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## AN ACTUARY ON WALL STREET?

by Joseph H. Dowling

There is a tendency, all too human, for many actuaries to define their profession rather narrowly, as though it related only to those few functions traditionally described as actuarial work. If this limited point of view were correct, there would be no place on Wall Street for the actuary as such. If, on the other hand, one views the actuary as having the benefit of a special education and experience which permits him to accrue a breadth and a depth of understanding of insurance unattainable by other routes, then there not only is a place for such an individual on the Street, there is a need for him. Few industries are so poorly understood by the investor as insurance and any area of misunderstanding in the investment world is taken by the less than ethical as an opening for exploitation.

Wall Street's principal business is publicly-traded securities—e.g., bonds, stocks, warrants, etc.—and most of the Street's people are concerned with them—analyzing, selling, and trading them, or providing support for those who do. A small number of people are engaged

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The Joint Actuarial Committee on Financial Reporting has prepared a response to the American Institute of Certified Public Accountants Exposure Draft of "Audits of Life Insurance Companies." The response is a 150-page detailed discussion of points raised by the draft Audit Guide. It also includes the results of studies and analyses made by the committee. Copies of the response will be available at the Society office on or after June 7. A charge of \$2.00 per copy will be made to cover reproduction and mailing costs.

## To Our Readers

Please note that the address is now  
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15th Floor — 1740 Broadway  
New York, N. Y. 10019.

## INPUT-OUTPUT OR INPUT-INPUT ANALYSIS

by James C. Hickman

We are served by a multiplicity of complex systems that provide such diverse products and services as protection, information, transportation, energy, and three square meals a day. There is usually more than one way of constructing each of the systems and this suggests the desirability of establishing measures of efficiency for the alternatives so that we may rationally choose among them. Indeed, the richness of the options open to managers in constructing business and governmental systems requires, if these systems are to avoid some of the pain and suffering of evolutionary trial and error, that measures of efficiency be designed.

In some areas these measures can be satisfactory. Although the degree of sophistication in the computation of their respective efficiency indices may have differed, both Charles Wilson with his desire to provide "the biggest bang for the buck" and Robert McNamara with his elaborate cost effectiveness studies, sought to allocate the nation's defense funds so as to maximize national security as it was perceived by the administrations they served. The quantification of the efficiency of engines converting heat energy to mechanical energy may require ingenious technology, but the final measurement has objective certainty. In many private businesses the market provides an almost immediate judgment on the success of a system in

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## MOSES REVISITED

(Extract from a recently discovered  
*Dead Sea Scroll*)

by Ian M. Charlton

The Supreme Ecumenical Association to Research Clurgical Heresay (hereinafter referred to as SEARCH) had been studying more palatable and salable verbiage for the Ten Commandments, with benefit illustrations. The chief governing supervisor of the Security and Investment Council (affectionately called SIC) was alleging that adherence to said Ten Commandments was indeed an investment in the hereafter, should be subject to SIC regulations, and should no longer be referred to as the Ten Commandments but rather *Measures for Modern Morality—A Ten-Point Plan for Investing in the Hereafter*. This would mean:

(a) Any promotional material designed to interest a parishioner, which included illustrations depicting benefits incident to profitable investment in the hereafter through observance of the Ten Commandments, must contain the following disclaimer (or words which are not, in the judgment of the Supervisor, "not less unfavorable"):

"For illustration only. Investment results are based on past experience which may or may not be reflected in the future."

(b) Prior to introducing a parishioner, regardless of age, to the Ten Commandments as a method of investing in the hereafter, a representative of SEARCH, now considered an associate of a Broker/Dealer, must precede his message with a prospectus to provide the potential investor with an adequate basis for judging the offering.

The proposed prospectus would have to include the following:

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## Moses Revisited

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The Commandments are a ten-point plan for investing in the here and hereafter. While originally designed for the morality of persons of all ages, this plan will be espoused particularly by the middle-aged group, casually referred to as those too young for Medicare but too old to enjoy the new morality.

