUSE 152 (emphasis added).

42. The raw monthly data is found at IBBOTSON ASSOCIATES, INC., STOCKS, BONDS, BILLS, AND INFLATION 148, 152 (1990) (total returns by month for the Standard and Poor's 500 Stock Composite Index and for the Salomon Brothers long-term, high-grade corporate bond total return index). I calculated indices for July 1-June 30 fiscal years, to enhance comparability with the tuition figures. Thus, the stock market crash of October 1987 is reflected in the figures for 1987-1988.

43. The marginal federal income tax rate for very-high-income taxpayers is currently 28%, and the Michigan rate is 4.6%. A combined rate of 33% is substantially lower than the rate that

This graph appears to fortify the case for a prepaid tuition program. Consider the hypothetical case of a mother with one child entering college today and one child who will enter college in 2005. If the historical relationship reflected in the graph continues, and if the mother sets aside an equal amount of money today for each child, her seemingly prudent behavior on behalf of the younger child will not be adequate to meet the child's needs. What she has set aside will not grow fast enough to pay for college in 2005. A prepaid tuition program that sold tuition for the class of 2005 at today's prices would respond to the apparent needs of the mother.

Once again, however, the argument confuses an observation about the world with a normative claim. Before one can conclude that a public program that helps its participants to cope with the world is justified, one needs more information about the income distribution of the society at large and of those who might be able to participate in the program. More precisely, if one's only justification for a program is that it helps its participants, one must consider two questions. Where are those participants likely to lie in the income distribution? And do they have a special moral claim on the community for assistance?

C. *Distributional Effects of Public Responses to Private Needs*

Suppose a state runs a program that helps some citizens to satisfy their individual desires and also "breaks even" financially, *i.e.*, does not cost the state's taxpayers any additional tax dollars. Why should it be a matter of public concern whether the program's beneficiaries are predominantly rich, middle-class, working-class, or poor?

There are at least two reasons to be concerned. The first has to do with *why* the state breaks even on the program. Is the state relying on its tax-exempt status for federal income tax purposes? Is it taking advantage of its unique status as a public entity, using the time and energy of civil servants, taking up space in public buildings, and exploiting its privileged access to the media to create a competitive advantage in the marketplace? If so, then it is likely that the participants in the program will be getting a higher rate of economic return on their investments than they could have obtained in the private market if the state program had not existed.

If the state gives program participants a higher rate of return on investment than is readily available in the marketplace, then the program will enhance the wealth of its participants. If those participants

actually prevailed during the time period shown in Figure 4, but it is more appropriate for efforts to decide whether *future* investments would keep up with tuition if the securities markets continue to behave as they have in the past.

are predominantly rich, the program will exacerbate inequalities of wealth within the society; if they are predominantly poor, the program will reduce them. To the extent inequality of wealth undermines social cohesion and stability, or undermines perceptions of "equal opportunity," predictable changes in the extent of inequality are costs or benefits that ought to be reckoned in one's deliberations over the wisdom of a particular program.

Indeed, even if the program does *not* enhance the wealth of its participants, even if it offers them exactly the same rate of return (*i.e.*, value) that a private, for-profit venture would offer were it not for some market failure, one might still have legitimate concern about the income distribution of program participants. The reason is that public resources are scarce. By public resources, I do not mean merely dollars, although I mean them as well. I mean the time of legislators, which cannot be increased simply by buying more of them. I mean the ability of a deliberative body to concentrate collective thought on a public agenda of issues. I mean the ability of a citizenry to notice and respond to the acts of its government. No program is cost-free.

Admittedly, the fact that no program is cost-free does not demonstrate that *distributional* concerns are pertinent to every program. That conclusion requires the additional observation that one task of representative government is to keep all sectors of the citizenry feeling that the government takes note of their existence. Accordingly, in choosing from a long list of equally good programs to launch, a government may legitimately worry about whether its interactions with the citizenry are neglecting some range or another of the income distribution. A government's authoritative voice as an embodiment of community values depends in part upon its audience's sense of membership in that community.

Governments have legitimate concern if an identifiable group becomes alienated from the process of governance because public programs appear to be directed at other audiences. An entire society may properly worry about how its working-class citizens are feeling. If the working class feels ignored by legislators who are perceived to worry only about the very rich and the very poor, social cohesion may be undermined. Under those circumstances, a legislator could, and perhaps should, be especially interested in any program that attracts a disproportionate number of working-class participants.

The structure of MET would seem to favor those who have accumulated enough money to participate — the upper end of the income

distribution.⁴⁴ Indeed, as I shall document in more detail in Part III.A and in the Appendix, participation in fact turned out to be heavily skewed in precisely that manner. Such a bias in the distribution of benefits cannot be defended on the basis of varying moral claims. The mother who has already saved enough to pay for a child's tuition has no stronger claim to protection from tuition inflation than a parent who, year by year, sets aside some money to achieve the same goal. Nor even than the parent who, in the year the child enters college, spends current labor earnings on tuition rather than personal consumption. If one's concern is simply that tuition is increasing too fast, then one ought to protect all types of parents by subsidizing all tuition payers (either directly or by subsidizing the colleges so that they may keep tuition low).

I am not suggesting that a government must always tackle all problems at once. A prepaid tuition program serving the needs of the mother might certainly be part of a package, each of whose components targets a different needy group. But one cannot simply point to the *possibility* of a piecemeal strategy to justify a particular program. In the higher education context, it is difficult to justify on grounds of need or desert (rather than behavioral modification) the creation of a program to help the upper class when the hypothetical component for the middle class is not yet in place.

D. *A Public Justification: Correcting Market Failures*

In the economics literature it is conventional to justify governmental programs as correctives to "market failures" — situations in which structural flaws preclude the private marketplace from operating efficiently.⁴⁵ Three possibilities suggest themselves as partial justifications for MET.

One potential source of market failure is the absence of a full set of markets, in particular the absence of futures and insurance markets. MET has thus been described as providing "tuition insurance," protecting parents against the risk that tuition will increase dramatically faster than investment returns.

44. To be sure, if one did not have money accumulated to purchase a MET contract, one could attempt to borrow the funds. MET negotiated an agreement with the state's savings and loan institutions to encourage those institutions to lend money to purchasers on the security of MET contracts. The agreement, however, did not limit the interest rates that the savings and loan institutions could charge on so-called "MET Loans," and the rates ultimately charged exceeded the contracts' projected rate of return if one used MET's actuarial assumptions. See Crawley, *Interest Rates Too High for Tuition Program, Official Says*, Ann Arbor News, Sept. 18, 1988, at A9, col. 1. Although MET officials were hoping that half of all MET contracts would be funded by MET Loans, *id.*, ultimately only about 30% were.

45. See, e.g., A. ATKINSON & J. STIGLITZ, LECTURES ON PUBLIC ECONOMICS 5-8 (1980).

This justification, although far from specious, is not compelling either. To begin with, the market has not entirely failed. At least one FDIC-insured bank currently sells certificates of deposit that bear interest at a rate just below the rate of inflation in a market index of tuition and other college expenses.⁴⁶ More significantly, MET does not by its terms provide such insurance. MET is an independent body with no revenues other than those provided by the sale of MET contracts. Accordingly, if the risk that MET were thought to insure against were to materialize — if tuitions were to race up faster than expected earnings — MET would go bankrupt. MET's portfolio of risks is not diversified; rather, all risks are perfectly correlated. Accordingly, MET cannot provide its beneficiaries true insurance protection without some form of guarantee that the state will bail it out in the event of bankruptcy — a guarantee that the legislature specifically declined to provide.

A second potential source of market failure is imperfect competition due to monopoly. In MET's case, the argument would be that the public colleges were operating inefficiently because they did not have to compete with one another on the basis of price in order to attract customers (*i.e.*, students). In other words, MET might be a remedy for tuition gouging.

At first blush this might seem a peculiar justification for so complex a program as MET. Why would the legislature not simply regulate the price directly? In Michigan, however, the fifteen public colleges are established by the state constitution as independent of direct legislative control.⁴⁷ And, as I shall explain in more detail in Part III, MET has in fact had a substantial influence over tuition policy among the fifteen public colleges. Nonetheless, I have found no evidence that any Michigan political figure has seriously maintained that Michigan's public colleges were in fact gouging. Moreover, during legislative deliberations MET's supporters explicitly denied that MET would keep tuitions down.⁴⁸ Accordingly, for present purposes, I would relegate this argument to the category of the hypothetical rather than the real.

A third potential source of market failure is imperfectly distributed information among market participants. In MET's case, it has been suggested that many parents saving for their children's college educations are ignorant of the investment opportunities available in the mar-

46. See *supra* note 13.

47. See *infra* note 234.

48. See 25 GONGWER NEWS SERVICE'S MICHIGAN REPORT, Report No. 74 (Apr. 17, 1986).

ketplace. They may keep their college savings in passbook accounts rather than investing in no-load mutual funds. By providing what is, in effect, a state-managed mutual fund, MET could be seen as effectively transforming uninformed or unsophisticated investors into well-informed, sophisticated investors.

This argument is the most plausible of the three, but still depends upon some fairly strong empirical assumptions about the pool of MET participants. Like the other two market-failure arguments, it is not so compelling as to make distributional concerns irrelevant. In other words, if MET were known to have neutral or beneficial distributional effects, the three hypothetical sources of market failure might offer some mild additional justification for the program. To the extent MET's distributional effects are negative, however, none of these classical market-failure arguments seems adequate to justify the program.

*E. An Alternative Public Justification: Fighting Incipient
Social Irresponsibility*

The market-failure justifications for a program such as MET are thus somewhat weaker than one might initially have thought. I turn now to an alternative justification, one that I think offers a stronger public justification for a program whose personal benefits will redound primarily to people situated toward the upper end of the income distribution. This justification, grounded in the need to strengthen cultural norms that condemn socially irresponsible conduct, is the most credible public justification for MET. Moreover, attention to its structure allows one to think carefully about how such arguments might be developed in other areas. Nonetheless, I conclude that even this argument may ultimately prove inadequate to justify MET itself.

Since the Higher Education Act of 1965⁴⁹ inaugurated the federal Guaranteed Student Loan program, federal and state governments have worked hard to ensure that children are not denied a higher education because of their parents' socioeconomic status.⁵⁰ Government programs have given children what the private market would not —

49. Pub. L. No. 89-329, 79 Stat. 1219.

50. For a useful history, see NATIONAL COMM. ON STUDENT FINANCIAL ASSISTANCE, GUARANTEED STUDENT LOANS: A BACKGROUND PAPER (1982). See also CARNEGIE COUNCIL ON POLICY STUDIES IN HIGHER EDUC., THE FEDERAL ROLE IN POSTSECONDARY EDUCATION 22-54 (1975) (analyzing various student aid programs); C. FINN, SCHOLARS, DOLLARS, AND BUREAUCRATS 8-19 (1978) (comparing the federal government's financing mechanisms for higher education with the government's various educational objectives). For overviews of the government programs that led up to the GSL program, see A. RIVLIN, THE ROLE OF THE FEDERAL GOVERNMENT IN FINANCING HIGHER EDUCATION 61-97 (1961); see also R. FREEMAN, *supra* note 33, at 102-07; Calkins, *Government Support of Higher Education*, in FINANCING HIGHER EDUCATION, *supra* note 31, at 183.

an opportunity to borrow against their future earnings in order to pay for college. The Guaranteed Student Loan program did much to equalize access to higher education.

It is tempting to describe the GSL program with the assistance of a simple spatial metaphor. Before the program, one group of families could afford to send its children to college, a second group could not. The program seems merely to transport families from the Outsiders' Group (unable to afford college) into the Insiders' Group (able to afford college). The problem with such a spatial metaphor, however, is that it presumes that people who were already members of the Insiders' Group will not change their behavior in response to the program. It presumes that the families who used to save to send their children to college will continue to do so, so that the only costs of the program will be those associated with taking care of the Outsiders' Group. Such a static metaphor fails to capture the dynamism of social life.

Like any program that advances us beyond a state of primitive social Darwinism, Guaranteed Student Loans weaken the link between behavior and consequences. In particular, they weaken the sanction for parents who fail to save enough money to fund their children's college education.⁵¹ To be sure, some economic sanction endures: a child who leaves college saddled with debt is less well situated than one who leaves debt-free. Moreover, the dominant culture continues to pressure parents to save. But whenever a public program removes economic pressures toward responsible action, social planners must consider whether the remaining cultural pressures are strong enough to avert significant behavioral shifts. And they must remain sensitive to subsequent changes that may weaken those cultural pressures.⁵²

Whether or not people's attitudes toward the future really changed in the 1980s, the popular media certainly reinforced perceptions that America crossed a cultural watershed during those years. Magazines and newspapers doted on the yuppie class as the distilled essence of self-indulgent irresponsible consumerism.⁵³ Books hinted that the

51. See Bowen, *Tuitions and Student Loans in the Finance of Higher Education*, in *ECONOMICS AND FINANCING*, *supra* note 31, at 623.

52. In a perceptive 1986 article, Michael McPherson and Mary Skinner pointed out that as a matter of intergenerational equity, one could plausibly have either of two systems: one under which each generation (saves and) pays for its children's education, a second under which each generation (borrows and) pays for its own education. Either system is stable, but if one adopts the first, one must always be aware that each generation may be tempted to accept its parents' largesse while refusing to help its own children. A transition from the first system to the second is difficult to manage fairly. See generally McPherson & Skinner, *Paying for College: A Lifetime Proposition*, *BROOKINGS REV.*, Fall 1986, at 29; see also Hansen, *Pay Now, Go Later*, 147 *COLL. BD. REV.* 8, 10 (1988) ("Among others, college financial aid offices are increasingly concerned about the need to reinforce the message that families must save if they can.").

53. See, e.g., *Yuppies Uncork a Boom in Fine French Wine*, *BUS. WK.*, July 1, 1985, at 58;

Reagan administration's response to the country's growing budget deficit was legitimating the view that each generation should take care of itself.⁵⁴ And in the entertainment world, the central tenet of compact-disk moral philosophy was, "Don't worry. Be happy."⁵⁵

In such an atmosphere, the concept of futility can be a catalyst for a shift in cultural norms. If parents are led to believe that it might be futile to save for their child's college education, they might well abandon their sense of personal responsibility for providing that education. The following utterance, though hypothetical, is unsettling for a society that wants to limit its commitment of public funds to higher education:

Everything I read says trying to save up the tuition in advance is a lost cause. The American dream of self-sufficiency is over. No matter what we do, she'll have to borrow like we did. There's no reason to forgo theater tickets this year if it will only make a little dent in a hopeless problem.

The effects of perceptions of futility on individuals' willingness to act with responsibility toward the future are well known. To invoke just one example, the average price of a house in Tokyo has skyrocketed over the past five years, moving from six times the average Tokyo-dweller's annual wage in 1984 to eighteen times the average annual wage in 1989.⁵⁶ Japanese society has become divided between the property-owning *nyuu ritchi* and the propertyless *nyuu pua*. Many members of the *nyuu pua* have abandoned dreams of ever owning a home. But, according to *The Economist*: "[T]he new poor, having ceased to save for a home, have more income left to spend as they choose than ever before. A mink coat for the wife, membership of a golf club for the husband and a shiny new foreign car for the family are a nice consolation."⁵⁷

When Governor Blanchard proposed the creation of MET, he called attention to the perceived futility of saving for college. Ordinarily, such an act would be expected to reinforce that perception of futility. Governor Blanchard therefore took pains to describe MET in

Yuppies in the Office, FORTUNE June 24, 1985, at 135; *More GM Yuppiesmobiles*, BUS. WK., Feb. 11, 1985, at 36; *Dog Togs for Yuppie Puppies: Canine Couture, Taking a Wow Bow*, Wash. Post, Sept. 1, 1984, at B1; *Sound: Yuppies at Home — A Hi-Fi Habitat*, N.Y. Times, June 10, 1984, § 2, at 23; *Yumpies, YAP's, Yuppies: Who They Are*, U.S. NEWS & WORLD REP., Apr. 16, 1984, at 39; *Onward and Yupward*, PEOPLE, Jan. 9, 1984, at 47; *Here Come the Yuppies*, TIME, Jan. 9, 1984, at 66.

54. E.g., B. FRIEDMAN, *supra* note 8, at 1-27.

55. Bobby McFerrin, *Don't Worry, Be Happy*, on SIMPLE PLEASURES (EMI-Manhattan Records 1988).

56. *Japan's Consumer Boom*, THE ECONOMIST, Sept. 9, 1989, at 21, 22.

57. *Id.*

ways that would undermine such a perception — as an antidote to despair: “We will move to eliminate parents’ uncertainty about paying for their children’s higher education by proposing a guaranteed tuition program . . . designed to help parents guarantee to their children the opportunity of a Michigan college education.”⁵⁸

MET might thus be justified as a “mood-altering” program, serving to rehabilitate weakening cultural norms. Before MET, a growing sense of futility may have made parents more willing to let someone else worry about their children’s college educations. MET could be seen as a public strategy for keeping that sense of futility under control.

To be sure, the actual participants in MET may well not have been parents who, without the program, would have given in to futility. It is quite plausible that much of the money these parents spent to buy prepaid tuition contracts would have been used for other forms of savings.⁵⁹ Indeed, it is even possible that, lulled into a false sense of security, program participants will save less than they otherwise would have!

But the defense of MET as a mood-altering program looks beyond those parents who actually participate by buying contracts. MET was a highly visible symbol that could well have affected *all* parents’ perceptions of what is possible. Even for people who do not participate in such a program, the public celebration of those who do can change attitudes. The variety of mechanisms available to save for college might become a more common topic of dinner conversation. And conversations might change behavior.⁶⁰

58. 1986 MICHIGAN JOURNAL OF THE HOUSE 152 (emphasis added).

59. It bears emphasis that, as outlined by Governor Blanchard, the prepaid tuition program would work by, in effect, allowing parents’ college savings to accumulate free of federal income taxation. The most carefully analyzed tax-based savings-inducement program to date has been the Individual Retirement Account. See I.R.C. §§ 219, 408, 409, 4973-4974, 6693 (1988). Whether the IRA in fact stimulated additional savings or merely led to reshuffling of portfolios remains the subject of much debate. See Feenberg & Skinner, *Sources of IRA Saving*, in 3 TAX POLICY AND THE ECONOMY 25 (1989) (little or no evidence supporting “shifting” hypothesis); Venti & Wise, *The Determinants of IRA Contributions and the Effect of Limit Changes*, in PENSIONS IN THE U.S. ECONOMY 9 (Z. Bodie, J. Shoven & D. Wise eds. 1988) (general discussion of likely effects of changes in IRA contribution limits); Burtless, *Comment*, in *id.* at 48-52 & n.1 (more interesting but unanswered by Venti and Wise is the question of the IRA’s net effect on personal savings, which has been minimal, and its net effect on national savings, which is even worse); Venti & Wise, *IRAs and Savings*, in NBER SUMMARY REPORT: TAXES AND CAPITAL FORMATION 6 (D. Zerwitz ed. 1988) (most participation is new savings); Hubbard, *Do IRAs and Keoghs Increase Saving?*, 37 NATL. TAX J. 43 (1984) (answering yes); Note, *Costs and Consequences of Tax Incentives: The Individual Retirement Account*, 94 HARV. L. REV. 864, 877-78 (1981) (available data suggest the IRA deduction is an expensive way to generate savings). See generally Steuerle, *The Failure of Saving Incentives*, 44 TAX NOTES 603 (1989) (most saving incentives simply do not work).

60. I do not contend that this justification for MET was foremost in the legislature’s mind

Naturally, it is conceivable that MET's effects on perceptions of futility might be exactly the opposite of those I have hypothesized. Parents unable to afford a MET contract may wrongly conclude that they would not be able to accumulate enough savings over time to pay for their children's college. Even if one assumes, however, that MET's net "demonstration effects" on feelings of futility will be to the good, that is not the end of the story. One must still form a judgment about whether those net benefits are sufficient to justify any distributional costs. And one must ask whether alternative mood-altering strategies might have been pursued that would have entailed fewer distributional costs.

F. Summary

The Michigan Education Trust was presented as a response to parental anxiety over runaway college tuition inflation. Yet the perceptions of the speed with which college tuitions were running away may have been exaggerated. And even if some anxiety is justified, one must be sensitive to the distributional effects of programs that are designed to respond to the anxieties of only one part of the community.

MET can also be justified by reference to public objectives. It might be thought of as correcting a failure in the marketplace — imperfect information about investment opportunities. It might be thought of as an effort to check incipient social irresponsibility by reinforcing norms of parental obligation. Yet the invocation of plausible public objectives does not end the inquiry any more than does the invocation of plausible private objectives. One must still attend to the possibility of public costs, in particular distributional costs. In the balance of this article, I explore the potential public costs of MET as it has actually been implemented.

when it enacted the program. I have, however, found one piece of evidence to suggest that MET proponents hoped the program would reduce the number of middle-income families who take advantage of financial aid programs. In April 1986, during testimony before the Colleges and Universities Committee of the State House of Representatives, Treasurer Robert Bowman described the likely effect of the MET on middle class use of financial aid. The Gongwer News Service gave the following account of his testimony:

This is a middle-income plan. But once investments are made, *middle-income families should not need other scholarship monies as much*, freeing those funds for poor families.

Plus, the state could consider investing a portion of the funds it already spends on scholarships and grants into the program on behalf of poorer students.

25 GONGWER NEWS SERVICE'S MICHIGAN REPORT, *supra* note 48 (emphasis added). Similarly, in an address to the MET Board of Directors at their first meeting, Governor Blanchard suggested that, "as more middle class persons take advantage of the tuition guarantee program, more of those [direct grant and scholarship] funds would be available for lower income families."

26 GONGWER NEWS SERVICE'S MICHIGAN REPORT, Report No. 42, at 4 (Mar. 5, 1987).

II. IMPLEMENTING MET: SELLING CONTRACTS TOO CHEAPLY

In this Part, I move from design to implementation. Whereas Part I was concerned with the abstract question of what policy reasons might justify the creation of a program such as MET, this Part is concerned with the concrete question of what happened to MET after it was created. Here I offer a critique of the manner in which MET has been implemented. I examine the single most important decision MET's Directors had to make during the program's first year of operations: setting the prices at which MET contracts would be sold.

The types of concerns the Directors had to consider in establishing those prices are concerns that are commonly described as "actuarial." MET is supposed to be run in an "actuarially sound" manner. I shall first review some of the background questions that one must confront in evaluating the actuarial soundness of a public program. I shall then offer a detailed actuarial analysis of MET itself, concluding that the prices MET charged were far too low, given the information available to MET's Directors at the time they acted.

A. *Actuarial Soundness — Some General Issues*

Section 13(1) of the Act requires that MET be administered "in a manner reasonably designed to be actuarially sound such that the assets of the trust will be sufficient to defray the obligations of the trust."⁶¹ What does it mean for a program like MET to be "actuarially sound"? The phrase is used in two radically different senses. In its first sense, it would require one to look at MET year by year, asking whether the program's assets will be sufficient to defray its obligations as they come due. In its other sense, it would require one to look at MET cohort by cohort, asking whether the assets contributed by each cohort of participants, together with the trust's earnings on those assets, will be sufficient to defray the trust's eventual obligations to that cohort.

The difference between the two approaches can be quite significant. Consider a hypothetical program to pay for a single year of college, built on the following assumptions:

(a) The program sells exactly one contract each year, to beneficiaries each of whom cashes in the contract exactly five years later.

(b) The price of a contract each year is set precisely equal to the cost of college that year.

61. MICH. COMP. LAWS ANN. § 390.1433 (West 1988).

(c) The cost of college is \$1 in the first year, \$2 in the second year, and doubles each year thereafter.

(d) The program does not invest the contract proceeds at all, but simply puts them into a glass jar.

If one adopted a year-to-year perspective, the program — a perfect pay-as-you-go plan — would always be in balance. It would build up a \$31 surplus in the first five years and then maintain it.⁶² It would never go bankrupt. Viewed from a cohort-by-cohort perspective, however, the program is insolvent from day one and becomes geometrically more so year by year.⁶³

The year-by-year perspective is the one traditionally taken in discussing the solvency of the Social Security Trust Funds.⁶⁴ Based on assumptions about the number of living retirees in future years, their levels of benefits, and the number of workers in covered employment and their earnings, a surplus is projected to accumulate in some years and be drawn down in others.

The year-by-year perspective was once popular with businesses establishing company pension plans as well. After some highly publicized defaults on pension obligations, Congress adopted the Employee Retirement Income Security Act of 1974 (ERISA). Section 302 of ERISA (and its overlapping counterpart section 412 of the Internal Revenue Code) requires most businesses' pensions to meet certain "minimum funding" standards. (Government pensions are exempt from ERISA's minimum funding requirements.) To be "actuarially sound" for ERISA purposes, a company pension must take the cohort-by-cohort approach with regard to all benefits accruing after the plan is created and must work to fund any benefits that were promised but unfunded in prior years.⁶⁵

62. The fund gets \$1 the first year, \$2 the second year, \$4 the third year, \$8 the fourth year, and \$16 the fifth year, but does not have to pay anything out during those years. In subsequent years it takes in as much as it pays out.

63. If one's discount rate is equal to one's annual after-tax return on investment, the overall present value of the trust in year n is equal to $-\$31 \times (2^n - 1)$.

It should be noted that this hypothetical is not purely hypothetical. History has produced some notorious swindles whose economic structures were quite similar. See, e.g., 1 L. LOSS & J. SELIGMAN, *SECURITIES REGULATION* 3-9 & n.21 (1989) (discussing John Law's South Sea Bubble and citing discussions of more recent scams).

64. See, e.g., COMMITTEE ON WAYS AND MEANS, U.S. HOUSE OF REPRESENTATIVES, 101ST CONG., 1ST SESS., *BACKGROUND MATERIAL AND DATA ON PROGRAMS WITHIN THE JURISDICTION OF THE COMMITTEE ON WAYS AND MEANS* 80-84 (Comm. Print 1989). Beginning in 1988, the Social Security Trustees began offering a "level-financing" appraisal of the program's actuarial balance as well, an approach that moves even more closely toward a pure year-by-year approach. *Id.* at 81.

65. Plans are given some discretion to "accrue" costs even faster than a strict cohort-by-cohort economic analysis of company obligations would dictate. They may not, however, go any slower than the "accrued benefit cost method." See J. LANGBEIN & B. WOLK, *PENSION AND*

How should MET be evaluated? It is useful to begin by thinking about why the year-by-year perspective has been thought justified in the Social Security context. One obvious point of departure is the fact that the Social Security system's assumed future revenues are *tax* revenues. The tax rates for those future years have already been enacted into law through the democratic process. Individuals cannot avoid contributing to the system without sacrificing net earnings or leaving the country. Furthermore, when one considers the remaining determinants of future Social Security revenues — earnings rates, fertility rates, etc. — they seem in an important sense to be much larger than the program itself. They seem to be big, exogenous factors of the sort that lend themselves to plausible long-range demographic or econometric forecasts. They seem unlikely to be affected significantly by the existence or nonexistence, success or failure of the Social Security system.

Yet even with Social Security, there are good reasons to hesitate about using the year-by-year approach. The system's long-range financial picture is extremely sensitive to even slight departures from the actuarial assumptions, and the year-by-year approach leaves no margin for error. Given the differences between MET and the Social Security system, one must be even less comfortable with the notion of using such an approach to evaluate MET.

MET's future revenues are less controllable than Social Security's, since they result from voluntary individual investment decisions to purchase contracts. Demographers and econometricians are even less comfortable making predictions about such matters than they are making predictions about fertility rates. Moreover, those individual decisions are certain to be closely tied to individuals' perceptions of the solvency of the MET program. A cohort-by-cohort approach is thus both simpler to calculate than a year-by-year approach and (at least in principle) more likely to be accurate over the long run. That is the approach used by MET's actuaries, and that is the approach I shall use in the balance of this article.

Under a cohort-by-cohort approach, the price MET should charge any given cohort depends upon two numbers: (1) the assumed aggregate payout to that cohort (in future dollars), and (2) the assumed after-tax rate of return MET will earn in the interim. Each of these two numbers is in turn derived from two further assumptions. The aggregate payout to the cohort of newborns who entered MET in 1988

EMPLOYEE BENEFIT LAW 229-33 (1990); D. MCGILL, FUNDAMENTALS OF PRIVATE PENSIONS 275-98 (6th ed. 1989).

will depend on: (a) how the cohort members ultimately distribute themselves among the fifteen Michigan public colleges and among the various refund possibilities, and (b) the total increase in tuition at the fifteen Michigan public colleges over the next twenty-two years. The Trust's after-tax rate of return on its investments will depend on: (a) the pre-tax rate of return on investments, and (b) the federal income tax treatment of the trust and its investments.

