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ABSTRACT

Much has been said and written about the need for measuring accurately and improving the investment performance of college and university endowment funds, but little has been written about how colleges and universities should report on the status and performance of the investments of endowment funds. When guidelines for reporting are adopted, a number of questions should be included. When should the reports be distributed? Should information be recorded on a book or market value basis? How should performance data be computed? With what inexes should the performance data be compared? In addition to annual financial statements, there are needs for special investment reports for public distribution as well as internal management reports. External reports should be prepared annually, but internal reports should be prepared quarterly or more frequently. (Author/KE)

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Preface

THIS MONOGRAPH HAS BEEN DESIGNED to encourage and assist college and university officers at institutions having permanent funds to make a public report of the stewardship of those funds. Lucid, attractive reports demonstrating professional management of invested assets should reassure donors, generate confidence on the part of alumni and friends of the institution, and provide a concrete accounting of the trust placed in the institution to have and to hold such assets.

The study provides broad yet detailed coverage. It includes the areas of general concern to most readers of reports on the management of endowment assets and it describes and demonstrates reporting formats and performance measurement techniques. It is not, however, intended to be prescriptive; each institution will wish to "pick and choose" ideas and techniques that best suit its own, unique situation.

The project to develop this paper was made possible by a grant from the Ford Foundation, enabling NACUBO to have another "how to" study available to institutions of higher education. Members of the NACUBO Investment Committee also hereby acknowledge Leigh A. Jones, whose participation in this project was considerable.

It is hoped that users of this monograph will find it helpful in developing more extensive and meaningful reports on the management of assets entrusted to their institutions.

March 31, 1975

NACUBO Investment Committee

Introduction

MUCH HAS BEEN SAID and written about the need for measuring accurately and improving the investment performance of college and university endowment funds, but little has been written about how colleges and universities should report on the status and performance of the investments of endowment funds. Accordingly, it is the intent of this treatise to set forth some basic guidelines for such reporting.

When guidelines for reporting are adopted, a number of questions should be considered: For whom should the reports be prepared? What information should be included? When should the reports be distributed? Should information be recorded on a book or market value basis? How should performance data be computed? With what indexes should the performance data be compared? In addition to annual financial statements, there are needs for special investment reports for public distribution as well as internal management reports. External reports should be prepared annually, but internal reports should be prepared quarterly or more frequently. Data that might be included in each of these types of reports are set forth herein, as are methods of calculation of various performance figures.

Although in annual financial statements, the reporting of investments at cost historically has been the accepted method, the book value concept for reporting endowment fund assets has limited utility. For example, if performance of investments is to be measured, market values are required. Reporting of investments of endowment funds at cost, even though market valuations are shown parenthetically or in the notes to financial statements, can also raise questions if there is no identification of the method of distribution of unrealized appreciation or depreciation among the various true, term, and quasi-endowment funds.

External Investment Reports

WHERE DOES THE EXTERNAL REPORT, prepared primarily for distribution to the public, fit into the scheme of reporting on investments of endowment and other permanent funds? If an institution has prepared a basic internal investment report and published its annual financial statements, is a separate external report necessary?

For some institutions an external report may be unnecessary because either the size of the endowment fund does not appear to warrant its preparation or the public to which the institution expects to report is small. In these cases the internal report may be expanded to include information on the investment portfolio, and this expanded report will serve as the external report to a limited public.

The external report discussed here is one that should be prepared by those institutions having significant investment funds. Institutions that have their own in-house investment management team often feel more compelled to publish an external report than do institutions that delegate the management of their funds to investment management firms. Whether investments are managed internally or externally should not be a criterion in deciding whether to publish an external report.

The objective and purpose of an external report should be to provide public information concerning the nature of the investment funds handled by the institution and the performance of these funds. The institution should show in this report that proper fiduciary responsibility has been exercised over the funds. Accordingly, it is not necessary for an external report to include as much detailed information as is contained in an internal report, but the external report should contain more information about investments than normally is found in annual financial statements. A prime objective of the external report should be the presentation of sufficiently sophisticated material to convince the reader that the institution knows what it is doing and has managed its funds well.

It is important to note that the external report, more than the internal investment report and the annual financial statement, may differ among institutions. Differences occur because of the size and nature of the funds, because institutions prepare reports for different types of publics, and because investment objectives may vary. As a result, each institution may emphasize different aspects of the report.

Quality of Reports

Professional help generally is desirable to assist with the layout, editing, and printing of the external report. Persons responsible for the funds must decide on the content of the report, but professional assistance should be utilized in order to create a publication that will clearly and professionally describe the fiduciary responsibility exercised by the institution. Many readers of external investment reports are familiar with annual corporate reports, and consequently a report that is poorly prepared can leave a negative impression.

While the report need not have a fancy cover or be expensively printed in color, it should be done expertly. Many large institutions have this kind of expertise in-house. Large commercial printing firms that print annual corporate reports also can provide this type of assistance.

Nature of Funds

Because of the desire for individuality, the layout of the material in the external report may differ among institutions. However, in all cases there should be an introduction that clearly describes the nature of the funds being reported. This section should describe the type of funds (endowment, pension, annuity, life income, etc.) covered by the report and should provide a summary of the changes that took place in funds during the year, such as total additions, total withdrawals, and market value changes. Performance highlights for the year also might be described. This section should give the reader an understanding of what the report covers, so that in progressing through the material, the reader will have a better understanding of how the detailed information fits into the larger picture.

Summary of Market Conditions

In order to present a background against which investment objectives and performance information can be evaluated properly, a section on market conditions during the period under review should be included. This section might be only a summary of the changes in the major market indexes, On the other hand, it might go so far as to discuss the economic environmental factors influencing market performance. The external report, customarily prepared a month or so after the end of the reporting period, must be in agreement with the published financial statements of the institution, which typically require a longer time to prepare. It should provide a review of principal market movements during the year. Most market commentaries and summaries are prepared on a calendar-year basis, but such information will be more helpful if it is presented to cover the fiscal year of the institution.