The substance of the ten-point plan is alleged to have been drawn from two tablets of stone. These tablets of stone have not been filed with the SIC; therefore, the SIC cannot pass on the accuracy or adequacy of the content and any representation to the contrary may be deemed to be an offense. Notwithstanding, however, the content has been drawn from a source deemed to be reliable.

This was in addition to the suggested wording received from the local Director, charged with the responsibility of being sure all text material used clear and precise language. The following was suggested for the Second Commandment:

Unless in conflict with the laws or regulations of the jurisdiction in which said commandments are to be practiced, no member shall bow down to any graven image (except such graven image as may be specifically exempted by the Supervisor as not being discriminatory in favor of the highly esteemed); nor to any likeness, including but not limited to idols (graven or otherwise, or any attempt thereat) of anything in heaven, which is alleged to be above, or in the earth, allegedly beneath, nor in the water under the earth, where said phrase shall be deemed to include moisture or precipitation, surrounding subterranean, terranean, celestial and/or space travel or residence; moreover, adherence hereto shall be given extragenerational effect, bearing through to the third and fourth generation of any covered member, as prescribed by any enabling legislation decreed since the inception of time. □

## Input-Output

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adding value, as perceived by customers, to the cost of the input resources.

However, there are social systems within the experience of each of us whose output is only imperfectly judged in the market or where the market judgment is long delayed. Yet the necessity to make decisions about such systems compels us to develop measures of efficiency for these systems. Because of the inherent difficulty in measuring the effectiveness of health, education, and defense systems, the professionals who manage these systems tend, as a convenience, to define operational management goals that only indirectly relate the ultimate output to the input of the system.

If you ask a hospital administrator, in confidence, to rate the hospitals in his area, he will have no difficulty in establishing a quality ordering. Chances are that the ordering will not be based on any measure of improvement in the health of the patients entering and leaving the institutions being rated. Instead it will be based on the size and academic qualifications of the staff and the amount of technical equipment available.

### Other Examples

If you discreetly inquire of a school superintendent or a college president the rating of the institutions that fall in the same general class as his, once again you will observe no great trouble in making the ordering. The chances are overwhelming that the rating will be a function of class size, the credentials of the faculty, and measures of library, laboratory and computer size. Seldom will the ratings depend on the relative educational impact on the students who move through the various institutions.

Military history contains instances where measures of combat effectiveness devised in peacetime seemed to have an *inverse* relationship to subsequent battlefield success.

Professional groups have a responsibility to create quality standards for the systems they administer. However, as indicated in the examples, these quality standards are often a function of the inputs to the system rather than the outputs. Only the ultimate requirement that society value the *output* of the system administered by a professional group prevents the group from living perpetually in a closed system in which the

quality standards of the profession alone prevail.

The health professions are finding mounting public resistance to allocating ever more resources to purchase higher quality medical care where this quality can be perceived only by professionals. In a similar way educators are finding it rather hard to secure financial support for achieving higher educational quality, as measured solely by the standards of professional educators. Even science, the great generator of the new ideas that have fueled our twentieth century civilization, is no longer allowed to measure the quality of the nation's scientific enterprise by the size of the resources allocated to science. This input must now be related to the outputs that the public values.

How do we actuaries shape up? All too often, I fear, our standards are input-oriented. I venture a few suggestions for improvement in these areas:

#### *The actuarial education system*

The body of knowledge that is defined by the current syllabus of examinations does not exhaust actuarial science.

The purpose of actuarial education is not the passing of actuarial examinations.

#### *The private pension system*

The purpose of pension planning is not primarily to secure I.R.S. qualification.

#### *The individual life insurance system*

The purpose of equity based insurance is not to provide the possibility of a speculative gain.

Insurance price-benefit structure should not be designed with the primary objective of supporting a particular administration or distribution system.

#### *The health insurance system*

The purpose of health insurance is not only to spread the burden of health costs but also to play a role in an integrated system that encourages efficiency and does not distort treatment practices.

#### *The automobile insurance system*

The purpose of automobile insurance is not solely to mitigate the financial consequences of fault or to support a particular system of allocating fault. It must also relate to the broader problem of creating a safe and economical transportation system and allocating the cost of this system equitably. □