B. *Actuarial Soundness — A Close Look at MET*

Take a deep breath. This section walks through the details of a moderately complex public program, scrutinizing the many judgments that were needed to implement it. It dissects the multitude of assumptions that necessarily enter the seemingly simple question of what price to charge. In so doing it provides a framework for the analysis of any program of public insurance. And it yields a bottom-line number. It concludes that, if the members of the MET Board of Directors were determined to proceed on the basis of the information they had available at the time they acted, they should have priced MET to raise more than 100 million dollars more than it actually did during the first year.⁶⁶

It is my strong belief that the steps along the way matter more than the bottom line. An understanding of where and how risks were taken is extremely useful when one inquires into why they were taken, and what their long-term effects will be — questions I shall take up in Part III. On the other hand, different people read articles for different reasons. If you are more interested in obtaining a rough general understanding of the types of problems presented by programs such as MET than in grappling with each analytical question posed along the way, you might profitably skim this section and resume closer reading in section II.C on page 1108, *infra*.

1. *Costs: How Much MET Will Need To Pay Out*

MET's actuaries projected the future expenditure for each cohort by taking the current weighted average tuition cost (weighting each school's tuition by the number of students attending) and increasing it at an assumed annual rate of tuition inflation for the future.⁶⁷ Using

66. That figure is arrived at through the interaction among a range of factors summarized in Table 2 and notes 215-16, *infra*.

67. See COOPERS & LYBRAND, MICHIGAN EDUCATION TRUST BOARD MEETING — AUGUST 24, 1988: ACTUARIAL ASSUMPTIONS — ANALYSIS AND STATUS [hereinafter 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS]; COOPERS & LYBRAND, ACTUARIAL ASSUMPTIONS UTILIZED IN DETERMINING PREMIUMS UNDER FULL BENEFITS, LIMITED BENEFITS AND COMMUNITY COLLEGE OPTIONS (June 17, 1988) [hereinafter 1988 ACTUARIAL ASSUMPTIONS

the current weighted average tuition cost as a starting point corresponds to an assumption that MET participants will distribute themselves among the fifteen Michigan public colleges in the same proportions as the general population of Michigan residents who attend the Michigan public colleges. There are at least three ways in which that assumption is likely to prove wrong. They involve the cash refunds available under the contract, the theory of adverse selection, and the theory of moral hazard.

a. Cash refunds. MET beneficiaries who do not attend Michigan public colleges are promised refunds (sometimes denominated "terminations" by MET) in amounts that depend upon what the beneficiaries do instead. The Act creates in effect three classes of cash refund: one for students who attend college outside Michigan, one for students who attend a private college within Michigan, and one for students who do not go directly to a four-year college at all.

According to the statute, a child who attends a degree-granting institution *outside* of Michigan may claim a refund in the form of a payment to that institution equal to the *lesser* of (a) the linear average of tuition charged resident students by the Michigan public colleges⁶⁸ or (b) the amount to which the initial purchase cost of the contract has grown through investment over time.⁶⁹ The statute also provides that any such cash refund shall be made "in equal installments over 4 years and not later than August 15 of the year due."⁷⁰ The contract does not in fact reflect the limitation in clause (b) above. It does, however, provide that the calculation of Average Tuition for purposes of a refund "shall be based upon the last full Academic Year before the refund payments commence and for the number of Academic Years covered by the Contract."⁷¹

Because the most expensive Michigan public colleges are also the largest, the linear average tuition is about 8.1% lower than the

— PREMIUMS]. These assumptions have been maintained, largely unchanged, in the two actuarial reviews performed after prices were set and contracts were sold. See COOPERS & LYBRAND, ACTUARY'S REPORT ON 1988 ENROLLMENT (Mar. 1989); COOPERS & LYBRAND, ACTUARY'S REPORT, VALUATION AS OF SEPTEMBER 30, 1989 (MAR. 1990).

68. That is, the sum of the 15 tuitions, divided by 15.

69. MICH. COMP. LAWS ANN. § 390.1428 (2) (West 1988). The statutory language reads: "the lesser of the average tuition cost of all state institutions of higher education on the date of termination of the contract, or the face amount of the payment or payments and any accrued investment income attributable to the payment or payments."

70. MICH. COMP. LAWS ANN. § 390.1428 (2) (West 1988).

71. MICHIGAN DEPARTMENT OF TREASURY, FORM T-1032, MICHIGAN EDUCATION TRUST FULL BENEFITS PLAN CONTRACT § 7(b)(2)(iii) (Aug. 1988) [hereinafter CONTRACT]; see also *id.*, §§ 7(a)(2), 17(f); Emergency Rule 6(3)(b)(i), Mich. Reg. 27, 31 (Nov. 1988). The Contract provides the same refund for a child who receives a full-tuition scholarship. CONTRACT, *supra*, §§ 7(a)(3), 7(b)(2); see also Emergency Rule 6(3)(b)(i), Mich. Reg. 27, 31 (Nov. 1988).

weighted average tuition. Moreover, because the calculation of Average Tuition is made with respect to the child's senior year in high school and does not increase from year to year as the child goes through college, its value is greatly diminished during periods of substantial tuition inflation.⁷² Using the 7.3% annual tuition inflation assumption made by the MET actuaries, the contractual refund would be 23.2% below the actuaries' overall expected payout.⁷³ Perhaps not surprisingly, that fact was not emphasized in MET's advertising.⁷⁴

In 1986, it appears that approximately thirteen percent of Michigan residents who entered four-year institutions attended out-of-state institutions.⁷⁵ One cannot say whether the percentage of MET partici-

72. Interestingly, at least one member of the MET Board of Directors was concerned about this feature of the refunds, expressing skepticism that the statute really precluded year-by-year adjustments. See Michigan Education Trust Board of Directors Meeting Minutes, July 21, 1988, at 8 [hereinafter MET Board Minutes] (discussion among Dumouchelle, Keeley, and Naoum) (available at Office of the M.E.T., Lansing, MI).

It is not clear what MET plans to do if a child's parents buys four separate one-year contracts instead of buying a single four-year contract. It is at least arguable that the present contractual language would give a much larger refund to the child who buys in pieces.

73. $[(1 - 8.1\%) \times 4] / [(1 + 7.3\%) + (1 + 7.3\%)^2 + (1 + 7.3\%)^3 + (1 + 7.3\%)^4] = 76.8\% = (1 - 23.2\%)$.

74. Indeed, MET's advertising was studiously vague about the amount of the refunds. It neither emphasized their value nor highlighted the significance of the decision to freeze refunds at the level of tuitions during the child's senior year of high school. In its descriptive mailing to curious parents, for example, MET included the following questions and answers:

Q. What are the advantages of the Michigan Education Trust program over individual savings programs?

A. There are several advantages.

...

Second, unlike many private plans that require students to attend a specific college, MET is portable to the school of the student's choice. While tuition is guaranteed only at a Michigan public institution, the student may attend any college in the nation and funds may be used toward tuition at that college. . . .

The amount of the refund will be based on the reason for terminating the contract.

...

If a student decides to attend an *out-of-state college*, a refund of the *average tuition cost* of Michigan's public institutions may be provided.

Michigan Dept. of Treasury, "Michigan Education Trust: Guaranteeing Tomorrow's College Tuition Costs at Today's Prices," at 4-7 (July 1988 information release).

In a televised call-in show about the program, Governor Blanchard described the refunds as follows:

[T]he nice thing about this is that it is portable. . . . If they go to a private school or independent college they don't get the full amount obviously, we can't guarantee that, those are private institutions, but they will get the average tuition in a public one.

"The Michigan Trust," (WTVS television broadcast, Aug. 3, 1988) (transcript at p. 10) [hereinafter *WTVS Transcript*].

In a letter to parents who paid the \$25 application fee and were then considering entering into a contract, MET included a table showing the refund as "One-fourth of the Average Tuition cost for each year the beneficiary directs payment to the college," but text underneath the table stated explicitly that "[a]ll refund amounts are determined on the basis of public four-year colleges and universities for the academic year immediately preceding the commencement of the refund and for the number of academic years covered by the contract." Michigan Dept. of Treasury, "The MET Program: A Summary," 3-4 (Aug. 1988 information release).

75. Michigan State Board of Educ., THE DATA SOURCE 1 (Table 1) (Nov. 1988).

pants who go out of state will be higher or lower than thirteen percent. On the one hand, the bigger refund available to students who go to Michigan public colleges suggests that MET's out-of-state percentage may well be lower. On the other hand, the disproportionate representation of high-income families in MET,⁷⁶ suggests that MET's out-of-state percentage may be higher. If one uses the (intermediate and probably best) assumption that thirteen percent of the participants will go out of state, then MET will have *over*-estimated costs on their account by approximately 3%.⁷⁷

According to the statute, a child who attends a *private* college inside Michigan is entitled to a refund in the form of a payment to that institution that "shall not be less than the prevailing weighted average tuition cost of state institutions of higher education for the number of credit hours covered by the contract on the date of termination."⁷⁸ This *weighted* average refund is higher than the *linear* average refund that is to be given students who go out of state. As was true for out-of-state students, however, the contract provides that the averaging calculation shall be "based upon the last full Academic Year before the refund payments commence for the number of Academic Years covered by the Contract."⁷⁹

Once again, the refund's failure to increase from year to year as the child goes through college greatly diminishes its value during periods of substantial tuition inflation. Using the 7.3% annual tuition inflation assumption made by the MET actuaries, the contractual refund would be 16.4% below the actuaries' overall expected payout.⁸⁰ If the proportion of MET beneficiaries who attend Michigan private colleges matches the proportion of Michigan high school seniors generally who do, MET will have overestimated its costs by 4.1% on their account.⁸¹

76. See *infra* section III.A.

77. $13\% \times 23.2\% = 3.0\%$.

78. MICH. COMP. LAWS ANN. §§ 390.1428 (4), 390.1424 (i) (West 1988).

79. CONTRACT, *supra* note 71, § 7(b)(1); see also *id.*, §§ 7(b)(1), 7(a)(1), 17(mm); Emergency Rule 6(3)(a), Mich. Reg. 27, 31 (Nov. 1988).

It bears mentioning that, while the Contract calculates the weighted average tuition cost by reference to "in-state undergraduate[s]," CONTRACT, *supra* note 71, §§ 17(d),(ll),(mm), the statutory definition is not literally restricted to in-state students. MICH. COMP. LAWS ANN. § 390.1424 (i) (West 1988). Such a reading of the statute would mean that MET *underestimated* its costs on account of this group. Since it is most implausible that the legislature intended to provide an incentive for state residents to attend private colleges over public ones, I expect that such a reading is no more likely to prevail than the Contract's extreme interpretation in the opposite direction.

80. $[100\% \times 4] / [(1 + 7.3\%) + (1 + 7.3\%)^2 + (1 + 7.3\%)^3 + (1 + 7.3\%)^4] = 83.6\% = (1 - 16.4\%)$.

81. I calculated this figure as follows. School-by-school profiles in COLLEGE ENTRANCE EXAMINATION BOARD, THE COLLEGE HANDBOOK 1988-1989, indicate that in the freshman class of 1987, 29.1% of Michigan residents entering four-year colleges *and* staying in-state en-

According to the statute, if a child dies, attends a community college, or does not attend college at all, MET will pay out a refund equal to the lowest tuition then being charged any resident students by any of the fifteen Michigan public colleges.⁸² In 1988, that was 25.1% lower than the weighted average. And once again, the contract specifies that the amount is calculated "based upon the last full Academic Year before the refund payments commence, and for the number of Academic Years covered by the contract, less a Termination fee."⁸³ Under a 7.3% annual tuition inflation assumption, this refund would end up being 37.4% below the actuaries' overall expected payout.⁸⁴

Because this refund is so small compared to the potential payout in benefits for a beneficiary who attends a Michigan public college, the contract provides that in circumstances where a beneficiary would be relegated to this refund, the contract may be transferred to another close family member.⁸⁵ As a result, one cannot easily predict how many children will end up with the lowest refund option. At best one can simply note that it provides a slight additional cushion of protection of Trust solvency on top of the roughly 7% cushion provided by the two primary refund provisions.

To summarize, the refund provisions reduce the amount of benefits MET can expect to have to pay. A cautious ("conservative") estimate would be that MET's costs will be reduced by (a) 3.0% on account of beneficiaries who attend college out of state, and (b) an additional 4.1% on account of beneficiaries who attend private in-state institutions. To combine both effects, one does not simply add the two percentages together.⁸⁶ The geometric (rather than arithmetic) sum of the two reductions on account of the refund rules indicates that the use of the weighted average tuition leads to an overestimate of future costs by 7.0%.⁸⁷

tered *Michigan private* colleges (12,176); 70.9% (29,667) entered *Michigan public* colleges. If one uses the 1986 finding that another 13% of Michigan residents entering four-year colleges chose to go out of state, *see supra* note 75 and accompanying text, that means only 25.3% of Michigan residents entering *all* four-year colleges went to Michigan private colleges ($29.1\% \times (1 - 13\%) = 25.3\%$). Thus: $25.3\% \times 16.4\% = 4.1\%$.

82. MICH. COMP. LAWS ANN. § 390.1428 (2) (West 1988). The precise language is: "the lowest tuition cost of all state institutions of higher education on the date of termination of the contract."

83. CONTRACT, *supra* note 71, § 7(b)(3). *See id.* §§ 7(a)(4)-(6), 17(s).

84. $[(1 - 25.1\%) \times 4] / [(1 + 7.3\%) + (1 + 7.3\%)^2 + (1 + 7.3\%)^3 + (1 + 7.3\%)^4] = 62.6\% = (1 - 37.4\%)$.

85. CONTRACT, *supra* note 71, § 6.

86. Think of the result if one has two effects, each of which tend to reduce costs by 50%.

87. The formula for the geometric sum tracks the formula for geometric differences set forth *supra* in note 27, and is as follows:

$$\text{SUM} = (1 + \text{PCT}_1) \times (1 + \text{PCT}_2) - 1.$$

b. Adverse selection. There are strong theoretical grounds to believe that MET beneficiaries will behave differently from the typical Michigan resident. The theory of adverse selection predicts that, because MET will ultimately have the greatest value for children who attend expensive Michigan public colleges and the least value for children who attend the least expensive Michigan public colleges, parents who have reason to believe their children will attend more expensive Michigan public colleges are more likely to purchase contracts than parents who have reason to believe their children will attend the less expensive schools.⁸⁸ If the parents' judgments are more likely to be right than a random guess would be, adverse selection would increase MET's future costs.⁸⁹

One can estimate *part* of the cost of adverse selection by using the zip codes of MET participants, which MET has made public. The fifteen Michigan public colleges tend to draw their students in different proportions from different regions of the state. Each school has a different geographic profile. To the extent that people in a single zip code share demographic, cultural, and socioeconomic traits that bear on their likely choice of college,⁹⁰ one can draw some inferences about the extent of adverse selection based on the zip code distribution of MET beneficiaries.

I constructed a database giving, for each zip code, the number of MET participants and the number of children who entered each of the fifteen Michigan public colleges in 1988.⁹¹ I assumed that MET participants from each zip code would distribute themselves among the fifteen Michigan public colleges in the same way that children from that zip code entering Michigan public colleges in 1988 had distrib-

88. The differences may be expressed as differential rates of return on the initial investment. The rates of return depend upon more than just what school the child attends, of course. They also depend upon the age of the child initially and upon the rate of tuition inflation during the interim period. For examples, see *infra* note 169 and accompanying text.

89. Adverse selection may also take place for reasons other than mere profit-maximization. Even if all parents agreed that MET would be a fabulous value no matter where their children went to school, the fact that a MET contract is itself expensive makes it more likely that wealthier parents will participate; to the extent the children of wealthy parents are more likely to attend the expensive schools, adverse selection will result.

90. See Austin, *supra* note 1, at 543 & n.174.

91. I am grateful to Marilyn Knepp, the Office of Academic Planning and Analysis at the University of Michigan, and the other members of the President's Council of State Universities of Michigan, who cooperated to provide me with this information. Lake Superior State University was unable to provide information broken down by zip code, but instead provided a county-by-county distribution. I allocated LSSU students to particular zip codes according to the relative population of children in the different zip codes in each county as of 1980, information which I obtained from the Bureau of the Census, U.S. Dept. of Commerce, Summary Tape File 3B, with the programming assistance of Cathy Sun. I am also grateful to Cindy Brach for her assistance in manipulating the gargantuan spreadsheet that resulted.

uted themselves. Adding up each school's projected share of MET participants across all zip codes, I obtained the following results:

TABLE 1

	1988 Students	Projected MET Students
Central Michigan Univ.:	9.9%	9.3%
Eastern Michigan Univ.:	9.1%	10.0%
Ferris State Univ.:	7.4%	5.5%
Grand Valley State Univ.:	4.0%	2.9%
Lake Superior State Univ.:	1.6%	0.6%
Michigan State Univ.:	19.5%	22.4%
Michigan Tech. Univ.:	3.6%	2.8%
Northern Michigan Univ.:	3.8%	2.3%
Oakland Univ.:	5.1%	5.8%
Saginaw Valley State Univ.:	2.3%	1.2%
Univ. of Michigan (Ann Arbor):	10.2%	13.2%
Univ. of Michigan (Dearborn):	2.9%	3.7%
Univ. of Michigan (Flint):	2.7%	1.6%
Wayne State Univ.:	8.7%	9.0%
Western Michigan Univ.:	9.3%	9.7%

Thus, MET participants are more likely than the average state-college-bound Michigan high school senior to attend the state's most expensive schools, such as the University of Michigan at Ann Arbor. If the weights in the second column are accurate, then a price based exclusively on the weights shown in the first column would underestimate MET's total tuition costs by 3.4%.⁹²

To be sure, this methodology almost certainly *under*-estimates the extent of adverse selection. It assumes that, within each zip code, MET participants will go where students go generally. It therefore fails to reflect adverse selection *within* each zip code, adverse selection that could in theory be quite significant.⁹³ Moreover, this methodol-

92. MET's actuaries appreciated the possibility of adverse selection. They took the position that the assumed rate of tuition inflation of 7.3% reflected "a little extra conservation" beyond what was otherwise warranted, in order to protect against adverse selection. 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67, at 2. They asserted that the net effect would be "approximately 3%" but that "there were other factors involved which were enough to overcome the 3% bias." MET Board Minutes, *supra* note 72, Sept. 20, 1988, at 5.

93. How significant it would be depends upon how heterogeneous the population of each zip code is, and how prone to select adversely. If one knew that each zip code were homogeneous, then the figures in the text would show all the adverse selection one will find. If one knew that each zip code were radically heterogeneous and its families prone to select adversely, one might be able to predict that all MET beneficiaries would attend the University of Michigan based on adverse selection. (Note that if one makes *too* extreme an assumption about zip code heterogeneity, one must then conclude that the calculation in the text has absolutely no predictive value, since it is premised on the assumption that at least some information about expected behavior is

ogy does not attempt to reflect the effect of adverse selection on the distribution of cash refunds, since zip-code data were not available for entrants into Michigan private colleges and out-of-state colleges.⁹⁴ A conservative pricing analysis would accordingly account for the 3.4% known adverse selection and then leave some additional cushion for extra adverse selection not picked up by this methodology.

c. Moral hazard. Even though MET can be understood in part as an antidote to the moral hazard presented by college financial aid, that does not mean MET cannot itself become infected by the phenomenon. MET is, after all, insurance against tuition inflation. Children who, absent MET, might have chosen a less expensive school to save money will be freed from budgetary constraints. Since MET will pay the full cost of tuition at *any* Michigan public college, a child who wants to attend a particular one of the fifteen will face a decision in which money will virtually no longer be an object.⁹⁵ Accordingly, one would predict further skewing toward the more expensive schools, on top of the skewing already indicated by adverse selection. Until MET has some substantial experience with students using their contract benefits, however, it will not be possible to offer a quantitative estimate of how severe the moral hazard effects will be. In the meantime, as was true for adverse selection not reflected in the zip code analysis, a conservative pricing analysis would leave at least *some* cushion to account for moral hazard.⁹⁶ In the balance of this article, I shall use a figure of 5% to cover both moral hazard and any adverse selection below the zip code level not accounted for in the prior section's analysis.

d. Future tuition inflation. The actuaries assumed that the weighted average tuition for Michigan residents at the Michigan public colleges would increase at the rate of 10.1% between 1987 and

conveyed by zip code.) If one were to make the intermediate (but not necessarily better founded) assumption that the families within each zip code show exactly the same degrees of heterogeneity and proclivity to select adversely as the zip code aggregates, one could then use a crude iterative process to estimate the additional effect. For an alternative way to gauge the extent of heterogeneity within zip codes, see *infra* note 300 and accompanying text.

94. See generally *supra* notes 68-87 and accompanying text.

95. It still is *some* object. When a child uses a MET contract to attend college, the IRS has ruled that the child will be taxed each year on the difference between one year of the then-prevailing tuition at that school and the amount that was originally paid for one year of the MET contract. Priv. Ltr. Rul. 88-25-027 (Mar. 29, 1988). The more expensive the school the child attends, the more the child will owe in federal taxes. If the child is in a 15% marginal tax bracket, MET will, in effect, be able to rely on a 15% federally supplied co-payment requirement as a check on moral hazard. Moreover, to the extent that room-and-board costs vary among the 15 colleges, an additional residual budgetary constraint will remain.

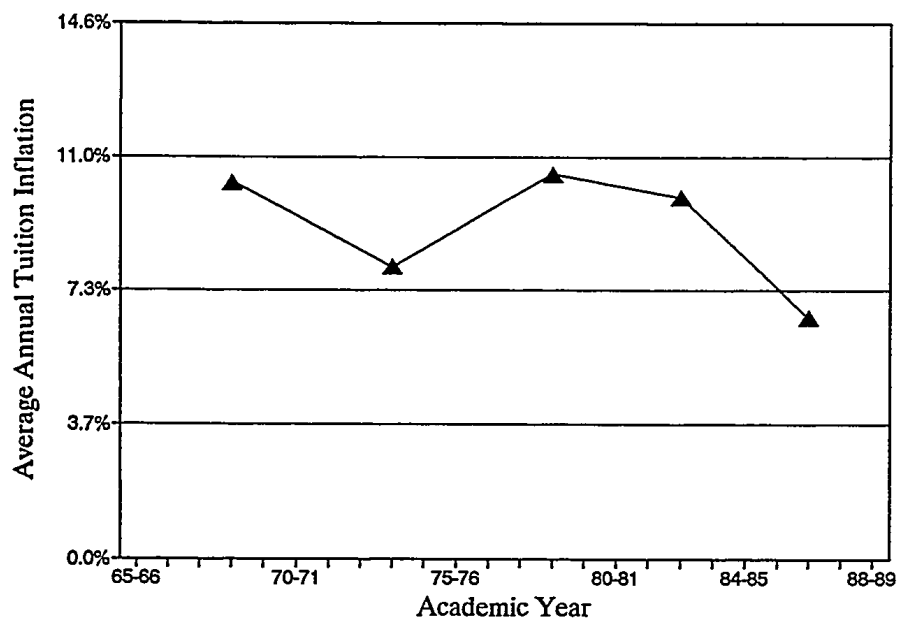
96. MET's actuaries never discuss moral hazard separately. One must presume that they were referring to it together with adverse selection when they spoke generally of "Bias Toward Higher Priced Schools" in 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67.

1988, and at the (nominal, not real) rate of 7.3% per year thereafter.⁹⁷ The 10.1 percent assumption ultimately proved uncannily accurate.⁹⁸ The question is whether the assumption of 7.3% tuition inflation for the future will prove equally so.

Earlier in this article, I presented historical data on *real* tuition inflation.⁹⁹ A graph of *nominal* tuition inflation at Michigan public universities, "smoothed" over five- and four-year intervals, looks like this:

FIGURE 5

Tuition Inflation at MI Public Colleges
(Nominal Annual Rate, Smoothed)



Among the Michigan public colleges, weighted-average tuition inflation ran at a rate of 9.1% per year between 1965-1966 and 1988-1989. If one looks only at the period since 1968-1969 (when my data are more uniform and reliable), the average rate was 8.7% per year.¹⁰⁰

97. 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67. This section considers the assumed nominal rate of tuition inflation as an independent historical artifact. I shall consider that rate *relative* to rates of investment return *infra* text at notes 110-111.

98. For the reason why, *see generally infra* section III.B.

99. *See supra* Figure 1.

100. In a world of moral hazard and adverse selection, one must be wary of excessive reliance on the weighted-average tuition in measuring tuition inflation. The estimates in the text assume that all schools are raising their tuitions at the same percentage rate from year to year. If the variance of that tuition increases over time (if the more expensive schools raise their tuitions at a faster rate than the less expensive schools), then tuition at the more expensive schools will pull

Moreover, tuition inflation over the twenty-year period was remarkably constant. Each ten-year half period (1968-1969 to 1978-1979 and 1978-1979 to 1988-1989) had the same 8.7% average annual rate as the two-decade whole.¹⁰¹

If MET had set its prices assuming an 8.7% rate of tuition inflation, rather than a 7.3% rate, it would have charged substantially more for the contracts. For the cohort of beneficiaries who were entering the tenth grade in 1988, the price would have been 6% higher. For the cohort entering as newborns in 1988, the price would have been 19% higher — \$8053 instead of \$6756. If tuition inflation in fact proceeds at an 8.7% rate, MET's payout cost will be 12% higher than projected, given the age distribution of the children who were actually signed up in 1988. If tuition inflation continues at the 10% annual rate seen between 1987-1988 and 1988-1989, MET will face obligations 26% higher than anticipated.¹⁰²

How ought one forecast tuition inflation over the long term? How ought one choose among 7.3%, 8.7%, and 10.0%? Statisticians forecast the future in a variety of ways, ranging from simple deterministic extrapolations, through more sophisticated stochastic extrapolation models, up to the most complex structural econometric regression models.¹⁰³

further away from the weighted average. Adverse selection and moral hazard will then have even greater costs for the program.

In fact, over the past 20 years the rates of tuition inflation have varied somewhat among the Michigan public colleges but not greatly. If, instead of looking at the historical change in the weighted average tuition, one looked at the historical change in each school's tuitions and weighted them by the projected distribution of MET beneficiaries shown in Table 1 above, one would obtain a rate of 8.74%, a figure insignificantly different from the 8.73% rate of inflation in the weighted average over the same period.

101. The second 10-year period shows substantially more variance than the first 10-year period did. That reflects the fact that for academic years 1984-1985 and 1985-1986, Governor Blanchard asked the public colleges to freeze their tuitions and, for the most part, they complied. In subsequent years, however, the schools appear to have been recouping their losses.

102. The following sensitivity table shows how much extra costs MET would face at various levels of tuition inflation:

<u>Annual Tuition Inflation</u>	<u>Underestimate</u>
8.0%	5.9%
9.0%	15.3%
10.0%	25.9%
11.0%	37.9%
12.0%	51.5%

103. For statistically sophisticated introductions to methodology, see R. PINDYCK & D. RUBINFELD, *ECONOMETRIC MODELS AND ECONOMIC FORECASTS*, chs. 15, 17, 19 (2d ed. 1981); M. NERLOVE, D. GREYHER, & J. CARVALHO, *ANALYSIS OF ECONOMIC TIME SERIES* chs. VI, VII, X, XI, XII (1979); G. BOX & G. JENKINS, *TIME SERIES ANALYSIS* (1970); Granger & Engle, *Econometric Forecasting: A Brief Survey of Current and Future Techniques*, in *FORECASTING IN THE SOCIAL AND NATURAL SCIENCES*, at 117 (K. Land & S. Schneider eds. 1987). For a discussion of the limitations of the methodology in making long-range forecasts, see Land & Schneider, *Forecasting in the Social and Natural Sciences: An Overview and Analysis of Isomor-*

I do not have enough data to generate a structural econometric regression model that takes into account the full range of underlying conditions that almost certainly influence public tuition levels in Michigan (costs faced by colleges, levels of state appropriations, available numbers of students, tuition levels nationwide, etc.). Moreover, even if I did, such a model can be used to make long-range projections of tuition inflation only by making strong assumptions about whether those underlying conditions will conform to *their* historical patterns, assumptions that strike me as no more intuitively plausible than an assumption that the number which ultimately matters (tuition inflation) will conform to *its* own historical pattern.¹⁰⁴

Unfortunately, the various models for extrapolating from the historical pattern of a single series are of only limited value when one attempts to make truly long-term forecasts — forecasts that require one to look about as far into the future as far as one is able to look back into the past. Moving-average models produce long-run forecasts that converge to the simple average value of the available data

phisms, in *id.* at 7, 15-17. For less statistically oriented approaches to some of the epistemological issues, see O. HELMER, LOOKING FORWARD 70-78 (1983); Smith, *The Social Forecasting Industry*, in FORECASTING IN THE SOCIAL AND NATURAL SCIENCES, *supra*, at 35.