Again, it is important to emphasize that the report should portray the quality of investment management. If this section depicts a clear understanding of economic factors affecting the marketplace, even on the basis of hindsight, a big step will be taken in accomplishing this objective.

Particular emphasis should be given to the market conditions in those areas (money markets, fixed-income securities market, equity market, real estate market, etc.) where the institution has large amounts of money invested. Fixed-income and

equity securities probably comprise the bulk of most investment portfolios, and market conditions covering these areas should be reviewed thoroughly.

Objectives and Policies

The investment objectives of the fund should be clearly enunciated in the external report in order to provide the reader with background information with which to evaluate performance. If the fund being reported on is a single-purpose fund with a single investment objective, such as growth of principal, this can be done quite simply. On the other hand, when there are several types of funds with different investment objectives being reported on, i.e., pension funds, endowment funds, life income funds, annuity funds, etc., the statement of objectives necessarily becomes more lengthy and more important. When several different funds are being reported on, the report may be divided into sections for each type of fund—with objectives and performance discussed for each fund. These sections presumably would appear after the summary of market conditions.

When it might not be clear to an uninformed reader, the particular purposes of a fund should be described, followed by a statement of the investment objectives and procedures that were adopted to fulfill these purposes. It is particularly important to set forth any change in policy or procedure that may have taken place since the last report. When a policy on social responsibility in investing has been adopted by the institution, the policy and its limitations should be described.

Performance

Presenting the investment performance results is an important purpose of the external report. Considerable care should be given to the manner in which these results are shown. In addition to reporting performance for the current period, a longer-term perspective also should be provided.

Performance for the period should be presented in various ways, but particularly as to changes in unit values, both of principal and on the total return basis (yield plus increase or decrease in market value). This should be reported even when the objectives of the fund are entirely to generate maximum current yield. Performance should be shown in annual percentage rates, which might be broken down into yield and market value changes. Consideration also should be given to discussing performance in dollar amounts. Indicating the dollar amount of yield (interest, dividends, rents, etc.) and the dollar value of the market price change can be very informative. The report should relate the dollar amount of market price change to the additions to and withdrawals from the fund in a reconciliation of the market value of the funds at the beginning of the year with those at the end of the year. This summary of fund transactions may be included in either the section on the nature of funds or in this performance section.

The results should be compared with performance indexes that are well known to the public. If a fund includes a substantial equity portfolio, the most common indexes for comparison are the Dow Jones Industrial Average and the Standard & Poor's 500-Stock Index (S & P 500). Even though there are reservations about the appropriateness of these two indexes as performance standards, it is important

to include a comparison with at least one of them because of their wide use and acceptance as a measure of market conditions. There are, of course, other published indexes that have considerable stature and that might be used for comparison purposes.

The New York Stock Exchange Index gives the average weighted performance of all listed stocks on that exchange. Or, comparison can be made with other managed funds, as measured by the Lipper Mutual Fund Industry Averages. These mutual fund averages are available by investment objective categories such as growth, balanced, or income, and might be used as comparative data when the objectives of the funds have similar purposes.. Performance data of the equity segment and fixed-income segment of the portfolio also might be separately presented and compared with related quoted indexes to give a more precise view of performance.

When investment funds are of a permanent nature such as endowment funds, the performance of investments should be presented for a period longer than one year. Three- and five-year compound average rates of return may be disclosed. If available, a ten-year period also may be used. While the one-year performance is, of course, important, the long-range investment accomplishments are the true measure of performance for permanent funds. In this regard, changes in investment philosophy or policies during the period selected should be disclosed so that a proper evaluation of the long-term performance can be made.

Nature of Investments

The report should disclose the major types of investments of a fund such as equities, fixed-income securities (both corporate and government), and real estate. These should be indicated in both absolute dollar amounts and in percentage figures. A comparison with the same data for the previous year-end is also informative. This section would be a good place to correlate the objectives of a fund with the stated investment philosophy or with any change that has been adopted.

Consideration should be given to publishing a complete list of all investments. If it is determined that a complete list is not appropriate, then the largest five, ten, or fifteen investments should be disclosed. When fixed-income securities make up a sizable part of the portfolio, a maturity schedule should be presented.

Tables and Charts

Well-prepared tables and charts describing information that writers of the report wish to convey are especially helpful. Generally speaking, a table or chart can more effectively present information for a number of years than can a text.

Some tables and charts to be considered for presentation in an external report include:

1. A comparison of performance over several periods with one or more market indexes.
2. A five- or ten-year record of unit values and earnings per unit (which might also include comparative index figures).

3. A five- or ten-year comparison of total market value of a fund, with its historic book value.

4. A five- or ten-year comparison of portfolio make-up, by classification in both dollars and percent.

Other Information

Inclusion of the above information generally is considered necessary for any external investment report. In addition, other items may be included in the report if they are pertinent or significant.

Stock Lending Operations. If the institution is actively involved in stock lending, this might be reported, as well as the income earned by this operation.

Proxy Policy. In cases where committees vote proxies or where specific procedures have been adopted for voting proxies, reference to the committee or procedures should be made in the report.

Investment Management. It is important that the report describe how the funds are managed. This might be a simple statement to the effect that the funds are managed entirely by in-house personnel or entirely by independent investment counsel or by some combination of the two. In addition, the report can include a full description of the various policies and procedures that determine investment decisions. Also, any change in personnel or in investment advisers should be noted.

Research. The report may describe how research is performed—whether by the institution, one or more firms, or a combination. If research is performed outside the institution, it might be appropriate to state the institution's policy on reimbursement for such services, either by fees paid for execution services (soft money) or by direct payment for services (hard money).

Miscellaneous. Legislation that is pending, passed, or vetoed, such as the Uniform Management of Institutional Funds Act, is an item that could be included if considered important, as well as utilization of any technical procedures such as AuTex, Instinet, etc.

Finally, the report may incorporate the names of the governing board members and the finance or investment committee members. Others who might be included are corporate officers in the finance area, investment staff, investment counsel, attorneys, and auditors. Often these names are placed either on the inside of the front cover or back cover of the report.