104. It is possible that the MET Board believed that since Michigan public college tuitions had been inflating faster than public college tuitions nationally, see *supra* Figure 1, in the future they will inflate slower. One would need a great deal of information about the similarities and differences among public colleges in different states in order to know whether that hypothesis or its opposite is more plausible.

To pick just one concrete aspect of the problem, in academic year 1968-1969, Michigan ranked 17th among the 50 states in direct operating subsidies to four-year colleges. In academic year 1986-1987, Michigan's rank had dropped to 30th. *Mindless: Michigan Cheats Its Future by Shortchanging Universities*, Detroit Free Press, Aug. 18, 1989, at 10A, col. 1; see also S. HARRIS, *supra* note 31, at 338 (showing an even higher ranking for Michigan in 1957); Harris, *supra* note 31, at 63 (same); PRESIDENTS COUNCIL, STATE UNIVERSITIES OF MICHIGAN, DEVELOPING MICHIGAN'S MINDPOWER, Dec. 15, 1989, at 11 (looking at state appropriations *per student*, Michigan fell from 24th to 32nd between 1977-1978 and 1988-1989); D. MURPHY & R. BOSARD, 1 MICHIGAN HIGHER EDUCATION FUNDING MODEL TASK FORCE RECOMMENDATION 92-94 (1976).

It is surely a plausible hypothesis that this fact accounts for why Michigan's resident tuition increased faster than the national average during that period. *But see* J. Wittstruck & S. Bragg, Focus on Price, 36 (July 1988) (unpublished paper) (nature of relationship may depend on whether you take a long-term or short-term view). But assuming that hypothesis is true, one cannot know what to expect from the future unless one knows how future legislative appropriations in Michigan will compare to future legislative appropriations nationally.

Moreover, other plausible explanations for Michigan's traditional high rate of tuition inflation would suggest that the trend is likely to continue. It is certainly possible that Michigan's public colleges offer an educational product that is in significant ways different from that offered by other states' public colleges. Without attempting to demonstrate the point, I would raise the possibility that Michigan's colleges are providing a "premium education" that depends heavily on "top quality" personnel and equipment. If the prices of "top quality" personnel and equipment increase more rapidly than the prices of the "good" personnel and equipment used in other states, then one would expect the historical disparity between Michigan tuition inflation and nationwide public college tuition inflation to continue for as long as Michigan chooses to provide a "premium education."

(which would project an average of 8.7% over the next 18 years based on tuition data from the past 20 years); integrated autoregressive models produce long-run forecasts that converge to a simple trend line (a straight line trend would project an average of 7.7% over the next 18 years, based on tuition data from the past 20 years).¹⁰⁵ Where, as in this case, the simple trend line is not a horizontal line and thus predicts something different from the simple average, one's choice between the two must reflect (a) an independently grounded judgment about whether the recent trend will endure or is nothing but an artifact of history, or (b) an independently grounded commitment to caution or to optimism.

Given the function of the tuition inflation assumption in the overall structure of MET, I would offer two reasons why the MET Board should have tended towards caution in selecting a tuition inflation assumption — why it should have chosen a figure of at least 8.7%. The first reason has to do with the asymmetrical costs of error. Undue conservatism in these circumstances yields a slightly overfunded program, with fewer participants than it might have attracted otherwise. Undue boldness, however, yields an insolvent program that may well deny participants the very “insurance” they thought they had purchased.

The second reason has to do with the connection between design and implementation. If one is crafting a public program whose mission is to insure against an expected problem, one ought not implement that program in such a way as to make its success contingent on a hope that the problem will never in fact materialize. MET was created to address a public concern that tuition inflation will continue at a high rate. Since the MET Board was not delegated the authority to lower tuitions directly, it ought to have selected an actuarial structure capable of surviving if relatively high rates of tuition inflation continue. It should certainly not have assumed that, in the future, tuition inflation rates will decline of their own accord.¹⁰⁶

In the balance of this article, I shall therefore adopt a tuition inflation assumption of 8.7%, rather than the MET Board's figure of 7.3%. That suggests an underestimate of overall future costs by the MET Board of 12.3% on account of future tuition inflation.

105. See R. PINDYCK & D. RUBINFELD, *supra* note 103, at 561-68.

106. To be sure, one might wish to think about this motivating assumption in relative, rather than absolute, terms. One might wish to concentrate on tuition levels, *compared with* returns on investment. See *supra* text accompanying notes 42-43. I shall consider the MET Board's package of assumptions in these terms *infra* text accompanying note 111; my conclusion is that the package is no less aggressive than the separate parts.

e. The costs subtotal. One may combine the figures given above regarding anticipated future costs as follows:

Refunds	7.0% overstatement
Observed Adverse Selection	0.4% understatement
Moral hazard and unobserved adverse selection	5.0% understatement
Tuition inflation	12.3% understatement

The net result is an overall underestimate of projected costs by 10.1 percent. That, however, is only half of a picture of MET's cohort-by-cohort solvency. One also needs to know how much MET will have available when it comes time to meet its financial obligations.

2. Revenues: How Much MET Will Be Able To Pay Out

In order to meet its obligations to the matriculating children, MET will invest the money it receives. How much will be available to pay out depends on two factors: (1) MET's pre-tax rate of return on investment, and (2) the federal tax treatment of MET.

a. Pre-tax return on investment. The actuaries assumed that in September 1989 MET would divide its money into two separate "funds": seventy-five percent into an "Annuity Fund" and twenty-five percent into a "Guarantee Fund." They assumed that the Annuity Fund would be used to purchase a group annuity contract from a life insurance company, paying benefits in the names of the beneficiaries. They assumed that the Guarantee Fund would be invested in a diversified portfolio of corporate and government securities.¹⁰⁷

The actuaries assumed that the nominal (not real) pre-tax rate of return on the Annuity Fund would range from 7.12% per year, compounded annually, for short-term deferred annuities (purchased to cover the contracts of older children) to more than 9.83% per year, compounded annually, for longer-term deferred annuities (purchased to cover the contracts of younger children).¹⁰⁸ These rates reflect net rates actually quoted to MET by an insurance company for fixed-rate annuities; their use is therefore quite conservative. If one weights the various returns by the age distribution of MET participants, they imply an overall return of about 9.4% per year.

The actuaries assumed that the nominal pre-tax rate of return on

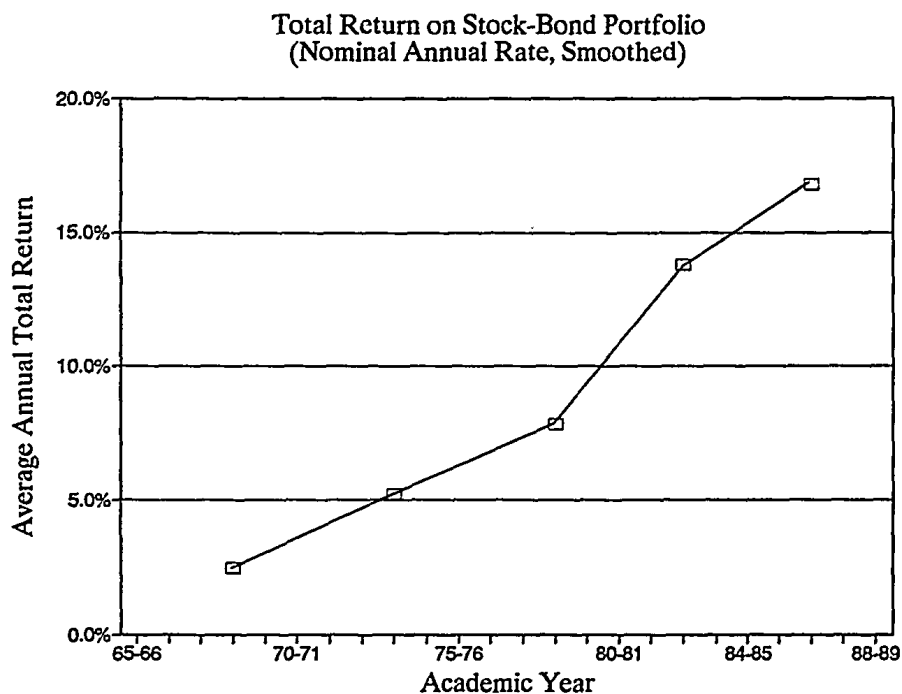
107. See 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67.

108. MET Board Minutes, *supra* note 72, June 21, 1988, at 8. The figures moved from 7.12% for a one-year deferral up to 9.83% for a 12-year deferral and then slowly dropped back to 9.71% for an 18-year deferral. *Id.*

One might well ask why, if the actuaries expected a return of 10% on general-fund moneys, they expected 75% of the funds to be invested in annuities having a projected composite yield of only 9.4%. The reason has to do with federal income taxes. See *infra* section II.B.2.b.ii.

the Guarantee Fund would be 10% per year, compounded annually. The following graph shows annual nominal total return rates (current income and capital appreciation), smoothed over the usual five- and four-year periods, on a hypothetical portfolio composed half of common stocks and half of long-term corporate bonds.¹⁰⁹

FIGURE 6



This pattern shows a distinct upward trend. Until 1980, total returns on this portfolio were distinctly below 10% per year. Over the period from 1965-1966 through 1988-1989, the average annual rate of return was 8.6% (a composite of 9.6% in the stock market and 7.1% in the bond market). Over the first half of that span, the nominal rate was only 4.6% (4.8% stocks, 4.5% bonds); over the second half of that span, the nominal rate soared to 12.3% (14.2% stocks, 9.6% bonds). Even over much longer time horizons, the patterns are not stable. Between 1928 and 1948, the average rate of return was 3.5%; between 1948 and 1968, 12.5%; between 1968 and 1988, 9.5%.¹¹⁰

109. During the mid-1980s, Michigan's pension funds moved from an investment mix of roughly 80% bonds and 20% stocks, to a mix of roughly 55% bonds and 45% stocks. Michigan Dept. of Treasury Release (Apr. 18, 1988) (Table 1, attached to memo from Jan W. Lyddon to Speaker Gary M. Owen, Michigan House of Representatives, April 19, 1988).

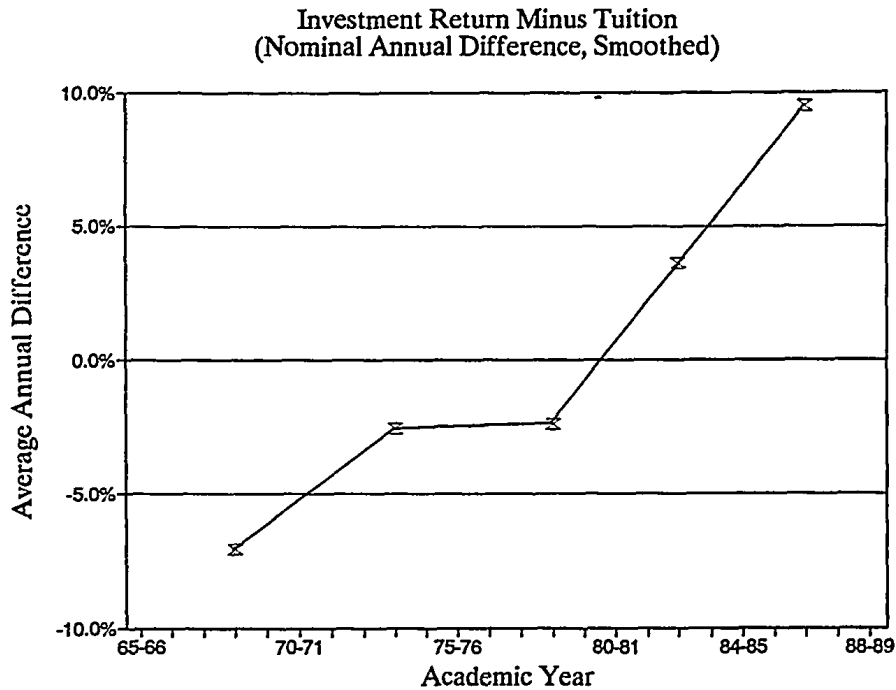
110. Calculated from IBBOTSON ASSOCIATES, *supra* note 42, at 174, 177.

As was the case with tuition inflation, it would be wonderful to have a complete econometric model and perfect knowledge of the future behavior of the independent components of that model over the next eighteen years. Unfortunately, of course, no such model exists. In the absence of such a model, one is left to puzzle over whether a 10% pre-tax total return assumption — high by long-term standards, but lower than the 1980s — should be deemed overly optimistic. While I certainly would not deem the assumption excessively cautious, neither am I prepared to think it so aggressive as to be beyond the bounds of fiduciary prudence. In the balance of this article, I shall therefore simply accept the MET Board's assumed pre-tax total return of 10% per year.

Before moving on, however, I would like to offer two more graphs. There is great intuitive power in the suggestion that, whatever else may determine nominal rates of tuition inflation, and whatever else may determine nominal rates of total return on investments, *both* are strongly affected by general price inflation in the marketplace. One might therefore expect the difference between investment returns and tuition inflation to be a more interesting number than either figure individually. The difference between MET's assumed return on investment of 10% and MET's assumed rate of tuition inflation of 7.3% is 2.5%.¹¹¹ The differences during the period from 1965-1966 to 1988-1989 looked like this:

111. Note that this is a geometric difference: $1.10 / 1.073 = 1.025$. For an explanation of geometric differences, see *supra* note 27.

FIGURE 7



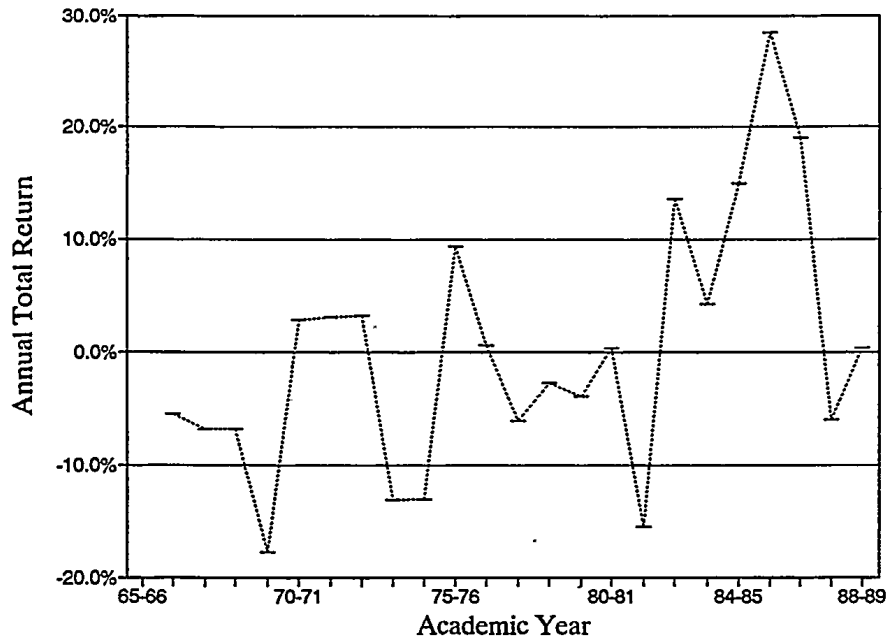
Over the entire period, investment returns ran 0.5% behind Michigan tuition inflation. During the first half, they ran 4.3% behind; during the span from 1976-1977 through 1988-1989, they ran 3.2% ahead. Thinking about the relationship between investment returns and tuition inflation thus appears to give us no more stable benchmark than thinking about each component separately. One must still decide whether the next eighteen years are more likely to resemble the past ten or the past twenty.

Slight guidance may be drawn from Figure 8, which provides the same information as that shown in Figure 7, except that it shows the individual year-to-year changes rather than the five-year smoothed averages:

8

FIGURE 8

Investment Return Minus Tuition
(Nominal Annual Difference)



Of the twenty-three year-to-year changes shown, only nine have investments outpacing tuition inflation by more than 1%. The only period in which they did so reliably was the spurt from 1981-1982 through 1985-1986, a period during which the stock market boomed and Michigan universities agreed to freeze their tuitions for two consecutive years. On balance, I would conclude that MET's assumption that investments will consistently outpace tuition inflation by 2.5% is optimistic when compared with the historical record. A geometric difference of only 1.2% per year (the difference one would obtain by projecting tuition inflation at 8.7% per year) is surely easier to defend as within the range of prudence.

b. The effects of federal taxes. How much MET will have available to pay to any particular cohort is a function of more than just the amount MET will earn on its investments. It depends as well on how much of its earnings MET will have to share with the federal government. MET's actuarial soundness is a function of its *after-tax* earnings.

Three different categories of tax problems can affect MET's after-tax earnings. One category involves MET's marginal income tax rate, which depends upon how MET itself is viewed for federal tax purposes. A charitable organization or an integral part of the state gov-

ernment would face a marginal rate of zero percent. A trust would face a marginal rate of 28%. An association taxed as a corporation would face a marginal rate of 34%.

A second category of tax problem involves the tax treatment of different types of potential investments. For example, if MET were to buy tax-exempt municipal bonds, it would pay no tax on interest earned from those bonds. (Of course, such bonds generally have a lower return than the pre-tax returns available from portfolios such as that used for analysis in the previous section.)

A third category of tax problem involves the tax treatment of payments between MET and the beneficiaries. Must MET pay tax on the money it receives by selling contracts? May it take a deduction when it pays a beneficiary's tuition?

In setting prices, MET's Board of Directors made the following assumptions with regard to each of these categories:

- (1) MET will be treated as an "association taxable as a corporation" and will accordingly face a marginal rate of 34%.
- (2) By investing 75% of its funds in deferred annuities, MET will be able to avoid paying any tax on the earnings from those annuities.
- (3) MET will not owe any tax on the money it receives by selling contracts, and MET will be able to take a deduction to the extent its payment of a beneficiary's tuition exceeds what the beneficiary initially paid to buy the contract.

The net result of these assumptions is that the MET Directors assumed the overall effective rate of tax on their investments was approximately 12%.

In this section, I review those assumptions in detail. I conclude that the first assumption is appropriate, that the second assumption is unsupported, and that the third assumption is probably only half right. I also explore an alternative theory that has a stronger chance of success than the tax assumptions used by MET's Board of Directors, but that I conclude is ultimately unlikely to prevail.

I should emphasize at this point that it is *possible* for MET's tax assumptions to prevail. MET may not be audited. Even if MET is audited, the application of the tax laws to new situations is sometimes difficult to predict. Moreover, the Internal Revenue Service may temper a dispassionate interpretation of existing authorities with a sensitivity to more overtly political considerations. Finally, Congress may intervene and offer MET favorable tax treatment directly.

My goal in this section is thus *not* to predict the ultimate outcome of a fight between MET and the IRS. Rather, I would like to make a more general observation about the nature of the MET Board's behav-

ior. My point is that, by making such optimistic tax assumptions without the benefit of either a ruling from the IRS or an opinion letter from tax counsel, the MET Board took a *significant* risk. For, as I shall demonstrate, if MET had adopted a price structure based on more cautious tax assumptions, it would have collected 25% more money from the participants — even if it kept its nontax actuarial assumptions unchanged.

(I appreciate that not all readers of this article may be interested in understanding the range of challenging questions of federal tax doctrine presented by a program such as MET. Such readers are welcome to proceed to section II.B.2.c on page 1106, *infra*. I ask only that they accept the proposition that the MET Board of Directors based its prices on a set of tax assumptions that carry an extremely high risk of being proved inaccurate.)

i. Is MET a tax-exempt entity? In calculating prices for MET's Board of Directors, the actuaries assumed that MET would not benefit from any of the provisions of the Internal Revenue Code that might arguably make it tax-exempt.¹¹² That assumption is consistent with rulings issued to MET by the Internal Revenue Service.¹¹³ Yet even though the actuaries did not assume that MET would be tax exempt when they calculated the price of MET contracts, they did — as a means to give comfort about the overall soundness of the trust — stress the *possibility* that MET might some day be held to be tax-exempt.¹¹⁴

Why might MET be tax-exempt? In its initial ruling request, MET had advanced two arguments to support exemption: (1) that MET is an "integral part of the state," directly exempted by the principle of "intergovernmental tax immunity"; and (2) that MET's income will "accrue" to the state out of the exercise of an "essential governmental function" and be exempt under section 115 of the Internal Revenue

112. See 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67, at 1.

113. See Priv. Ltr. Rul. 88-25-027 (Mar. 29, 1988); MET Board Minutes, *supra* note 72, May 2, 1989, at 3-4 (statement of Lawrence Owen).

114. In its reports of June 17, 1988, and August 24, 1988, Coopers & Lybrand commented that "501(c)(3) or other tax-exempt status may be obtained!!!" 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67, at 3; 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67, at 3. In its oral report to the Board of Directors on September 20, 1988, Coopers & Lybrand indicated that the Detroit law firm of Miller, Canfield, Paddock, and Stone had "expressed a strong likelihood MET will receive 501(c)(3) status." MET Minutes, *supra* note 72, Sept. 20, 1988, at 4. And in a conversation in July 1988, the Chairman of MET's Board insisted that the trust would ultimately be declared tax-exempt, "like the lottery commission." Interview with Robert A. Bowman, Michigan Treasury Secretary (July 19, 1988) (Notes of John Furman, copy on file with *Michigan Law Review*) [hereinafter Meeting, July 19, 1988].

Code.¹¹⁵ Later, MET advanced the argument that it was a 501(c)(3) charitable organization. None of these approaches moved the IRS. In this section, I shall review the merits of each argument, concluding that the MET Board should not *for any purposes* rely on the possibility of tax exemption. In particular, the MET Board should not act as if risky positions in other areas are somehow “balanced out” by the possibility of a tax exemption.

The principle of “intergovernmental tax immunity” has a long and somewhat tempestuous history.¹¹⁶ At present, it is understood to exempt states (and “integral parts” of states) from certain kinds of fed-

115. Ruling request letter from Burton Leland and Robert Bowman to Thomas Lyden of the Internal Revenue Service, at 9, 10 (Feb. 19, 1987) (copy on file with *Michigan Law Review*).

116. The doctrine of intergovernmental tax immunity protects the federal government from state taxation. *See California State Bd. of Equalization v. Sierra Summit, Inc.*, 109 S. Ct. 2228 (1989). More significantly for MET, it also provides slightly more limited protection to state governments from federal taxation, and it is that aspect of the doctrine that interests me here.

The doctrine, which is reviewed at length in *South Carolina v. Baker*, 485 U.S. 505, 515-27 (1988), has had two components, which have moved in opposite directions over time.

The first component deals with taxation of activities of the states themselves. Until the mid-1940s, only the states’ “essential governmental functions” (as opposed to nonessential proprietary activities) enjoyed tax immunity. *See, e.g., Allen v. Regents of the Univ. Sys. of Georgia*, 304 U.S. 439, 452 (1938); *Helvering v. Therrell*, 303 U.S. 218, 225 (1938); *Brush v. Commissioner*, 300 U.S. 352, 361-62 (1937); *Helvering v. Powers*, 293 U.S. 214, 227 (1934); *Ohio v. Helvering*, 292 U.S. 360, 368-69 (1934); *Metcalf & Eddy v. Mitchell*, 269 U.S. 514, 523-24 (1926); *Flint v. Stone Tracy Co.*, 220 U.S. 107, 172 (1911); *South Carolina v. United States*, 199 U.S. 437, 454-63 (1905). More recently, however, the Supreme Court has moved away from efforts to have the constitutional issue turn on an essential/nonessential distinction. *See Helvering v. Gerhardt*, 304 U.S. 405, 427 (1938); *New York v. United States*, 326 U.S. 572, 579-82, 586 (1946) (opinions of Frankfurter, J., joined by Rutledge, J., and of Stone, C.J., concurring, joined by Reed, Murphy, and Burton, JJ.); *Garcia v. San Antonio Metro. Transit Auth.*, 469 U.S. 528, 541-47 (1985); *South Carolina v. Baker*, 485 U.S. 505, 523-26 nn.14-15. The rule of those cases would appear to be that states may be taxed directly, even on “essential functions,” as long as the federal government does so in a nondiscriminatory manner. *But see New York v. United States*, 326 U.S. at 586-88 (Stone, C.J., concurring). Some lower courts, however, continue to apply the “essential governmental function” test in evaluating intergovernmental tax immunity cases. *E.g., Ohio County & Indep. Agric. Socys. v. Commissioner*, 43 T.C.M. (CCH) 1126, 1132 (1982); *Troy State Univ. v. Commissioner*, 62 T.C. 493, 499 (1974).

The second component deals with federal taxation of people who deal with state governments. Between 1871 and 1937, this component of the doctrine of intergovernmental immunity was thought to be quite broad, prohibiting the federal government from taxing the states but also prohibiting the federal government from taxing people who dealt with state governments if the tax would “burden” the state’s efforts to perform an essential function. *See, e.g., Collector v. Day*, 78 U.S. (11 Wall.) 113 (1870); *Pollock v. Farmers’ Loan & Trust Co.*, 157 U.S. 429 (1895); *Gillespie v. Oklahoma*, 257 U.S. 501 (1922); *Indian Motorcycle Co. v. United States*, 283 U.S. 570 (1931); *Burnet v. Coronado Oil & Gas Co.*, 285 U.S. 393 (1932).

Since 1938, however, this component of the doctrine has contracted dramatically. *See, e.g., Helvering v. Mountain Producers Corp.*, 303 U.S. 376 (1938) (overruling *Burnet* and *Gillespie*); *Gerhardt*, 304 U.S. 405 (confining *Day* to its facts); *Graves v. New York ex rel. O’Keefe*, 306 U.S. 466 (1939) (overruling *Day*); *South Carolina v. Baker*, 485 U.S. 505 (1988) (overruling *Pollock*).

Today, most problems involving the doctrine concern disputes over whether a particular entity is part of the state (and therefore entitled to immunity) or not. *See Massachusetts v. United States*, 435 U.S. 444 (1978); *Rev. Rul. 87-2*, 1987-1 C.B. 18 (state supreme court created, supervised, and controlled a Lawyer Trust Account Fund, whose earnings were disbursed for public

eral taxes.¹¹⁷ The IRS ruling concluded that MET is not an “integral part” of the State of Michigan on the basis of four observations:

- (a) MET’s funds are not derived from the state;
- (b) MET’s funds are not subject to the claims of state creditors;
- (c) Michigan cannot use MET’s funds for any purpose other than to pay the tuition and cash refunds to which individual beneficiaries may be entitled; and
- (d) MET’s Board is not subject to supervision by any other state agency.¹¹⁸

The point of these four observations is that MET is a world unto itself within state government. The first three demonstrate that MET is economically sealed off from the rest of state government. The last demonstrates that it is administratively sealed off. Taken together, they make it easy to conclude that MET is not such an “integral part” of the sovereign state of Michigan that the state would be burdened if MET were taxed.¹¹⁹

MET’s second argument to the IRS — that it is exempt under section 115 of the Code — was properly rejected as well. Section 115 exempts income that is “derived from any public utility or the exercise of any essential governmental function and accruing to a State”¹²⁰ The legislative history of that very old and somewhat cryptic language strongly supports the view that it was intended to be no more than a codification of the principle of intergovernmental tax immunity.¹²¹

purposes rather than for the benefit of the clients who supplied the principal); Rev. Rul. 77-261, 1977-2 C.B. 45; Gen. Couns. Mem. 39,315 (Dec. 21, 1984).

See generally Powell, *The Waning of Intergovernmental Tax Immunities*, 58 HARV. L. REV. 633, 664-65 (1945).

117. Authorities are divided over whether states are immune from federal taxes that would “unduly burden” their functioning so as to threaten their sovereignty or whether they are immune merely from discriminatory federal taxes. See *South Carolina v. Baker*, 485 U.S. at 523 n.14 (acknowledging but not resolving the question).

118. Priv. Ltr. Rul. 88-25-027 (Mar. 29, 1988).

119. The conclusion is easily consistent with the line of authorities that makes state-run liquor stores tax-exempt, see Rev. Rul. 71-132, 1971-1 C.B. 29; Rev. Rul. 71-131, 1971-1 C.B. 29, but makes state-created savings-and-loan-insurance corporations taxable, see *Maryland Savings-Share Ins. Corp. v. United States*, 308 F. Supp. 761, 767-68 (D. Md. 1970), *revd. on other grounds*, 400 U.S. 4, 7 n.2 (1970) (per curiam). In the former case, federal taxation confiscates money that would otherwise enter state coffers; in the latter case, it does not.

120. I.R.C. § 115 (1988).

121. This language entered the tax laws in 1913. Tariff of 1913, ch. 16, § IIG(a), 38 Stat. 114, 172. It was reproduced, with only minor stylistic changes and an updated grandfathering proviso, in the Revenue Act of 1916. Revenue Act of 1916, ch. 463, § 11(b), 39 Stat. 756, 767. It was carried forward, again with only minor stylistic changes, into a subsequent Revenue Act, and into the Internal Revenue Code of 1939, and ultimately became § 115 of the Internal Revenue Code of 1954. See Revenue Act of 1928, ch. 852, § 116(d), 45 Stat. 791, 823; Internal Revenue Code of 1939, ch. 2, § 116(d), 53 Stat. 1, 49; Internal Revenue Code of 1954, Pub. L. No. 591, § 115, 68A Stat. 1, 35. The grandfathering proviso dealing with income in the hands of public utilities that was to be turned over to the state was not deleted until 1976, when it was

Over the years, the courts and the IRS have treated the provision as requiring a different form of analysis from the principle of intergovernmental tax immunity, but have not allowed it to produce different results. The courts have construed the word "accrue" narrowly, applying section 115 only when an integral part of a state or municipal government has "a vested right" or "an enforceable claim" to the money. They have not found the accrual requirement satisfied when income or a benefit merely "inures" to a state or when unused earnings may, at some future time, be delivered to the state treasury.¹²² Moreover, while the General Counsel's Office at the IRS has used a less stringent interpretation of "accrual" than have the courts, it too has produced the same pattern of results that one finds under the principle of intergovernmental tax immunity.¹²³

declared obsolete. Tax Reform Act of 1976, Pub. L. No. 94-455, § 1901(a)(19), 90 Stat. 1520, 1766.

The original 1913 House bill, H.R. 3321, did not explicitly exempt state and municipal corporations from the corporate income tax. The Senate Finance Committee added an amendment affirming that states would never be taxed on their revenues, from any source. 50 CONG. REC. 2513-14, 3867 (1913). On the floor of the Senate, the Committee went further. Speaking for the Committee, Senator Simmons persuaded the Senate to exempt the income of public utilities, at the public utility level, to the extent that such income was ultimately to be passed through to the state. 50 CONG. REC. 4380 (1913). In Conference, however, both the main provision and the proviso were cut back to exempt revenue derived by a governmental body from a corporation, but not the revenues derived by that corporation from its business. 50 CONG. REC. 5320-21 (1913) (remarks of Sen. Shively).

122. Such an interpretation is consistent with the understanding that Senator Shively presented to the Senate at the completion of the Conference that produced the final language. 50 CONG. REC. 5320-21 (1913); *see also* *Troy State Univ. v. Commissioner*, 62 T.C. 493, 497 (1974); *City of Bethel v. United States*, 594 F.2d 1301 (9th Cir. 1979), *cert. denied*, 444 U.S. 980 (1979); *Ohio Cty. & Indep. Agric. Socys. v. Commissioner*, 43 T.C.M. (CCH) 1126, 1134 (1982); *Omaha Pub. Power Dist. v. O'Malley*, 232 F.2d 805, 809 (8th Cir. 1956), *cert. denied*, 352 U.S. 837 (1956); *Town of Fairhaven v. United States*, 142 F. Supp. 590 (Ct. Cl. 1956); *Keokuk & Hamilton Bridge, Inc. v. Commissioner*, 12 T.C. 249 (1949), *revd.*, 180 F.2d 58 (8th Cir. 1950); *Bear Gulch Water Co. v. Commissioner*, 40 B.T.A. 1281 (1939), *affd.*, 116 F.2d 975 (9th Cir. 1941), *cert. denied*, 314 U.S. 652 (1941); *Citizens' Water Co. v. Commissioner*, 32 B.T.A. 750, 753 (1935), *affd.*, 87 F.2d 874 (8th Cir. 1937), *cert. denied*, 302 U.S. 694 (1937).

But cf. *Maryland Savings-Share Ins. Corp. v. United States*, 308 F. Supp. 761, 765 (D. Md. 1970), *revd. on other grounds*, 400 U.S. 4 (1970), which found that the state-run savings and loan insurance mechanism failed to satisfy § 115's "accrual" test through "a weighing of how central the activity sought to be taxed is to the operation of state government and of how directly taxation of the income of the activity will burden the state treasury." *But see* *Keokuk & Hamilton Bridge, Inc. v. Commissioner*, 180 F.2d 58 (8th Cir. 1950) (corporation formed to run toll bridge, pay off outstanding mortgage, and turn it over to city; § 115 applies).

123. Early on, the Internal Revenue Service released a confusing General Counsel's Memorandum that at one point indicated that § 115 applies "to that part of the income of a corporation engaged in the operation of a public utility or in the performance of some governmental function which accrues to a State or municipality by virtue of its ownership of such corporation." Gen. Couns. Mem. 14,407, 14-1 C.B. 103, 105 (1935) (emphasis added), *superseded by* Rev. Rul. 71-131, 1971-1 C.B. 28. Other portions of the memorandum, however, referred only to efforts to collect taxes from states and municipalities, and the ultimate conclusion was simply that the State of Montana itself was not subject to taxation. *Id.* at 105-07.

More recently, the IRS has taken the position that, while the intergovernmental tax immunity principle applies only to "integral parts" of governments, mere "instrumentalities" of the state (which, unlike "integral parts," must file federal income tax returns) may nonetheless be

MET's economic isolation from the rest of state government thus keeps it outside the protection of section 115 as well. The state gives no money to MET; MET gives no money to the state. Indeed, MET's situation is virtually indistinguishable from that of the Maryland Savings-Share Insurance Corporation (MSSIC) — the entity established by the state of Maryland to insure its savings and loan institutions and to thereby inspire citizen confidence in them. And the United States Supreme Court, in an obscure but pellucid footnote, held MSSIC to be ineligible for section 115 protection.¹²⁴

After the IRS rejected the intergovernmental immunity and sec-

covered by § 115 if their income "accrues" to the state. Rev. Rul. 77-261, 1977-2 C.B. 45; *see also* Gen. Couns. Mem. 39,601 at n.1 (Jan. 30, 1987); Gen. Couns. Mem. 39,315 (Dec. 21, 1984) (§ 115 can exempt income in the hands of entities that are not "integral parts of states," which makes it unnecessary to determine whether the board in question is or is not "integral"); Gen. Couns. Mem. 39,006 (June 28, 1983); Gen. Couns. Mem. 37,657 (Aug. 31, 1978); Gen. Couns. Mem. 34,704 (Dec. 2, 1971) (intergovernmental tax immunity applies to "integral parts" of the state; § 115 applies to "instrumentalities" of the state that are not "integral parts"). *But cf.* Gen. Couns. Mem. 38,471 (Aug. 13, 1980) (any organization whose income is excluded under § 115 is a "state institution" within the meaning of Treas. Reg. § 1.6033-2(g)(1)(v)).

And in deciding whether income "accrues" to the state, the IRS has been satisfied in a range of situations that fall short of actual or constructive receipt, as long as there is clear evidence that the income will eventually wind up in state coffers and not in the hands of private citizens. *See* Rev. Rul. 77-261, 1977-2 C.B. 45, 46 (state had "an unrestricted right to receive in [its] own right [its] proportionate share of the investment [entity]'s income as it is earned"); Rev. Rul. 59-41, 1959-1 C.B. 13 (city established and issued bonds for a nonprofit water corporation that it would control and manage, with any surplus after bond amortization to be paid to the general fund); Rev. Rul. 57-151, 1957-1 C.B. 64 (county established a trust to provide utility services, whose funds would, upon liquidation, be distributed to the county); Rev. Rul. 54-296, 1954-2 C.B. 59 (city formed a corporation to improve and rent out a municipal building); *see also* Gen. Couns. Mem. 39,006 (June 28, 1983).

124. *United States v. Maryland Savings-Share Ins. Corp.*, 400 U.S. 4, 7 n.2 (1970).

The IRS letter ruling to MET on the § 115 issue is, admittedly, somewhat peculiar. Instead of emphasizing MET's relationship to the rest of state government, the IRS emphasized the relationship between MET and the citizenry at large. The letter ruling to MET declared that § 115 does not apply to any activity that serves a private interest in ways that are not "incidental to the public interest." Priv. Ltr. Rul., 88-25-027 (Mar. 29, 1988). According to the letter ruling, "The basic principle underlying section 115 is that property (including any income thereon) must be devoted to purposes which are considered beneficial to the community in general, rather than particular individuals." The ruling concluded that because MET provides "a direct economic benefit" to contract beneficiaries and nobody else, it does not satisfy that standard. *Id.*

The problem with that analysis is that it is incomplete. It fails to explain why the benefits for MET contract beneficiaries are not merely "incidental to the public interest" in encouraging savings for college. After all, most public programs distribute their benefits unequally. Water utilities are more beneficial to people who take many showers. Schools are more beneficial to children and their parents.

To be sure, if one wished to distinguish MET from schools and public utilities on functional rather than structural grounds, it would not be hard. Section 115 refers only to income derived from "essential governmental functions"; investment management for parents with money to set aside for their children's college education could plausibly be deemed "non-essential." The federal government has, in other contexts, denied tax benefits to state governments when they act simply as money managers. I.R.C. §§ 103(b)(2), 148 (1988) (denying tax exemption for municipal bonds whose proceeds are intentionally used to acquire higher-yielding investments). But if the IRS wished not to rely on the simple structural argument, the letter ruling's approach was not the right one to take.

tion 115 arguments, MET then filed an application for an exemption under section 501(c)(3) of the Internal Revenue Code, as a "charitable . . . or educational" corporation. The IRS promptly rejected the application.¹²⁵

Section 501(c)(3) applies by its terms only to organizations "no part of the net earnings of which inures to the benefit of any private shareholder or individual." MET provides no services.¹²⁶ It is purely an economic enterprise designed to help investors' savings keep up with tuition inflation. Moreover, if MET's earnings do not keep up with tuition inflation, those individuals will be harmed because MET will have to dissolve.¹²⁷ Thus, *all* of MET's net earnings inure to the benefit of specifically identifiable private individuals — the MET beneficiaries.

ii. The treatment of MET investments in deferred annuities. While the assumption by MET's actuaries that it will not be tax-exempt is thus appropriate, the same cannot be said of the assumption that it could place seventy-five percent of its money into an Annuity Fund, use that money to purchase deferred annuities from life insurance companies, and not owe any taxes on the annual increment in the annuities' value.¹²⁸

Under the Internal Revenue Code, when a natural person purchases a deferred annuity from a life insurance company, taxation of the so-called "inside buildup" of the annuity is deferred until the annuity is paid out. Deferral, while obviously less valuable than complete exemption from taxation, nonetheless has significant economic value because it permits interest to compound more rapidly. During the early 1980s, it became popular for employers to purchase deferred annuities as a form of tax-favored deferred compensation for employees that would not have to comply with ERISA's rigorous requirements for qualified pension plans.¹²⁹

125. I have not seen a copy of either the exemption application or the IRS ruling, but both have been referred to in the Minutes of the Board. See, e.g., MET Board Minutes, *supra* note 72, July 11, 1989.

126. It is thus different from entities like churches and social clubs that provide noncash benefits to particular individuals who elect to participate.

127. MICH. COMP. LAWS ANN. § 390.1433 sec. 13(2) (West 1988). On the tax significance, see, for example, Rev. Rul. 66-259, 1966-2 C.B. 214 (trust not tax-exempt where principal ultimately reverts to creator, since any gains derived from investing and reinvesting the principal would inure to the benefit of an individual).

128. See 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67; 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67.

129. Among the most significant of ERISA's requirements are the antidiscrimination rules: the plan may not discriminate in favor of highly compensated employees as to coverage, and it may not simultaneously discriminate as to both contributors and benefits. I.R.C. §§ 401(a)(4), 401(a)(5) (1988); I.R.C. § 401(a)(26) (1988).

As part of the Tax Reform Act of 1986, Congress attempted to restrict the attractiveness of deferred annuities as tax shelters.¹³⁰ One change raised the penalty tax on withdrawals from deferred annuities before the beneficiary reaches 59½ years old.¹³¹ A second change created a new section 72(u) of the Code, which denies the benefits of tax deferral unless the annuity is held by a natural person.¹³² MET is not a natural person.¹³³ Thus, at first blush, section 72(u) would appear to

130. The House Report describes the changes as follows:

Under present law, income credited to a deferred annuity contract is not taxed currently to the owner of the contract or to the insurance company issuing the contract. . . .

. . . .
The committee believes that the present-law rules relating to deferred annuity contracts present an opportunity for employers to fund, on a tax-favored basis, significant amounts of deferred compensation for employees. This favorable tax treatment may create a disincentive for employers to provide benefits to employees under qualified pension plans, which are subject to significantly greater restrictions. . . .

Further, the committee believes that tax incentives for savings should not be provided unless the savings generally are held for retirement. The committee notes that other forms of tax-favored savings (e.g., IRAs) are subject to higher additional taxes on early withdrawals. . . .

Under the bill, if any annuity contract is held by a person who is not a natural person (such as a corporation), then the contract is not treated as an annuity contract for Federal income tax purposes and the income on the contract for any taxable year is treated as ordinary income received or accrued by the owner of the contract during the taxable year.

. . . .
In addition, the bill extends the additional income tax on early withdrawals from qualified plans and IRAs to deferred annuity contracts.

H.R. REP. NO. 426, 99th Cong., 1st Sess., *reprinted in* 1986-3 C.B. vol. 2, at 703-04.

131. I.R.C. § 72(q) (1988).

132. I.R.C. § 72(u) (1988) reads as follows:

TREATMENT OF ANNUITY CONTRACTS NOT HELD BY NATURAL PERSONS

(1) **IN GENERAL** — If any annuity contract is held by a person who is not a natural person —

- (A) such contract shall not be treated as an annuity contract for purposes of this subtitle, and
- (B) the income on the contract for any taxable year of the policyholder shall be treated as ordinary income received or accrued by the owner during such taxable year.

For purposes of this paragraph, holding by a trust or other entity as an agent for a natural person shall not be taken into account.

(2) **INCOME ON THE CONTRACT** —

(A) **IN GENERAL** — For purposes of paragraph (1), the term “income on the contract” means, with respect to any taxable year of the policyholder, the excess of —

- (i) the sum of the net surrender value of the contract as of the close of the taxable year plus all distributions under the contract received during the taxable year or any prior taxable year, reduced by
- (ii) the sum of the amount of net premiums under the contract for the taxable year and prior taxable years and amounts includible in gross income for prior taxable years with respect to such contract under this subsection.

Where necessary to prevent the avoidance of this subsection, the Secretary may substitute “fair market value of the contract” for “net surrender value of the contract” each place it appears in the preceding sentence.

(B) **NET PREMIUMS** — For purposes of this paragraph, the term “net premiums” means the amount of premiums paid under the contract reduced by any policyholder dividends.

133. See S. REP. NO. 313, 99th Cong., 2d Sess., *reprinted in* 1986-3 C.B. vol. 3, at 567 (noting that a corporation or a trust is not a natural person).

make MET taxable on the annual increase in value of any annuities that it "holds."

The key statutory language, however, is found at the end of subsection 72(u)(1), which provides that "holding by a trust or other entity as an agent for a natural person shall not be taken into account." If MET bought deferred annuities, would it hold them "as an agent" for the beneficiaries? The contract, drafted with this issue in mind, clearly speaks of MET buying annuities in the role of an "agent" so that the beneficiaries would be the owners of the annuities for tax purposes.¹³⁴ But would that language be effective for tax purposes?

In fact, there is a lot of law on this point. The tax laws are forever having to come to grips with two basic facts of our legal order. The first is that, like some natural persons, legally created "persons" have split personalities. They are separate entities with independent integrity and at the same time conduits through which others pursue their own interests. The second is that "property rights" — rights between people to control the use of things — are susceptible to almost infinite subdivision among different persons, both legal and natural.

The tax laws respond to the phenomenon of "legal persons" by working from the general premise that each person, legal or natural, is a separate taxpayer, unless there are special reasons to think otherwise.¹³⁵ Sometimes, as is the case with most corporations, that premise means that the same item of "income" is taxed more than once. Sometimes, however, special rules operate to alleviate that sort of "double taxation."¹³⁶

The tax laws have had more trouble responding to the phenomenon of fragmented ownership. It would be theoretically pure (at least for some theorists) to abandon the notion of "property" and to treat any legally enforceable right as an item of value for tax purposes. Each right could be assigned its own value and basis, depreciation schedule, and the like. It would also be administratively unworkable. Accordingly, the tax laws have in most cases chosen to work with the common law categories of property and to make one single person the "owner" for tax purposes of each item of property.

134. CONTRACT, *supra* note 71, § 12(a).

135. Examples of situations in which we think otherwise are when we permit married couples to file joint returns, I.R.C. § 6013 (1988), when we permit affiliated corporations to file consolidated returns, I.R.C. §§ 1501-05 (1988), and when we conclude that a given entity has no substantive existence and call it a "sham," *see* Moline Properties, Inc. v. Commissioner, 319 U.S. 436 (1943).

136. *See, e.g.*, I.R.C. § 102 (1988) (exclusion of gift receipt from income of donee); I.R.C. § 1361 (1988) (treatment of S Corporation as pass-through entity); I.R.C. § 665-67 (1988) (throwback rules for trusts).

To give a concrete example, I live with my family in a house in Ann Arbor and we rent out the upstairs floor to a changing cast of tenants. Legally, we "own" the whole house, subject to our making good on a set of continuing obligations for the future. The bank has a "mortgage interest" in it. Our tenants have a "leasehold interest" in part of it, subject to their making good on a set of continuing obligations for the future. If one were to think of the "house" as a functioning economic entity with a very long future life, the bank would own about seventy-five percent of it, we would own about twenty-five percent of it, and the tenants would own virtually none of it. For tax purposes, however, we are treated as "owning" the whole thing.

The tax laws' preference for not subdividing property any more than is absolutely necessary,¹³⁷ has brought with it the sometimes painful task of deciding who is the "true owner" of an item of property when rights are fairly evenly divided between two persons. Formal legal determinations of tax ownership have come in an extraordinary range of settings.¹³⁸ Analytic commentary on those determinations has come to acknowledge that it is perhaps easier to describe rules of thumb used in particular commercial contexts than to describe overarching principles that unify the entire world of tax.¹³⁹ I would offer five very rough (and not particularly original) general principles:

- (1) The IRS and the courts tend to begin with the legal forms chosen by the parties and then recharacterize the transaction whenever they find the divergence between form and "substance" offensive to their sensibilities.
- (2) The sensibilities of the IRS and the courts are less likely to be offended by a divergence that harms the taxpayer than by a divergence that helps the taxpayer.¹⁴⁰
- (3) In defining the "substance" of a situation, long-term economic exposure to changes in the market value of an asset almost always matters.

137. This is not to say that it is not done. There are some examples borrowed from the common law of property (life estates and remainders, joint ownership, etc.) and others that are purely creatures of the tax laws (recognition of new entity, "constructive partnership" or "constructive trust").

138. See, e.g., *Commissioner v. Sunnen*, 333 U.S. 591 (1948); *Helvering v. Horst*, 311 U.S. 112 (1940); *Blair v. Commissioner*, 300 U.S. 5 (1937); *Welch v. Helvering*, 290 U.S. 111 (1933).

139. For the best articulation of this position, see Isenbergh, *Musings on Form and Substance in Taxation* (Book Review), 49 U. CHI. L. REV. 859 (1982); see also 1 B. BITTKER & L. LOKKEN, *FEDERAL TAXATION OF INCOME, ESTATES AND GIFTS* ¶¶ 4.3-4.4.3 (2d ed. 1989).

140. Since taxpayers structure the transactions that are taxed, they can do so in ways that minimize the variance between economic income and taxable income. If they choose not to, they can hardly blame the Commissioner. Moreover, it is often the case in such situations that, while a given form increases the tax burden of one party to a transaction, it also decreases the tax burden of another. A rule that emphasizes form over substance in such situations minimizes the risk that the government will be whipsawed by parties to an agreement who take logically inconsistent positions about the agreement's tax consequences.

(4) In defining the "substance" of a situation, short-term and intermediate-term control over the use of an asset sometimes matters.

(5) In defining the "substance" of a situation, the existence or nonexistence of a nontax motivation for choosing a particular form sometimes matters.

MET's contracts adopted a form of words declaring that, if MET bought any annuities, it would be doing so merely as the beneficiaries' agent.¹⁴¹ The substantive contractual ground rules, however, were that MET would have complete discretion over whether, when, and from whom to buy such annuities.¹⁴² When the annuities came due, MET would apply as much of the proceeds as necessary to satisfy its obligations to the beneficiary¹⁴³ and then would use the rest to satisfy its obligations under other MET contracts.¹⁴⁴ The use of annuities would neither enlarge nor diminish the beneficiary's rights against MET.¹⁴⁵

Whatever it may be, this is certainly not an agency agreement. As a matter of substantive right and obligation, MET is assigned all control over the decision to buy, sell, and manage the annuities. In addition, MET is assigned all the benefits and burdens associated with changes in the market value of any annuities it buys.

At common law, the central distinguishing feature of an agency relationship is the right of the principal to control the agent.¹⁴⁶ "It is the element of continuous subjection to the will of the principal which distinguishes the agent from other fiduciaries and the agency agreement from other agreements."¹⁴⁷ In litigated cases treating a purported agency agreement as a "true agency" for tax purposes, the right

141. CONTRACT, *supra* note 71, § 12(a) provides:

SECTION 12. INVESTMENT THROUGH THE USE OF A GROUP ANNUITY.

(a) If MET purchases a group annuity contract from a life insurance company as an investment of funds received under this Contract, then an annuity will be issued in the name of the Beneficiary in conjunction with his or her status as a Beneficiary. For all state and federal tax purposes, the Beneficiary shall be considered the owner of any annuity contract so purchased.

142. *Id.*

143. *Id.* § 12(b) provides:

MET is hereby designated to act as the agent of the Purchaser and Beneficiary in conjunction with all aspects of the annuity. As agent, MET's duties shall include, but shall not be limited to, the duty to effectuate a direct transfer of the annuity proceeds upon maturity of the annuity necessary to fulfill obligations under this Contract.

144. *Id.* § 12(c) provides: "Upon maturity of any annuity, the proceeds of that annuity may be used to fulfill obligations of contracts under this Plan."

145. *Id.* § 12(d) provides: "The use of a group annuity contract as a means of investing funds received under the Contract will neither increase nor diminish the rights or obligations of any Person having an interest in this Contract."

146. While necessary to a finding of agency, control is not always sufficient. *See* Commissioner v. Bollinger, 485 U.S. 340, 346 (1988) (discussing National Carbide Corp. v. Commissioner, 336 U.S. 422 (1949)).

147. Restatement 2d of Agency (1958) (comment on subsection (1), ¶ b); *see also id.* §§ 14

of the principal to direct the agent has been clear.¹⁴⁸ But no beneficiary child can require MET, for example, to cash in his or her annuity and reinvest the proceeds in something else. And no beneficiary child can direct MET to cash in the annuity and give him or her the proceeds; the only bases for such a "termination" of the MET contract involve turning eighteen, dying, becoming disabled, or getting permission from the MET Board of Directors.¹⁴⁹

Outside the context of "agency" disputes, control has not always been a prerequisite to tax ownership, *provided* that the formal "owner" retained in fact a direct long-term financial stake in the ultimate market value of the asset. This "burdens and benefits of ownership test," sometimes known as the "upside potential/downside risk" test or the "beneficial ownership" test, has come to assume a central role in determining whether what is in form a lease will be respected for tax purposes.¹⁵⁰

(control by principal), 14B (agency and trust), 14C (agent or director), 14F (judicially appointed fiduciaries).

148. See *Bollinger*, 485 U.S. 340, 345, 349 (finding corporation to be agent of partnership where agency agreement specified that "the partnership would have sole control of and responsibility for the apartment complex"); *United States v. Raphan*, 759 F.2d 879, 881-82 (Fed. Cir. 1985) (agent had "no real interest in or duties or responsibilities in respect to the Property except to perform ministerial tasks at the written direction and instruction of Principal"); *Carver v. United States*, 412 F.2d 233, 240 (Ct. Cl. 1969) (agent holding title to property, which is "to be dealt with or conveyed upon the joint direction of said parties"); *Schlosberg v. United States*, 81-1 USTC ¶ 9272, at 86,677 (E.D. Va. 1981) (principal had "actual command" over the income and benefits of the property); *Ourisman v. Commissioner*, 82 T.C. 171, 186 (1984) (reviewed) (principals "continued to act as principals with respect to every aspect of the construction project"; agent's activities were "minimal").

Moreover, as these cases are careful to explain, this right of "control" has been exercised directly through an agreement of agency, not indirectly through stock ownership or voting control. See *National Carbide Corp. v. Commissioner*, 336 U.S. 422 (1949). See generally B. BITTKER & L. LOKKEN, *supra* note 139, at ¶ 6.2; Miller, *The Nominee Conundrum: The Live Dummy Is Dead, but the Dead Dummy Should Live!*, 34 TAX L. REV. 213 (1979).

It is unfortunate that many of these cases (usually involving corporate agents) have blended their discussion of "true agency" with a discussion of the issue presented in *Moline Properties, Inc. v. Commissioner*, 319 U.S. 436 (1943), whether the corporation is any more than a sham. Obviously, a nonsham corporation can still act as an agent for someone else.

Even outside the field of self-styled "agency" cases, control has been a significant issue. For examples dealing with the problem of "wraparound annuities," see Rev. Rul. 82-55, 1982-1 C.B. 12; Rev. Rul. 81-225, 1981-2 C.B. 12; Rev. Rul. 80-274, 1980-2 C.B. 27; see also *Christoffersen v. United States*, 749 F.2d 513 (8th Cir. 1984).

149. CONTRACT, *supra* note 71, § 7(a)(1)-(6).

150. The world of "true lease" cases is vast and arcane. For a representative introduction, see *Frank Lyon Co. v. United States*, 435 U.S. 561 (1978); *Helvering v. F. & R. Lazarus & Co.*, 308 U.S. 252 (1939); *Swift Dodge v. Commissioner*, 692 F.2d 651 (9th Cir. 1982); *Torres v. Commissioner*, 88 T.C. 702 (1987); *Cooper v. Commissioner*, 88 T.C. 84 (1987); *Rice's Toyota World v. Commissioner*, 81 T.C. 184 (1983), *affd. in part, revd. in part*, 752 F.2d 89 (4th Cir. 1985); Rev. Rul. 55-540, 1955-2 C.B. 39. In planning leveraged lease transactions, taxpayers have come to rely heavily on the true lease advance ruling "guidelines" published by the Internal Revenue Service. See Rev. Proc. 79-48, 1979-2 C.B. 529; Rev. Proc. 76-30, 1976-2 C.B. 647; Rev. Proc. 75-28, 1975-1 C.B. 752; Rev. Proc. 75-21, 1975-1 C.B. 715. For useful commentary, see Simonson, *Determining Tax Ownership of Leased Property*, 38 TAX LAWYER 1 (1984);

Once again, however, MET — not the beneficiary — is the “person” who has the relevant financial stake. Should the annuities pay MET more than it happens to owe any particular child by way of tuition or refund, MET does not have to pay the excess money to that child.¹⁵¹ Should MET go bankrupt, any annuity contracts held by MET would apparently enter into the pool of MET assets and be subject to the claims of general creditors. And should the child go bankrupt, there is no basis under which the child’s creditors may seize the annuity.

In sum, there is virtually no reason to believe that MET could escape taxation on earnings from any investments it might make in deferred annuities.

iii. The treatment of payments to and from MET. MET receives money from parents in early years; MET will pay benefits to children (or to colleges on children’s behalf) in later years. The actuaries assumed that MET will not have to recognize any income when it receives money from a parent.¹⁵² Moreover, they assumed that when MET subsequently makes payments under the contracts, it will be entitled to a deduction equal to the difference between the amount it received in selling the contract and the amount it must pay back.¹⁵³ Neither of those assumptions is necessarily implausible, standing alone. For reasons I shall articulate in this section, however, it is difficult to maintain them both at the same time.

The tax treatment of payments to MET from parents and from MET to children and colleges depends on how the MET contracts are characterized. Three possibilities suggest themselves. First, one might think of a MET contract as a contract for the sale of insurance, or higher education services, or credits: the parents pay their money early and receive the goods later. Second, one might think of a MET contract as a share of “stock”: parents make an equity investment in MET early, and their investment is liquidated later. Third, one might think of a MET contract as a “loan” from the parent to MET: MET

Wolfman, *The Supreme Court in the Lyon’s Den: A Failure of Judicial Process*, 66 CORNELL L. REV. 1075 (1981).

151. See MET Board Minutes, *supra* note 72, July 21, 1988, at 8 (comments of attorney Lynn Stevens Naoum) (“[T]he purchaser is . . . irrevocably appointing MET as the person intended to receive earnings in excess of tuition costs. The beneficiary does not receive the annuity proceeds, rather MET receives them and then transfers them directly to the university.”).