Internal Investment Reports

INTERNAL INVESTMENT REPORTS are prepared primarily for management purposes and are distributed to the investment committee of the governing board as well as to the corporate officers of the institution who are concerned with endowment funds and their management. The internal investment report may serve as the source document for preparing other reports on investments of endowment funds.

The following information should be included in the basic internal report: objectives and policies that govern investment of the funds, nature or character of the investments, and performance. While it is not necessary to present the information in this order, setting forth the material in this sequence will result in a logical and understandable presentation.

OBJECTIVES AND POLICIES

Even though the objectives and policies governing the investment of endowment funds are known to the persons who will receive copies of the internal investment report, it is still important to make these policies and objectives a part of each report. A clear understanding of the guidelines that have been established and of the investment objectives for the funds will make evaluation of the detailed analytical information in the report more meaningful. Statements of policies and objectives should include as a minimum:

Performance objectives that have been established. If none has been established, then the plan that is followed should be described, e.g., investing for some growth but with safety of principal, investing for total return, investing primarily for yield, etc. If a "social responsibility" investment policy has been adopted, it should be included here.

Method used to make investment decisions. Someone or some committee obviously is making the buy sell decisions. The individual or committee delegated this responsibility and the procedures followed should be described.

Method used to determine spendable income. If it is policy to spend only yield, this should be stated. If the total return concept is followed for spending, there should be a brief statement as to how spendable return is computed.

Other significant policies or procedures that may have been adopted also might be considered for inclusion in this section of the report. Such policy statements might include degree of acceptable investment risk, percentage or dollar limitations for investment in any one company or industry, limitations on investment in unlisted or foreign securities, investment in real estate, trading in options, and stock lending. While policies relating to voting proxies need not be included in the internal report, they may be noted here if desired.

The policies and procedures section of an internal report might read as follows.

Policies and Procedures

At its meeting in October 1968 the Board of Trustees adopted the policy to invest the endowment funds of the college to achieve maximum total return assuming a reasonable degree of risk, the reasonable degree of risk to be determined by the board's Finance Committee.

Complete discretion in selecting individual investments has been delegated to an investment adviser. The Finance Committee of the board monitors the adviser's performance, but takes no part in the actual buy-sell decisions. Certain restrictions have been placed on the investment adviser regarding types and amounts of investments that are permissible.

As of December 31, 1968, the pooled endowment funds were divided for management purposes equally between Manager A and Manager B. As of January 31, 1973, Manager A was given the responsibility for managing one-half of the funds then held by Manager B. As of May 1, 1973, the responsibility for managing the investments held in the Chapel Fund was given to Manager A, and this fund then was commingled with the other pooled endowment funds that they manage.

In October 1972 the board voted that all new moneys received for endowment be deposited for investment purposes with Manager A.

As a part of the total return investment concept, the board adopted in January 1970 a formula for determining spendable return. Under this formula the amount of total return that can be used in any one year is calculated on the basis of five percent of the average market value of the endowment funds during the three-year period ending one year before the beginning of the year in which the return is to be spent.

Endowment gifts are deposited directly into the endowment pool on the next valuation date. Cash required to make up the difference between yield and the amount approved by the board for use for current operations is withdrawn quarterly from the endowment pool.

Nature or Character of Investments

This part of the internal report provides a description of the investments held at the reporting date. It also provides, where there are separately invested funds or where the management of the funds has been delegated to more than one money manager, a breakdown of the funds by each location.

As a minimum, the following information is suggested:

1. A breakdown of all funds by types of investments.
2. A breakdown of all funds by fund manager or investment location.
3. A listing of the ten largest investments.

Other information that also might be included in this section of the internal report as a further description of the above might include:

1. A breakdown by type of investment of the funds managed by each fund manager or investment location.
2. A breakdown of common stocks by industry classification.
3. A schedule summarizing bond maturity dates.
4. A complete listing of all investments.
5. A chart showing a comparison of the investments by types for the last five or ten years.

The categories for reporting investments by types should include, as a minimum, short-term investments (including cash), common stocks, preferred stocks, corporate notes and bonds, federal government obligations, real estate, real estate mortgages, and interfund investments. However, further breakdowns, where amounts are significant, can be informative. Such breakdowns might include mutual funds and convertible stocks and bonds. In addition to the market values of each type of investment, the percentage that each classification makes up of the total should be shown, and all this information should be presented with comparative figures for the previous year-end.

Types of Investments

	June 30,			
	1974		1973	
	Market Value	%	Market Value	%
Common stocks	$ 60,000,000	60%	$46,750,000	55%
Convertible notes and bonds	5,000,000	5	8,500,000	10
Short-term investments	7,000,000	7	2,550,000	3
Other corporate notes and bonds	15,000,000	15	17,000,000	20
U.S. government obligations	3,000,000	3	3,400,000	4
Real estate	4,000,000	4	—0—	—
Real estate mortgages	4,000,000	4	4,250,000	5
Loans to plant fund	2,000,000	2	2,550,000	3
	$100,000,000	100%	$85,000,000	100%

In many cases, the investments of a college or university will be under the management of more than one individual or firm and will be located in more than one place. A breakdown of the total funds should be presented in the report, showing each of the major locations.

Location of Investments

	June 30, 1974 Market Value	1974 %	June 30, 1973 Market Value	1973 %
Manager A	$ 40,000,000	40%	$32,300,000	38%
Manager B	24,000,000	24	—0—	—
Manager C	25,000,000	25	43,350,000	51
Trustees Memorial Fund	7,000,000	7	5,100,000	6
The Common Fund	2,000,000	2	1,700,000	2
Loans to plant fund	2,000,000	2	2,550,000	3
	$100,000,000	100%	$85,000,000	100%

As a minimum, a listing of the ten largest investments should be included in the report. However, if practical, a complete listing of all investments would be more informative. Where there are numerous small investments such as real estate mortgages serviced by independent mortgage bankers or financial institutions, it would be appropriate to summarize and report them by type or servicing agent rather than individually. However, where mortgage loans are made by in-house personnel, the governing board may wish to have them listed individually.