152. This assumption is consistent with the Private Letter Ruling MET received from the IRS, which states in part, “payments made under the contract . . . are excludable from the gross income of Trust.” Priv. Ltr. Rul. 88-25-027 (March 29, 1988).

153. 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67.

repays the loan later, with the amount of "interest" dependent on where the child goes to school.

Treating a MET contract as an insurance agreement, or a sale of some other service or good, would justify only one of the two actuarial assumptions. MET *would* be able to deduct its payments on those contracts. Unfortunately, it would not be able to deduct those payments until it makes them¹⁵⁴ and it would also have to *include* the amount it receives from selling the contracts in current income.¹⁵⁵

Similarly, treating a MET contract as an equity investment in MET — as stock — would also justify only one of the two actuarial assumptions. MET would not recognize any income when it sells the contracts.¹⁵⁶ Unfortunately, MET would not be able to deduct any portion of its payments to children or colleges under the contract. Such payments would merely be distributions "with respect to its stock."¹⁵⁷

The only characterization of a MET contract that is consistent with *both* actuarial assumptions is to treat a MET contract as a loan. Corporations that borrow money may exclude the loan proceeds from income. They may also deduct whatever interest they pay up to and including the final repayment of principal.¹⁵⁸ Thus, MET may be thinking of its contracts as long-term loans from the beneficiaries¹⁵⁹ that earn "interest" over time in amounts that depend upon whether and where the beneficiary goes to college.

154. Even assuming MET uses the accrual method of accounting, the "all events test" is not satisfied until one knows where the child is going to college.

155. See *Schlude v. Commissioner*, 372 U.S. 128 (1963); *American Automobile Assn. v. United States*, 367 U.S. 687 (1961); *Automobile Club of Mich. v. Commissioner*, 353 U.S. 180 (1957). Elective statutory exceptions exist for prepaid subscriptions to periodicals and for prepaid dues of certain membership organizations. I.R.C. §§ 455, 456 (1988). Other exceptions exist for long-term building, installation, construction, and certain manufacturing contracts, see Treas. Reg. § 1.451-3 (1989), for trading stamps, Treas. Reg. § 1.451-4 (1989), and for taxpayers who postpone recognizing receipts for financial accounting purposes, Treas. Reg. § 1.451-5 (1989). Obviously, none of these exceptions are available to MET.

If MET were an insurance company dealing in particular forms of insurance according to the rules of Subchapter L, it could mitigate some of the burdens of having to include premiums in income to the extent it could show that some of the "premiums" were "unearned," or that it had in fact "incurred" certain losses before they were paid. See I.R.C. §§ 832(b)(4),(b)(5) (1988). It appears unlikely, however, that MET's particular brand of insurance would satisfy those requirements. See *Maryland Savings-Share Ins. Corp. v. United States*, 644 F.2d 16 (Ct. Cl. 1981); Rev. Rul. 61-167, 1961-2 C.B. 130.

156. I.R.C. § 1032 (1988). One might stretch to characterize the payment as a mere contribution to MET's "capital," see I.R.C. § 118 (1988), but without much plausibility, since the "contributors" would have no other interest in the business association.

157. I.R.C. § 311 (1988).

158. I.R.C. § 163 (1988).

159. The "loan" would run from the beneficiary rather than the purchaser, since the purchaser is presumed to have made a completed gift to the beneficiary on the date the contract is purchased.

The courts and the IRS have a great deal of experience in deciding whether or not to characterize a given transaction as a loan. Unfortunately, they have not been able to offer hard and fast rules, largely because loans have much in common with both long-term contracts and equity investments. All three transactions allow one party to use the other party's money over time and (in one way or another) require the user of the money to compensate the supplier for that use.¹⁶⁰

By far the greatest source of case law on the nature of indebtedness has come in the effort to distinguish debt from shareholder equity. Since both corporate dividends and corporate interest payments create income for an individual recipient, and since interest payments but not dividend payments give rise to deductions for the corporation, corporate taxpayers often like to have their obligations to investors characterized as indebtedness for tax purposes. Unfortunately, the abundance of cases has brought confusion rather than clarity, and most commentators have given up trying to cut a path through the thicket.¹⁶¹ In 1969, Congress asked the Treasury Department to promulgate regulations.¹⁶² In 1980, the Treasury Department offered its best effort, but after minor modifications and several delays in the effective date, the new regulations were withdrawn in 1983.¹⁶³

160. Thus, the presence in the transaction of "compensation for the use or forbearance of money" — the most commonly quoted definition of "interest" deductible under I.R.C. § 163 (1988), see, e.g., *Commissioner v. National Alfalfa Dehydrating & Milling Co.*, 417 U.S. 134, 145 (1974); *United States v. Midland-Ross Corp.*, 381 U.S. 54, 57 (1965); *Deputy v. Du Pont*, 308 U.S. 488, 498 (1940) — is not enough to demonstrate that the transaction is a loan.

161. See, e.g., Goldstein, *Corporate Indebtedness to Shareholders: "Thin Capitalization" and Related Problems*, 16 TAX L. REV. 1 (1960); Kaplan & Yoder, *New Variations on an Old Enigma: The Treasury Department's Debt-Equity Regulations*, 1981 U. ILL. L. REV. 567; Madison, *The Deductibility of "Interest" on Hybrid Securities*, 39 TAX LAW. 465 (1986); Plumb, *The Federal Income Tax Significance of Corporate Debt: A Critical Analysis and a Proposal*, 26 TAX L. REV. 369 (1971); Pusker, *Debt-Equity Guidelines Subsequent to Withdrawal of Proposed Regulations*, 67 TAXES, 88 (1989); Robertson & Burckel, *When Is Debt Synonymous With Equity? Recent Developments in the Classification of Hybrid Securities*, 66 TAXES, 784 (1988); Stone & McGeehan, *Distinguishing Corporate Debt from Stock Under Section 385*, 36 TAX L. REV. 341 (1981); Stone, *Debt-Equity Distinctions in the Tax Treatment of the Corporation and Its Shareholders*, 42 TUL. L. REV. 251 (1968); Comment, *Hybrid Instruments and the Debt-Equity Distinction in Corporate Taxation*, 52 U. CHI. L. REV. 118 (1985).

The courts' difficulties were such that for a time it became something of a sport to count the number of distinct "factors" emphasized in different cases. Professor Plumb came up with 32. Plumb, *supra* at 411-12. Holzman, *The Interest-Dividend Guidelines*, 47 TAXES 4 (1969), gives 38.

162. Tax Reform Act of 1969, Pub. L. No. 91-172, § 415, 83 Stat. 487 (codified as amended at I.R.C. § 385 (1988)).

163. See *Treatment of Certain Interests in Corporations as Stock or Indebtedness*, 45 Fed. Reg. 18,957 (1980) (to be codified at 26 C.F.R., Pt. I) (proposed March 24, 1980); T.D. 7747, 1981-1 C.B. 141; T.D. 7774, 1981-1 C.B. 168; T.D. 7801, 1982-1 C.B. 60; Notice of Proposed Rulemaking, 47 Fed. Reg. 164 (1982) (proposed Jan. 2, 1982); T.D. 7822, 1982-2 C.B. 84; Notice of Proposed Withdrawal of a Treasury Decision, 48 Fed. Reg. 31,053 (1983) (proposed July 6, 1983); T.D. 7920, 1983-2 C.B. 69.

The murky state of the law, and the shakiness of its connection to matters of economic substance, make it difficult to predict with certainty how a MET contract will ultimately be characterized. Yet, of the various possibilities, it seems most unlikely that MET contracts will ultimately be treated as loans.¹⁶⁴

First, nothing in the contract suggests that it is providing benefits as a payment to compensate for the use of the beneficiary's "principal" (*i.e.*, the contract purchase price) over time. Rather, the MET contract describes itself as a contract for the provision of "Educational Benefits" — an agreement to pay for credit hours.¹⁶⁵ As one important commentator has noted, "[a]lthough the label is not controlling, a failure to endow the instrument with enough indicia of debt may be a threshold barrier for the taxpayer who seeks an interest deduction."¹⁶⁶

Second, unlike the usual holder of a note or some other evidence of indebtedness, a MET contract beneficiary may not sell those credit hours. MET benefits may be transferred to someone else only under certain narrowly defined circumstances.¹⁶⁷

Third, the value of MET benefits is contingent — it depends, among other things, upon the beneficiary's choice of schools and the school's tuition level in that year.¹⁶⁸ Indeed, if one accepts MET's own assumptions about the future, it will be giving a child who was in the tenth grade in 1988 and who chooses to attend Northern Michigan University "interest" at an annual rate of 0.9%, while giving "interest" of 15.5% per year to her classmate who attends the University of Michigan at Ann Arbor.¹⁶⁹ And if tuition at Northern Michigan University were to go up more slowly than the actuaries predicted, or if

164. It should not go unnoticed that MET itself argued to the IRS in its first ruling request that a MET contract is not a loan, but rather a "bona fide payment for services to be rendered." Letter from Burton Leland and Robert A. Bowman to Thomas J. Lyden, *supra* note 115, at 24.

165. CONTRACT, *supra* note 71, § 2.

166. 3 B. BITTKER, FEDERAL TAXATION OF INCOME, ESTATES AND GIFTS p 91.10.2 (1981); *see also* Goldstein, *supra* note 161, at 13; Madison, *supra* note 161, at 473-74. For cases looking at such factors, see *Slappey Drive Indus. Park v. United States*, 561 F.2d 572, 582 (5th Cir. 1977); *Richmond, F. & P. R.R. v. Commissioner*, 528 F.2d 917 (4th Cir. 1975); *Milwaukee & Suburban Transp. Corp. v. Commissioner*, 283 F.2d 279, 283 (7th Cir. 1960); *United States v. South Ga. Ry.*, 107 F.2d 3, 5 (5th Cir. 1939); *Scriptomatic, Inc. v. United States*, 397 F. Supp. 753, 758-60 (E.D. Pa. 1975); *Kentucky River Coal Corp. v. Lucas*, 51 F.2d 586, 587 (W.D. Ky. 1931); *Wynnefield Heights, Inc. v. Commissioner*, 25 T.C.M. (CCH) 953, 959 (1966).

167. CONTRACT, *supra* note 71, §§ 6, 13, 16(b); *see also supra* text accompanying note 85.

168. Most cases that emphasize the "contingency" factor have involved contingencies concerning the status of the *debtor*, not of the creditor. *E.g.*, *Fox v. Commissioner*, 80 T.C. 972, 1018-23 (1983); *Cuyuna Realty Co. v. United States*, 382 F.2d 298, 300 (Ct. Cl. 1967); *Guardian Inv. Corp. v. Phinney*, 253 F.2d 326, 331 (5th Cir. 1958); *United States v. Virgin*, 230 F.2d 880, 882 (5th Cir. 1956). For a case refusing to treat an obligation as "debt" because of contingencies relating to the creditor, *see Garvey, Inc. v. United States*, 726 F.2d 1569, 1574 (Fed. Cir. 1984), *affg.*, 1 Cl. Ct. 108, 126-29 (1983).

169. To calculate these numbers, one needs to know that in 1988 tuition at the University of

the child attended a year or two of community college before transferring to the university, the "creditor" could well receive *less* than a full repayment of "principal." It is difficult to imagine a theory that would characterize such arrangements as loans without also sweeping in most contracts for term insurance.

Finally, the value of MET benefits is contingent upon whether MET itself remains solvent throughout the intervening years. The contract provides that an annual actuarial review will be conducted "[i]n order to protect Purchasers and Beneficiaries."¹⁷⁰ If the actuarial review finds MET to be actuarially unsound and if that situation cannot be rectified, then MET must liquidate and an individual designated by the contract Purchaser shall receive a pro rata share of MET assets.¹⁷¹ Assuming MET had been operated in an actuarially sound manner up until that time, the liquidating distribution would reflect the Purchaser's initial contribution plus earnings accumulated at the Trust's after-tax income rate.

In sum, a MET contract is a hybrid. It is in part an equity investment in a state-sponsored pooled-investment organization. (In that regard it resembles in some ways an unregulated mutual fund that fails to qualify for the favored tax treatment given designated Regulated Investment Companies¹⁷² and is therefore taxed as if its shares are stock in a traditional corporation.) At the same time, a MET contract is also in form an insurance policy. As long as MET remains actuarially sound, beneficiaries appear, on the surface, to have shifted to MET the risk that they will attend a school whose tuition is unusually high or has increased at an extraordinarily high rate.¹⁷³ And, to be sure, there remains some chance that the IRS could be persuaded that MET contracts are a fancy new breed of variable-rate loan.

What is significant about the MET Board's assumption is that it is the most daring of the three options. If that assumption is wrong, the Trust is in grave financial danger. The cost of error varies, depending upon whether MET's position with respect to deferred annuities prevails. But suppose, as is almost certainly the case, that MET's assumption regarding deferred annuities does not prevail, and that MET makes the most sensible responsive adjustment — it invests so as to

Michigan was \$3178 per year, tuition at Northern Michigan University was \$1729 per year, and the MET premium for a 10th grader was \$9152. *See supra*, note 29.

170. CONTRACT, *supra* note 71, § 8(c).

171. *Id.* § 8, Item 16.

172. I.R.C. §§ 851 (1988).

173. The extent to which the risk of high tuition inflation has in *substance* been shifted is open to serious debate. *See supra* text accompanying note 46.

reap the higher returns available from a diversified portfolio. Then, even if all of MET's other assumptions are correct, MET's assumption that the contract will be treated as a loan is an assumption that projects MET to have 25% more money after taxes than it will if the contract is treated as a sales contract or as stock.

iv. The road not taken: might MET be a trust? A full analysis of the likely tax treatment of MET requires more than a simple appraisal of the strength of the assumptions made by the actuaries. For there is one line of argument that was not relied upon by MET's actuaries but that has a respectable chance of success and would mitigate some of the costs of other errors. That line of argument would have MET be taxed as a trust and not as a corporation. Ultimately, I do not find the argument persuasive. But the possibility of success is sufficiently high, and the substantive tax issue is sufficiently interesting, that I shall devote this section to spelling it out in detail.

MET is, after all, the Michigan Education *Trust*. Why would MET not be taxed as a trust? A trust faces a lower marginal tax rate than a "business association" taxed as a corporation.¹⁷⁴ Moreover, whereas a business association and its associate must endure what is usually called "double taxation," a trust and its beneficiaries are spared most of those pains.¹⁷⁵

The primary rules for determining how a particular organization should be classified for tax purposes were first articulated by the Supreme Court. In a series of 1935 opinions, the Court articulated a set of tests for determining when an organization should be deemed a business association, taxable as a corporation, and when not.¹⁷⁶ The Treasury Department subsequently codified those tests in a set of regulations that have come to take on something of a life of their own.¹⁷⁷

If one had to decide whether MET looked more like a partnership

174. The highest marginal rate faced by a trust is presently 28%. I.R.C. § 1(e) (1988). The highest marginal rate faced by a corporation is presently 34%. I.R.C. § 11 (1988). The term "corporation" is defined to include "associations" by I.R.C. § 7701(a)(3) (1988).

175. A corporation is not permitted a deduction for dividends paid, and individual shareholders are taxed on the full amount of dividends they receive. See I.R.C. § 61(a)(7) (1988); cf. I.R.C. § 243 (1988) (corporate shareholders of corporations taxed on less than full amount of dividends).

A trust is given a deduction for the lesser of currently required distributions and distributable net income, see I.R.C. §§ 651, 661 (1988), and beneficiaries of a "complex trust" are given the benefit of taxes previously paid by the trust under the so-called "throwback rule" of I.R.C. § 666 (1988).

176. *Helvering v. Coleman-Gilbert Assocs.*, 296 U.S. 369 (1935); *Helvering v. Combs*, 296 U.S. 365 (1935); *Swanson v. Commissioner*, 296 U.S. 362 (1935); *Morrissey v. Commissioner*, 296 U.S. 344 (1935). The *Morrissey* opinion is the longest and is often cited alone. See also *Hecht v. Malley*, 265 U.S. 144 (1924).

177. Treas. Reg. § 301.7701-2 (1983).

or a corporation, the task would be simple. One would note that MET has the “corporate characteristics” of continuous life,¹⁷⁸ centralized management,¹⁷⁹ and limited liability for its investors,¹⁸⁰ but lacks the corporate characteristic of “free transferability of interests.”¹⁸¹ Since it has three out of the four characteristics deemed typical of corporations, it would warrant taxation as a corporation.¹⁸²

Trusts, however, share those characteristics. Accordingly, the regulations require that the inquiry turn on two other characteristics — the presence of “associates” and of “an objective to carry on business and divide the gains therefrom.”¹⁸³ If both features are present, the organization will be taxed as a corporation; if either is missing, it will be taxed as a trust.¹⁸⁴

Is MET “carrying on business”? The definitive opinion on the subject of whether an organization that does nothing but manage passive investments should be characterized as “carrying on business” was rendered by Learned Hand in 1941.¹⁸⁵ Hand concluded that, if the trustee of such an organization is empowered only to protect or conserve trust property, it should not be seen as carrying on business; if, however, the trustee has the power “to vary the existing investments of all [beneficiaries] at will, for as long as any new money [comes] in, and in this way to take advantage of market variations to improve the investments even of the first investors,” it should be treated as carrying on business.¹⁸⁶ Since MET has the authority — indeed, the mission — to change its investments in order to take advantage of market variations so that all cohorts may benefit simultaneously, it easily satisfies the “carrying-on-business” test.

178. See Treas. Reg. § 301.7701-2(b).

179. See Treas. Reg. § 301.7701-2(c).

180. See Treas. Reg. § 301.7701-2(d).

181. See Treas. Reg. § 301.7701-2(e).

182. See Treas. Reg. § 301.7701-2(a).

183. Treas. Reg. § 301.7701-2(a)(2).

184. Another provision of the regulations might arguably be read as subordinating the “associates” question to the “carrying-on-business” question. It reads:

Generally speaking, an arrangement will be treated as a trust . . . if it can be shown that the purpose of the arrangement is to vest in trustees responsibility for the protection and conservation of property for beneficiaries who cannot share in the discharge of this responsibility and, therefore, are not associates in a joint enterprise for the conduct of business for profit. Treas. Reg. § 301.7701-4(a) (1986). The Tax Court, at least, has declined to read the regulations that way, however, and has continued to treat the questions as separate. See *infra* text accompanying notes 187-97.

185. *Commissioner v. North Am. Bond Trust*, 122 F.2d 545 (2d Cir. 1941).

186. 122 F.2d at 546; *cf.* *Commissioner v. Chase Natl. Bank*, 122 F.2d 540 (2d Cir. 1941) (no power to vary investments, so taxed as a trust); see also *Continental Bank & Trust Co. v. United States*, 19 F. Supp. 15 (S.D.N.Y. 1937); Rev. Rul. 86-92, 1986-2 C.B. 214; Rev. Rul. 78-149, 1978-1 C.B. 448; Rev. Rul. 75-192, 1975-1 C.B. 384.

As for whether MET's beneficiaries should be characterized as "associates," the fact that the young children were not participants in MET's creation does not preclude them from being associates in its enterprise.¹⁸⁷ And at least in one sense, they are all "associated" with one another in the MET venture. It thus seems logical to conclude, as the actuarial assumptions presume, that MET will be taxed as an association.

Two recent Tax Court decisions, however, offer MET a line of argument that it has not yet pressed. Indeed, it is an argument that may be more promising than those MET *has* chosen to rely on. These cases hold that where beneficiaries neither participate in the creation of the trust nor affirmatively enter into the enterprise, "some further voluntary activity may be necessary on their part to satisfy the 'associates' requirement."¹⁸⁸

In *Elm Street Realty Trust v. Commissioner*,¹⁸⁹ the court concluded that under such circumstances whether a true association exists depends upon whether the beneficiaries have either (a) freely transferable interests, or (b) some ability to influence or otherwise participate in the trust's activities.¹⁹⁰ Two individuals transferred real estate to a trust and gave the trustees substantial authority to run the trust as a business enterprise.¹⁹¹ The individuals (the original beneficiaries) promptly gave their beneficial interests to members of their families, who had little authority to transfer their interests or influence the trustees' management of the property. The court rebuffed the IRS' efforts to have the trust taxed as a business association.

More recently, in *Estate of Bedell Trust v. Commissioner*,¹⁹² the court had to struggle with a rather complicated testamentary trust that the IRS apparently had chosen as a test case.¹⁹³ The court characterized the testator as a "strong-willed person accustomed to being the dominant figure in his family and having his own way, who was emphatic upon seeing to it that only his blood descendants should ben-

187. See *Swanson*, 296 U.S. at 364; *Roberts-Solomon Trust Estate v. Commissioner*, 34 B.T.A. 723 (1936), *aff'd.*, 89 F.2d 569 (5th Cir. 1937).

188. *Elm St. Realty Trust v. Commissioner*, 76 T.C. 803, 814 (1981); *accord* *Estate of Bedell, Trust v. Commissioner*, 86 T.C. 1207 (1986); see also *United States v. Davidson*, 115 F.2d 799, 801 (6th Cir. 1940); *Curt Teich Trust No. One v. Commissioner*, 25 T.C. 884 (1956); *Living Funded Trust of Lyman v. Commissioner*, 36 B.T.A. 161 (1937).

189. 76 T.C. 803 (1981), *acq.*, 1981-2 C.B. 1.

190. 76 T.C. at 813-18.

191. The authority was not, in fact, ever exercised. 76 T.C. at 810.

192. 86 T.C. 1207 (1986), *acq. in result*, 1987-2 C.B. 1.

193. See the court's recitation of facts, 86 T.C. at 1208-14, and criticism of the IRS, 86 T.C. at 1222, for its apparent selection of the case as a test case.

efit from his estate."¹⁹⁴ Finding the beneficiaries' interests nontransferable, the court appeared to go beyond *Elm Street Realty* to find the fact of nontransferability alone sufficient to preclude a finding that the beneficiaries were "associates."¹⁹⁵ The court went on, however, to emphasize the additional fact that the beneficiaries did not control the management of trust assets.¹⁹⁶

MET's beneficiaries did not create MET, did not purchase their own contracts, cannot transfer their interests except under very limited circumstances, and have no authority to influence the behavior of the MET Board of Directors. Thus, to the extent *Bedell* and *Elm Street Realty* are good law, MET might qualify as a trust, since it lacks "associates."¹⁹⁷ Indeed, MET's beneficiaries' powers are even less significant than those held by the beneficiaries in *Bedell*.¹⁹⁸

One can legitimately question the wisdom of the *Bedell-Elm Street Realty* line of authority. It might open up opportunities to escape the corporate double tax, especially in the context of family businesses.¹⁹⁹ Moreover, one may well find MET's particular form of publicly marketed risk pooling and investment management to be farther down the path from trust to corporation than either of the organizations at issue in *Bedell* and *Elm Street Realty*. But given that the IRS now appears to be accepting that line of cases,²⁰⁰ one might also wonder why MET did not press the IRS for a ruling that it should be taxed as a trust.²⁰¹

194. 86 T.C. at 1219.

195. See 86 T.C. at 1220.

196. 86 T.C. at 1220-21.

197. In *Bedell Trust*, the Commissioner, relying on Treas. Reg. § 301.7701-4(b) (defining a trust as an arrangement to protect or conserve property), submitted the argument that in the case of investment trusts "associates" are not required. The court rejected this proposed construction of § 301.7701-4(b), observing that it would be inconsistent with Treas. Reg. § 301.7701-2(a) (setting forth "associates" requirement). 86 T.C. at 1221. The court indicated, however, that if the Treasury Department wished to, it could amend the regulations to make the point clear. 86 T.C. at 1221 n.9.

198. See A.O.D. CC-1987-001 (July 26, 1988) (noting that the *Bedell* beneficiaries had some authority to modify or terminate the trust).

199. See, e.g., Priv. Ltr. Rul. 88-42-043 (July 26, 1988) (IRS approved "trust" status for a marital accumulation trust in which the beneficiary had the right to replace the trustee at any time (she could even appoint herself trustee) and the trustee had the right to liquidate the trust at any time).

200. The IRS acquiesced in *Elm St. Realty*, 76 T.C. 803, see 1981-2 C.B. 1, and acquiesced in the result in *Bedell*, 86 T.C. 1207, see 1987-2 C.B. 1. See also Priv. Ltr. Rul., 88-42-043 (July 26, 1988); A.O.D. CC-1987-001, 88-42-043 (July 26, 1988).

201. MET's initial ruling request never raised the possibility. Accordingly, the private letter ruling issued in response does not address the possibility directly. The ruling states, without elaboration, that "payments made under the contract . . . are excludable from the gross income of Trust." Priv. Ltr. Rul. 88-25-027 (Mar. 29, 1988). While that is consistent with viewing MET as a corporation and MET Contracts as stock, it is equally consistent with viewing MET as a trust, since the payments would merely be contributions to the trust on behalf of the beneficiary.

On the other hand, the ruling goes on to say that the beneficiary will be taxed on the differ-

If MET could persuade the IRS to tax it as a trust, what would the consequences be? Once again, the answer is not entirely clear. Section 661(a) of the Code allows a trust to take a deduction for any distributions properly paid to beneficiaries, to the extent that such distributions do not exceed "the distributable net income" of the trust. Since in any given year MET can be expected to make distributions to only one eighteenth (5.5%) of its beneficiaries, but is expected to have gross earnings of 10% of its asset base each year, this approach seems to offer the possibility of excludable contributions and deductible distributions.²⁰²

One remaining obstacle to such treatment (beyond the hurdle of being classified as a trust to begin with) lies in the "separate share" rule of section 663(c). Where different beneficiaries have "substantially separate and independent shares" in the trust, "distributable net income" is calculated share by share rather than in the aggregate.²⁰³ In MET's case, treating each separately priced cohort as a separate share would effectively make distributions deductible only to the extent of the very last year of MET earnings on the beneficiary's cohort's contribution.²⁰⁴

In determining whether the "separate-share" rule applies, the issue is whether the distributions "are to be made in substantially the same manner as if separate trusts had been created."²⁰⁵ A share may be considered as separate even though two or more beneficiaries have indeterminate interests in one share which is separate and independent from another share.²⁰⁶ Even if a trust has the power to give one class of beneficiaries more than is due according to its share, separate share treatment may still apply "if the possibility of exercise of the power is remote."²⁰⁷ In MET's case, it would be necessary to determine whether the possibility that one cohort's contributions might not cover its eventual withdrawals is "remote." If MET could demonstrate

ence between the value of the tuition provided by MET and his or her "basis" in the Contract. *Id.* That language is not consistent with viewing MET as a trust. See I.R.C. §§ 662-63, 665-67 (1988).

202. Unfortunately for the beneficiaries, that would make *all* of the distribution includable in their income, not merely the portion identified in the private letter ruling. See I.R.C. § 662 (1988).

203. Treas. Reg. § 1.663 (c)-1, (c)-2, (c)-3, (c)-4. Separate share treatment is not a matter of taxpayer election. Treas. Reg. § 1.663(c)-1(d).

204. Even though that treatment would thus be of relatively little value to MET, it would be of great value to the beneficiary, who would then be able to take advantage of the "throwback rules" of I.R.C. §§ 665-66 (1988).

205. Treas. Reg. § 1.663(c)-3(a) (as amended, 1979).

206. Treas. Reg. § 1.663(c)-3(c) (as amended, 1979).

207. Treas. Reg. § 1.663(c)-3(d) (as amended, 1979).

otherwise, it could escape separate-share treatment.²⁰⁸

On balance, it seems unlikely that MET could persuade the IRS both that it should be treated as a trust and that the separate-share rule should not apply. Nonetheless, it is at least something of a puzzle that MET has never pressed the argument with the IRS. I shall explore the more general puzzle of how MET chose to make its tax assumptions later, in section III.B.

v. *The effects of possible future changes in the tax law.* In setting the price for a program that is projected to extend over eighteen years into the future, a full actuarial analysis must consider the possibilities of changes in the tax laws. Two possibilities in particular warrant consideration.

First, as noted above, the actuaries assumed that MET is an association taxable as a corporation at a marginal rate of 34%. That is, in fact, the current prevailing rate for corporations. The history of tax rates suggests that it is unlikely to remain the current rate indefinitely.²⁰⁹ Moreover, given the current budget deficit, it is perhaps more likely that the rates will go up than down. Nonetheless, the strength of anti-tax-increase political forces is sufficient to make the point entirely speculative. I would not fault the Board unduly for failing to add in any cushion of protection on account of the possibility.

An opposite form of change in the tax laws also warrants consideration. That is, it is not beyond the realm of possibility that Congress would amend the Code to exempt MET and programs like it from federal income taxation. That would clearly be of substantial benefit to MET, and at one point during the consideration of the Technical and Miscellaneous Revenue Act of 1988,²¹⁰ Senator Donald Riegle of Michigan introduced such an amendment in Congress.²¹¹

Unfortunately for MET, Congress rejected Senator Riegle's proposed amendment and instead created a special tax break for federal Educational Savings Bonds.²¹² Given that history, it would unques-

208. Cf. Rev. Rul. 74-299, 1974-1 C.B. 154 (applying separate-share rule to limit deductions of nonqualified employees' trust, where trust maintained separate accounts for each participating employee).

209. For taxable years beginning during 1964, the highest marginal rate was 50%. I.R.C. § 11 (1958), as amended by Pub. L. No. 88-272, § 121, 78 Stat. 19, 25 (1964). For taxable years beginning from 1965 through 1978, the highest marginal rate was 48%. I.R.C. § 11 (1976), prior to amendment by Pub. L. No. 95-600, § 301(a), 92 Stat. 2763, 2820 (1978). For taxable years beginning from 1979 through June 30, 1987, the highest marginal rate was 46%. I.R.C. § 11 (1982 & Supp. III 1985), prior to amendment by Pub. L. No. 99-514, § 601(a), 100 Stat. 2085, 2249 (1986). Only for taxable years beginning on or after July 1, 1987, has the highest marginal rate been 34%. Pub. L. 99-514, § 601(b)(1), 100 Stat. 2085, 2249 (1986).

210. Pub. L. No. 100-647, 102 Stat. 3342 (1988).

211. 134 CONG. REC. S15492 (1988).

212. I.R.C. § 135 (West Supp. 1989); see also *supra* note 14.

tionably be imprudent for MET to set prices now in reliance on the possibility of future federal legislative tax relief.

vi. Summary: Quantifying MET's tax exposure. The different tax assumptions are interrelated. Thus, the cost of a mistake in any one tax assumption depends upon how many other tax assumptions are coming unglued at the same time. I have assembled a spreadsheet model of MET's financial structure that allows one to calculate the effects of any of the various permutations and combinations of tax mistakes.

Absent a change in the tax laws, MET will not prevail with an argument that it will not be taxed on investments in deferred annuities. If MET were to forge ahead and make the investments anyway, *and if* it were somehow to prevail on the other tax issues, it would face an overall shortfall of 7.4%. That shortfall would reflect undercharges ranging from 17.5% for newborns down to 1.2% for tenth graders.

But despite the assumptions on which the 1988 prices were based, MET has not yet purchased deferred annuities. And given the bleak prognosis on the tax issue, it obviously should instead invest in a higher-yielding diversified stock-bond portfolio.²¹³ If it were to do so, and *if* it were somehow to prevail on the other tax issues, it would not face any overall loss if all its other assumptions (tax and otherwise) were to hold up. Undercharges to the newborns would actually be *offset* by overcharges to the older children.

Thus, if MET refrains from an ill-advised annuity purchase, the key tax issue will become its ability to exclude receipts from the sale of contracts while taking a deduction for its payment of benefits. As I explained earlier, the most likely outcome here is that MET will not prevail — that the contracts will be treated as sales contracts or as stock.²¹⁴ The cost of such an outcome would be extremely high. For a child who entered the tenth grade in the fall of 1988, it would mean that MET should have charged 4% more than it did. For a newborn

213. I assume that the portfolio is split 50% common stocks and 50% long-term corporate bonds, *see supra* note 107, so as to yield a pre-tax rate of return of 10%. I assume further that 25% of that overall yield takes the form of dividends for which MET is entitled to a 70% deduction pursuant to I.R.C. § 243.

214. Were it not for the fact that the IRS has already ruled that MET will not be taxed on its receipts from the initial sale of contracts, *see* Priv. L. Rul. 88-25-027 (Mar. 29, 1988), I might have thought that the most likely combination would have MET taxed as if it were entering into typical sales contracts. (The IRS has the authority to revoke private letter rulings retroactively, but does so only under unusual circumstances. *See* Rev. Proc. 89-1 § 16.05, 1989-1 I.R.B. 8, 20.)

The cost of this treatment would be precisely the same as if the MET contract is treated as stock. Under the sorts of simplifying assumptions made to do these calculations, inclusion followed by a full deduction has the same present-value cost as exclusion followed by no deduction.

in the fall of 1988, it would mean that MET should have charged 43% more! Overall, given the actual distribution of 1988 entrants, it would mean that MET should have collected 25.4% more in fees than it actually did.

c. The revenues subtotal. In sum, there are fewer factors to consider on the revenues side of the balance sheet than there are on the cost side. The only complexity derives from a single black box known as "tax considerations." Moreover, as we have seen, some aggressive actuarial assumptions were lodged in that box as well. Because of those aggressive tax assumptions, revenues were most likely overestimated by about 25.4%.

3. *The Grand Total: Matching Costs and Revenues*

The interactions among the various assumptions are complex indeed. Ultimately, the question is not whether any individual assumption is sound, but whether the combination of assumptions is best characterized as daring or conservative. For a little daring in one area may well be counteracted by an abundance of caution in another.

To provide an overall assessment of MET, it is helpful to compare the actuaries' assumptions with an alternative package of assumptions, one that I would characterize as more cautious and more realistic. In tabular form, the comparison looks like this:

TABLE 2

<u>Issue</u>	<u>MET</u>	<u>Lehman</u>	<u>Difference</u>
1. Refunds for Out-of-Staters (23% low)	No use	13.0% use	- 3.0%
2. Refunds for Private In-Staters (16% low)	No use	25.0% use	- 4.1%
3. Refunds for No college or 2-year college (37% low)	No use	No use	0%

4. Adverse Selection Among Michigan Schools at Zip Code Level	3.0%	3.4%	0.4%
5. Moral Hazard and Adverse Selection Below Zip Code Level	None	5.0%	5.0%
6. Weighted Average Tuition Inflation	7.3%	8.7%	newborn 19.2% 10th grader 6.4% avg. 12.37%
7. Pre-Tax Return	10.0%	10.0%	0%
8. Tax Treatment	various	various	newborn 43.1% 10th grader 4.19% avg. 25.4%

When one combines these features,²¹⁵ one reaches the somewhat disturbing conclusion that, if MET had made more appropriate tax and actuarial assumptions, it would have collected almost 50% more from the program's participants than it did — over 100 million dollars more.²¹⁶ Indeed, even under the most optimistic tax assumptions, MET should have collected 11% more during 1988 than it did, over 20 million dollars more.

Fifty percent is a big number. But it ought to square with one's intuition about the program. MET sold a cheap package. An entering freshman in the fall of 1988 was paying, on average, 27% more for a college education than MET was charging the parents of a newborn. MET was then assuming that it, as a taxable entity, would take the money it acquired, invest it in market instruments that are generally available at rates that do not appear astonishingly high, and would then pay out whatever tuition and fees are prevailing when the beneficiary starts college.

MET was thus saying that a parent with two children, one entering college in 1988 and one newly born in 1988, needed to set aside *fewer* dollars to pay for the newborn than it did to pay for the older child. It was saying that, in present-value terms, the newborn's education

215. The correct way to combine the effects of independent percentage changes PCT_1 , PCT_2 , etc., is to multiply $(1 + PCT_1) \times (1 + PCT_2) \times \dots$ and so on. See *supra* note 27. Unfortunately, however, in this case the percentage changes PCT_1 , PCT_2 , etc., are not entirely independent. In order to calculate the combined effects shown in the text, one must develop a simulation model.

216. The precise number is 45.9%. The extra charges would not, of course, have been distributed uniformly. If MET had used my assumptions, its charges for 10th-graders would have been only 8.2% higher (\$9,903) but its charges for newborns would have been 80.7% higher (\$12,206). This pattern — higher charges for younger children — is consistent with an assumption that after-tax earnings do not keep up with tuition inflation, the clear pattern of the past 20 years.

would be *less* expensive than the eighteen-year-old's. MET could justify such an implicit statement only by making some rather surprising tax assumptions and by assuming that tuition inflation will not be as bad in the future as it has been in the past.²¹⁷ But if MET was really justified in making such working assumptions, one must surely wonder whether there was a genuine need for the program at all.

C. *Actuarial Soundness Revisited — Year-to-Year Approaches Reconsidered*

If future conditions are better than they have been, then MET could be solvent on a cohort-by-cohort basis. Daring assumptions sometimes pan out. But as I emphasized in section II.A, even if those assumptions fail, MET may remain solvent on a year-by-year basis. If MET attracts additional revenues each year in an amount equal to that year's expenditures, it can conceivably go on forever.²¹⁸ The early years of the program, moreover, are giving MET a sizable kitty that can make up for some shortfalls in future years. More importantly, that kitty can provide an interval during which the actuaries may refine their assumptions so that future cohorts really pay their own way.

To be sure, MET cannot publicly declare itself to be solvent only from a year-by-year perspective. Where the state neither puts its full faith and credit behind a program nor has the power to force new people to participate, a pay-as-you-go program is nothing but a chain letter. Indeed, if street-corner conversation about the Social Security program is any evidence, people are skeptical of the solvency of a pay-as-you-go program even when the government uses the taxing power to force people in.

Nonetheless, in some ways a year-by-year perspective is the only perspective that the public can verify. A cohort-by-cohort perspective necessarily requires one to make actuarial assumptions, and by making appropriately optimistic assumptions, a measure of "solvency" can be maintained almost indefinitely. And if the state of Michigan were to put its full faith and credit (that is to say, the full resources of its

217. There is an alternative way in which MET could have justified such an implicit statement — it could have assumed that it could earn a higher rate of return before taxes than a well-managed investment portfolio available in the private sector. As we have seen, however, that was not MET's assumption. See *supra* section II.B.1.e. And if one restricts oneself to the same general rate of return that one sees in the private sector, one must find a way to escape the historical reality reflected in Figure 4, *supra*.

218. Of course, if MET continues to sell contracts for less than the current prevailing cost of tuition, it would have to sell more and more contracts every year to maintain that sort of equilibrium.

taxpayers) behind such a program, investors would undoubtedly be in even more abundant supply.

How long an interval does MET have in which to adopt a more stable pricing policy? I would expect three to five years. The ages of the initial participants are distributed as follows:

TABLE 3

<u>Year of Expected Matriculation</u>	<u>% of MET Beneficiaries</u>
1989	0.2%
1990	0.4%
1991	2.5%
1992	3.2%
1993	4.3%
1994	4.7%
1995	5.6%
1996	5.7%
1997	6.3%
1998	6.5%
1999	6.9%
2000	7.7%
2001	7.3%
2002	8.6%
2003	7.9%
2004	8.0%
2005	8.1%
2006	6.0%

Only about 15% of the beneficiaries of the 1988 wave of MET contracts will be entering college before 1995. During that period, MET's coffers will inevitably swell. If during that time MET moves to a position where it can maintain long-term year-to-year stability, it is possible that few will notice whether the 1988 wave of entrants in fact withdraws substantially more in benefits than its individual contributions produce.

This brings us to an important observation. Not all actuarial assumptions are created equal. Some are more demonstrably incorrect than others. For example, MET's tax assumptions are either right or wrong. Assuming MET is audited two years after it files a return for the taxable year in which it first buys an annuity or attempts to deduct a payment on a contract, it will begin to debate those propositions with the IRS in the spring of 1992 and will know what position the IRS will insist upon by the end of that year. If the position is unfavorable to MET, it will no longer be possible for the actuaries to rely on

the tax assumptions. The effect on MET's solvency would be quick and catastrophic.

The other actuarial assumptions, in contrast, will not be demonstrated correct or incorrect at a single moment in time; if they prove incorrect, they shall do so slowly. The big nontax assumptions — tuition inflation and investment return — are always open to reasonable debate. Therefore, what an outsider might call a pay-as-you-go system can be described as an actuarially sound cohort-by-cohort system, as long as one is willing to make aggressive actuarial assumptions. MET could go on for many years in that posture; the ultimate accuracy of the program's tuition inflation and investment return assumptions will not be clear until the beneficiaries claim their benefits.

III. EVALUATING MET: IDENTIFYING ITS EFFECTS AND EXPLAINING ITS FAILURES

Because MET is still a toddler, it would be premature to make strong assertions about where its greatest significance will ultimately lie. Nevertheless, the two most likely candidates have already entered an appearance. One is the domain of distributional equity. The other is the domain of higher education policy. In this Part, I shall report what we already know about MET's likely effects in each of those domains. My conclusion is that, because of the manner in which MET has been implemented, the program can be expected to produce some very unfortunate side effects. In particular, it can be expected to exacerbate income inequalities and distort the process through which educational policy is made.

I shall then pursue the question of why MET was implemented in the way it was. After offering some plausible explanations for the failures in MET's implementation, I shall suggest that the best explanation, quite ironically, is that MET's Board of Directors yielded to the temptation toward behavior that I characterized in Part I as "socially irresponsible." I shall conclude with some speculative thoughts about what features of MET's history and administrative structure made it especially susceptible to that sort of temptation.

A. *The Effects of MET on Income Distribution*

I have already argued that no comprehensive assessment of a public program of MET's scope should omit consideration of its distributional impact.²¹⁹ To evaluate MET as public policy, one must ask

219. See *supra* section I.C.

whether MET gives aid to the poor or gives comfort to the rich.²²⁰ To answer that question, one needs a precise sense of what we mean by "poor" and "rich." Poor or rich compared to whom?²²¹

This question of the appropriate "reference group" is complex. It turns on at least two factors. First, one needs a sense of how the program's beneficiaries will become an especially favored (or disfavored) group. If the program will operate so as to provide a simple transfer of wealth from a set of "losers" to a set of program-beneficiary "winners," then one ought to compare the incomes of program participants with the incomes of those members of society who will have to pay for the transfer. If the program enhances wealth in a more complex way, or if it is conceived of as an allocation of scarce public attention as well as dollars, then an equally (if not more) appropriate reference group would be the society as a whole.

Second, one needs to know why the program is thought to be an appropriate public endeavor, for that justification may suggest that the program contemplates a benefit for a particular "target group." One might then want to know whether the program is reaching all of its target group or only an unrepresentative subgroup. Let me use MET to demonstrate how these factors can shape one's choice of reference group.

MET's participants might not become a group of "winners." MET might well become insolvent and liquidate according to the terms of the statute, leaving its beneficiaries with nothing but their initial investments plus a nominal return. That would not have a substantial effect on the incomes of participants, compared to what they were before they participated, but it would leave them very disappointed.

If MET's participants end up "losers" in this sense, one might plausibly want to know how the pain of disappointed expectations would be distributed among families in the state. One would be concerned if that pain was concentrated in a particularly needy sector (although, as I suggested earlier, that would be unlikely with a program such as MET). Accordingly, it would be interesting to know

220. For the classic debate over how to think about the distributional effects of California's heavily subsidized system of public higher education, compare W. HANSEN & B. WEISBROD, *BENEFITS, COSTS, AND FINANCE OF PUBLIC HIGHER EDUCATION* (1969) and Hansen & Weisbrod, *The Distribution of Costs and Direct Benefits of Public Higher Education: The Case of California*, 4 J. HUM. RESOURCES 176 (1969) with Pechman, *The Distributional Effects of Public Higher Education in California*, 5 J. HUM. RESOURCES 361 (1970); see also Hartman, *A Comment on the Pechman-Hansen-Weisbrod Controversy*, 5 J. HUM. RESOURCES 519 (1970).

221. This question is raised briefly in Witte, *The Growth and Distribution of Tax Expenditures*, in *THE DISTRIBUTIONAL IMPACTS OF PUBLIC POLICIES* 171, 184-85 (S. Danziger & K. Portney eds. 1988).

how the incomes of the families of the beneficiaries compare with the incomes of families generally throughout the state.

On the other hand, it is also quite possible that MET's participants will become a group of economic "winners." The clearest example would be if MET became insolvent and were bailed out by the state legislature. That would effectuate a direct transfer of wealth from taxpayers to beneficiaries.²²² One might plausibly want to know whether the transfer will alter the shape of the income distribution curve from what it otherwise would have been. Accordingly, it might be interesting to compare the distribution of transfer benefits across income classes with (a) the distribution of taxes across income classes or (b) the distribution of existing income across income classes. (One could also substitute "wealth" for "income" throughout this paragraph.)

MET's participants could also become economic winners in less direct ways. Notwithstanding my predictions in Part II, MET might remain solvent due (for example) to unusual investment acumen on the part of the state employees who manage it. MET might thus enhance the wealth of its participants in a way that does not reduce the wealth of other citizens in so obvious a fashion as a taxpayer-financed bailout. One might then wish to know whether the "MET Kids" are drawn from an income group that has traditionally benefited from public largesse or attention and compare their families' incomes with the incomes of families in general throughout the state.

Finally, even if MET neither enhances nor diminishes the wealth of its participants, scarce public attention will have been devoted to a program for their benefit.²²³ To the extent the justification for such public attention depends upon a view that — for one reason or another — society ought to help the families of the college-bound,²²⁴ one might wish to know whether the "MET Kids" constitute a representative sample of that group or are rather some privileged subgroup. Accordingly, it might be interesting to know how the incomes of the beneficiary group compare with the incomes of families who currently send their children to Michigan public colleges, and also (since those who currently attend Michigan public colleges may themselves be a

222. It bears mention at this point that legislators have already given parents who purchase MET contracts a tax benefit. Even though tuition payments to public universities are not ordinarily deductible on a Michigan income tax return, the full purchase price of a MET contract is. See MICH. COMP. LAWS ANN. § 390.1440 (a) (West 1988). That fact alone justifies attention to the distribution of participants, although I would think it justifies more attention to the distribution of sponsors than to the distribution of beneficiaries.

223. This point is developed in more detail *supra* in section I.C.

224. See *supra* sections I.B and I.D.

skewed sample of the group one ought to be interested in) with the incomes of all families with children under age eighteen.

I have been able to use available data sources to make some of these comparisons. The details of the comparisons are set forth in the Appendix at the end of this article. The data are imperfect, so I cannot draw conclusions tailored precisely to the questions one would most like answered. Nonetheless, it is clear that, whatever reference group one chooses, MET's beneficiaries are drawn disproportionately from the upper reaches of the income distribution. This should not be surprising. MET is, after all, expensive in an absolute sense, even if it is cheap compared to the cost of college. And wealth is concentrated far more heavily than education or income.

Thus, if MET becomes insolvent and is bailed out by the taxpayers, the undeniable net effect will be a transfer of wealth up the income distribution. If MET does not become insolvent because it can successfully exploit the special tax advantages of deferred annuities, it will have done so for the primary immediate benefit of the most economically privileged segment of the population. And in all events the scarce energies and resources of the state will have been directed for their benefit.

Does that mean MET is a bad idea? Not necessarily. The program's mood-altering value, its value as a check on social irresponsibility,²²⁵ may justify the expenditure of public time, energy, and attention. Such a distribution of participants should, however, lead those who are required to implement the program to be extremely cautious in making actuarial assumptions — at least if there is a chance that the taxpaying public will ultimately be expected to guarantee that all the promised benefits are provided.

A program that has significant public benefits may well be a good idea, even if it also carries incidental private benefits for its participants that are not well distributed throughout the population. But if one knows that the participants are concentrated among the most economically secure members of the population, one ought to make sure that the private benefits are truly incidental — *i.e.*, to ensure that they do not end up swamping any hoped-for public benefits.

In MET's case, that observation suggests two things. It suggests that pricing should have been more cautious than it was. And it suggests that if MET does go bankrupt, the legislature certainly should not rush to bail it out.

225. See *supra* Part I.

B. *The Effects of MET on Higher Education Policy*

The ultimate distributional effects of MET and its pricing decision will not be known with certainty for many years. In the short term, however, it has already had important effects on higher education policy in Michigan. For while some actuarial "assumptions" are merely assumptions, others take on the air of self-fulfilling prophecies.

When private citizens make assumptions about the economic world, their expectations will occasionally influence that world. Perhaps the most well-known example of this phenomenon is the observation that under some circumstances citizens' expectations of price inflation can themselves cause price inflation.²²⁶ In MET's case, the assumption about future tuition inflation appears to have the same sort of self-fulfilling quality.²²⁷

In June 1988, the MET Directors approved a proposal that assumed tuition inflation at the rate of 9% from 1987 to 1988 and 7.3% per year thereafter.²²⁸ That assumption, combined with the other actuarial assumptions discussed earlier in Part II yielded the price schedule ultimately adopted.

Later in June 1988, and throughout the month of July, the universities announced their tuition increases for the fall. One school announced an increase of 7.9%; eleven announced that they were adopting increases ranging from 11.3% up to 21.4%; the remaining three announced that they had not made a final decision but were considering increases of between 10% and 14%.²²⁹ The combined net effect would have been a 12.4% increase in weighted average tuition.

Then began an intense lobbying campaign in which Governor Blanchard announced that he would veto state appropriations for any university that did not roll back its tuition increase to less than 10%.²³⁰ The Governor was explicit about linking his announced figure to the MET program. One by one, the universities yielded to the pressure and lowered their tuitions. At its meeting on August 24,

226. For a review of several different models of *how* expectations and prices may affect one another, see Chick, *Monetarist Views on Inflation*, in *PERSPECTIVES ON INFLATION* 37 (D. Heathfield ed. 1979).

227. The phenomenon of self-fulfilling prophecy is a special case of the more general problem of endogeneity, where two economic variables feed back onto one another and make forecasting more difficult. Unlike many problems of endogeneity, however, this one cannot be addressed through sophisticated mathematical forecasting techniques, since the forecast itself is the variable causing the feedback.

228. MET Board Minutes, *supra* note 72, June 21, 1988, at 8.

229. Jones, *Lawmaker Blasts Tuition Increases*, Detroit Free Press, July 28, 1988, at 1A, col.1.

230. See Cain, *MSU Trims Its Tuition Increase*, Detroit News, July 31, 1988, at 1B, col. 5.

1988, the MET Board approved revised actuarial assumptions that assumed up to a 10.1% rate of tuition inflation between 1987 and 1988. The revised assumption had no effect on the prices the Board decided to charge.

Thus, the MET Board of Directors, in consultation with its actuaries and with the assistance of a gubernatorial threat, lowered tuition for state residents at the Michigan public colleges for the 1988-1989 academic year. The universities adapted in various ways. The University of Michigan simply collected more money from its out-of-state students. Other schools either found ways to be more efficient than they otherwise would have been or else cut back on their programs.

It is a commonplace that in maintaining a system of public colleges and universities, a state's electorate is required to make complex judgments about what it deems important. For decades, debates have raged over the course governments should pursue regarding higher education.²³¹ Should a state's universities all pursue the same mission, or should the state have different schools that specialize? Should the state attempt to serve needs beyond undergraduate training, through the maintenance of one or more national research institutions? Should it attempt to keep tuitions as low as possible for all students, but charge all students the same price, or should it allow some schools to adopt de facto sliding-scale tuition policies (by raising tuitions and expanding financial aid)? Should it mandate uniform statewide tuitions, or should schools' tuitions vary according to the types of education they provide?

MET's actuarial assumptions about tuition inflation do not resolve these questions for the state of Michigan.²³² They do, however, transform the context in which such questions are discussed. They create a

231. For a representative sampling of the literature, see *Hearings on Higher Education Costs before the Subcomm. on Postsecondary Education of the House Comm. on Education and Labor*, 100th Cong., 1st Sess. (1988); JOINT ECONOMIC COMM., 91ST CONG., 1ST SESS., *THE ECONOMICS AND FINANCING OF HIGHER EDUCATION IN THE UNITED STATES* (Comm. Print 1969); H. BOWEN, *THE COSTS OF HIGHER EDUCATION* (1980); R. CARBONE, *ALTERNATIVE TUITION SYSTEMS* (1974); CARNEGIE COMMISSION ON HIGHER EDUCATION, *HIGHER EDUCATION: WHO PAYS? WHO BENEFITS? WHO SHOULD PAY?* (1973); CARNEGIE COUNCIL ON POLICY STUDIES IN HIGHER EDUCATION, *THE FEDERAL ROLE IN POSTSECONDARY EDUCATION* (1975); *EXPLORING THE CASE FOR LOW TUITION IN PUBLIC HIGHER EDUCATION* (K. Young ed., 1974); *FINANCING HIGHER EDUCATION* *supra* note 31; C. FINN, *supra* note 50; R. FREEMAN, *supra* note 33; S. HARRIS, *supra* note 31; Gladieux, *The Student Loan Quandary*, *CHANGE*, May/June 1989, at 35; Karelis, *Price as a Lever for Reform*, *CHANGE*, Mar./Apr. 1989, at 21; O'Keefe, *College Costs: Have They Gone Too High Too Fast?*, *CHANGE*, May/June 1986, at 6; Yanikoski, *Over a Barrel: The High Cost of Rising Tuitions*, *EDUC. REC.*, Spring/Summer 1986, at 12.

232. The most systematic recent government-sponsored efforts to address those questions in Michigan came in 1984, when Governor Blanchard appointed a special commission to consider them. See GOVERNOR'S COMMISSION ON THE FUTURE OF HIGHER EDUCATION IN MICHIGAN, *PUTTING OUR MINDS TOGETHER: NEW DIRECTIONS FOR MICHIGAN HIGHER EDUCATION*

new benchmark, a new point of reference, a new implicit norm. Competing proposals no longer stand pristine; they are perceived as conforming to or departing from that norm. Deviance now requires justification. The assumptions have sufficient political weight to alter the trajectory of any bodies that pass within their orbit. Simply put, MET's tuition inflation assumptions will make it much harder to raise state residents' tuitions quickly.

If colleges are kept from raising tuitions as rapidly as they would have in the absence of MET, they will have to adapt in other ways. They can try to find other sources of revenue. Or they can try to find ways to spend less. No matter what route they pursue, however, they will be changed in the process.

The changes would be obvious if the colleges were to reduce spending associated with the classroom. Some expensive, sought-after professors might be allowed to leave for greener pastures, to be replaced by cheaper teachers. Some expensive, but unfashionable, departments might be allowed to close down entirely. The number of teaching "slots" in some departments might be allowed to decline through attrition; those remaining might be asked to pick up the slack by teaching larger classes or by cutting back on research in order to teach more classes. Teacher "productivity" might be enhanced through more widespread use of technologies like the videotaped lecture.

Other forms of spending cuts might have effects less visible to students but just as profound for the overall mission of the university. Library and museum budgets might shrink. Repairs and renovations might be deferred. Financial aid budgets might be cut back, so that "real" tuitions (as opposed to the sticker-price tuitions that are the concern of MET) could increase at a higher rate.

Yet institutions are loathe to reduce expenditures, and so it is more likely that, in the short run, they would seek out alternative sources of revenue. To the extent the market would bear it, the colleges might raise tuitions for out-of-state students faster than they otherwise would have. To the extent politically feasible, they might seek to accept fewer low-tuition-paying state residents and accept more of the lucrative out-of-state students, relaxing academic requirements if necessary.

They might look beyond the students for revenue as well. They might lobby harder in the state capital for increased taxpayer subsidies

(1984); GOVERNOR'S COMMISSION ON THE FUTURE OF HIGHER EDUCATION IN MICHIGAN, AGENDA FOR DISCUSSION: MIDYEAR PROGRESS REPORT (1984).

to higher education. They might ask more of their alumni. They might come to view their faculty more as "profit centers" and demand that more faculty research be sponsored by outside entities, further relinquishing to outsiders the power to define what forms of knowledge ought to be pursued and developed.

I do not contend that all of these possible changes in the colleges would be less desirable than the changes that would be brought about by faster tuition increases for state residents. But to the extent that MET has reduced the colleges' ability to raise tuitions, some of these changes are inevitable. To borrow a phrase from my colleague Peter Steiner, "There is a university for every tuition structure, but not the same university."²³³

In order to draw strong conclusions about whether the effects of MET on higher education policy will be salutary or not, one would need more information than we presently have. One would need to know precisely how the colleges will adapt to the constraint on their abilities to increase state residents' tuitions. And one would need to form a judgment about whether the costs of that form of adaptation are justified by the public and private benefits of keeping tuition low. Such judgments are beyond the scope of this article.

But if I cannot offer a strong conclusion about substance, I can nevertheless offer a modest observation about process. One can be undecided about whether the state of Michigan ought to preclude its public colleges from raising tuitions faster than 7.3% per year and still care about how such a result is achieved. It matters what system of public higher education a state chooses to adopt, and it also matters how the choice is made. At a minimum, the choice ought to be understood as such, and defended publicly as an appropriate judgment of higher education policy.²³⁴

233. Private conversation between Peter Steiner and the author, Sept. 1989.

234. In Michigan, the public has imposed even stronger, somewhat idiosyncratic conditions on how such decisions are to be made. Whereas in many states the public colleges are entirely creatures of statute, Michigan created its system through the state constitution. MICH. CONST. Art. 8, § 5 creates publicly elected governing boards for the University of Michigan (three campuses), Michigan State University, and Wayne State University, the state's three "Elected-Board Colleges." That section charges each board with "general supervision of its institution and the control and direction of all expenditures from the institution's funds." MICH. CONST. Art. 8, § 4 requires the legislature to appropriate funds to "maintain" those colleges and seven others.