Ten Largest Investments

	Shares by Investment Location				Market Value June 30, 1974		
	Manager A	Manager B	Manager C	Total	Per share	Total in millions	%
IBM	3,500	4,500	5,000	13,000	$213	$ 2,768	4.6%
Xerox	4,500	7,000	8,000	19,500	115	2,242	3.7
Procter and Gamble	3,300	4,800	8,900	17,000	100	1,700	2.8
Minnesota Mining	7,500	4,000	7,500	19,000	74	1,406	2.4
Merck	3,000	6,000	8,000	17,000	79	1,343	2.2
Eastman Kodak	—	5,000	6,500	11,500	104	1,196	2.0
AMP	—	16,500	13,000	29,500	39	1,150	1.9
Sears, Roebuck	3,000	5,000	5,000	13,000	83	1,079	1.8
Caterpillar	8,000	4,000	6,000	18,000	59	1,062	1.8
Citicorp	7,000	14,000	13,000	34,000	31	1,054	1.8
						$15,000	25.0%
			Total other common stocks			45,000	75.0
			Total all common stocks			$60,000	100.0%

If common stocks comprise a substantial portion of the investment portfolio, a further breakdown by industry classification is informative. Also, if there are several managers, a comparison of the amounts invested in each industry classification by each manager often will provide revealing information about each manager's investment strategy.

When corporate notes and bonds and other long-term debt are significant portfolio holdings, a summary of these investments by maturity dates is useful. Custodians and professional money managers often group long-term debt investments into such classifications as government obligations, utility obligations, and industrial obligations.

A chart showing the percentage of funds invested in each type of security as of the end of the fiscal year for the last five or ten years is interesting. While such a graph might be included in an internal investment report, it more often is included in external special investment reports.

PERFORMANCE

The performance section of the internal report might contain a significant amount of data that is too complex for the layman. Accordingly, it is suggested that the report begin with a "highlights" page, presenting and summarizing the most important data. The minimum information that should be presented in the performance section of the internal report includes:

1. An analysis of the change in market value of the entire endowment fund and of any separately managed portions of it from the beginning to the end of the reporting period.
2. The total return realized by the entire fund and by each separately managed portion for the reporting period and the average for the last few reporting periods in both dollars and percent. (Care must be exercised to define the reporting period for the reader, e.g., trailing twelve months, calendar year, fiscal year, etc.) For reporting periods of more or less than twelve months, yield and total return figures should be annualized.
3. A comparison of the percentage changes in unit value of the total fund, and each separately managed portion, with various leading indexes such as the Dow Jones Industrial Average and the Standard & Poor's 500-Stock Index. (*Note:* These are equity indexes only.)
4. The yield realized per unit, in both dollars and percent, for the entire fund and for its components.

The same information may be applied to separately invested funds, such as separately invested endowments and pooled income and annuity funds, if they are significant to the institution.

Other information that might be included in this section of the report would be.

1. The yield realized by major types of investments such as common stocks and fixed-income securities.
2. The amount and number of units taken from the funds to supplement yield in arriving at spendable return (when a total return formula has been used to develop the amount of total return used for current operations).
3. The total return realized by major types of investments such as common stocks, long-term bonds, or short-term investments.
4. The change in unit values of major types of investments such as common stocks, long-term bonds, or short-term investments.

5. A comparison of the change in unit values noted in (4) above with the change in the Dow Jones Industrial Average, the Standard & Poor's 500, the Dow Jones Bond Averages, and other indexes.

6. Performance of the ten largest investments.

7. Risk or volatility measurements of the fund.

In addition to this information, the report also might be improved by the inclusion of several charts or graphs, such as:

1. A five- or ten-year comparison of year-end, month-end, or quarter-end unit values for the endowment fund and, or each major pool or fund that is separately invested.

2. A five- or ten-year comparison of earnings per unit for the endowment fund and/or each major pool or fund that is separately invested.

3. A five- or ten-year comparison of the market value and the historical cost of the fund.

4. A five- or ten-year summary of yield as a percent of historical cost and of market value.

Highlights

As suggested above, a highlights section can be helpful to the reader in providing a broad view of what has happened and in directing attention to key points. A highlights section is most effective when it is brief and the data are attractively displayed for easy reading. This section should be placed at the beginning of the report, and accordingly should include not only highlights on performance, but also highlights on the nature or character of the funds. Data that might be included in such a section are:

1. Analysis of change in total market value of investments from the beginning of the period to the end.

2. A breakdown of investments by portfolio manager as of the reporting date compared with the beginning date.

3. A summary of types of investment on the reporting date.

4. The total performance of investments for the period.

A sample highlights section follows.

Highlights

	Fiscal year ending June 30, 1974	1973
Change in Valuation		
Market price beginning of year	$70,400,000	$69,200,000
Additions	5,900,000	5,600,000
Withdrawals for current operations	(700,000)	(600,000)
Market price decline	(12,700,000)	(3,800,000)
Market price end of year	$62,900,000	$70,400,000
Portfolio Management (at market)		
Manager A	$31,600,000	$34,200,000
Manager B	11,400,000	14,100,000
Manager C	9,700,000	12,500,000
Other	10,200,000	9,600,000
	$62,900,000	$70,400,000
Types of Investments (at market)		
Common stocks (73.1% and 81.0%)	$46,000,000	$57,000,000
Short-term investments	8,400,000	4,200,000
Long-term corporate notes and bonds	6,200,000	6,500,000
Other	2,300,000	2,700,000
	$62,900,000	$70,400,000
Investment Performance (total return for year)		
Manager A	—14.2%	+0.6%
Manager B	—18.7	—3.6
Manager C	—19.1	—7.7
All funds combined	—14.4	—2.5
Dow Jones Industrial Average	— 6.3	—0.6
S & P 500	—14.3	0.0

Analysis of Change in Market Value

The analysis of change in market value of the total funds should be similar to the statement of changes in fund balance for the endowment funds in the institution's annual financial statement if endowment funds are being reported at market in this statement. However, because this is an investment report and is not intended as an analysis of the details making up the changes, the transactions for the year can be summarized in three groups. total additions to the funds, total withdrawals from the funds, and total change in market value (appreciation or depreciation) of the funds. The report should contain such an analysis not only for the total endowment fund, but for each individually invested pool or fund.