In cases involving the Elected-Board Colleges, Michigan's courts have interpreted article 8, § 5 to give their Boards full autonomy as independent organs of the state government, free from legislative or executive control. The Trustees have

entire control and management over University affairs, including the management of property and expenditure of funds to the exclusion of all other departments of the state. Although the Legislature may put certain conditions on money that it appropriates for the University, and such conditions are binding if the trustees accept the money, the conditions may not interfere with the trustees' management of the University and may be applied only to state appropriated funds.

To be sure, the MET Board's estimate of future tuition inflation did not — by itself — have the effects outlined above. The critical intervening cause was the Governor's decision to threaten a funds veto if the colleges deviated from MET's assumption.²³⁵ What matters for the future is that the Governor's behavior was not surprising.

As we have learned from our experience with Social Security, long-term governmental promises are powerful engines in political life. Their beneficiaries become deeply interested in whether they will be kept. Since politicians can be moved by the intensity with which their constituents hold preferences, no career politician could lightly risk disappointing the families of MET beneficiaries. Indeed, even if the Governor did not threaten to veto state appropriations, the public colleges would be justifiably nervous about doing anything that might cause them to be blamed for MET's insolvency.

Consequently, actuarial assumptions made in connection with a program like MET about behavior that is subject to future political control should be recognized as acts of policymaking. They should be understood that way by the officials who make the assumptions. They should also be understood that way when legislators consider how to allocate the authority to make such assumptions.

It can thus be said without substantial exaggeration that in 1988 a

William C. Reichenbach Co. v. State, 94 Mich. App. 323, 335, 288 N.W. 2d 622, 628 (1979) (citations omitted). The most extensive discussions of the Elected-Board Colleges' constitutional independence may be found in *Regents of the Univ. of Mich. v. State*, 395 Mich. 52, 235 N.W.2d 1 (1975), and in *Sterling v. Regents of the Univ. of Mich.*, 110 Mich. 369, 68 N.W. 253 (1896); see also *Sprick v. Regents of the Univ. of Mich.*, 43 Mich. App. 178, 204 N.W.2d 62 (1972), *affid. on other grounds*, 390 Mich. 84, 210 N.W.2d 332 (1973); *State Bd. of Agric. v. Auditor Gen.*, 226 Mich. 417, 197 N.W. 160 (1924); *State Bd. of Agric. v. Auditor Gen.*, 180 Mich. 349, 147 N.W. 529 (1914); *Board of Regents of the Univ. of Mich. v. Auditor Gen.*, 167 Mich. 444, 132 N.W. 1037 (1911); *Bauer v. State Bd. of Agric.*, 164 Mich. 415, 129 N.W. 713 (1911); *Weinberg v. Regents of the Univ. of Mich.*, 97 Mich. 246, 56 N.W. 605 (1893).

Tuition policy is central to the governance of a university and is accordingly consigned to the exclusive authority of the colleges' governing boards. *Regents of the Univ. of Mich. v. State*, 395 Mich. at 64-65.

The position of Michigan's other 10 public colleges is less clear. In 1963, Michigan amended its constitution to enhance the autonomy of the so-called Appointed-Board Colleges. Under new article 8, § 6; they "shall each be governed by a board of control which shall be a body corporate. The board shall have general supervision of the institution and the control and direction of all expenditures from the institution's funds." MICH. CONST. art. 8, § 6. But the 1963 amendments did not grant those other institutions the full autonomy enjoyed by the Elected-Board Colleges. For the boards of control remained matters of gubernatorial appointment. Thus, while article 8, § 6 appears to grant the other institutions a measure of independence from the executive branch, as a practical matter their boards of control remain subject to direct gubernatorial influence.

235. As the authorities in the previous footnote indicate, Michigan's constitution gives reason to doubt that the Governor had the authority to veto appropriations to the public colleges on the basis of a disagreement with those institutions' governing boards over tuition policy. That is especially true in the case of the Elected-Board Colleges whose Boards are not appointed by the Governor. See *supra* note 234. Yet in 1988 all 15 public colleges acceded to the Governor's demand.

major act of higher education policy was undertaken in the state of Michigan. A decision was made that in future years resident tuition at public colleges would go up more slowly (when compared with the rate of return on investments in the economy) than it had in the past. The decision was not strictly binding, but it was deeply influential. And it was made by the MET Board of Directors in the form of an actuarial assumption.

C. *Why and How MET Made Its Assumptions*

MET is an interesting program. It has been imitated by other states. Moreover, because of the manner in which MET has been implemented, Michigan may ultimately shift wealth up the income distribution. MET may even change the character of Michigan's public colleges.

To know what MET is doing is not really enough, however. If MET made a mistake in the way it set prices during its first year, one must ask why. Was it simple human error, a failure to obtain information and analyze it in the most sophisticated way possible? Or was it something more structural?

The MET Board of Directors justified setting a very low price for its 1988 contracts by making two separate aggressive actuarial assumptions — an aggressive tax assumption and an aggressive tuition inflation assumption. For reasons I elaborated in Part II, I think both assumptions were too bold. In this section, I shall review the available evidence about how each assumption was made. The two assumptions share much in the way of history, but each has unique features that should be appreciated for themselves. For it is quite possible that other public programs could have features that would make them vulnerable to replicating one type of mistake without replicating both.

1. *The Common Heritage — Minimal Oversight of the Board*

It is important to keep in mind precisely how the MET Board of Directors makes policy. Michigan's legislature authorized MET, an administrative body whose Directors are appointed by the Governor, to sell promises and to set the price. Such an authorization is different in kind from the standard form of political delegation; in principle it ought to be accompanied by a proportionally more extensive structure of political oversight.

When the U.S. Congress gives regulatory authority to the Internal Revenue Service, the Federal Trade Commission, or the Food and Drug Administration, it usually does so provisionally. If Congress does not like a particular IRS interpretation of the Internal Revenue

Code, it can amend the statute. If Congress does not like a particular policy decision by the FDA, it can undo that damage as well.

To be sure, administrative agencies can do some things that cannot be undone by the legislature. For example, if the IRS incorrectly decides to give someone a refund, Congress can do little about it as long as the refund is less than \$200,000.²³⁶ And when the Federal Reserve Board sets the discount rate or readjusts reserve requirements, its decision is effectively final. But those sorts of agency decisions, while acknowledged to be important, have traditionally been seen as less significant than the authority to borrow money and to commit future generations to repay. For that reason, the federal Treasury Department's ability to sell bonds is restricted by the overall "debt ceiling," which is established and amended by statute.

The limitations on agency power to commit future generations have traditionally been even stronger at the state level than at the federal level. For example, not even Michigan's legislature is empowered to commit the full faith and credit of the state to a particular obligation. The Michigan Constitution (like that of some other states) requires that any "general obligation" borrowing that is to extend for more than one fiscal year be approved by two thirds of each branch of the legislature and then be ratified by voter referendum.²³⁷

MET cannot, as a technical matter, bind the state of Michigan. Its obligations under prepaid tuition contracts are not backed by the full faith and credit of the state. Accordingly, its actions are not subject to the mechanisms for procedural oversight that apply to general obligation borrowing.

Yet without creating legal constraints on future generations, MET was empowered, indeed expected, to create a set of enduring expectations. And state officials encouraged those expectations. For example, in a state-wide television call-in show held during the period when parents were permitted to register for MET contracts, Governor Blanchard encouraged parents who were considering buying contracts to think of them as binding taxpayers in the future:

CALLER: I have a question regarding the word "guarantee" that is used. As I understand it, the contract is with the Trust Fund and not the State. . . . Which would mean there really is no guarantee as I see it, inasmuch as if the money runs out in that fund, then the plan has a

236. See I.R.C. § 6405(a) (1988).

237. MICH. CONST. art. 9, §§ 12, 15. That restriction does not apply to long-term leases, however, nor does it apply to so-called "revenue bonds" or "special obligation bonds," which are to be repaid out of specific state funds. See Advisory Opinion on Constitutionality of 1982 PA 47, 418 Mich. 49, 340 N.W.2d 817 (1983); Advisory Opinion on Constitutionality of 1976 PA 240, 400 Mich. 311, 254 N.W.2d 544 (1977).

chance of bankruptcy situation. Now I want a little clarification on that

....

GOVERNOR: Well, it's a state agency, MET. And it is an absolute guarantee, and the state has to stay behind it, and it's contractually enforceable, both under our constitution and the U.S. Constitution. Period. It's an absolute guarantee. That is the greatest feature of the program.²³⁸

Whether or not such statements create legal rights and obligations, they certainly create political expectations. As I noted earlier, those expectations may constrain the future behavior of public actors in the same fashion, if not to the same extent, as legal rights and obligations.²³⁹

MET is thus capable, through its present actions, of shaping the obligations and opportunities of future governments. By assuming that tuition will be low in the future, MET creates pressures for it to be low. By selling contracts at a low price, MET greatly increases the likelihood that future taxpayers will subsidize the mostly well-off beneficiaries of those contracts.

Yet, despite these practical powers, MET's Board of Directors and advisors were not subjected to any substantial legislative oversight. The legislature did not dictate the manner in which the various actuarial assumptions would be made, much less what those assumptions ought to be. To understand how and why the MET Board of Directors made the assumptions it did, one must examine the particular situation that the Board found itself in at the time it made those assumptions.

2. *The Common Heritage — Politicization of the Price*

The key feature of the Board's situation was that, in setting the price for MET contracts, it was choosing sides in a partisan political debate. The Chairman of the Board was a politically ambitious civil servant. And even before all of the information essential to a dispassionate actuarial assessment had become available, he had become an active participant in a debate over how high MET's price would be.

The Chairman of MET's Board was Robert Bowman, the state's Treasury Secretary. He had been named to the Treasury post at the age of twenty-eight by Governor Blanchard after a brief career as an

238. *WTVS Transcript, supra* note 74, at 9 (corrected to the extent possible by reference to an audio tape recording of National Public Radio's *Morning Edition* broadcast on Aug. 10, 1988, in which portions of the television program were re-broadcast (tape segment ME 880810 IIB, MI Education Trust)).

239. *See supra* section III.B.

investment banker.²⁴⁰ He had attracted substantial public attention both for his successful management of the state's pension funds,²⁴¹ and for his work in designing MET.²⁴² He came close to running for the U.S. House of Representatives and has been mentioned as a candidate for Lieutenant Governor.²⁴³

Even before the original MET legislation was introduced, Secretary Bowman publicly suggested that contracts would be sold at a very low price. In March 1986, he offered a tentative estimate that a MET contract covering four years of college would cost between \$2500 and \$4000.²⁴⁴ When the bill was introduced, the public estimate shifted upward to between \$3100 and \$4600.²⁴⁵ When the bill was enacted at the end of 1986, the estimate shifted back down to \$2530 for a newborn child.²⁴⁶

Between the end of 1986 and March 1988, the public estimate of MET prices rose again, but not drastically.²⁴⁷ On Monday night,

240. See Reiff, *Aggressive Prudence*, FORBES, June 13, 1988, at 134-35.

241. *Id.*

242. Governor Blanchard has described Secretary Bowman as the "chief architect" of MET. *WTVS Transcript*, *supra* note 74, at 7.

243. UPI Regional News (Aug. 7, 1987) (Bowman says odds are "better than 50-50 that I will run" for Congress); Kenworthy, *House Talent-Hunters Seek Strong Challengers As Few Seats Are Open*, Wash. Post, Nov. 15, 1987, at A4; UPI Regional News (Jan. 3, 1988) ("Bowman says he won't run for Congress in 1988"); UPI Regional News (June 30, 1989) (Bowman announced "that he would in no way accept or allow himself to be drafted for lieutenant governor"); Bergstrom, *Treasurer May Have Political Future*, Ann Arbor News, Mar. 31, 1990, at A7 ("Bowman wouldn't discuss rumors about bids for Congress or lieutenant governor").

244. Harsha, *Bowman: Guaranteed Tuition Interest To Grow Like IRA's*, Lansing St. J., Mar. 31, 1986, at 1B, col. 1. How could the estimate have been so low? It appears that throughout the legislative deliberations, the working assumption was that tuition inflation would be about 6% per year. See Memorandum from Jan W. Lyddon, House Democratic Research Staff, to Rep. James A. Kosteva (May 6, 1986), at 2. If one assumes that MET is tax-exempt and that MET will earn 13% per year on its investments, one gets a price of \$2433. If one assumes that MET is tax-exempt but will earn only 10% per year on its investments, one gets a price of \$4117. If one were willing to adopt a short enough time horizon, those assumptions were consistent with historical experience. Thus, in response to questions asked by Republican members of the House Colleges and Universities Committee of the Michigan House of Representatives in May 1986, Secretary Bowman stated: "For the last five years, the [state] pension funds' average return has been 16.5% per year. Over the same period of time, tuition increases have averaged less than 5%." Memorandum from Rep. Judith Miller to House Colleagues 2 (May 14, 1986).

245. News Release From the Governor 2 (Apr. 15, 1986).

246. Williams, *MSU, U-M Get Behind Tuition Plan*, Lansing St. J., Dec. 14, 1986, at 1B.

247. At MET's first Board meeting, in early 1987, Secretary Bowman gave a brief overview of the determinants of MET's price, using figures that began with a "base payment amount" of \$4200. See MET Board Minutes, *supra* note 72, Mar. 5, 1987, at 2. MET then engaged the market research firm of CRW Associates to study the extent of public interest in MET. MET Board Minutes, *supra* note 72, July 1, 1987, at 6. CRW presented its results to the Board in September. Minutes of Michigan Education Trust Board of Directors Meeting on Sept. 18, 1987, at 2-7. The survey covered 950 adult respondents. It reported that the median response to a request to "name the maximum price they would be willing to pay" was between \$4600 and \$4700, and Secretary Bowman then "pointed out the similarity between this amount and our original cost estimate of between \$3000 to \$4500." *Id.* at 5. Later during that meeting, Secretary

March 14, on the eve of the adverse ruling from the IRS, aides to Governor Blanchard estimated a price of about \$4500.²⁴⁸ Two days later, after the ruling was in hand, the estimate became "\$5000 to \$6000."²⁴⁹

At just that moment, researchers for the Senate Republican Caucus issued a report charging that the prices being quoted by the Treasury were "dangerously unrealistic."²⁵⁰ According to newspaper accounts from Friday, April 1, when Secretary Bowman was asked about the report he "stuck by an earlier estimate that it will take an initial investment of between \$5000 and \$7000 to guarantee four years' college tuition."²⁵¹ On April 13, the Senate Finance Committee held hearings at which the Republican researchers and MET officials argued about whose price estimate was better.²⁵²

It was against that background of partisan fighting that the MET Board convened on April 18, 1988. At that meeting, the MET Directors considered three tentative options presented by their actuaries. The options all assumed that tuition would increase by 9% from 1987 to 1988 and by 6.5% per year thereafter. The rather sketchy available public documentation leaves unclear precisely what price schedule was chosen.²⁵³ Immediately after the meeting, however, Secretary Bowman released a schedule showing a price of \$6400 for a newborn.²⁵⁴

All of this history of partisan public discussion of the price is, to be sure, circumstantial evidence. Nonetheless, it appears safe to infer that the MET Board of Directors, or at least its Chairman, felt some pressure to keep the final price low. But while that pressure may explain why the tuition inflation and tax assumptions that MET made were attractive, it does not fully explain why the Board adopted them. To understand the adoption (and not merely the attractiveness) of the

Bowman reported, "The actuaries have concluded that the price is in the range of what the Board has been expecting, from about \$3500 to \$4500 for a newborn." *Id.* at 7.

248. Firestone, *Tuition Plan May Get I.R.S. Backing*, Detroit News, Mar. 15, 1988, at 1A, col. 2.

249. Jones, *Safety Called a Key Factor in State's New Tuition Plan*, Detroit Free Press, Mar. 17, 1988, at 17A, col.1.

250. *College Cost Defended*, Detroit News, Apr. 1, 1988, at 3B.

251. *Id.*; see also *Tuition Cost Given*, Detroit Free Press, Apr. 1, 1988, at 13C (noting the Senate Republican estimate of \$7000 to \$10,000).

252. See Barclay *et al.*, *MET: A Progress Report From the Senate Finance Committee*, Apr. 15, 1988; *Tuition Plan to Start in May*, Detroit Free Press, Apr. 15, 1988, at 4A, col. 2.

253. See MET Board Minutes, *supra* note 72, April 18, 1988, at 9, handout Plan B. It is clear that the chosen option assumed the trust would be taxed as a simple trust at an overall effective rate of 18% per year on pre-tax earnings of 10% annually.

254. See *\$6400 Can Buy College Education - for Frosh of '06*, Detroit Free Press, Apr. 19, 1988, at 3A, col.3.

tuition inflation and tax assumptions; I believe it is useful to consider the two categories of assumptions separately.

3. *How MET Made Tuition Inflation Assumptions*

In the end, MET assumed tuition inflation averaging 7.3% per year and investment returns averaging 10% per year. The analysis presented in Part II suggests that a more appropriate assumption would have been tuition inflation of 8.7% per year during a period in which investment returns averaged 10% per year. Why did MET use the lower tuition inflation figure?

The record suggests that the tuition inflation assumption emerged out of a long series of discussions between the MET Board and its actuarial advisor, Coopers & Lybrand. As early as October 1987, the Board received a presentation from Coopers addressing the relationship between tuition inflation and investment returns.

Interestingly, Coopers began by projecting an even lower rate of tuition inflation than it ultimately settled on. At the October 1987 meeting, Coopers reported that it projected "that tuition rates will increase on average 6.5% per year over the next 18 years [and that its] best estimate on rate of return on investments by the Trust Fund is 10% per year on average."²⁵⁵ It explained that "6.5 percent is an average which is based on 5% annual inflation increases and 1.5% in real increases."²⁵⁶

Dr. David Adamany, a MET Board member and the president of Wayne State University, expressed concern about that assumption and asked that the payments be recalculated using a higher rate of tuition increase.²⁵⁷ For several months more, Coopers continued to present price estimates based on 6.5% tuition inflation.²⁵⁸ At the June 1988, meeting, however, Coopers presented new prices, assuming only a 2.5% geometric difference between tuition increases (7.3% assumed) and investment earnings (10% assumed).²⁵⁹

How could Coopers assume even a 2.5% geometric difference be-

255. MET Board Minutes, *supra* note 72, Sept. 18, 1987, at 2.

256. *Id.*

257. *Id.*

258. According to the minutes of the April 1988 meeting, when the Board first voted on a pricing methodology, "[Secretary] Bowman referred the Board to charts . . . which compare the Consumer Price Index, state pension fund earnings, [and] tuition increases . . . over the last ten years. Over the ten year period the spread between tuition increases and pension fund earnings was 3.9%." MET Board Minutes, *supra* note 72, Apr. 18, 1988, at 4. He then referred the Board to pricing proposals prepared by Coopers & Lybrand that assumed a "3.5% spread" between tuition increases (6.5% assumed) and investment earnings (10% assumed). *Id.* (Secretary Bowman was using arithmetic differences rather than geometric differences.)

259. MET Board Minutes, *supra* note 72, June 17, 1988, at 8.

tween investment earnings and tuition inflation? It appears that throughout its representation of MET, Coopers has based its calculations on data beginning with the 1977-1978 academic year.²⁶⁰ During that time, the investments were indeed running 3.5% ahead of inflation.²⁶¹ The problem is that during the prior decade they had been running 4.3% *behind* inflation.²⁶²

I can think of only two speculative explanations for Coopers & Lybrand's use of only the most recent ten years' worth of data in order to forecast eighteen years into the future. One explanation would be that Coopers simply did not bother to obtain the extra data. That explanation, however, is not particularly illuminating, except to the extent that it raises the question why the MET Board did not ask Coopers to obtain more data.

A richer explanation would begin with the hypothesis that Coopers made a deliberate judgment that the future was most likely to resemble the period from 1977-1978 to 1986-1987 and that earlier time periods were not relevant. To be sure, if Coopers made such a deliberate judgment, it never made it an explicit part of the public record and never acknowledged the strikingly different pattern observable over a longer time horizon. Nonetheless, some public evidence could be read to support such an explanation.

The most important feature of the time period considered by Coopers was a two-year "tuition freeze" negotiated between the Governor and the public colleges during the 1984-1985 and 1985-1986 academic years.²⁶³ What grounds might there be for Coopers and the MET Board to believe such a freeze would be repeated? The most likely candidate is MET itself.

As I noted earlier, MET's tuition assumption was not entirely "exogenous." Rather, MET's assumption has itself turned out to be one of the more important determinants of tuition.²⁶⁴ If that were fully anticipated, then Coopers' use of the short time period might be explained not as a statement of what MET *expected* future years to be like, but rather as a statement of what MET *intended* future years to be like.

The problem with this explanation is that, to the extent it works, it

260. See, e.g., COOPERS & LYBRAND, TUITION AT MICHIGAN UNIVERSITIES: TRENDS AND DETERMINANTS 2 (1989).

261. See *supra* note 109 and accompanying text.

262. *Id.*

263. See, e.g., R. Cole, *Taking Stock* 6-7 (1988) (reviewing impact of the Governor's Commission on the Future of Higher Education). The second-most important feature was the boom in the stock market during that period.

264. See *supra* section III.B.

is inconsistent with the publicly expressed desires of the Board. Certainly, MET's potential effectiveness as a tuition-setting device had been foreseen by Coopers and the Board.²⁶⁵ But that was never publicly described as something to be taken into account in making the assumptions. Quite the contrary. At a meeting of the MET Board early in 1988, Dr. Adamany expressed deep concern about a proposal to have Coopers study tuition patterns and project future tuition, arguing that "a one-time tuition projection for a twenty-year period could be viewed as a tuition setting policy."²⁶⁶

And yet, even so, the explanation is not entirely implausible. For while the minutes of MET Board Meetings do not reflect a shared desire to use MET's assumptions to manipulate public college tuitions, that desire can be detected in statements made by the Board's Chairman outside the context of formal meetings. During the summer of 1988, in response to a newspaper reporter's question about whether he was concerned that the universities had announced a higher tuition increase than MET had assumed, Secretary Bowman said:

They all will roll back or we'll be recommending to the governor that their budgets be vetoed to remind them that *they can take this autonomy too far*. . . .

. . . .

. . . I think what we will probably see in 10 years . . . is that *tuition levels will be about the same across all schools*, which means (the University of) Michigan's going to go up more slowly th[a]n the cheaper schools. We will get to a system like California or New York where the same dollar buys the same amount of credits²⁶⁷

In another conversation earlier that same summer, Secretary Bowman had been even more direct: "This can be used as a club against higher tuition. . . . [W]e do plan to use this as a way to keep tuition down, based on economic and political convictions. Why should tuition go up higher than inflation?"²⁶⁸ Thus, for Secretary Bowman, the effects of MET's assumptions on higher education were no mere accident. Rather, they reflected a calculated vision of what the state's tuitions policy ought to be.

265. Coopers' final report to the Board included a provision stating that a "favorable" major item that had *not* been counted on in setting prices was the possibility of "[s]uasion imposed upon tuition rates so that they are limited to no more than inflation." 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67, at 4; 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67, at 3.

266. MET Board Minutes, *supra* note 72, Mar. 9, 1988, at 4.

267. Aulino, *Colleges Threatened by State Money Chief if Tuition Hikes Stick*, Birmingham Observer and Eccentric, Aug. 18, 1988, at 1A, 5A (emphasis added).

268. The conversation took place in Secretary Bowman's office among Secretary Bowman, Sabrina Keeley, me, my colleague Kent Syverud, and our research assistant John Furman, on July 19, 1988. Meeting, July 19, 1988, *supra* note 114 (emphasis added).

There is, of course, nothing wrong with a state establishing a tuitions policy. Indeed, it would not necessarily be crazy for a state to announce that, each year, each of its universities would increase their tuitions by an amount that is 2.5% less than the pre-tax total return on a half-stock, half-bond portfolio. To the extent MET's tuition assumption was a calculated effort at making higher education policy, its failure was a failure of process.

MET's brand of higher education policy (if that is what it was) was not the product of a public, deliberate debate in the legislature over competing values and priorities. It was not even the product of a careful analysis by the state Department of Education. If it was indeed higher education policy, it reflected no more than Secretary Bowman's "economic and political convictions," transformed into a powerful actuarial assumption.

The mandate of the MET Board was not to establish a new tuitions policy for the state. Its mandate was to run a prepaid tuition program in a prudent, actuarially sound manner. And whether or not all the members of MET's Board conceived of the tuition assumption as a long-range tuitions policy for higher education, it has become one as a matter of fact. Yet because the policy was buried in an actuarial assumption, it was difficult to detect until after it had become an effective force in state affairs.

4. *How MET Made Tax Assumptions*

As I explained in Part II, MET made tax assumptions that are unlikely to hold up without substantial help from either the IRS or the Congress. Moreover, those assumptions (not the tuition inflation assumption) are the primary cause of MET's surprisingly low price.

The official public record concerning MET's tax assumptions is much slimmer than the record concerning its tuition inflation assumption. In its report to the Board of Directors on June 17, 1988, Coopers & Lybrand simply reported the assumption that no tax would be imposed on the Annuity Fund.²⁶⁹ That assumption was not even flagged later in the section of the report entitled *Major Qualitative Items That Will Affect Actual Results*.²⁷⁰ Nor was it mentioned in a letter dated June 15, 1988, entitled *Guidance as to the Taxability of the Participants in the Michigan Education Trust*, from the Detroit law firm that was advising the Board — Miller, Canfield, Paddock & Stone.²⁷¹

269. 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67, at 1. See *supra* section II.B.2.b.ii for a discussion of the issue and its significance.

270. 1988 ACTUARIAL ASSUMPTIONS — PREMIUMS, *supra* note 67, at 2-3.

271. The letter does, however, discuss the procedural mechanisms for obtaining review of the

At its meeting on June 21, 1988, Secretary Bowman began by discussing "the possibility of MET investing a portion of its funds in annuities, which provide tax advantages. . . . The annuity investments would not be subject to any annual income tax . . ." ²⁷² Representatives from Miller, Canfield then walked the Board through their "guidance letter," speaking of the beneficiary's potential tax liability if annuities are used, but never of MET's. Later on, in response to questions about the beneficiary's potential liability, a Miller, Canfield attorney stated:

[I]f MET invests in annuities, the most sensible way to divide the funds for investment would be to limit the annuity investments to the amount necessary to provide the lowest tuition cost in the future. Therefore, all of the annuity proceeds would be used toward tuition and *the IRS would not be able to consider MET as the owner of the annuity and thus subject to paying taxes.* ²⁷³

Representatives from Coopers then walked the Board through their report, stating that "[t]he costs also assume the worst case scenario for the tax rate, that the guarantee fund is taxed at the 34% corporate rate." ²⁷⁴ The Board of Directors then adopted a resolution approving the prices based on those assumptions. ²⁷⁵

In revised actuarial assumptions, presented to the Board on August 24, 1988, Coopers & Lybrand added the following statement to its tax assumptions: "It is our understanding that MET's outside attorneys feel 'very good' about [the assumption of no tax on the Annuity Fund] . . . , which [is a] very important factor[]." ²⁷⁶ At the Board's meeting of September 20, 1988, a Coopers representative reported orally that "he did receive a letter from Miller, Canfield, Paddock and Stone which stated there is a *strong likelihood* that . . . MET will not be taxed on the buildup of any annuities." ²⁷⁷

There is no indication that Miller, Canfield's letter to Coopers was

IRS's decision that § 115 does not apply to MET. It also discusses the manner in which MET might apply for exemption from taxation as a charitable or educational organization pursuant to § 501(c)(3). It concludes by recommending that MET file an application for a § 501(c)(3) exemption and that MET then commence litigation on the § 115 issue. The letter never offers the law firm's views on the likelihood of success of either recommended effort.

272. MET Board Minutes, *supra* note 72, June 21, 1988, at 2-3.

273. *Id.* at 7 (emphasis added) (comments of Ms. Naoum).

274. *Id.* at 8 (comments of Mr. Kaye).

275. Michigan Education Trust Resolution 1988-10. The resolution also delegated authority to Secretary Bowman and the Board's President to adjust the prices by up to 5% if necessary to maintain actuarial soundness.

276. 1988 ACTUARIAL ASSUMPTIONS — ANALYSIS, *supra* note 67, at 2.

277. MET Board Minutes, *supra* note 72, Sept. 20, 1988, at 4 (emphasis added) (comments of Mr. Richard Kaye). Mr. Kaye reported that "the law firm also expressed a strong likelihood MET will receive 501(c)(3) status." (!) *Id.*

ever shared with the entire Board of Directors. It does not appear that the Board ever asked to receive a copy. Nor does it appear that any of the Directors asked the Coopers representative how big a risk might be associated with Miller, Canfield's "very good" feelings of a "strong likelihood" of success.

The official record here is quite spare. It is surely tempting to dismiss the risky tax assumption as an artifact of our monstrously complex federal income tax laws. One might well conclude that, perhaps overwhelmed by the complexity of the tax laws, the MET Board as a whole never even *realized* that there was any substantial risk associated with its tax assumptions. Nothing in the formal proceedings indicated that they were ever aware of any significant risk. None of the Directors (other than Secretary Bowman) had any significant experience with tax matters. And in informal conversations, Secretary Bowman indicated that, while he agreed that there was some tax risk, he did not consider it substantial.²⁷⁸

But such a conclusion would ignore the more significant question of why this particular tax risk was not detected. Whether or not the Board believed the risks associated with the tax assumptions were substantial,²⁷⁹ it presumably understood itself to be basing that belief on the judgment of its tax lawyers. The natural question, then, is why the Board did not ask that the law firm give it a formal opinion letter, so that it could be certain about the precise nature of the risks before it, and so that the firm could later be held fully responsible for its advice?²⁸⁰

In a conversation in July 1988, Secretary Bowman answered that

278. During one conversation, Secretary Bowman said:

At some point, it's certain that the trust will be tax-exempt. Congress will almost certainly enact legislation this term making such trusts tax-exempt. . . . Without being tax-free, the numbers still work out, but in a different fashion. . . . Tax issues are critical, but we shouldn't scrap the program just because of them.

Meeting, July 19, 1988, *supra* note 114.

279. The public record gives no way of knowing the extent to which the law firm elaborated to the Board in private on the amount of risk associated with the tax assumptions. The most the public record reports is the actuaries' statement that Miller, Canfield, Paddock, and Stone felt "very good" about their assumptions. *See supra* text accompanying note 276.

280. The closest the Board ever came to asking the firm for an opinion letter came during the following exchange at a Board Meeting:

Ms. Dumouchelle [a Board member] referred to Mr. Collins' [a Miller, Canfield attorney's] opening remarks indicating the letter from his firm is a tax discussion letter. She questioned whether this was a legal term or whether it was providing the Board with an opinion or advice.

Mr. Collins said when someone requests a legal opinion, they would generally receive a letter saying "as a matter of law it is our opinion that this is the answer." For some issues, such as taxability to the purchaser, Miller, Canfield, Paddock and Stone can supply to the Board information that is certain. Other issues, such as the 501(c)(3) status, are not certain. Rather, the information is provided as advice relating to options which are available to the Board. The information was put into the discussion letter format to address both of the

question quite explicitly: "I don't want one of my successor[s] to sue Miller, Canfield. *We* should be sued if we screw up. I'm not prepared to let lawyers get on the hook for malpractice; I'd rather have the *state* on the hook."²⁸¹ Thus, for Secretary Bowman the risk that a tax assumption was incorrect was a risk that should be borne by future taxpayers, not by the lawyers advising on the propriety of that assumption.

Note that Secretary Bowman insisted that the state — not the members of the Board — should be "on the hook." By statute, Board members are immune from tort liability unless they engage in conduct that is "so reckless as to demonstrate a substantial lack of concern for whether an injury results."²⁸² Interestingly, the topic of their immunity was of substantial concern to the Board members during the period before they set prices. In October 1987, Terrence Grady, from the office of the Attorney General of Michigan, explained to the Board that he would not expect lawsuits against Board members. "[R]ather people will most likely sue the Trust first."²⁸³ This did not allay the Board members' concerns, however, and in May 1988, Mr. Grady returned with a stronger message:

[A] member could be sued personally or in his/her official capacity If the member were sued personally, the Attorney General's first approach would be to move the court to change the suit to one naming the member in his/her official capacity unless there could be an immediate showing of intentional personal misconduct by the member. The Attorney General would normally expect to be successful in making that transformation. It is very important to the Department of Attorney General that none of the members have personal liability under any circumstances. The statute does not contemplate it, nor is it the public policy of the state. The state does not encourage suits or let suits remain in existence that can be pursued to reach any prospect of personal liability.²⁸⁴

Despite the strength of that message, the Board went on to adopt a resolution providing that MET would indemnify them for any liability deriving from things other than gross negligence or intentional misconduct.²⁸⁵

concerns, tax treatment to the purchaser and, at the same time, lay out all the options that are available to the Board.

Ms. Dumouchelle said, in other words, Miller, Canfield, Paddock and Stone, is advising the MET Board.

Mr. Collins said yes.

MET Board Minutes, *supra* note 72, June 21, 1988, at 6.

281. Meeting, July 19, 1988, *supra* note 114 (emphasis in original).

282. MICH. COMP. LAWS ANN. § 691.1407(2) (West 1988).

283. MET Board Minutes, *supra* note 72, Oct. 20, 1987, at 6.

284. MET Board Minutes, *supra* note 72, May 13, 1988, at 3.

285. Michigan Education Trust Resolution 1988-5.

Notice the structure of the situation. In deciding how aggressive to be about the tax assumption, MET's Board of Directors had to decide whether to take a risk. They ultimately chose to take quite a big risk. Their assumptions created a high probability that MET would become insolvent, unable to fulfill its contractual obligations.

There were immediate benefits for some of those who chose to take the risk — certainly for Secretary Bowman. He had taken a strong public stand in support of the position that MET's price would be low. A risky tax assumption made the low price possible. Moreover, the low price meant that more families would participate in the program, increasing its political value to the Governor. And the bigger the program, the greater the personal satisfaction Board members could feel for having gotten it off the ground.

Yet these benefits were not matched by offsetting costs. None of the actors most directly involved in the decision to take the risk were personally accountable for the consequences of any mistake they might make. The law firm that advised the Board was never called upon for an opinion letter. The actuaries warranted only that their forecasts were reasonable, given the Board's tax and investment assumptions. The Board members were personally immune. Even political accountability was restricted, because the IRS is not expected to complete an audit of a MET tax return in which the tax assumptions are raised until after the terms of the 1988 Directors expire — indeed, not until after the next gubernatorial election.²⁸⁶

I am not suggesting that MET's Directors should be punished financially if they are ultimately shown to have taken a bad risk. There are good reasons not to use the risk of economic liability as the mechanism for counteracting temptations for social irresponsibility in the public sector. The more sensible practice is to rely on noneconomic political and cultural incentives to instill in public servants a sense of personal responsibility for their actions.

In MET's case, the existing noneconomic incentives simply proved inadequate to the task. The Board resolutely pursued a high-risk strategy. That outcome was not fore-ordained by MET's structure, which treats the problem of price setting as a technical question appro-

286. The Internal Revenue Manual establishes a 27-month cycle for disposing of examinations of corporation income tax returns, beginning on the later of the return's due date or the date the return is filed. [1 Audit] Internal Rev. Man. (CCH) § 4212.1(1) (Nov. 2, 1981); *see also An Interview with IRS Commissioner Gibbs*, 33 TAX NOTES, 439, 441 (1986). MET did not collect money from contract purchasers until late 1988. Since it adopted a fiscal year accounting period, it did not need to file a return until late 1989 raising the questions of how to handle either MET's receipt of payments from parents or its payment of benefits to children or colleges.

appropriate for delegation to an administrative panel. But that structure surely facilitated risk taking.

CONCLUSION

Public programs must travel a long path from design to full implementation. A legislator who designs a program can have a radically different understanding of that program from that of the manager who runs it from day to day. And an outsider who attempts to evaluate the behavior of the legislator and the manager is likely to have yet a third perspective.

The most important lessons to be learned from the Michigan Education Trust have to do with the problem of social irresponsibility. First, that problem offers insight into the reasons why one might design a program such as MET. If one's concern is simply with the cost of higher education, MET is difficult to defend, since its benefits are, by design, concentrated on upper-income families. However, if one's primary concern is with reinforcing parents' sense of obligation for their children's educations, the design makes somewhat more sense.

Second, the problem of social irresponsibility offers insight into the pitfalls such programs face in implementation. Michigan's legislature did not set a price for MET contracts. The only guidance it gave was that the Trust should be run in a manner "reasonably designed to be actuarially sound." It treated the question of price setting as little more than a mechanical act, one that could be delegated to an independent board of nine people "with knowledge, skill, and experience in the academic, business, or financial field."²⁸⁷

But in any public program that commits future taxpayers to satisfy current promises, it is far from a mechanical act to set the price for which those promises are sold. Actuarial assumptions about the future are judgments. Sometimes, as with MET's tuition inflation assumption, they are sufficiently important to become pronouncements of policy. It is essential that such judgments be made with care.

The more heavily politicized the program, the more difficult it becomes to conceive of such actuarial assumptions as questions of professional expertise. If the person who makes the actuarial judgment is a political actor, the temptation to be optimistic (and thereby obtain a low price) is powerful; political actors like programs to be big and purchasers to be happy. In MET's case, the fact that the Chairman of the Board was a visible and ambitious political actor may well have heightened the pressure to keep the price low.

287. MICH. COMP. LAWS ANN. §§ 390.1433, .1430 (West 1988).

Even an individual or group that is not politically active may feel pressure from political actors to be optimistic. Sometimes, other structures may be used to neutralize such pressure. In MET's case, for example, the Board could have more effectively assigned responsibility for making a judgment about the tax assumption to its outside legal counsel. If it had demanded a formal opinion of counsel from its law firm, the firm's desire to please its client would have been balanced against the firm's desire to protect its own professional reputation. If the firm had been asked for an opinion letter, it would have had to give an opinion knowing that the risk of error could not be shifted to someone else.

The Michigan legislature failed to anticipate the problems of implementation that MET would face. If the designers of other public programs are to be more successful, they must learn to be wary when creating programs whose costs will not be borne for many years. They must understand the way such programs can facilitate a divergence between private and public interests. They must fashion administrative structures that can resist the inevitable temptation of socially irresponsible implementation.²⁸⁸

288. In the wake of the savings and loan debacle, the United States Treasury Department recently proposed one possible structure — the use of independent credit-rating concerns to impose another form of oversight on the Federal National Mortgage Association and six other government-sponsored enterprises. *Treasury Asks Congress to Require Firm Backed by U.S. to Have a Triple A Rating*, WALL ST. J., May 15, 1990, at A2.

APPENDIX

This Appendix discusses the variety of data sources that may be brought to bear on the question of how much MET participation was skewed toward high-income groups. It organizes the data sources according to the variety of "reference groups" that might be thought appropriate for policy purposes.

1. *MET Families and Michigan Families*

In March 1989, MET issued a news release which gives the percentage of MET families (presumably the families of the beneficiaries rather than the purchasers) whose Adjusted Gross Incomes (presumably for the 1987 tax year) fell into each of five brackets.²⁸⁹ The news release offered similar figures for "all Michigan families":²⁹⁰

TABLE 4

<u>Adjusted Gross Income</u>	<u>% of "MET families in" this AGI range</u>	<u>% of "Michigan families" in this AGI range</u>
over \$80,000	19%	9%
60 — 80,000	20%	11%
40 — 60,000	26%	29%
20 — 40,000	18%	33%
under 20,000	17%	19%

289. Michigan Department of Treasury, *MET Income Statistics Released*, Mar. 1, 1989 [hereinafter *MET Income Statistics*].

Unfortunately, I was unable to obtain from MET either the individualized income figures from which these figures were calculated or a careful explanation of what exactly the figures reflected. I do not know whether the "MET families" are grouped by the AGI of the contract purchaser or by the AGI of the family of the contract beneficiary. I do not know whether a single family that purchased MET contracts for two children is counted as one "MET family" or two.

It does appear that the percentages shown are percentages of MET contracts sold under *any* of the three plans offered — the full-benefits option, a less expensive "limited-benefits option" for families that expect their children to attend less expensive schools, and an even less expensive "community-college option." Ninety-six percent of the contracts were for full benefits, slightly over 3% were for community college tuition, and less than 1% were for limited benefits. 1989 ACTUARY'S REPORT, *supra* note 24, at 9. If lower-income families are more likely to have bought the community-college and limited-benefits plans, the distribution of full-benefit plans would have fewer lower-income families than the table shown in the text.

Similarly, the percentages shown are percentages of MET contracts, regardless of whether the contracts were for one year of college, two years, three years, or four years. Approximately 79% of the full-benefits contracts covered three or four years, approximately 21% covered one or two. *Id.* at 10. If one assumes that lower-income families are more likely to have bought fewer years than higher-income families, the distribution of "full-benefit plan years" would have fewer lower-income families than the table shown in the text.

290. *MET Income Statistics*, *supra* note 289. As was the case for "MET families," I do not know precisely how a "Michigan family" was defined. (It is obvious from the figures that families too poor to file state tax returns were not treated as "Michigan families.") Nor do I know whether the AGI figures reflect 1986 dollars, 1987 dollars, or 1988 dollars (I assume 1987 dollars).

The numbers in this table suggest in a rough sense that MET drew disproportionately from the higher end of the income distribution — 39% from the top 20%, 65% from the top 50%.²⁹¹

Moreover, these figures understate the extent to which MET's benefits are skewed. Census Bureau data²⁹² suggest that in general "Michigan families" are not as well as off as MET's news release indicates, perhaps because MET's news release did not consider families too poor to file income taxes. A comparison with Census Bureau data would yield the following table:

TABLE 5

<u>Adjusted Gross Income</u>	<u>"MET Families" (MET figures)</u>	<u>"Michigan Families" (Census Bureau data)²⁹³</u>
over \$60,000	39%	14%
40 — 60,000	26%	22%
20 — 40,000	18%	35%
under 20,000	17%	29%

The following graph shows the comparison between MET families and the two versions of the "Michigan families" data:

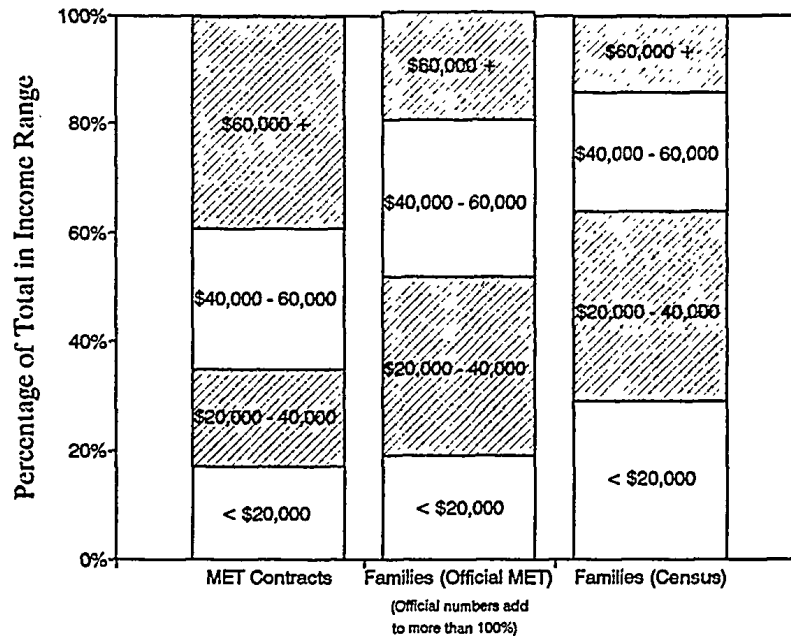
291. *But cf. MET Income Statistics, supra* note 289 (an official MET news release quotes Secretary Bowman as saying, "The numbers show that middle income Michigan residents were the largest group to take advantage of MET, which was exactly what we expected. . . . I am encouraged by the large number of lower income families who feel that their children's college education is a priority and thus signed up for MET.").

292. Each year, the Census Bureau publishes estimates of the distribution of "total money income" among families. "Total money income" measures a range of items slightly different from "personal income," which is in turn slightly different from that measured by Adjusted Gross Income. For example, AGI includes employee social insurance taxes that the employee never actually receives, capital gains, and certain pension income but personal income does not. Likewise, personal income includes all government cash transfer payments whereas AGI includes only some of them. See Park & Reeb, *Personal Income and Adjusted Gross Income, 1984-1986*, SOI BULL., Winter 1988-1989, at 71. Total money income is the sum of all money wages and salaries, net income from self-employment, and income other than earnings (including social insurance and welfare payments), before deductions for taxes, social insurance, union dues, and the like. See 1987 MONEY INCOME, *supra* note 32, at 172-74.

The Census Bureau's estimates are broken down by region. Michigan's region also includes Illinois, Indiana, Ohio, and Wisconsin. These regional estimates count numbers of families (with or without children) rather than numbers of children in families. Overall, there is not a substantial difference between the distribution of incomes of families and the distribution of children-in-families. Compare 1987 MONEY INCOME, *supra* note 32, Table 21, col. 3, at 83 (families) with *id.* at col. 4 (children).

293. Calculated from 1987 MONEY INCOME, *supra* note 32, Table 16, at 57.

FIGURE 9

Income Distribution of MET Contracts
Compared to Michigan Families Generally2. *MET Kids and Michigan Kids*

For many purposes, the comparison between “families” is not precisely what one is interested in. “Families” includes people without children as well as people with children. Thus, if one thinks of MET as a program to help the children of the state, and if one’s concern is whether the program is reaching a representative sample of those children, one would like an answer to the question, “What percentage of all children who live in Michigan reside in families that have incomes in each of the brackets set forth in the MET news release and shown above?”

I drew on Internal Revenue Service data to obtain a rough answer to that question:²⁹⁴

294. The Internal Revenue Service has a microdata sample file of tax returns, coded with the taxpayer’s state of residence, for all returns having an AGI under \$200,000. The file indicates the number of exemptions claimed on the returns for children living at home. The same file has a sample of returns over \$200,000, with the state of residence suppressed. I was able to use the 1985 version of this microdata file thanks to the Center on Tax Policy Research at the University of Michigan. I am grateful to Laura Kalambokidis for programming assistance in retrieving the data.

In order to have comparable figures, it was necessary to take the income figures for 1985 and inflate them to 1987 values. Rather than simply multiplying by the change in the overall median family income during that period, I attempted to reflect the fact that between 1985 and 1987 high

TABLE 6

<u>Adjusted Gross Income</u>	<u>"MET Families"</u>	<u>"Michigan Kids"</u> <u>(IRS data)</u>
over \$60,000	39%	13%
40 — 60,000	26%	27%
20 — 40,000	18%	37%
under 20,000	17%	22%

Once again, the data are not adequate to provide a perfect answer. Like the figures in the MET news release, this table overstates the well-being of "Michigan Kids" generally by ignoring children in families too poor to file tax returns. Even so, the picture remains one of a

incomes grew faster than low incomes. Using figures calculated from Census Bureau data, I applied differential inflation rates to each income quintile. See 1987 MONEY INCOME, *supra* note 32, Table 12, at 42.

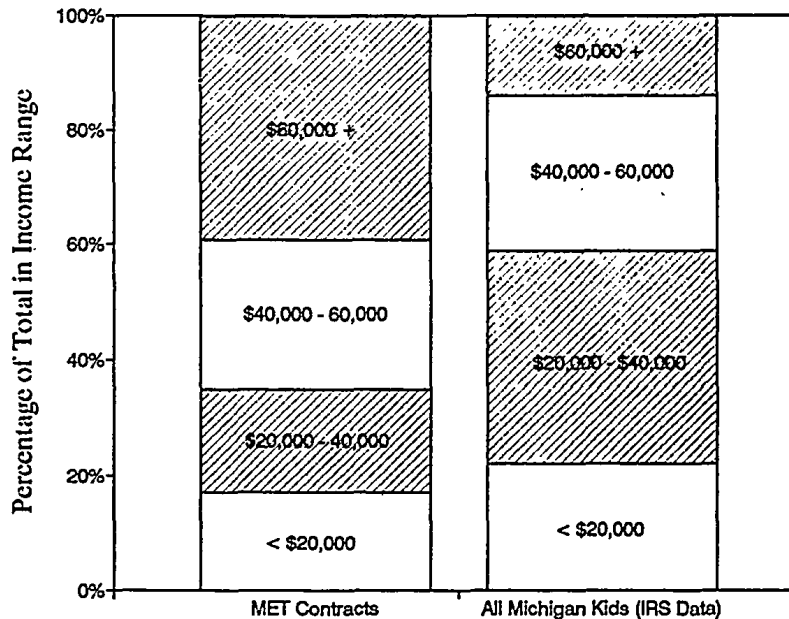
I assigned Michigan a share of the over-\$200,000 returns reflecting Michigan's share of U.S. households in 1985. See BUREAU OF THE CENSUS, U.S. DEPT. OF COMMERCE, STATE POPULATION AND HOUSEHOLD ESTIMATES, WITH AGE, SEX, AND COMPONENTS OF CHANGE: 1981-87, at 83 (Current Population Reports, Series P-25, No. 1024, 1988) [hereinafter POPULATION AND HOUSEHOLD ESTIMATES]. That provided me with a total of about 2.7 million children claimed as exemptions. These figures count dependent children *regardless* of age, and they exclude children in families too poor to file tax returns; thus, they tend to overstate the well-being of the 2.5 million children under 18.

For a general discussion of weaknesses in the Statistics of Income data, see Bristol, *Tax Modeling and the Policy Environment of the 1990's*, SOI BULL., Fall 1988, at 115.

program whose benefits are skewed heavily toward economically more privileged children:

FIGURE 10

Income Distribution of MET Contracts
Compared to Michigan Children Generally



Unfortunately, the figures provided in the MET news release are grouped in a way that allows only a limited set of comparisons to be made. For example, suppose one were to ask the question, "If one took all the children in the state and ranked them according to their family's incomes, what share of the MET contracts would be held by the richest 20% of children?" If one used the table above, one could answer "Between 39% of the contracts and 65% of the contracts," but not much more.

It is possible, however, to approach that question by another path. MET has released the distribution of all MET participants by zip code.²⁹⁵ Accordingly, it is possible to take all the children in the state and rank them according to the median family incomes of their zip codes rather than according to the actual incomes of their families.²⁹⁶ Ranking the children in this fashion, one can obtain a fairly precise

295. MICHIGAN DEPARTMENT OF TREASURY, ACTUARIAL TOTAL CONTRACTS BY COUNTY, ZIP CODE, (1989). The table does distinguish among the alternative options, but not among the number of years purchased. In the ensuing analysis, I use the data regarding "full-benefits" contracts.

296. Summary Tape 3B from the Census Bureau provides the 1979 median family income for

picture of the distribution of MET contracts.²⁹⁷ If one groups the children in "quintiles" (fifths of the population) according to their zip code's incomes, one gets the following picture:

TABLE 7

<u>Quintile</u>	<u>Share of MET Contracts</u>
Richest	50%
2nd	22%
3rd	13%
4th	11%
Poorest	4%

Like all of the tables presented in this Appendix, this one understates the extent of inequality in the distribution. In a table built on information about the zip code, all inequality below the level of the zip code is ignored.²⁹⁸ Nonetheless, to the extent other information based on zip codes is available, it permits a careful relative comparison of the distribution of MET participants to that of other groups. In the remaining two sections of this Appendix, I shall compare these zip-code-based quintile shares of MET Contracts with zip-code-based quintile shares of (a) total income in the state and (b) public college freshmen.

3. *MET Contracts and Michigan Income*

Some might attempt to defend the sort of skewing seen in the previous section by saying that it merely reflects the skewing of income that already exists in society. They might argue that, as long as the state's programs are no more skewed toward the most fortunate than the allocation of goods produced by the private economy, the programs should not be criticized.

I must confess that, in principle, I find this argument to be only a partial defense. As I explain in the body of the article, governments do not have unlimited resources available for public programs. Implementing one crowds out others. Accordingly, if a public program distributes private benefits with a pattern of inequality that is no better

each zip code, the total family income for each zip code, and counts of families and of children under age 18 for each zip code.

297. I am grateful to Marcea Metzler for doing a substantial portion of this work for me. Many zip code boundaries changed between 1980 and 1988. Working with a variety of U.S. Postal Service sources, she was able to connect 1980 zip codes to the new 1988 zip codes. Where an old zip code had divided, or where two had become three, she apportioned the under-18 population and assigned putative median family incomes in a logical reflection of the number of MET contracts sold from each new zip code.

298. Zip codes are relatively large; there are slightly more than 1000 zip codes in Michigan, but roughly 2.5 million children. POPULATION AND HOUSEHOLD ESTIMATES, *supra* note 294, Table 6, at 51.

than the pattern generated by the private sector, one ought to insist that such a program produce substantial *public* benefits.

Even if one is willing to conclude that public programs have nothing to apologize for as long as they replicate the inequalities generated by the private sector, however, MET does not meet even that low threshold of equity. Using the zip-code aggregation system described in the previous section, I examined the degree of concentration of Michigan's total family income. I assigned the total family income of each zip code to the children residing in that zip code. Ranking the children as before and grouping them again by "quintiles," I developed the following picture:

TABLE 8

<u>Quintile</u>	<u>Share of MET Contracts</u>	<u>Share of Family Income</u>
Richest	50%	28%
2nd	22%	23%
3rd	13%	19%
4th	11%	17%
Poorest	4%	13%

The MET contracts are obviously concentrated far more in the hands of children living in high-income zip codes than family income. One can reduce this picture of concentration to a single number by calculating an index analogous to a "Gini Coefficient" or "Suits Index." Such an index would assign a score of zero to a perfectly equal distribution and a score of one to a perfectly unequal (*i.e.*, completely concentrated) distribution.²⁹⁹ Using such a method, the MET con-

299. See generally CHANGING DISTRIBUTION, *supra* note 38, at 75-78.

To calculate such an index, one begins by preparing a concentration curve, analogous to the Lorenz curve of income concentration. The curve graphs the cumulative percentage of MET contracts (or whatever other variable one is interested in) on the vertical axis against the cumulative percentage of the population on the horizontal axis. If the MET contracts were distributed with perfect uniformity through the population, the curve would be a diagonal line going upward to the right at a 45-degree angle. If the contracts were distributed with perfect non-uniformity — all owned by the single richest person in the population — the curve would lie flat along the horizontal axis until it reached the top 1%, and then it would go almost vertically up to join the diagonal. The closer the curve is to the diagonal, the more equally distributed are the contracts. The farther away it is from the diagonal, the more unequal the distribution.

To calculate a numerical index of concentration based on these curves, one divides (i) the area between the diagonal line of perfect uniformity and the actual curve by (ii) the area between the diagonal line of perfect uniformity and the extreme curve of perfect non-uniformity (*i.e.*, the entire triangle below the diagonal line). A highly uniform distribution would have a concentration index close to zero; the more concentrated the distribution the closer the concentration index approaches to 1.

See H. MENDERSHAUSEN, CHANGES IN INCOME DISTRIBUTION DURING THE GREAT DEPRESSION 162-67 (1946); see also Current Population Reports, Consumer Income Series P-60, No. 123.

tracts are highly concentrated, with an index of 0.441, whereas family income shows a concentration of only 0.161.³⁰⁰

4. *MET Contracts and Michigan Public College Freshmen*

The last interesting reference group for comparison to MET participants is the group of freshmen who entered Michigan public colleges in 1988. As I noted at the outset of this article, some have sought to justify MET by contending that public colleges are becoming less affordable and that college students deserve help in paying for their educations.³⁰¹ If that were one's premise, one might be willing to accept some inequality in the distribution of MET contracts, provided it matched an inequality in the distribution of college students.³⁰²

Using the now-familiar method of zip-code bunching, one obtains the following results:

TABLE 9

<u>Quintile</u>	<u>Share of MET Contracts</u>	<u>Share of 1988 Freshmen</u>
Richest	50%	33%
2nd	22%	21%
3rd	13%	17%
4th	11%	16%
Poorest	4%	13%

The relative concentration indices are 0.441 for MET Contracts and 0.191 for freshmen.

5. *Summary*

No matter which set of figures one uses, it remains obvious that MET beneficiaries are not representative of the typical Michigan child. MET participants are far more heavily concentrated in the wealthier reaches of the population than in any of the plausible reference groups.

300. The calculation of such an index also gives an opportunity to note the extent to which grouping by zip code can mask inequality. According to calculations from a Current Population Survey computer tape by Jon Haveman and Sheldon Danziger, the Gini Coefficient for family incomes in Michigan for the 1984-1986 period was 0.379, far more unequal than the 0.161 figure in the text would suggest. If the zip-code groupings are masking a comparable degree of inequality in the distribution of MET contracts, the economically best-off fifth of Michigan children is holding substantially *more* than half of the contracts.

301. See *supra* section I.B.

302. Doing so would, of course, ignore the extent to which financial constraints might *already* be deterring students from attending college. It would thus hold MET to an exceptionally lenient standard.