Total Return

Performance on a total return basis should be presented for all funds combined as well as for each separately invested pool or fund. Because there are different methods of calculating total return (which provide different results), the report should indicate how the returns are calculated. The time-weighted method is considered the preferable method for making these computations. This method takes into account the timing of the cash flow (see Appendix B).

Summary of Investment Performance

	Year ended June 30, 1974		
	Rate of yield	Market price change	Total return
Pooled Endowment Funds			
Trustees Memorial Fund	3.4%	—16.4%	—13.0%
Manager A	3.1	—17.3	—14.2
The Common Fund	3.6	—19.9	—16.3
Manager B	1.6	—20.3	—18.7
Manager C	3.2	—22.3	—19.1
All endowment funds combined	3.0	—17.4	—14.4
Comparative Performance Indexes			
Dow Jones Industrial Average	3.7%	—10.0%	— 6.3%
S & P 500	3.2	—17.5	—14.3
Lipper—Mutual Fund Industry Average	—	—	—13.0
Lipper—Growth Fund Index	—	—	—15.3
Lipper—Growth and Income Fund Index	—	—	—10.9

Note Rate of yield percentages have been computed by relating total earnings for the year to the average month-end market price of each fund. Market price changes have been computed based on the beginning and ending unit values for each fund.

Changes in Unit Value

As support to calculation of total return, the change in unit values should be shown in the report together with the percentage increase or decrease for the year. This should be done for the total fund and also may be done for each separately invested pool or fund if kept on a unit basis. Because the major quoted stock averages cover only changes in principal balance (and not yield), it is important to present data that can be compared with these indexes.

Changes in Unit Value

	Unit value			
	Beginning of period	End of period	Change	% Change
June 30, 1969 to June 30, 1974 (5 years)				
Manager A	$100.000	$102.404	$+ 2.404	+ 2.40%
All endowment funds combined	100.000	89.367	—10.633	—10.63
Trustees Memorial Fund	100.000	88.616	—11.384	—11.38
Dow Jones Industrial Average	100.000	85.028	—14.972	—14.97
S & P 500	100.000	82.772	—17.228	—17.23
Manager B	100.000	75.109	—24.891	—24.89
June 30, 1973 to June 30, 1974 (1 year)				
Dow Jones Industrial Average	$ 89.259	$ 80.321	$— 9.028	—10.01%
Trustees Memorial Fund	90.248	75.442	—14.806	—16.41
Manager A	91.683	75.784	—15.899	—17.34
S & P 500	89.914	74.138	—15.776	—17.55
All endowment funds combined	90.653	74.698	—15.955	—17.60
Manager B	90.270	71.957	—18.313	—20.29
Manager C	86.903	67.558	—19.345	—22.26

Comparison with Indexes

As a means of providing a basis on which to judge the performance of funds, comparative data should be given on the performance of selected market indexes. There are many indexes available that might be used for comparison, and the governing board or the investment committee of the board should determine what indexes will be used. It may be that different parts of the fund, particularly equities, will be compared with different indexes. As a minimum, however, the total return and the change in unit values should be compared with the Dow Jones Industrial Average and the Standard & Poor's 500-Stock Index. Performance figures are available for these indexes both on a total return basis (yield included) and on a straight principal basis. These two indexes generally are considered the best bench marks for comparison, not because they necessarily are more correct than other indexes, but because they are so widely used.

Yield Realized

There is general agreement that the rate of total return is the single most important figure for measuring performance. The majority of institutions, however, spend only yield and have not adopted the total return concept for spending purposes. Accordingly, it is important to report yield in terms of total dollars, dollars per unit, and as a percent of market value not only for those institutions that spend only yield, but also for those that follow the total return concept for spending. One method of making this calculation and displaying this information follows:

Rate of Yield and Total Return

	Manager A	Manager B	Manager C	The Common Fund	All endowment funds
Market Value of Investments					
June 30, 1973	$34,210,300	$12,484,600	$14,163,400	$906,000	$70,408,700
July 31, 1973	36,000,700	13,148,200	15,059,300	968,900	74,270,800
August 31, 1973	35,299,100	12,681,500	14,570,300	938,900	72,391,400
September 30, 1973	36,574,200	13,069,200	14,520,200	999,300	73,387,000
October 31, 1973	38,118,800	12,878,100	14,645,200	974,400	74,548,000
November 30, 1973	34,307,100	11,138,400	12,913,800	847,000	66,982,100
December 31, 1973	35,009,800	11,024,000	12,484,600	850,300	66,017,500
January 31, 1974	34,134,500	10,736,200	12,106,400	843,800	64,414,200
February 28, 1974	33,535,500	10,830,400	12,049,700	841,600	63,831,900
March 31, 1974	33,025,900	10,699,600	11,938,800	810,900	63,083,000
April 30, 1974	32,118,100	10,181,400	11,616,800	775,600	61,231,800
May 31, 1974	31,922,200	9,925,900	11,644,700	740,700	60,747,200
June 30, 1974	31,606,200	9,705,500	11,381,100	725,300	62,917,700
Average Market Value	$34,297,100	$11,423,300	$12,991,900	$863,300	$67,248,600
Yield	1,073,788	364,779	201,578	30,964	2,050,225
Rate of yield	3.13%	3.19%	1.55%	3.59%	3.05%
Change in market value (from unit value computation)	—17.34	—22.26	—20.29	—19.94	—17.43
Total return	—14.21%	—19.07%	—18.74%	—16.35%	—14.38%

Other Performance Information

While the above information is considered essential for an internal investment report, there are other data that could be included that would be helpful and informative to readers. The relevance of other information would depend to a large extent on the types of investment funds and objectives established by the governing board.

Total Return by Types of Investment. When performance is broken down by types of investment, the breakdown usually goes no further than between equities and fixed-income securities. While these classifications could be divided further, the difficulty in developing additional data generally is more than the benefits derived. Separate unit values must be computed for each type of investment being monitored, and income must be separately accounted for. This type of information is particularly informative when the governing board by policy has established limits on types of investment.

Change in Unit Values of Different Types of Investments. Unit values of different types of investments must be calculated if total return for each type of investment is to be reported. If unit values by types of investment are available, they

might be included in the report and compared with related market indexes. It can be argued that a true comparison of performance is to compare changes in unit values of equities with changes in common stock market indexes and that changes in unit values of fixed-income securities should be compared only with indexes that specifically show value changes in fixed-income securities.

Yield Realized by Types of Investments. A segregation of yield by dividends, interest, rents, and other, together with a reporting of these amounts on a unit basis, will complete the data on the performance of different types of investments. Again, when yield is considered an important objective by the governing board, this type of information becomes an important part of the internal report.

Withdrawal Policy

If the total return concept for spending is followed and the spendable portion of total return is greater than the yield provided by the investments, the total dollar amount in excess of yield that was withdrawn for expenditure and the reduction in number of units it represented should be shown. The reduction in number of units also should be stated on a percentage basis so that the reader knows the degree of principal utilization. When the reduction in number of units is not made across the board, because some individual funds have market values less than their historical cost, this fact and the effect it has on the funds from which this withdrawal is made also should be shown.

Performance of the Ten Largest Investments

The individual performance of the ten largest investments is information that is interesting and often revealing. The calculation of performance data can be made on the basis of one share held for the entire year. If there have been significant additions or withdrawals in one of these ten securities during the year, a notation should be made so that performance data are not misleading.

Measures of Risk

While generally considered of doubtful reliability, such measurements of risk as the alpha and beta coefficients do give some indication of the volatility to which the portfolio is exposed. A general reference to the subject is considered better than a specific reference to the beta of each holding, although the average weighted figure for the portfolio is necessary in order to relate it to the market as a whole.

Annual Financial Statements

THE INDUSTRY AUDIT GUIDE, *Audits of Colleges and Universities*, prepared by the American Institute of Certified Public Accountants' Committee on College and University Accounting and Auditing (New York: AICPA, 1973) and *College and University Business Administration* (Washington, D.C.: National Association of College and University Business Officers, 1974) are the current authorities on what information should be included in the annual financial statements of colleges and universities and how that information should be displayed. In relation to investments the audit guide states:

> "The financial statements or notes should set forth the total performance (i.e., yield and gains and losses) of the investment portfolio based on cost and market value." (page 9)
>
> "As a permissible alternative, investments, exclusive of physical plant, may be reported in the financial statements at current market value or fair value, provided this basis is used for all investments of all funds. When using this alternative, unrealized gains and losses should be reported in the same manner as realized gains and losses are reported under the cost basis." (pages 8-9)

The guide also indicates that a summary of investments is one of several schedules "which might prove to be useful and informative."

The two standard references describe the minimum information to be included in the annual financial statements on endowment funds and their investment.

This information may be summarized as follows:

1. The financial statements or notes should indicate whether investments are recorded at cost or market.
2. If investments are recorded at cost (or market value at date of receipt, in the case of gifts), their market value, as of the balance sheet date, should be disclosed either parenthetically on the balance sheet or in the notes thereto. If the financial statements include cost figures for the preceding year, the market value of investments for the preceding year also should be reported.

3. The financial statements or notes should show, as a minimum, a breakdown of investments between marketable securities and other significant types of investments.

4. The financial statements or notes should disclose the composition by types of endowment and similar funds (true, term, and quasi), and the market value of the applicable investments if the fund balance breakdown is on a book value basis.

5. The financial statements or notes should disclose, when material, the amount of endowment funds for which the income is restricted.

6. The financial statements or notes should set forth the total performance (yield and realized and unrealized gains and/or losses) of the investment portfolio.

7. The notes should include a brief description of any policies applicable to the accounting for endowment and similar funds and their assets and related liabilities not otherwise disclosed, such as information regarding the accounting for pooled investments and interfund loans.

If a college or university wishes to give a fuller and more complete report on its investments, the following is suggested additional information that might be included:

1. Investment performance for the year on a percentage as well as on a unit basis. Historical information on performance of prior years also would be informative, and calculations should be consistent from year to year. There is increasing interest in an additional percentage computation of return on a cumulative, compounded basis for any particular period of years.

2. A comparison of investment performance of the equity portion of the portfolio with a leading market index such as the Dow Jones Industrial Average or the Standard & Poor's 500 on a total return basis.

3. Information, when material, on the institution's stock lending activities, if any, and trading in options, if any.

4. Information, when applicable, on any "social responsibility" investment policy or any other important investment policies, together with significant amounts of securities held under restrictive covenants governing their disposition.

Appendix A: Unitizing Investment Portfolios

IT IS ESSENTIAL that investment portfolios be unitized if accurate performance figures are to be determined and presented. Unitizing a portfolio is not difficult if certain basic information is available. This information includes the date and amount of each addition or withdrawal from a pooled investment fund and the market value of the fund at the time of each addition or withdrawal. The most accurate calculation of a unit value requires daily valuation of the portfolio. However, while this is done by mutual funds, the most common college or university practice is to calculate unit values on a monthly basis. The unit value at each month-end is then used in calculating the new units added or the value of the units withdrawn during the subsequent month. Although some institutions calculate unit values quarterly or even less often, it should be realized that the resulting performance figures become less precise.

The procedure followed in calculating unit values and changes in number of units resulting from additions and withdrawals is as follows:

1. The total market value of the fund at any time is divided by the number of units then outstanding to determine the value of each unit (unit value). If the fund has not previously been unitized, an arbitrary value (usually $10 or $100) is assigned as the beginning unit value, and this amount is divided into the market value of each endowment fund in the investment pool to determine the beginning number of units owned by each fund.
2. When additions are made to a fund, the value of the addition is divided by the unit value (determined immediately prior to the addition) to arrive at the number of units assigned to the addition. These new units then are added to the prior number of units outstanding to arrive at the new number of units outstanding.
3. When withdrawals are made from the fund, the number of units being withdrawn is multiplied by the current unit value to determine the amount of cash or market value of securities that should be withdrawn. When the amount of cash and or securities to be withdrawn from the fund is known, that amount is divided by the current unit value to determine how many units are to be removed.

Calculation of Unit Values

Assume:	Market value of fund:	$250,000
	Number of units outstanding:	2,500
Then:	Unit value is $\frac{\$250,000}{2,500}$ or:	$100

Additions

Assume:	Market value of fund immediately prior to time of addition:	$312,500
	Number of units outstanding:	2,500
	Unit value:	$125
Then:	If $125,000 is added to the fund, the additional number of units added is $\frac{\$125,000}{\$125}$ or:	1,000

As proof that this calculation is correct, divide the new value of the fund immediately after the addition ($312,500 + $125,000 = $437,500) by the new number of units (2,500 + 1,000 = 3,500). The result should be the same unit value as immediately prior to the addition:

$$\frac{\$437,500}{3,500} = \$125$$

A worksheet showing monthly calculation might appear as follows:

Additions and Withdrawals

	Market value of fund	Amount	Unit value	Number of units	Number of units outstanding	Unit value
June 30	$250,000(A)				2,500.00	$100.00(B)
July additions		$ 17,500	$100.00	175.00	2,675.00	
July withdrawals		(6,500)	100.00	(65.00)	2,610.00	
July 31	$325,000(A)				2,610.00	$124.52
August additions		$ 36,000	$124.52	289.11	2,899.11	
August withdrawals		(12,452)(C)	124.52	(100.00)	2,799.11	
August 31	$400,000(A)				2,799.11	$142.90
September additions		$ 100,000	$142.90	699.79	3,498.90	
September withdrawals		—	—	—	3,498.90	
September 30	$425,000(A)				3,498.90	$121.47
October additions		$ 50,000	$121.47	411.62	3,910.52	
October withdrawals		(100,000)(D)	121.47	(823.25)	3,087.27	
October 31	$500,000(A)				3,087.27	$161.96
November additions		—	—	—	3,087.27	
November withdrawals		—	—	—	3,087.27	
November 30	$525,000(A)				3,087.27	$170.05
December additions		$ 25,000	$170.05	147.02	3,234.29	
December withdrawals		—	—	—	3,234.29	
December 31	$500,000(A)				3,234.29	$154.59

Notes. (A) Market value of fund at each month-end taken from a detail listing of assets held by the fund on each date.

(B) Unit value arbitrarily established as $100 on beginning date of fund.

(C) In this case the board is withdrawing a certain number of units (100) and the cash withdrawal is determined by multiplying the unit value times the number of units being withdrawn.

(D) In this case the board is withdrawing a specified amount of money and the related number of units to be withdrawn is determined by dividing that amount by the unit value.

The number of units and unit value should be carried out to at least two decimal places for reasonable accuracy in related performance calculations.

Appendix B: Calculation of Rates of Return

IN HIS BOOK on the measurement of endowment fund performance, J. Peter Williamson describes five methods of calculating annual rates of return.[1] Three of these are described as "approximations" and two as "exact methods." The two exact methods are referred to as the "dollar-weighted rate of return" and the "time-weighted rate of return." When there are inflows and outflows of money from a fund, the time-weighted method should be used in measuring performance because it takes into consideration the timing of the cash flow.

The differences between the approximate methods and the exact methods result from the use by the exact methods of more information relating to the dates on which income is received by the fund during the year and the market valuations of the portfolio on those dates. Using income and valuation information on a day-to-day basis provides the most precise results. However, because of the difficulty of making daily calculations, the generally accepted practice is to determine income and market valuations on a monthly basis to arrive at annual rates of return. If valuations are made less often, the results become more approximate, and this should be taken into consideration when results are compared with other calculations made on a more precise basis.

The formula for calculating the annual time-weighted rate of return on a monthly basis is:

$$1 + R = (1 + r_1)(1 + r_2)(1 + r_3) \ldots (1 + r_{12})$$

where:

R = annual rate of return
r = monthly rate of return
r_1 = rate of return for first month
r_2 = rate of return for second month
$r_3 \ldots r_{12}$ = rate of return for other months

[1] J. Peter Williamson, *Performance Measurement and Investment Objectives for Educational Endowment Funds* (New York, The Common Fund, 1972).

Example

Assumptions	Number of units outstanding at beginning of month	Income received during month	Earnings per unit
July	373,137	$ 56,372	$ .151
August	373,137	45,070	.121
September	375,536	79,387	.211
October	383,515	56,335	.147
November	400,255	98,872	.247
December	401,486	122,973	.306
January	414,273	66,646	.161
February	414,273	99,025	.239
March	414,273	99,148	.239
April	414,273	84,027	.203
May	414,273	58,631	.142
June	414,273	125,059	.302
		$991,545	$2.469

	Calculation of Unit Values			
Assumptions	Market value	Amount	Outstanding units	Unit value
June 30	$34,210,300		373,137	$91.683
July 31	36,000,700		373,137	96.481
Deposits		$ 231,500	2,399	
August 31	35,299,100		375,536	93.997
Deposits		750,000	7,979	
September 30	36,574,200		383,515	95.366
Deposits		1,596,449	16,740	
October 31	38,118,800		400,255	95.236
Deposits		117,210	1,231	
November 30	34,307,100		401,486	85.450
Deposits		1,092,646	12,787	
December 31	35,009,800		414,273	84.509
January 31	34,134,500		414,273	82.396
February 28	33,535,500		414,273	80.950
March 31	33,025,900		414,273	79.720
April 30	32,118,100		414,273	77.529
May 31	31,922,200		414,273	77.056
Deposits		214,516	2,784	
June 30	31,606,200		417,057	75.784
Total		$4,002,321		

Calculation of Change in Unit Values

	Unit Values		
	Beginning of month	End of month	Unit value change
July	$91.683	$96.481	$4.798
August	96.481	93.997	—2.484
September	93.997	95.366	1.369
October	95.366	95.236	— .130
November	95.236	85.450	—9.786
December	85.450	84.509	— .941
January	84.509	82.396	—2.113
February	82.396	80.950	—1.446
March	80.950	79.720	—1.230
April	79.720	77.529	—2.191
May	77.529	77.056	— .473
June	77.056	75.784	—1.272

Calculation of Monthly Rate of Return

	(1) Earnings per unit	(2) Unit value change	(3) Total (1)+(2)	(4) Unit value beginning of month	(5) Monthly rate of return (3)÷4)
July	$ .151	$4.798	$4.949	$91.683	5.40%
August	.121	—2.484	—2.363	96.481	—2.45
September	.211	1.369	1.580	93.997	1.68
October	.147	— .130	.017	95.366	.02
November	.247	—9.786	—9.539	95.236	—10.02
December.	.306	— .941	— .635	85.450	— .74
January	.161	—2.113	—1.952	84.509	—2.31
February	.239	—1.446	—1.207	82.396	—1.46
March	.239	—1.230	— .991	80.950	—1.22
April	.203	—2.191	—1.988	79.720	—2.49
May	.142	— .473	— .331	77.529	— .43
June	.302	—1.272	— .970	77.056	—1.26

Calculation of Annual Rate of Return

$1 + R = (1 + r_1)(1 + r_2)$, etc.

$1 + R = (1 + .0540)(1 — .0245)(1 + .0168)(1 + .0002)(1 — .1002)(1 — .0074)$
$(1 — .0231)(1 — .0146)(1 — .0122)(1 — .0249)(1 — .0043)(1 — .0126)$

$1 + R = (1.0540)(.9755)(1.0068)(1.0002)(.8998)(.9926)(.9769)(.9854)(.9878)$
$(.9751)(.9957)(.9874)$

$1 + R = .8513$

$R = —14.87\%$

Using the same basic figures as above, a less precise calculation would be as follows, using income and unit values calculated on a quarterly basis:

Assumptions

Calculation of Unit Values

	Market value	Additions	Outstanding units	Unit value
June 30	$34,210,300		373,137	$91.683
Deposits		$ 981,500	10,705	
September 30	36,574,200		383,842	95.285
Deposits		2,806,305	29,452	
December 31	35,009,800		413,294	84.709
March 31	33,025,900		413,294	79.909
Deposits		214,516	2,685	
June 30	31,606,200		415,979	75.980
Total		$4,002,321		

Assumptions

Earnings per Unit

	Number of units outstanding beginning of quarter	Income received during quarter	Earnings per unit
July—September	373,137	$180,829	$ .485
October—December	383,842	278,180	.725
January—March	413,294	264,819	.641
April—June	413,294	267,717	.648
		$991,545	$2.499

Calculation of Change in Unit Values

	Unit Values		
	Beginning of quarter	End of quarter	Change
July—September	$91.683	$95.285	$ 3.602
October—December	95.285	84.709	—10.576
January—March	84.709	79.909	— 4.800
April—June	79.909	75.980	— 3.929

Calculation of Quarterly Rate of Return

	(1) Earnings per unit	(2) Unit value change	(3) Total (1)+(2)	(4) Unit value beginning of quarter	(5) Quarterly rate of return (3)÷(4)
July—September	$ .485	$ 3.602	$4.087	$91.683	4.46%
October—December	.725	—10.576	—9.851	95.285	—10.34
January—March	.641	— 4.800	—4.159	84.709	— 4.91
April—June	.648	— 3.929	—3.281	79.909	— 4.11

Calculation of Annual Rate of Return

$$1 + R = (1 + .0446)(1 - .1034)(1 - .0491)(1 - .0411)$$
$$1 + R = (1.0446)(.8966)(.9509)(.9589)$$
$$1 + R = .8540$$
$$R = -14.60\%$$

Calculation of Average Rate of Return over Several Years

While the calculation of annual rates of return is essential, the calculation of an average rate of return over a period of several years may have even more significance to management and the public than a one-year figure. There are at least three different methods of calculating such an average. They are referred to as the arithmetic average, the internal rate of return average, and the geometric average.

The arithmetic average is calculated by adding the yearly rates of return and dividing their total by the number of years. The resulting average is not a compound average rate of return and therefore is not an accurate measurement for judging portfolio management. The internal rate of return is found by calculating the discount rate that brings the ending fund valuation and interim transactions back to the beginning fund valuation. The internal rate is a compound average, but because the timing of additions and withdrawals affects the results, it is not considered a good measurement for judging portfolio management. The geometric average, on the other hand, is an average that reflects a compound rate of return for the period, and is not affected by the timing of additions and withdrawals. It is the average that should be used in judging portfolio management.

The formula for computing the geometric average is:

$$(1 + R)^n = (1 + r_1)(1 + r_2)(1 + r_3) \ldots (1 + r_{n-1})(1 + r_n)$$

where:

R = geometric average
r = annual rate of return
n = number of years

Example

Assumptions

Year	Individual yearly rates of return
1970	—12.5%
1971	35.2
1972	9.7
1973	— 6.5
1974	—14.2

Calculation

$$(1 + R)^5 = (1 - .125)(1 + .352)(1 + .097)(1 - .065)(1 - .142)$$
$$(1 + R)^5 = (.875)(1.352)(1.097)(.935)(.858)$$
$$(1 + R)^5 = 1.041$$
$$R = \sqrt[5]{1.041} - 1$$
$$R = 1.008 - 1$$
$$R = .8\%$$

The above rate is the compound rate of return earned by the fund for the five years ended 1974.

Pricing Nonmarketable Investments and Investments Difficult to Value

Some portfolios contain investments that have no quoted current market values. Such investments include some unlisted equity securities, private placement notes and bonds, real estate investments, oil and gas rights, home loan mortgages, etc. As noted earlier, monthly market valuations are necessary if accurate computations of total return rates are to be made. Accordingly, if investments of this nature are significant, serious consideration should be given before they are included in a unitized pool with other marketable securities. As an alternative, these investments may be unitized in a separate pool. All such investments might be placed in one pool, or each type of investment might be measured separately.

The actual determination of a fair market value for these assets might be made only once a year. Professional appraisals, capitalization of earnings, and adjustment of interest rates are only a few of the ways that a fair current value might be placed on these investments. However, where there is lack of substantive support for appraising the investments at a price higher or lower than their cost, strong consideration should be given to recording them at cost, since this is the last known true market value.